



Entertainment Transportation Vehicle (ETV) Evaluation

Prepared For:
Transportation Licensing Board

Prepared By:
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RISE TO THE CHALLENGE

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Study Goals

- There are currently 87 active permits for Entertainment Transportation Vehicles (ETVs)
- Determine if the number of permits should be reduced

Study Area



- Commerce Street to Demonbreun Street
- 8th Avenue to 1st Avenue

Modeling Traffic

- PTV VISSIM
 - ▶ Microsimulation modeling software
 - ▶ Utilizes random number generation and probabilities to anticipate driver decisions.
 - Traveling speed
 - Turning movements
 - ▶ Allows for the evaluation of networks rather than just intersections.

VISSIM Model Assumptions

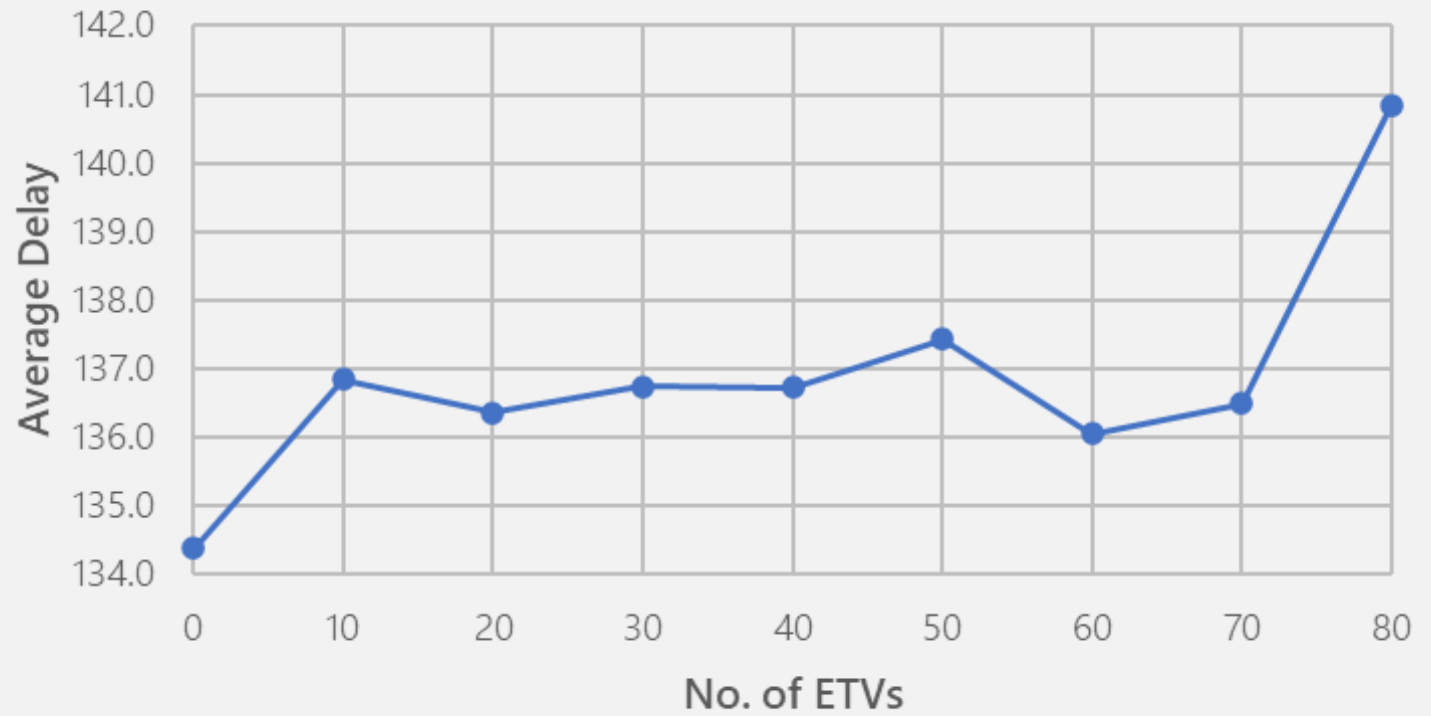
- ETVs Operations
 - ▶ Modeled as “buses”
 - ▶ Max speed 15 mph
 - ▶ Lower acceleration and deceleration rates
 - ▶ Two routes per hour per ETV permit
- Volumes
 - ▶ Weekday off-peak volumes were estimated to be 14% lower than the PM peak volumes
 - ▶ Friday volumes were estimated to be 20% higher than the PM peak volumes

SCENARIOS

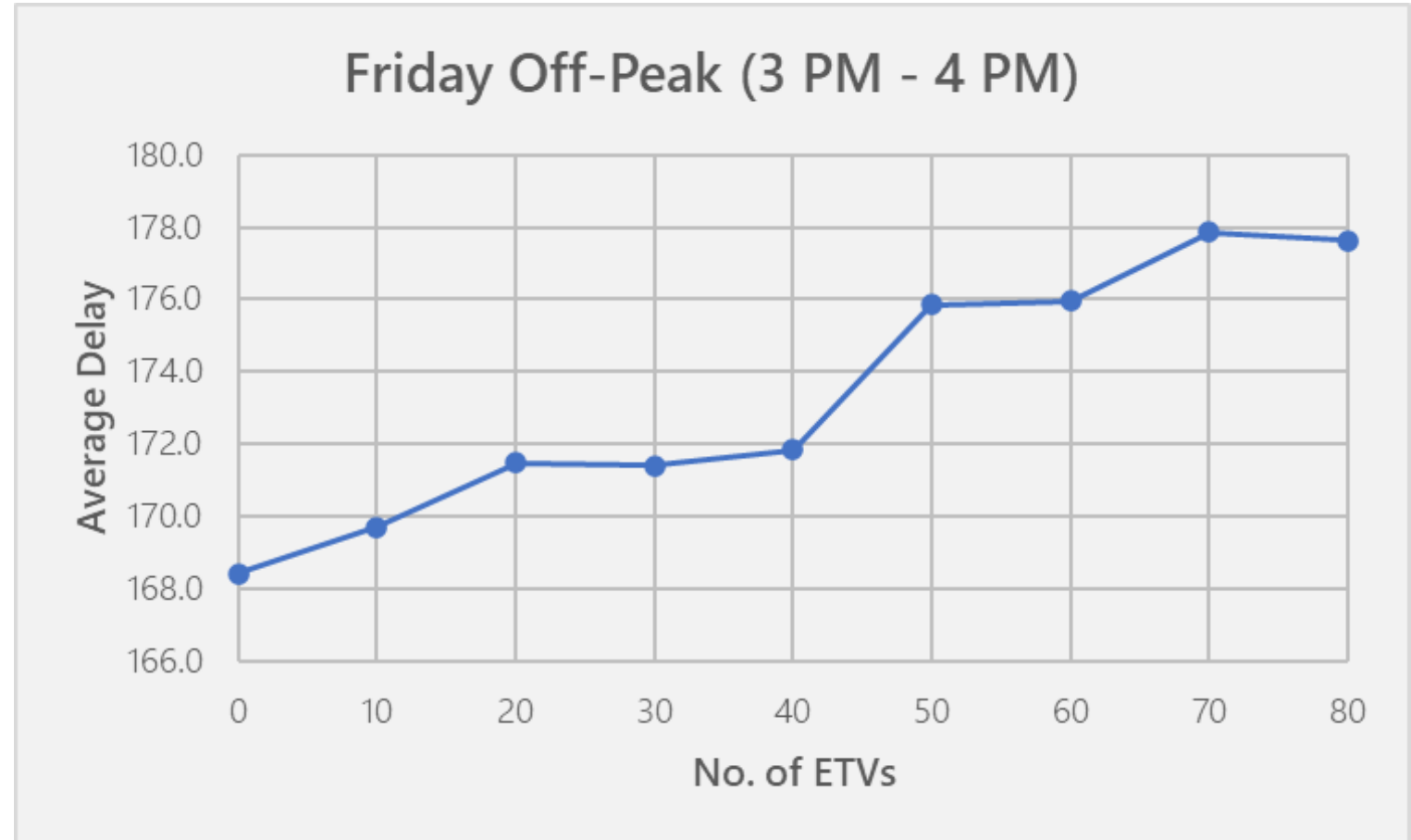
- 18 scenarios were evaluated
 - ▶ Weekday Off-Peak (3-4 PM)
 - No ETVs
 - 10 ETVs – 80 ETVs added in increments of 10
 - ▶ Friday Off-Peak (3-4 PM/6:30-7:30 PM)
 - No ETVs
 - 10 ETVs – 80 ETVs added in increments of 10
- Each scenario was run for one hour
- Runs were completed 5 times, and the results were averaged

Average
Delay
Results

Weekday Off-Peak (3 PM -4 PM)



Average
Delay
Results



Results

- Adding 80 ETVs to the network results in an average delay increase of approximately 8 seconds per vehicle on weekdays and 10 second per vehicle on Fridays
- The off-peak from 3-4 PM leads into the PM peak and having ETVs starts that peak with 8-10 additional seconds of delay on the network that increases the delay throughout the PM peak
- The largest observed increase in delay was between 40 and 50 ETVs. Therefore, considerations should be made into reducing the number of ETV permits to 40.

Future Conditions

- New developments currently under construction that will increase the number of vehicles using the network
- Connect Downtown
 - ▶ Contemplates lane closures for exclusive bus lanes and/or multi-use lanes for bicycles and pedestrians.
 - ▶ Any additional vehicles on the road will cause additional delay.
- Conditions should be reevaluated once Connect Downtown has concluded, and recommendations have been determined.