



MEMORANDUM

Date: August 8, 2008 Project #: 9369.2

To: Tim Davis
City of Frederick
140 West Patrick Street
Frederick, MD 21701

Cc: Sarah Crawford
Metropolitan Washington Council of Governments
777 North Capital Street, N.E. Suite 300
Washington, DC 20002

From: Yolanda Takesian and Jamie Parks

Project: Fort Detrick Bicycle, Pedestrian, and Transit Access Study

Subject: Summary of Work Products and Recommendations

This memorandum summarizes area analysis and opportunities for improvement of the Fort Detrick Bicycle, Pedestrian, and Transit Access Study. Descriptions of the project team's findings and recommendations, as well as public comments are provided in accompanying documents. The project was funded through a grant from the National Capital Region Transportation Planning Board's (TPB) Transportation/Land-Use Connections (TLC) Program. The results of the project are intended for use by the City of Frederick and its partners: Frederick County, TransIT, and Fort Detrick, to enhance safety and non-motorized accommodation. The study will also be used by the TPB to offer a process framework for similar efforts occurring within the region.

Study Area and Background

The area surrounding Fort Detrick is a focus of concern for bicycle and pedestrian safety and comfort for several reasons. Fort Detrick and the National Cancer Institute are large employers located within the greater Frederick area, a city known for its high quality pedestrian environment and transit supportive densities. The presence of this concentration of jobs in a campus-like setting surrounded by neighborhoods and retail centers enhances the potential for high levels of pedestrian, bicycle and transit activity. Desires to reduce household travel costs, reduce environmental impacts, and enhance livability further increases the potential for non-motorized travel.

There are several impediments to fully realizing the potential for pedestrian and bicycle use, however. The vast size and limited access of the military installation and US 15 create physical barriers, increase out-of-direction travel for non-motorized users, and reduce connectivity and

route choice. In addition, pedestrian and bicycle facilities along the major travel corridors are often lacking or non-existent.

The study area for improvement comprises the transportation network immediately adjacent to Fort Detrick, with a specific focus on adjacent sections of the Rosemont Avenue, 7th Street, Military Road and Opossumtown Pike corridors west of US 15 within the City of Frederick.

Community Involvement

To encourage public participation in the identification of issues and to ensure incorporation of user experience into the final product, KAI and the City used both a project website and public meeting/open house to solicit input. The project website used a map-based application to allow users to pinpoint and comment on areas of concern. Overall, approximately 80 comments were recorded on the website. The locations of public comments are shown on the aerial plots attached, and a shapefile containing all comments is being provided to the City as an inventory of issues and improvements.

The public meeting/open house hosted by the City on June 24, 2008 provided an additional opportunity to gather feedback. KAI provided aerial mapping detailing known issues and a presentation describing a set of potential interventions to improve non-motorized transportation in the study area. The June 24 presentation used photo images of the study area and potential mitigation strategies to detail dominant issues and locations for intervention. Participants were asked to ground-truth consultant findings and identify additional issues and possible solutions based on their direct experience and observation. Public comments gathered through the meeting were incorporated into the analysis and recommendations.

Data Collection and Analysis

KAI used several methods to collect and synthesize data and to develop recommendations. In addition to the public outreach described above, KAI met with City staff, conducted a field visits, collected traffic-count and GIS data, and analyzed aeriels. During an initial field visit on May 8, 2008, the team observed and photographed conditions, which were then organized into an inventory of location-based issues to map and present to the public. The analysis built on the team's experience with multimodal environments and knowledge of the area. The study also considered potential generators of walking and bicycling trips, including those related to transit, future trail locations and commercial center access. The work highlights transportation system strengths that can be enhanced through near-term opportunities.

The evaluation included analysis of the following aspects of the transportation system:

- Mapping of crash data involving pedestrians and bicycles.
- Gaps in pedestrian and bicycle facilities, including adequate accommodation at signals and potential crossing opportunities.

- Review of roadway operations data and characteristics to integrate understanding of major conflict points.
- Identifying generators of pedestrian and bicycle trips, natural and man-made barriers, and path options and alternatives.
- Current transit routes and stops in the project area.
- Planned projects with the potential to affect the study area.

Analysis Findings

The analysis performed through this project identified several opportunities to improve the pedestrian, bicycle, and transit environment in the vicinity of Fort Detrick. Detailed descriptions of the project team's observations and recommendations are provided on seven, 1" = 100' plots. The plots use aerial photography to depict locations where specific improvements are recommended, and also show the location of the public comments that were received. These plots are being provided to the City as addenda to this memorandum.

In general, several key issues emerged through that recur throughout the study corridors:












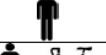

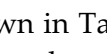
- Marked bicycle ways and facilities are generally lacking throughout the study area. Bike lanes and/or sharrows on major routes and intersections are needed to improve cyclist comfort and safety, and to raise driver awareness of the bicyclist's right to the road. In addition, an emphasis on bicycle wayfinding may help cyclists to find low-volume alternative routes and off-road trails where they exist.
- Pedestrian accommodation at signalized intersections should be improved by providing well-marked crosswalks and pedestrian signal heads on all approaches, by reducing turning radii and crossing distances, and by prohibiting right-turn on red.
- The interchange ramp terminals and crossings of US 15 on Rosemont Avenue, 7th Street, and Opossumtown Road are all difficult to navigate for both pedestrians and cyclists. The new trail crossing of US 15 near Rosemont will mitigate some of these issues. However, the City should consider the possibility of reducing turning radii at all ramp terminals and signalizing the 7th Street ramp terminals.
- Bicycle mobility could be significantly improved through a relatively low-cost program of replacing of parallel-slotted sewer grates with bike-friendly grates and regular removal of debris (especially on the under-crossings of US 15).
- An enforcement and education campaign on traffic safety and sharing the road may increase driver knowledge of and compliance with existing traffic laws pertaining to pedestrians and bicycles.

- More frequent marked pedestrian crossings of major roadways where distances between signals is far and generators (side-streets and commercial centers) occur at more frequent intervals. This is particularly true on 7th Street and Opossumtown Pike.
- The signals at Military Road/7th Street and Military Road/Rosemont Avenue received many comments as being difficult to traverse for all modes, including automobile.
 - At Military Road/Rosemont Avenue, consider using the parking lot on the northwest corner of the intersection to realign the intersection, reduce its skew and crossing distance, and provide adequate space for a sidewalk and improve driver sight distance for right turning vehicles.
 - At Military Road/7th Street, crosswalks and signal timing to allow pedestrians to cross Military Road is needed. In addition, guidance directing drivers into the proper lane to enter the base and revised signal timing may have the potential to reduce queues on 7th Street. There was a concern that these queues frequently block the driveways to the Detrick Plaza Apartments. A document from residents of the apartment detailing the problem and potential solutions was provided to the City in conjunction with this memorandum.

Recommended Strategies

To address the deficiencies identified above, the project team developed a list of potential mitigation strategies. Table 1 provides a brief description of these strategies. In all, 14 treatments are shown in Table 1, with information on modes served, implementation timeframe, and costs.

Table 1 Potential Mitigations

Tool	Type	Time	Cost	Comments
No Right-turn on Red				Low-cost safety benefit
Signal re-Timing				Benefits for all modes
Signal retrofits				ADA and improved comfort
Pedestrian Crossings			Varies	Provide every 400-600 feet
Left-turn Lanes				May allow pedestrian refuges
Interchange Improvements				No good existing X-ing of US-15
Bike lanes/Sharrows				Improve bicycle comfort
Off-street trails				Doesn't replace on-street facilities
Traffic Calming			Varies	Safety benefit for all modes
Access Consolidation				Safety benefit for all modes
Road Diets				Safety benefit for all modes
Site Design				Key to long-term success
Transit Access				
Demand Management				Community-wide benefits

Several of the treatments shown in Table 1, such as eliminating right-turns on red and signal re-timing are relatively low cost, and can be accomplished in the near future. These treatments have the potential to immediately improve pedestrian and bicycle access in the Fort Detrick study area. However, fully addressing the deficiencies noted above will require a longer timeframe and significant funding. For instance, off-street trails and interchange improvements are critical to long-term success but require years of planning and often cost millions of dollars to complete.

In addition to capital projects, Table 1 lists several strategies related to policy considerations that will allow the City to take full advantage of new development as it occurs. Additional detail on each of the potential mitigation strategies is provided in the presentation KAI prepared for the June 24th meeting.

Further study is required to identify specific treatments to comprehensively address the problem locations within the study area, and develop a capital program and implementation plan to facilitate execution.

Should you have any questions or concerns, please contact us at (410) 347-9610.