LADOTD Tolling System
Presented to Louisiana Transportation Conference

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Agenda

- Current LADOTD Toll Facilities
- Toll System Overview
  - Lane Subsystems
  - In Ground Technology
  - Above Ground Technology
- Moving Forward
Transactions Types for Calendar Year 2012

Crescent City Connection Bridge

AVI: 15.4 million (GeauxPass)

Cash: 12.7 million

Violations: 1.6 million
LA 1 Toll Facility
Transactions Types for Calendar Year 2012

LA 1

AVI: 600,000
Cash : 500,000*
Credit Cards: 40,000*
Violations: 100,000
Toll System Overview
Current In Lane Technology

- Automatic Vehicle Identification (AVI)
  - GeauxPass
- Automatic Vehicle Classification (AVC)
- Violation Enforcement System (VES)
- Automatic Toll Payment Machine (ATPM)
- Manual Lane Toll Terminals (MLTT)
Current Lane at Crescent City Connection
Lane Controller

- **Lane Controllers**
  - The computer and software that controls the operation of the lane hardware equipment, keeps track of vehicles in the lane and relays the information to the facility server.

- It also monitors information about the peripheral equipment within the lanes, such as loops, readers and VES components, and communicates any equipment messages (status or error conditions) to the facility servers.
Automatic Vehicle Identification

Reader control units

Controlled devices capable of initiating bidirectional communications with any compatible transponder
Automatic Vehicle Identification

- Antennas
Automatic Vehicle Identification

- Toll Tag/GeauxPass Transponder
Automatic Vehicle Classification

- Smart Loop Technology
  - Most Accurate and efficient way to detect and classify vehicles
Keys To Success for AVC

- Loop site needs to be chosen with care to avoid interference from external objects or signals
- Loops themselves need to be correctly installed and properly positioned
- Lead-in wires must be twisted at (five twists per foot) to cancel out the unwanted detection field between the loop detector
- Cutting depth of the loops is very important. If the axle loops are cut too deep they will not work correctly.
- Inductive loops typically use #14 wire with low AC and DC resistance. Most critical is the quality, thickness and type of wire insulation cross-link polyethylene insulation is strongly recommended
What Makes a Violation Enforcement System?

- Cameras
  - Illumination sources
- Hardware-Controller/Server
- Trigger for the Camera
- Software package
  - Optical Character recognition (OCR)
Recognizing and Identifying License Plates

- Distinctive features
  - Fonts
  - Syntax
  - Number of characters
    - Excluded characters
  - Flat plates
  - Embossed plates
  - License plates are retro reflective
Industry Accuracy Goals

- Automatic Vehicle Detection
  - Goal 99.95%
- Automatic Vehicle Identification
  - Goal 99.90%
- Image Capture Rate
  - Goal 99.50%
- Image Acceptance Rate
  - Goal 93.50%
- OCR Auto Pass Rates
  - Goal 60-65% with newer system
Moving Forward

LADOTD has established a Toll Council

- Increase system efficiencies
- Statewide Interoperability
- Regional Interoperability
- All Electronic Tolling Study at Crescent City Connection