



# Traffic Systems Design Directive

169 Brick Store Landing Road, Smyrna, DE

Number (Year - #)  
2017-1

Requestor Name: Steve Harr, WRA

Date Submitted: 01/27/2017

Applicable Chapter / Section / Page / Figure in current manual: See attached

Description of Current Practice: See attached

Recommended Change: See attached

Requires modification to Traffic Design Manual?

Yes

No

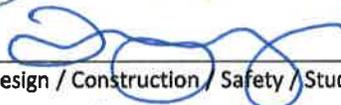
Date Received: \_\_\_\_\_

Received By: \_\_\_\_\_

Based upon the conditions presented, it is recommended that this be approved as an updated Traffic Systems Design Practice and included as a revision to the Traffic Design Manual (if applicable).

Recommended By:   
Requestor

Date: 01/27/17

Recommended By:   
Design / Construction / Safety / Studies Manager

Date: 1/31/17

Approved By:   
(Signature)

Date: 1/31/17

Status / Date Completed: \_\_\_\_\_

**CHAPTER IV**

**Page 70, Section C, Item 2f**

**Provision:**

**Backplates**

Backplates should only be used where an engineering study indicates their need to resolve a problem such as where sun glare, bright sky, and/or complex or confusing backgrounds indicate a need for enhanced signal face conspicuity. If used on span wire, a tether wire shall be used.

**Suggested Revision:**

**Backplates**

Backplates should be used to supplement all vehicular signal heads mounted on mast arms and where an engineering study indicates their need to resolve a problem such as where sun glare, bright sky, and/or complex or confusing backgrounds indicate a need for enhanced signal face conspicuity. If backplates are installed, they shall include a two-inch wide yellow retro-reflective border. If used on span wire, a tether wire shall also be used.

**Support:**

Improving safety at intersections is the highest-priority emphasis area of the 2015 Delaware Strategic Highway Safety Plan (SHSP). Signal backplates with a retro-reflective border provide additional conspicuity for signal heads and providing backplates on mast-arm-mounted signal heads does not require additional tethering. Additionally, the Federal Highway Administration has included backplates with retro-reflective borders as a proven safety countermeasure at intersections. Although these guidelines indicate that backplates should, not shall, be used with mast arm designs, the designer should still assess the mast arm size, length, and orientation to avoid the potential for significantly higher wind loading with backplates.