



Memo

To: Christopher Cash, Public Works Director
From: Larry Tay, Deputy PW Director/City Traffic Engineer
Date: October 22, 2025
Re: Analysis of Plaza Park Incursions (2018 through Present)

In response to City Council direction (9/23/25 meeting) that resulted from the agenda item discussing various concepts for enhancing Plaza Square/Plaza Park, staff performed a more detailed analysis of recent park incursions, including plotting the trajectories and points of entry of errant vehicles.

Working together with the Orange Police Traffic Bureau, staff plotted and analyzed all reported Plaza incursions since January 2018. Presented below are various tables, charts, and exhibits that summarize the accident data, along with a discussion of key findings.

Table 1 - All Plaza Incursions 2018 to Present

Plaza Accidents 2018 -2025						
Direction	# Accidents	DUI	Santa Ana Police Chase	Unsafe Speed	Unsafe Turning Movement	Unknown
East	27	19	0	7	1	0
West	11	7	0	2	1	1
North	4	3	1	0	0	0
South	1	1	0	0	0	0
Total	43	30	1	9	2	1

Figure 1 – Year-by-Year Accident Frequency

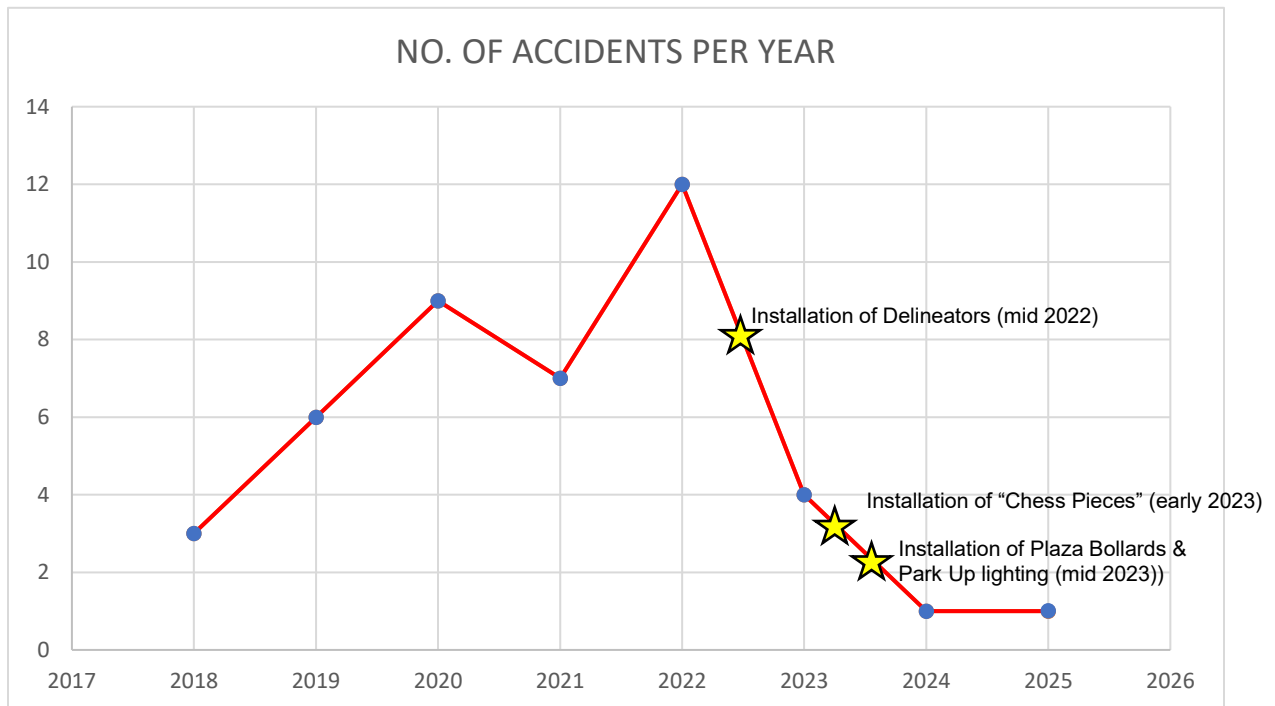


Figure 2 – Accidents by Direction

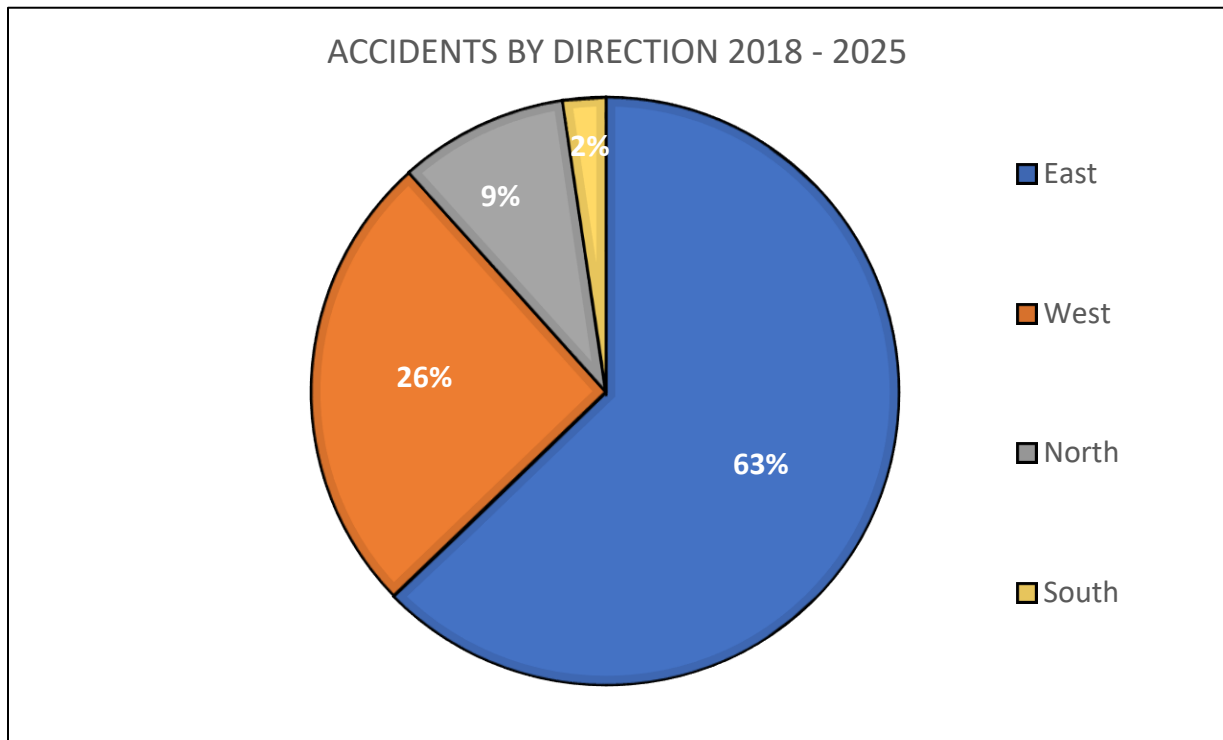


Figure 3 – Percentage of DUI Incursions by Direction

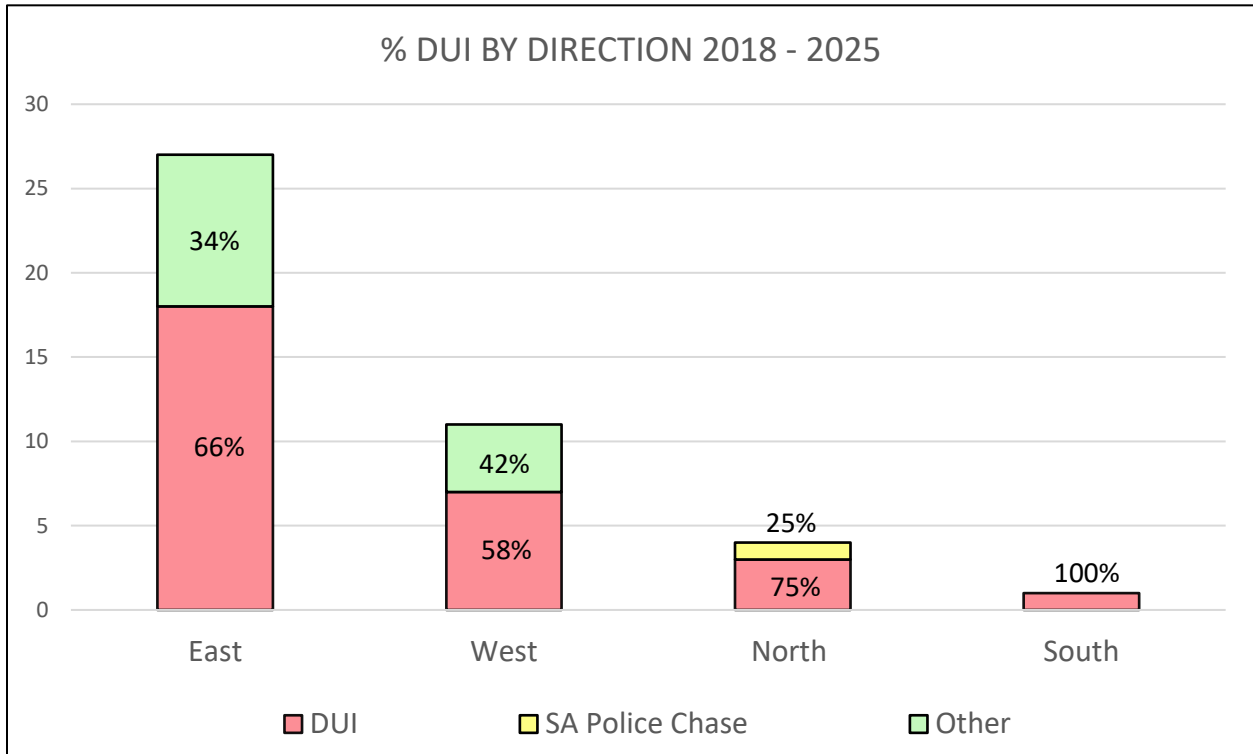
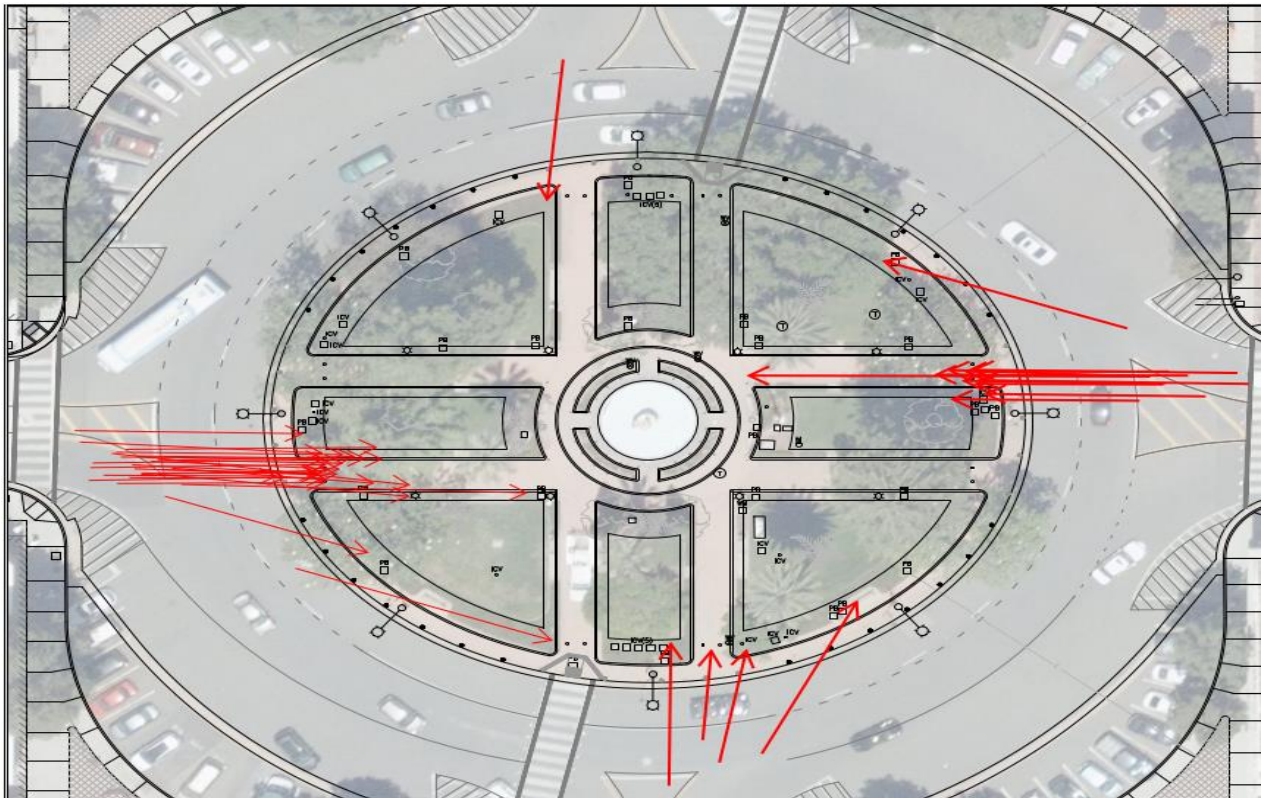


Figure 4 – Trajectory Diagram



Discussion and Key Takeaways

- Since 2018, there have been 43 reported Plaza incursions.
- The number of accidents trended upward during the COVID/Plaza Paseo years - but has been significantly declining ever since (some supplemental measures deployed in last 3 years may have contributed to that reduction).
- Went from a peak of 12 accidents in 2022, to 1 in each of the past two years.
- Of the 43 accidents, 30 accidents (70 percent) involved DUI. Another was the result of a police chase involving Santa Ana PD.
- Of the remaining 12 accidents, 9 involved unsafe speed (entering the circular roadway – not necessarily speeding on the “spoke” streets), 2 involved improper turning movements, and 1 had a cause unknown.
- 38 of the 43 accidents involved a vehicle traveling on Chapman Avenue (27 eastbound, 11 westbound.) And 5 involved Glassell (4 northbound and 1 southbound).
- All five accidents on Glassell were involved either DUI or the aforementioned police chase. A significant majority of the Chapman incidents involved DUI.
- All but one of these accidents occurred during darkness. All but two (both DUI) occurred between 10 PM and 5AM.
- The “spray pattern” from the plotted trajectories suggest that incursions from any given approach tend to occur between the prolongation of the approaching roadways’ centerlines and right curb lines.
- Based on the spray pattern, the selective placement of additional bollards would involve more than just a “couple extra” units, look very asymmetrical, and leave portions of the treated approaches susceptible.
- Based on the accident diagram, one option is to enhance bollards on the Chapman sides of the Plaza, as originally presented (expanding coverage and filling in the central gaps by adding 11 bollards to each approach,) and leave the Glassell sides as-is.
- Staff will continue to review traffic calming enhancements - with the goal of presenting potential recommendations, including, but not limited to, bollard additions, as an information item to the CTC at their December meeting.