TRAFFIC OPERATIONS POLICY DIRECTIVE	NUMBER: **24 - 01**	PAGE: 1 of 5
David Man, DIVISION CHIEF (Signature) *David S Man*	DATE ISSUED: February 8, 2024	EFFECTIVE DATE: February 8, 2024

SUBJECT: **Leading Pedestrian Interval (LPI) at Signalized Intersections**	DISTRIBUTION
	☒ All District Directors
	☒ All Deputy District Directors - Traffic Operations
	☒ Chief Counsel, Legal Division
	Headquarters Division/Program Chiefs for:
	☒ Construction
	☒ Design
	☒ Maintenance
	☒ Safety Programs
	☒ Transportation Planning
	☐ Additional:

DOES THIS DIRECTIVE AFFECT OR SUPERSEDE ANOTHER DOCUMENT? ☒YES ☐NO	IF YES, DESCRIBE Traffic Operations Memo dated 12/29/2022, "IMPLEMENTATION OF LEADING PEDESTRIAN INTERVAL (LPI) AT SIGNALIZED INTERSECTIONS"
WILL THIS DIRECTIVE BE INCORPORATED IN A DEPARTMENT MANUAL, GUIDELINE OR STANDARD PLAN? ☒YES ☐NO	IF YES, DESCRIBE Traffic Signal Operations Business Plan

DIRECTIVE

New and replaced traffic-actuated signals owned or operated by the California Department of Transportation (Caltrans) shall include a touch-free Accessible Pedestrian Signal (APS) and Leading Pedestrian Interval (LPI). LPIs shall also be implemented at existing traffic-actuated signalized intersections in LPI-required areas.

IMPLEMENTATION

The first placement or replacement of a state-owned or operated traffic-actuated signal shall be installed and maintained to have LPIs, and such signal shall also include the installation, activation, and maintenance of a touch-free APS, provided these requirements comply with the California Manual on Uniform Traffic Control Devices (CA MUTCD) and are not prohibited by the version of the CA MUTCD in effect on December 31, 2022.

In the context of this policy, "replaced" or "replacement" refers to the relocation or exchange in place with new ones, of all existing signal poles at an intersection.

Caltrans shall implement LPIs on existing state-owned or operated traffic-actuated signals that are in any of the following LPI-required areas unless prohibited by the CA MUTCD:

- **Residential district, as determined by California Vehicle Code (CVC) section 22507.5.**
- **Business district, as defined in CVC sections 235 and 240.**
- **Business activity district, as defined in CVC section 22358.9**
- **Safety corridor as defined in CA MUTCD section 2B.13.**
- **School zone, as defined in CA MUTCD section 1A.13.185.**
- **Areas with a high concentration of pedestrians and cyclists, as defined in CA MUTCD, Section 2B.13 and Table 2B.106(CA).**

As soon as practicable, all existing state-owned or operated traffic signals located in LPI-required areas, as described above, shall be identified and recorded in the Transportation Management System (TMS) Inventory Database to assist future annual operational review requirements and coordination with locals for delegated signals. LPIs should then be implemented at the next opportunity for regularly scheduled operational reviews. **The traffic signal LPI implementation shall be recorded in the TMS Inventory Database.**

As soon as practicable, district signal operations units shall formally notify, in writing, local agencies operating state-owned traffic-actuated signals in LPI required areas, as described above, about the opportunity to implement LPI. Additionally, such local agencies shall report their implementation of LPI at these locations to Caltrans so the locations can be included in the TMS Inventory Database.

For existing traffic signals not in LPI required areas, Caltrans should follow the Guidelines for Implementing LPI to assess and implement LPI at intersections.

For additional requirements on the use of touch-free APS refer to TOPD 21-06.

Depending on local site geometric and traffic conditions, some LPI locations may need to restrict turns on red using illuminated blank out signs and enhanced signing.
LPI may be implemented at existing signals without touch-free APS and pedestrian countdown signals.

IMPLEMENTATION (Cont'd)

This policy does not require a traffic-actuated signal replacement.

DELEGATION

No new delegations of authority are created under this policy.

BACKGROUND

LPI is a signal-timing tool that can reduce vehicle-pedestrian crashes. At signalized intersections, LPI gives pedestrians the opportunity to enter an intersection 3 to 7 seconds before vehicles are given a green indication. With this head start, pedestrians can better establish their presence in the crosswalk before vehicles proceed to make their turn. LPI provides the benefits of increased visibility of crossing pedestrians, reduced conflicts between pedestrians and vehicles, and increased likelihood of motorists yielding to pedestrians.

LPI is a Federal Highway Administration "Proven Safety Countermeasure" that may reduce pedestrian-vehicle crashes at intersections by up to 13 percent. Therefore, the implementation of LPI may help enhance pedestrian safety and reduce traffic fatalities.

Assembly Bill 2264 (Bloom)added the following language to section 21450.5 of the California Vehicle Code, effective January 1, 2023:

(d)

    (1) Upon the first placement or replacement of a state-owned or operated traffic-actuated signal, a traffic-actuated signal shall be installed and maintained to have a leading pedestrian interval, and shall include the installation, activation, and maintenance of an accessible pedestrian signal and detector that complies with sections 4E.08 to 4E.13 of the California Manual on Uniform Traffic Control Devices in effect on December 31, 2022.

    (2) An existing state-owned or operated traffic-actuated signal capable of being implemented with remote installation or in-person programming shall have a leading pedestrian interval programmed when maintenance work is done on the intersection in which the traffic-actuated signal is located, if the traffic-actuated signal is in any of the following areas:

        (A) A residential district.
        (B) A business district.
        (C) A business activity district.
        (D) A safety corridor.
        (E) A school zone.

BACKGROUND (Cont'd)

      (F) An area with a high concentration of pedestrians and cyclists, as determined by the Department of Transportation pursuant to Section 22358.7.

(3) The requirements in paragraphs (1) and (2) do not apply when prohibited by the California Manual on Uniform Traffic Control Devices.

(4) As used in this subdivision, a "leading pedestrian interval" means an official traffic control signal that advances the "WALK" signal for three to seven seconds while the red signal halting traffic continues to be displayed on parallel through or turning traffic.

(5) As used in this subdivision, an "accessible pedestrian signal and detector" means an integrated device that communicates information about the "WALK" and "DON'T WALK" intervals at signalized intersections in nonvisual formats, including audible tones, speech messages, and vibrotactile surfaces, to pedestrians who are blind or have low vision.

<u>DEFINITIONS</u>

When used in this Traffic Operations Policy Directive, the text shall be defined as follows:

1) **Standard** – a statement of required, mandatory or specifically prohibited practice. All standards text appears in **bold** type. The verb **shall** is typically used. Standards are sometimes modified by Options.

2) <u>Guidance</u> – a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements text appears in <u>underline</u> type. The verb <u>should</u> is typically used. Guidance statements are sometimes modified by Options.

3) Option – a statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a Standard or Guidance. All Option statements text appears in normal type. The verb may is typically used.

4) Support – an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements text appears in normal type. The verbs shall, should and may are not used in Support statements.