



Tobias Marx
Parking Director

TO: Eileen Donoghue, City Manager *EMD*
FROM: Tobias Marx, Parking Director
DATE: April 03, 2019
RE: Council Motion of 4/02/2019 by Councilor Noun
Request City Manager. Direct The Parking Department Instruct Their Staff To Check Pay Stations During Daily Routes And Report Any Malfunctioning Meters Each Day.

The City of Lowell Parking Department operates as an Enterprise Fund to generate revenue from on and off-street parking operations.

In 2006 the City of Lowell transitioned the on-street metered parking spaces from individual meters to multi space parking meters (Pay Stations) that are placed in strategic and convenient locations, and that offer multiple payment options including coins, bills and credit cards. The on-street parking system currently includes app. 1700 metered spaces. Customers use one of 175 deployed Pay Stations to pay by credit card, bill or coin. Additionally, more and more customers use the Passport Mobile App to pay for their parking time from their mobile phone. All but two pay stations deployed are solar powered and communicate via a 3G data connection.

In the fall of 2018, the parking department conducted an internal audit to analyze the operation and revenue potential of the entire on-street parking system and to evaluate individual pay station performance. To get a better handle on uprate and functionality of individual machines, a daily AM and PM tracking system was implemented that informs the Parking Department and the Meter Technician of issues and pay station errors in the morning and in the afternoon.

We identified that battery lifecycles, connectivity, and basic cleaning protocols, were the number one reason for machines to fail or to show error messages. Additionally, long lead times and expensive replacement parts were preventing quick responses to error messages and machine failures. We identified a 65% up-rate of pay stations across the on-street system which translated to 65 of 186 machines being down or showing daily issues while only 120 were fully operational.

In an effort to increase the uprate of our pay stations the parking department started a new maintenance protocol in the fall of 2018. This new protocol included very strategic actions:

- We started by removing 12 fully functional pay stations from very low revenue areas and used them to replace older and/or broken pay stations while ensuring that we still had enough pay stations in each area as to not limit the convenience for our customers.



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- We found a new source for replacement batteries that offered similar or better quality batteries for less cost, ordered additional batteries and chargers to create a battery charging station that ensures a backup of fully charged replacement batteries at all times.
- We implemented a new maintenance protocol for all pay stations and now perform a basic maintenance protocol on each machine every 12 weeks.
- We changed the call-in times from pay stations from every 4 hours to every 2 hours to get a more frequent picture of the systems performance.
- In April we are moving the Pay Station Repair Shop to the Early Garage to have it more centrally located and allow for a faster response time.

Within just a few weeks we were able to increase the uprate to 88% and are now operating at an average of 87%. This means, on daily basis we now have 156 out of 176 fully functional machines on the streets.

Maintaining Pay Stations is a top priority for the Parking Department and is a multi-facet team approach. We utilize the Meter Technician to respond to error messages during the day. The technician usually responds to error reports within 30 minutes, and in most cases is able to restore pay station functionality within minutes.

Awareness of pay station errors is a team effort. The technician relies on our Enforcement Officers who check pay stations periodically on their routes and often get reports from customers of malfunctioning pay stations. When an officer observes or has been made aware of a malfunctioning pay station, he or she sends out an email or text message to the technician with the name and location of that pay station. The Parking Director and the Parking Business Manager are copied on these emails to ensure follow up.

In an effort to improve our error reporting system we are working with the city of Lowell's MIS Department to implement a new Work Order System that can be used to report malfunctioning pay stations. Once up and running, Enforcement Officer will have an app on their mobile phone that enables them to report any error they observe. We hope this will enable us to further improve our on-street parking system and ensure we have fully functional pay stations.

The hardware for our on-street parking system is aging and as with every mechanical machine, errors and failures will happen. A pro-active preventative maintenance protocol with a sufficient replacement part inventory will ensure that our pay stations are functioning properly for more years to come.