



ADMINISTRATION AND REGULATORY AFFAIRS DEPARTMENT

Transportation Section Policy

Subject: Integrated Global Positioning Satellite (GPS)/Credit Card Payment System for Taxicabs in Houston

Policy No. VFH - 007

Effective Date: Upon Approval

1. AUTHORITY

- 1.1 Chapter 46, Houston Code of Ordinances

2. PURPOSE

- 2.1 The purpose of this policy is to establish guidelines for the installation, support and maintenance of equipment that delivers an integrated solution for the electronic collection of trip data, credit/debit card payment capability and an interactive passenger information monitor for taxicabs in the City of Houston.

3. POLICY STATEMENT

- 3.1 Taxicabs are often the visitor's first impression of Houston, and they play an important role in the city's ability to attract conventions and major events. To ensure a consistently customer-friendly trip experience, taxicab drivers must be able to smoothly navigate the 600+ square miles of city streets, as well as provide safe, secure credit card transactions. These features are essential to the City's regulatory goal of protecting public safety and providing exemplary customer service. This policy outlines the technology standards authorized by City Council for Global Positioning Satellite (GPS) and Credit Card Systems required by taxicabs to operate within Houston city limits.

4. PROCEDURES

- 4.1 This policy will be effective from the date of signature and expire upon date of any replacing or overriding Ordinance provision and/or new Director's Rule and Regulation.
- 4.2 This policy applies to taxicab companies permitted by the City of Houston.
- 4.3 Effective February 4, 2015, all taxicabs operating within the city limits must include an integrated solution containing the following technological features:
 - 4.3.1 Credit/Debit Card Acceptance:
 - 4.3.1.1 Security and confidentiality of credit/debit card information must be maintained throughout the solution.
 - 4.3.1.2 The solution must enable drivers to accept payments from the following major credit/debit cards: Visa, MasterCard, American Express and Discover Card.
 - 4.3.1.3 All credit/debit card transactions must be conducted through the solution to ensure the highest level of security. Handheld cell phone credit/debit card transactions are not allowed.
 - 4.3.1.4 Credit/debit card transactions must be fast and secure:
 - The solution should communicate wirelessly to get approvals for credit/debit cards.
 - Credit/debit card acceptance should be completed 10 seconds or less.
 - There must be a reasonably high success rate of completing a card-based transaction.

Approved:

Date Approved:

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- The solution shall not allow for exposure of credit/debit card numbers; e.g. receipts detailing card numbers.
- 4.3.1.5 The solution must support adjustments (edits) and voids before transactions are settled.
- 4.3.1.6 A receipt must be printed by the taxi meter or solution for every credit/debit card transaction.
- 4.3.2 **Payment Processing and Settlement:**
- 4.3.2.1 The solution must include a credit/debit card payment processing system with competitive credit/debit card processing rates.
- 4.3.2.2 Although taxicab owners or fleet owners will typically be the merchant of record, individual drivers shall also be permitted to act as merchant of record, where necessary.
- 4.3.2.3 Payment processing and settlement must be conducted in a timely manner.
- 4.3.2.4 Merchants are required to obtain reports for shift change reconciliation, daily reconciliation, transaction details and historical views of payments. Access should be secure, simple and in-keeping with changing technology standards.
- 4.3.2.5 An end-shift report detailing credit/debit card transactions successfully processed through the solution must be available to the driver.
- 4.3.2.6 Each credit/debit card transaction must be identified by license number, trip number, date, and time and must include the total fare including tolls and surcharges.
- 4.3.3 **Payment Card Industry (PCI) Security Standards:** The solution must be compliant with all relevant PCI security standards and provide proof of such certification.
- 4.3.4 **Driver Authentication:** The solution must include a process for driver authentication where the solution can only be fully activated upon driver authentication.
- 4.3.5 **Ease of Use:** The solution must be simple to use, including, but not limited to, easy legible fonts, key sizes, receipts, messaging and equipment markings.
- 4.3.6 **Taximeter:** Solutions which necessitate the installation of a new taximeter are acceptable, although not required. Either configuration-compatible with currently installed equipment or new installation—is allowed as long as the taximeter is fully compliant with all City of Houston rules and standards.
- 4.3.7 **Privacy and Security Risks:** The solution must ensure privacy and reduce security risks while minimizing fraud.
- 4.3.8 **GPS System Requirements – Vehicle Location and Data Collection Services:**
- 4.3.4.1 The solution must include GPS location-based technology that provides vehicle position and route determination, trip data tracking, collection and reporting. Data must be made available to both the taxicab operator and the regulator. Location data will be input into an interactive passenger trip map (mentioned above).
- 4.3.4.2 The solution must be able to capture trip data and transmit the data to a database hosting facility. Data must be transferred in a secure fashion to ensure data integrity.
- 4.3.4.3 Automating the trip-sheet should be simple and require minimal manual input and interaction from the driver.
- 4.3.4.4 The solution provider must be able to host, maintain and store data in a secure environment.
- 4.3.4.5 The solution must compensate for momentary signal blockage or distortion.
- 4.3.4.6 Data should be accessible within reasonable time frames.
- 4.3.4.7 All data fields populated by the solution must be searchable.
- 4.3.4.8 The solution provider will be required to work with the City to develop a data structure/format. At a minimum, the following data elements must be captured and stored:
- Date, time and location (street address and latitude/longitude) of passenger pick-up and drop-off

- Trip duration measured in time and miles
- Trip number
- Itemized fare (tolls, surcharges, and tip amount for card payments)
- Payment method
- Amount due driver
- Credit/debit card transaction status (approved, declined, etc.)
- Total number of passengers
- Car and driver identifier

4.3.9 **Wireless telecom services:** Wireless communication is necessary to process electronic payments in a mobile environment. Wireless service plays a major role in collecting and transmitting trip data. Coverage and connection to wireless networks is vital to the success of the transactions. Therefore, solution reliability is critical. In selecting a solution, the operator should ensure that the solution provider guarantees uptime and provides a solution for dead zone and network outages.

4.3.10 **Maintenance and Trouble Reporting:**

4.3.6.1 In selecting a solution, the operator should ensure that the solution provider has the means to repair or replace equipment quickly. Maintaining an adequate supply of spare equipment for “hot swaps” is encouraged. The device and application uptime percentage should be at least 99.6%.

4.3.6.2 The targeted network uptime percentage is at least 99.6%. Back end systems must be designed with reliability in mind. As system problems may occur, it is necessary for the solution provider to accurately determine the source of the problem and rapidly repair the failure. Sufficient network diagnostic information must be available so that problems can be resolved remotely.

4.3.11 **Customer Service:** In selecting a solution, the operator must ensure the solution provider is able to operate Help Desk services for equipment seven days per week, twenty-four hours per day. Help Desk services must be available to City Staff and the taxicab industry, including fleet operators, dispatchers and drivers.

4.3.12 **Training and Ongoing Support:** The solution operator must provide ongoing training for drivers to accommodate technology refreshment and staff turnover.

4.3.13 **System Upgrade:** The solution operator must ensure technology is upgraded as recommended by the solution manufacturer or provider.

4.3.14 **Back-Up Plan and Disaster Recover:** The solution operator must ensure business continuity and must maintain a plan that identifies procedures relating to an emergency or significant business disruption.

4.4 **Effective January 1, 2016, all taxicabs operating in the City of Houston must include a Passenger Information Monitor (PIM) containing the following technological features in addition to the requirements listed above in 4.3:**

4.4.1 **System Requirements:**

4.4.1.1 The PIM must be the primary device used to complete the electronic payment process and provide for quick, easy and secure credit/debit card acceptance.

4.4.1.2 The transaction process must not require driver intervention, but may provide for driver assistance to the passenger. The passenger must maintain control of the credit card throughout the entire process.

4.4.1.3 The PIM must include a touch screen enabling:

- Passenger to enter and retrieve desired information
- Displays of public service announcements (PSA), operator information, and an interactive route map

- Messaging capabilities which allow the City to communicate with taxicab drivers on a real-time basis

4.4.1.4 The PIM must be installed in the rear passenger compartment of the taxicab. The PIM should not be removable.

4.4.2 Display Requirements:

4.4.2.1 The PIM must display an interactive map, where the current start point (meter engaged), ongoing route and end point (meter disengaged) are clearly indicated to the passenger. The goal is to provide passengers with a real-time visual representation of their ride.

4.4.2.2 The PIM must be capable of displaying PSAs such as fare information and the passenger's bill of rights.

4.4.2.3 At the end of every fare, the PIM must display the summary of charges for the trip regardless of the passenger's method of payment. The summary of charges shall consist of an itemized list including total fare, surcharges, tolls and tip amount. The tip shall only be displayed for credit/debit payments. For cash transactions, the PIM must display an itemized list of charges, but no further action shall be required for the passenger or driver to complete cash transactions.

4.4.2.4 The PIM must be capable of displaying multiple languages including English and Spanish.

4.4.3 Hardware Specifications:

4.4.3.1 The PIM screen must be durable with vandal-proof features.

4.4.3.2 The PIM screen must be designed to protect passengers in the case of a collision or sudden stop, including, but not limited to, smooth rubberized or similar style coating to prevent injury from contact with the device.

4.4.3.3 The PIM must be designed in a way to withstand continuous operation and be weather and spill resistant.

4.4.3.4 The PIM must have the ability to mute all audio at the passenger's discretion.

4.4.3.5 The PIM must have a dimming mechanism, removing all visual stimuli, at the passenger's discretion.

4.4.3.6 After a fare is completed, the PIM must automatically return to its default audio and brightness levels. However, when no passengers are present, i.e. no active fare, the driver should have the ability to control the volume of the PIM.

4.4.3.7 The PIM should reset to the default audio and brightness levels at the start of a new fare, upon engagement of the meter.

4.4.3.8 The PIM software and technology must be adaptable to accommodate system updates and technological advancements as needed.