

THE RED LINE TRANSIT PROJECT HEALTH IMPACT ASSESSMENT

EXECUTIVE SUMMARY

Introduction

The Baltimore Red Line is a proposed 14-mile transit line running east-west from Johns Hopkins Bayview to the Social Security Administration headquarters in Baltimore County. The Red Line Corridor Transit Study Alternatives Analysis/Draft Environmental Impact Statement (DEIS) was released in October 2008. It describes the proposed tunnel and surface alignments and the two main modes under discussion, Light Rail Train (LRT) and Bus Rapid Transit (BRT).

The Red Line project has the potential to significantly impact the geography and social environment across the City of Baltimore and will be a factor contributing to community health. In order to more fully explore how the Red Line will impact health and examine the potential to improve quality of life in Baltimore, the Baltimore City Department of Transportation and the Baltimore City Health Department joined forces to initiate a health impact assessment (HIA). The HIA aims to summarize current health conditions for the population living in the Red Line corridor, illustrate links between transportation and health in Baltimore, and recommend specific design features and mitigation strategies to maximize the project's capacity to achieve better health.

This HIA will serve as a comment to and supplemental analysis of the DEIS.

As required by federal statute, the DEIS details how construction and implementation of the project will affect the environment, including air, water, noise, and traffic volume. It also provides an assessment of several factors that affect health—such as neighborhood cohesion, access, mobility, economic development and issues of environmental justice. However, it does not identify how these factors will impact community health through changes to the built environment. The DEIS does illustrate some of the differential health impacts, such as noise disturbances, from each of the transit options, but it not emphasize human-centric design options.

Definition of Health Impact Assessment

Health Impact Assessment is a tool to describe in a qualitative or semi-quantitative fashion the impact of proposed policies, actions, or projects on human health. HIA is based upon a vision of health that considers all aspects of individuals' work, lifestyle, and environment to contribute to well-being. The HIA process uses a variety of methods to assess which communities will be affected by a new project and if those impacts benefit, reduce or have no effect on health. This could include interviews, focus groups, data collection and data analysis.

Methods

The process of developing the Red Line HIA took place in four phases. The first two phases, screening and scoping, involved a review of the Red Line proposal and the DEIS; resident interviews; expert input; and modeling health and transit links. At this time, a choice was made to focus on City impacts only because the researchers working on the HIA represent the interests of Baltimore City residents. An extensive literature review and analysis of census and local data on Baltimore health comprised the third phase. Synthesis of the data and the development of recommendations constituted the fourth phase. Through these steps, the HIA narrowed to focus on three main areas. These areas are: Improving Access and Opportunities for Safe Outdoor Activity; Construction Issues; and Improving Air Quality.

The City of Baltimore Department of Planning has divided the city into 55 Community Statistical Areas (CSA) based on existing neighborhoods boundaries. For the most part, this HIA utilized data based on these jurisdictions.

The Health and Transportation Connection

Numerous studies have shown that the built environment is a significant factor influencing the physical and mental health of individuals and communities. Further, the intersection between the built environment and accessible modes of transport affects health by promoting or discouraging healthy behaviors and by supporting (or not) healthful living conditions. Transportation connects to several major factors mediating health, among them neighborhood cohesion, access to services, injury, physical activity/obesity and air quality. These links involve both direct and indirect influences related to health outcomes.

Conclusions

Access and Opportunities for Safe Outdoor Activity

Evidence has shown that infrastructure that supports opportunities for safe outdoor activity and access to healthy foods will lead to enhanced population health. Insofar as the Red Line project improves the built environment to make physical activity and services more accessible, neighborhoods along the Red Line corridor could have a healthier future than they currently experience.

Construction Issues

Air quality, noise, and the presence of rodents can be unfavorably impacted from construction. Health affects include respiratory problems, disturbance of sleep and concentration, and the potentials for rodents to spread disease. Knowing the potential for such impacts in advance, however, allows for better planning and mitigation in order to diminish negative outcomes.

Air Quality

Despite projections for nearly negligible improvements to regional air quality as a result of building the Red Line, improvements to local air quality could be significant. Studies show that individuals, and particularly children, living near major thoroughfares have higher rates of asthma and respiratory disease than people living farther from main roads. Without the Red Line, traffic models predict tens of thousands more cars per day traversing the corridor by 2030. Thus, a transit project that leads to traffic reductions could improve the health of residents living on and along the proposed route.

Recommendations

Cross-cutting recommendations

Build the Red Line. The Red Line transit project offers numerous potential health benefits to the communities living along the proposed corridor. Choosing the “No Build” option would eliminate the potential for these benefits.

Light Rail. We strongly recommend the use of LRT for the Red Line. Light Rail provides a cleaner mode of transportation. LRT also has less impact on ambient noise levels in the Red Line corridor than does BRT. Additionally, research shows that people will travel further to access LRT than buses, making this a more viable option for sustained ridership and adding to the potential for increased physical activity.

Appoint a public health expert to serve on decision-making teams. For any committees on design and planning for stations, streetscaping and landscaping, the presence of a public health expert will help insure that health and accessibility are primary objectives for changes to the built environment.

Increase green space. The scale of the Red Line project presents a significant opportunity to plant vegetation and arrange other landscaping to maximize health benefits. Increased green space has been linked with mental as well as physical benefits. These include lower childhood obesity and asthma rates and improved psychological well-being. Planned green space can enhance neighborhood cohesion by providing space for community connectedness. It promotes healthy activity through easier connections between neighborhoods and by providing a neighborhood commons for entertainment and exercise.

Recommendations for Improving Access and Opportunities for Safe Outdoor Activity

Coordinate with the Baltimore City Bicycle/Pedestrian Planner. Any planning for new or augmented pedestrian and bicycle facilities must be done in concert with the City’s current Bicycle and Pedestrian Master Plans.

Create an oversight committee made up of representatives from local bicycle and pedestrian advocacy groups.

Street plans should be drawn using “Complete Streets” design principles. Benefits of providing such “Complete Streets” design include slower traffic, fewer crashes, especially those involving pedestrians and cyclists, and overall safer streets for children, older adults and women and directly benefit community health.

Widen sidewalks to a minimum of 10 feet to accommodate current and future pedestrian traffic and allow space for landscaping. The majority of the Red Line’s 14-mile route will likely run on the surface. Given the current need and the probable increase in pedestrian traffic with the new transit line, design plans should include spacious sidewalks in areas where the Red Line runs on the surface.

Plan for numerous, safe crosswalks. Where the Red Line will run on the surface, MTA has the opportunity to rebuild sidewalks and install safe crosswalks. Marked, lighted crosswalks can be built both at intersections and at mid-block to provide more opportunities for pedestrians to safely cross the street and help calm traffic. Providing numerous crosswalks also can enhance social cohesion between neighborhoods by improving access to schools, work, friends and family.

Ensure the Red Line includes bike facilities to guarantee accessibility and connectivity for cyclists. The Red Line project offers an excellent opportunity to provide critical east-west connection for cyclists and to promote health and physical activity. Putting in place road modifications that will facilitate cycling will be a collaborative effort on behalf of the City and MTA at the time of street and sidewalk re-construction.

Install bicycle storage facilities. This includes bike racks at every station, bike lockers at select stations, and hooks inside transit vehicles to safely position bikes while traveling.

Recommendations for Construction Issues

Provide for independent monitoring and reporting. Via project website, allow residents to register complaints about noise, vibrations, air quality, vector control, hazardous materials, and water leaks.

Use Clean Construction models from EPA’s program Clean Construction USA. The Clean Construction USA website has an extensive description of best practices, case studies, and mitigation measures at www.epa.gov/otaq/diesel/construction/.

Limit dust and emissions from construction. Limit emissions by regularly checking engine and exhaust systems, replacing older engines with newer, cleaner models, using ultra-low sulphur fuels, and utilizing particulate filters. Limit dust by dampening construction sites during dry weather, erecting temporary barriers to contain dust during demolition, and planning for minimal vehicle movements.

Place equipment as far as possible from homes, schools, and other sensitive areas. This will help reduce stress from excessive noise for people living, working, and going to school in the Red Line construction zones.

Restrict the utilization of particularly noisy equipment and operation to daytime hours. Limiting intrusive noise at night will reduce sleep disturbance from construction.

Start early and coordinate a team to plan and manage rodent control. Include community outreach and education as a central component of this plan. Begin surveys, baiting, and enforcement of sanitation codes up to two years before the start of construction.

Use Integrated Pest Management techniques. This includes surveys of rat populations, public education, sanitation, rodent proofing, and baiting. Continue such strategies during the building phase.