The Temporal and Spatial Connectivity of the Gambles Mill Corridor, Richmond, VA


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Introduction

The City of Richmond and the Virginia Department of Transportation proposed to rehabilitate the Gambles Mill Trail connecting the University of Richmond (UR) to the intersection of Huguenot and River Road. Planners envision this trail as a sustainable model for the reduction of nutrient and sediment flow and as a vital path in a city-wide network of bike and pedestrian trails. Meanwhile, UR also proposes to rehabilitate the corridor in their new Master Plan. Nevertheless, until now, no substantive studies exist on the trail or the corridor linking the trail to the south side of the James River through the hazardous River-Huguenot Road intersection and the Huguenot Bridge currently under construction. The University of Richmond’s Geography 221 Course, Mapping Sustainability: Cartography and Geographic Information in an Environmental Context, is working with a variety of stakeholders (public, private, and community-based) to map the past, present, and future of the Gambles Mill Corridor and influence local and regional sustainability of transportation, hydrology, and recreation in a floodplain ecosystem. Students produce maps grouped around four networks even as we work to once again improve the distance from the University of Richmond campus via sustainable transport (Fig. 3). This map demonstrates the complexity of human-environmental planning across multiple institutions, jurisdictions, and stakeholder interests. We hope feedback for this poster will help us improve on our map making efforts and allow us to more clearly represent the issues at hand in the sustainable development of the Gambles Mill Corridor both for the students of the University of Richmond and the larger Richmond community.

Small Scale

This map represents the potential bike route between Richmond and the university while highlighting the strategic importance of the Gambles Mill Corridor. The corridor will allow students to access the river and the city via sustainable transport (Fig. 3). This map demonstrates the distance from the University of Richmond campus via the potential routes, allowing students to calculate the time and effort needed to reach their desired destination. Parks on the map show the accessibility of outdoor recreations areas of great interest to Richmond students and community members. Parks such as Pony Pasture and Maymont Park are iconographic landscapes of Richmond city allowing community members and students to connect to the environment and the cultural history of the region. The last feature on this map demonstrates the safety aspects of the route, an important feature for any cyclist or pedestrian. Safety information is based on data such as vehicle accidents, number of lanes, and size of shoulders. This information will help cyclists and pedestrians decide where to travel and by which route. Comprehensively, these maps encourage students at the University of Richmond and other community members in the West End of Richmond to enjoy and explore their city using sustainable transport.

Methods

The students in this introductory computer cartography and community-based learning course used ArcGIS 10 and Adobe Photoshop CS 5 to create maps based on data from GIS and historic collection in the field, digital files scanned from archival maps, engineering drawings, GIS data from government institutions, Google Earth, and ESRI. To obtain this data, students reached out to engineers, city and county officials, community organizations, archivists in regional and local libraries, and University of Richmond professors. The community-based element of the course, funded by a Community-based Learning fellowship from the University of Richmond’s Center for Civic Engagement allowed students to do academic research in an applied environment. This learning opportunity allows students to not only develop their critical thinking skills and technical mapping proficiency, but also to understand the interdisciplinary, communication, and personal challenges they will face in the workplace following graduation.

Conclusions

At the creation of this poster, the course continues, but preliminary conclusions include an appreciation for the complexity of human-environmental planning across multiple institutions, jurisdictions, and stakeholder interests. We hope feedback for this poster will help us improve on our map making efforts and allow us to more clearly represent the issues at hand in the sustainable development of the Gambles Mill Corridor both for the students of the University of Richmond and the larger Richmond community.

Sources

Arlington County, Virginia. "Street Railway map of Richmond 1930." Source: McKenney, Rails in Richmond, Virginia, 1913. 8th printing, 1930. Richmond, VA: The Washingtonatm.strucrue that founded the University of Richmond to the city in the 1920s.

Figure 1. The #9 Westhampton structure that linked the University of Richmond to the city in the 1920s.

Figure 2. Lowland Area alongside the Corridor path.

Figure 3. This map shows the connectivity of the Gambles-Mill Corridor to the greater Richmond area through bike paths. These are further complemented by which paths are safer or more dangerous. As recreation is a major attraction for users of these paths, the local park regions have been highlighted. Distance is shown through the concentric circles at half-mile intervals.

Figure 4. This map proposes new pathways to be constructed to add pedestrian and bicyclist safety through the least crowded and dangerous intersection. Providing access to the shopping centers and to the James River from the corridor will promote student and public use of the pathway.

Figure 5. This map highlights the history of the Gambles-Mills area and the University of Richmond, demonstrates the past sustainable transportation methods with the 1930s street car line and colonial era canal system.

Figure 6. A map of the old canals in the area that were used for urban drainage.

Figure 7. This map shows the connectivity of the Gambles-Mills Corridor to the greater Richmond area through bike paths. These are further complemented by which paths are safer or more dangerous. As recreation is a major attraction for users of these paths, the local park regions have been highlighted. Distance is shown through the concentric circles at half-mile intervals.