

# The Richmond Greenway MASTER PLAN



**Prepared For:**

**Metropolitan Transportation Commission**

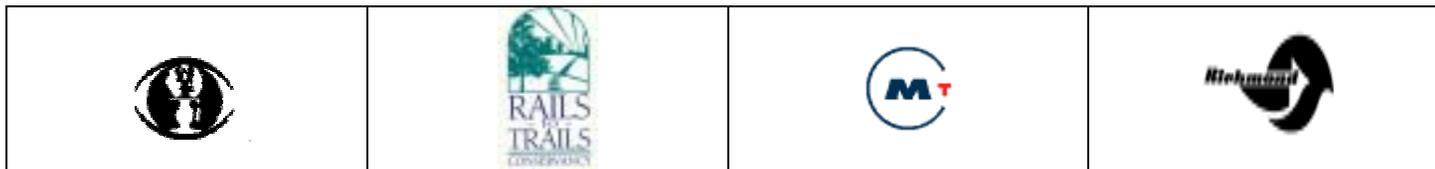
**Prepared By:**

**City of Richmond Engineering  
Community Youth Council for Leadership & Education  
Rails-to-Trails Conservancy**

**May 2003**

## The Planning Team

Rails-to-Trails Conservancy – Kate Bickert, Laura Cohen, Amanda Eaken  
Community Youth Council for Leadership and Education – Allen Green, Judith Henderson  
City of Richmond - City Manager's Office, Engineering Department, Recreation and Parks Department  
OASIS Design Group – David Ralston  
Parisi Associates – David Parisi



[www.railtrails.org/ca](http://www.railtrails.org/ca)

## **Acknowledgements**

Project partners would like to acknowledge the vital community contributions made toward the completion of the Greenway Master Plan. Without the assistance of the following groups and individuals, this plan would not have been possible.

### **Key Project Supporters**

Metropolitan Transportation Commission (MTC)  
Richmond City Council  
Assemblywoman Dionne Aroner  
Senator Don Perata  
Congressman George Miller  
Eagle Environmental Construction

Project partners would also like to thank the following organizations for their contributions of time and energy to the planning process. The development of trails and greenways is a collaborative, community-driven process, and project partners hope these groups will continue to participate in ongoing maintenance and site improvements.

### **Neighborhood Councils**

Atchison Village, City Center, Coronado, Iron Triangle, Pullman, Richmore Village, Santa Fe

### **Community Organizations**

The California Center for Land Recycling  
California Conservation Corps  
East Bay Bicycle Coalition  
Friends of Baxter Creek  
Lincoln School Site Committee  
Richmond Historic Museum  
Trails for Richmond Action Committee

### **Regional Partners**

East Bay Regional Parks District  
El Cerrito City Council  
Urban Ecology  
Urban Habitat  
West Contra Costa Transportation Advisory Committee

### **Statewide and National Supporters**

California Department of Parks and Recreation  
Chevron, USA  
Environmental Protection Agency  
National Parks Service

## TABLE OF CONTENTS

<b>I.</b>	<b>Introduction.....</b>	<b>5</b>
	Greenway Concept	5
	History	5
	Future	5
	Planning Process	5
	Planning Goals and Principles	8
<b>II.</b>	<b>Local Context.....</b>	<b>8</b>
	User Profile	8
	Benefits of Rail-trails	10
	Local Quality of Life	11
<b>III.</b>	<b>Route Plans.....</b>	<b>12</b>
	Site Inventory/Preferred Alignment Plan	12
	Photo Tour of Greenway	18
	Opportunities and Constraints	23
<b>IV.</b>	<b>Design Guidelines.....</b>	<b>29</b>
	Introduction	29
	Path Design	29
	Universal Access	31
	Trail Amenities	32
	Trail Support Facilities	33
<b>V.</b>	<b>Implementation.....</b>	<b>33</b>
	Cost Estimates	34
	Phasing Strategy	34
	Trail and Greenway Funding Programs	35
	Sustainability and Maintenance	37
	Liability	37
	Acquisitions	38
	Implementing Actions	38
<b>VI.</b>	<b>Appendices</b>	
	Greenway Map and Drawings	
	Phase I Capital Budget & Construction Schedule	
	Greenway Steering Committee Contact List	
	Handouts from Community Design Workshop	
	Budget Estimates for Future Phases	
	Additional Trail and Wetland Funding Programs	



# I. INTRODUCTION

## Greenway Concept

Traversing the heart of Richmond, California, the conversion of a 3-mile former rail corridor to an urban greenbelt and trail presents an exceptional opportunity for community revitalization. The Richmond Greenway is bounded by Garrard Boulevard on the west and Key Boulevard on the east. Running parallel to Ohio and Chanslor Streets, the Greenway will ultimately connect with the San Francisco Bay Trail to the west, and the Ohlone Greenway in the City of El Cerrito to the east.

The Greenway has the potential to dramatically improve quality of life in the City of Richmond. Imagine working nearby and enjoying daily breaks by biking downtown through a huge open space with easy access to cafes, markets, repair shops, galleries, outdoor arts, and everyday necessities. Envision clear views to Mount Tamalpais westward and the East Bay hills eastward, and convenient connections with Baxter Creek on the east end and Nicholl Park to the north. Natural recreation and relaxation will be part of people's everyday experience.

The corridor's vital central location, connection with local and regional transit, non-motorized facilities, and myriad common destinations make it an enormously promising project. The Richmond Greenway will serve as a key link in a growing regional network of trails and other biking and walking facilities.

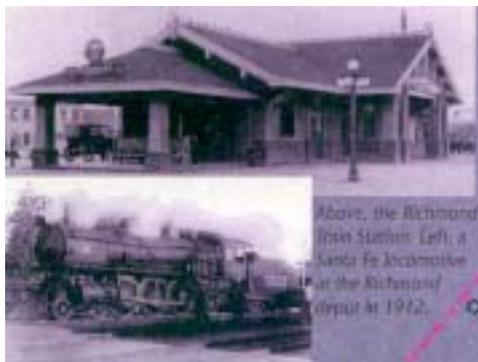


Figure 1: Images of the Santa Fe Railroad

## History of the Greenway Corridor

Beginning in 1904, the Atchison-Topeka and Santa Fe Railroad (AT&SF) carried freight along this corridor—which constitutes one side of Richmond's famed "Iron Triangle". In 1979, AT&SF Railroad deeded the right-of-way (ROW) to the City of Richmond, and the City Council incorporated the corridor into the General Plan as open space, and for use as an off-street bike path. A 1992 technical report produced by the City included an implementation strategy, but funding and staffing cuts precluded further action. In 1994, the City removed the railroad tracks and graded the right-of-way. Recognizing a unique opportunity, in 1996, the Community Youth Council for Leadership and Education (CYCLE) partnered with the City, Rails-to-Trails Conservancy (RTC), the National Park Service, the California Conservation Corps, the Richmond Museum, Urban Ecology and others to propose a rail-trail and Greenway.

## Future

Today, an array of concurrent projects promises to complement the Greenway in a network of civic improvements. Located just four blocks south of Richmond's Main Street, MacDonald Avenue, the Greenway will become Richmond's longest non-motorized transportation corridor, linking neighborhoods, schools, downtown, civic buildings and other common destinations. The timing is perfect for uniting the Greenway with Richmond's Main Street Initiative project, the Richmond Transit Village, Hope VI, and Ells Middle School among others. The Greenway provides direct connections to public transit, as well as bicycling and walking facilities. The Richmond Greenway will revitalize the natural promenade running the entire length of downtown. This is a rare opportunity in any city today.

## The Planning Process

In 2000, a planning grant from MTC and a state budget request enabled Greenway planning to begin in earnest, and CYCLE and RTC convened a steering committee to provide general guidance and oversight (see Appendix C). With the help of local groups, regional agencies and national organizations, CYCLE and RTC led a series of meetings,

workshops, and roving sessions to gather public input for the Greenway's Master Plan (see Appendix D).

As with any transportation improvement, trail projects move along more smoothly if they have strong community support. The primary goal of the project team was to include local residents in planning the Greenway so that its final design is representative of their desires and concerns. To that effect, the following pages represent suggestions for the development of the Greenway gathered through the extensive community planning process.

The objectives of the first round of meetings were to involve the neighborhood councils representing areas directly adjacent to the Greenway, as well as local stakeholder groups and other community residents. A series of presentations served to provide an overview of the project, introduce the major issues and concerns to be addressed in design, and to invite people to partake in the planning process.

CYCLE and RTC met with four neighborhood councils: Coronado, Santa Fe, Iron Triangle, and Pullman. In addition, project partners involved several other interest groups including: Friends of Baxter Creek (FOBC); Trails for Richmond Action Committee (TRAC); Bay Trail Advocates; the Richmond Police Department; adjacent schools; the West Contra Costa County Transportation Advisory Committee (WCCTAC) and, the East Bay Conservation Corps. Other neighborhood councils were also encouraged to participate in the planning process.

In preparation for a community design workshop, held October 7th, 2000, CYCLE youth helped pass out invitation flyers, and went door to door along Ohio and Chanslor Streets to invite residents. Turnout was lower than expected, but the residents involved gave excellent feedback for the site plan. In order to reach more residents, CYCLE and RTC decided to use a series of "roving" meetings to target residents who might not otherwise have known about the Greenway project, and to reach a broader cross-section of Richmond residents. These ad-hoc meetings employed a strategy of taking the planning process to the people, to compensate for a lower-than-expected turnout at scheduled workshops. Project partners brought maps, site plans, comment cards, pens and pencils in a truck, and approached gatherings of local residents to solicit feedback. From these roving meetings, a core list of those interested in being on an ad-hoc design sub-committee was formed. Ad-hoc meetings were held at Nicholl Park, the YMCA, and local schools

adjacent to the right-of-way. Through the design workshop, project partners solicited feedback from locals on specific design issues of importance to them.



Figure 2: CYCLE staff share Greenway plans with community members

## Summary of Community Meetings

### Round I Meetings

#### Stakeholder Meetings

- Coronado Neighborhood Council - September 20, 2000
- Santa Fe Neighborhood Council - September 21, 2000
- Iron Triangle Neighborhood Council - September 28th 2000
- TRAC November - 6, 2000
- Friends of Baxter Creek - October 25, 2000
- YMCA Grandmothers Meeting - November 14, 2000
- Lincoln School - February 15, 2001
- Richmond Education Center - February 28, 2001

### Community Workshop

- October 7, 2000

### Roving Meetings

- Nicholl Park, City Hall Plaza, Stops along Ohio—Saturday October 21, Friday October 27, 2000.



Figure 3: Location of neighborhood councils near the Greenway

### **Round II Meetings**

After a detailed draft of the master plan was completed, project partners conducted a second round of community meetings to ensure that stakeholders had an opportunity to comment on the final design. Community meetings were scheduled with diverse groups of stakeholders, and this plan is representative of comments received through these meetings.

### Stakeholder Meetings

- East Bay Center for Performing Arts - 5/16/02
- Kennedy High School Athletes 5/17/02
- East Bay Bicycle Coalition 5/21/02, 6/22/02
- Presentation to the Parks and Recreation Commission - 6/13/02
- Friends of Baxter Creek - 6/13/02
- Supervisor John Gioia - 6/26/02
- BART - 7/1/02
- TRAC - 7/1/02
- Richmond City Council - 7/2/02
- Pullman Neighborhood Council - 7/13/02
- National Parks Service - 7/13/02
- Atchison Village Neighborhood Council - 7/25/02
- Richmond Parks Department, & Permaculture Institute, FOBC, American Soil Products - 8/8/02

- Kathy Hoffman, Congressman George Miller's Office – 2/14/03
- Coronado/Iron Triangle Neighborhood Councils – 2/21/03

Neighbors reported that persistent blight on the site and anti-social behaviors were the main problems to solve. The unkempt state of the large open space has drawn undesirable activities by being neither off limits nor highly prized. Other comments centered on lighting, hours of operation, connections with popular facilities, and design, all of which are incorporated into the final design plan. In spite of unsafe areas, rough surfaces, illegal dumping, derelict appearance, and related blight, the Greenway already serves many basic needs. This stretch of open land serves as an informal pedestrian and bicycle path connecting homes, schools, parks, jobs, and cultural centers. As it is improved, the site will become a great public place connected with local life in ways that reflect Richmond's natural and cultural diversity.



Figure 4: Judith Henderson, Greenway project manager for CYCLE, shows route of Greenway to residents gathered at community meeting.

The following planning principles reflect priorities conveyed during two extensive rounds of community outreach meetings.

## Planning Goals and Principles

- **Improve Mobility**  
The Greenway will provide a safe and continuous facility for walking and cycling, offering easy access to local and regional transit hubs, and myriad common destinations within the City.
- **Improve Safety and Security**  
The Greenway will improve safety in the surrounding neighborhoods and the City in general, by revitalizing an abandoned and neglected public right-of-way as a popular and beautified community facility.
- **Protect and Enhance Cultural and Historic Resources**  
The Greenway will actively engage local artists and organizations to celebrate Richmond's cultural and historic resources with murals and educational panels.
- **Protect and Restore the Environment**  
By providing a safe space to walk and bike, the Greenway will encourage people to make short trips without their cars, resulting in improved local air quality, and a reduction in runoff and water pollution associated with the use of motor vehicles. The Greenway will also enhance the environment by removing toxic waste, discouraging illegal dumping of garbage, and restoring native habitats. Planning, design and management will add native vegetation, and use clean renewable resources in site improvements.
- **Provide Opportunities for Economic Development**  
The Greenway will boost economic vigor by improving livability for all Richmond residents. Increased use on a regional scale will benefit businesses near the Greenway as people seek refreshments, services, and other recreational amenities.
- **Provide Ongoing Opportunities for Community Input and Participation**  
The Greenway's planning, development, and management will support on-going opportunities for proactive community participation. The initial planning process is just the beginning of a sustained process of public involvement.

## II. LOCAL CONTEXT<sup>i</sup>

### User Profile

#### Who uses Bay Area Trails and Greenways?

Trails and greenways in the Bay Area are used by a wide cross-section of the community that includes people of all ages, ethnic backgrounds and ability levels. The types of use also vary considerably and include:

- Walking - primarily local residents of all ages but non-local residents also use trails to access destinations such as local and regional parks, Bay Shore facilities, and transit hubs including Amtrak, BART, and AC Transit.
- Bicycling - for local and regional recreation and transportation.
- Running and jogging - local and regional uses
- Skating, skateboards, scooters - mainly local young adults and children
- Nature appreciation - using the trail/Greenway to view wildlife, vegetation and to enjoy the outdoors.

#### When do people use Trails and Greenways?

Typically trail use is heaviest in the evenings, on weekends, and during warm months. When trails provide convenient access to schools, use by school children also increases during the school year. Figure 5 below describes the anticipated users of the Greenway and their individual needs. Many of the user groups outlined are compatible. Some specific age groups or user groups may require special design considerations. For example, parents and babysitters might sit near tot lots whereas solitary adults might want seating in quieter areas near gardens. Families might prefer some picnic areas and playgrounds, while adolescents want sports activity areas and places to congregate with their friends.

Special interest groups and regional users also have specific needs. School groups would be attracted to areas that provide opportunities to learn about local flora and fauna and Richmond History. Regional recreational users might be attracted for sporting events, bird watching, dog walking, or by having a safe, traffic free place where children could play. The key is to make the trail and Greenway welcoming to all ages and user groups by incorporating design and management schemes that enhance safety and address specific user needs.

<b>GROUP</b>	<b>EXPECTED ACTIVITIES</b>	<b>NEEDS</b>
Children and Families	Socializing, picnics, gardening, stroller walking, playground activities, dog-walking	Enclosed tot lots; playgrounds, seating areas; picnic areas/barbecues; green space; curb cuts (for strollers)
Children	Playing, sports, school trips	Safe areas; opportunities for nature viewing; separate areas for "kid only" playgrounds; separated paths for walking/biking/skating; safe street crossings; safe connections from trails to schools; educational exhibits; historical/cultural information displayed
Adolescents	Bike riding, trick bikes, skate boarding, inline skating, field sports	Dirt trails, "off road" areas; hard trails; recreation amenities such as skating parks; connections to schools
Young Adults (18-25)	Bicycling, inline skating, walking, people watching, hanging out, recreation/sports	Seating areas; opportunities for sports activities; opportunities for work and job training activities
Adults and Seniors	Walking, cycling, socializing, gardening, exercising, nature viewing	Separate areas for walking and biking; seating areas for cards, chess and socializing; community garden areas; landscaping and nature areas; smooth surfaces with few obstacles; ADA accessibility design.
Regional Users/Destination Visitors	Walking, cycling, nature viewing, visiting points of interest	Connections to regional points of interest and activity centers. Staging areas, parking. Varied landscapes.
Commuters	Cyclists and pedestrians accessing local destinations, visiting regional recreational areas, connecting to transit facilities.	Curb cuts; separate walking and cycling paths (efficiency); easy connections to transit; good directional signage on streets leading to and away from Greenway; safe street crossings.
Non English Speaking	All of the above uses	Signage in Spanish and perhaps other languages where appropriate.

Figure 5: Expected Activities by User Group for Richmond Greenway

## Benefits of Rail-trails

Trails and greenways are enormously popular facilities. According to a new study by the National Association of Realtors, trails are the number one residential amenity sought by homebuyers, more popular than golf courses, security gates, and dog parks. Trails owe their strong support to the numerous benefits they provide to a surrounding community. Throughout the planning process, Richmond residents identified new reasons to support a greenway in their community.

**Health Benefits** - Studies show that where trails are built, people are more active. Trails provide opportunities for safe, enjoyable, convenient, close-to-home recreation. The California Department of Health Services calls obesity California's "other energy crisis." Inactivity leading to obesity has been linked to a variety of other health concerns, including heart disease, arthritis, diabetes and colon cancer. Inactivity and poor diet are responsible for 300,000 deaths nationwide every year, second only to tobacco, which they will soon surpass as the leading cause of death in our country. Public health officials are trying desperately to get their communities to be more active. Trails provide a direct solution. A 1996 Surgeon General report found that only 20% of Americans engage in the recommended amount of daily activity—30 minutes of exercise every day of the week. An alarming 25% of Americans are totally inactive. Trails are places for free, leisurely exercise to realize public health goals.

**Environmental Benefits** - Trails can be used as outdoor classrooms. They provide places for educating students about nature and native cultures, and can also be used by wildlife as migration corridors. By encouraging residents to replace short car trips with walking and biking trips, trails can help reduce local emissions of both harmful greenhouse gases and local pollutants that contribute to poor air quality.

**Transportation Benefits** - Traffic congestion is perhaps one of the most serious factors threatening the quality of life of Californians today. Time spent sitting in gridlock is time lost with family, or engaging in recreational activities. Research indicates that many people will not commute by bike unless safe, separate pathways are provided. Rail-trails make excellent corridors for cycle commutes because they are direct, flat, and provide logical connections from outlying areas to urban cores. A U.S. Department of Transportation Study found that 40% of

California's non-commercial trips are less than 3 miles in length. Even novice cyclists can make this distance in about 20 minutes, on a level rail-trail.



*Figure 6: Two cyclists enjoy the level grade provided by the Mill-Valley-Sausalito rail-trail in Marin County, CA*

**Land Use Benefits** - Old railroad corridors often are the last undeveloped parcels of land left in urban communities. With California's burgeoning population and the increasing demand on our land, trails are often the only opportunity to keep open space access that is so important to preserve high quality of life in our communities.

**Community/Social Benefits** - In an increasingly fast paced world, trails create shared public space for a return to neighborly conversation and slower paced, relaxing social interactions. These casual social interactions enhance a feeling of community.

**Economic Benefits** - Trails can revive local economies by increasing tourism. Trails attract people, and people spend money. A National Parks' Service Study found that the average economic benefit of rail-trails was \$1 million per year, with users spending 4 to 11 dollars per day per trail. Trails and open space also increase property values. Businesses cite parks and trails as the number one factor they use in choosing new locations, with good quality of life<sup>ii</sup>.

## Local Quality of Life

In every community, trails represent opportunities to improve quality of life by encouraging non-motorized forms of commuting, providing places for quiet recreation, and promoting increased physical activity. Several local factors indicate that Richmond is especially in need of this improvement. A recent pedestrian safety report published by the Surface Transportation Policy Project named Richmond as the 7<sup>th</sup> most dangerous city in California for pedestrians.<sup>iii</sup> Poor planning has made Richmond hostile to pedestrians, and where pedestrian injuries and fatalities are high, bicycle conditions also tend to be sub-standard. Recent data from the Contra Costa Transportation Authority indicates that Richmond is home to a high proportion of the total bicycle fatalities and injuries in Contra Costa County. Additionally, Richmond residents have proportionally fewer cars than other Bay Area cities—making it of the utmost importance to provide safe biking and walking facilities that connect seamlessly to local and regional mass transit. A full 29% of Richmond residents don't own cars (1990 census in 1999 Welfare to Work Transportation Plan). Richmond's dense population (over 1660 people per square mile) makes it even more conducive to walking and bicycling.

Richmond is also underserved by parks and open space, with only three acres of open space per 1000 residents.

### Demographics

In Richmond, ethnic diversity includes 44% African-American, 12% Asian American, 36% Caucasian, 14.5% Hispanic, 7.6% other. Over 13% of Richmond residents live below the poverty level and almost 16% utilize public assistance. Nearly 33% of Richmond's children do not complete high school, and poverty levels for children are the highest in Contra Costa County.

Richmond's corridor is in dire need of improvement to enhance quality of life in an underserved region, and to address public safety issues. While the possibilities are endless and inspiring, certain factors pose hurdles that are important to address in the planning stage. The following section is intended as a tour of the proposed trail and Greenway corridor, as well as an analysis of the Greenway's potential, and the hurdles to its implementation.

# III. ROUTE PLANS

## Site Inventory/Preferred Alignment Plan

For the purposes of the alignment discussion, the Greenway has been divided into seven sections. Ultimately the Greenway should be an entirely off-road facility with grade-separated structures wherever heavy traffic and difficult street crossings require their use for trail continuity and user safety. Wherever possible, the trail should follow the route traversed by the original railroad tracks, as this alignment was raised above the rest of the corridor to ensure proper drainage, and was initially prepared to withstand heavy loads.

Several areas pose constraints to the development of a continuous Greenway (see Constraints section, p. 26). While these obstacles can all eventually be resolved, due to cost and time constraints, Phase I of the Greenway's development may not represent the alignment that is ultimately preferable. For this discussion, wherever constraints exist, a preferred alignment, and a Phase I, interim alignment are presented. Where no constraints exist, only the preferred alignment is presented.

Through a comprehensive site inventory, the planning team has identified 17 discrete sections of the Greenway which have sufficient characteristics and design challenges to merit their own descriptions. These 17 site inventory sections are included as sub-headings within the larger seven segments of the Alignment plan (see Appendix A for a map of the Phase I Alignment). These site descriptions provide information about the character of the railroad corridor – the preferred alignment – not the adjacent streets that may serve as interim alignments.

### **1. Garrard Blvd. to 2nd Street:**

#### **Phase I Alignment**

The west end of the Greenway begins at Garrard Blvd. The alignment of the Bay Trail along Garrard is in place, and the Richmond Greenway provides a direct connection to this regional facility. Because the .5-mile section of the RR right-of-way from Garrard to 1<sup>st</sup> Street is currently owned by Burlington-Northern & Santa-Fe railroad (BN&SF), the Phase I alignment of this section of the Greenway will include bike lanes on Ohio Street. Ohio Street is identified on the 1978 Richmond Citywide bikeways plan as a proposed bike route. The street is wide enough to

safely accommodate bike lanes, and the at-grade crossing of the railroad right-of-way is accomplished through a crossing arm used to stop cars when trains are crossing the street. Due to encroachment, homeless encampments, prior issues with drug use, and a challenging crossing of a drainage channel along the corridor from 1<sup>st</sup>-2<sup>nd</sup>, the recommended phase I alignment will continue along Ohio Street to 2<sup>nd</sup> street. Bicycle users of the corridor will travel on bike lanes proposed on both sides of Ohio Street. Pedestrians can use the sidewalk on the south side of Ohio Street. Good signage should direct users from the Bay Trail along Garrard to the Ohio street alignment of the Greenway, and vice-versa, as this connection is important for creating a regional system of bicycling and walking facilities.

#### **Preferred Alignment**

In order to ensure that trail users of all ages and ability levels feel safe using the Greenway, the ultimate alignment from Garrard to 2<sup>nd</sup> Street should be an off-road, Class I trail on the property that is currently owned by BN&SF. The proposed trail would run to the north of the northernmost live tracks on the site, separated by a safe distance and appropriate barrier. Such an alignment would avoid a new at-grade crossing of the live railroad tracks. After following the live tracks for a short section, the trail would follow the route that the Burlington Northern Tracks once traversed. The City should present a proposal to BN&SF for an easement to accommodate the Greenway.

#### **A. GARRARD BOULEVARD TO 1<sup>ST</sup> STREET- SITE DESCRIPTION**

Between Garrard and 1<sup>st</sup> Street, the segment currently owned by BN&SF Railroad, the Greenway crosses a wide, long expanse of open space occupied by some active railroad tracks and an inactive spur that ends near 1<sup>st</sup> Street (see Figure 6). On the north side of this parcel is the Atchison Village housing area, which is separated from the ROW by a fence. On the south side of the parcel, across Ohio Street, are various light industrial uses. This is one of several sections of the ROW that already has a park-like feel, with many mature eucalyptus and willow trees. This section offers the most "natural" setting, with a drainage channel emerging at the southern-most section. The ROW is screened from Ohio Street by high oleander shrubs. Near 1<sup>st</sup> Street, under a grove of large eucalyptus trees, is a large patch of dirt delineated by railroad ties. Someone has erected a small shrine next to the trees. This area would provide a good trailhead and staging area. This area also is ideal for an urban wetlands lagoon, as it is partially within the 100-yr flood zone. It has also been discussed as a possible commemoration point for

railroad history in Richmond (including perhaps a historic railroad engine with a kiosk).

#### **B. 1<sup>ST</sup> TO 2<sup>ND</sup> STREETS-SITE DESCRIPTION**

There is a mix of land uses in this section. To the north are primarily residential apartment buildings and single-family homes. To the south there are mainly warehouses with a few storage areas and unkempt yards. There is also a storage yard at the adjacent lot at 1<sup>st</sup> Street. The ROW and railroad berm is flat and straight in this area. There is a vacant parcel at 2<sup>nd</sup> and Ohio adjacent to the ROW (see figure 7). The former railroad ROW in this section is currently owned by the City, and a ten unit parking lot is to be located on it adjacent to 2<sup>nd</sup> Street as a staging area, and also to offset the loss of street parking brought about by class 2 bike lane striping on 2<sup>nd</sup> Street.

### **2. 2<sup>nd</sup> Street to Harbour Way**

#### **Preferred Alignment**

At 2<sup>nd</sup> street, trail users should turn left from Ohio Avenue onto 2<sup>nd</sup> Street, and turn right from 2<sup>nd</sup> Street onto the Greenway corridor. The feasibility of putting bike lanes on 2<sup>nd</sup> Street was not evaluated by this study, but it is a light-to medium volume residential street, and pedestrians can use the sidewalk on the east side of 2<sup>nd</sup> Street to access the Greenway. From 2<sup>nd</sup> Street to Harbour Way, the greenway will follow the original route of the railroad tracks. Ultimately, this section of 2<sup>nd</sup> Street will not be needed, as the Greenway will be routed off street from Garrard to 2nd Street in a future phase.

#### **A. 2ND TO 4TH STREETS - SITE DESCRIPTION**

The various land uses in this section mirror those of the previous section, with residential to the north and warehouses and storage to the south. There is some encroachment onto the ROW at the NW corner of 4th and the Greenway, but the landowner has indicated that he will move his fenced parking area. Although there are currently open ditches in this area with poor drainage (see Figure 8), this is also a prime area for an urban wetlands improvement. This would both improve drainage and help restore this area to a semblance of its original environmental character).

#### **B. 4<sup>TH</sup> TO 6<sup>TH</sup> STREETS - SITE DESCRIPTION**

This section of the ROW directly abuts Lincoln Elementary School. This area is also perfect for urban wetlands enhancement. There is potential to use reclaimed water from the Richmond Wastewater Plant to provide dry weather plant establishment and habitat. A small creek runs along the north side of the ROW next to the school, and drainage issues in this area must be addressed. On the side of the school that directly abuts the ROW is a large asphalt play yard, several temporary classroom buildings and the school auditorium. Along the southern half of the ROW, significant amounts of trash in a drainage gulch have created some issues with water flow. The buildings along the southern edge are mostly corrugated aluminum sided warehouses, 15-20 feet high. There are a large number of mature trees in this two-block section of the ROW, providing nice shade coverage. This section is graded with the exception of several piles of dirt that have been discarded randomly throughout. The overall effect in this area is park-like and peaceful, although the school has reported instances of loitering and illegal activity here (see figure 9).

#### **C. 6<sup>TH</sup> STREET TO 8<sup>TH</sup> STREET-SITE DESCRIPTION**

This area is primarily light industrial in character, with some commercial establishments on the south side. One possibility for off-site parking would be the lot at the northeast corner of 6<sup>th</sup> street and the Greenway. There is a vacant lot between Ohio and the ROW just off 6<sup>th</sup> Street. Culverts channel drainage water along either side of the ROW and under 6<sup>th</sup> Street. Another vacant lot is found at the corner of the ROW and 8<sup>th</sup> Street, which is separated from the ROW by an angled retaining wall a few feet high. Iron Triangle and Santa Fe Neighborhood Councils are found to the north and south of the Greenway respectively.

#### **D. 8<sup>TH</sup> STREET TO HARBOUR WAY- SITE DESCRIPTION**

The two blocks between 8<sup>th</sup> and Harbour are lined with 8-foot corrugated metal fences covered with graffiti. These fences shield the light industrial activity of adjacent businesses. There are a few notable brick buildings within this section that could provide opportunities for restoration and commercial development (see figure 11). Also notable is Nystrom School, located two blocks south of the Greenway on Harbour Way.

#### **E. HARBOUR WAY CROSSING- SITE DESCRIPTION**

At Harbour Way it will be necessary to install a pedestrian activated illuminated crossing, in which motorists are alerted to cyclists/pedestrians by advance warning signs and flashing lights built into the crosswalk. This device also gives pedestrians/cyclists a chance

to alert motorists prior to entering the crosswalk. At this crossing, it may be necessary to relocate the existing AC Transit bus stop to the South, to prevent a bike path/pedestrian obstruction.

### **3. Harbour Way to Marina Way**

#### **Phase I Alignment**

Richmond's City Corporation Yard takes up most of the ROW in this section. It is possible to travel alongside this fenced yard for about two blocks in a narrow grassy area that ends abruptly at a large trailer. The two blocks to the east of the trailer are fenced and currently used for parking. By removing the neighborhood encroachments south of the Corporation Yard parking lot, and by a small parking lot reconfiguration, the bike path can be routed through this narrow area on to the Marina Way over crossing. The Marina Way over crossing will be made ADA accessible via a retaining wall.

#### **Preferred Alignment**

To preserve continuity of the trail, the preferred and ultimate alignment should follow the rail corridor from Harbour Way to Marina Way. The original resolution passed by the Richmond City Council accepting the deed of the corridor from BNSF identified a section of the ROW for the Corporation Yard, and preserved a 40-foot swath for the Greenway. Since that time, the City Corporation Yard has expanded beyond the boundaries identified in the original resolution. An agreement will have to be made with the City to return a 30-40 foot easement through this section for the Greenway. The city's stated intention is to move the Corporation Yard to a Richmond Parkway location within the next three years, so this area could become another staging/parking area with possible rest area facilities (picnic tables, restrooms, drinking fountains, etc).

#### **A. HARBOUR WAY TO MARINA WAY – SITE DESCRIPTION**

The south side of the ROW is a mix of light industrial, vacant lots, billboards, storage yards and a few commercial buildings. There is an active church at the corner of Harbour and the ROW that uses the driveway entrance to the Corporation Yard for parking on Sundays. Many of the light industrial uses to the south have encroached onto the ROW. Behind the church are some quiet residential areas that surround the Corporation Yard (see figure 12).

### **4: Marina Way to 23<sup>rd</sup> Street**

#### **Preferred Alignment:**

From Marina Way to 23<sup>rd</sup> Street, the corridor is at its widest, and faces relatively few constraints. Through this section, the trail should be routed to the north of the corridor, following the route of the railroad tracks as closely as possible. This area is also the location of the proposed Unity Park, which is to contain a gazebo, basketball courts, and various commemorative kiosks.”

#### **A. MARINA WAY CROSSOVER - SITE DESCRIPTION**

The Marina Way crossover represents the highest point along the Greenway (see Figure 13) The bridge is the highest point of the ROW and provides excellent views to the west of Mount Tamalpais and to the east of the Richmond/ El Cerrito hills. It also provides views north towards downtown and south toward the Richmond Inner Harbour and the San Francisco Bay. One proposal received during community meetings was to design this area as an interpretive site. Residents suggested that boulders with placards could provide trail users with historical information about the area. A wing wall approach is planned on both sides of the crossover to bring the approach grades below the required 5% slope.

#### **B. MARINA WAY TO 20<sup>TH</sup> STREET –SITE DESCRIPTION**

This is the broadest segment of the ROW ranging from 75-130 feet wide throughout (see Figure 14). Crossing over Marina Way via an existing bridge the ROW slopes down to this wide and largely vacant stretch. The only street that intersects the ROW through this section is 20<sup>th</sup> Street. Throughout this section of the ROW are clumps of brush, garbage and crisscrossing dirt paths formed by pedestrians and bicyclists from the surrounding neighborhoods. This is one of the most residential areas of the ROW, with single-family houses and apartment buildings abutting the ROW on either side. Four residential streets dead-end at the ROW.

At the northeast corner of Marina Way and the ROW is the two-story Richmond Education Center (former site of the Musicians Union). The Education Center abuts the ROW and a side yard connects to the school's garden. Along the south side of the ROW the most notable feature in addition to housing is a wide unused concrete pad (across from 16<sup>th</sup>). As one moves closer to 20<sup>th</sup> Street the residential fabric on the north side gives way to light industrial uses, one of particular architectural interest. At the northeastern corner of 20<sup>th</sup> Street, the ROW is a vacant lot. Large rocks and boulders are also scattered around the

ROW at 20<sup>th</sup> Street. On the northeast side of the ROW is a parcel that CYCLE and the Iron Triangle Neighborhood Association have designated as a community garden site (see Figure 15).

#### **C. 20<sup>TH</sup> STREET TO 23<sup>RD</sup> STREET- SITE DESCRIPTION**

The ROW runs east three more blocks where it ends at a fence bordering a walkway overlooking 23<sup>rd</sup> Street. Within this three-block section one finds the Post Office Annex and other warehouses on the north side and the backyards of homes on the south side (see figure 15).

### **5: 23<sup>rd</sup> Street**

#### **Phase I Alignment:**

The near-term crossing of this challenging intersection is highly complex, and far from the preferred alignment. The fence just west of 23<sup>rd</sup> street, which separates the rail corridor from a sidewalk just on the other side of the fence, must be removed. At this point, trail users have two options. They can go right (south) nearly to the intersection of 23<sup>rd</sup> and Ohio, make a 180 degree turn onto the sidewalk, which they can take under the BART tracks and Carlson Blvd to the second set of stairs, up to the sidewalk on the east side of Broadway, and then cross to the sidewalk on the east side of Carlson which eventually rejoins the trail. The other option is to turn left onto the sidewalk, take a flight of stairs down to the 23<sup>rd</sup> street sidewalk, take the second set of stairs, and then continue along the alignment previously described. Neither of these options is convenient or preferable, and the importance of a grade-separated structure cannot be overstated.

#### **Preferred Alignment:**

A grade-separated crossing of this extremely complex intersection is vital to the overall functionality and connectivity of the Greenway. Four streets and two sets of railroad tracks come together at this intersection, making this intersection a challenge to negotiate. The grade separated crossing should take off from the corridor just west of 23<sup>rd</sup> street, clear 23<sup>rd</sup> street, the BNSF tracks, and Carlson Boulevard, and touch down just south of the BART tracks, delivering trail users safely back to the right-of-way (see Figure 16). Congressman George Miller has submitted a Member Request to earmark \$3 million through TEA-21 re-authorization to fund this bridge.

### **6: 23<sup>rd</sup>/Carlson – 41<sup>st</sup> Street BART Crossover**

#### **Preferred Alignment**

For this section, the rail ROW is narrow and is shared with the BART trains. Design of the Greenway will preserve the minimum setback of 8.5-foot (9.5-foot on curves) from the centerline of the rails to the nearest edge of the trail as required by the California Public Utilities Commission. The Greenway corridor is separated by fencing, vegetation, and a height differential for much of the right-of-way.

#### **A. 23<sup>RD</sup>/CARLSON BOULEVARD TO 33<sup>RD</sup> STREET- SITE DESCRIPTION**

Exiting off Carlson one enters a triangular shaped section of surplus BART property. At this point the elevated BART tracks begin to merge alongside the ROW and descend to grade. This portion of the BART tracks is noisy as the trains come around the curve. Within the surplus land near Carlson Blvd, community activists have started planting a series of trees and making other improvements. Adjacent to the elevated tracks the ground cover is loose gravel giving way to patchy grass and a few trees. There is a narrow concrete drainage channel cutting across this lot. This section is separated from the Richmore Village residential area by the elevated BART tracks. Starting one block east of the triangular parcel the ROW becomes constricted and is approximately 40 feet wide. The BART tracks run parallel on a raised berm on the north side of the ROW and are separated from the ROW by a fence. The backyards of homes border the southern edge of the ROW in this section. Because the ROW was not graded in this section after abandonment, the ROW is higher than these yards. Because of width constrains in this section of the ROW, only a trail can be accommodated, with limited landscaping or trees. Some additional fencing or screening from shrubs will also probably be required to address privacy concerns of adjacent homeowners (see figure 17).

#### **B. 33<sup>RD</sup> STREET WALKOVER – SITE DESCRIPTION**

The ROW in this section passes under the Harry Ells Bridge, an existing pedestrian facility linking neighborhoods to the south with Nicholl Park on the north side of the BART tracks. Currently this bridge functions well for pedestrians, but may need to be retrofitted to accommodate bicycles, particularly as the new Ells Middle School to the north of the Greenway draws students from residential areas to the south (see Figure 18).

#### **C. 33<sup>RD</sup> STREET TO 37<sup>TH</sup> STREET CROSSOVER – SITE DESCRIPTION**

Through this section, areas to the South of the Greenway are primarily residential, and several streets dead-end into the ROW, providing future opportunities to connect to the Greenway. Currently, only 35<sup>th</sup> Street provides access to the Greenway. At 33<sup>rd</sup> access to the ROW is blocked by a barbed wire fence. At 35<sup>th</sup> the berm is approximately six feet high and there is a small drainage ditch running along the ROW. The north side has a wide drainage channel along this entire section. On the north side of the BART tracks is the newly constructed Ells Middle School. At 37<sup>th</sup> street, there is an existing grade-separated structure that has been determined to be suitable for trail use (see figures 19, 20). After two blocks at this point the ROW begins to open up as the BART tracks make a slight descent to cross beneath the ROW (see figure 21).

## **7: 41<sup>st</sup> Street to San Pablo Avenue**

### **Phase 1 Alignment**

The ROW remains narrow for this section, and the Greenway turns northward prior to the I-80 tunnel, to lie at the base of the Caltrans fill slope within the Caltrans ROW surrounding I-80. The bike path then meets MacDonald Ave., which will contain an illuminated crosswalk at this point for westbound cyclists/pedestrians. At this point, the Greenway becomes a 4' wide class 2 striped bike lane, adjacent to the existing MacDonald sidewalk. Adjustments to existing lane widths and some elimination of parking will accommodate this improvement. The class 2 bike lane will allow safe crossing at the San Pablo intersection, after which the class 2 bike lane will head southward along Key Blvd., to join with the terminus of the existing Ohlone Trail in El Cerrito. Once again, safe crossing of MacDonald and Key are provided by existing crosswalks, and bike lane striping is accomplished by some elimination of parking. Existing sidewalks will accompany the bike lane throughout this class 2 portion.

### **Preferred Alignment**

The preferred ultimate alignment is through the I-80 tunnel and Adachi parcel containing Baxter Creek. This alignment is dependent upon successful negotiations to purchase the Adachi parcel, which may be financed in part by grant funds. This preferred future alignment would emerge from the tunnel near San Pablo Ave. Trail users would be routed across San Pablo Ave. via the nearby Conlon Ave pedestrian crosswalk, with a future goal of an elevated bicycle and pedestrian

bridge. Once across San Pablo Ave., the bike path is in El Cerrito property recently purchased for the purpose of connecting the Richmond Greenway with the Ohlone Greenway to the South. Signs from San Pablo will direct trail users to the Ohlone Greenway. This alignment will be an improvement over the Phase 1 Alignment, which requires two signalized intersection crossings and one mid-block crossing. Should there be a delay in the implementation of the preferred alignment, signal upgrades favorable to cyclists are recommended for the Phase 1 alignment.

### **A. 41<sup>ST</sup> STREET CROSSOVER TO TUNNEL- SITE DESCRIPTION**

At 43rd Street, the BART tracks pass under the right-of-way (see figure 22 and 23). From 41<sup>st</sup> Street to 45<sup>th</sup>, the land use to the south of the Greenway is primarily residential, giving way to commercial uses from 45<sup>th</sup> to San Pablo Avenue. After 41<sup>st</sup> Street the graded berm flattens as well. On the south side abutting the ROW is a storm drain with rocks, trees and a small concrete pad. At the corner of 42<sup>nd</sup> is a vacant lot. Past 42<sup>nd</sup> the ROW continues across a small bridge over the BART tracks that is enclosed with high protective fences. At this point, moving east, the ROW parallels the former Montgomery Ward's lot. A gate opens here onto the lot, which is close to the old auto repair center and a vacated building. People routinely use the bridge to cross to residential areas on the south side of the ROW. From this point to the I-80 tunnel under crossing there are a number of trees, grass and some landscaping around the freeway edges. The lot on the south side of the ROW next to the freeway is home to the Sakai Nursery.

### **B. TUNNEL UNDER I-80 (APPROX. 150 FEET)-SITE DESCRIPTION**

Constraints associated with this tunnel, approximately 150 feet long, are mainly associated with security issues for trail users (see figure 24). To address security concerns lighting should be installed both inside and at the entrances to the tunnel. In addition no high or shrubby landscaping should be done around the entrances that would block views through the tunnel. Emergency call boxes could also be installed in the tunnel or at the entrances. Increased patrolling and trail user traffic are also expected to improve perceived and actual safety.

### **C. TUNNEL TO SAN PABLO AVENUE-SITE DESCRIPTION**

As the ROW emerges from the tunnel on the east side the ROW opens into a wide grassy area extending to the west edge of San Pablo Ave, a major commercial arterial (see figure 25). A portion of the area is currently vacant and is owned by Adachi Associates and BART, but

sufficient public right-of-way is owned by the City to create a standard-width trail. There is some development pressure in this area. On the south side of the ROW is a Taco Bell and on the north is a small deli and grocery store. Also within one block of this area are a Bank of America, a gas station, an Albertson's, and a mini-mall to the south. Although the Adachi property has been identified as a future extension for Home Depot there is an easement through the property that will allow the Greenway/trail to continue through to San Pablo. Gravel "turn around" cuts into the grassy open space and creek area allow cars to approach the ROW from the south. At this site the BART tracks pass under the freeway through a separate tunnel and then rise in elevation to approach the El Cerrito Del Norte station. A number of homeless encampments and a dirt path are found under the BART tracks.

# Photo Tour of Greenway

Figure 6: Garrard Blvd. to 1<sup>st</sup> Street



Figure 7: 1<sup>st</sup> Street to 2<sup>nd</sup> Street



Figure 8: 2<sup>nd</sup> Street to 4<sup>th</sup> Street



Figure 9: 4<sup>th</sup> Street to 6<sup>th</sup> Street

Figure 10: 6<sup>th</sup> Street to 8<sup>th</sup> Street



Figure 11: 8<sup>th</sup> Street to Harbour Way



Figure 12: Harbour Way to Marina Way



Figure 13: Marina Way Crossover

Figure 14: Marina Way Crossover to 20<sup>th</sup> Street



Figure 15: 20<sup>th</sup> Street to 23<sup>rd</sup> Street



Figure 16: 23<sup>rd</sup> Street to Carlson Boulevard



Figure 17: 23<sup>rd</sup> Street/Carlson Boulevard to 33<sup>rd</sup> Street

Figure 18: 33<sup>rd</sup> Street Walkover



Figure 19: 33<sup>rd</sup> Street to 37<sup>th</sup> Street



Figure 20: 37<sup>th</sup> Street Crossover



Figure 21: 37<sup>th</sup> Street Crossover to 41<sup>st</sup> Street

Figure 22: 41<sup>st</sup> Street Crossover



Figure 23: 41<sup>st</sup> Street Crossover to Tunnel



Figure 24:Tunnel under I 80



Figure 25:Tunnel to San Pablo Avenue

## Opportunities and Constraints

### Opportunities

#### A. SUMMARY

The abandoned Santa Fe Railroad Corridor through Richmond presents the opportunity to create a rail-trail that will serve alternative transportation and community enhancement goals. The corridor is unique because it has relatively few street crossings and very little encroachment onto the corridor by adjacent landowners. The primary opportunities include using the corridor to connect to other trails and open space; as an alternative transportation route for walking and bicycling; as a non-motorized access to nearby community and civic resources; as a public space that can "link" or complement many existing community activities; as an enhancement to City redevelopment and housing plans. Finally, this project has the potential to bring significant economic benefits to Richmond by cleaning up a blighted area and attracting new small business and homeowners to the area. Listed below are specific opportunities voiced by the community through the public planning process. Every effort should be made to realize these opportunities in future phases.

#### B. OPEN SPACE LINKAGES

The Richmond Greenway offers a unique opportunity to fill an existing gap within the local and regional networks of open space. The Greenway will provide a significant east-west open space corridor linking many city parks, regional parks and existing or planned trails. The Greenway will also link communities in the eastern hilly section of the city to the shoreline. The corridor has been designated as open space in the open space element of the City's general plan. Clear signage from the Richmond Greenway should direct users to these open space linkages. Specific linkages include:

1. **Ohlone Greenway** - existing Greenway runs through El Cerrito to Berkeley and starts at San Pablo Blvd and Conlon Ave. in El Cerrito.
2. **San Francisco Bay Trail connector** - planned connection to five miles of Bay Trail up Garrard Blvd. connecting with MacDonald Ave. and Wildcat Creek.

3. **Miller Knox Regional Park** and Shoreline at the west end.
4. **Nicholl Park** in Richmond at 33<sup>rd</sup> Street.
5. **Martin Luther King Park**, south of the Greenway corridor at Harbour Way and Cutting Blvd.
6. **Atchison Village Park** at the west end of the Greenway corridor near 1<sup>st</sup> Street and Collins Street.
7. **Nevin Center and Park** four blocks north of the Greenway up 4<sup>th</sup> Street.
8. **Richmond community garden** at the corner of Harbour Way and MacDonald Ave.

#### C. NON-MOTORIZED TRANSPORTATION SYSTEM & PUBLIC TRANSIT LINKAGES

Due to its central location, this Greenway has the potential to become the main artery of a local non-motorized transportation system in Richmond. It also provides excellent opportunities to link to regional transit. Clear signage should alert users to other streets designated for bicycle use, whether Class 2 or Class 3, and to major transit hubs, including BART and Amtrak. Specific connections include:

1. Connection to the Richmond BART station at 16<sup>th</sup> Street and Macdonald Ave. north of the Greenway corridor and to the El Cerrito Del Norte BART station at San Pablo Ave. and Cutting Blvd.
2. Connections to various regional transit lines including AC Transit.
3. Links to the Amtrak Station at the Richmond BART station
4. Class I east-west bicycle and pedestrian route, included in the Contra Costa County bicycle plan.
5. This trail provides an opportunity to improve upon Richmond's 1978 Bike Plan, which calls for bike lanes on Ohio Street.

Further, there are opportunities to improve public safety, by implementing a monitoring system with paid patrol staff and landmarks to orient people and locate attractions along the Greenway.

#### Project Merits Widely Acknowledged

Strong local and regional support is indicated by the number of plans that currently contain the Greenway project. These include: Contra

Costa County Bikeways Plan, to be adopted Fall 2002; Bay Area Regional Bicycle Plan; City of Richmond General Plan, Circulation Element, Proposed Route, and; the San Francisco Bay Trail Plan.

#### **D. CIVIC RESOURCE LINKAGES**

There are several opportunities to connect the Greenway to civic and community-based resources within the City of Richmond. The concept for this project includes the Greenway as both a destination in and of itself and providing for a safe and attractive route by which to access other centers of community activity. Ideally landscaping improvements could be made along the streets that provide connections to community resources in order to maintain the character and feeling of the Greenway along these streets. At a minimum, clear signs should alert Greenway users of the location of common destinations. This is particularly important if children are to use the Greenway to get to schools. These signs are critical to realizing the Greenway's potential as a non-motorized transportation route. The following resources and/or activity centers are within two to four blocks of the Greenway:

1. Nine schools, including three that are directly adjacent to the Greenway: Lincoln Elementary School at 6<sup>th</sup> Street; the Richmond Education Center at Marina Way; and the new Ells Middle School next to Nicholl Park near 34<sup>th</sup> Street. Nystrom School is two blocks south of the Greenway on Harbour Way. At 33<sup>rd</sup> Street, a pedestrian over crossing of the Greenway and BART tracks currently provides a crucial link to the Ells Middle School. Residents suggested retrofitting this bridge to allow bicycles smooth access.
2. Commercial areas along San Pablo Ave. on the east end of the Greenway
3. Commercial areas on Macdonald Ave., especially between Harbour Way and 18<sup>th</sup> Street.
4. Richmond City Hall and Civic Center. The City Hall and plaza are the site of many cultural and community events, including the weekly farmers market. A connector route could be created on

Broadway from the 23<sup>rd</sup> Street/Carlson Blvd. intersection.

5. The Richmond Museum of History is located four blocks north of the Greenway on 4<sup>th</sup> Street at 400 Nevin Ave. Museum staff have indicated an interest in participating in the development of cultural and historic interpretive sites along the Greenway corridor.
6. Richmond Art Center, located in Richmond's Civic Center Plaza. The 25,000 square foot facility houses classes in painting, weaving, ceramics and jewelry/metal arts for children, youth, and adults, as well as an exhibition program showcasing work by emerging and mid-career Bay Area artists in 4 galleries and a sculpture courtyard. Several sections of the Greenway were identified as potential locations for community murals to improve aesthetics, including the stretch from 6<sup>th</sup> to 8<sup>th</sup> Streets.
7. The Richmond Health Center is located on the north side of the ROW at 38<sup>th</sup> Street. During the planning process, health officials identified the Greenway as a potential boon to public health in Richmond, and suggested creating a par course outdoor physical activity circuit along the Greenway.
8. Social Security Administration is four blocks north at 1221 Nevin Avenue at 12<sup>th</sup> Street.
9. The West Contra Costa County YMCA is two blocks south of the Greenway at 20<sup>th</sup> and Florida.

#### **E. COMMUNITY ACTIVITY LINKAGES**

Past perceptions of the abandoned open space as an easy place to get away with criminal activities will be addressed by inviting greater use by the broader local community in site events and festivities associated with the Greenway's design and development. Making the process fun, inclusive, and effective will renew public spirit as well as replenish the ecosystem. Civic activities will displace an anti-social legacy. Tangible improvements will attract more people to be involved. Involving local artists, multicultural mentors, youth teams, community elders, non-profit groups, and public agency partners will build a spirit of cooperation in the long run.

There are many ongoing community-based advocacy efforts in Richmond. Many of these are directly complementary to the overall Greenway vision and plan. By uniting the Greenway with concurrent City improvements, project partners hope that the network of civic improvements become mutually beneficial. These include:

1. Creek restoration and wetland habitat restoration activities -The Friends of Baxter Creek (FOBC) are working at the east end of the Greenway around San Pablo Ave. to design and build a creek-side gateway park between Richmond and El Cerrito. The City of El Cerrito has recently signed with BNSF to purchase an easement over the property. The Urban Creeks Council has expressed interest in helping with creek restoration and clean up of the small waterway adjacent to Lincoln Elementary School. There is also potential to create an urban wetlands lagoon west of 6<sup>th</sup> street, particularly between Garrard Boulevard and 1<sup>st</sup> Street—the widest segment of the rail corridor.
2. Community gardens - CYCLE has plans to work with local youth to create a community garden at a designated site on the Greenway at 20<sup>th</sup> Street.
3. Use of the trail/Greenway as sacred space and a place of meaning - It is possible to create special places through informal and ad hoc uses and activity. These uses often involve encouraging special events and activities on the site and engaging community members in public art projects. Opportunities for this kind of use of public space are often overlooked in conventional design and planning processes. These kinds of activities provide an important way to encourage community involvement and can facilitate and promote peaceful, respectful and introspective use of public common space. By encouraging this type of positive activity a community can often channel negative activity (such as graffiti painting) into more a positive expression, such as a mural.

One of the clearest examples of this kind of informal place creation on the Greenway site is the place at 1<sup>st</sup> Street where someone placed a small "memorial shrine". In many cultures shrines become the markers of special spaces to be revered and respected and providing opportunities for this kind of personal and cultural expression may be one way to build community

participation in the ongoing care of the Greenway. Another example is the activity center and workshop that has been established alongside the Greenway ROW in the City Parks and Recreation Department parking lot (near Nicholl Park) by local woodcarver and craftsman Harken Lucero. At this work site Harken is engaged in ongoing work to create totem poles. The wood carving activity often attracts youth from Nicholl Park interested in what Mr. Lucero is doing. A series of 20-30 foot totem poles at various stages of development, many of them beautifully finished and painted, lie about the activity center/workshop and have remained safe and unmolested despite the fact that the site is open and accessible with no security. This kind of informal activity will be incorporated into the overall Greenway design in order to use and celebrate the talent of local artists and provide ways to incorporate artworks into the Greenway design.

4. Unity Park - Throughout the planning process, community residents have expressed a desire to utilize the corridor to create recreational amenities, public gathering sites and community gardens. The culmination of the feedback was a proposal to create Unity Park between Marina Way and 23<sup>rd</sup> street. This proposal specifically included basketball courts, soccer fields, picnic tables, commemorative areas, totem poles carved by a local artist, and a gazebo. Unity Park was a high priority for residents as there are relatively few community gathering sites in Richmond, and should be implemented in future phases.

## F. COMMUNITY DEVELOPMENT AND PLANNING LINKAGES

The Greenway Project complements several projects that are underway in Richmond. Some of these projects include:

1. Richmond BART Transit Village: The large BART parking lot and bus transit center in Richmond are the focus of a new transit oriented development called the Richmond Transit Village. The plan calls for townhouse development, a parking garage and commercial areas. This project has been identified as a centerpiece of downtown Richmond's revitalization efforts and will bring in hundreds of new residents and provide more opportunities for regional BART users to access the Richmond

Amtrak. The Central Richmond Greenway would provide an important link to this project, particularly if bike lanes and pedestrian improvements are made along connecting streets.

2. **HOPE VI Housing Development:** Richmond has received a \$35 million HUD grant to implement a Hope VI housing plan. The center of the Hope VI plan is located at the Easter Hill Housing Development, several blocks south of the Greenway/trail corridor.
3. **Main Street Initiative:** Richmond is currently undergoing a main street redevelopment planning process that will complement the Greenway development. Greenway project partners have met with main street planners to ensure connections between the main street corridor and the Greenway and to include signs directing people to the Greenway.

#### **G. REVENUE GENERATION OPPORTUNITIES AND LINKAGES**

There are many opportunities to use surplus or vacant land for revenue generating activities and small-scale commercial activities in addition to official City redevelopment activities. Several vacant lots could be used to develop trailside businesses like bike shops, cafes and restaurants. Other sites would be suitable for new housing development, particularly the large vacant parcel opposite the Greenway ROW at 15<sup>th</sup> and 16<sup>th</sup> Streets.

A Technical Report on the ROW produced in 1992 recommended that surplus land owned by the City be sold or leased to generate revenue for Greenway management. This report identified the intersections of 2<sup>nd</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> and 23<sup>rd</sup> Streets as good opportunities. At this time it appears that 2<sup>nd</sup>, 8<sup>th</sup> and 20<sup>th</sup> Streets still present good opportunities for some sort of commercial or residential development. Regardless of whether or not this approach is adopted, care should be taken that development plans are compatible with Greenway activity and do not interrupt views or create obstacles to direct connections between various sections of the Greenway.

In some areas along the Greenway ROW adjacent property owners have encroached onto the ROW. The 1992 Technical Report also recommended that the City either reclaim these sites or offer to sell

them to the property owners and use new tax revenues to fund Greenway maintenance.

#### Constraints

##### **A. SUMMARY**

This project has some constraints, primarily due to its location in a very urban area. Though there are few street crossings, a number present real challenges for the overall utility of the Greenway corridor. None of these, however, would prevent the project from moving forward in the near term. Drainage has been a problem on the corridor that will need to be addressed as part of the overall project planning and development. Most of the constraints in this project are related to social and political issues (concern over safety and long-term funding) that will have to be monitored very closely as the project moves forward.

##### **B. PHYSICAL CONSTRAINTS**

Most of the physical constraints have alternatives that could be implemented in the near term, with plans for added improvements in later phases of Greenway development. The primary physical constraints include:

1. **Encroachment onto the ROW from North and South between Harbour Way and Marina Way** - see Site Inventory, p 13
2. **Tunnel under Interstate-80** - see Site Inventory, p.16
3. **Drainage Issues** - Site visits and neighbor comments confirm that drainage is a problem along the outside edges of the corridor at various points along the length of the Greenway. Design and construction of the Greenway should alleviate this problem. Drainage problems are primarily seasonal and have been a consistent problem for residents adjacent to the corridor for many years.
4. **Street Crossings** - There are a few areas where special efforts should be made to improve crossing safety and provide for a continuous trail from Garrard Blvd. to San Pablo Ave. In many ways, the creation of the Greenway actually provides an opportunity to

significantly improve street crossings that are already used by residents but are not currently optimal in terms of safety. Street crossing improvements should be made at the following intersections:

6th Street Crossing/Lincoln Elementary School: Parents regularly use this street to drop off and pick up children from school. Students dropped off on the west side of 6<sup>th</sup> often cross to the school mid-block where there is significant traffic at the beginning and end of the school day. The planning team had conversations with the school Site Committee and the principal to look at how to make the crossing safe for children. Some consideration has been made to acquire and develop as school parking a vacant parcel on the east side of 6<sup>th</sup> that is adjacent to the Greenway ROW. The community expressed enthusiasm for creating a seating area where the Greenway hits 6<sup>th</sup> Street designed for parents waiting to pick up their children. Final design should also provide safe crossings at 2<sup>nd</sup>, 4<sup>th</sup> and 8<sup>th</sup> Streets, because these streets are in the direct vicinity of Lincoln School, and are likely to be used frequently by school children once the trail is open. This crossing should initially consist of a striped crosswalk with advance warning signs to motorists, accompanied by stop bars and stop signs for the Greenway legs of the intersection. At a future date, these intersections should be evaluated for possible upgrade to the illuminated crosswalk standard.

Harbour Way Crossing: This is a busy and wide street. As previously stated, this is a higher volume intersection that warrants an illuminated crosswalk system, with a possible future upgrade to a fully signalized crosswalk.

23<sup>rd</sup> & Carlson Blvd. Crossing - see Site Inventory p.14

San Pablo Ave. Crossing: In order to provide a direct connection to the Ohlone Greenway in El Cerrito, part of the long-term vision for the Central Richmond Greenway, crossing of San Pablo needs to be addressed. San Pablo is a very busy commercial arterial. Currently people must go to signalized intersections to the north or south. People also cross mid-block and use the median strip as a waiting point. Future planning should consider developing a more controlled mid-block crossing or a grade separated crossing of this road.

5. **Crossing Live Railroad Track at West End** - Just west of 1<sup>st</sup> Street toward Garrard tracks still in use by BNSF Railroad cross the corridor and Ohio Street. Train traffic is slow moving and infrequent and cars and pedestrians traveling down Ohio Street regularly cross the at grade tracks. Preliminary trail/Greenway design plans call for the trail alignment to use Ohio Street for this section, and use the existing crossing. City staff should approach BNSF with a proposal to obtain an easement to connect the Richmond Greenway with the Bay Trail at Garrard Blvd (see Preferred Alignment p.12).
6. **Crossing BART Tracks to Access Nicholl Park and Ells Middle School** – see Site Inventory p.15

### C. COMMUNITY CONCERNS

1. **Personal Safety** - This was identified by most participants in the planning effort as a critical concern. Currently the corridor sees regular illegal or unwanted activity such as dumping, drug dealing, graffiti, prostitution, loitering and even a report of a mugging. Residents worry that creating a trail might encourage more of this kind of activity. This is a common concern raised in virtually every community in which a rail-trail has been built. However, experience around the country shows that by incorporating safety concerns into the design and by creating a nice and well-used public space public safety is enhanced. Design elements that address public safety include enhanced lighting, clear sight lines, eliminating "hiding" places created by structures or vegetation, telephone call boxes, improved fencing in certain areas and clear signage indicating that the space is not abandoned. Management plans that call for regular patrolling by police and volunteers also enhance safety.
2. **Lighting** - While residents want more and better lighting throughout the corridor there is also concern that lights will intrude into houses at night. Residents adjacent to the corridor east of Carlson Blvd., where the railroad berm is raised above the level of backyards and homes, were particularly concerned about this. The lighting plan should make efforts to reduce glare, light trespass and be energy efficient.
3. **Privacy** - Residents east of Carlson Blvd. are concerned that trail users will be able to look into their back yards and homes

because the berm is raised above the level of their yards. Current design plans include enhanced fencing along this section to address these concerns. Future phases can include vegetation to further ensure privacy of adjacent residents.

**4. Ongoing Opportunity for Community Involvement -**

Residents have generally been supportive and excited about the possibility of the Greenway project moving forward. Yet there is some cynicism that once the initial planning is completed, opportunities for community input will end. Efforts should be made to continually involve and update residents about the progress of Greenway development.

**5. Parking on Abutting Streets -**

Residents of streets that dead-end into the Greenway corridor expressed some concern that their streets would become default parking lots for residents seeking access to the Greenway. Of specific concern were people parking their cars and perhaps loitering at the entrances to the Greenway, littering and/or drinking. Residents suggested collaboration with the Engineering Division to create and enforce short-term parking zones, or to enact a special permitting system to restrict parking on these streets to neighborhood residents. Future phases should include meetings with the Engineering Division to identify a solution that is amenable to these residents.

# IV. DESIGN GUIDELINES

## Introduction

Through an extensive community outreach process, project partners have identified several distinct priorities for design of the Richmond Greenway. The design guidelines identified in this chapter serve to: 1) ensure that the trail meets the needs of all trail users, particularly those using the trail for transportation purposes; 2) create an environment of real and perceived safety; 3) satisfy residents' desires for more open space, community gathering areas, and additional recreational amenities; and, 4) define the ecological goals of the implementation process.

## Path Design

In order to maximize use and efficiency of the path while minimizing user conflict, the Greenway design is consistent with all of the current standards and guidelines outlined by state and federal transportation agencies. Standards for planning, design and implementation were derived from the following sources:

1. American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 1994
2. Caltrans Highway Design Manual, Chapter 1000<sup>iv</sup>
3. USDOT, Manual on Uniform Traffic Control Devices<sup>v</sup>
4. AASHTO, Guide for the development of Bicycle Facilities, 1999
5. Trails for the 21<sup>st</sup> Century: A Planning, Design and Management Manual for Multi-Use trails.<sup>vi</sup>

None of these documents are requirements per se, with the exception of Caltrans Chapter 1000, and every greenway project is unique. These documents are meant primarily as guidelines; the expertise of trail engineers and designers hired for the project will provide the final say on trail design.

**Recommended Width** - The path will meet and exceed current standards for bikeway design. Caltrans minimum recommended width is 8 feet, with a suggested 2' lateral clearance and 8' vertical clearance.

Due to its urban location, and high projected use, the main trail will consist of a 12-foot wide asphalt concrete section over an aggregate base. Where possible, a 4-foot wide crushed gravel trail is also proposed. In certain confined areas, the width may decrease slightly, but planners intend to achieve Caltrans 8' minimum wherever possible.

**Setback** - For a section of the corridor, trail users will share the right-of-way with BART trains. The trail's design will adhere at a minimum to the California Public Utilities Commission's (CPUC) requirements for an 8.5-foot setback (9.5 on curves), defined as the centerline of the rails to the nearest edge of the trail.

**Fencing** - Fencing is recommended along certain sections of the trail to improve safety and clarify site boundaries. Much of the corridor has already been fenced by adjacent residents, gaps should be filled in. Efforts should be made to include vegetation to improve aesthetics in areas where fences are dilapidated or unsightly.

**Intersections** - Well-designed intersections are key to a successful trail. The design of these important links can impact the overall functionality of the greenway more than any other single improvement associated with implementation. Intersection design should seek to prioritize smooth and seamless connections, while maximizing safety for all trail users. Determinations of right-of-way at a particular intersection should be made according to average use. If it is estimated that more traffic will be crossing a particular street while using the Greenway, trail users should receive right-of-way priority, and intersecting cars should be given a stop sign. If, alternatively, the trail crosses a heavily trafficked street, trail users should yield, or be accommodated with a grade-separated structure.

Curb cuts will be required at the trail's mid-block crossings with each of the intersecting streets. In addition, curb cuts should be constructed at the abutting streets to ensure access onto and off of the trail for disabled users. Bollards, clear signage, and pavement striping should be used to alert trail users to upcoming intersections, and to slow trail users when approaching an intersection. The Greenway should intersect crossing streets at right angles and vegetation should be maintained to preserve long-distance sight lines for trail and road users.

For Phase 1, bikeway crossings at 2nd St, 4th St, 6th St, 8th St, and 20th St will include a painted stop bar and stop sign for bikes and pedestrians. Vehicular crossings will be striped and signed as for a school crossing, with a yellow hatched crosswalk (over asphalt), elevated 0.10', with "SLOW SCHOOL CROSSING" and the W66 and W66a signs both ways as an advanced warning. Class 2 bike lane crossings at Ohio St (Near 2nd) and Key Blvd. will include signage and striping to indicate "PED XING" with W54 signs accompanying the striping in both directions. Harbour Way and MacDonald Crossings will include a pedestrian activated illuminated crosswalk, with flashing advanced warning signs also activated by the pedestrian. These crossings will also include painted stop bars and stop signs (where appropriate), and "PED XING" striping. At signalized intersections, the bikeway will include bicycle loop detectors. In future phases, striped crosswalks will be upgraded to include textured concrete crosswalks, to improve safety and aesthetics. Fully signalized intersections, grade separations, and the creation of street cul de sacs to prevent car traffic from crossing the Greenway will be investigated as means to improve the transportation value of the corridor.

**Striping and Signage** - For all users, clear multi-lingual signs that designate orientation and points of interest are very important. All streets need clear markings and crossing facilities. A yellow centerline stripe may prove useful at separating users on busy sections of the trail, or areas with restricted sight lines. Sign type and placement will adhere to guidelines set forth by FHWA.

Signs and striping should be used extensively to alert drivers to the presence, and right-of-way, of trail users, where appropriate. Signs well before the intersection of the trail with the street should alert drivers to the trail crossing ahead. A recent study published by the Federal Highway's Administration highlights the importance of increasing the visibility of uncontrolled pedestrian crossings of streets and roads<sup>vii</sup>. Contrary to the widespread belief among some traffic planners that pavement striping at uncontrolled intersections gives pedestrians a "false sense of security" and should therefore be removed, this study concludes- "the more the better". In planning pedestrian and bicycle crossings, especially at mid-block, every effort should be made with bright striping and signage to alert drivers to their presence. Eventually project partners intend to construct grade-separated crossings at the busiest intersections, to ensure continuity of the trail, and safety of all users. Speed humps or tables may be an effective way to slow traffic on

intersecting streets while simultaneously drawing their attention to the trail.

Additionally, signs should be placed along the Greenway's length to direct users to adjacent streets and common destinations. Each street that intersects the trail should be identified with a numbered street sign. Excellent signage locating restrooms, food services, repair shops and common destinations is essential for an effective transportation route. Similarly, the Greenway should be well signed from downtown and other common trip generators in Richmond. Just as I-580 is well signed from surrounding streets, so too should the Greenway be easy to find.

**Traffic Calming** - Traffic-calming slows down automobile traffic and makes the road safer for other users of the right of way, such as people walking or bicycling. Numerous studies have demonstrated the value of traffic calming for reducing fatalities. A recent international study showed that roundabouts at intersections reduce collisions by an average of 82 percent<sup>viii</sup>. Other traffic calming elements include speed humps, roundabouts, stop signs, street narrowing, speed limit signs, and police enforcement. The speed hump program, for example, is designed for neighborhoods with low volume/high speed traffic problems. In addition to transportation engineering fixes, creative solutions for slowing traffic, such as planting trees, lawn signs, and community enforcement campaigns can also be effective. Traffic calming elements are recommended on all streets that intersect the Greenway, especially on streets that are likely to be used by bicyclists and pedestrians to access common destinations from the trail.

**Connecting Corridors** - Project partners envision the Greenway as the spine of a local non-motorized transportation system, with local "bicycle-friendly" streets and sidewalks providing connections to common destinations. If the greenway is to become the transportation corridor that residents desire, a network of connecting streets must be identified, and where possible, improved concurrently with the Greenway.

Pedestrians will also take advantage of "short cuts" to specific destinations and no unnecessary obstacles should be placed to interrupt use of short cuts. This is especially important when designing intersections with local streets. Despite directional signage and design, pedestrians especially will take the shortest distance between two points, so designers must anticipate this behavior and accommodate it.

**Structural Integrity** - Construction of the bike path will adhere to Caltrans standards for minimum asphalt thickness. As with road construction, sub-base thickness should be determined by soil condition.

**Surface Materials** - The needs of pedestrians, bicyclists and other users are distinctly different. Walkers and joggers often prefer soft surface trails that are separated from faster moving bicycle traffic. Bicyclists and skaters prefer/need hard surface trails and often prefer separation from pedestrians, people with strollers, dog walkers, etc. The preferred material for the Richmond Greenway is Asphalt Concrete, with an 8" gravel aggregate base. Unpaved shoulders will be surfaced with crushed stone to accommodate walkers and joggers.

**Public Art** - One vision for the Greenway identified by Richmond residents was a "linear outdoor museum". Local artists have offered to display their works, adding another dimension to the Greenway's potential. Signs pointing towards the Greenway from adjacent streets may be able to evoke the theme of public art developed along the corridor.

**Long-Distance Sight Lines**- On the Greenway, assure visibility with open sight lines, with no hideouts, and add sensitive lighting.

**Tunnels** - Well-lit, carefully monitored and maintained tunnels can improve the continuity and experience for all trail users. Special attention should be paid to ensuring that the tunnel along the Richmond Greenway is brightly lit, kept clean, and achieves a high degree of real and perceived safety for all users.

**Night Lighting** -To deter illicit activity, and ensure a sense of security for trail users, lighting standards should be placed throughout the Greenway. Standards will not be required where the Greenway traverses adjacent streets. Special care should be paid to the type of light used to illuminate the Greenway. Adjacent landowners often express concern about glare from trail lighting negatively impacting their homes. Special "Good-Neighbor" light standards can address these concerns.

**Drainage** - In order to ensure proper drainage, a 2% cross slope is recommended for the length of the corridor, and should not be exceeded. Particular attention should be paid to areas with high gradients, where

water should be collected in a ditch and re-directed towards a catch basin, which in turn empties into an appropriately sized drainage pipe.

The Greenway needs improved drainage systems in the vicinity of Lincoln School near 4<sup>th</sup> street. A minor drainage system, approximately 4000 feet in length will be required, and will feed into the existing drainage system.

**Design Speed** - Since this trail is intended as a commuter route, it must be designed to be traversed safely at fairly high speeds. For bike paths, the minimum design speed is 20 miles per hour.

**Structures** - There is currently a sub-standard wooden bridge over Baxter Creek. As part of the trail project, this bridge will be replaced with a bridge that will adhere to the width requirements for the trail.

## Universal Access

Greenway planners recognize the importance and social significance of planning for every possible user, regardless of ability level. To these ends, the Greenway will be designed according to ADAAG (Americans with Disabilities Association Accessibility Guidelines.) Ensuring that grades are minimized where possible will have the multiple benefits of creating a near flat path for commuting cyclists, and creating a path accessible by wheelchair users, the elderly and in-line skaters, among other users appreciative of level facilities. Flat grades are preferable for all multi-use trails, with a recommended maximum gradient of 5%. Because the Greenway is planned to traverse a former railroad corridor, planners are fortunate to be working with a right-of-way that is virtually flat to begin with. ADA concerns will be most significant on major overpasses, eventually planned for 23<sup>rd</sup>/Carlson, and San Pablo Avenue, and on connections from nearby surface streets to the Greenway.



Figure 26: El Cerrito Council member and steering committee member Janet Abelson tours the Greenway site with the Planning Team.

A comprehensive informational resource on the needs of Americans with disabilities, the final report of the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas can be found at: [www.access-board.gov/](http://www.access-board.gov/).

## Trail Amenities

**Landscaping** - Community input highlighted the desire for more landscaping improvements. In addition to providing an attractive environment, landscaping should maintain clear sight lines and be easy to maintain. Families expressed interest in open grassy areas/lawns for picnics, sitting and playing. Future phases may incorporate grassy areas, but lawn upkeep is a significant maintenance activity. Lawn upkeep is a factor. In some places alternative ground cover and low maintenance landscaping may be more appropriate.

**Color Coding System** - One suggestion raised through the public process was that of a system of signs and pavement striping to direct users of all backgrounds through the Greenway. Signs or stripes while the Greenway is off-road could be green, with blue sections tracing the

on-road routes. The suggestion of blue footprints to lead users through the complex crossing of 23<sup>rd</sup> Street was met with much support.

**Railroad History Theme** - The abandoned Santa Fe railroad right-of-way is a significant part of Richmond's history. This "place" history should be celebrated and highlighted throughout the design of the corridor. For example old tracks and ties, railroad buildings and old train cars should be recycled and used throughout the corridor for fencing, seating and interpretive areas. There is an old Santa Fe Railroad station building on Garrard that currently serves as a railroad reading room. At community meetings residents and a City council member expressed interest in moving this station to a site closer to, or on the Greenway site.

Suggestions from public meetings include an arched trail entrance on the western end constructed from railroad tracks, as well as an educational panel about the historical use of the corridor. This area could also include water fountains, benches, restrooms and other elements of a formal trailhead. Another suggestion for a future phase would be the use of a former rail car for part of a trailhead area.

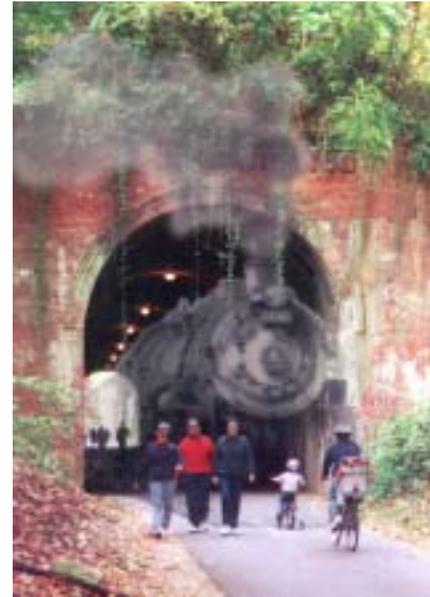


Figure 27: A postcard of the Capital Crescent Trail in Maryland reminds visitors of the corridor's railroad history.

## Trail Support Facilities

**Rest Areas/Staging Areas** – In order to facilitate use of the Greenway, a few rest areas will be developed along the three-mile corridor. The typical elements of a rest area include benches, water fountains, restrooms, trash receptacles, maps, kiosks, interpretive panels, bike racks, picnic benches, and in some cases, parking. In certain situations, concessionaires with food and or bicycle support merchandise may be appropriate. Eventually there will be three such rest areas along the Richmond Greenway: near Garrard, at the west end of the Greenway; on the site of the Current City Corporation Yard; and, at the East end, near San Pablo Avenue, with easy access to Angelos Deli. In Phase I, a small parking area will be created at the southwest corner of the Greenway at 2<sup>nd</sup> Street. This site has been selected for parking since 2<sup>nd</sup> Street represents the temporary western terminus of the Class I off-road trail. Acquiring an easement from BN&SF to continue the Greenway off-road all the way to Garrard to meet with the Bay Trail is a high priority for Phase II both among project supporters and elected officials in Richmond. Since 2<sup>nd</sup> Street is only the temporary Western terminus of the trail, the full complement of improvements typically associated with a rest area will not be implemented in Phase I, but will be delayed until sufficient new ROW is acquired connecting to the Bay Trail at Garrard. At this time, project partners will make efforts to remove the parking at 2<sup>nd</sup> Street and create a staging area closer to Garrard Blvd. For a full description of the staging area envisioned for this section, see the RR History theme section on p. 32.

**Seating** - Benches or seated areas should be placed near staging areas, trailheads, and in areas that provide shelter from winds or sun. Durable materials should be considered as a way to reduce maintenance costs and activities.

**Water Fountains** - Locate water fountains at regular intervals to ensure all users are accommodated. Consider locating them near rest rooms to maximize utility access and improvements.

**Restrooms** - In designing rest rooms, consider maintenance above all. Locate restrooms to be easily accessible by trail maintenance staff, and convenient for trail users.

**Trash Receptacles** - These should be regularly placed, durable, and vandal-resistant. While it may seem a small detail, recent studies of

school-age children in California conducted by the Department of Health Services cite litter and dog waste among the top reasons for not walking to school.<sup>ix</sup>



*Figure 28: A rest area along the Cannon Valley Trail in Minnesota provides trail users with shade, water, restrooms and trail information.*

**Emergency Telephones** - Primarily used for urban trails, emergency telephones should be regularly spaced, located in visible, well-lit areas, and vandal-resistant. Solar-powered phones can reduce costs.

**Bike Parking** - Bike parking should be located as close as possible to a particular destination without interfering with traffic flow. Generally, to deter theft, bicycle racks should be centrally located in highly visible areas, where lighting and shelter are available.

## V. IMPLEMENTATION: FUNDING, PHASING & MAINTENANCE

Project Partners are optimistic about future funding opportunities for the Richmond Greenway. Strong support for this project from regional and statewide agencies has been indicated by several grants the project has already received:

- 1. MTC Transportation for Livable Communities Planning Grant** – In 2000, RTC and CYCLE received a \$50,000 planning grant from MTC to include the community in planning and design of the Greenway
- 2. State Budget Allocation** – With assistance from Assemblywoman Aroner and Senator Perata, project partners were able to secure a \$50,000 earmark through the state budget process for additional planning and design.
- 3. MTC Transportation for Livable Communities Capital Grant** – In July 2001, indicating their strong support for this project, MTC voted to allocate \$1.9 million towards Phase I development of the Central Richmond Greenway.

### Cost Estimates

Since a complex set of variables determine the actual price of construction for any given project, the following breakdowns for funding particular sections of the Greenway can be estimates at best. Prices vary according to seasonal and regional availability considerations. Comparison of similar projects is commonly used to project future cost figures. In this project, the largest cost factors for future phases are two bridges at Carlson Boulevard/23<sup>rd</sup> Street and San Pablo Avenue. Depending on the type of bridges utilized, the cost can vary widely. As an example, The Highway 80 overpass in Berkeley cost six million dollars (See Figure 27).

### Phasing Strategy

When considering a greenway project, many communities are understandably concerned about the financial burden a trail will pose on local budgets. As a result, most communities will divide their trail projects into distinct phases of development in order to ease the burden of seeking capital funding. The project partners have decided to employ such a strategy for the Richmond Greenway. The following is a proposed phasing strategy to minimize the impact of any particular greenway development activity on local budgets and staffing.

#### Phase 1: Circulation System

Phase I Greenway design includes the basic infrastructural improvements necessary to construct a multi-use trail. This phase includes a 12' paved path with adjacent shoulders and intersection improvements to alert both trail and road users of oncoming traffic. Traditional trail design elements such as curb cuts, striping, and good signage will improve the experience for all trail users. Basic lighting, fencing, and drainage needs will be addressed in this phase of construction. Minimal landscaping and cultural enhancements will also be included.

**Budget:** \$2.98 million (See budget attached in Appendix B)

**Timing:** The Metropolitan Transportation Commission programmed \$1.9 million for the Richmond Greenway into the 2001 FTIP. These funds must be obligated by September 2003. Project partners cannot begin construction until funds have been obligated, but hope to begin construction soon after, by Spring 2004.

#### Phase 2: 23<sup>rd</sup> St Grade Separation, Right-of-Way Acquisition, Urban Wetlands Restoration

This phase provides for the 23<sup>rd</sup> St/Carlson Blvd. Over crossing, acquisition of ROW at the east and west ends of the Greenway, and implements the urban wetlands improvements on the east and west ends of the project. There will also be minor pedestrian/bike improvements to the Baxter Creek Bridge and 33<sup>rd</sup> St/Nicholl Park bridge (see figure 18), traffic calming/intersection improvements, and landscape improvements.

**Budget:** \$8.3 million

**Timing:** As funding is secured, construction will proceed. Partners hope Phase II will begin no later than 2005.

(See Appendix E for a detailed Phase II budget.)



*Figure 29: The Ygnacio Valley Road Bridge is a critical grade-separated crossing for bicyclists and pedestrians traveling along the 25-mile Iron Horse Rail-Trail in Alameda and Contra Costa Counties.*

### **Phase 3: San Pablo Ave Bridge, Additional Landscaping and Linear Park**

In Phase 3, project partners hope to implement a grade-separated crossing of San Pablo Avenue, as well as additional informational, educational, recreational, and aesthetic. These improvements may include: Educational exhibits, Site arts, Historic rail car exhibit, Landscaping, community gardens, Unity Park, Benches and Improvements to the Corporation Yard Area, and Placement of exercise equipment (stretch bars, sit up benches, pull up bars, sports fields)

**Budget:** \$4 million

**Timing:** Site development to start 2006

(See Appendix E for a detailed Phase III budget.)

## **Trail & Greenway Funding Programs**

Since the early 1990s, the number of programs and available dollars for implementing trails and greenways have experienced tremendous growth. During the period from 1973-1991, the states collectively spent just \$40 million on the development of bicycle and pedestrian facilities nationwide. With the passage of ISTEA, the Intermodal Surface Transportation Efficiency Act, and TEA-21, the Transportation Equity Act for the 21<sup>st</sup> Century, this number is now \$600 million, and is still on the rise.

One of the chief concerns of local residents when a trail is proposed in their community is that a new project will drain local coffers, and put additional strain on budgets that are already stretched thin. Contrary to popular belief, numerous local, state and federal funding sources are available to acquire, plan, construct and maintain trails and greenways. In addition, rail-trail land acquisition and construction costs, on average, are less than one-fifth those of city roads and less than two percent of highway construction costs. The public health, alternative transportation, and economic benefits associated with greenway development typically outweigh the initial outlay of funding necessary for their construction.

Further, the project partners are committed to developing a long-term fundraising strategy to guarantee that future Greenway phases are implemented in a timely fashion. This commitment is evidenced by the fact that nearly \$2 million in capital funding has already been secured for Phase I implementation at the time of this Master Plan's completion. The Richmond Greenway is a major capital improvement project for the City of Richmond and will therefore have a high price tag; fortunately, project partners are intimately familiar with the grant programs available to fund these kinds of improvements and are committed to realizing a long-term community vision. Following is a list of the diverse sources that would most likely be available for implementation of the Richmond Greenway<sup>x</sup>.

### **State/Federal**

**Bicycle Transportation Account** - Grant funds for new bike paths, bike lanes, and bike routes, bicycle parking facilities, bike racks on buses, traffic control devices to improve safety, planning, safety, education, and maintenance of bikeways and bicycle parking facilities. Account provides money to local agencies to projects that improve safety and convenience

for bicycle commuters. Currently funded at \$7.2 million per year, administered by Caltrans.

**California Coastal Conservancy** - Funded through park bonds and acts of the Legislature, the California Coastal Conservancy is charged with facilitating and maintaining access to the coast for all Californians. The Bay Area Conservancy is dedicated to improving access to the San Francisco Bay waterfront, through projects that help to complete, or connect to the 400+ mile San Francisco Bay Trail.

**Environmental Enhancement And Mitigation (EEM)** - The EEM program, administered by the Resources Agency, provides \$10 million a year for projects that can enhance or mitigate the impacts of a planned public transportation improvement project. Trails, bike lanes, and other facilities that may encourage alternative transportation modes to mitigate the air and water quality impacts of another major transportation investment, are eligible.

**Environmental Justice Grants** - Responding to federal mandates, Caltrans has created a new grant program to provide funds for including low-income, minority and Native American California residents in planning for transportation improvements in their communities. Funded for its third year (FY 03-04) for \$3 million, this program is administered by Caltrans Division of Transportation Planning, and individual grants of up to \$300,000 are available.

**Safe Routes To Schools** - This program, funded at \$20 million a year, and administered by Caltrans, aims to improve school area safety, and encourage children to walk or ride bicycles to get to school. Bike trails, safe crosswalks, speed humps, stop signs and other school area traffic calming or safety improvements are eligible.

**State Park Bonds** - Though most of the funds from Prop 12, the 2000 Park Bond have been programmed, in March 2002, the voters approved a \$2.6 billion park bond to improve opportunities for recreation and open space preservation in California. Rail-trails are likely to be eligible under several categories, including Roberti-Z'berg Harris, various Historical & Cultural Conservancies and the Rivers & Urban Streams Program.

#### **TEA-21**

Federal gas tax funding through TEA 21 (Transportation Equity Act for the 21st Century) has been the single largest source of funding for trail

and greenway projects across the United States. There are several funding sources through TEA-21 for which trails are eligible. Currently TEA-21 contains three major trail-funding programs: Transportation Enhancements Activities (TEA), Congestion, Mitigation and Air Quality Improvement (CMAQ) and the Recreational Trails Program (RTP). Trails have been the most successful under the TEA program, which currently provides roughly \$60 million a year to California, for projects that create a more balanced transportation system, and provide travelers with more choices and a richer experience. In the Bay Area, the TEA funds are administered through the Metropolitan Transportation Commission's Transportation for Livable Communities (TLC) program at the County level. Typically, \$9 million a year is available from MTC for capital construction projects. CMAQ and the Recreational Trails Program provide \$350 million, and \$50 million respectively, on a national level every year through 2003. The Recreational Trails Program is notable because it is available to fund trail maintenance, a top concern of local agencies.

#### **Local/Regional**

**Assessment Districts** - An assessment may also be referred to as a "special" or "benefit" assessment, and involves the levying of a charge on property owners to provide financing for public improvements. For example, Proposition KK approved by voters in 1994, created a landscaping and lighting assessment district in Eastern Contra Costa County that is used by the East Bay Regional Park District and its municipal partners to fund open space and trail improvements in this portion of the Park District.

**Flood Control Districts** - The acquisition and restoration of wetlands is increasingly recognized as providing both environmental and flood control benefits. Contact your local district to determine if funds are available.

**General Obligation Bonds** - Cities, counties, and recreation and park districts have authority to issue bonds for park and open space purposes. If approved, bonds and the interest they incur are re-paid through an increase in property taxes. Current law requires passage by a 2/3 vote - bonds issued to fund specific, popular projects are more likely to be approved.

**Local Park Districts** - Many local or regional park districts are actively involved in acquiring and restoring wetland and riparian habitat. For more information, contact your local park district office.

**Recycled Rubberized Asphalt** - A new and innovative way to reduce trail-building costs is to solicit donations of old tires to be used in rubberized surfacing. The method and material has been used successfully in recent projects such as Sacramento's American River Bikeway. Locally, Ford Motors and their representatives with Recovery Technology have already pledged support and visited the Greenway site with CYCLE staff and City planners.

**San Francisco Bay Regional Water Quality Control Board** - The Regional Board makes an effort to direct Administrative Civil Liability fines to local projects.

**Transportation Development Act Article III** - Awarded to local agencies as block grants, Transportation Development Act funds cover bicycle and pedestrian projects in California. Administered locally, TDA Article III funds are state gas tax monies, and are distributed based on population.

**Transportation Funds for Clean Air (TFCA)** - TFCA funds are available for transportation projects that improve air quality in California, and bicycle projects are one eligible category. These funds are distributed at the regional level; the Bay Area Air Quality Management District (BAAQMD) administers the \$18 million annually available in the San Francisco Bay Area.

Two additional funding resources are included in Appendix F. One is a list of non-traditional trail funding programs, including certain sources dedicated to wetland restoration. The second is the Rails-to-Trails Conservancy's 2003 California Trail Funding Summary. This document includes eligible activities, deadlines, and contact information for the most successful trail funding programs in California.

## Sustainability and Maintenance

Paying for management and maintenance of the Greenway is a real concern. The Richmond Greenway must be adopted as an integral part of the City's Parks and Recreation program, including comprehensive maintenance and management plan. Landscaping with drought-resistant native plants and utilizing energy efficient lighting techniques can reduce maintenance costs. The installation of sturdy and vandal-resistant facilities and amenities can also cut costs and activities.

The City and Greenway advocates should pursue suggestions to create a special Greenway maintenance funding account. City staff should become familiar with existing state and federal funding programs that subsidize trail maintenance. Consideration should be given to initiating a volunteer "trail patrol" program and contracting with local youth development organizations to do basic maintenance and patrol.

### Community Involvement

In contrast to structural, civic, and electrical engineering projects, ecological aspects of Greenway development are less rigidly priced, since donations and volunteer partnerships can cut costs while providing residents with a sense of ownership over the Greenway. Such community-oriented activities include: soil replenishment; creek and habitat restoration; tree planting; and, wildflower and native grass propagation. The greening of the corridor presents tremendous opportunities for extending the spirit of collaboration and community involvement from the planning stage through the Greenway's implementation and management.

## Liability

With the prevalence of lawsuits in today's society, it is not surprising that trail planners have hesitations about the legal ramifications of trail development. Research has shown that in the great majority of cases, trails are covered under the larger umbrella of the managing agency's policy. Further, trail managers report that claims made against them are extremely rare, and generally settled to the satisfaction of both parties.

## Acquisitions/Right-of-Way Issues

1. Easement from BNSF on the west end from Garrard to 1<sup>st</sup> Street
2. City Corporation Yard encroachment between Harbour Way and Marina Way
3. Easement from BART at Carlson
4. Site Survey needs to be completed to determine ownership of property at east end between the tunnel under I-80 and San Pablo Ave. Sufficient City-owned right-of-way currently exists to create a standard width trail from the Tunnel to San Pablo Avenue.

## Implementing Actions

The success of this project depends on the continued enthusiasm and dedication of community-based organizations, trail advocates, legislators, community residents and City staff. What follows is a description of the steps that remain to create a world-class Greenway facility.

1. **Address environmental contamination** - Initial sampling of the Greenway site have indicated that there are some elevated levels of arsenic, due primarily the railroads former use of herbicide in the right of way. This issue is actively under study and a remediation plan being prepared. Since the Phase 1 plan does not anticipate cut slopes or off haul, this issue is expected to have minimal initial impact on the project.
2. **Obligate Capital funds** - The City of Richmond has received a \$1.9-million grant from the Metropolitan Transportation Commission's Transportation for Livable Communities Capital Funding Program. In order to obligate this funding, all environmental review and right-of-way clearance must be completed by September 2003. The first step towards obligation is a Field Review, wherein Caltrans Environmental staff will survey the proposed project and make recommendations for

necessary environmental studies. City of Richmond staff are moving to schedule a field review immediately.

3. **Secure right-of-way for continuous trail**- The Greenway proposed in Phase I represents an enormous improvement over current conditions, but is not a continuous Class I facility. Greenway planners should initiate conversations with Burlington Northern & Santa Fe to secure an easement over the Garrard Blvd. to 1<sup>st</sup> Street section. The areas of the City Corporation yard that encroach on the trail corridor should be relocated in favor of a continuous trail. Finally, a survey of the east end of the right-of-way is mandatory to resolve issues of property ownership in the vicinity of Baxter Creek. Additional areas of encroachment, including the section from 1<sup>st</sup>-2<sup>nd</sup> Streets, should be identified and addressed by Greenway Planners and the City Attorney's office.
4. **Seek funding to implement future phases** - A variety of funding mechanisms exist to support the development of trails and greenways, and most trail projects are subsidized through a combination of available sources. Future phases, including grade-separated crossings at 23<sup>rd</sup> and Carlson, and San Pablo Avenue are essential to trail user safety and convenience, and funding should be sought immediately to implement these much-needed improvements.

Through the collaboration of the City, Community Based Organizations, Regional Planning agencies and national groups, this project will be implemented in the coming years. Decades from now, people will study Richmond's Greenway as an innovative example of sustainable community development, because it integrates transportation, recreation, education, public art, multicultural expression and ecological restoration in a rich mix, made possible by its unifying location.

---

<sup>i</sup> This section is based on information gleaned from community meetings, roving meetings, and information contained in MTC and county bicycling plans and studies.

<sup>ii</sup> [www.railtrails.org](http://www.railtrails.org)

<sup>iii</sup> Pedestrian Safety in California; Five Years of Progress and Pitfalls, STPP, California Walks, San Francisco, California, August 2002.

<sup>iv</sup> California Department of Transportation (Caltrans), Highway Design Manual, Chapter 1000: Bikeway Planning and Design, 2001

<sup>v</sup> U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Manual of Uniform Traffic Control Devices (MUTCD) 2000.

<sup>vi</sup> Flink, Charles A., Kristine Olka, and Robert M. Searns, Eds. *Trails for the 21<sup>st</sup> Century: Planning, Design, and Management Manual for Multi-use Trails*. Washington, DC: Island Press, 2001.

<sup>vii</sup> Federal Highways Administration, U.S. Department of Transportation. *Safety Effects of Marked Vs. Unmarked Crosswalks at Uncontrolled Locations: Executive Summary and Recommended Guidelines*. Washington D.C: Federal Highway Administration, 2002. Publication No. FHWA-RD-01-075 29 pp.

<sup>viii</sup> [www.transact.org/ca](http://www.transact.org/ca)

<sup>ix</sup> Pers. Comm., Anne Seeley, Physical Activity and Health Initiative, California Department of Health Services, 6/02

<sup>x</sup> A list of non-traditional funding sources is available in Appendix F