



South La Brea Ave. and Adams Blvd.
Los Angeles, CA
Risk Diagnostic Report



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General Information

Report Details

Site	South La Brea Ave. and Adams Blvd., Los Angeles, CA
Video Period	2019-Dec-17 to 2019-Dec-19
Video Length	72 hours

Report Organization

General Information	Provides key details about the report
Results Summary	Provides data at the intersection level
Results Detail Pages	Provides data for individual configurations

Indicator Definitions

Safe Systems Post Encroachment Time (PETss)	PET is the time elapsed between one vehicle leaving a conflict area and a conflicting vehicle arriving at it. Risk level is based on PET together with the bullet vehicle impact speed. Risk thresholds reference the probability of severe injury (MAIS 3+) for left-turning vehicle vs oncoming vehicle collisions [1]. This indicator is used to measure risk to vehicle occupants.
Vulnerable Road User Safe Systems Risk Indicator (VRUss)	VRUss is a categorical risk indicator that is an adapted version of Lareshyn's T2 concept and is a generalized extension of Post- Encroachment Time (PET) and Time-to-Collision (TTC) [2]. Instantaneous vehicle speed is used to calculate the time required for a vehicle or VRU to reach a conflict point along its actual travel path. The minimum time to a conflict point is extracted and combined with the vehicle impact speed at that moment to determine the probability of severe injury (MAIS 3+) for vehicle- pedestrian collisions [1]. This indicator is used to measure risk to VRUs.

[1] Jurewicz, C., Sobhani, A., Woolley, J., Dutschke, J., Corben, B., 2016. Exploration of Vehicle Impact Speed – Injury Severity Relationships for Application in Safer Road Design. Transportation Research Procedia 14, 4247–4256. <https://doi.org/10.1016/j.trpro.2016.05.396>

[2] Lareshyn, A., De Ceunynck, T., Karlsson, C., Svensson, Å., Daniels, S., 2017. In search of the severity dimension of traffic events: Extended Delta-V as a traffic conflict indicator. Accident Analysis & Prevention 98, 46–56. <https://doi.org/10.1016/j.aap.2016.09.026>



Overview of Conflict Types

Vehicle vs Pedestrian/Cyclist			
Indicator Used	VRUss		
Left-hook	Right-hook	Through/Right/Left (near-side)	Through (far-side)
pedestrian/cyclist vs left turning vehicle exiting intersection	pedestrian/cyclist vs right turning vehicle exiting intersection	pedestrian/cyclist vs vehicle entering intersection	pedestrian/cyclist vs through vehicle exiting intersection

Vehicle vs Vehicle		
Indicator Used	PETss	
Left Turning vs Oncoming	Through vs Through	Left Turning vs Through from Left

These are generic conflict type diagrams and do not depict the specific site

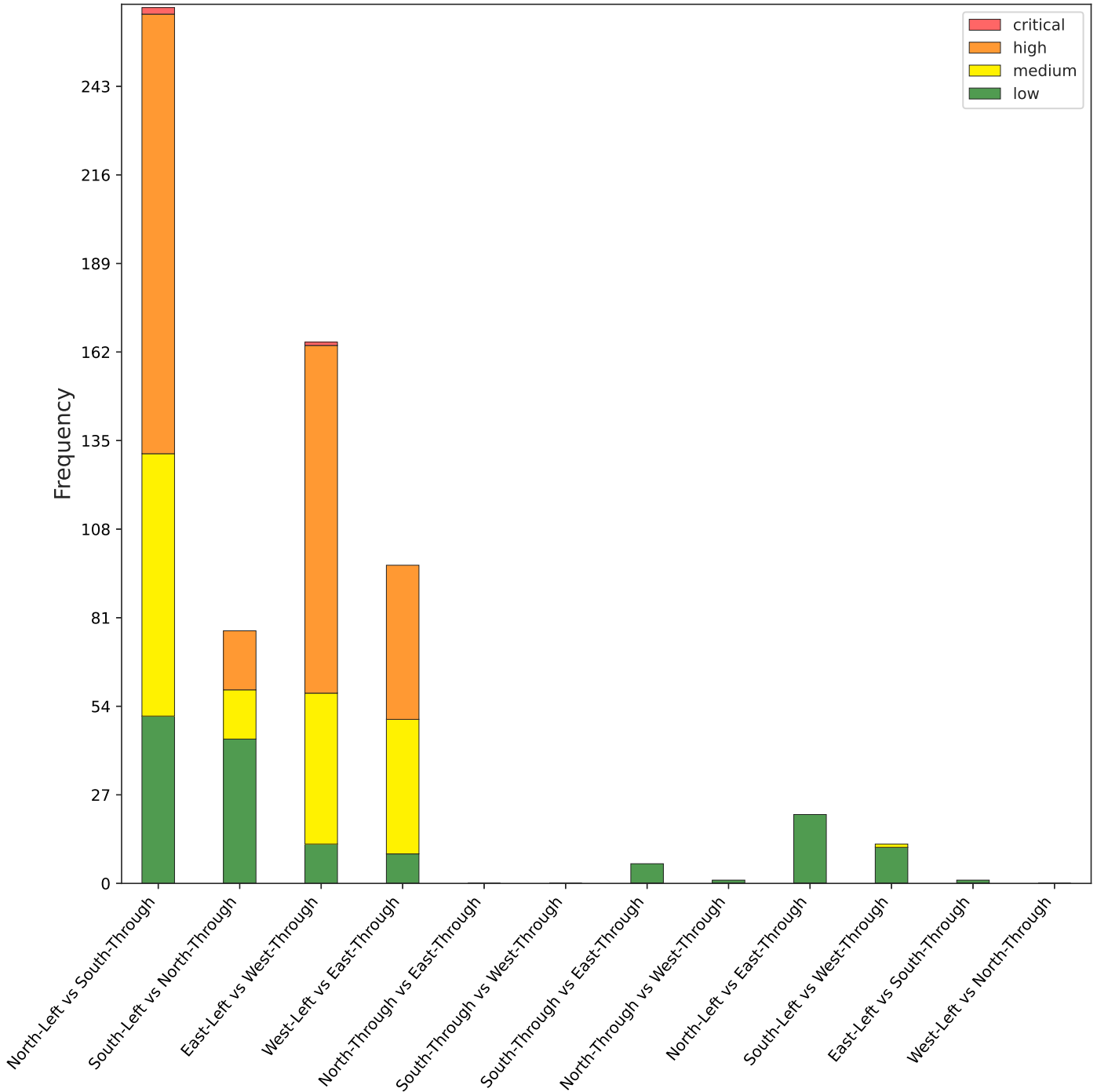


Definition of Metrics Used in Detail Pages

Metric	Definition of Metric
Measured Frequency	Number of conflicts measured in the respective risk category.
Annual Estimate	Simple extrapolation of measured frequency to an annual basis. The purpose of this metric is to provide an annualized context.
Conflict Rate	Calculated as: $\frac{\text{number of conflicts in a respective risk level}}{\text{frequency of estimated limiting movement}}$ eg. if there is one North-left vs South-through high risk event and there are 1000 North-left vehicles, the high risk conflict rate for this configuration is 0.1%.
Relative Risk	Calculated as: $\frac{\text{conflict rate at or above a specific risk level}}{\text{benchmark average conflict rate at or above that risk level}}$ A Relative Risk of 1 means the conflict rate of road users at or above that risk level is the same as the benchmark average whereas a Relative Risk of 0.75 means the conflict rate is 0.75x the benchmark etc. Benchmark thresholds are developed locally for network screening applications and based on relevant sites from other jurisdictions otherwise. The purpose of this metric is to demonstrate which interactions have elevated risk and which do not.



Results Summary – Safe Systems Post Encroachment Time





Results Summary – Safe Systems Post Encroachment Time

Right-Angle (Left-Turning Vehicle vs Oncoming Vehicle)

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
North-Left vs South-Through	51	80	134	2
South-Left vs North-Through	44	15	18	0
East-Left vs West-Through	12	46	106	1
West-Left vs East-Through	9	41	47	0

Right-Angle (Through Vehicle vs Through Vehicle)

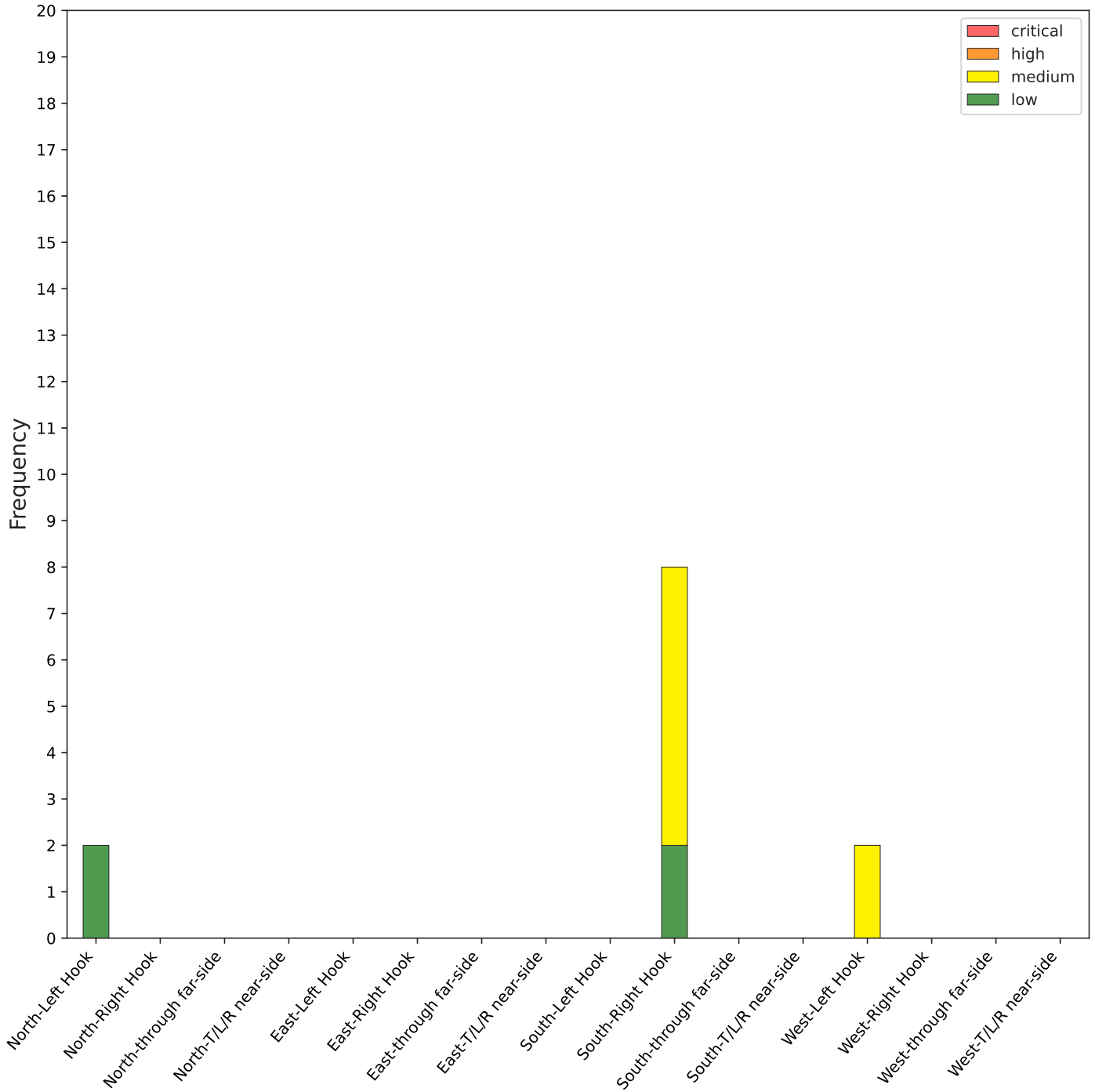
Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
North-Through vs East-Through	0	0	0	0
South-Through vs West-Through	0	0	0	0
South-Through vs East-Through	6	0	0	0
North-Through vs West-Through	1	0	0	0

Right-Angle (Left-Turning Vehicle vs Through Vehicle from Left)

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
North-Left vs East-Through	21	0	0	0
South-Left vs West-Through	11	1	0	0
East-Left vs South-Through	1	0	0	0
West-Left vs North-Through	0	0	0	0



Results Summary – Cyclist Safe Systems Risk Indicator





Results Summary – Cyclist Safe Systems Risk Indicator

Cyclist vs Northbound Vehicle Conflicts

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
North-Left Hook	2	0	0	0
North-Right Hook	NM	NM	NM	NM
North-through far-side	NM	NM	NM	NM
North-T/L/R near-side	0	0	0	0

Cyclist vs Eastbound Vehicle Conflicts

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
East-Left Hook	NM	NM	NM	NM
East-Right Hook	0	0	0	0
East-through far-side	NM	NM	NM	NM
East-T/L/R near-side	0	0	0	0

Cyclist vs Southbound Vehicle Conflicts

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
South-Left Hook	NM	NM	NM	NM
South-Right Hook	2	6	0	0
South-through far-side	0	0	0	0
South-T/L/R near-side	NM	NM	NM	NM

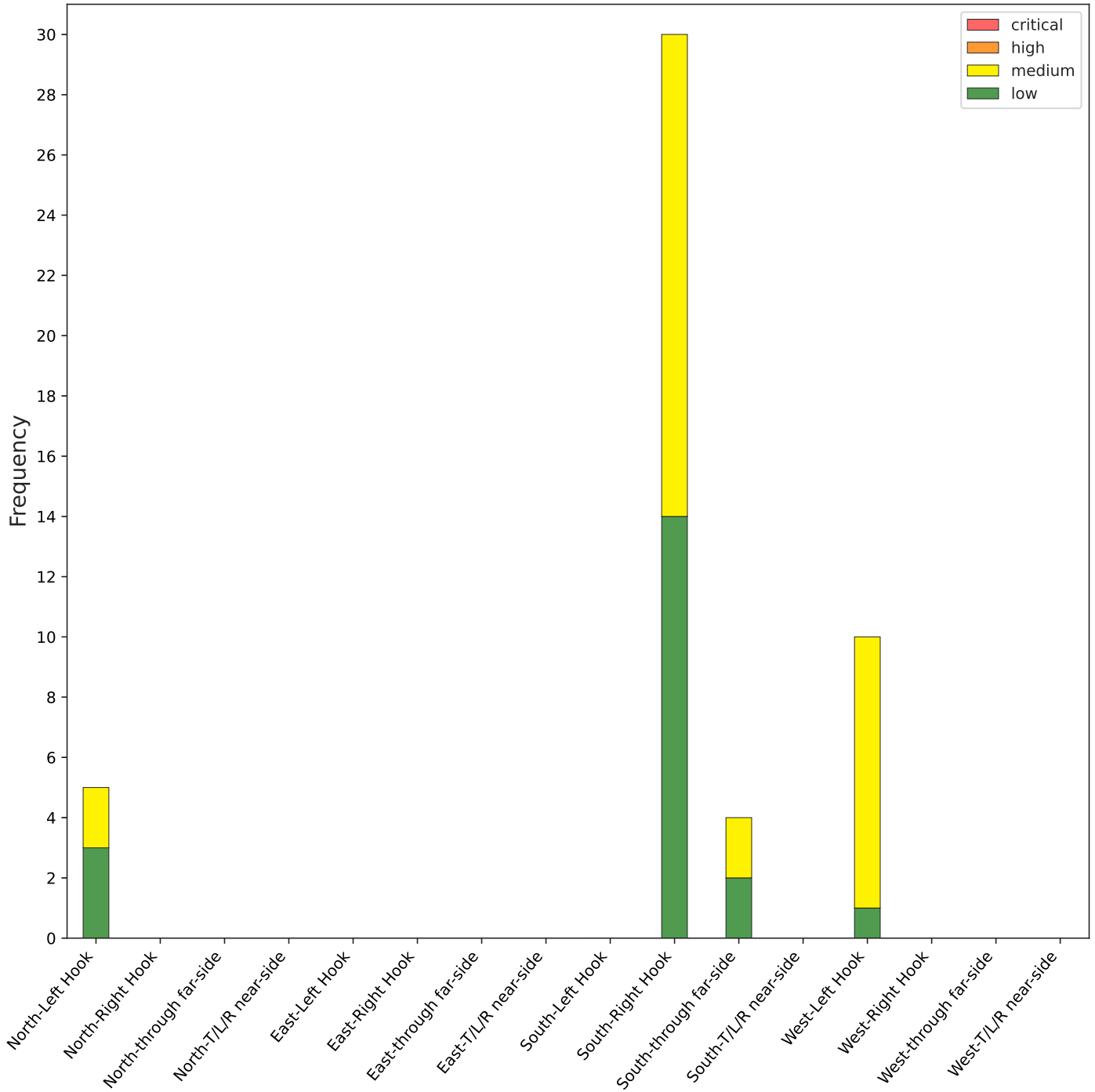
Cyclist vs Westbound Vehicle Conflicts

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
West-Left Hook	0	2	0	0
West-Right Hook	NM	NM	NM	NM
West-through far-side	0	0	0	0
West-T/L/R near-side	NM	NM	NM	NM

NM = Not Measured



Results Summary – Pedestrian Safe Systems Risk Indicator





Results Summary – Pedestrian Safe Systems Risk Indicator

Pedestrian vs Northbound Vehicle Conflicts

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
North-Left Hook	3	2	0	0
North-Right Hook	NM	NM	NM	NM
North-through far-side	NM	NM	NM	NM
North-T/L/R near-side	0	0	0	0

Pedestrian vs Eastbound Vehicle Conflicts

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
East-Left Hook	NM	NM	NM	NM
East-Right Hook	0	0	0	0
East-through far-side	NM	NM	NM	NM
East-T/L/R near-side	0	0	0	0

Pedestrian vs Southbound Vehicle Conflicts

Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
South-Left Hook	NM	NM	NM	NM
South-Right Hook	14	16	0	0
South-through far-side	2	2	0	0
South-T/L/R near-side	NM	NM	NM	NM

Pedestrian vs Westbound Vehicle Conflicts

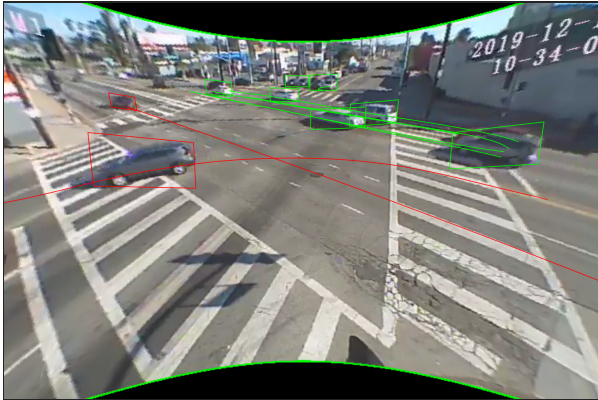
Configuration	Low Risk	Medium Risk	High Risk	Critical Risk
West-Left Hook	1	9	0	0
West-Right Hook	NM	NM	NM	NM
West-through far-side	0	0	0	0
West-T/L/R near-side	NM	NM	NM	NM

NM = Not Measured

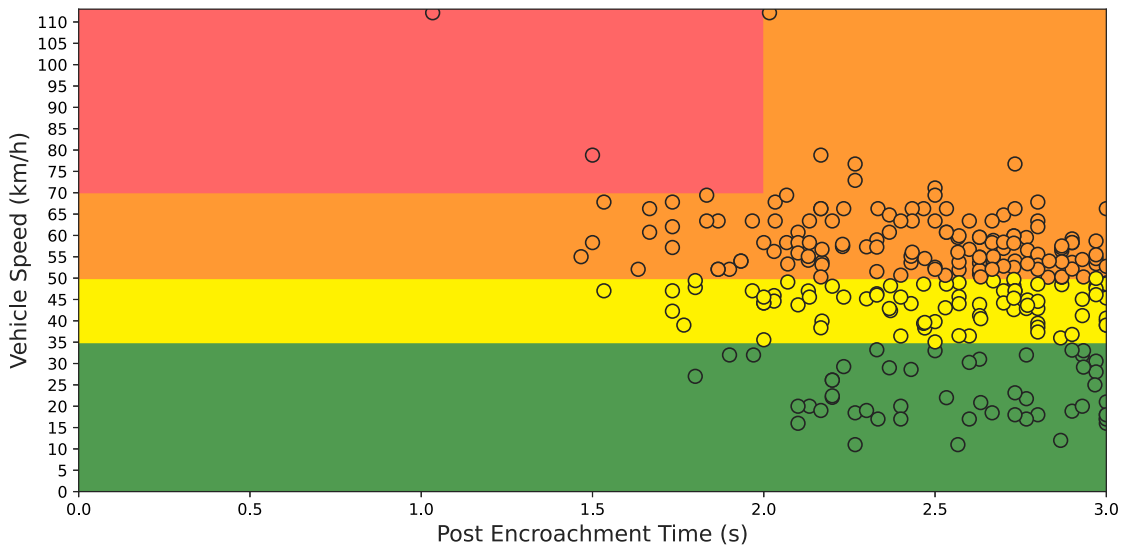
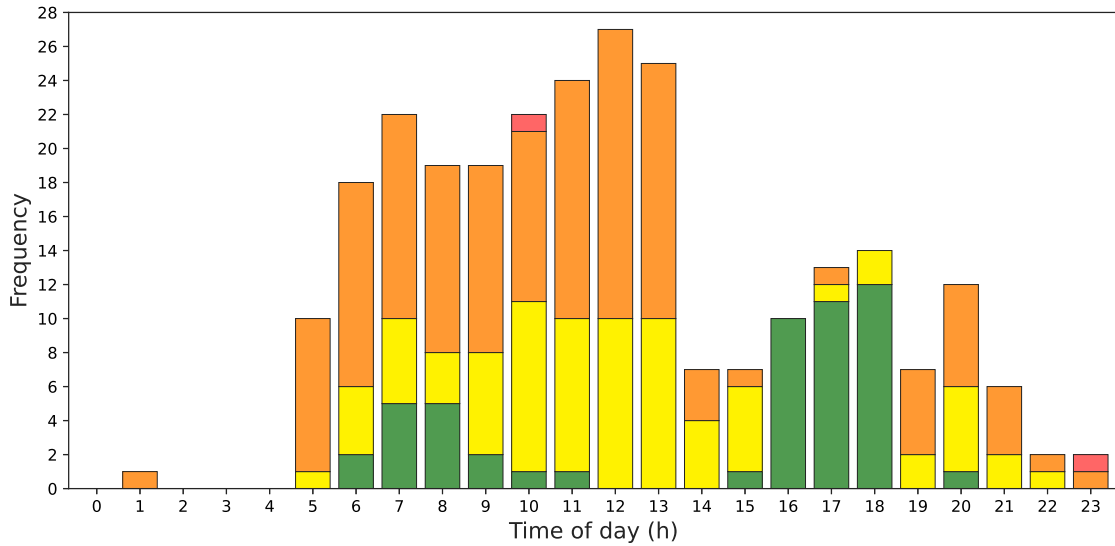


North-Left Vehicle vs South-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



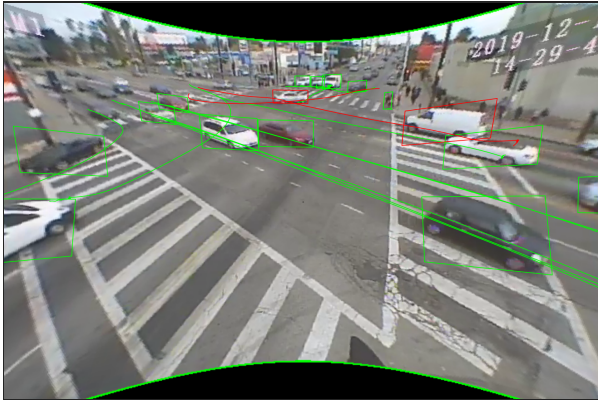
Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	2	134	80	51
Annual Estimate	243	16303	9733	6205
Conflict Rate (%)	0.04	2.59	1.55	0.99
Relative Risk	NA	2.25	2.43	1.89



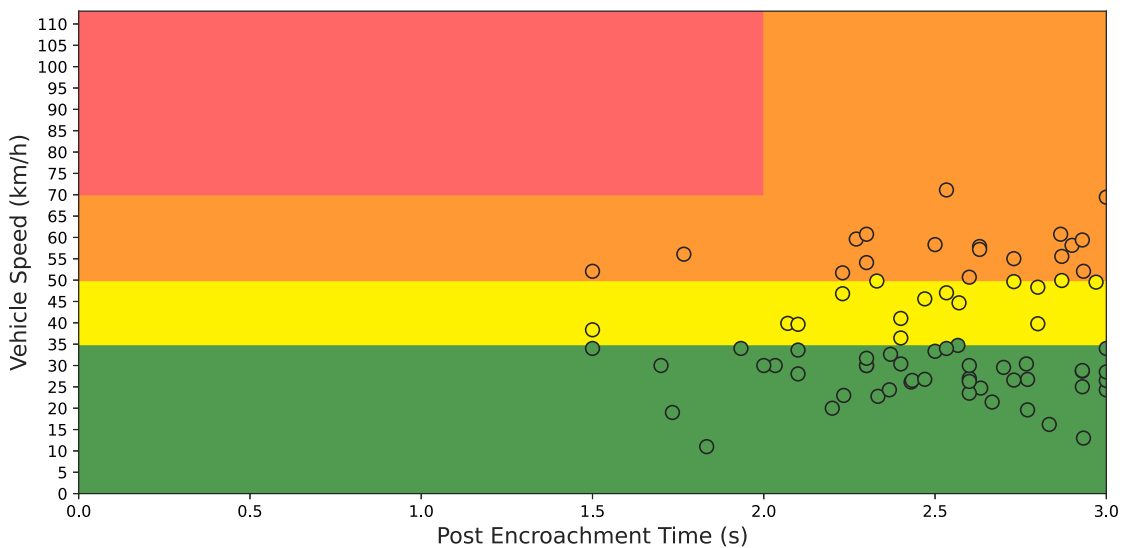
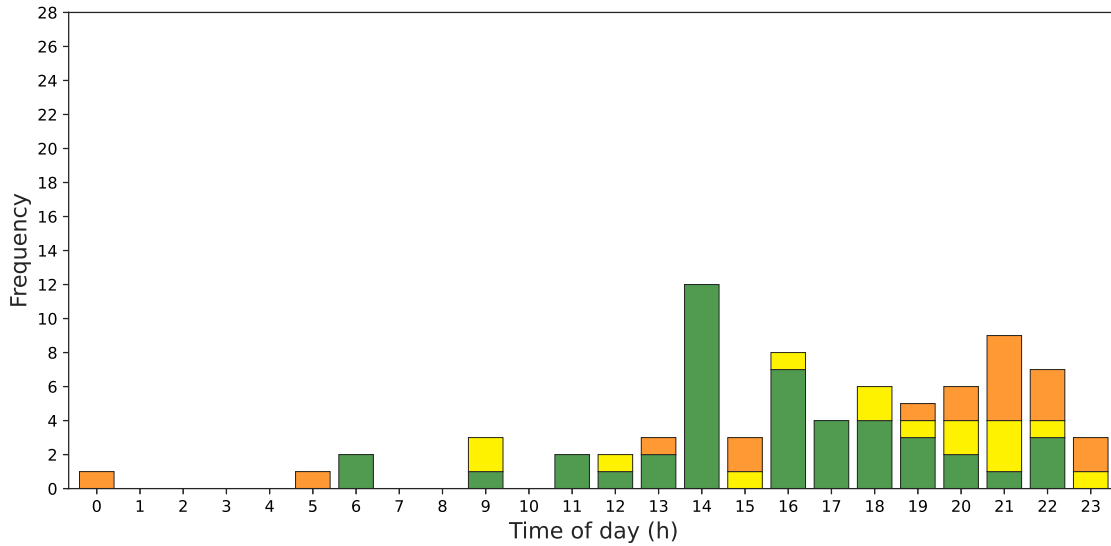


South-Left Vehicle vs North-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



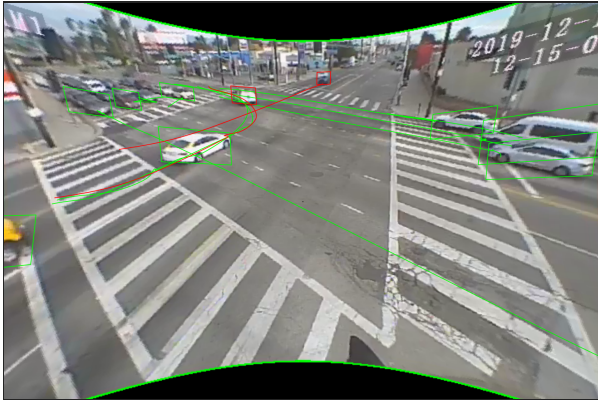
Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	18	15	44
Annual Estimate	0	2190	1825	5353
Conflict Rate (%)	0.0	0.23	0.19	0.56
Relative Risk	NA	0.2	0.24	0.36



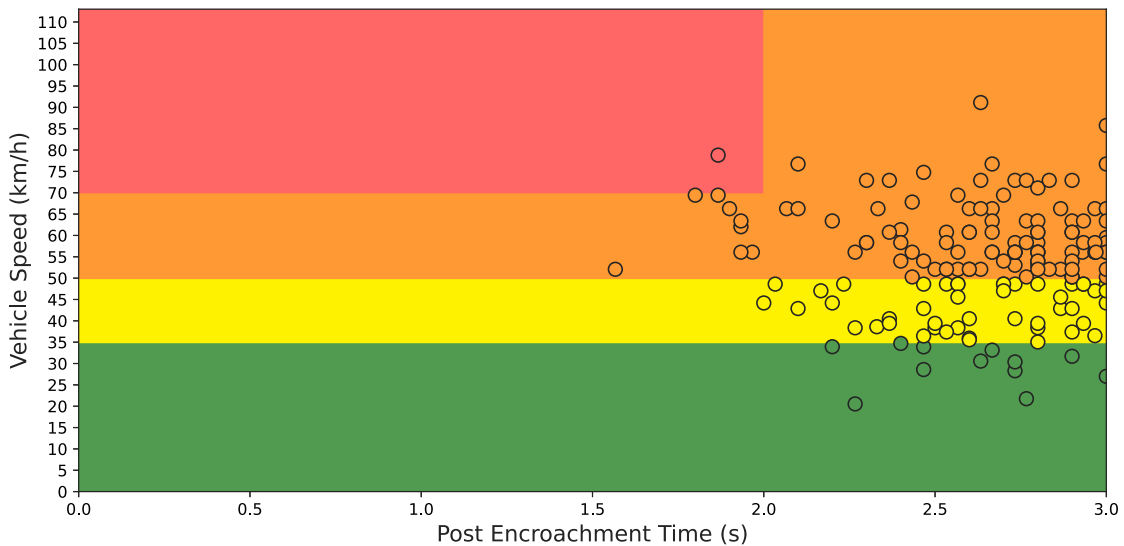
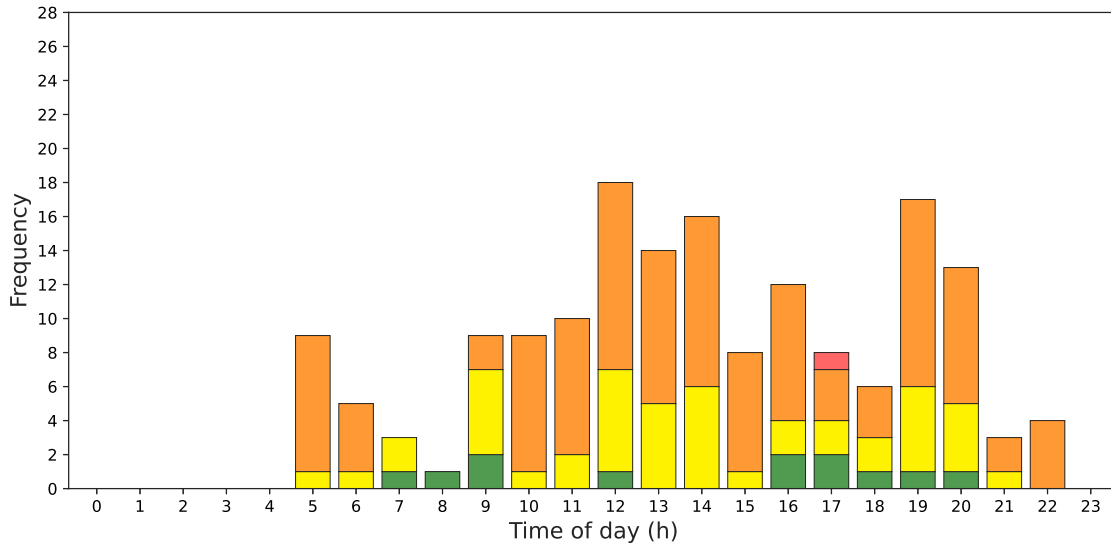


East-Left Vehicle vs West-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



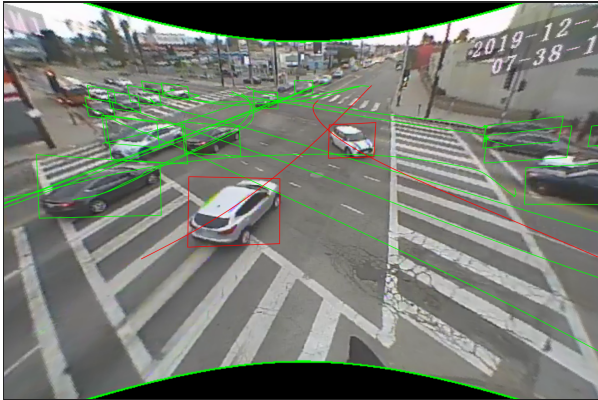
Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	1	106	46	12
Annual Estimate	122	12897	5597	1460
Conflict Rate (%)	0.01	1.07	0.46	0.12
Relative Risk	NA	0.92	0.9	0.61



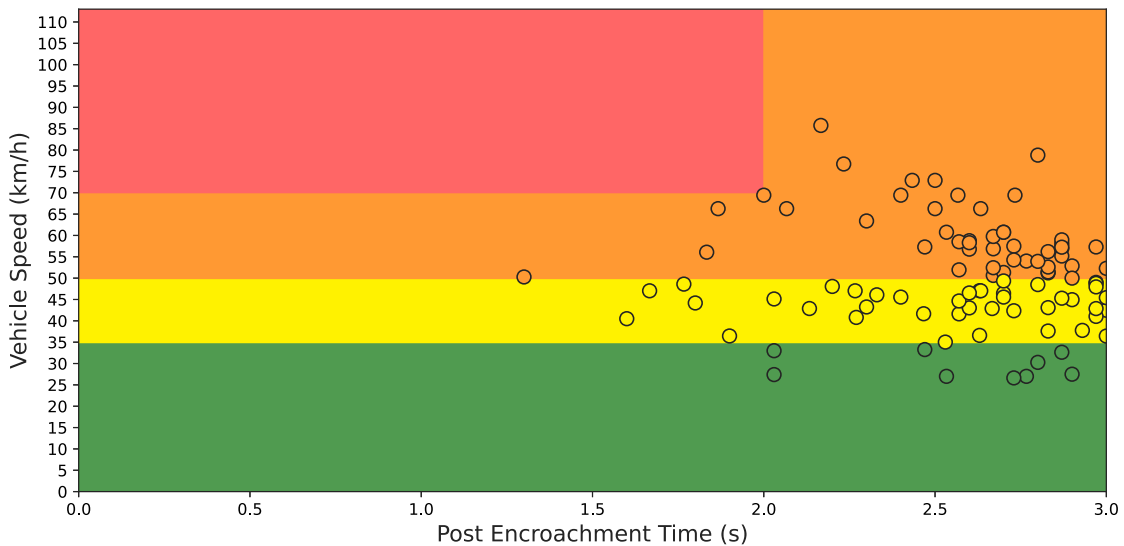
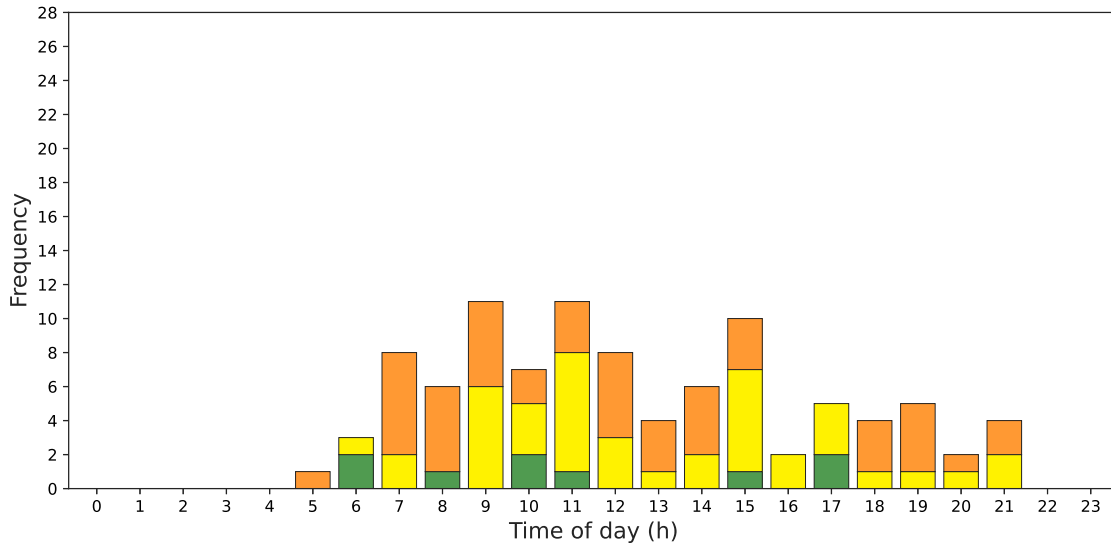


West-Left Vehicle vs East-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	47	41	9
Annual Estimate	0	5718	4988	1095
Conflict Rate (%)	0.0	0.76	0.67	0.15
Relative Risk	NA	0.65	0.83	0.58



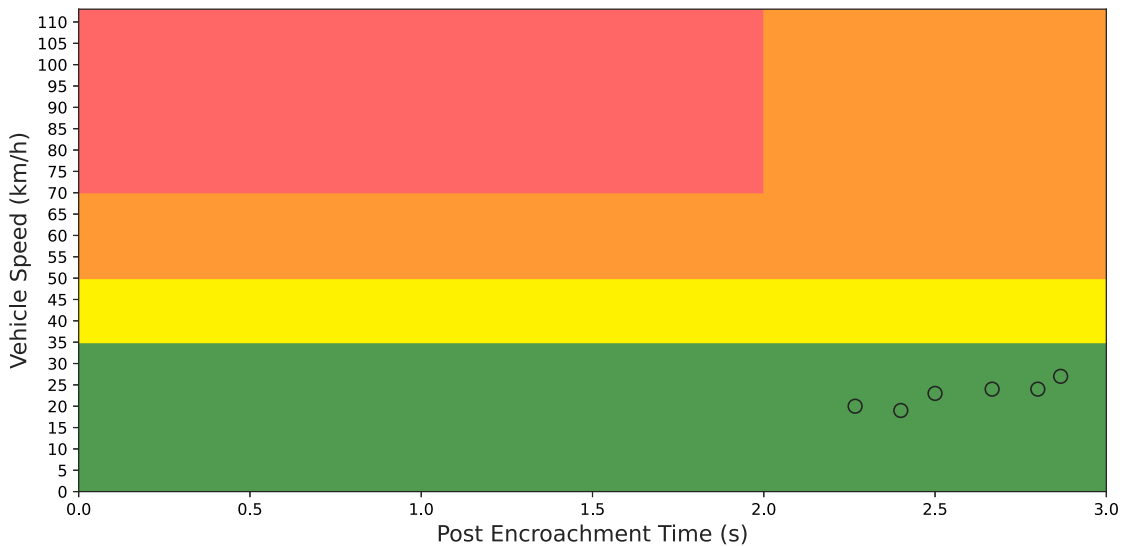
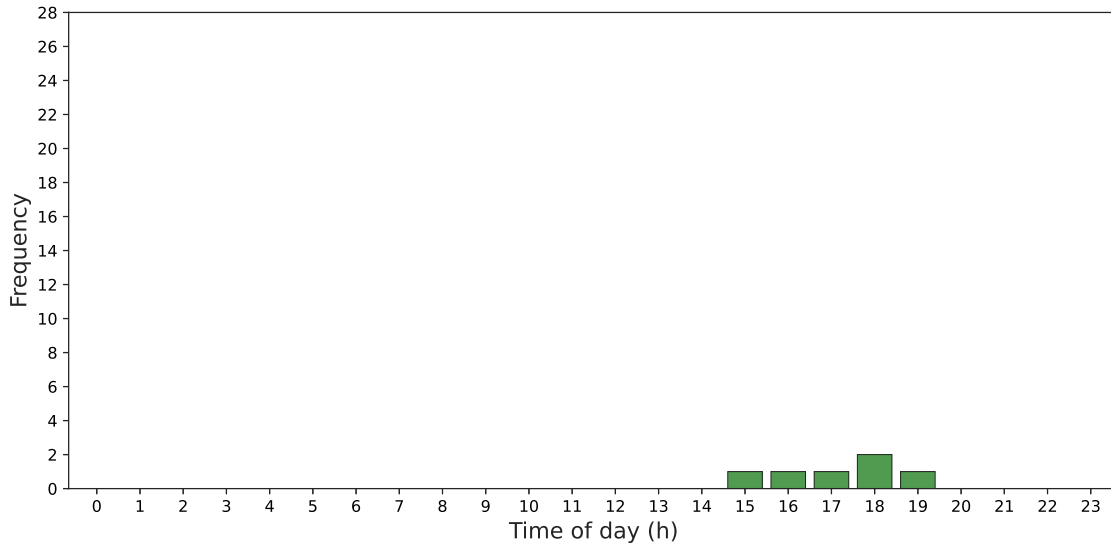


South-Through Vehicle vs East-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



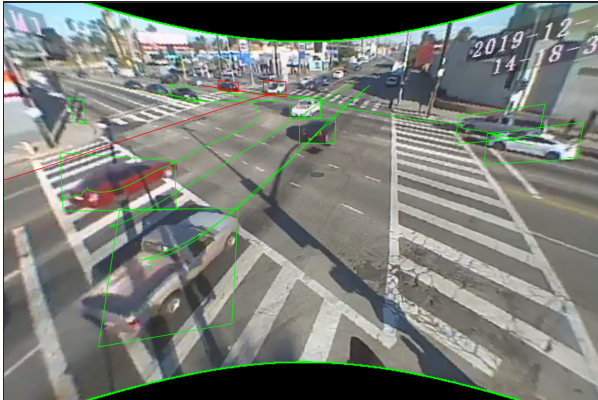
Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	0	6
Annual Estimate	0	0	0	730
Conflict Rate (%)	NA	NA	NA	NA
Relative Risk	NA	NA	NA	NA



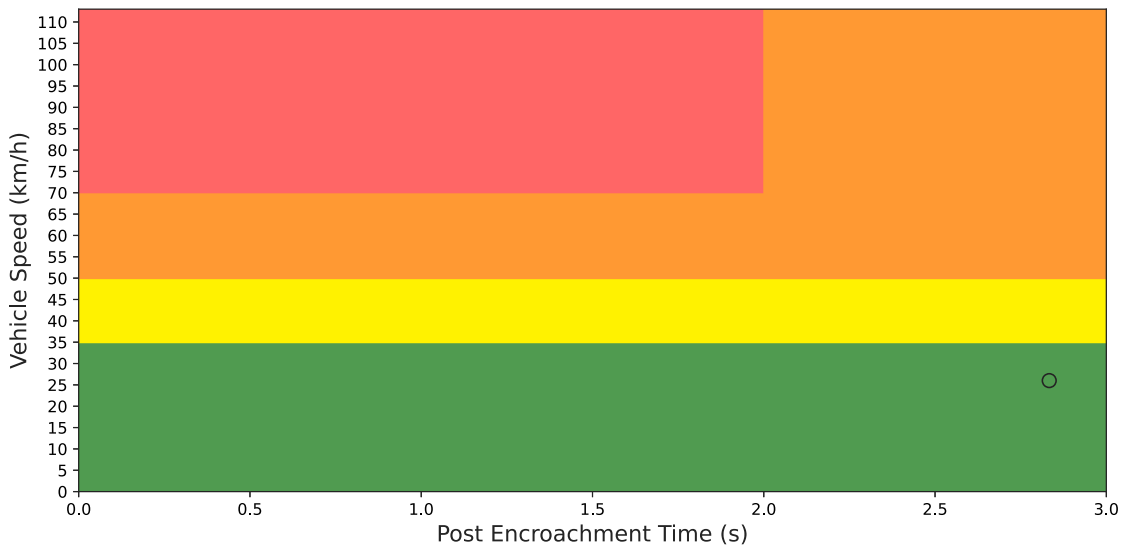
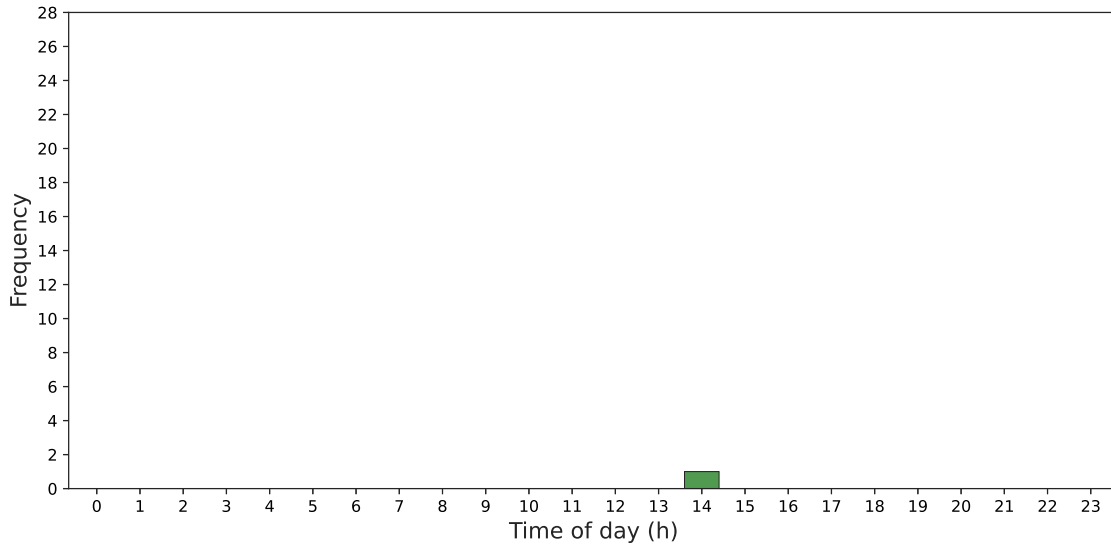


North-Through Vehicle vs West-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



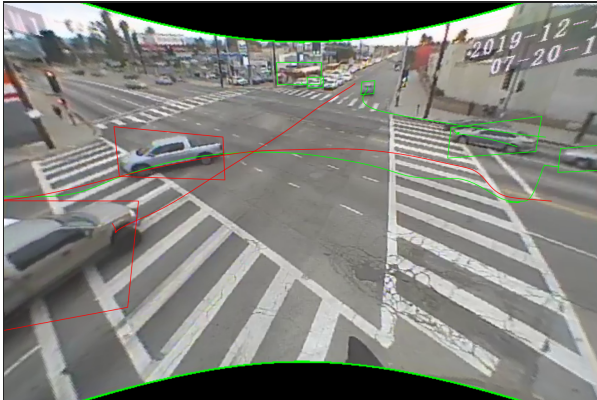
Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	0	1
Annual Estimate	0	0	0	122
Conflict Rate (%)	NA	NA	NA	NA
Relative Risk	NA	NA	NA	NA



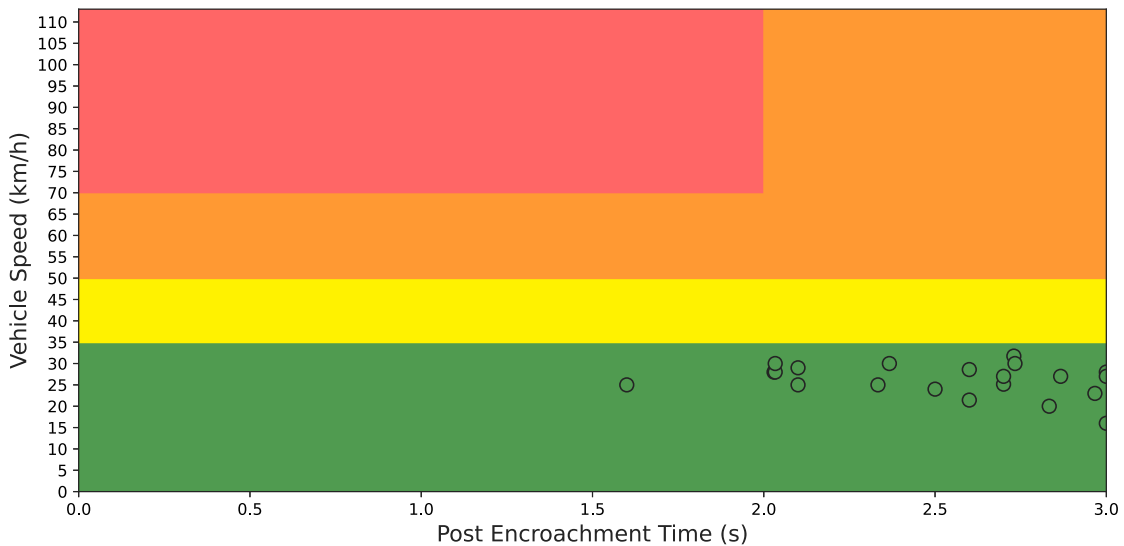
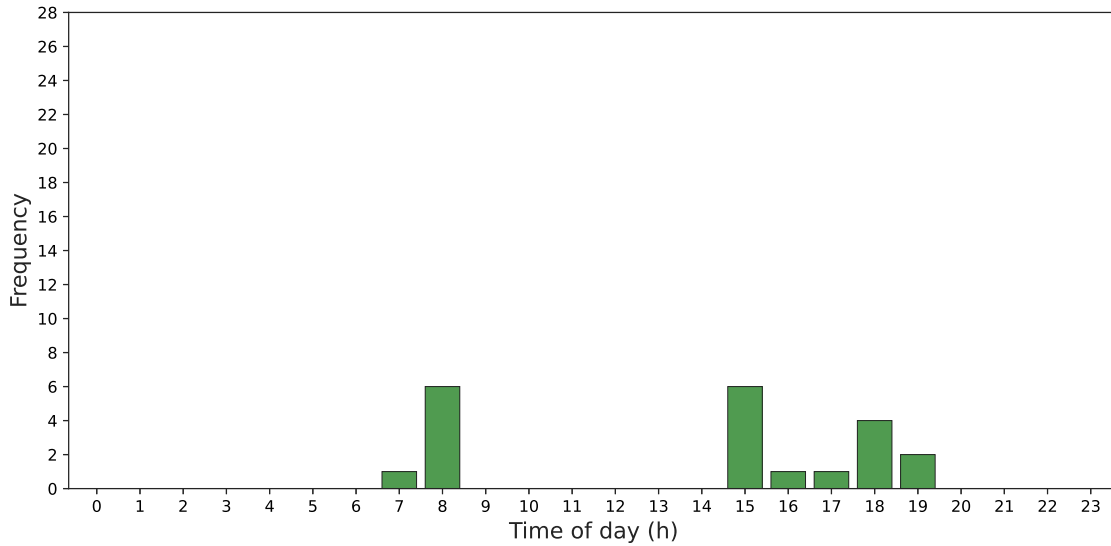


North-Left Vehicle vs East-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	0	21
Annual Estimate	0	0	0	2555
Conflict Rate (%)	0.0	0.0	0.0	0.41
Relative Risk	NA	NA	NA	NA



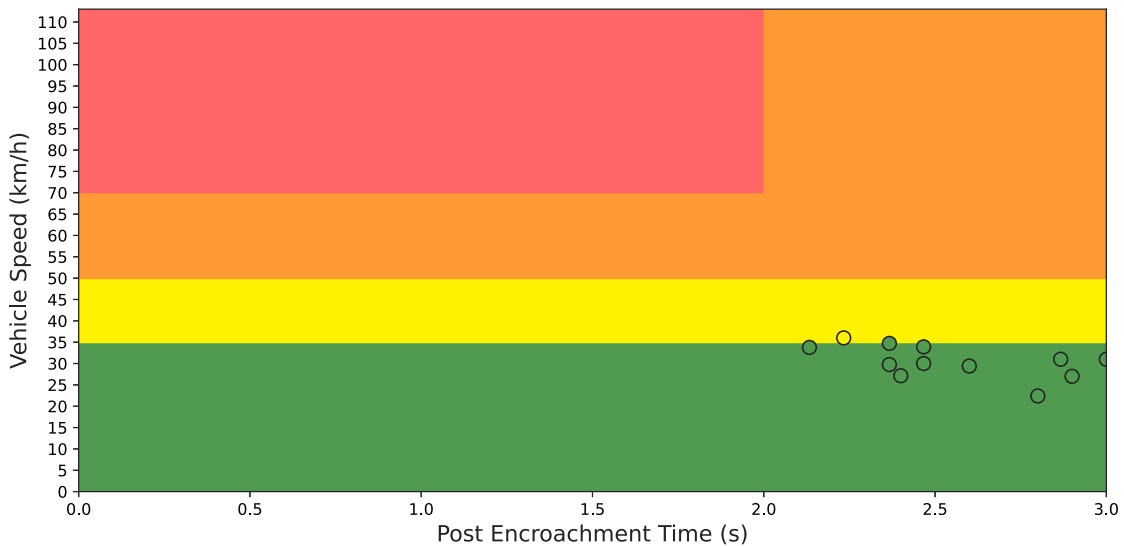
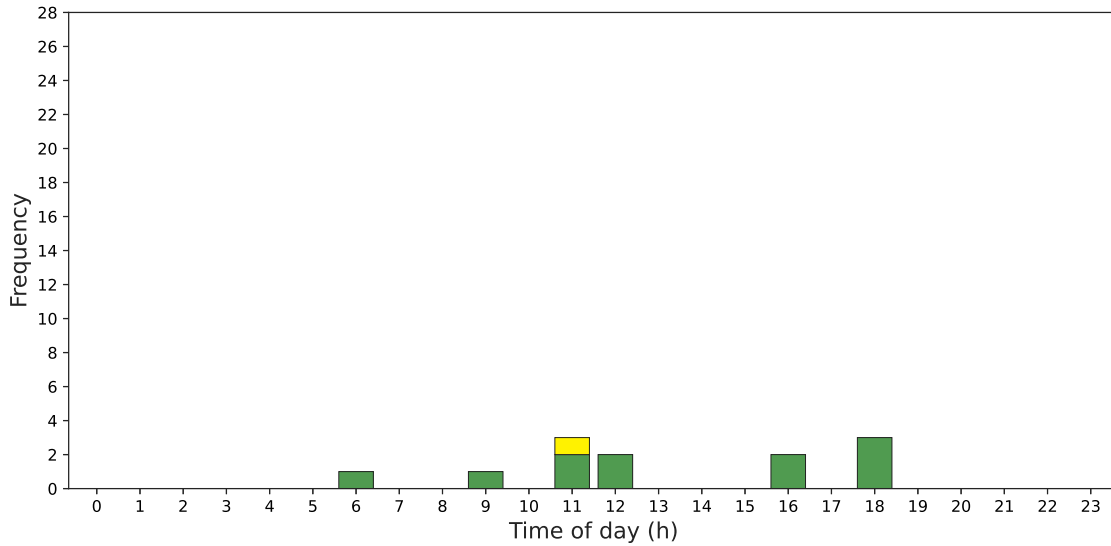


South-Left Vehicle vs West-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	1	11
Annual Estimate	0	0	122	1338
Conflict Rate (%)	0.0	0.0	0.01	0.14
Relative Risk	NA	NA	NA	NA



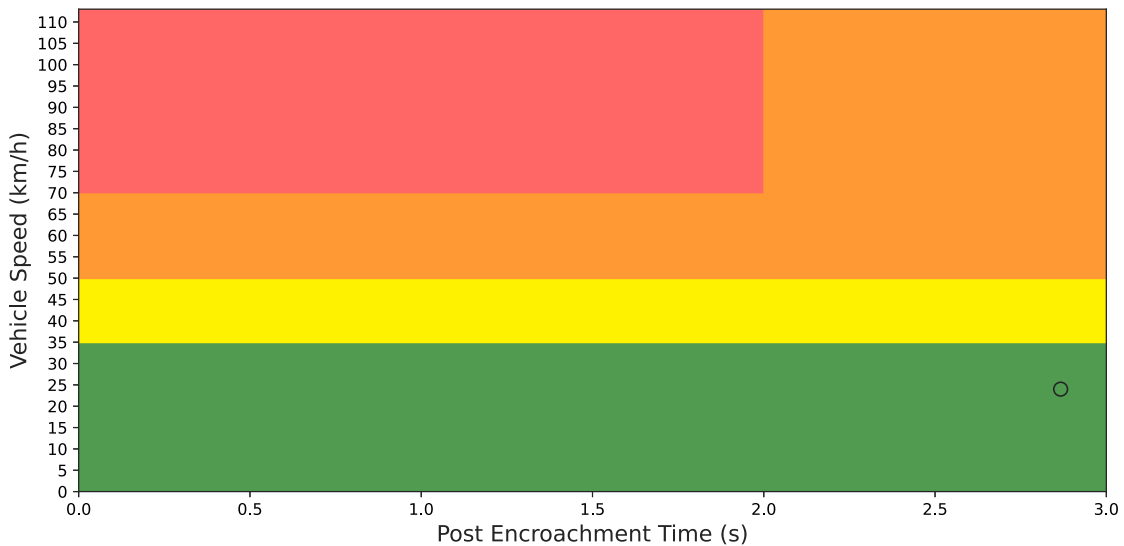
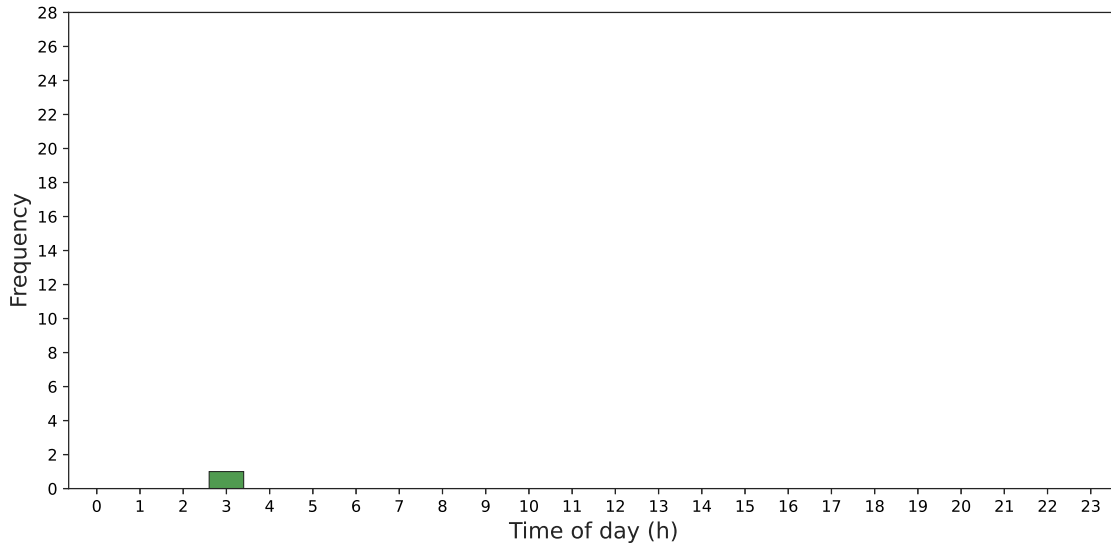


East-Left Vehicle vs South-Through Vehicle

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19

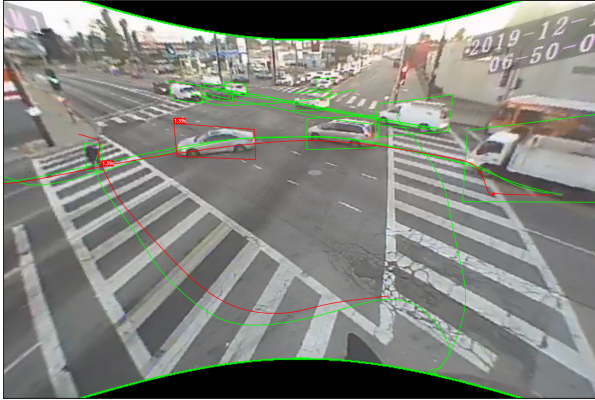


Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	0	1
Annual Estimate	0	0	0	122
Conflict Rate (%)	0.0	0.0	0.0	0.01
Relative Risk	NA	NA	NA	NA

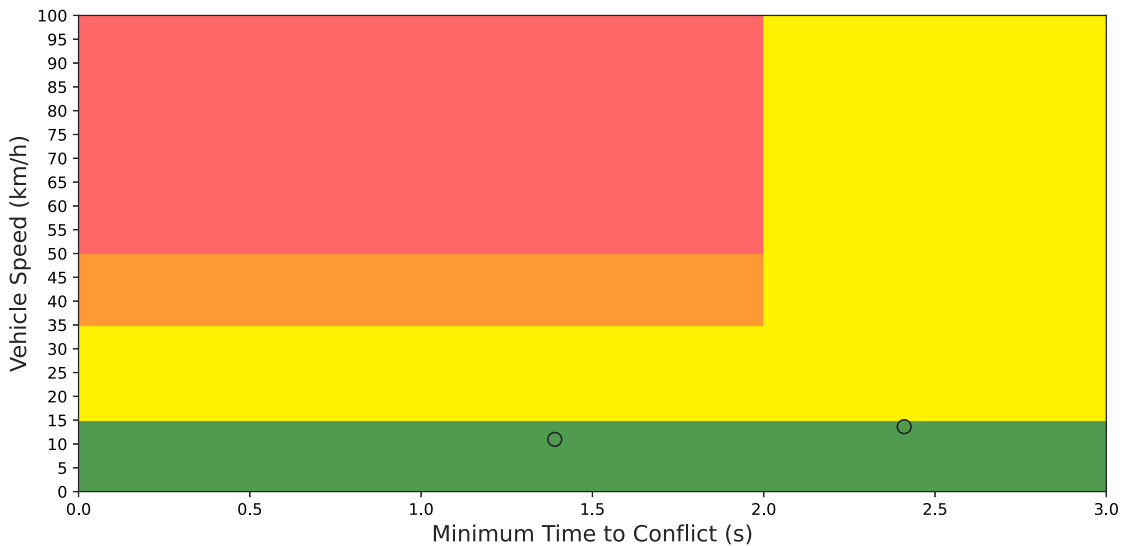
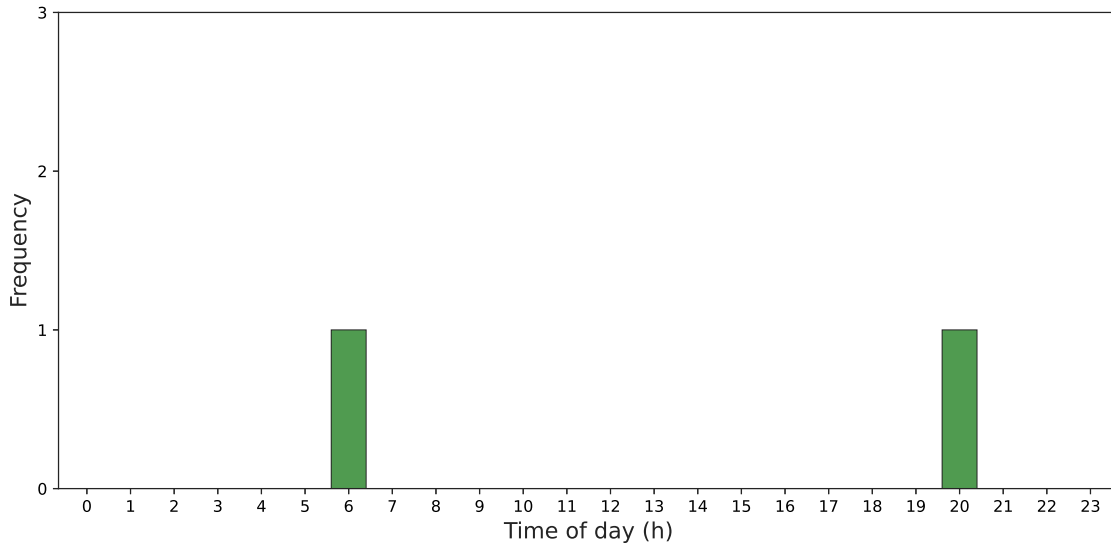




North-Left Vehicle vs Cyclist on West Crossing (North-Left Hook) @ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



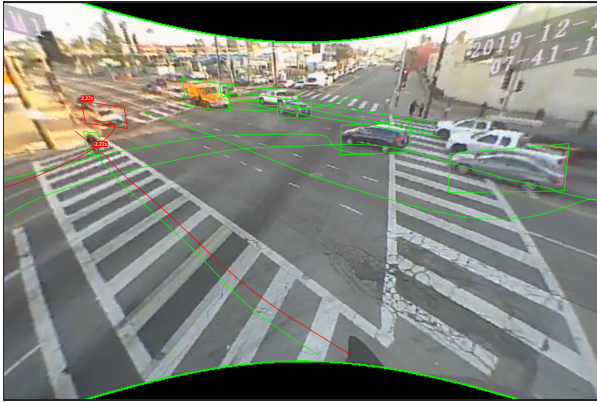
Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	0	2
Annual Estimate	0	0	0	243
Conflict Rate (%)	0.0	0.0	0.0	2.04
Relative Risk	NA	NA	NA	NA



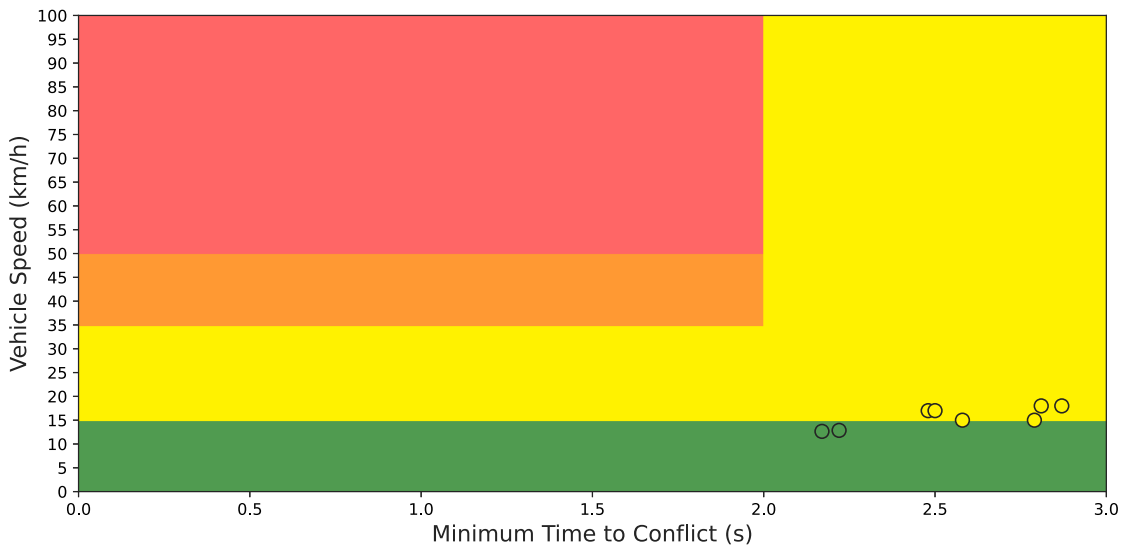
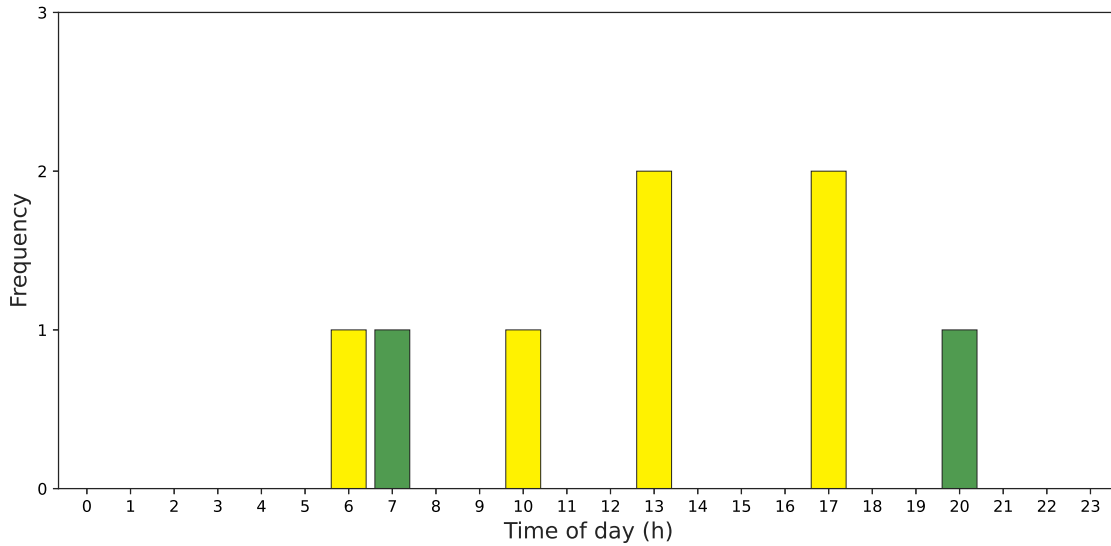


South-Right Vehicle vs Cyclist on West Crossing (South-Right Hook)

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19

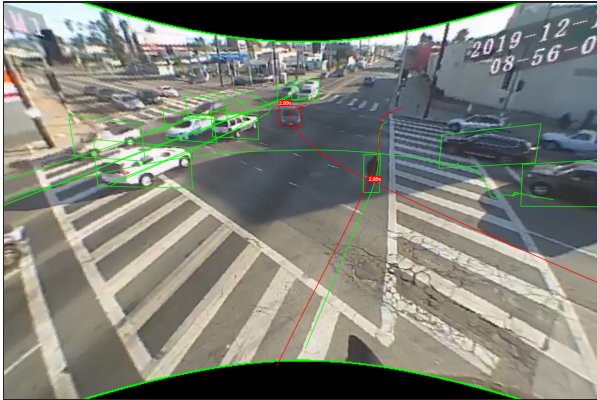


Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	6	2
Annual Estimate	0	0	730	243
Conflict Rate (%)	0.0	0.0	6.12	2.04
Relative Risk	NA	NA	NA	NA

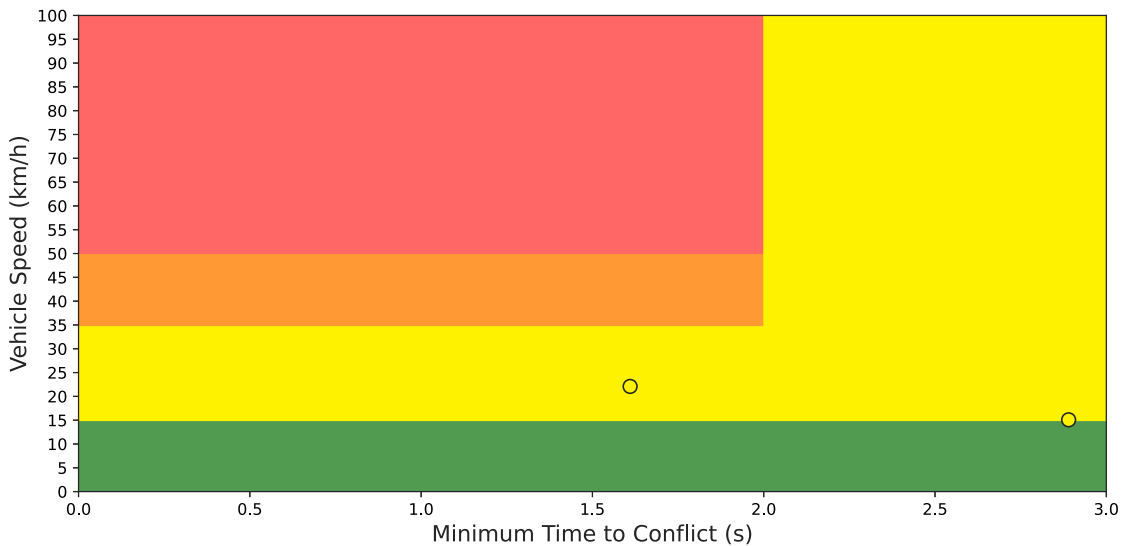
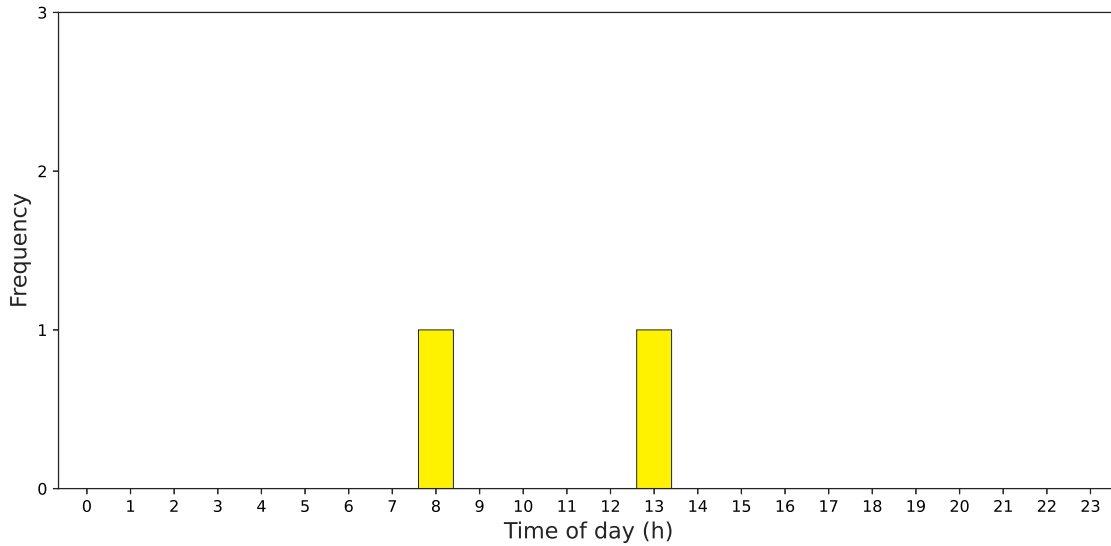




West-Left Vehicle vs Cyclist on South Crossing (West-Left Hook)
@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19

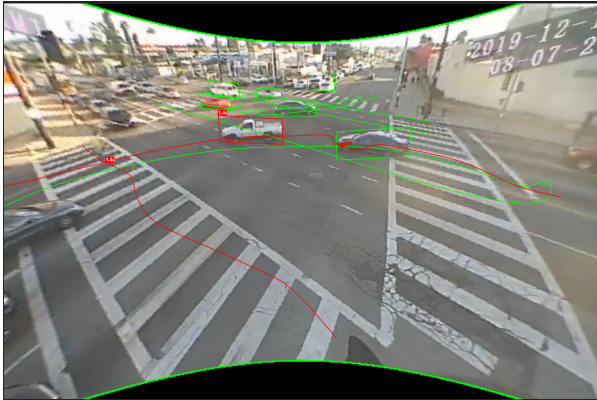


Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	2	0
Annual Estimate	0	0	243	0
Conflict Rate (%)	0.0	0.0	0.86	0.0
Relative Risk	NA	NA	NA	NA

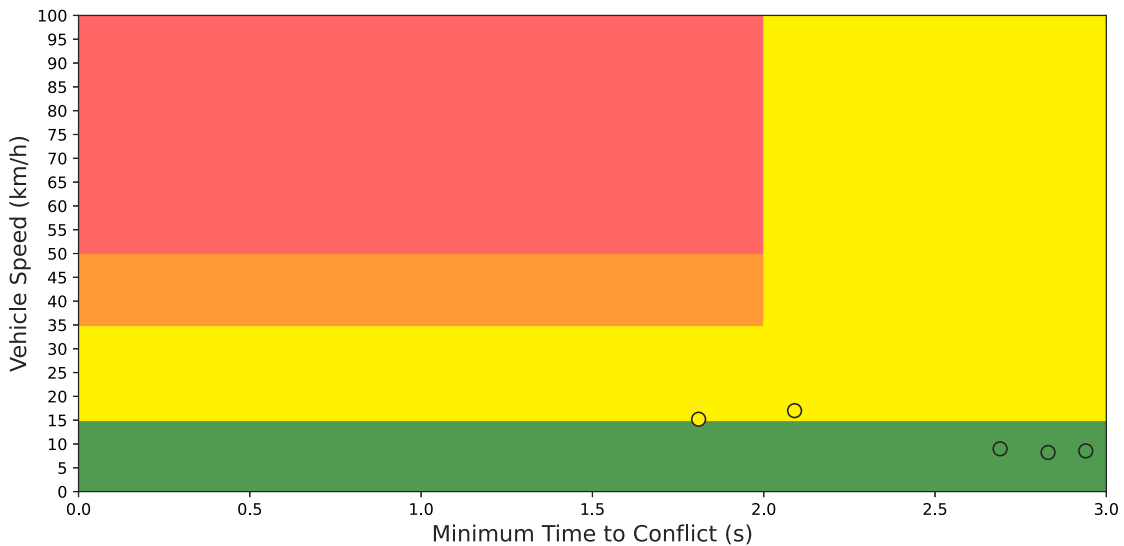
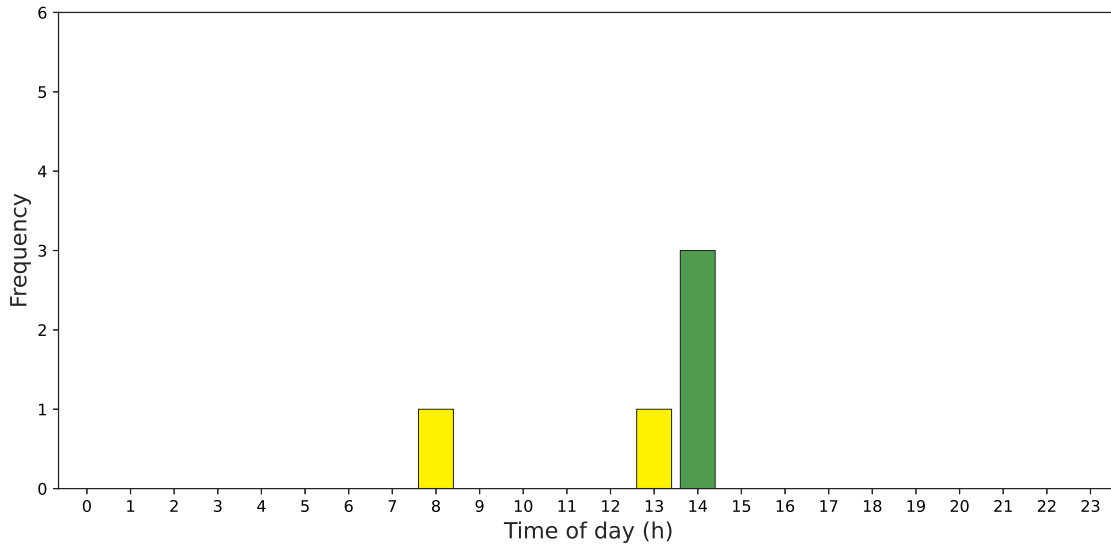




North-Left Vehicle vs Pedestrian on West Crossing (North-Left Hook)
@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



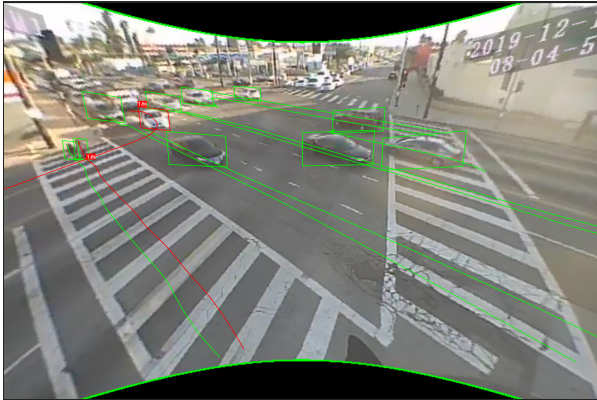
Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	2	3
Annual Estimate	0	0	243	365
Conflict Rate (%)	0.0	0.0	0.27	0.4
Relative Risk	NA	NA	0.35	0.49



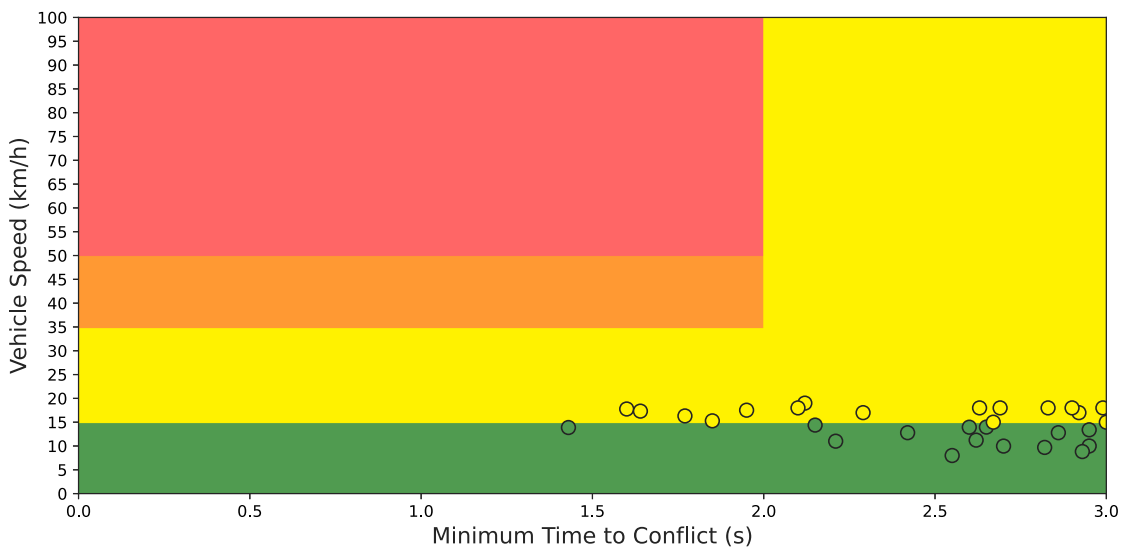
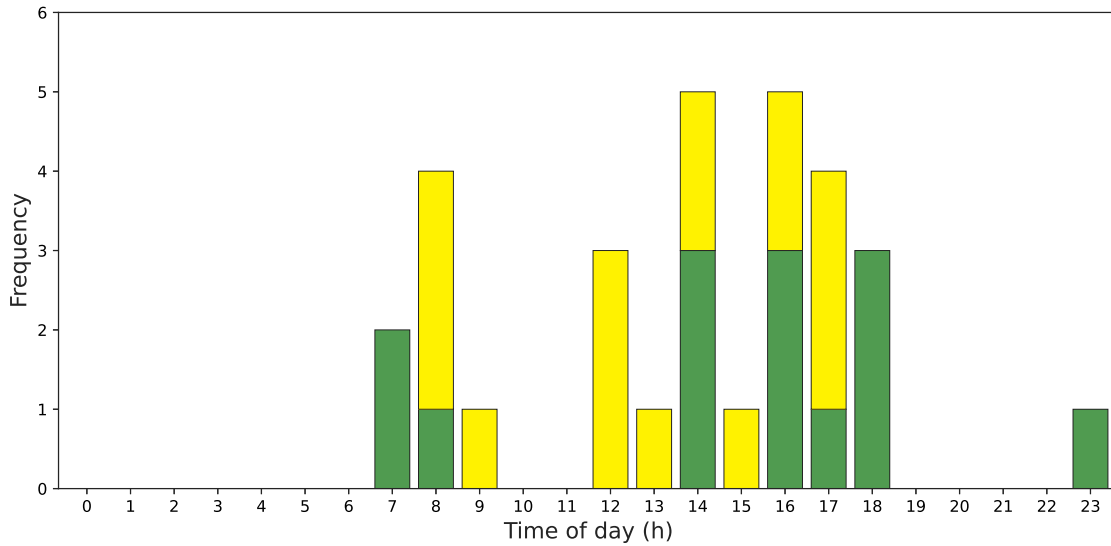


South-Right Vehicle vs Pedestrian on West Crossing (South-Right Hook)

@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19

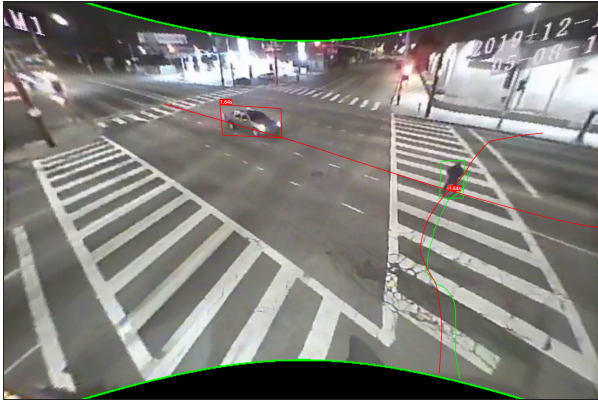


Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	16	14
Annual Estimate	0	0	1947	1703
Conflict Rate (%)	0.0	0.0	2.13	1.86
Relative Risk	NA	NA	7.1	3.8

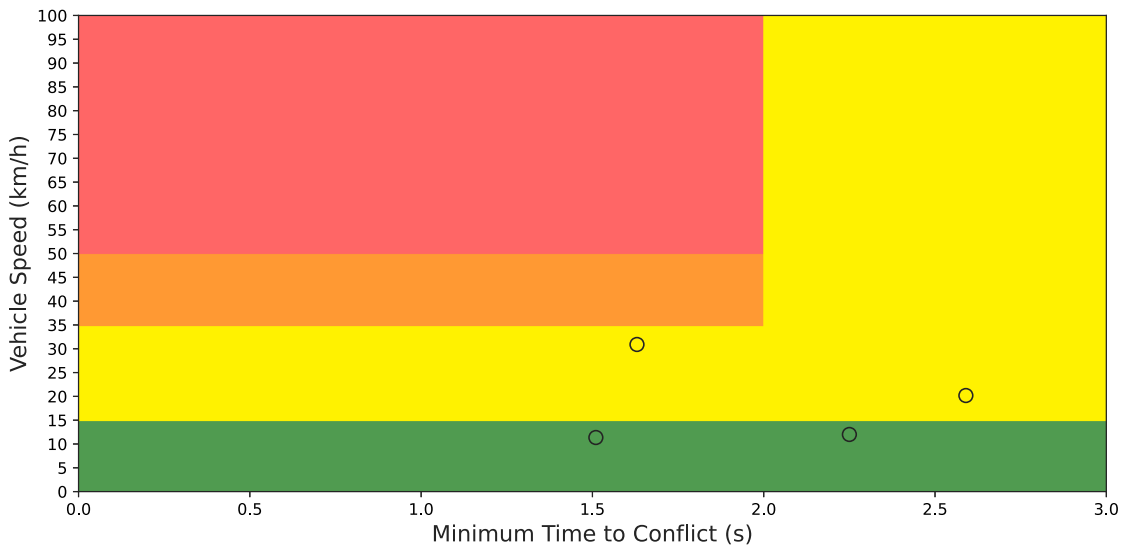
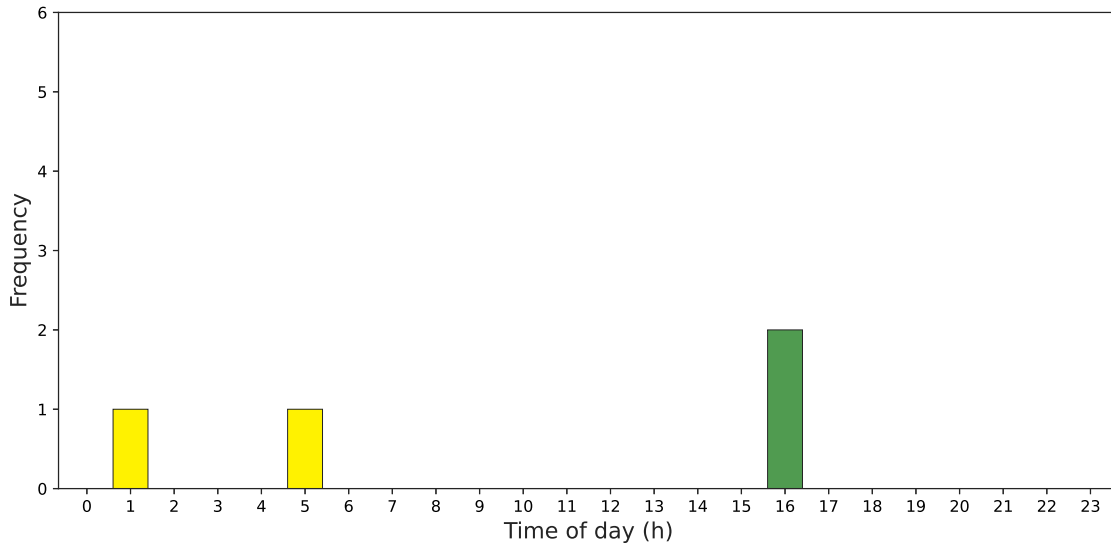




South-Through Vehicle vs Pedestrian on South Crossing (South-through far-side) @ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19

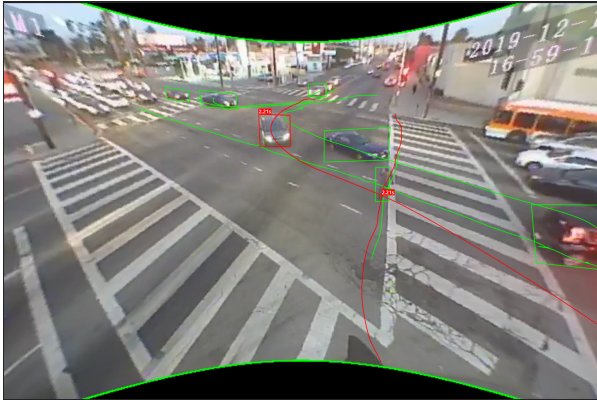


Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	2	2
Annual Estimate	0	0	243	243
Conflict Rate (%)	0.0	0.0	0.08	0.08
Relative Risk	NA	NA	NA	NA





West-Left Vehicle vs Pedestrian on South Crossing (West-Left Hook)
@ South La Brea Ave. and Adams Blvd., 2019-Dec-17 to 2019-Dec-19



Risk Level	Critical Risk	High Risk	Medium Risk	Low Risk
Measured Frequency	0	0	9	1
Annual Estimate	0	0	1095	122
Conflict Rate (%)	0.0	0.0	0.38	0.04
Relative Risk	NA	NA	0.5	0.31

