



OSCEOLA COUNTY

Transportation & Transit RFP-22-12726-TP

Funded By TAPS-LA Grant (FPN) 448363-1-88-01

Video Analytics System – VHB / Derq

Overview

01 Expectations

02 Timeline

03 Data Collection

04 Reporting

05 Analyzing Data

06 Summary

Expectations



Setup System –
Using the existing
cameras, fiber, and
servers



Collect Data



Confirm Data
integrity



Training



Data Analyzation



Recommended
roadway
corrections

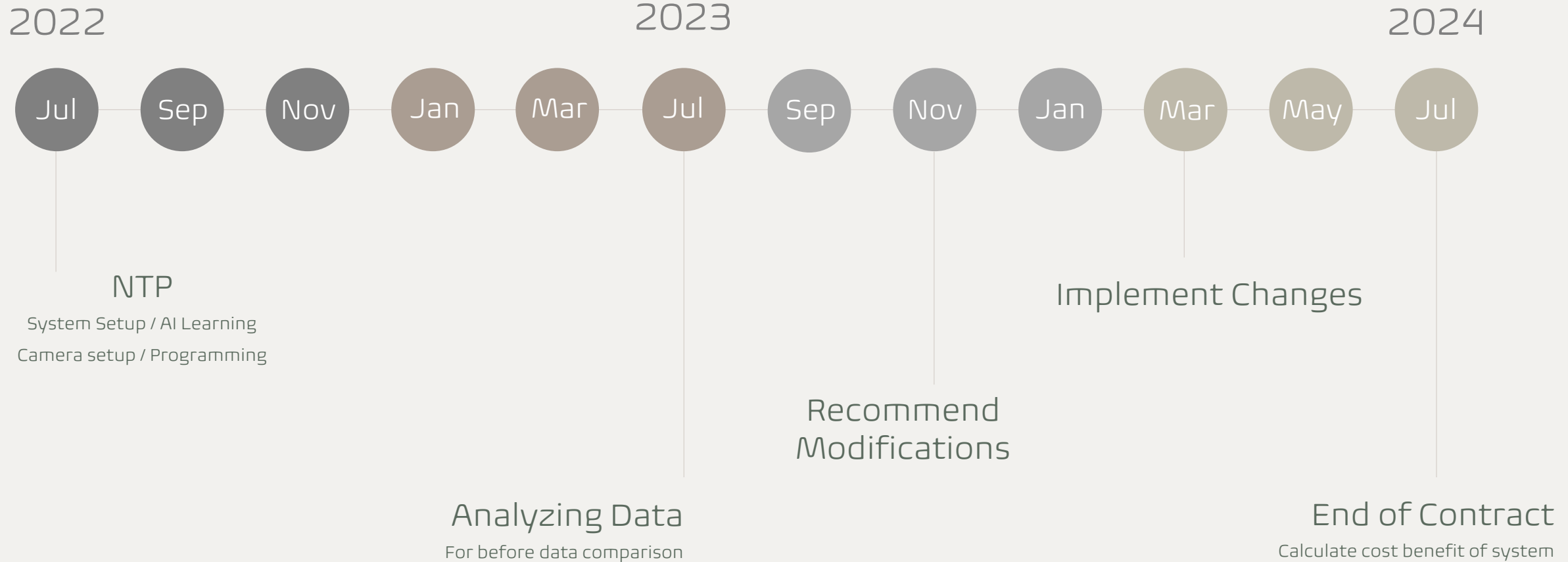


Implement
Countermeasures



Verify data and
safety
improvements

Timeline



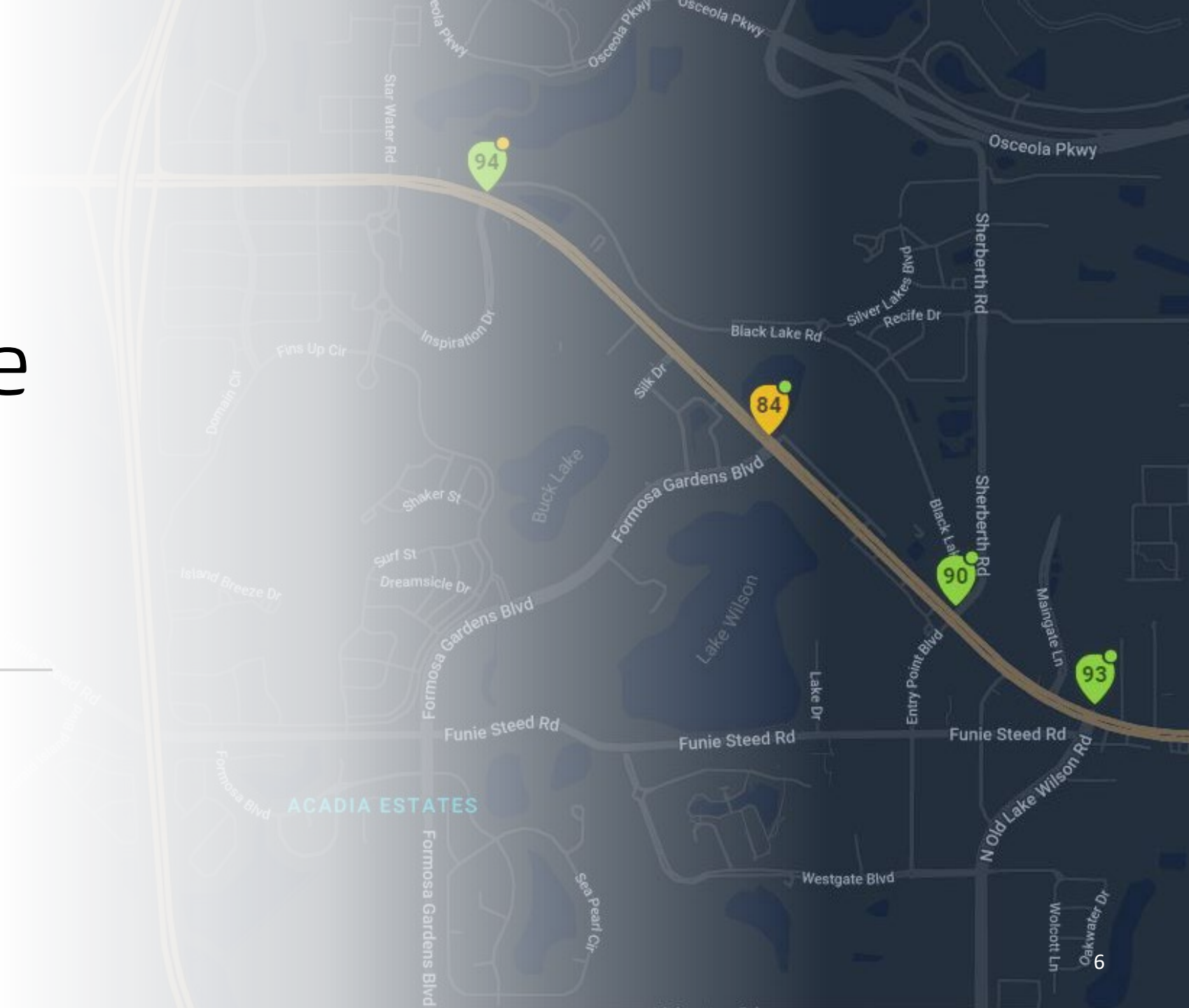


AI Data Collection and Human Verification

- Human data verification needs to meet at least 90% accuracy
- Known issue of CCTV cameras being used for signal or traffic observations will exclude collection data for time used – solution setup timers to auto home after 15 mins of non-use.

Intersection Health Score

Can be set by user to be weighted towards
Pedestrian or vehicle safety or have a
balance between the two



Safety Snapshot

ALL LOCATIONS

Sort By
Safety Score

Sort Order
Ascending

| | | |
|---------------------------------|----|----------------|
| I-4 EB Ramps & CR 532 | 49 | 2288212112 |
| Hwy 17 & S Poinciana Blvd | 72 | 1199631241 |
| John Young Pkwy & W Donegan Ave | 79 | 166576114172 |
| U.S. 192 & N Hoagland Blvd | 80 | 2429870921,151 |
| U.S. 192 & Formosa Gardens Blvd | 83 | 4745913286 |
| U.S. 192 & Entry Point Blvd | 89 | 99022273728 |
| U.S. 192 & John Young Pkwy | 90 | 1852898102 |
| U.S. 192 & Black Lake Rd | 93 | 1165386 |
| U.S. 192 & N Old Lake Wilson Rd | 93 | 52424261575 |

AI Automated
Detection Events:

- Vehicle & Pedestrian near misses
- Vehicle & Vehicle near misses
- Wrong Way Drivers
- Stopped Vehicles within Intersection
- Illegal Turn Movements
- Lane Compliance Violations
- Illegal Pedestrian Crossing



Vehicle-Vehicle Near Miss



Event ID : 651c7325a0a43c0012da6528



Location

U.S. 192 & Entry Point Blvd

Detected on

October 03, 2023 04:01 PM

Speed

25 mph

Near Miss Type

Cutoff

Detection Area

Intersection Center



Road User A

Class: Passenger Vehicle

Speed: 11 mph

Movement: LT

Direction: NB

Road User B

Class: Passenger Vehicle

Speed: 25 mph

Movement: TH

Direction: SWB

Surrogate Safety Measures

PET : N/A

TTC : 1s

Gap Time : 0.5s

Severity : High

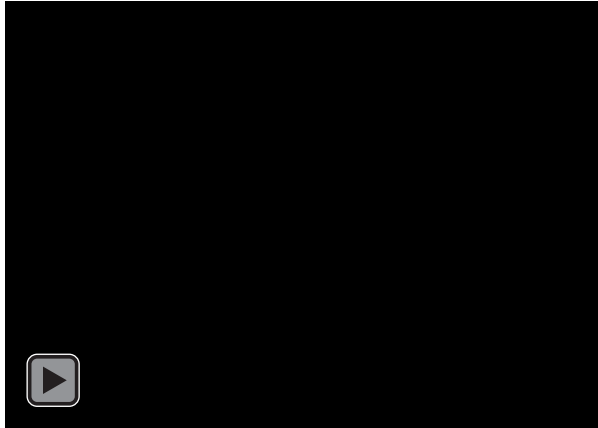
Max Speed : 31 mph

Near Misses are Measured By:

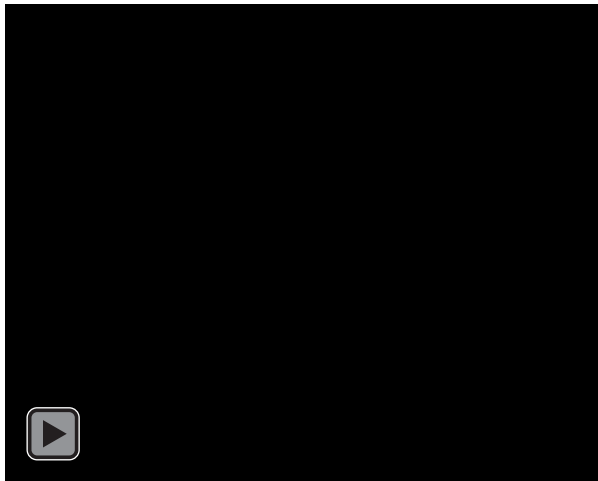
- Post Encroachment Time (PET)
- Time to Collision TTC
- Gap Time
- Speed
- Movement type and Direction

Data Heat Maps Per Intersection And By Selected Timeframe

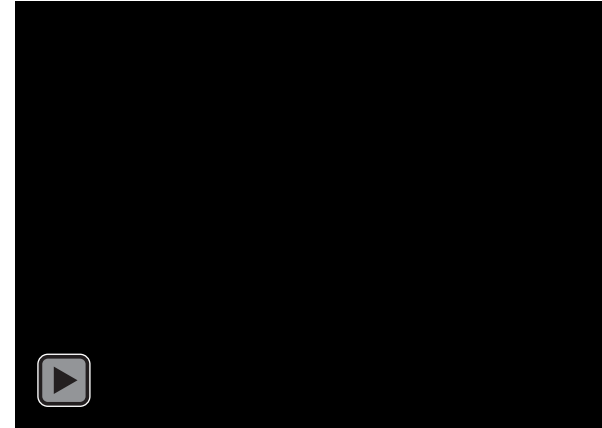




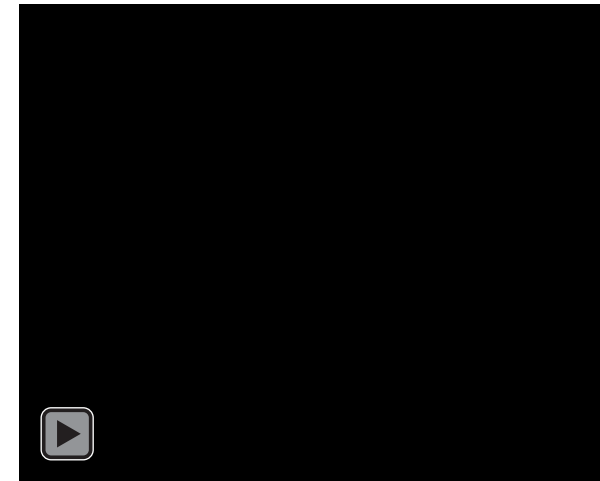
Wrong Way Driving



Wrong Way Driving

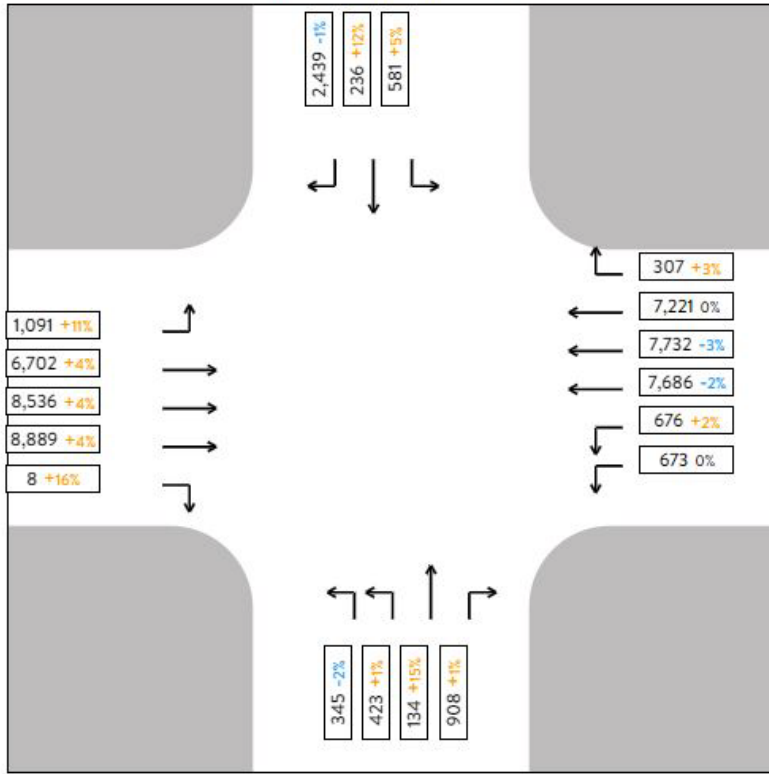


Vehicle vs. Vehicle Near Miss

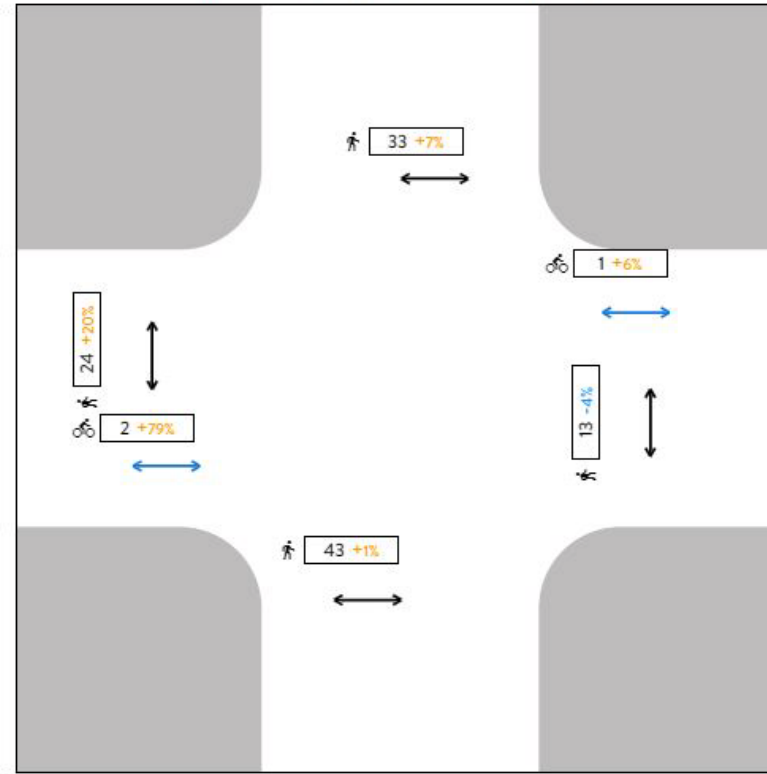


Vehicle vs. Pedestrian

DAILY VEHICLE COUNTS



DAILY VULNERABLE ROAD USER COUNTS



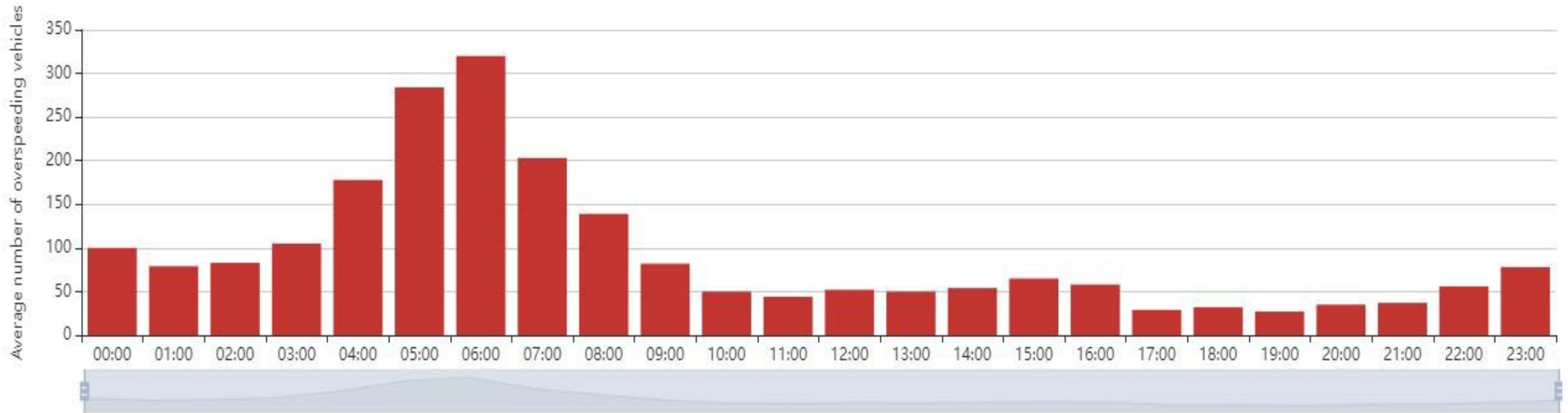
Vehicle Data Collected:

- Classification of Vehicles
 - Passenger Vehicles
 - Motorcycle Trucks
 - Articulated Trucks
 - Single Use Trucks
 - Busses
- Total Cars
- Lane Counts
- Turn Counts
- Pedestrian Counts
- Bicycle Counts

| Date ↓ | Passenger Vehicle | Motorcycle | Truck | Articulated Truck | Single Unit Truck | Bus |
|------------|-------------------|------------|-------|-------------------|-------------------|-----|
| 10-13-2023 | 23,854 | 31 | --- | 470 | 552 | 72 |
| 10-12-2023 | 54,071 | 53 | --- | 560 | 630 | 175 |
| 10-11-2023 | 50,918 | 66 | --- | 643 | 714 | 146 |
| 10-10-2023 | 47,571 | 87 | --- | 681 | 873 | 168 |
| 10-09-2023 | 54,122 | 96 | --- | 652 | 766 | 158 |
| 10-08-2023 | 52,898 | 130 | --- | 74 | 139 | 101 |
| 10-07-2023 | 60,442 | 150 | --- | 229 | 304 | 126 |

Additional Data Collected

- Peak Hour Analysis
- Speed Distribution
- Over Speeding Data



Over Speeding Data Chart

Report Summary

Safety Assessment Report



Before and After Assessment Report



Economic Analysis Report

Questions or Comments?

