

Place Proposal: Little Arboretum

Harrisonburg, VA

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GEOG 476: URBAN SUSTAINABILITY
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Introduction

This is an Arboretum proposal for the City of Harrisonburg, Virginia. The proposal area can be seen in the image below, outlined in blue. This area lies on the south side of Neff Avenue, located northeast of its intersection with Port Republic Road and just southwest of A Dream Come True Playground.



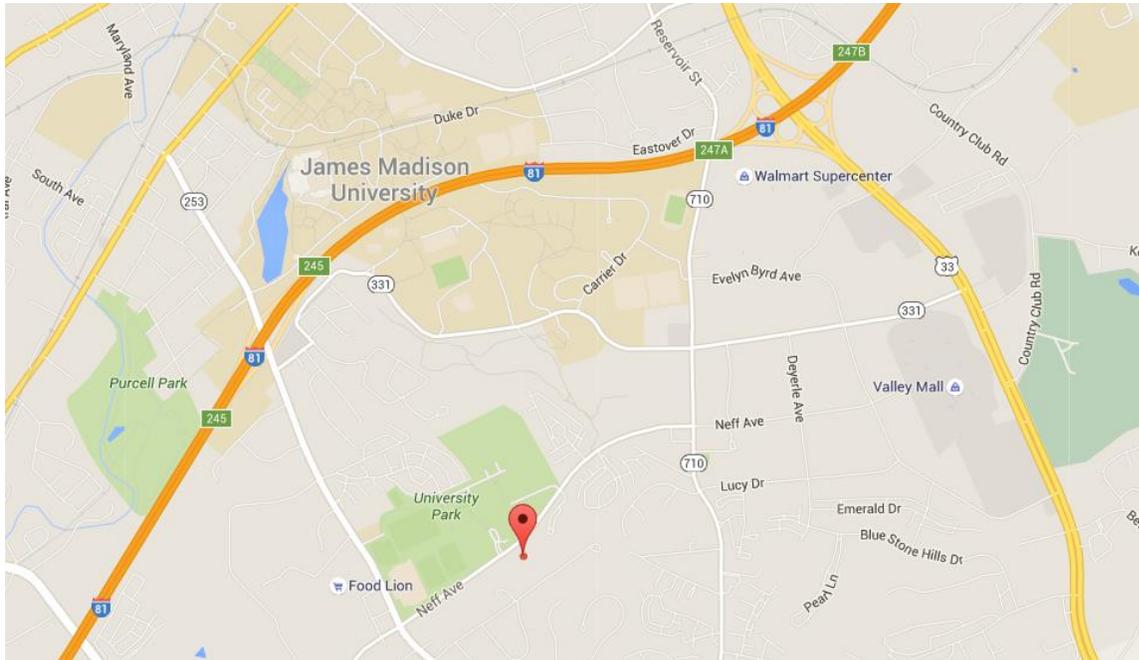
Proposal area outlined in blue. | Source: Google Earth Pro

Opportunity

The proposal area outline above is a great candidate for conservation and recreation in the form of an Arboretum; the forest contained within is healthy, and its close proximity to the Dream Come True Playground makes for a perfect opportunity to expose youth to nature conservancy.

Background

The proposal area is located in southeast Harrisonburg at the coordinates 38.421354° N, 78.863336° W. Travel north on Neff Avenue from its intersection with Port Republic Road and after 0.2 miles the proposal area will begin on the right and continue until the Dream Come True Playground.



Red marker depicts the proposal area. | Source: Google Maps

The proposal area is contained within Harrisonburg Map Number 087-G-2 and is owned by the City of Harrisonburg. The proposal area, seen below in blue, is 8.4 Acres while the forested area, seen below in green, is 3.8 Acres. The lighter green in the middle of the forested area is the forest’s core area, about 0.4 Acres. The forest’s core area was calculated by measuring inward from the edge of the forest by a fixed distance. This fixed distance can be found by taking the average tree height, in this case about 10m, and multiplying by three. This core area of the forest is important because, while some species prefer edges, many others prefer forest cores.



Proposal area in blue, forested area in green, core forest in central green | Source: Google Earth Pro

Goals & Intents

There are two main goals for this proposed arboretum:

- 1) Create a successful nature retreat for both adults and children
- 2) Create an environment that fosters species biodiversity

There are three main intents for the goals set forth above:

- 1) Conserve and promote the natural environment as intended by Goal 8 of the City's Goals for Achieving the Vision
- 2) Expose younger generations to nature and conservation so as to carry on the relevance of environmental protection in the future
- 3) Provide a robust recreational space for outdoor leisure as intended by Goal 9 of the City's Goals for Achieving the Vision

Summary

The following list of proposals, if carried out, will accomplish the goals listed above.

New Structures & Staff

- Nature Center to serve as a visitor's center, activities center, learning center and maintenance hub.
- Two Pavilions to provide shelter and a hub for activities

New Paths, Trails & Signs

- Paved paths leading to the nature center and pavilions
- Permeable, unobtrusive trails leading through the forest
- Signs near the Nature Center and along the paths to provide nature information

New Flora

- Garden near the Nature Center
- Variety of new plant species around the forest and along the trails

New Parking

- Additional two rows of parking near the Playground
- Additional two rows of parking on the south side and an access road



Discussion

New Structures & Staff

There are three proposed new structures: a Nature Center on the north side near the Dream Come True Playground and two pavilions on the south.

The Nature Center will appear just over the top of the hill above the Playground. It will serve as a visitor’s center, activities center, learning center and maintenance hub for the property and pavilions. The Center as it appears in the images is about 3,150 square feet, providing ample room for its numerous duties. This square footage is comparable to, and even slightly larger than, the main building in the Edith J. Carrier Arboretum which is



Proposed Nature Center in red
Source: Google Earth Pro

about 2,890 square feet and holds similar purposes. The Center will need to be staffed; however, the frequency at which staff is present need not be extensive. Perhaps a few key days of the week and only during peak hours or during special events will be sufficient. The building will need to be stocked with pamphlets, nature books, learning materials and merchandise, as well as gardening and maintenance tools. It should also contain a unisex family bathroom. Behind the Nature Center, along the edge of the forest, a robust, multi-modal bird feeder should be placed, and windows in the building installed so as to watch the variety of species; a similar setup is very successful at the Huntley Meadows Park in Northern Virginia.



Proposed pavilions in red
Source: Google Earth Pro

The two other proposed structures are pavilions located along the southern edge of forest. They should be nearly identical to those found in Hillendale Park. The proposed pavilions as seen in the map and image are about 1340 square feet, only slightly larger than those found in Hillendale Park which are about 1,240 square feet. These pavilions should be used as activity centers and be close enough to the forest to give users a sense of nature. Trash cans should be found at either end of both pavilions in order to reduce littering. The pavilions should be maintained by staff based out of the Nature Center.



Pavilion in Hillendale Park
Source: www.harrisonburgva.gov

New Paths, Trails and Signs

A sensible path and trail system must be developed in order to provide successful interconnection of the Arboretum with its surroundings and within itself. A robust array of signs should complement the various paths to provide park, nature and species information.

The first path created should be one that provides safe, easy passage from the Dream Come True Playground to the Nature Center. This path should be flat-paved and have ample texture to prevent slipping. As depicted in the map and image, the path should wind around the hill to provide the most gradual route up the incline, providing handicapped access to the facility.



Proposed paved path in white
Source: Google Earth Pro



Proposed paved paths in white
Source: Google Earth Pro

Next, a second network of flat, paved paths should be developed to connect the pavilions with new parking. This will provide worry-free passage to the new pavilions as well as ensure handicapped access.



Proposed nature trails in white
Source: Google Earth Pro

Finally, a robust trail system should be formed within the forest itself. This nature trail system should be permeable and unobtrusive to the environment. The trails should be no more than 6 feet wide to accommodate two-way walking traffic, and should consist of some permeable, forest-friendly material such as wood chips.

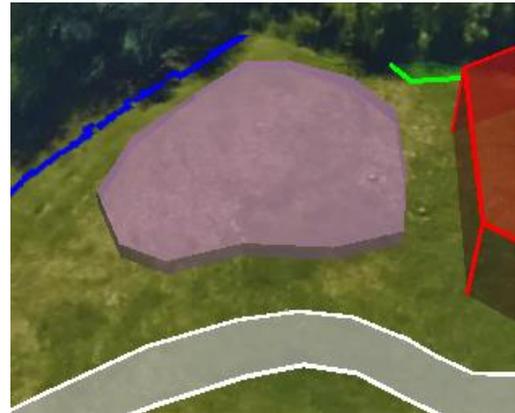
To compliment the paths and trails, a thorough sign system should be implemented throughout the Arboretum. It is a requirement for any Arboretum to label the species it holds, but these signs can also fulfill functional as well as educational purposes. A sign containing a park map should be placed at each entrance to the wooded area. Signs throughout the arboretum should be placed labeling each group of plant species. Educational signs can be placed intermittently along the path to spark interest in both young and old generations.



Example sign
Source: www.ywt.org.uk

New Flora

The goal of any Arboretum is to grow and display a variety of plant species in an effort to conserve them, educate the public and increase a site’s biodiversity. Shown in the map and image is a proposed garden by the Nature Center sized at about 1,670 square feet. This would be a main attraction for the front of the arboretum, and would also help to promote the Arboretum’s flora goals. Species native to Virginia should be selected for this garden as well as the entirety of the area. New plants should be planted along the edge of the forest to promote a gradual brush shift, as well as within the forested area all along the path, much like the Edith J. Carrier Arboretum.



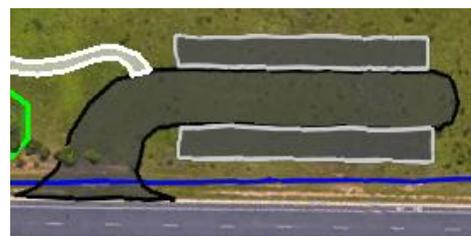
Proposed garden in pink
Source: Google Earth Pro

New Parking



Proposed paved road and parking area in gray
Source: Google Earth Pro

There are four new proposed rows of parking, each row adding an additional 15 parking spots, creating capacity for 60 additional vehicles. Two of these proposed rows are north of the arboretum near the Dream Come True Playground while two are south of the Arboretum and connect directly to the pavilions. The two rows near the Playground should be easily implemented; only one of them requires any additional road paving. The two rows on the south side will require a small access road to be paved down to Neff Avenue, however, this section of parking is essential for easy increased pavilion access as well as handicapped access.



Proposed paved road and parking area in gray
Source: Google Earth Pro

Conclusion



Front of the proposed arboretum | Source: Google Earth Pro

The inclusion of an arboretum at this location would be a huge benefit to the community. Its location is central to several neighborhoods and easily accessible from main roads, as well as adjacent to the Dreams Come True Playground. This area would provide invaluable environmental conservation while simultaneously helping to expose younger generations to nature and its conservancy. The arboretum and its amenities would provide additional space for recreation for both adults and children. If this project is completed, it will also provide a healthy infrastructure for further development in the southern sector of the proposal area.



Back of the proposed arboretum | Source: Google Earth Pro

References

- Arnoldia, Bulletin of Popular Information, Harvard University Vol. 20, Numbers 11-12, pg. 69-83: How to Establish an Arboretum or Botanical Garden. <http://arnoldia.arboretum.harvard.edu/pdf/articles/1960-20--how-to-establish-an-arboretum-or-botanical-garden.pdf>
- Bartlow et al: Nature Trail Development on Small Acreages, University of Arkansas Division of Agriculture. <http://www.uaex.edu/publications/pdf/MP488.pdf>
- Class notes - GEOG 476: Urban Sustainability, Dr. Henry Way
- Harrisonburg, VA City Website. <http://www.harrisonburgva.gov/>