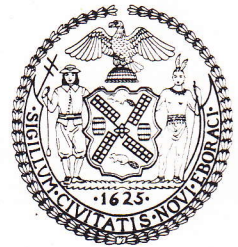


# Initial Safety Impact of "P" Warrant Traffic Signals in New York City

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## EXECUTIVE SUMMARY

The New York City Department of Transportation receives more than one thousand requests for new traffic signals each year from community groups and elected officials. Signals are typically requested as a means to reduce traffic speeds and prevent accidents on residential streets. It is widely believed by the public that traffic signals reduce speeding and ameliorate unsafe traffic conditions.

Traffic signals installed according to engineering criteria (warrants) assign the right-of-way to competing traffic flows and effect orderly traffic movement. Signals are not effective as a speed control device, and should not be installed to regulate speeding or other driver behavior problems. Engineering studies have shown that unwarranted signals have the potential to create more problems than they solve. Unwarranted signals may exacerbate speeding and noncompliance with other traffic regulations. Many community activists and elected officials request signal installations to address speeding and other driver behavior problems, even though signal installation may prove counterproductive to improving safety.

This paper examines the initial safety impact of six unwarranted traffic signals installed between 1983 and 1985 at local intersections in response to pressure from the community. It compares this impact with that of six warranted traffic signals installed at local intersections.

In the twelve month period following signal installation, the following results were observed:

- o Accidents increased 65% at unwarranted signal sites and declined 49% where warranted signals were installed.
  
- o 4 out of 6 warranted signal sites showed decreases in accidents; 1 had an increase and 1 remained unchanged.  
  
1 out of 6 unwarranted sites showed a decrease in accidents; 4 showed increases and 1 remained unchanged.
  
- o Injuries increased at unwarranted signal sites and decreased where warranted signals were installed. The injury total at the six "P" warrant locations was three injuries per year (0.5 injuries per year per intersection). This is fairly typical of the injury history at many sites where political pressure is applied for signal approval. Signal requests are often based on perception of hazard rather than real hazard. Occasionally a tragedy (not preventable by a signal) is a catalyst for demanding a signal. However, it is hard to improve on zero to one injuries per year.

This preliminary study concludes that during their initial year, unwarranted signals do not reduce accidents, and may increase the risk of certain accident types.