



**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
HARRISBURG, PENNSYLVANIA 17120**

**OFFICE OF
SECRETARY OF TRANSPORTATION**

May 27, 2003

Mr. James A. Cheatham, Division Administrator
Federal Highway Administration
228 Walnut Street, Room 508
Harrisburg, PA 17101-1720

RE: White LED Flashing Warning Light
Request for Experimental Approval
MUTCD, Section IA. 10 Interpretations, Experimentations, and Changes

Dear Mr. Cheatham:

The Pennsylvania Department of Transportation requests permission to experiment with a white LED flashing light in *active work zones*. The light will be attached to the Pennsylvania "Active Work Zone When Flashing Increased Penalties" sign (W21-19) in order to inform drivers that they are entering the *active work zone*.

Background

The Pennsylvania Vehicle Code was recently amended to mandate additional traffic control devices in highway work zones. The purpose is to improve both the safety of those working on highways and enhance the mobility of the traveling public. It also makes the Pennsylvania Department of Transportation, municipalities, highway contractors, and utility companies more accountable to the public by delineating those portions of work zones where motorists could jeopardize the safety of workers. This newly delineated area is designated as an *active work zone*, which can be considered a subset of the work zone and will be the only portion of the work zone where double fines and other increased penalties will apply. Further, the law requires that drivers be informed that they are entering an *active work zone* by the use of a white strobe light or other unique white flashing light or device installed on the W21-19 sign located as close as practical to the active work zone. The Pennsylvania Department of Transportation selected a white LED light to comply with the law. The white LED light will be installed in approximately 650 construction and maintenance work zones during the 2003 construction season.

Objective

The Pennsylvania Department of Transportation will evaluate the white LED light to determine its effectiveness in informing drivers that they are entering an *active work zone*.

Work Plan

A. Scope


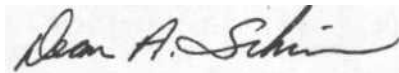
The Department will evaluate the white flashing LED light in one construction *active work zone* in each Engineering District (total = 11). The evaluation will be performed by randomly selecting and stopping drivers downstream of the *active work zone* and completing a survey about their awareness of the zone, increased penalties, and Act 229 in general. The survey will be conducted by the District staff or our consultant with the tabulation and report written by the Central Office Traffic Engineering and Operations Division with the assistance of the FHWA Pennsylvania Division Safety Engineer.

B. Detailed Evaluation Plan

<u>Task</u>	<u>Target Date</u>
1. Develop survey questionnaire	August 1
2. Distribute questionnaire	August 15
3. Districts select projects	August 15
4. Conduct survey	August 15 -- September 15
5. Write draft report	October 10
6. Review of draft report, incorporate changes	October 15
7. Submit final report to FHWA	November 15

If you have any questions, please contact Richard Sesny, P.E. at 717-783-6080 or at rsesny@state.pa.us.

Sincerely,



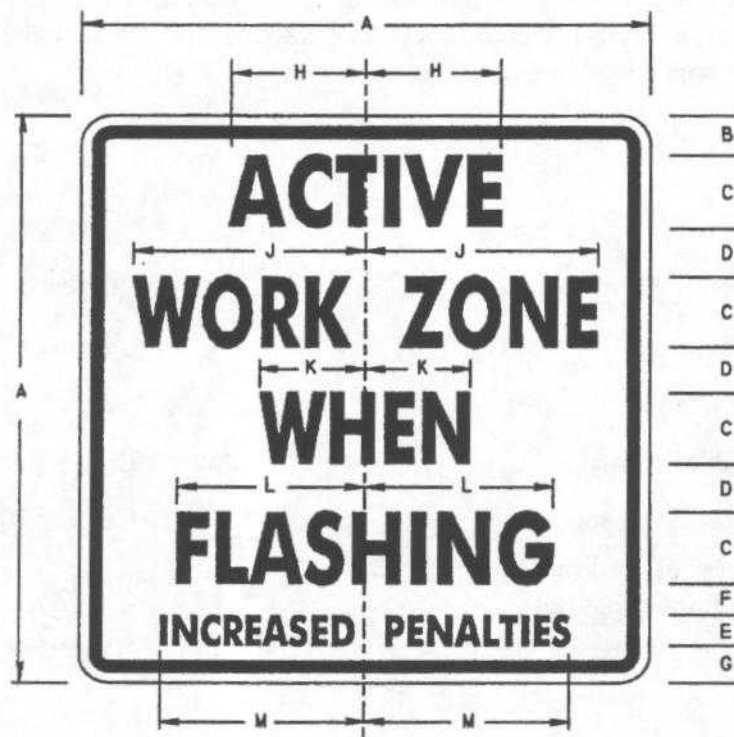
Gary L. Hoffman, P.E.
Deputy Secretary for Highway Administration

W21-19

ACTIVE WORK ZONE WHEN FLASHING SIGN

(a) Justification. The Active Work Zone When Flashing Sign (W21-19) shall be used in advance of an 'active work zone' in accordance with Department guidelines to advise motorists that construction, maintenance or utility workers are on the roadway, berm or shoulder, and that increased penalties apply. The W21-19 sign shall be equipped with a flashing white light that is activated when workers are present and when flashing shall be readily visible both day and night by an ordinarily observant person. When workers are not present for more than 60 minutes, the flashing light shall be turned off.

(b) Placement. When used, the W21-19 sign shall be erected as close as practical to the beginning of the active work zone, except motorists' safety should not be compromised by erecting the signs within transitions or at other locations where the sign could be especially distracting when a work zone has more than one active work zone and the active work zones are more than 1 mile apart, each active work zone shall be signed individually with this sign.



SIGN SIZE AxA	DIMENSIONS (IN MILLIMETERS)											MAR- GIN	BOR- DER	BLANK STD.
	B	C	D	E	F	G	H	J	K	L	M			
900x900	62	113C	75	50C	50	61	212	367	165	296	322	15	20	B3-900
1200x1200	86	150C	88	75C	75	100	282	490	220	395	483	20	25	B3-1200

COLOR:
LEGEND AND BORDER:
 BLACK (NON-REFLECTORIZED)
BACKGROUND:
 ORANGE (REFLECTORIZED)

APPROVED FOR THE Date 2/20/03
Secretary of Transportation
By : *A.H. Brown*
Chief, Traffic Engineering and Operations Division
Bureau of Highway Safety and Traffic Engineering

W21_19.DGN

W21-20

END ACTIVE WORK ZONE SIGN

The End Active Work Zone Sign (W21-20) should be installed immediately at the end of each "active work zone" when signs are erected at the beginning of the active work zone to advise of increased penalties. However, the W21-20 sign is not necessary if the End Road Work Sign (G20-2a) or the End Work Area Sign (G20-3) is located at this location.



SIGN SIZE AxA	DIMENSIONS (IN MILLIMETERS)								MAR- GIN	BOR- DER	BLANK STD.
	B	C	D	E	F	G	H	J			
900x900	246	88	125E	87	75	177	337	267	15	20	B3-900
1200x1200	295	113	150E	112	125	213	404	320	15	20	B3-1200

COLOR:
 LEGEND AND BORDER:
 BLACK (NON-REFLECTORIZED)
 BACKGROUND:
 ORANGE (REFLECTORIZED)

APPROVED FOR THE _____ Date 2/20/03
 Secretary of Transportation
 By : Art Brune
 Chief, Traffic Engineering and Operations Division
 Bureau of Highway Safety and Traffic Engineering

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