



## Providence Green and Complete Streets Advisory Council

Jorge O. Elorza, Mayor

### **Staff Report: Discussion of Walk Signal Policies (For Action)**

*Presented at 11-21-22 GCSC meeting*

### **Summary of discussion with Nate Urso at October meeting**

Mr. Urso: In early 2020, all traffic signals in the city were set to pedestrian recall (a walk light coming up every cycle without the need for pedestrians to push a button) due to concerns about high-touch surfaces. In early 2022, complaints about traffic congestion at intersections with exclusive pedestrian phases led to the 29 city-owned traffic signals with exclusive phases being returned to push-button actuation. Public Works did not track how many complaints were made about each intersection. The 166 city-owned traffic signals without an exclusive pedestrian phase remain on pedestrian recall.

*The 29 intersections are:*

- **East Side:** Angell & “The Walk” at Brown, Gano & Pitman, Waterman & Benefit, Waterman & “The Walk” at Brown, Wickenden & Brook
- **Charles, Wanskuck, Smith Hill, Valley:** Branch & Silver Spring, Park & Promenade (no complaints), Silver Spring & Commodore, West Exchange & North Garage, West River & Post Office (no complaints)
- **Federal Hill:** Atwells & DePasquale, Broadway & DePasquale, Broadway & Tobey,
- **Downtown:** Canal & Park Row West, Chestnut & Clifford, Dorrance & Fulton, East Franklin & Friendship, Exchange & Fulton
- **Elmhurst, Mt Pleasant, Manton:** Atwells & Mount Pleasant, Chalkstone & River, Eaton & Huxley, Fruit Hill & Manton
- **South Providence & West End:** Broad & Friendship, Cranston & Bridgman, Eddy & Dudley, Eddy & Ernest, Prairie & Thurburs
- **Silver Lake:** Plainfield & Atwood, Plainfield & Laurel Hill

*Highlighted intersections received fewer than “numerous” complaints about motor vehicle congestion.*

Ms. Quezada: Can we track the impact of the changes?

Mr. Urso: There are other studies planned and it might be possible to look at pedestrian crash data at these intersections as part of that.

Mr. Urso then responded to questions listed in the presentation that Ms. Jaswal was interested in:

- Is there a general policy around when to restrict Right Turn on Red?
  - Mr. Urso: There is no written policy. In general, wherever there is an exclusive pedestrian phase there should be No Right Turn on Red signed. On a case-by-case basis visibility concerns, high pedestrian activity, a high rate of crashes, or poor compliance of drivers yielding to pedestrians may also lead to this restriction. Restricting Right Turn on Red has been implemented based on requests previously.

DEPARTMENT OF PLANNING AND DEVELOPMENT

444 Westminster Street, Providence, Rhode Island 02903

401 680 8400 ph | 401 680 8492 fax

[www.providenceri.gov](http://www.providenceri.gov)



## Providence Green and Complete Streets Advisory Council

Jorge O. Elorza, Mayor

- What is the process for using actuated vs. automatic pedestrian phasing?
  - Mr. Urso: Currently exclusive pedestrian phases are push-button actuated and all other city-owned signals are on concurrent pedestrian recall.
- What volume of turning movements does DPW consider incompatible with concurrent phasing?
  - Mr. Urso: DPW does not have a specific threshold and is not aware of national guidance.
- Are there volumes of pedestrian traffic that trigger different walk signal configurations?
  - Mr. Urso: DPW does not have a specific threshold, but may consider pedestrian volume alongside traffic volume and crash data when evaluating the potential for a Leading Pedestrian Interval (LPI) or an exclusive pedestrian phase.
- Does DPW have a plan for adding Leading Pedestrian Interval (LPI) to signals throughout the city?
  - Mr. Urso: DPW does not have a specific plan to implement LPI but is interested in the potential of LPI. DPW capacity to conduct studies is limited but it may be possible to implement LPI with only a field review rather than a detailed study.
- Is there a plan for upgrading walk signals to provide better auditory feedback for visually impaired crosswalk users?
  - Mr. Urso: DPW does not have a specific plan to implement auditory feedback signals citywide due to cost of implementation. Signal work initiated outside normal DPW operations does sometimes include this.
- What walk speed does DPW use in calculating length of walk signal?
  - Mr. Urso: 3 feet per second, or 2.5 in areas with a high concentration of elderly road users or those with mobility disabilities.
- What are target and maximum cycle lengths in different types of streets?
  - Mr. Urso: Cycle lengths are mostly between 60-90 seconds. The target depends on the intersection, and both traffic volume and pedestrian volume are relevant to setting a target.

### Staff recommendations

- Pedestrian and motor vehicle volume should be studied **at the 29 city-owned signals with exclusive pedestrian phasing, and some of these should be returned to pedestrian recall** during peak periods, including intersections with very high pedestrian and/or turning traffic, and intersections with low vehicular traffic, and the intersection of Clifford Street with East Franklin Street where recall is important to the safe operation of the urban trail. Intersections with lower turning volumes (see thresholds below) should be evaluated for a change to concurrent phasing with LPIs.
- **Right Turn On Red** should be prohibited citywide by ordinance as recommended in the Great Streets Plan. Until such time as a restriction on Right Turn On Red is codified in citywide ordinance, the City should put a plan in writing for increasing the implementation of No Turn On Red signage. Locations should be prioritized where:
  - There is a moderate or high pedestrian/bicycle-volume or a significant volume of vulnerable crossers (e.g., children or older adults);
  - The crosswalk location is such that drivers turning right block the crosswalk while waiting for a gap or there are high conflicting volumes for right turns to merge into; and

DEPARTMENT OF PLANNING AND DEVELOPMENT

444 Westminster Street, Providence, Rhode Island 02903

401 680 8400 ph | 401 680 8492 fax

[www.providenceri.gov](http://www.providenceri.gov)



## Providence Green and Complete Streets Advisory Council

Jorge O. Elorza, Mayor

- Crossings used by bicycles approaching from two directions (urban trail crossings)
- **Leading Pedestrian Intervals (LPis)** of 3-7 seconds should be implemented at signalized intersections with concurrent pedestrian phasing and moderate turning volumes based on the following thresholds:

Warrant	Turning Vehicle Volume (A)	Pedestrian Volume (B)
Vehicle Peak Hour	≥ 130 per hour	≥ 25 per hour
Pedestrian Peak Hour	≥ 100 per hour	≥ 50 per hour
4-hour vehicle/ped volume	≥ 105 per hour	≥ 30 per hour
8-hour vehicle/ped volume	≥ 100 per hour	≥ 25 per hour
School Crossing	≥ 50 per hour	

LPI should also be implemented where there are T-junctions or junctions with one-way streets that have no opposing through traffic to shield pedestrians from left turns during the early part of the pedestrian phase. An LPI can be considered as a means of partial protection from left turns in these cases; however, a longer LPI may be required.

- Where turning volumes are higher (over 200 per hour) and dedicated turning lanes are available, protected-only turning movement phases should be considered, and should be mandatory for bike lane or urban trail crossings that meet the following thresholds:

Separated Bike Lane Operation	Motor Vehicles per Hour turning across Separated Bike Lane			
	Two-way Street			One-way Street
	Right Turn	Left Turn across One Lane	Left Turn across Two Lanes	Right or Left Turn
One-way	150	100	50	150
Two-way	100	50	0	100

Where protected-only left phasing is implemented, lagging left turn phases preferred over leading lefts to allow for pedestrians to clear prior to the start of the protected phase.

- **Exclusive pedestrian phasing** should be considered if any of the following conditions are met:
  - The intersection experiences a high volume of pedestrians (over 800 per day).
  - There is a combination of a moderate volume of pedestrians with high turning-vehicle volumes (over 200 per hour), where a dedicated turning lane is not available and protected turn phasing cannot be implemented.
  - There is moderate pedestrian volume with high pedestrian–vehicle collisions (three collisions over the past 3 years).
  - There is moderate pedestrian volume, and at least 25% of pedestrians desire to cross diagonally.
  - The intersection geometry is unusual (e.g., highly skewed; five or six legs).

DEPARTMENT OF PLANNING AND DEVELOPMENT

444 Westminister Street, Providence, Rhode Island 02903

401 680 8400 ph | 401 680 8492 fax

[www.providenceri.gov](http://www.providenceri.gov)



## Providence Green and Complete Streets Advisory Council

Jorge O. Elorza, Mayor

- **Exclusive bike phases** should be provided at transition points such as when a bicycle path switches from one side of the road to another, or from two-way to one-way operations
- **General Recommendations** for Signalized Intersections
  - Curb ramps and crosswalks should be added where they are missing. If a crosswalk was omitted due to turning traffic volume, protected phasing should be implemented
  - Pedestrian phasing should be extended to match the length of the concurrent phases where the minimum pedestrian crossing time is exceeded (peds rest in walk)
  - Auditory feedback should be added whenever a signal is added or modified. A plan should be developed to upgrade all signalized crossings with this accessibility feature over time.
  - The City should consider reducing signal cycle lengths from 90s to 60s off-peak where feasible.
- The City should present GCSC with a plan for the timeline on which these recommendations will be implemented by June 2023.

---

Respectfully submitted by Alex Ellis.