Automated Capture of Freight Origin/Destination Data using License Plate Readers

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OUTLINE

1. Origin/Destination Data
2. Phase I
3. System Hardware
4. System Software

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Project Objective

To utilize LPR technology for collecting O/D Data of Freight using highway gantry-mounted cameras.

O/D

When did it leave and from where?

When did it arrive and to where?

ORIGIN - DESTINATION DATA

- Planning
- Design
- Congestion Pricing
- Maintenance
- Cargo Theft
- Enforcement
- Intermodal
- Port Management
- Traffic
- Average Speed

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ORIGIN - DESTINATION DATA

LARGE number of models is Available.

But where would the DATA come from?!

ORIGIN - DESTINATION DATA

Getting

RELIABLE Origin/Destination Data is

Expensive and time consuming.

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Jaxport

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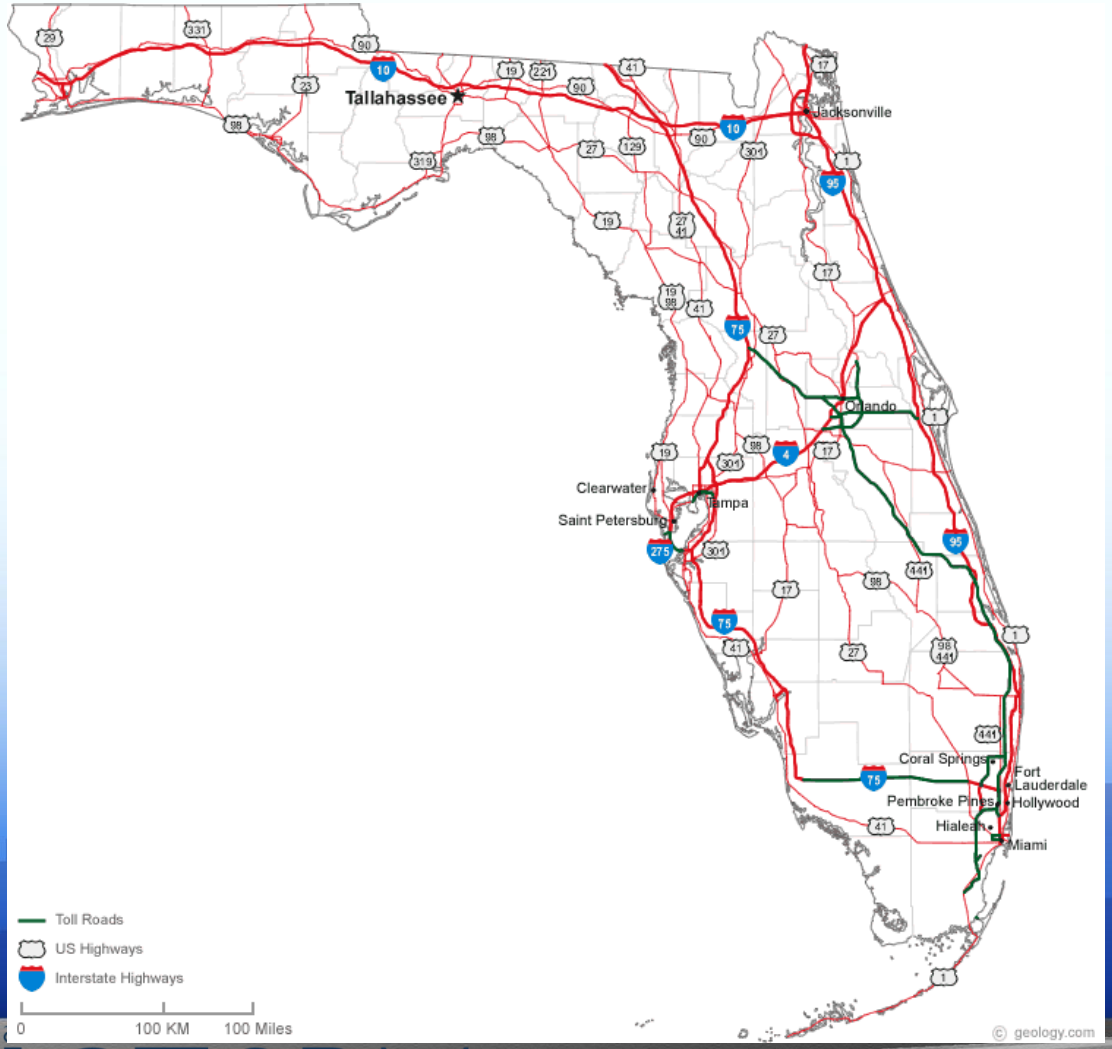
Installation

Phase I

Installation



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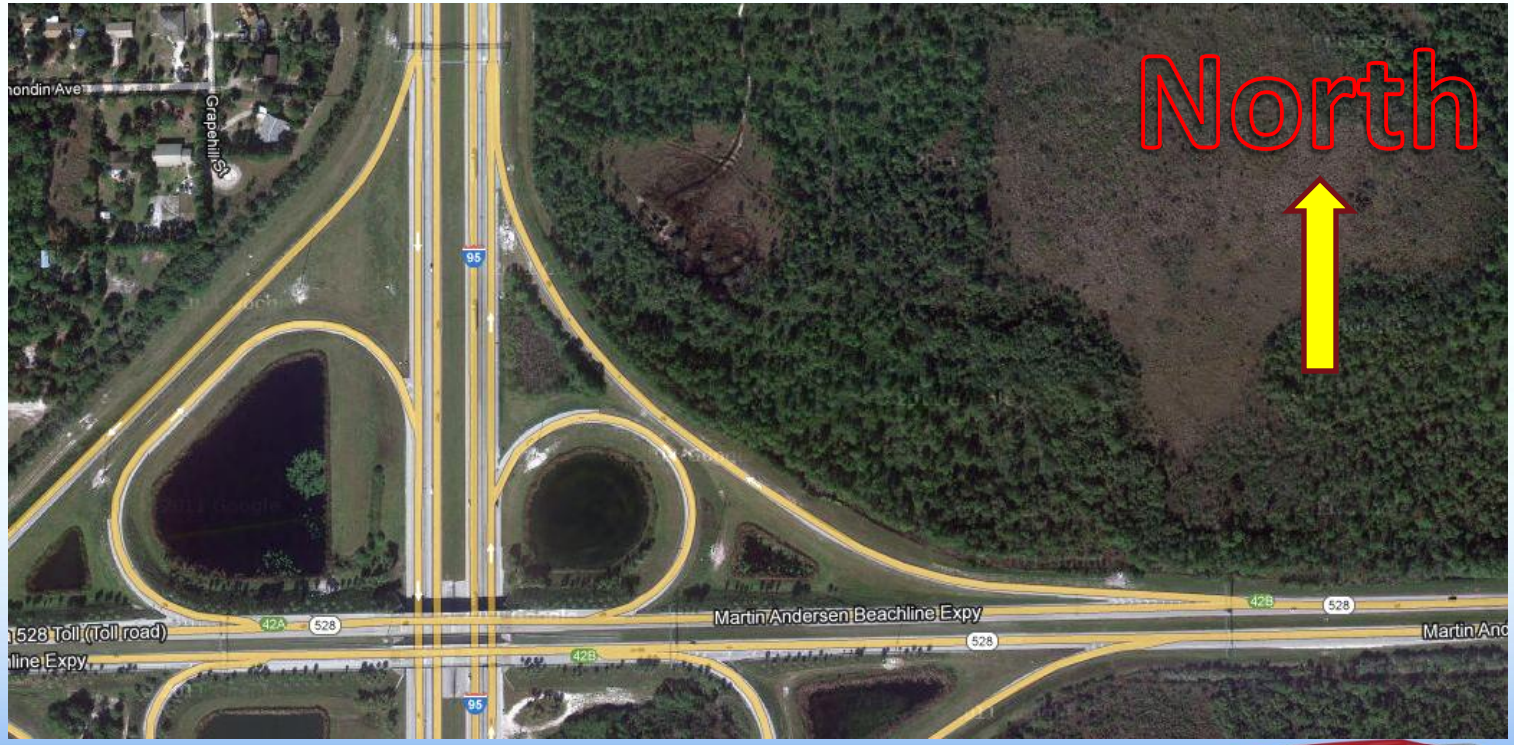
Location



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System Design Challenges

1. Selection of Camera Systems (light, resolution ..)
2. Selection of Triggering Mechanisms
3. Power Source
4. Software and acquisition speed
5. OCR Target: Plates, Container Numbers …etc.
6. Safe connection to Gantries
7. Sign structure Issues

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Gantry 1

7) Sign structure Issues

7) Safe connection to Gantries

Installation

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Laser Trigger

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Image Acquisition

Rear License-Plate Reading

Rear License-Plate Problems

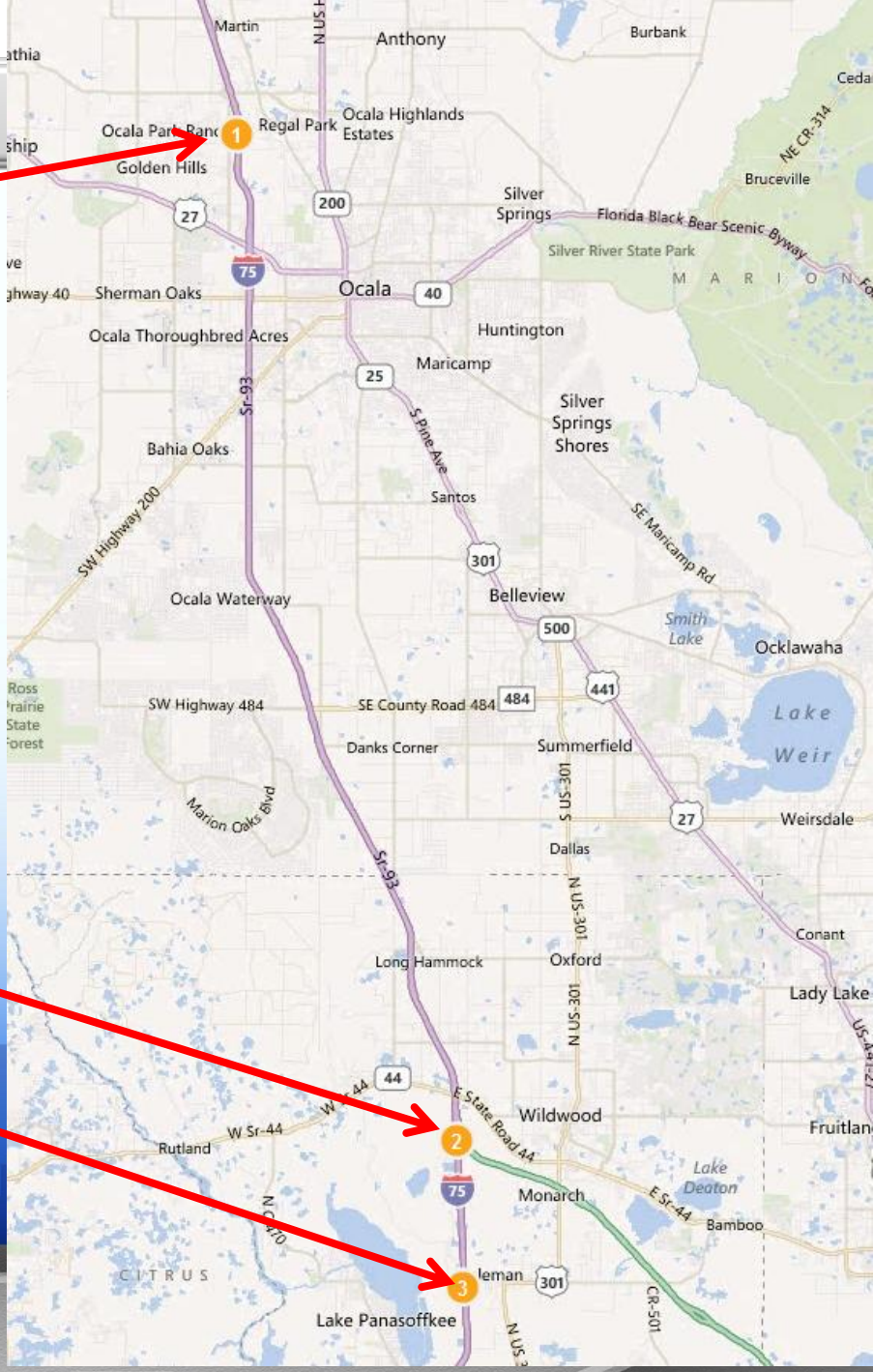
Rear License-Plate Problems

Installation

Location 1

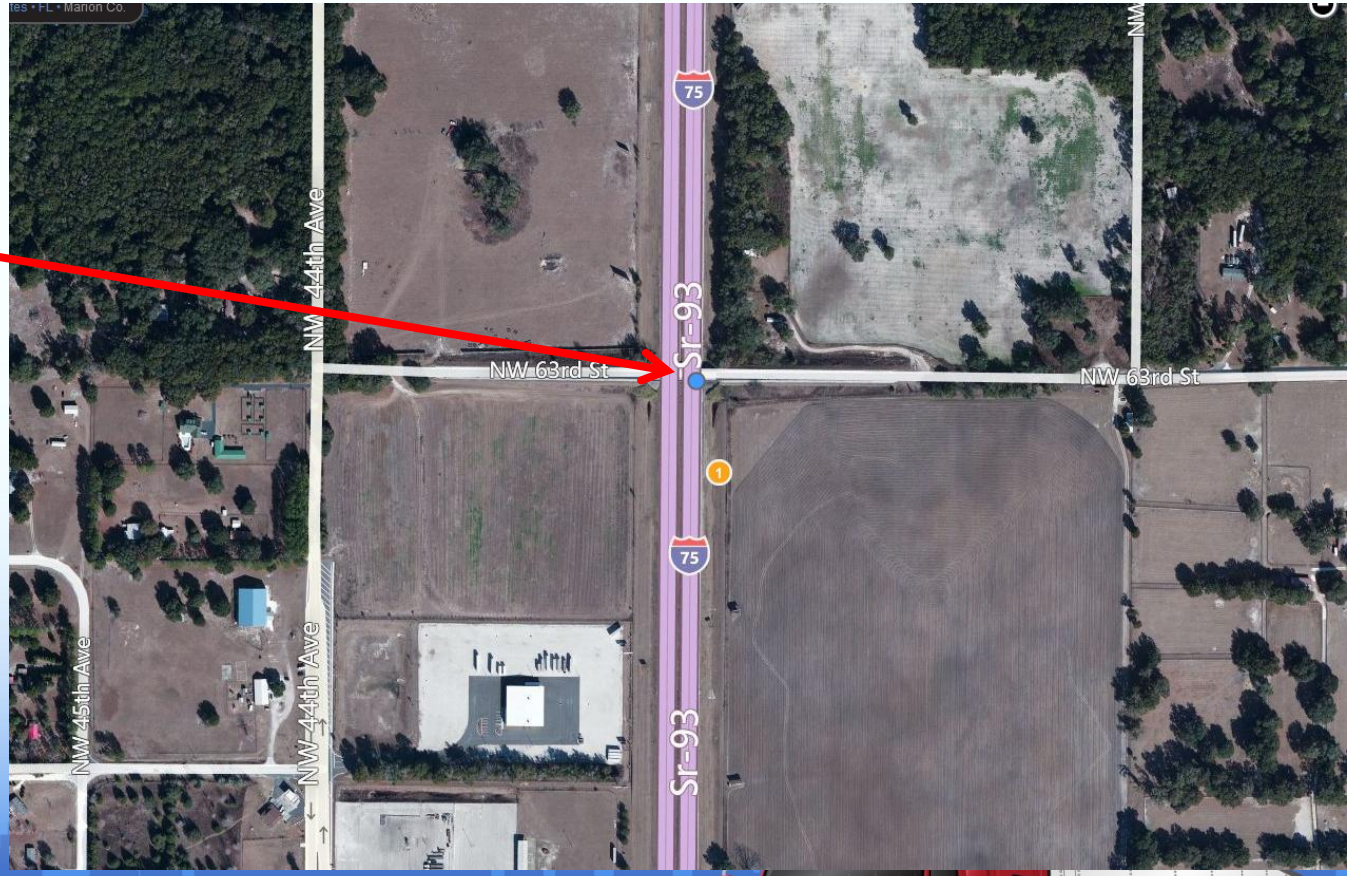
Location 2

Location 3



Installation

Location 1



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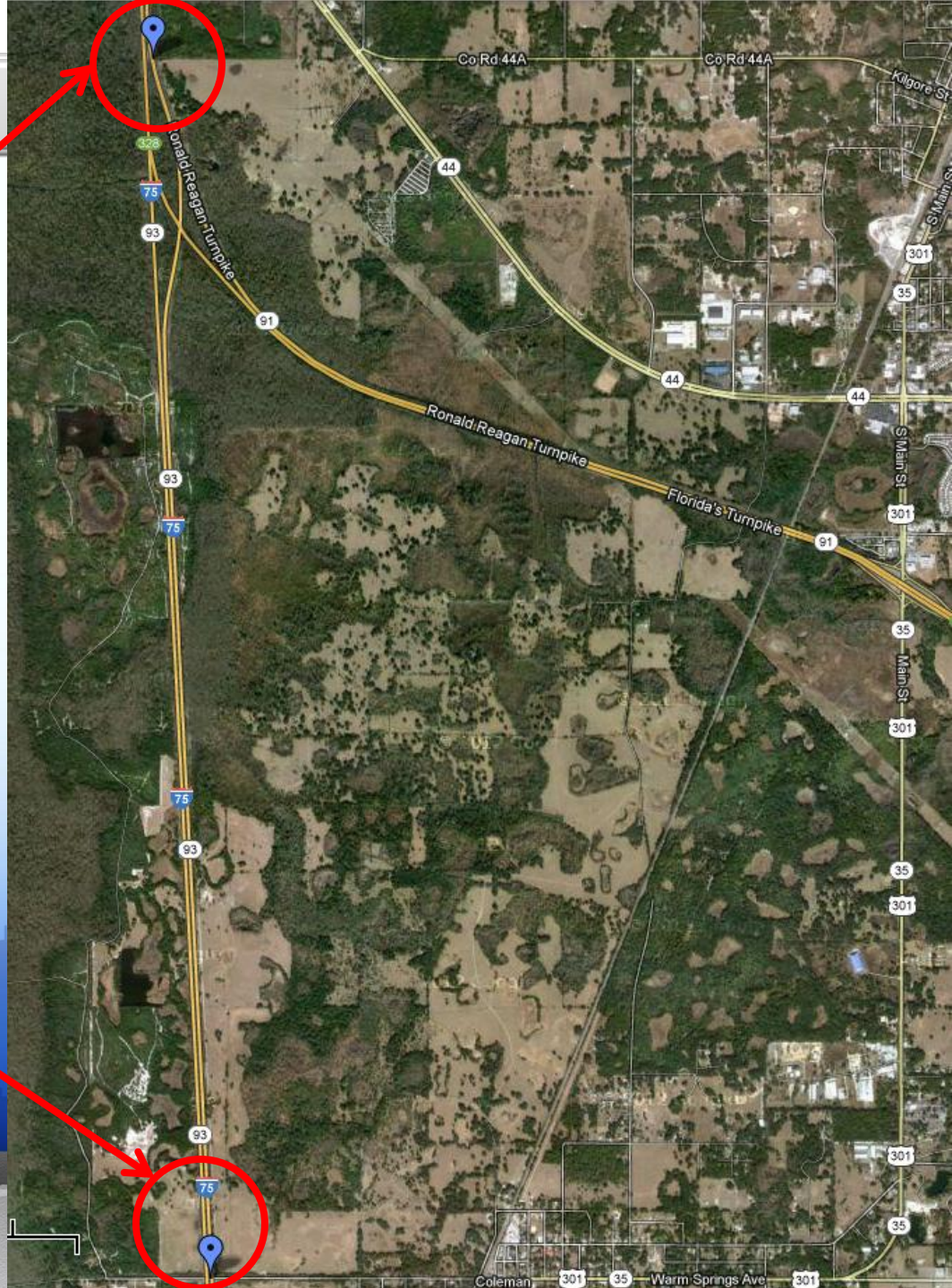
Installation

Location 2

Location 3



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Location 3

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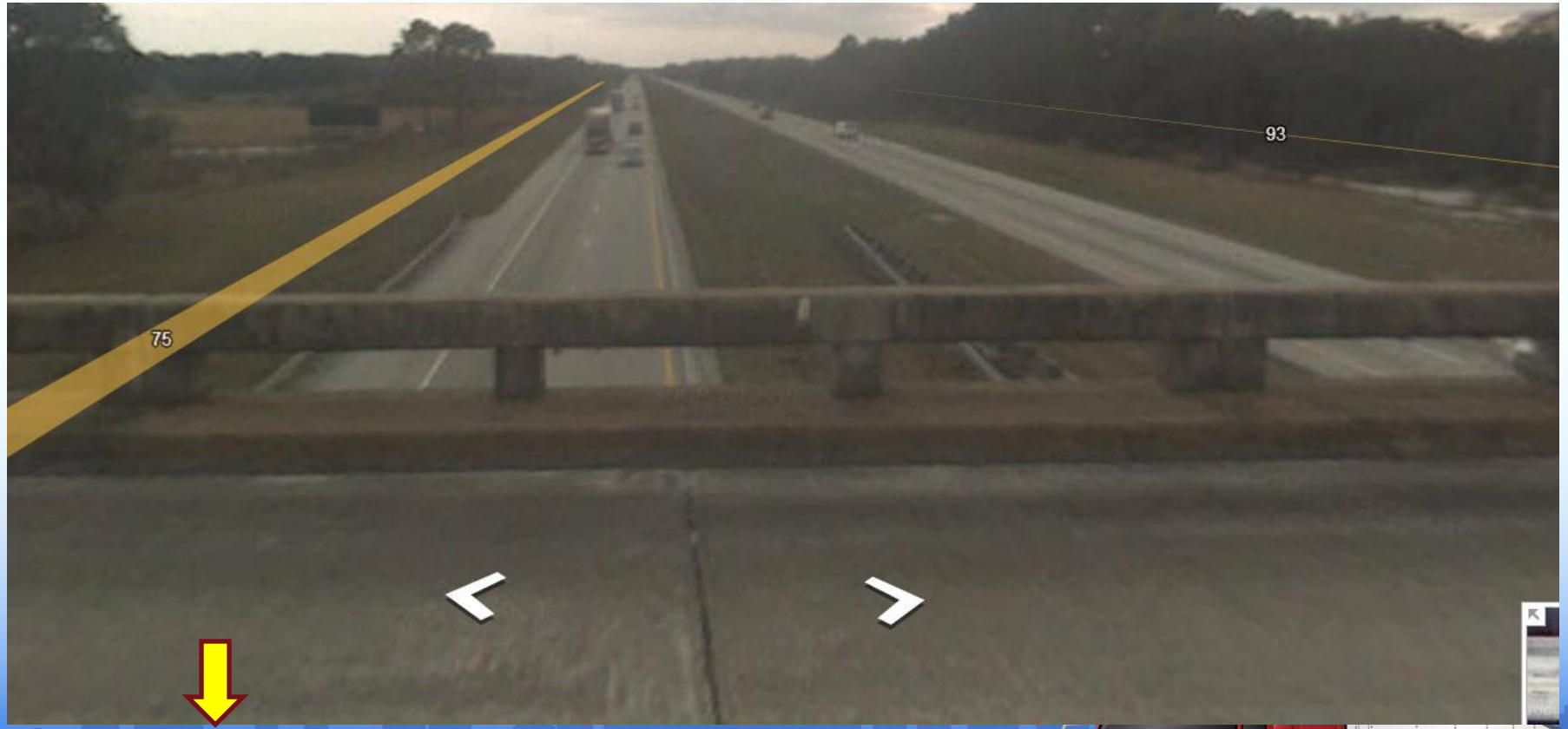
Location 3



North

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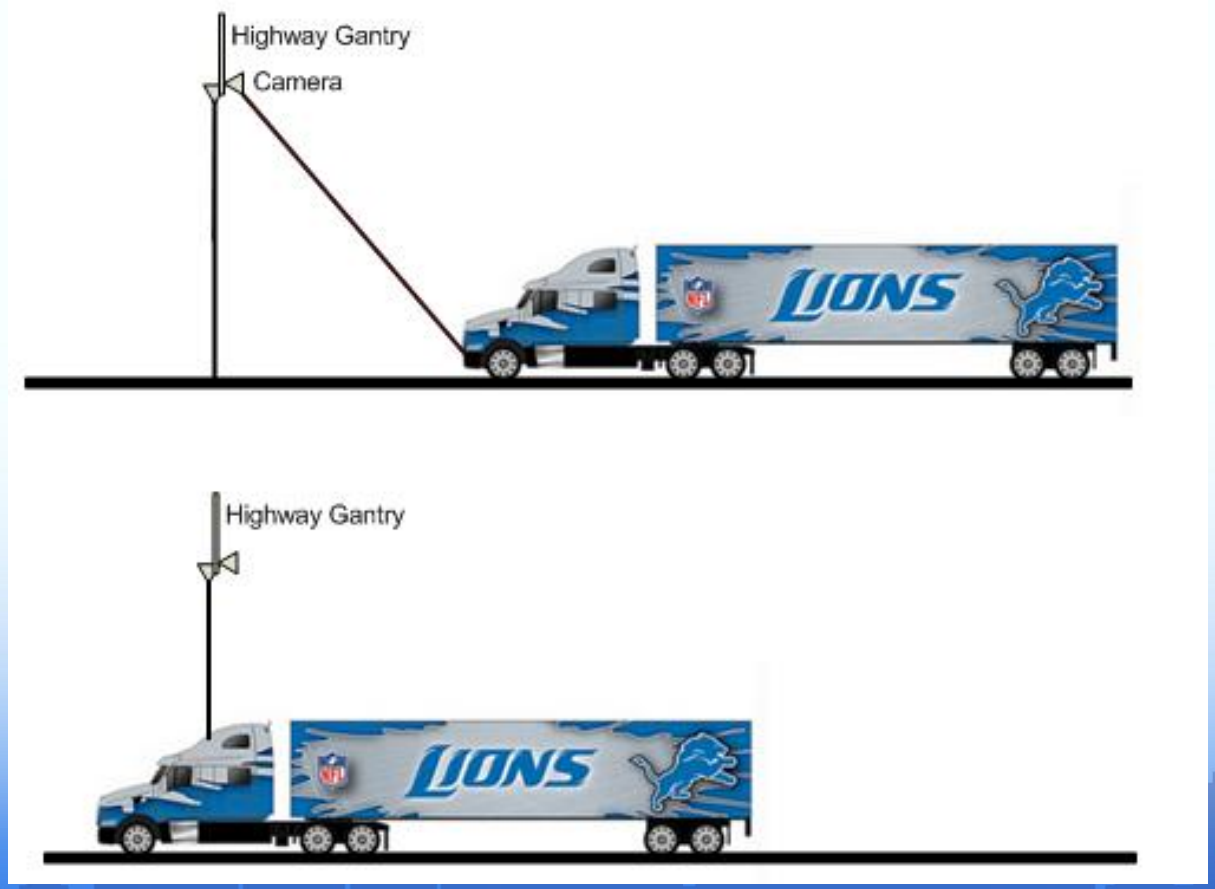
3) Triggering Technology



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3) Triggering Technology

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Bracket

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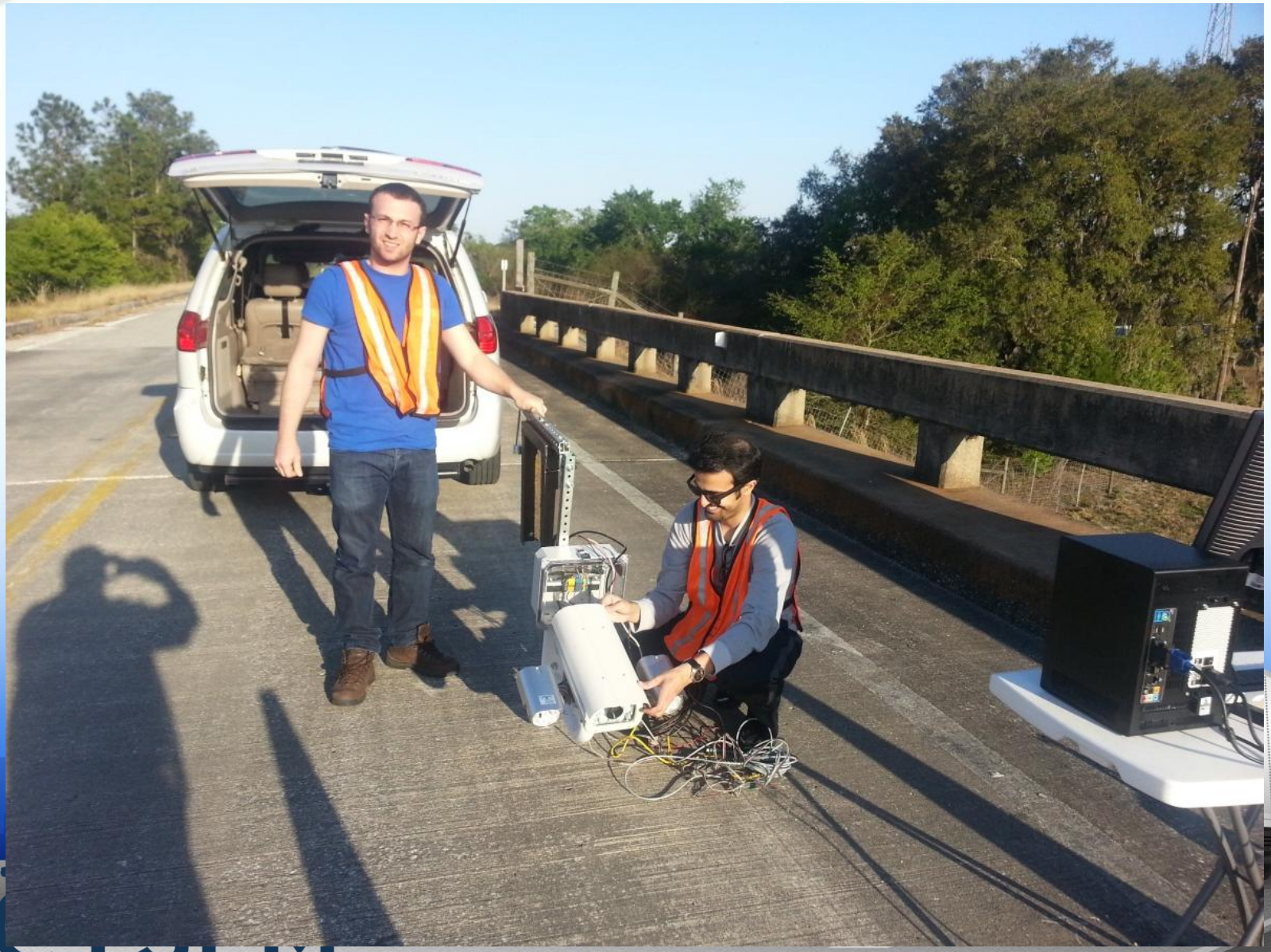
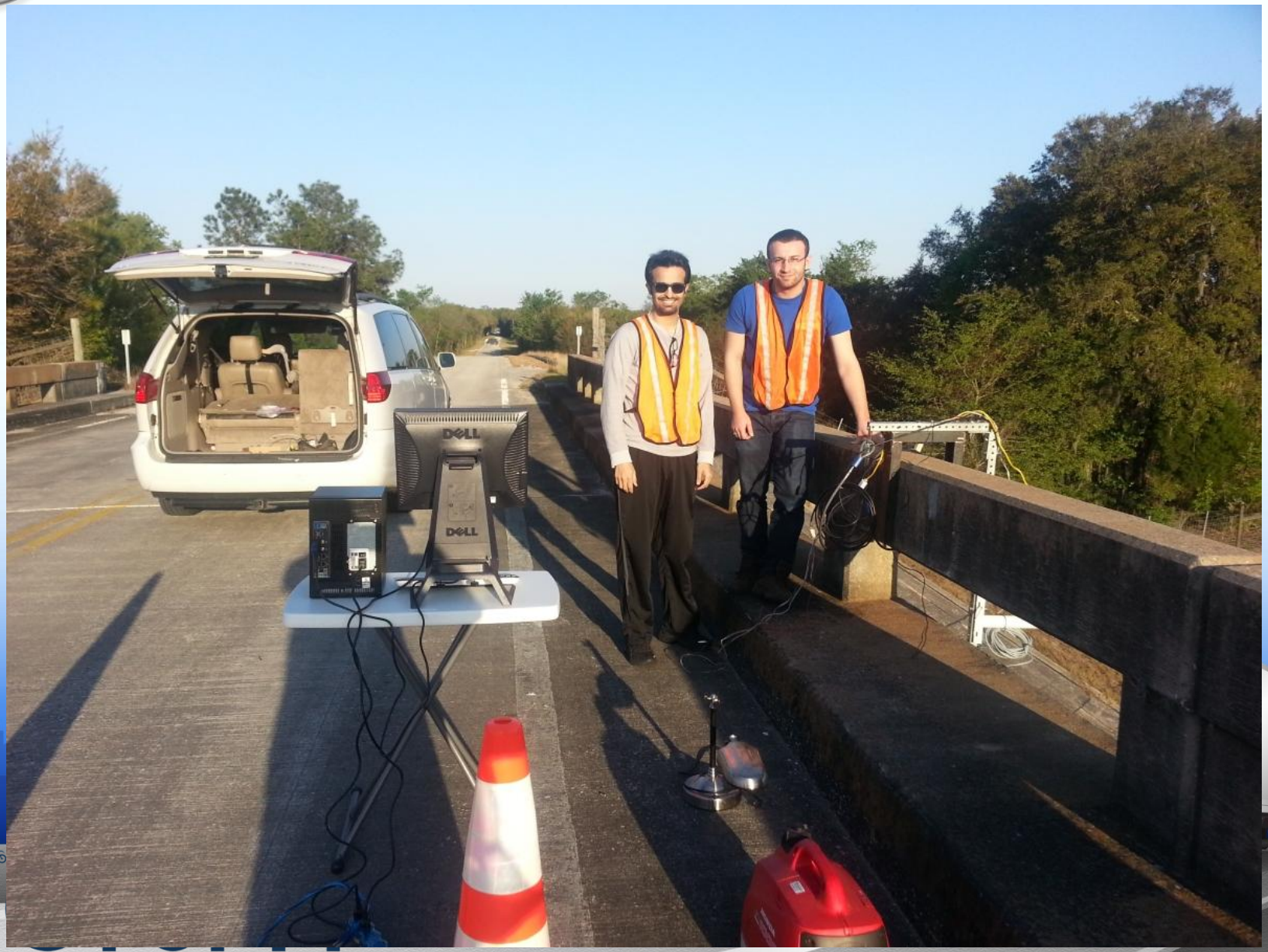
Installation



Installation



Installation

Field Test

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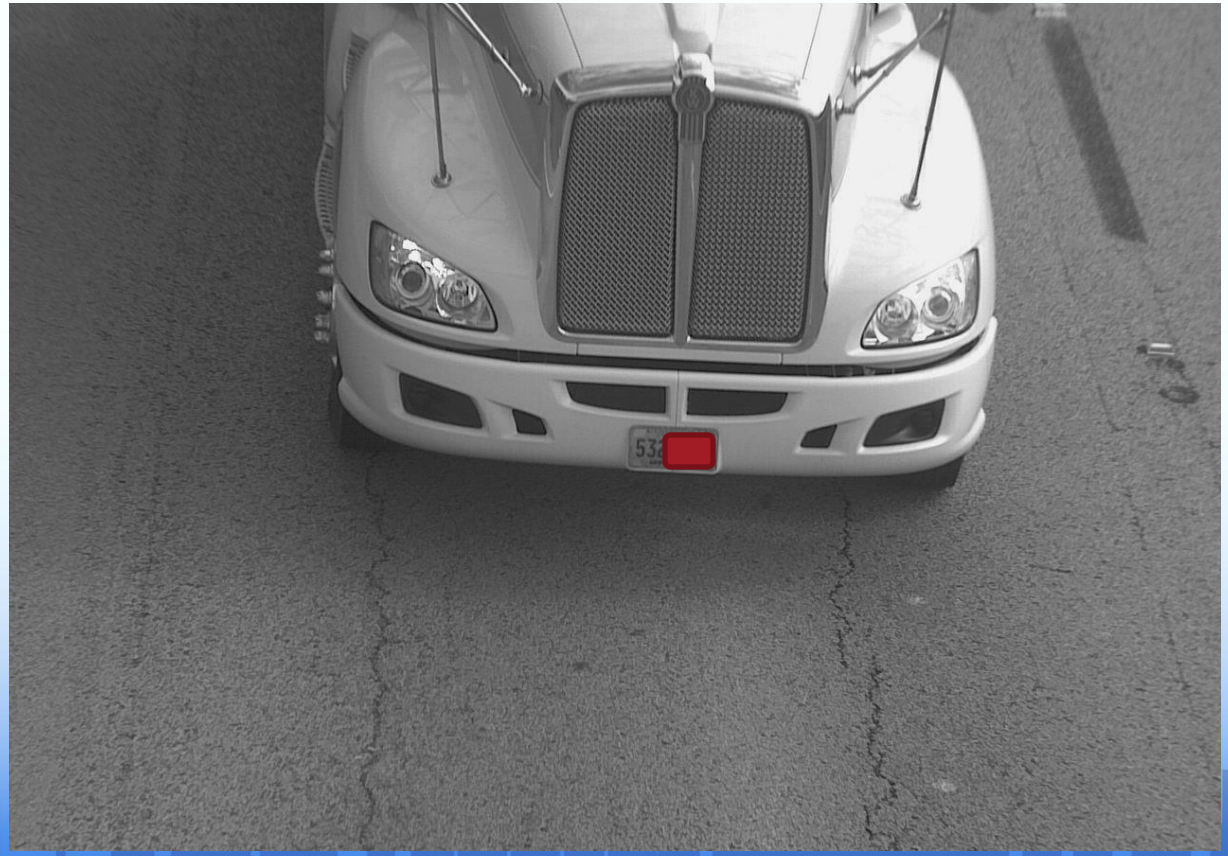
Field Test

Field Test

Sample Image – Latest Cameras

Truck Image



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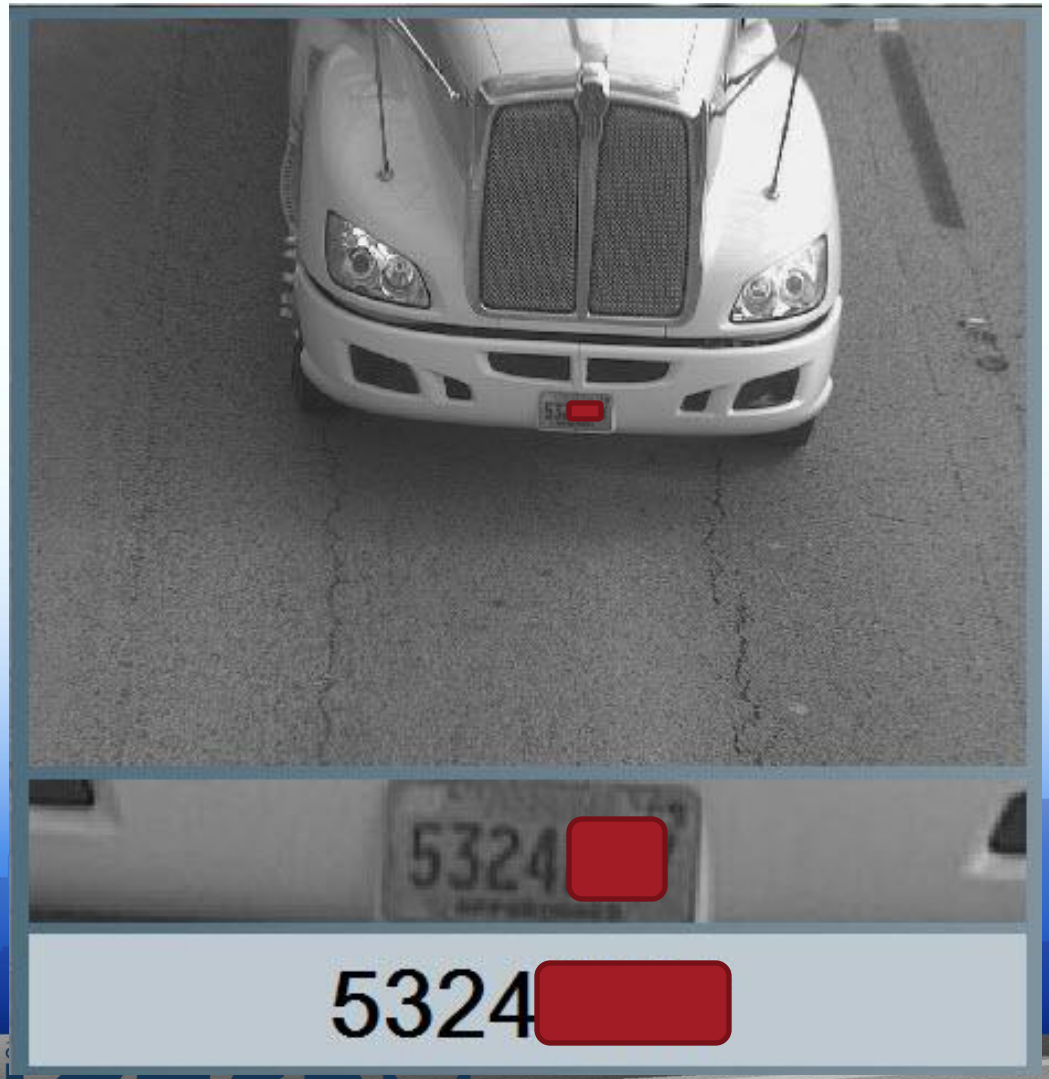
LPR OCR Output



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NIGHT READING

Night Reading

Solar Power

Acknowledgments

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ANY QUESTIONS ?

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