

CONSIDERATIONS FOR BIKE LANES IN BETHLEHEM

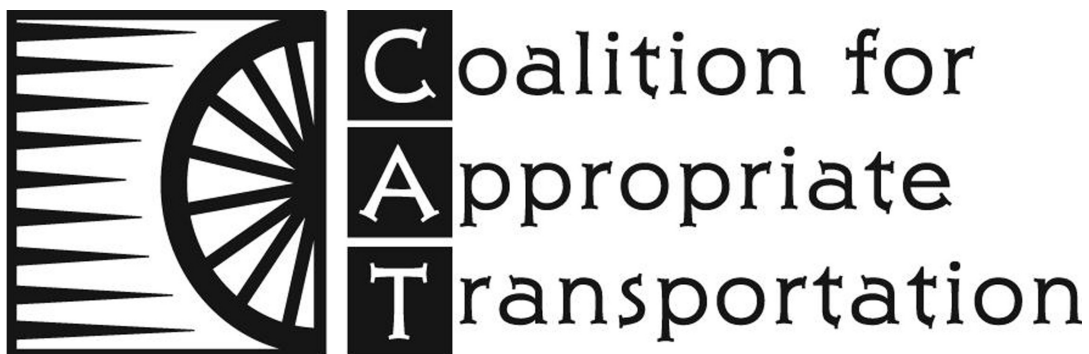
Prepared for
Darlene Heller, Planning Director
City of Bethlehem, Pennsylvania

Prepared by
Scott Slingerland, PE., LCI
Director

Coalition for Appropriate Transportation (CAT)
1935 West Broad Street
Bethlehem, PA 18018
www.lvcat.org

scott@lvcat.org
(845) 430-6552

November 1, 2015



CONSIDERATIONS FOR BIKE LANES IN BETHLEHEM

Note: This document is intended to outline design, maintenance and mindset-related safety factors that are often overlooked with bike lanes. This document is intended to neither support nor invalidate bike lanes.

INTRODUCTION

CAT would like commend the City of Bethlehem's best intentions to improve the quality of life for its residents through bicycling, walking and transit access. Throughout the City, there are many people and families who ride for recreation or health, as well as many who ride to work, school or shopping.

The Bethlehem Trails Feasibility Study outlines proposed bike lanes on Center Street, Linden Street, Easton Avenue and Eaton Avenue. CAT would like to support the City with providing safe, smart and intuitive facilities for the gamut of cyclists who use them.

There are many considerations that must be made to ensure cyclist well-being, or else bike lanes would be a false sense of security for cyclists, and an increased risk to cyclists' safety. The risks that bike lanes create are particularly present for lesser-experienced cyclists. In the case that risks cannot be mitigated in the design, implementation and routine maintenance of the proposed bike lanes, bike lanes should with good conscience be avoided.

Please consider the following items in your evaluation of whether to implement bike lanes along Center, Linden, Easton, Eaton and other locations.

BIKE LANE DESIGN

Design considerations depend on the frequency of driveways, intersections and other specific factors.

1. Risk for intersection and driveway conflicts with motor vehicles who may pass and turn right across the bike lane (right hook collision)
2. Risk for intersection and driveway conflicts with oncoming motor vehicles who may turn left in front of a cyclist's path in the bike lane (left cross collision)
3. Motor vehicles not expecting a cyclist to move into travel lane for left turns or hazard avoidance
4. Storm water grates in bike lane present surface hazard
5. Potential for motor vehicles parked or driving in bike lane
6. Potential hazard for cars parked adjacent to bike lane, opening doors into cyclist's path in the bike lane (door zone).
7. Adequate bike lane width required for bicycles passing other bicycles, pedestrians and/or negotiating hazards
8. Risk due to diminished visibility of cyclists by other road users when cyclists are riding far to the right in a bike lane

CONSIDERATIONS FOR BIKE LANES IN BETHLEHEM

BIKE LANE MAINTENANCE

Making the connection between planning and public works early in the process can keep facilities in good care for the safety of cyclists who use them.

1. Winter maintenance: ice, snow removal & salt/sanding in winter
2. Debris/hazard removal: gravel, glass, roadkill, tree branches & leaves, auto parts
3. Repainting lines, markings every 2-4 years (as-needed)
4. Surface maintenance (potholes, longitudinal cracks)

BIKE LANE MINDSET

Mindset is a matter of perception.

1. Cyclists who believe a street is only safe to ride on if there is a bike lane, thereby limiting their mobility. Novice cyclists may be fearful without a bike lane and ignorant of risks with a bike lane.
2. Motorists who believe that bicycles should remain in the bike lane at all times, and should not ride on streets without a bike lane.
3. Cyclists and motorists are all best served with education on legal and smart cycling.

AVOIDING OTHERS' MISTAKES

In other Lehigh Valley communities where bike lanes have been proposed, CAT has advocated to avoid repeating the mistakes of planners from other national and international bike lane and shared lane marking projects. Here are some recommendations:

1. End bike lanes 200' before intersections (or before Right Turn Only lane begins), not with solid white edge line diagonally crossing lane to curb edge, but with bike lane line ending with straight line to promote destination specific mixing of bike and motor vehicle traffic.
2. Remove Shared Lane Markings (SLM) upstream of intersections and use them downstream of intersections.
3. No SLM should be used in multi-lane section as cyclist may be using various lane positioning for turns.
4. Solid bike lane line should become dashed 200' upstream of all signed LANTA bus stops. Paint in bike lane at 200' upstream "BUS STOP" to warn cyclists that buses may be stopping.
5. Solid bike lane line should be dashed anywhere driveways cross.

EDUCATION AND COOPERATION

A valuable goal can be to focus on cooperation between cyclists and motorists through education, Shared Lane Markings (sharrows) and on-road communication. Cyclists riding legally on roadways can provide opportunities for traffic calming, on every street, for everyone who uses them.

In addition to taking a bicycle education class, here are some tips for cyclists and motorists:

CONSIDERATIONS FOR BIKE LANES IN BETHLEHEM

1. Cyclists who ride with the flow of traffic, stop at red lights and stop signs, who behave predictably, can improve their safety and offer motorists greater ease.
2. Motor vehicle drivers who give driving their full attention, pass with care and 4 feet of clearance, can give cyclists greater ease.
3. Cyclists who ride with good lane position can maximize their visibility to motorists, to minimize the opportunity of a crash by right hook, left cross or door zone conflict.
4. Cyclists who ride with good lane position can avoid marginalizing themselves and reduce vulnerability to surface hazards such as debris and glass.
5. Cyclists may not legally ride more than two abreast.

THANK YOU

With respect and wishes for motorists to be alert and to pass bicyclists with care. With hope for cyclists to respect the rights and responsibilities of riding on the road.

Thank you to the City of Bethlehem for supporting cyclists and all road users.