

# **Torrance Boulevard and Broadway Traffic Control Enhancements**

# Torrance Boulevard at Broadway

## Traffic Control Enhancements

---

### Background

- December 2015 - City Council Approval
  - Pedestrian Actuated Flashing Beacons (RRFB)
  - High-visibility crosswalks
  - Associated signage and pavement markings
- November 2019 – City Council Referral to Staff
- Data collection
  - Field observations
  - Traffic volume data
  - Accident history survey

First United  
Methodist Church



S Broadway

El Pan-Americano

Oasis  
Spa -



Torrance Blvd

Torrance Blvd

Torrance Blvd

Torrance Blvd

Torrance Blvd

Torrance Blvd



S Broadway



# Torrance Boulevard at Broadway

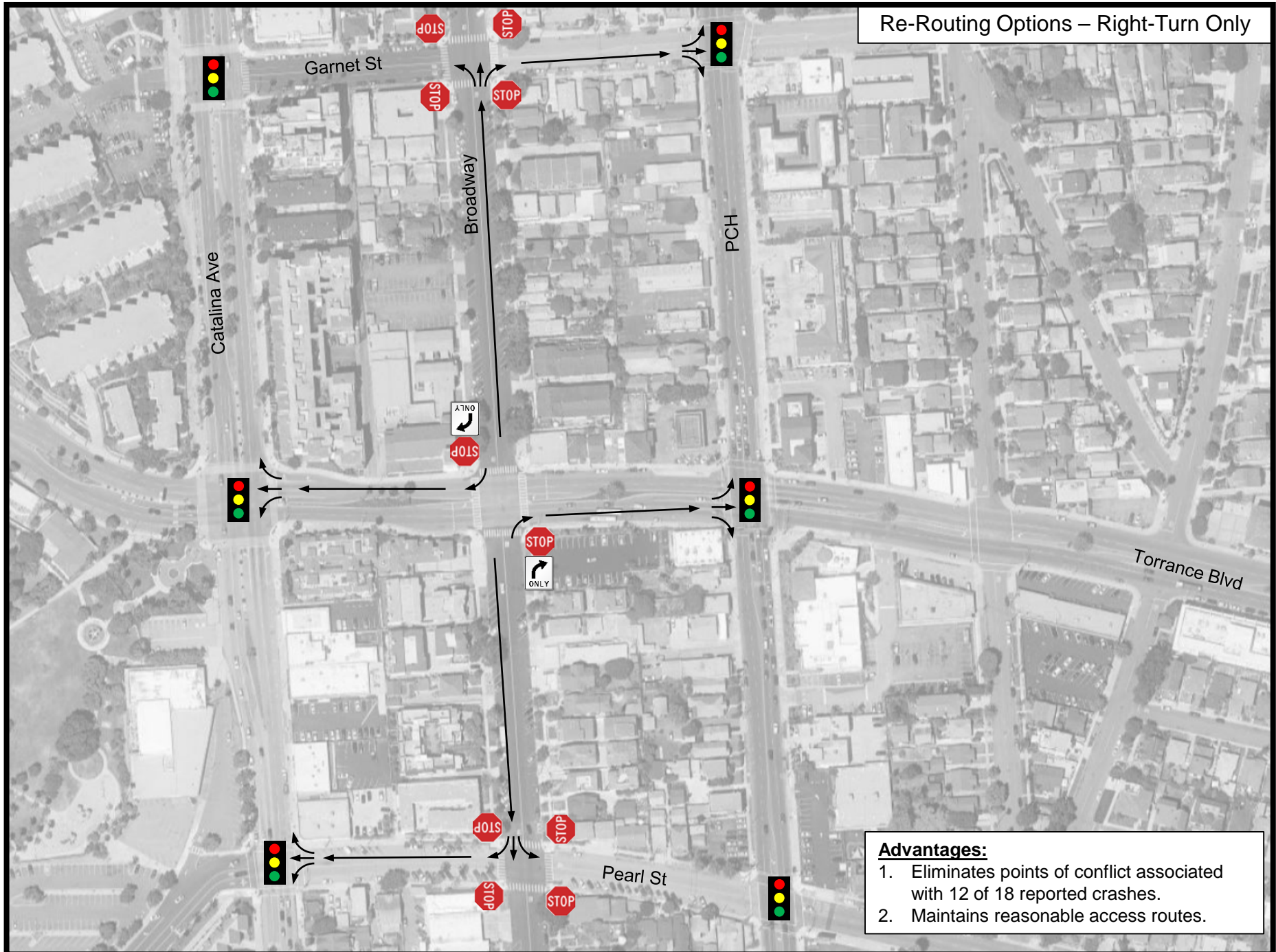
## Traffic Control Enhancements

### Analysis

- Motorists stopped on Torrance Blvd despite no pedestrians crossing
- Motorists traveling northbound on Broadway failed to yield ROW (stopped, but continued movement) causing Torrance Blvd vehicles to yield
- Significant westbound left-turns were u-turns (to travel northbound on PCH)
- Most pedestrians activated beacons – not all.
- Motorists traveling northbound on Broadway occupied entire lane, disallowing right turners to sneak by.

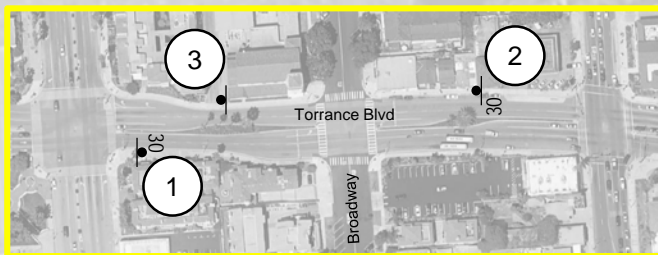


## Re-Routing Options – Right-Turn Only



### Advantages:

1. Eliminates points of conflict associated with 12 of 18 reported crashes.
2. Maintains reasonable access routes.

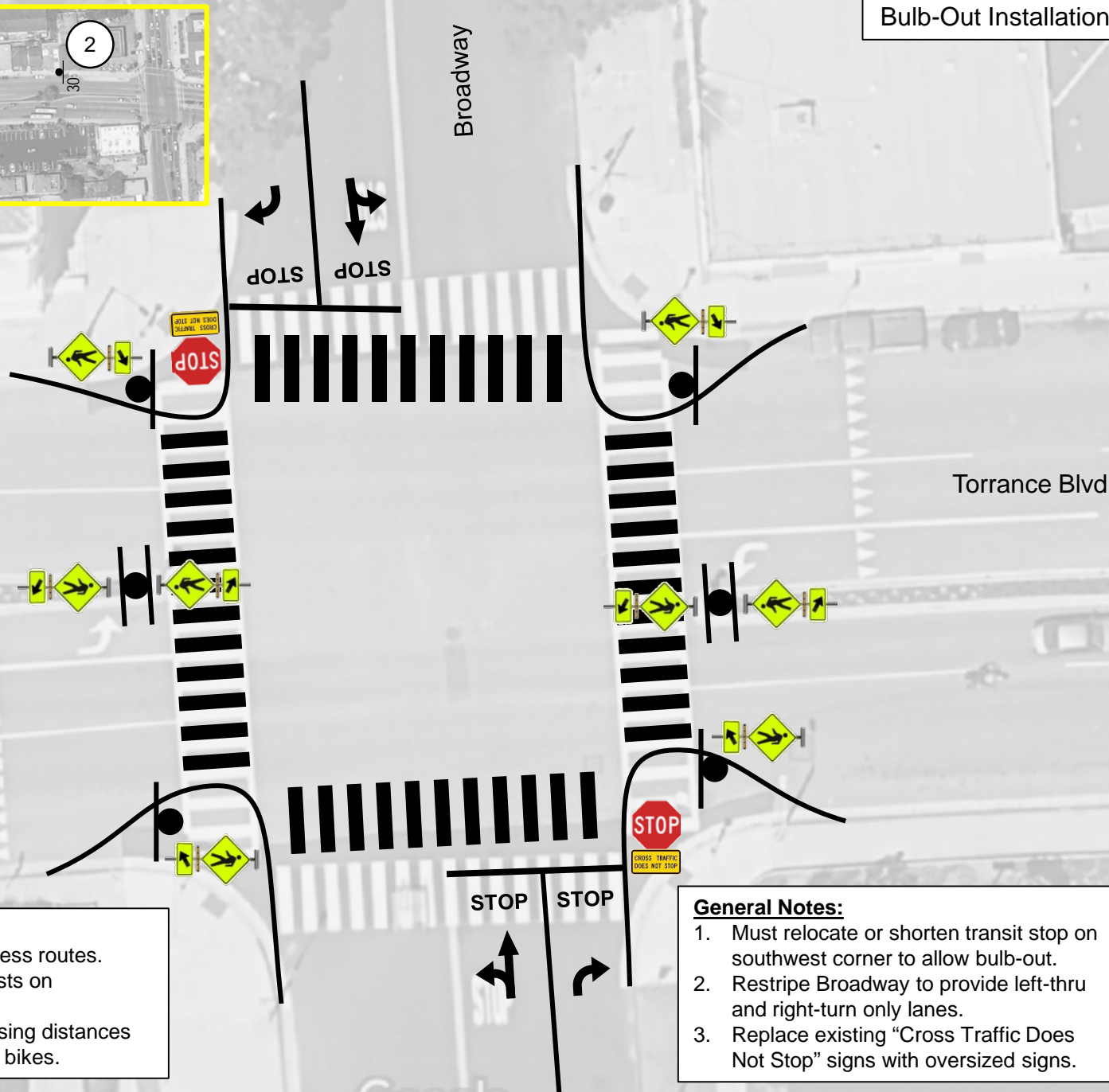


**Construction Notes:**

1. Install oversized 30 mph speed limit sign and "30" pavement markings in both eastbound lanes.
2. Replace existing 30 mph speed limit sign with oversized sign and install "30" pavement markings in both westbound lanes. Place permanent radar speed feedback sign for westbound traffic.
3. Retain existing 30 mph speed limit sign.

**Advantages:**

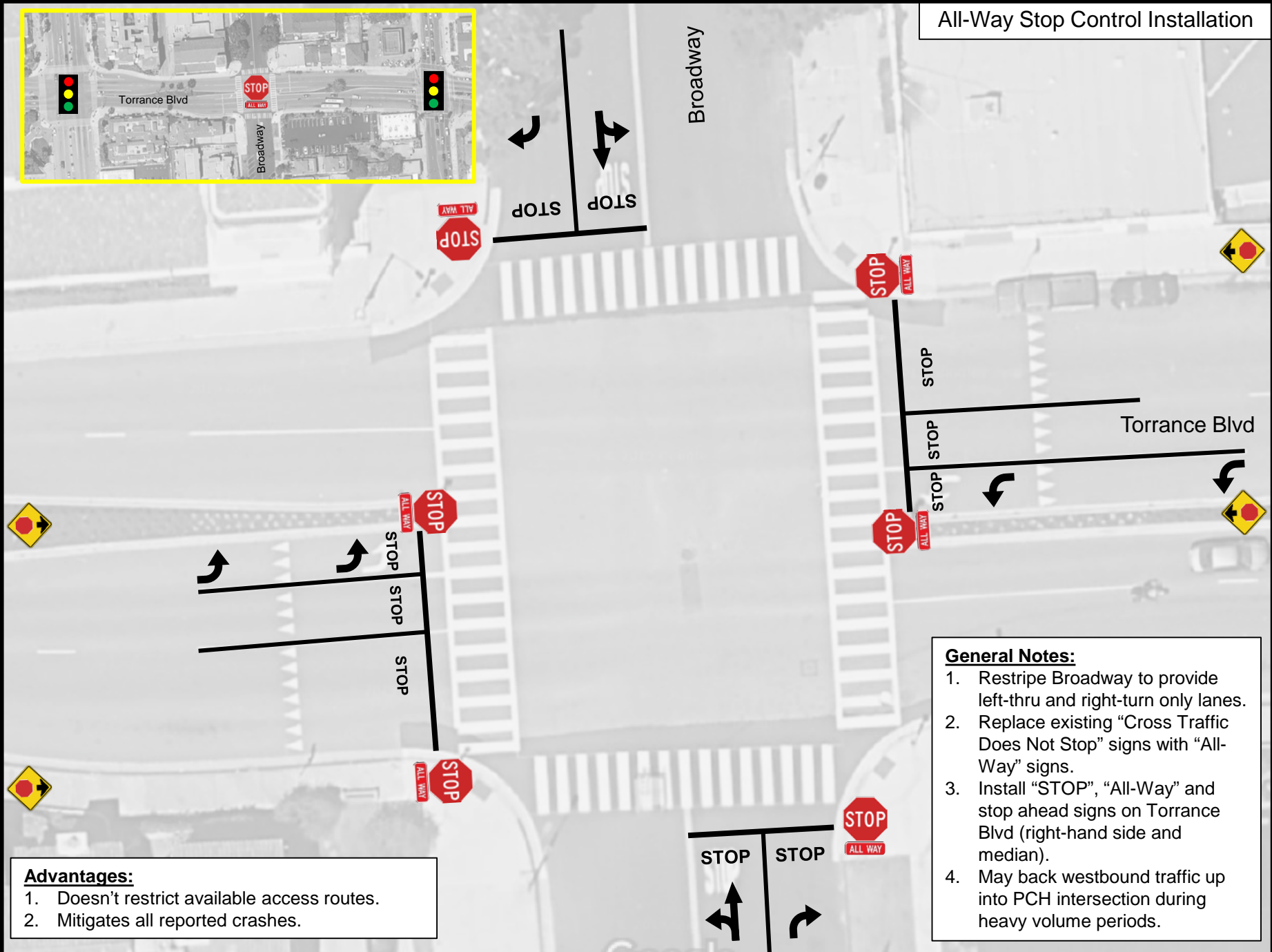
1. Doesn't restrict available access routes.
2. Increases visibility for motorists on Broadway.
3. Reduces Torrance Blvd crossing distances for vehicles, pedestrians and bikes.



**General Notes:**

1. Must relocate or shorten transit stop on southwest corner to allow bulb-out.
2. Restripe Broadway to provide left-thru and right-turn only lanes.
3. Replace existing "Cross Traffic Does Not Stop" signs with oversized signs.

## All-Way Stop Control Installation



### Advantages:

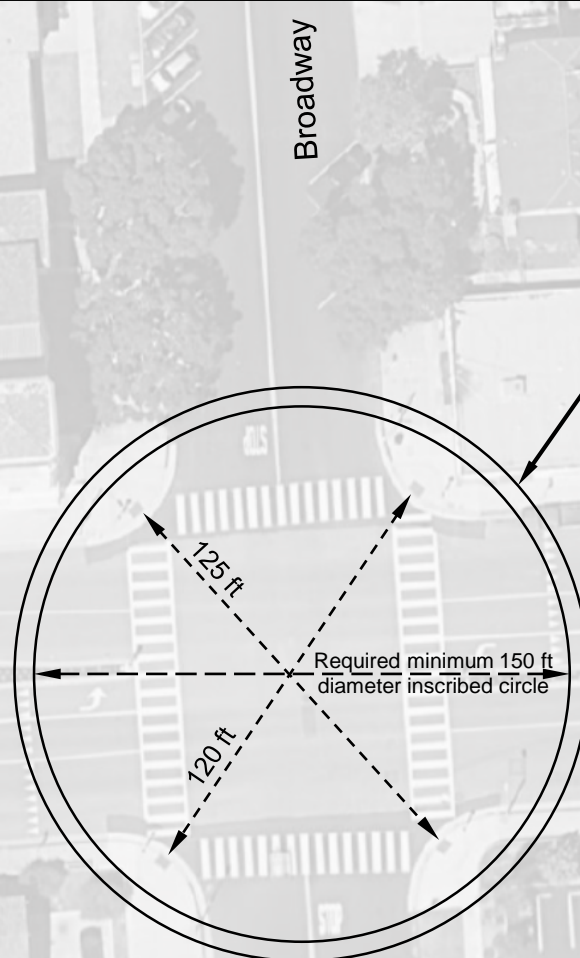
1. Doesn't restrict available access routes.
2. Mitigates all reported crashes.

### General Notes:

1. Restripe Broadway to provide left-thru and right-turn only lanes.
2. Replace existing "Cross Traffic Does Not Stop" signs with "All-Way" signs.
3. Install "STOP", "All-Way" and stop ahead signs on Torrance Blvd (right-hand side and median).
4. May back westbound traffic up into PCH intersection during heavy volume periods.



## Roundabout Dimensions



### **Required Intersection Modifications:**

1. Must acquire right-of-way on all corners.
2. Existing structures and facilities must be removed and/or altered.
3. 150 ft inscribed circle is the minimum for a multi-lane roundabout – design and operational analysis may require a larger circle.
4. The median on Torrance Blvd must be modified and/or removed.
5. Possible Caltrans opposition due to close proximity of PCH (300 ft easterly).

Table 1: Roundabout Category Comparison

| Design Element   | Mini Roundabout                    | Single-Lane Roundabout              | Multi-Lane Roundabout                                      |
|--|------------------------------------|-------------------------------------|--|
| Desirable maximum entry design speed   | 15 to 20 mph<br>(25 to 30 km/h)    | 20 to 25 mph<br>(30 to 40 km/h)     | 25 to 30 mph<br>(40 to 50 km/h)                            |
| Maximum number of entering lanes per approach  | 1                                  | 1                                   | 2+   |
| Typical inscribed circle diameter  | 45 to 90 ft<br>(13 to 27 m)        | 90 to 180 ft<br>(27 to 55 m)        | 150 to 300 ft<br>(46 to 91 m)                              |
| Central island treatment   | Fully traversable                  | Raised (may have traversable apron) | Raised (may have traversable apron)                        |
| Typical daily service volumes on 4-leg roundabout below which may be expected to operate without requiring a detailed capacity analysis (veh/day)* | Up to approximately 15,000 veh/day | Up to approximately 25,000 veh/day  | Up to approximately 45,000 veh/day for two-lane roundabout |

\*Operational analysis needed to verify upper limit for specific applications.





## Torrance Boulevard at Broadway Traffic Control Enhancements

---

### Fiscal Impact

- Right-turn only restriction on Broadway - \$2,000
- Bulb-out on Torrance Boulevard Pedestrian - \$50,000
- All-Way Stop Control - \$5,000
- Traffic Signal - \$275,000



# Torrance Boulevard at Broadway Traffic Control Enhancements

---

## Recommendations

- Review the engineering report, receive public input and provide direction to Staff regarding proceeding with proposed traffic control modifications at Torrance Boulevard and Broadway.