



# TOWN OF BROOKLINE

Department of Public Works  
333 Washington Street  
Brookline, MA 02445

Right Turn On Red Restriction

For

Eliot Street at Ackers Avenue

The purpose of this study is to determine if the right turn restriction on the northwest approach to the Eliot Street at Ackers Avenue intersection is warranted. The study location can be seen in **Figure 1**. Recommendations will be based on the guidelines found in the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). The MUTCD suggests the following factors should be considered for the implementation of a NO TURN ON RED restriction:

1. Sight distance of vehicles approaching from the Left;
2. Geometric or operational characteristics of the intersection that might result in unexpected conflicts;
3. An exclusive (“Barn Dance”) pedestrian phase;
4. An unacceptable number of pedestrian conflicts with right-turn-on-red maneuvers, especially involving children, older pedestrians, or persons with disabilities;
5. More than three (3) right-turn-on-red accidents reported in a 12 month period for the particular approach.

According to our files the Transportation Board, or it’s predecessor the Traffic Council, implemented the NO TURN ON RED restriction based on an Exclusive “Barn Dance” pedestrian phase.



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Figure 1

Study Location

## SIGHT DISTANCE

The northwest approach to the Eliot Street at Ackers Avenue intersection does not have applicable sight distance requirements for right turn on red maneuvers because no vehicles are approaching from the left.

## GEOMETRIC AND OPERATIONAL CHARACTERISTICS

Ackers Avenue meets Eliot Street at 90 degrees to form a signalized t-intersection. The Eliot Street approaches both provide one general purpose travel lane. The Ackers Avenue is one-way in the northeast direction. Land use at the intersection is primarily residential the intersection also abuts the heath school.

## PEDESTRIAN CONFLICTS AND SIGNAL PHASING

Pedestrian activity at the Eliot Street and Ackers Avenue intersection is high during school hours. The signal is located within a school zone. The signal timing provides an exclusive pedestrian phase, during which time all vehicles should be stopped so pedestrians can cross. The MUTCD recommends no turn on red when an exclusive pedestrian phase is used and when an unacceptable number of pedestrian conflicts with right-turn-on-red maneuvers occur, especially involving children.

## CRASH ANALYSIS

In order to identify accident trends and safety characteristics for the study intersection accident reports were obtained from MassDOT Highway Crash Database for a three-year period covering 2007 through 2009.

There were no reported crashes at the Eliot Street and Ackers Avenue intersection for the study period. However right turn on red maneuvers are currently restricted on all approaches. The MUTCD warrants a right-turn-on-red restriction if three (3) or more accidents were caused by right turn on red maneuvers within 12 months.

## CONCLUSIONS

The Eliot Street northwest approach to the Eliot Street at Ackers Avenue signalized intersection has heavy pedestrian usage by school aged children during school hours with an exclusive pedestrian interval at which time all vehicles should be stopped and pedestrians allowed cross. The intersection is located within a school zone. Using the MUTCD guidelines 3, and 4 the removal of the right turn on red restriction would not be recommended.