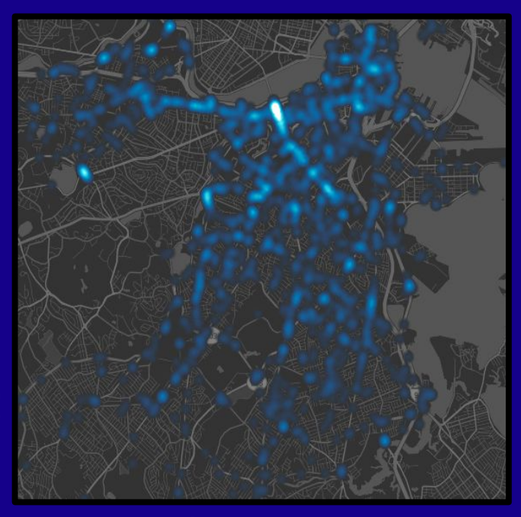
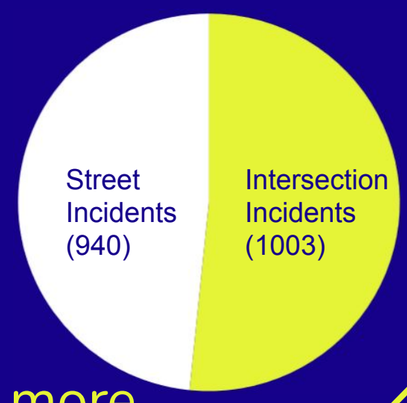
The issue:

Boston has seen almost **2,000** serious bicycle incidents since 2015.



Heat map of all incidents since 2015

More than half of these incidents happened at intersections!
Yet public opinion still points toward more street-oriented bike lanes.

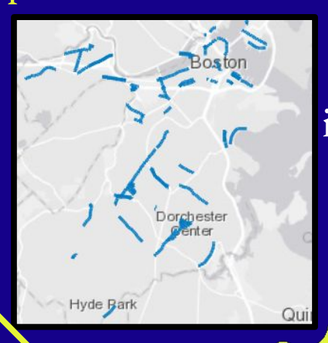


Better Biking In Boston MA
Improving Awareness At Incident Hotspots

Direct Improvement

Boston has built or upgraded almost 30 miles of bicycle infrastructure in the last 5 years. These include innovative new designs such as physically separated bike lanes.

These contribute to the almost 200 miles of existing bike lanes and paths. We already have an impressive system to make sure cycling is a viable method of transport.



Yet these lanes are NOT designed for intersections, where the majority of incidents occur.
That Must Change

Proposal 1:
Install mirrors at the most dangerous intersections in the city in order to increase cyclists' fields of view.

4 sets of convex traffic mirrors would be placed at each of the 162 intersections with multiple recorded incidents in the last 5 years.

These would directly help cyclists have more awareness of traffic behind them. As more cyclists begin to utilize the system, it's effectiveness will increase.

The cost of this system is estimated to be less than $350,000.

Proposal 2:
Offer bicycle lights/ reflectors to help cyclists who can not afford the proper equipment.

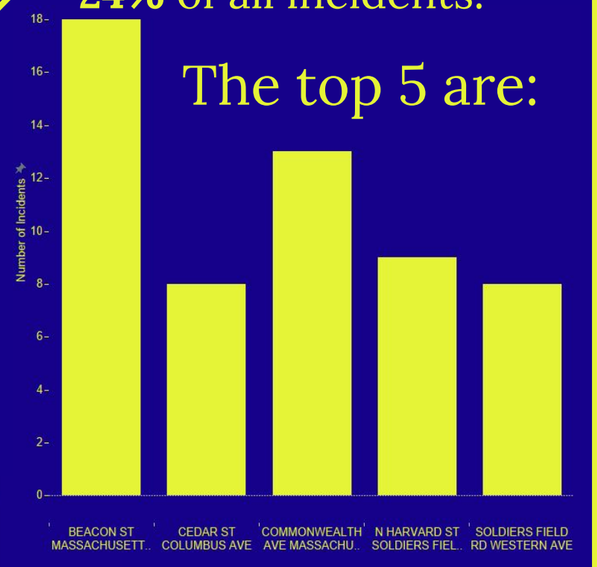
At least 13% of incidents happen at night! A city-run program to directly provide late night commuters with a way to be more visible to cars would reduce that number.

This program should be offered to all citizens with a simple application process to ensure that nobody is given multiple items or otherwise takes advantage of the system.

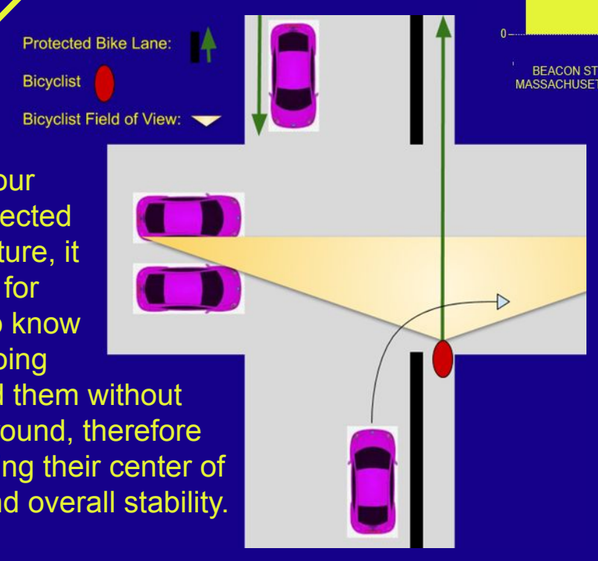
The total cost of this proposal is variable, but administrative costs would be low and the reflectors are relatively inexpensive.

162 intersections account for **24%** of all incidents.

The top 5 are:



The lack of visibility and awareness is accountable for these dangerous road conditions, for both the drivers and the cyclists. (see diagram below)



Even on our city's protected infrastructure, it is difficult for cyclists to know what is going on behind them without turning around, therefore jeopardizing their center of gravity and overall stability.

The city's most effective plan of attack would be to focus on these KEY INTERSECTIONS, rather than disperse resources throughout the city on patchy sections of bike lane.

Indirect Improvement

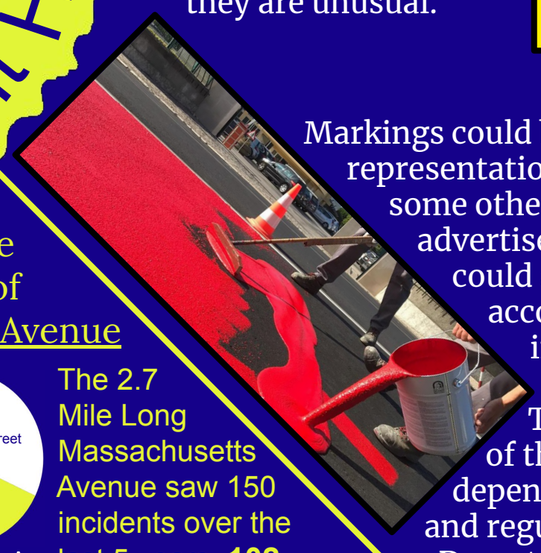
Proposal 3:
Improve drivers' awareness by installing caution signs at the worst intersections in the city, as well as a predetermined number of on-street locations.

While it may seem simple, signage warning drivers of potential dangers indirectly helps cyclists avoid collisions.

These signs should also be of varying severity depending on the danger of each intersection. The cost is estimated to be less than $150,000 for the installation of ~1000 signs in Boston.

Proposal 4:
Paint markings on the roads where incidents have occured in the past.

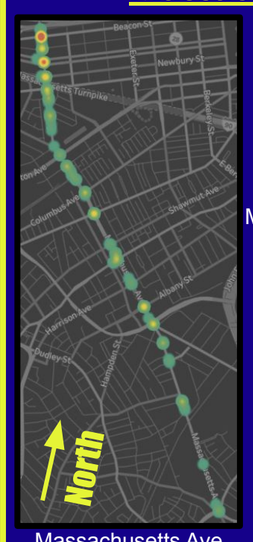
These markings would play a similar role to caution signs, but they could have a greater effect on drivers as they are unusual.



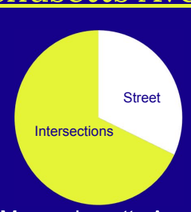
Markings could be small representations of a bicycle or some other symbol to advertise the danger. They could also be updated according to the incident database.

The specific details of this proposal would depend on the capability and regulations of the Department of Public Works, as would the total cost.

Case study of Massachusetts Avenue

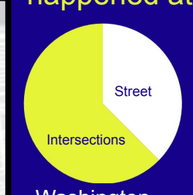


Massachusetts Ave Incidents

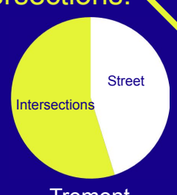


Massachusetts Ave Bike Lanes

The 2.7 Mile Long Massachusetts Avenue saw 150 incidents over the last 5 years. **102** happened at intersections.

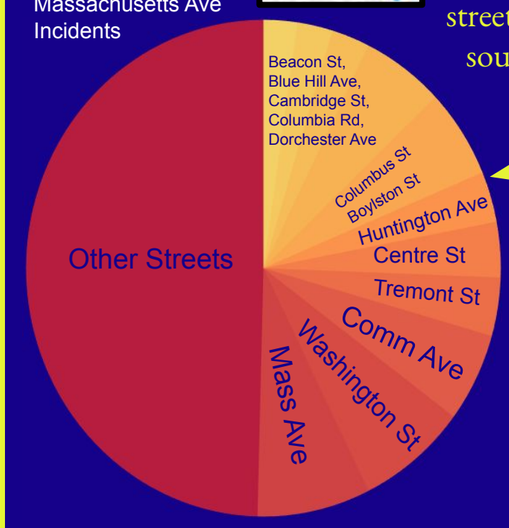


Washington St



Tremont Street

As it so happens, the top 13 dangerous streets tend to have most of their incidents sourced from intersections (e.g. above).



And these 13 streets account for 51% of all incidents!!!

Adding new infrastructure to intersections would also improve conditions along ALL of the roads as drivers would maintain a heightened state of awareness past the junctions.