



June 15, 2020

Dear Municipal Partner:

The department understands the challenges occurring at this time and appreciates your efforts. Due to a recent structural failure of a traffic signal pole in Pennsylvania, the department is providing you with background information on this incident to learn from this experience and ensure public safety moving forward. Recommendations are provided below to minimize the risk of such an occurrence.

In Pennsylvania, in accordance with §6122(a)(2) of the Pennsylvania Vehicle Code (75 Pa. C.S.), traffic signals are owned, operated, and maintained by the Municipality having jurisdiction over the intersection. This requirement is regardless of whether the roads are State or Municipal owned. Traffic signals should be maintained in accordance with PennDOT Publication 191, *Guidelines for the Maintenance and Operation of Traffic Signals*. This letter is being sent to all Municipalities in which traffic signals are located.

On April 13, 2020, an incident occurred in Pennsylvania where a traffic signal pole failed and fell onto the roadway. Upon further investigation, the base of the pole was found to have extensive corrosion and loss of structural steel material leading to the collapse of the traffic signal pole. This extensive steel corrosion at the pole base was not visible until after the failure due to the pole base having been encased in concrete (see attached photo 1). The pole was originally erected circa 1983 and in service for less than 40 years.

The department recommends the following actions be taken by traffic signal owners to minimize the risk to the public of traffic signal pole failures:

1. Inventory all traffic poles on non-state routes:
PennDOT's Traffic Asset Management System (TSAMS) <https://www.tsams.penndot.gov/> is a database established for recording traffic signal pole inventory data. The TSAMS database already contains data for traffic signal poles on state roads. Owners are encouraged to update and/or complete their inventory for the signals not yet recorded in TSAMS. For information on how to gain access to TSAMS, please email signals@pa.gov.
2. Inspect all traffic poles (State and Local routes) within your jurisdiction, then record any structural deficiencies observed. Particular attention should be given to poles erected prior to 1990:
 - a. If any traffic poles have the baseplates embedded in concrete, earth, or any other situation that would hamper sufficient drainage, action

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- should be taken to expose the base plate to allow drainage and inspection of the pole.
- b. Determine if cracks, corrosion, or holes through the poles are present, with particular attention to the lower 1/3 of the pole and arm connections. A simple method to assess structural integrity is to visually inspect through the hand hole and to strike the pole with a hammer as a soundness check.
 - c. Determine other deficiencies, such as, loose nuts, missing bolts, deformation, etc.
 - d. If the structural integrity of the traffic pole is compromised, take immediate action to mitigate the risk to the public.
3. Develop a plan to repair or replace poles that no longer meet the design capacity.
 - a. For traffic poles where there are structural deficiencies, please contact the District Traffic Engineer.
 4. Ensure any future attachments added to an existing traffic signal pole are evaluated as part of the PennDOT traffic signal permitting process. Other equipment attached to traffic signal poles must comply with Strike-off Letter 494-15-05, *Guidelines for Attaching Other Equipment on Traffic Signal Structures*.
 5. Initiate planning and programming, design, and construction for the repair or replacement of any poles deemed unsuitable.

A Local Technical Assistance Program (LTAP) web-based Drop-In Meeting has been set for June 23rd at 12:00pm to present the structural failure and this letter. The announcement of the web-based meeting will be sent through LTAP or from your municipal association partners (i.e., Boroughs Association, PA Municipal League, and PSATS).

The department administers many funding sources that can assist Municipalities with inspection, repair, and replacement of traffic poles including municipal Liquid Fuels and Automated Red Light Enforcement (ARLE). For more information on these and other funding sources please click on this link: ([Community and Local Government Assistance](#)). For further information, please contact Mr. Ashwin B. Patel, P.E., Senior Manager – Traffic Engineering & Safety Division, at 610-205-6565 or Mr. David L. Adams, P.E., Traffic Signals Section Manager, at 610-205-6576.

Sincerely,

Kenneth M. McClain /s/

Kenneth M. McClain
District Executive 6-0



Photo 1: Traffic Pole at the point of encasement.