THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: August 21, 2023

TO: Steve Celniker, Senior Traffic Engineer, Traffic Signals
             Gary Pence, Senior Traffic Engineer, Traffic Operations
             Joseph Jimenez, Senior Traffic Engineer, Traffic Operations

FROM: Phil Rust, Senior Traffic Engineer, Safety, Information, and Analysis

SUBJECT: High Crash Locations for Calendar Year 2022

The High Crash Location analysis uses injury and fatal crashes instead of all crashes, excluding property-damage-only crashes. This helps to focus staff time and City funds toward eliminating more severe crashes, which provides a much greater societal benefit.

Intersection Crash Rate and Crash Frequency
For calendar year 2022, 3 intersections were identified with high injury crash rates (1 standard deviation or more above average). 2 intersections were identified as having a pattern of injury crashes (5 or more in the same directions).

Segment Crash Frequency
Segments were evaluated but did not produce significant results. This is consistent with the Systemic Safety Analysis Reporting Program (SSARP), which shows that most serious crashes are concentrated at intersections, but not on segments. In place of segment analysis, the primary focus will remain on intersections and systemic analysis, particularly for pedestrians.

Pedestrian Crash Locations
For calendar years 2018-2022, the top 5 intersections with high pedestrian crashes were identified. All intersections in the City of San Diego were ranked; first by the number of Severe Injury or Fatal pedestrian crashes reported (from highest to lowest), and then by the total number of pedestrian injury crashes reported (from highest to lowest) in calendar years 2018-2022.

There are also many locations identified and improved using systemic analysis and countermeasures, especially pedestrian crash locations. Since the start of SSARP, we have applied for 3 systemic grants and all were approved by Caltrans. The intersections in each of those grants were identified using systemic analysis, and they propose systemic countermeasures.

- GRANT 1 – 66 intersections Lead Pedestrian Interval Systemic Safety
  o STATUS: IN CONSTRUCTION. Expected completion before end of May 2024.
  o Total Project Cost of $1,206,100
  o Countermeasures:
    ▪ Blank-out signs and controllers to support Leading Pedestrian Intervals
    ▪ Pedestrian countdown signal heads
    ▪ High visibility marked crosswalks

- GRANT 2 – 215 intersections Pedestrian Signal Improvements
  o STATUS: COMPLETED November 2021.
  o Total Project Cost of $249,500
  o Countermeasures:
    ▪ Pedestrian countdown signal heads

- GRANT 3 – 31 intersections Lead Pedestrian Interval Systemic Safety
  o STATUS: processing grant initiation
  o Total Project Cost of $997,700
  o Countermeasures:
    ▪ Blank-out signs and controllers to support Leading Pedestrian Intervals
    ▪ Pedestrian countdown signal heads
    ▪ High visibility marked crosswalks

Please review the attached lists to determine what traffic engineering measures, if any, are expected to improve safety. Location diagrams are being prepared to assist you. If you have any questions, please contact Matthew Balan at (619) 533-3168.

Attachments:
- Rate List
- Pattern List
- Pedestrian List

CC: Bethany Bezak, Director
       Chris Gascon, Assistant Director
       Duncan Hughes, Deputy Director
       Everett Hauser, Program Manager
       Gary Chui, Senior Traffic Engineer, Transportation Systems Oversight
       Brian Genovese, Senior Traffic Engineer, Multimodal
       Donald Pornan, Senior Traffic Engineer, SANDAG/MTS Liaison

INTERSECTIONS WITH HIGH CRASH RATES[1]
CALENDAR YEAR 2022

INTERSECTION	CRASH RATE[2]	INJURY CRASHES	ENTERING TRAFFIC[3]
1. 14 St & Market St (S)	0.92	5	14,832
2. Dawes St & Garnet Av	0.89	5	15,349
3. 16th St & G St (S)	0.59	5	23,027

[1] High crash rate intersections have a crash rate equal to or greater than one standard deviation (0.16) above the average crash rate (0.36). The crash rate was calculated for 35 intersections that show 5 or more reported crashes in 2022. Property damage only crashes are not included.

[2] The crash rate equals: (number of reported crashes x 1 million) divided by (daily entering traffic x 365 days).

[3] Entering traffic is the number of vehicles entering the intersection on an average weekday.

(S): Signalized intersection.

INTERSECTIONS WITH HIGH CRASH PATTERNS[4]
CALENDAR YEAR 2022

INTERSECTION	CRASH PATTERN	INJURY CRASHES
1. 10th Avenue & A Street (S)	(SB vs. EB) Broadside	6
2. I-8 WB Off Ramp & West Mission Bay Drive (S)[5]	(SB) Rear-end	5

[4] The intersections on this list were identified by reviewing a list of 35 intersections that show 5 or more reported crashes for Calendar Year 2022. Property damage only crashes are not included. A pattern is 5 or more crashes that have the same crash type and that involve the same direction(s).

[5] This traffic signal is operated by Caltrans.

(S): Signalized intersection.

TOP 5 LOCATIONS WITH PEDESTRIAN CRASHES[7]
CALENDAR YEARS 2018-2022

INTERSECTION	SEVERE INJURY/ FATAL PED CRASHES	INJURY/FATAL PED CRASHES
1. 54th Street & University Avenue (S)	2	4
2. Logan Avenue & South 45th Street (S)	2	4
3. Esplendente Boulevard & Tierrasanta Boulevard (S)	2	3
4. University Avenue & Vermont Street (S)	2	2
5. 50th Street & El Cajon Boulevard	1	4

[7] The top 5 locations are identified by ranking them; first by the number of Severe Injury or Fatal pedestrian crashes reported (from highest to lowest), and then by the total number of pedestrian injury crashes reported (from highest to lowest) in calendar years 2018 – 2022.

(S): Signalized intersection.