

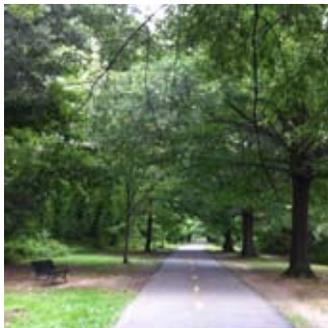
# HOLMES RUN PARK SYSTEM

ALL VETERANS PARK

BROOKVALLEY PARK

TARLETON PARK





# Background

## Park Profiles: James H. Marx

Holmes Run Park System (62.51 acres) is a linear open space along Holmes Run, a resource-rich stream that traverses the west half of Alexandria's West End. As a greenway it includes four distinct spaces: Holmes Run Scenic Easement, Brookvalley Park, James Marx H. All Veterans Park, and Tarleton Park. These spaces are connected by a single trail system that reaches the Dora Kelley Nature Center to its north and Tarleton Park to its south, and connects to Ben Brenman Park over a bridge to the west.

These spaces are also connected by a rich history. In 1706, the Greenway was all part of a 4,639 acre land grant that was gradually divided into several farmsteads over the 18th and 19th centuries. The Strathblane house, which still stands today at 4630 Strathblane Lane, was built in 1817 a short distance from today's park system. Though the house sits outside of the greenway, much of the greenway's territory was once a part of the Strathblane estate and most likely contains remnants of the Strathblane Cemetery. In the early 19th century Cloud's Mill was built to the south of Holmes Run and traces of the mill race can still be found along the greenway.

The James H. Marx All Veterans Memorial Park, was dedicated in May 30, 1994 in remembrance of James H. Marx Sr., a beloved West End civic leader. Marx worked tirelessly to acquire, reclaim, and develop the parkland along Holmes Run Greenway and took a special interest in the area of All Veterans Park (see sidebar on right).

All Veterans Park was originally a creek bed until it was filled by the U.S. Army Corps of Engineers after Hurricane Agnes struck Alexandria in 1972 causing Lake Barcroft to flood the Holmes Run channel. It was then used as a storage area for dredged gravel and debris collection until Marx and other members of the Holmes Run Committee began working with City officials to convert the site into parkland. Marx wanted the park to be named "All Veterans" to memorialize Alexandria veterans of all wars. The City Council decided on "All Veterans" for the park's name but, after Marx's death a few days following the decision, Council immediately changed the name to also honor the Park's most dedicated proponent.

Today, the linear park is full of scenic beauty and nature, the Holmes Run Greenway is abundant with natural resources and opportunities for passive recreation. Whether jogging alongside the quiet stream or contemplating beneath the branches of an old Bitternut Hickory, White Oak, or the Bicentennial Tree (the oldest tree in Alexandria), visitors reap the benefits of interacting with a biodiversity of life throughout the Greenway. A 2.5 mile shared-use path on the north side of Holmes Run Parkway is heavily used by cyclists, families, joggers, and dog walkers who frequent the trail simultaneously. The Greenway is also heavily used as a commuter route. Trail systems for walking and jogging are strongly desired by Alexandria residents as identified in the 2011 and 2013 Parks and Recreation Needs Assessment.

James H. Marx Sr. was a caring and engaged neighbor and friend to the many Alexandrians that knew him. According to the hard-working Navy veteran, "If you live somewhere, you have a responsibility to become a part of it." Marx exemplified this proverb through serving in a number of civic leadership positions in Alexandria. At the time of his death, Marx was chairman of the Holmes Run Committee, a coalition of ten civic and condominium associations formed in 1982. As chairman, Marx worked closely with his good friend and secretary of the Committee, Ben Brenman, to develop Holmes Run Greenway and address issues related to West End.



Marx's civic leadership in Alexandria was coupled with a lifetime of service to his country. Marx joined the Navy in 1943 and served aboard the USS Missouri and various warships in the years following World War II. After retiring from the Navy, Marx served as president of the Navy Federal Credit Union, where he helped establish United Community National Bank, a minority-owned bank in D.C. From 1970 to 1991, Marx worked in various positions at the Department of Commerce. One of these positions enabled him to develop and implement national policy on the formation of minority-owned savings banks, insurance companies, and small business investment companies.

#### Sources:

- Rich Blake, "West End civic activist Jim Marx mourned by friends, city leaders," The Gazette Packet, March 11, 1993, 12-13.
- Melinda Jensen, "West Ender takes responsibility for his community," The Gazette Packet, October, 6, 1989.
- Brenman, Bernard. Homes Run Committee to Councilwoman Del Pepper and Councilman Kerry Donley, March 15, 1993. Letter. City Manager's Office (June 2013)

## *Walking Holmes Run*



Ed Smith has lived in the West End of Alexandria for six years. Ed, a professional dog walker, loves walking dogs along the Holmes Run Greenway. To Ed, the Greenway trails are great to walk because they are close to the water and have plenty of shade. During his walks, Ed often sees interesting birds like Blue Herons along the water and stops to marvel at the scenic beauty of the Greenway. Ed is excited about the proposed improvements to the Holmes Run Greenway, particularly the formalized trail on the South side of Holmes Run.

The stream, the premier asset of the Greenway, is infringed upon by invasive species growing along the steep slopes of its banks. There are areas along the stream especially near the All Veterans Park area of Holmes Run, where invasive plants have grown so dense that they block the view of the stream and create dangerous, hidden areas. While there are several designated entrances to the Greenway, they are not easily accessible for people with limited mobility and do not fully comply with the American Disabilities Act Standards.

Once in the Park System, park users find that the pathways are not interconnected, especially those in All Veterans Park which dead end at the easternmost part of the Park. There is a lack of clear and consistent signage identifying sites and directing park visitors throughout the Greenway. Storm water management is also a significant factor affecting access to the trail, which frequently floods at its low points.<sup>1</sup>

The greenway also lacks the programs and amenities needed to serve a wider range of park users' needs, such as a welcoming space for picnics, frisbee throwing, or other passive recreational activity. All Veterans Park has potential to be a great space for unorganized recreation; however, it is currently seldom-used due to its lack of shade, inefficient design, and insufficient facilities. Play and exercise equipment scattered throughout the park could help draw people to the Park and be a strong neighborhood asset, but, much of the existing equipment is outdated and new features are needed in order to provide play and exercise opportunities to all age groups.

---

<sup>1</sup> To address some of the flooding concerns, the City of Alexandria's Department of Transportation and Environmental Services is currently reviewing options for improving the portion of the trail beneath the 395 overpass.



# Community Feedback

From September through early December 2012, RPCA solicited input on the existing conditions and possible future uses for Holmes Run Park.

To gather information, RPCA held a public workshop to discuss park needs, distributed an online survey asking for feedback, and placed hard copy surveys in boxes located at entrances to the park, and in the mailboxes of adjacent neighborhood homes. Staff also visited events, local businesses, and a nearby senior center to hold “mobile workshops.” The survey asked park users to identify their usual point of access into the park, the mode of transportation they use to get there, their typical park activities, what they like about the park, and what areas of the park need improvement. Survey participants also prioritized their improvement needs. See the appendix for detailed community feedback reports.

RPCA received 94 completed surveys. Of those surveyed, 64 participants lived in the 22304 zip code. Fewer than 5 participants lived in each of the other Alexandria zip codes or outside City limits. The majority of those who visit do so daily (33%) or weekly (37%).

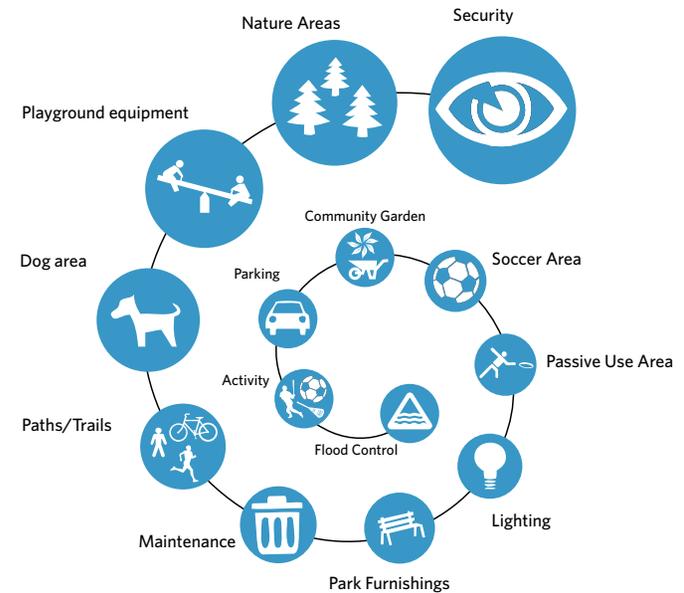
## This is what we heard:

Sixty percent walk to Holmes Run Park; 19% bike and only 14% drive. This high number of pedestrians demonstrates how Holmes Run is considered a large park with a strong neighborhood use, attracting leisurely activity. It also implies the need to review safer pedestrian and cyclist access throughout the Park.

When asked, “**What do you do in the Park?**” almost all participants stated that they go for unorganized, passive park uses. **The highest use was to walk (29%). Other popular activities included relaxing (17%), biking (19%), running (12%) and walking dog(s) (11%).** All of these activities are multi-generational and can occur individually or in vary small groups.

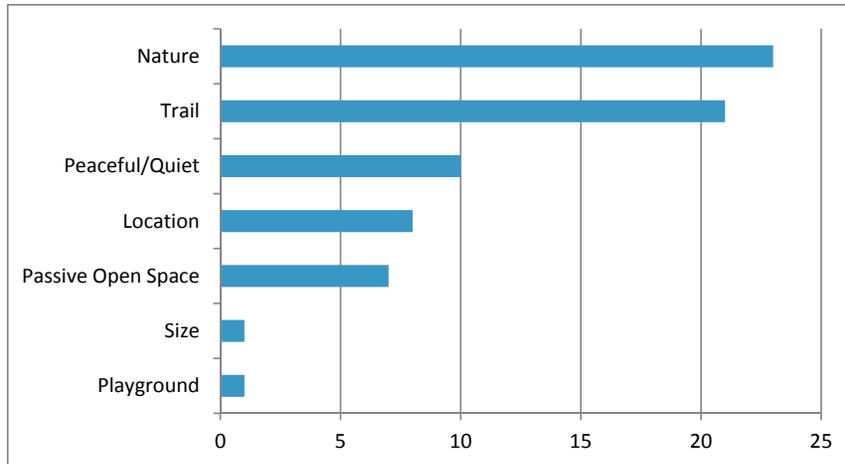
In answering, “**What do you like about the Park,**” participants were consistent in identifying the natural character of the Park’s setting. **Over 30% specifically commented that they like the Park because of nature.** Comments included, “[I like] the large, old trees along the bike path, the stream and the wildlife (especially the occasional heron), and the chance it gives my children to experience ‘the woods’ in the middle of the City” and “[I like] the wooded natural area next to the

## What needs improvement in Holmes Run Park?



The highest priority is shown as the largest circle; the lowest priority is the smallest circle. Priorities are based on the number of responses to needed improvements and then weighted by how participants prioritized their answers

### What do you like about the Park?



stream...able to see wildlife: deer, hawks, foxes, etc.”

The trail is a clear asset of the Park, both locally and regionally. Respondents liked that the trail is quiet, but also connected to places of convenience, such as the Foxchase Shopping Center.

There are some consistent themes throughout the three methods of community feedback. These include:

#### Security

The survey and workshop indicate that security is a major concern in the Park. As suggested by the police and discussed in the workshop, one easy way to address the security situation is to remove non-native vegetation to increase views and surveillance and to install mile markers along the trail so that park users can easily identify where

in the park they are. Many respondents asked for better lighting in the park.

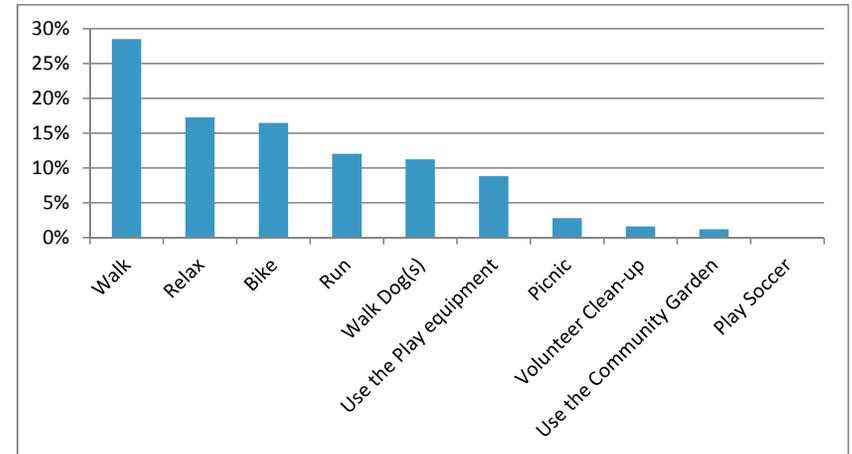
#### Shared-Use Trail

The shared-use path in Holmes Run is highly active and used by runners, cyclists, and pedestrians. Because the path is heavily used, markings to separate the uses may help assist cyclists and children. Flood/drainage control is also a big concern along the trail.

#### Natural Areas

Holmes Run Park is one of the most beautiful, natural areas of the City. Its quiet, peaceful setting is what draws many people to the neighborhood to live and recreate. However, throughout the park there are areas where invasive plants pose a threat to the native wildlife. An effort to remove and curtail the overgrowth could help enrich the Park’s natural health.

### What do you do in the Park?



#### James Marx All Veterans Park

Throughout the survey results, many people stated that there needs to be a draw to the Park for family use. The All Veterans Park portion of the Park has potential to be an area for passive play, such as picnics, frisbee, or other unorganized recreational activity. As suggested during the workshop, a re-design of this portion of the park may enhance the space and provide a setting for bridge connections between the Charles Beatley Library and Holmes Run trail.

#### Play equipment

Many of the play equipment pieces scattered throughout the Park are out of date. While some pieces have recently been replaced, more equipment and natural play features that cater to a range of age could become a greater neighborhood asset.

# The Plan

## KEYED LEGEND

1. MINIMIZE FLOOD IMPACT FOR TRAIL UNDERPASSES
2. PROTECT AGAINST EROSION ALONG BANKS
3. IMPROVE STORAGE AND EDGING FOR COMMUNITY GARDENS
4. REMOVE INVASIVE SPECIES AND CREATE OPEN VIEWSHEDS THROUGHOUT PARK FOR SAFETY AND ECOLOGICAL HEALTH
5. REPLACE AND RENOVATE PICNIC AREAS
6. CONSTRUCT ACCESSIBLE SOUTH SIDE TRAIL AND INCREASE ACCESS FROM HOLMES RUN PARKWAY
7. ADD NATURAL PLAY AREAS
8. EXPAND FITNESS STATION
9. ADD LIGHTS TO BEATLEY BRIDGE AND TO THE ADJOINING SECTION OF THE NORTH SIDE TRAIL
10. DIVIDE DOG PARK FOR LARGE AND SMALL DOGS
11. FORMALIZE SOFT TRAIL
12. ADD TRAIL MARKINGS FOR IMPROVED SAFETY AT N. JORDAN ST.
13. CONNECT JAMES MARX-ALL VETERANS PARK WITH HOLMES RUN TRAIL CIRCULATION AND DUKE ST. DOG PARK
14. MODIFY JAMES MARX-ALL VETERANS PARK TO PROVIDE ENHANCED VISIBILITY AND PASSIVE PARK USE
15. MOVE JAMES MARX MEMORIAL TO ENHANCE VISIBILITY FROM STREET IN CONJUNCTION WITH PARK MODIFICATIONS
16. INSTALL BRIDGE TO CONNECT JAMES MARX-ALL VETERANS PARK TO CHARLES BEATLEY LIBRARY
17. INSTALL STORMWATER MANAGEMENT SITE WITH EDUCATIONAL COMPONENT
18. ADD NEW PICNIC SHELTER TO JAMES MARX-ALL VETERANS PARK



## GRAPHIC KEY



# Recommendations & Implementation Strategy



The trail often floods, particularly under the 395 overpass, and in many places the banks have severe erosion.



The edging around the community garden is haphazard.



Views of the stream are blocked by "walls" of invasive species.

1

## ***Minimize flood impact for trail underpasses***

Flooding frequently overtakes the trail and renders areas of the trail impassable, particularly at the fair weather crossing. Improvements to the trail include raising the trail, construction of a pedestrian bridge from the existing stairs to the north side pathway, and improved energy efficient lighting.

COST: \$4,000,000 (already in approved budget) PRIORITY: High PROPOSED TIMEFRAME: 1-3 years  
ACTION: Department of Implementation to conduct final design and construction of improvements on Holmes Run Trail, from Ripley Street though I-395

2

## ***Protect against erosion along banks***

Securing the banks along the Greenway will help protect the creek channel and maintain safe access to the water. This action specifically coincides with Alexandria's Environmental Action Plan, which includes the objective to "Restore and stabilize stream banks of all streams to promote healthy habitat, biotic integrity, and to minimize erosion."

SUGGESTED ACTION: T&ES review and recommend

3

## ***Improve storage and edging for community gardens***

Standardized edging will highlight the community gardens as a distinguished feature of the park along the south-side trail. Storage space will help gardeners maintain a tidy and productive garden. *Note: Storage type must adhere to Resource Protection Area guidelines and can not accommodate fertilizers and pesticides.*

ESTIMATED COST: \$22,500 - \$37,000 PRIORITY: Medium PROPOSED TIMEFRAME: 3-10 years

4

## ***Remove invasive species and open viewsheds throughout park for safety and ecological health***

Invasive species along the Greenway such as certain types of ivy, honeysuckle, bamboo, and kudzu significantly degrade the natural habitat and prevent the natural succession of native plants. Removing these invasives will restore biodiversity to the Greenway and, in turn, provide park users greater access and visibility to Holmes Run. The removal of invasive plants and any subsequent planting will adhere to the City's Environmental Action Plan.

ESTIMATED COST: \$47,000 - \$57,000 PRIORITY: High PROPOSED TIMEFRAME: 3-10 years



The Park's only picnic area is not fully accessible and is an undefined area.

5

**Replace and renovate picnic areas**

The proposed new picnic areas complete with new grills, trash cans, tables, and gazebos will increase visitor experience and provide outdoor gathering space for adjacent neighbors, many of whom live in apartment complexes without private outdoor space.

ESTIMATED COST: \$78,000 - \$110,000      PRIORITY: high      PROPOSED TIMEFRAME: 3-10 years



Park users have formed a "desire line" along the length of the south side of the Park after years of walking along the same stretch.

6

**Construct accessible south side trail and increase access from Holmes Run Parkway**

A formal trail will replace the desire line on the South side of the Greenway. This project is supported by strong desire in the 2011 and 2013 Needs Assessment for walking trails. The current "desire line" is across the street from high rise buildings with a very high concentration of senior residents, yet the park is inaccessible. The proposed trail will be connected to the sidewalks along Holmes Run Parkway by curb ramps with detectable warning surfaces for park users who are blind or have low vision. A porous pavement is desired at this location because it is in a Resource Protection Area.

ESTIMATED COST: \$570,000 - \$1,000,000      PRIORITY: high      PROPOSED TIMEFRAME: 3-10 years



Boulders and other natural play features to climb, such as those shown above, would be appropriate for the character of Holmes Run Park.

7

**Add natural play areas**

Environmentally-sensitive and nature-inspired play equipment such as boulders and climbing structures will provide alternative recreational opportunities for children and make the Greenway a more family-friendly environment.

ESTIMATED COST: \$32,000 - \$42,000      PRIORITY: medium      PROPOSED TIMEFRAME: 3-10 years



RPCA recently installed new Chin Up Bars in Holmes Run Park.

8

**Expand fitness station**

RPCA recently replaced part of the adult fitness equipment, creating enhanced exercise opportunities along the North side of the trail. Additional equipment would complete the site.

EXPECTED COMPLETION: SPRING 2014



Many nearby residents cross the Beatley Bridge to get to bus stops on Duke Street as part of their daily commute. The lack of lighting makes this walk feel unsafe, particularly during winter months.

9

**Add lights to Beatley Bridge and to the adjoining section of the north side trail and bring bridge up to standard**

RPCA installed mile markers with solar lights to the north side trail in June 2013. New solar lights added to Beatley Bridge and the adjoining part of the North side trail will assist those that use the park on their commute to Duke Street. These lights will cut off at 10:00 p.m. to discourage park use outside of the Greenway's official hours. Also, the bridge's hand railings do not meet today's safety standard and need to be brought up to code.

ESTIMATED COST: \$82,500 - \$116,000 PRIORITY: High PROPOSED TIMEFRAME: 3-10 years



A number of survey respondents voiced concern that the vast dog park is unsafe for smaller dogs when large dogs are in the area.

10

**Divide dog park for large and small dogs**

The proposed division of Duke Street dog park is in response to many requests that there be delineated individual spaces for small and large dogs. This division requires broader community discussion and an amendment to the existing City of Alexandria Dog Park Master Plan.

ESTIMATED COST: \$35,000 - \$45,000 PRIORITY: Low PROPOSED TIMEFRAME: 3-10 years



The park entrance at Raleigh Avenue is undefined.

11

**Formalize soft trail**

A mulched, planted trail around the bicentennial tree and connection to Raleigh Avenue will create a comfortable route, differing from the existing foot paths that are currently used to enter and exit the park.

ESTIMATED COST: \$110,000 - \$136,000 PRIORITY: High PROPOSED TIMEFRAME: 3-10 years



Pedestrians, cyclists, and strollers cross paths at the North Jordan entrance to the Park.

12

**Add trail markings for improved safety at North Jordan Street**

The Holmes Run trails are shared by park users of different age, participating in a diversity of activities –walking, jogging, running, biking, pushing a stroller, etc. Trail markings at North Jordan Street will help encourage continued shared use of the trails.

ESTIMATED COST: \$500 - \$1,000      PRIORITY: High      PROPOSED TIMEFRAME: 1-3 years



13

**Connect James Marx All Veterans Park with Holmes Run Trail circulation and Duke St. Dog Park**

With enhanced integration to the surrounding areas of the Greenway, All Veterans Park will attract more park users and become a more comfortable and safer place for passive recreation.

ESTIMATED COST: \$315,000 - \$400,000      PRIORITY: High      PROPOSED TIMEFRAME: 3-10 years



14

**Modify James Marx All Veterans Park to provide enhanced visibility and passive park use**

James Marx All Veterans Park is one of the few contiguous open spaces along Holmes Run Greenway. With improved grading, it can provide a place of peaceful respite as it was intended when dedicated as park space. Its location along the streambed provides a unique opportunity for spectacular views of ecological resources in an urban environment.

ESTIMATED COST: \$162,000 - \$245,000      PRIORITY: High      PROPOSED TIMEFRAME: 3-10 years



Given its location next to the stream and easy access from North Pickett Street, James Marx All Veterans Parks has the potential to be a premier park in the West End, yet its current condition and design feels unsafe and isolated.

15

**Move James Marx Memorial to enhance visibility from street in conjunction with park re-design**

This plan proposes moving the James Marx Memorial to be a prominent entry location that is an integral feature of the Park. It will be clearly visible to park users and visitors on the Holmes Run Parkway and North Pickett Street and is a location selected by James Marx’s family.

ESTIMATED COST: \$4,500 - \$6,000      PRIORITY: High      PROPOSED TIMEFRAME: 3-10 years



The pathways in James Marx All Veterans Park are not contiguous, making it feel unsafe for individuals. Also, despite a great need for outdoor gathering spaces on the West End, its lack of amenities deters park users.



A stormwater BMP at North Pickett Street will remove many of the invasive species that have taken over the viewshed.

16

***Install bridge to connect James Marx All Veterans Park to Charles Beatley Library***

This connection will open up All Veterans Park, allowing for better visibility and circulation. Citizens will have the benefit of utilizing two valuable public resources in tandem, the Park and Library. This improvement is coincidentally similar to James Marx's vision of a viewing deck connecting the Park area with the Library, where citizens could enjoy reading or lounging with the scenic view of Holmes Run in the distance.

ESTIMATED COST: \$670,000 - \$916,000    PRIORITY: High    PROPOSED TIMEFRAME: 1-3 years

17

***Install stormwater management site with educational component***

The City is evaluating the feasibility of stormwater treatment forebay(s) in the existing Old Holmes Run area near the west end of the Park. This site provides an opportunity to treat untreated stormwater runoff from the area west of the Park. Stormwater treatment forebay(s) will help reduce the amount of debris, sediment and pollutants (phosphorous and nitrogen) discharging into the existing channel. Enhancement of the existing wetland functionality and design is also being evaluated. Since the area is between a library and a park, the site would provide a great educational opportunities for students, children, and residents. Educational signage can help explain the stormwater benefits of the stormwater forebays and existing wetland.

ACTION: T&ES to complete engineering feasibility

18

***Add new picnic shelter to James Marx All Veterans Park***

A new picnic shelter in James Marx All Veterans Park will encourage passive use of the space by providing a place where the park's users may congregate.

ESTIMATED COST: \$42,000 - \$56,000    PRIORITY: Medium    PROPOSED TIMEFRAME: 3-10 years

# Overall Preliminary Cost Estimates

The estimated cost range (in 2013 dollars) shown below includes two scenarios: 1) If the recommendations were implemented independent of other projects and include associated soft costs (contingency, engineering, survey, geotechnical, environmental, permitting) and 2) a cost scenario in which all the recommendations are implemented together.

The priority for each recommendation is shown as “low, medium, or high.” RPCA determined these rankings based upon three factors: 1) park user safety, 2) community prioritization feedback and the results of the 2011 and 2013 Parks and Recreation Needs Assessment, 3) life span of existing facility.

The proposed timeline for each recommendation considers the project priority, the project cost with relation to the Department budget and contingent upon the Capital Improvement Plan, and the construction sequencing of recommendation amongst other park projects.

ESTIMATED COST RANGES										
DESCRIPTION	If recommendations are addressed all together as package			If recommendations are addressed individually (soft costs are loaded in each item)			Priority	Timeline		
WAYFINDING	\$11,178	-	\$14,285	\$13,414	-	\$17,142	high	1-3 years		
01 IMPROVE FLOOD CONTROL	TES PROJECT			N/A	-	N/A	high	1-3 years		
02 PROTECT AGAINST EROSION ALONG BANKS	TES PROJECT			N/A	-	N/A	medium	3-10 years		
03 COMMUNITY GARDEN IMPROVEMENTS	16,000	-	26,000	\$22,560	-	\$36,660	medium	3-10 years		
04 INVASIVE SPECIES REMOVAL	47,302	-	47,302	\$56,762	-	\$47,302	high	3-10 years		
05 ADD NEW PICNIC GROUNDS	55,156	-	77,848	\$77,769	-	\$109,766	high	3-10 years		
06 NEW ADA SOUTHSIDE TRAIL	405,546	-	762,084	\$571,820	-	\$1,074,539	high	3-10 years		
07 ADD NATURAL PLAY FEATURES	22,500	-	30,000	\$31,725	-	\$42,300	medium	3-10 years		
08 EXPAND FITNESS STATIONS	COMPLETE			N/A	-	N/A				
09 BEATLEY BRIDGE IMPROVEMENTS	58,500	-	82,000	\$82,485	-	\$115,620	High	3-10 years		
10 DOG PARK IMPROVEMENTS	24,592	-	32,140	\$34,675	-	\$45,317	Low	3-10 years		
11 FOREST TRAIL	78,146	-	97,084	\$110,185	-	\$136,889	High	3-10 years		
12 TRAIL MARKINGS AT N. JORDAN STREET	500	-	1,000	\$600	-	\$1,200	High	3-10 years		
13 ALL VETERANS/HOLMES RUN TRAILS	223,050	-	288,090	\$314,500	-	\$406,207	High	3-10 years		
14 REGRADE ALL VETERANS PARK	115,091	-	172,963	\$162,279	-	\$243,877	High	3-10 years		
15 RELOCATE JAMES MARX MEMORIAL	3,115	-	4,294	\$4,392	-	\$6,054	High	3-10 years		
16 STORMWATER MANAGEMENT	TES PROJECT			N/A	-	N/A				
17 INSTALL BRIDGE	475,500	-	650,000	\$670,455	-	\$916,500	High	3-10 years		
18 ADD PICNIC SHELTER	30,000	-	40,000	\$42,300	-	\$56,400	Medium	3-10 years		
DOCUMENTARY STUDY/EVALUATION	56,700	-	80,300	56,700	-	\$80,300	Medium	3-10 years		
INTERPRETATION	15,000	-	25,000	15,000	-	\$25,000	Medium	3-10 years		
UTILITY UPGRADES	105,000	-	130,000	\$148,050	-	\$183,300	High	1-3 years		
<b>SUBTOTAL</b>	<b>\$1,742,876</b>	-	<b>\$2,560,390</b>							
	Soft Costs	CONTINGENCY	348,575.18	-	512,077.95					
		ENGINEERING	209,145.11	-	307,246.77					
		SURVEY	52,286.28	-	76,811.69					
		GEOTECHNICAL	34,857.52	-	51,207.80					
		ENVIRONMENTAL	69,715.04	-	102,415.59					
	PERMITTING	150,000.00	-	200,000.00						
<b>GRAND TOTAL</b>		<b>\$2,607,455</b>	-	<b>\$3,810,150</b>						