

## **APPENDIX C-5**

### **Toll Collection Equipment**

## I. GENERAL

The toll collection equipment varies with the lane operating scenarios (i.e., Mixed Mode Manual and Highway Speed E-ZPass). Following is a list of equipment for various lane operating scenarios as identified for the modern toll barrier facility:

## II. ENTRY EQUIPMENT FOR MIXED MODE MANUAL (TICKET & E-ZPASS)

### Toll Booth Equipment:

- Entry Ticket Transport
- Card Reader
- Intercom
- Direct Dial Phone
- Touch Screen Terminal (color)
- Ergonomic TT Mount

### Canopy:

- Mark IV Lane Kit (IAG Antenna, RF Module, Adapter Cable)
- Antenna Mounting Bracket
- Antenna Tuning
- Antenna RF Interconnect Cable (CushCraft)
- 4 Canopy Mounted Flip Signs (4 x 10 w/ Bracing and Mounting)
- Canopy SS Sign Winch & Cable
- Overheight Vehicle Detector (IR Transmitter & Receiver)
- Flashing Yellow E-Z Pass Beacon
- Lane Use Signals (Red / Green Ball)
- Vehicle Separator (IR or Laser)

### Lane/Island:

- Mark IV Reader
- Mark IV Reader Cabinet
- OH Violation Alarm (Flasher & Horn – Mtd. on PFD)
- Patron Fare Display (PFD) with Pole
- Lane Equipment Cabinet
- ProMux

## III. EXIT EQUIPMENT FOR MIXED MODE (MANUAL/CASH & E-ZPASS)

### Toll Booth Equipment:

- Exit Ticket Transport
- Card Reader
- Intercom
- Direct Dial Phone
- Touch Screen Terminal (color)
- Ergonomic TT Mount
- Receipt Printer

### Canopy

- Mark IV Lane Kit (IAG Antenna, RF Module, Adapter Cable)
- Antenna Mounting Bracket
- Antenna Tuning

- Antenna RF Interconnect Cable (CushCraft)
- 9 Canopy Mounted Flip Signs (4 x 10 w/ Bracing and Mounting)
- Canopy SS Sign Winch & Cable
- Flashing Yellow E-ZPass Beacon
- Lane Use Signals (Red / Green Ball)
- Vehicle Separator & Profiler (IR or Laser)

Lane/Island

- VES Front Camera w/ Mount
- VES Rear Camera w/ Mount
- VES Light Fixture (Hubbell w/ 500W)
- Lane Equipment Cabinet
- Mark IV Reader (Lanes 1-6, Interconnected w/ Lanes 7-11)
- Mark IV Reader Cabinet
- Four (4) Contact Treadle (Pad & Frame)
- Exit Loop w/ Amplifier & Lead-in Cable
- Patron Fare Display (PFD) with Pole
- ProMux
- Violation Alarm (Flasher & Horn – Mtd. on PFD)

**IV. HIGHWAY SPEED E-ZPASS LANE EQUIPMENT – ENTRY HIGH SPEED LANES (2 LANES)**

Lane/Island

- Mark IV Lane Kit (Antenna, RF Module, Adapter Cable)
- Mark IV Guard Antenna Lane Kit
- Antenna Mounting Bracket
- Antenna Tuning
- Antenna RF Interconnect Cable (CushCraft)
- Flashing Yellow EZ Pass Beacon
- Lane Use Signals
- Overheight Vehicle Detector (IR Transmitter & Receiver)
- OH Blankout Overheight Sign Only (Gantry Separate)
- Warning Flasher (2/ OH Sign)
- PEEK Loop System (5 Loops / Lane, Amplifier and Installation)
- Lane Equipment Cabinet
- Gantry Mounted VMS Signs (4x10) w/ Bracing and Mounting
- Vehicle Separator (IR or Laser)
- ProMux

**V. HIGHWAY SPEED E-ZPASS LANE EQUIPMENT – EXIT HIGH SPEED LANES (2 LANES)**

Lane/Island

- Mark IV Lane Kit (IAG Antenna, RF Module, Adapter Cable)
- Mark IV Guard Antenna Lane Kit
- Antenna Mounting Bracket
- Antenna Tuning
- Antenna RF Interconnect Cable (CushCraft)
- Mark IV Reader Cabinet
- Flashing Yellow E-ZPass Beacon
- Lane Use Signals
- Warning Flasher (2/ OH Sign)

- PEEK Loop System (5 Loops / Lane, Amplifier and Installation)
- Lane Equipment Cabinet
- Gantry Mounted VMS Signs (4x10) w/ Bracing and Mounting
- Vehicle Separator (IR or Laser)
- Reader Interconnect Cable (bet. 2 Exit Readers)
- VES Front Camera (1 / Lane plus Shoulder w/ Mounting Bracket)
- VES Rear Camera (1 / Lane plus Shoulder w/ Mounting Bracket)
- VES Light Fixture (Hubbell w/ 500W Lamp)
- ProMux
- Mark IV Reader