No Turn on Red Policy Update

August 6, 2024
SFMTA Board of Directors

Ricardo Olea, City Traffic Engineer

No Turn on Red (NTOR) Timeline

1. **1920-30's.** California adopts driving regulations that allow people to turn right on a red light after stopping.
2. **1970's.** Eastern states required by federal mandates to adopt turns on red during energy crisis.
3. **2002**. DPT study of NTOR.
4. **2020**. DPH and SFMTA study of turns on red crashes.
5. **2021**. Proactive areawide pilot of NTOR in the Tenderloin.
6. **2022**. SFMTA decision to expand NTOR beyond Tenderloin.
7. **2023**. Public online petition and Board of Supervisors Resolution 481-83 on citywide NTOR expansion.
8. **2024.** Approvals and start of Downtown NTOR expansion.

1995 NHTSA Report to Congress

- National Highway Traffic Safety Administration (NHTSA) report to Congress per the Energy Policy Act of 1992.
- "In conclusion, there are a relatively small number of deaths and injuries each year caused by RTOR crashes. These represent a very small percentage of all crashes, deaths and injuries."

Percentage of All Crashes That Are Right-Turn-On-Red (RTOR) Crashes*

	All Crashes	RTOR Crashes	% RTOR
Property Damage	2,408,664	1,163	0.048
Injury	892,985	558	0.062
Fatal	14,029	4	0.029
TOTAL	3,315,678	1,725	0.052

* Data from Indiana, Maryland, and Missouri, 1989-1992; Illinois, 1989-1991

The Turning On Red Task

- In order to turn on red legally, a vehicle must come to a complete stop behind stop bar, but in practice some fail to do so.
- Inching forward allows for vehicular sight distance, but doing this naturally blocks the crosswalk.
- Watching for pedestrians crossing the street, but often people forget to look right again in case someone new started crossing.

2020 SFMTA and SFDPH NTOR Study

- About 1% of citywide injury crashes in five-year period were due to a turn on red (129 of 15,979 incidents).
- The vast majority (80%) of crashes where turns on red crashes involve pedestrians (103 of the 129).
- 2.5% citywide pedestrian injury crashes in five-year period were due to turn on red (103 of 4,179).
- The vast majority of turns on red crashes happen on the High Injury Network (12% of streets).
- Turn on green crashes about three times more frequent.

Tenderloin Areawide NTOR Pilot

In Fall 2021, the SFMTA posted No Turn On Red signs at over 50 intersections in the Tenderloin (high injury concentration).

Motorist Compliance

Motorists are demonstrating a high compliance with NTOR restrictions. On average, **92%** of vehicles are complying with the turn restriction.

Crosswalk Encroachment

Vehicles blocking or encroaching onto crosswalks on a red signal was reduced by more than **70%** after the restriction was implemented.

Close Calls at Intersections

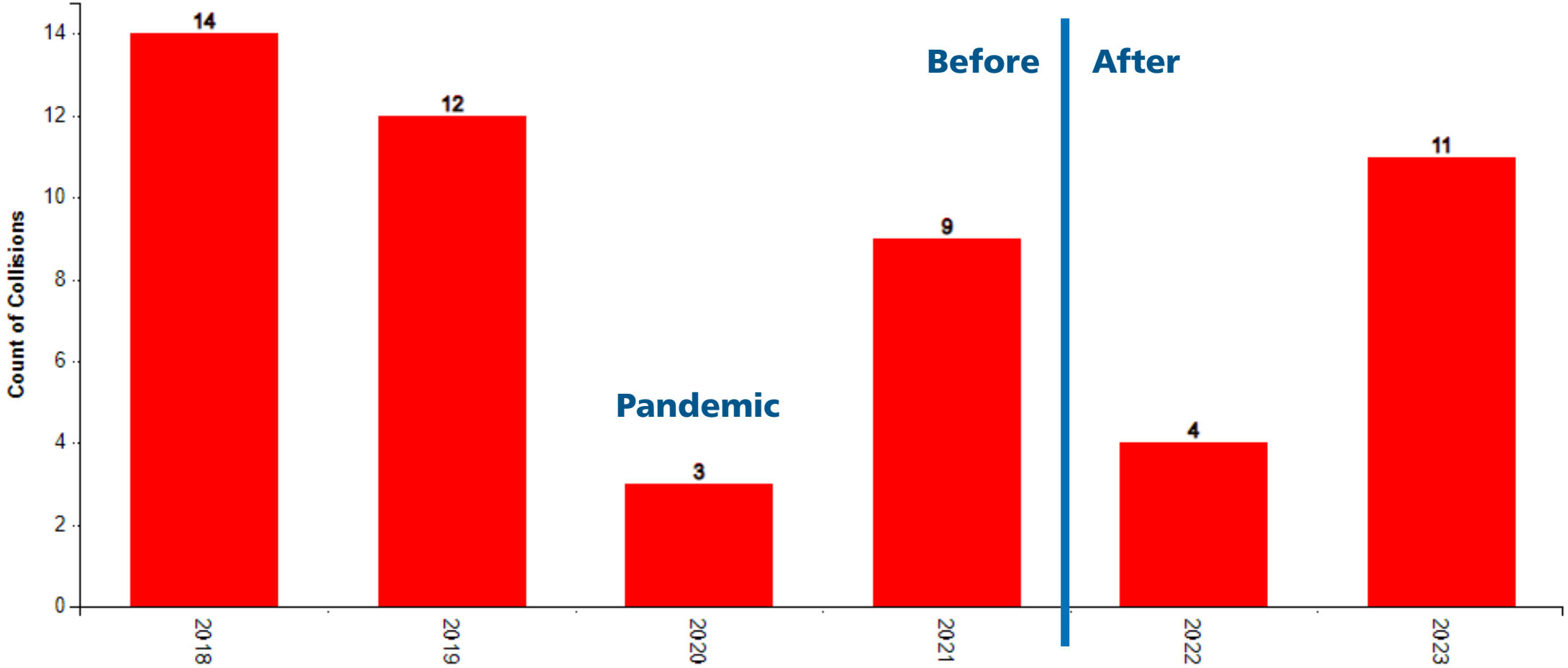
While pedestrian-vehicle interactions increased (expected given NTOR restriction), **close calls for vehicle-pedestrians decreased** from 5 close calls before NTOR signs were posted to 1 close call after restrictions were in place at observed intersections.

Yielding Behavior

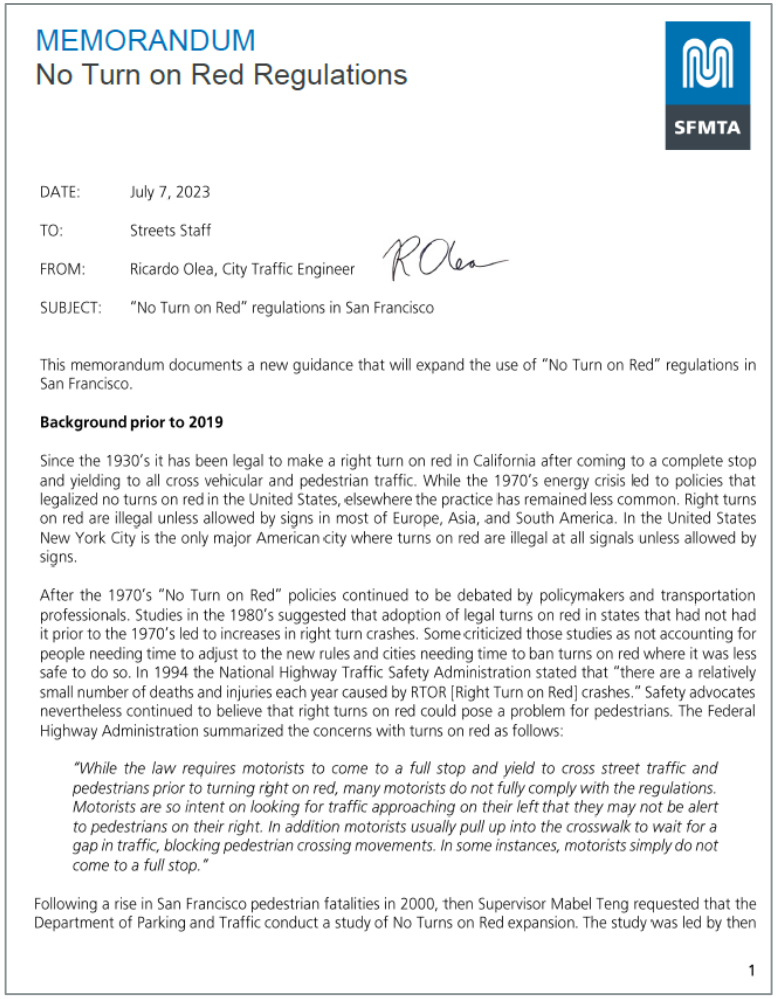
There was no significant change in the percentage of turning vehicles that yield at the crosswalk to pedestrians on a green light.

Tenderloin Right Turn Crashes After NTOR

Pedestrian-involved injury crashes in Tenderloin involving all right turns at signals.



2023 NTOR Staff Guidance Memo



MEMORANDUM
No Turn on Red Regulations

SFMTA

DATE: July 7, 2023

TO: Streets Staff

FROM: Ricardo Olea, City Traffic Engineer

SUBJECT: "No Turn on Red" regulations in San Francisco

This memorandum documents a new guidance that will expand the use of "No Turn on Red" regulations in San Francisco.

Background prior to 2019

Since the 1930's it has been legal to make a right turn on red in California after coming to a complete stop and yielding to all cross vehicular and pedestrian traffic. While the 1970's energy crisis led to policies that legalized no turns on red in the United States, elsewhere the practice has remained less common. Right turns on red are illegal unless allowed by signs in most of Europe, Asia, and South America. In the United States New York City is the only major American city where turns on red are illegal at all signals unless allowed by signs.

After the 1970's "No Turn on Red" policies continued to be debated by policymakers and transportation professionals. Studies in the 1980's suggested that adoption of legal turns on red in states that had not had it prior to the 1970's led to increases in right turn crashes. Some criticized those studies as not accounting for people needing time to adjust to the new rules and cities needing time to ban turns on red where it was less safe to do so. In 1994 the National Highway Traffic Safety Administration stated that "there are a relatively small number of deaths and injuries each year caused by RTOR [Right Turn on Red] crashes." Safety advocates nevertheless continued to believe that right turns on red could pose a problem for pedestrians. The Federal Highway Administration summarized the concerns with turns on red as follows:

> *"While the law requires motorists to come to a full stop and yield to cross street traffic and pedestrians prior to turning right on red, many motorists do not fully comply with the regulations. Motorists are so intent on looking for traffic approaching on their left that they may not be alert to pedestrians on their right. In addition motorists usually pull up into the crosswalk to wait for a gap in traffic, blocking pedestrian crossing movements. In some instances, motorists simply do not come to a full stop."*

Following a rise in San Francisco pedestrian fatalities in 2000, then Supervisor Mabel Teng requested that the Department of Parking and Traffic conduct a study of No Turns on Red expansion. The study was led by then

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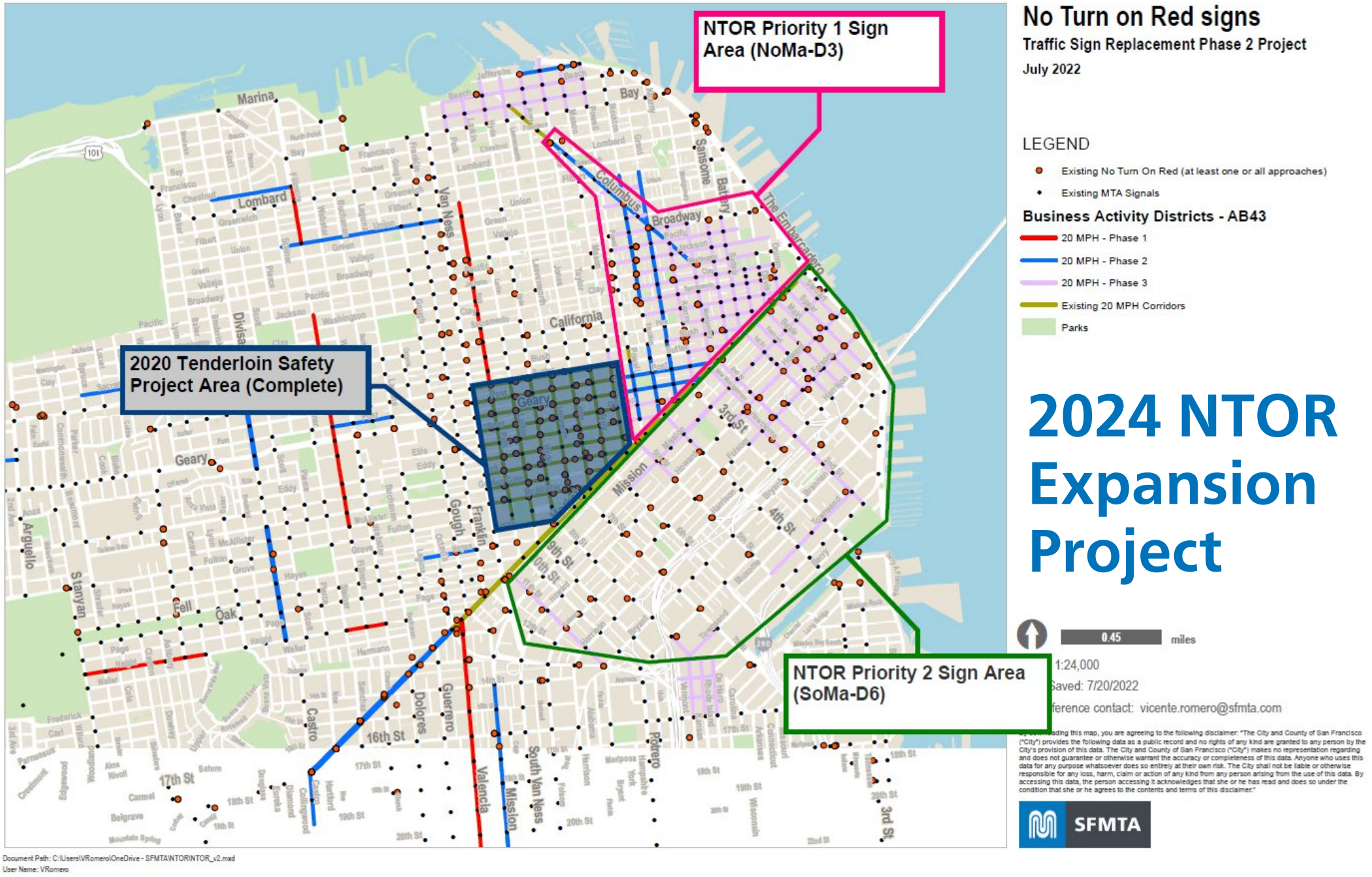
- Memo summarizes post-Tenderloin approach, including past studies and evolution of topic in the transportation profession.
- Prioritize locations with high pedestrian levels of activity.
- Framing of NTOR to more of a proactive than reactive tool.

Board of Supervisors Res. 481-23

- "....FURTHER RESOLVED, That the Board of Supervisors urges the MTA Board to adopt a policy requiring NTOR restrictions be added in connection with updates or modifications at signalized intersections, including upcoming quick build projects, speed reduction efforts, and future implementation of the Active Communities Plan; and, be it
- FURTHER RESOLVED, That the Board of Supervisors urges MTA, to the extent that state law or resource constraints limit immediate citywide implementation of NTOR...."

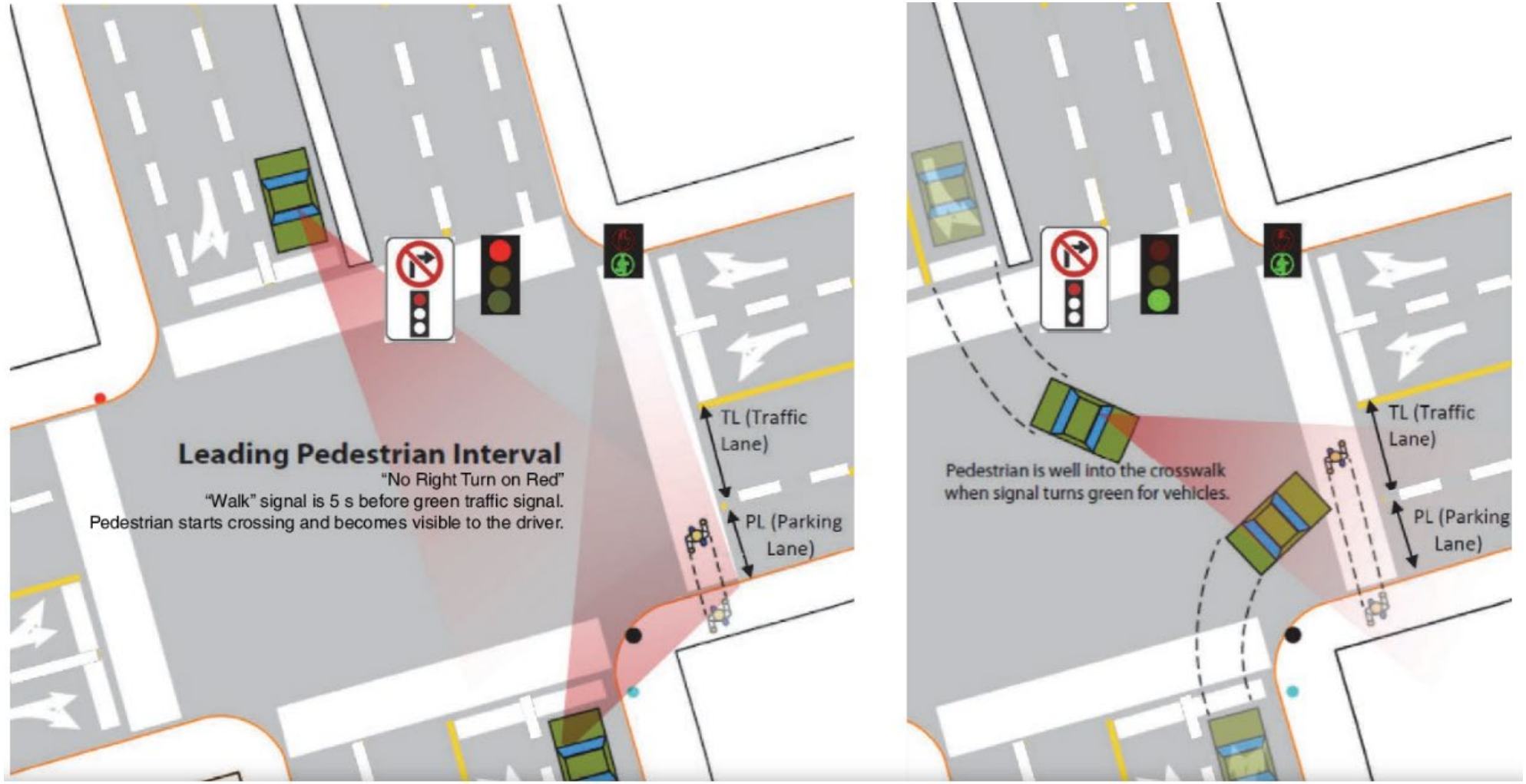


2024 NTOR Expansion Project

San Francisco's Three Prioritization Factors

- **Factor 1: Pedestrian Activity.** Turn on red should be expanded at areas of high pedestrian activity to:
  a) Improve pedestrian comfort, such as keeping crosswalks clear; and
  b) Reduce risks of vehicle-pedestrian conflicts where pedestrians are concentrated.
- **Factor 2: High Injury Network.** The turn on red crashes that have been reported tend to concentrate in areas of high pedestrian activity in the High Injury Network.
- **Factor 3: Leading Pedestrian Intervals.** No Turn on Red regulations can reduce conflicts associated with red to green transitions at Leading Pedestrian Intervals.

NTOR and Leading Pedestrian Intervals



Saneinejad, S., & Lo, J. (2015). Leading Pedestrian Interval: Assessment and Implementation Guidelines. *Transportation Research Record*, *2519*(1), 85–94. https://doi.org/10.3141/2519-10

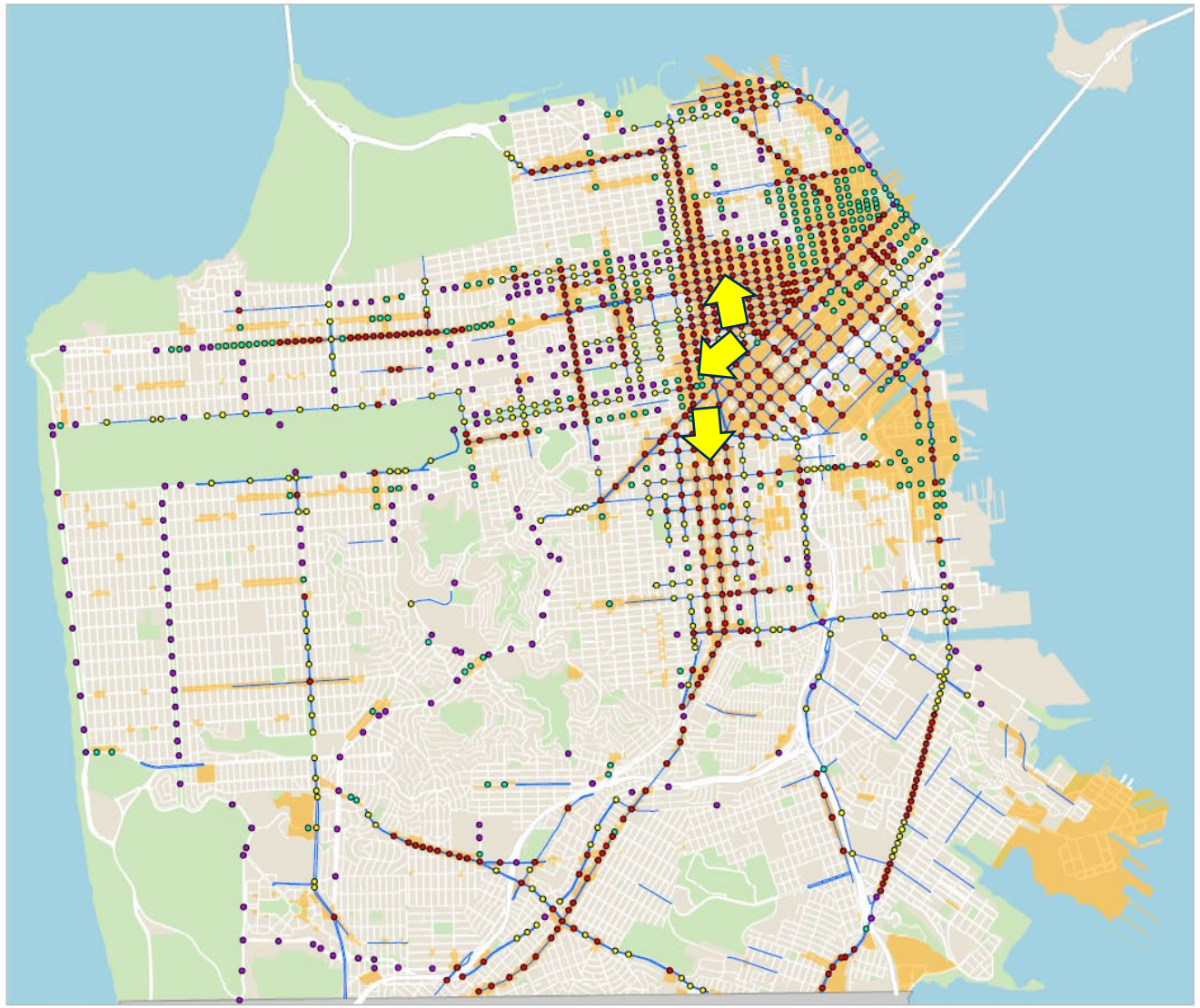
Why Not A Citywide Ban?

- City wants the public to voluntarily comply with safety regulations. We cannot assume success of NTOR depends on citations.
- Voluntary compliance can be increased with educational approaches but also helps for the traffic control to intuitively "command respect" by itself (that is, seem necessary). Pedestrian activity is that intuitive factor.
- Not all San Francisco signalized crossings have the pedestrian density or other factors present that justify adding new No Turn on Red regulations as a blanket policy.

Next Implementation Steps

- SFMTA Board of Directors approves a resolution supporting citywide expansion of NTOR regulations to signalized intersections with high levels of pedestrian activity.
- SFMTA Streets staff has been trained on new policies expanding the use of NTOR citywide as summarized in this presentation.
- Capital and operational projects will review NTOR on affected locations and implement new signs as recommended by policy.
- Evaluation and monitoring of expansion sites for compliance, safety evaluation data, and other issues like transit delays.
- Staff will look at funding opportunities to continue doing NTOR on a systematic and proactive basis as a follow up to the current grant-funded (HSIP) expansion project.
- Consider additional maintenance resources as these and other types of signs are expanded citywide and need maintenance in future years.

NTOR Citywide Expansion Planning



No Turn On Red Expansion

San Francisco

February 2024

LEGEND

- MTA Signals on the HIN & on Ped Land Uses
- MTA Signals on the HIN & NOT on Ped Land Uses
- MTA Signals NOT on the HIN & on Ped Land Uses
- MTA Signals NOT on the HIN & NOT on Ped Land Uses
- 2022 High-Injury Network
- Pedestrian Land Uses (commercial, mixed use, transit)

Expansion Areas under Consideration

Existing MTA signals: 1,284

MTA signals on the HIN & on Ped Areas: 553 (43%)
MTA signals on the HIN & NOT on Ped Areas: 255 (20%)

MTA signals NOT on the HIN & on Ped Areas: 238 (18.5%)
MTA signals NOT on the HIN & NOT on Ped Areas: 238 (18.5%)

0.9 miles

Scale 1:48,000

Date Saved: 2/8/2024

For reference contact: VisionZeroSF@sfmta.com

SFMTA

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