

License Plate Recognition Technology

DPW Parking Services is proposing to utilize License Plate Recognition (LPR) technology to automate the entry of license plate numbers into our parking compliance software. This LPR technology does NOT identify the owner of the vehicle in the field nor does it record the location of vehicle unless they are in violation and receive a ticket. This technology is not capable of identifying or tracking the movement of the general public.

The following are not Benefits of LPR per se, but rather benefits that stem from a digital permitting approach which works best when LPR is utilized.

Benefits

Improved Customer Experience

LPR is a key component in the infrastructure that uses license plate numbers as “digital parking credentials.” Like other digital technologies, using plate numbers as a parking credential allows the customer to have one credential that accesses multiple products. This means that someone with a Residential Parking Permit and a monthly garage permit will not only not have two physical permits to keep track of, they will have none (ie. there will no longer be hangtags, QR codes, prox cards, validations, etc).

We have already migrated the Residential Parking Program (RPP) to digital and are now no longer requiring customers to affix a large, ugly green sticker to their car, a clear customer benefit for customers concerned with the appearance of their vehicles. We hope to allow residents to renew their permits online and avoid annual trips to DPW to pick up a “renewal” sticker.

More Flexible Products

The digital also platform allows us to us to provide more flexible and creative parking products to meet the needs of our community and visitors. As with all things digital, we can easily create a wide array of products with little to no overhead costs. For example, we would like to implement a “punch card” type of permit for the Downtown Garage. For folks who work a hybrid schedule and only commute to the office 2 or 3 times per week, LPR would be able to seamlessly remove one day from their pre-purchased bank. This product has been requested by multiple companies who currently park in the garage. Additionally, the City has eliminated parking minimums for new developments in City zoning. With these new technologies, the City could offer new parking products to users with “light car” use who are single car families or utilize car share programs, charging for parking only when it is needed to help advance the City’s other environmental and housing goals.

Improved Focus on Safety

Currently, in controlled parking areas like RPP, meters, lots, etc., Parking Services Agents (PSAs) manually type-in each license plate to determine if a car is properly credentialed. This manual data entry process is time consuming in RPP zones and lots/garages in particular. The time spent on data entry could be better utilized patrolling for safety violations like here-to-corner and fire hydrants. Fundamentally, as a PSA drives down a street headed to check a hydrant they would be concurrently, automatically checking credentials. This both improves the efficiency of the work but allow shift the focus (and hopefully culture) of the PSA onto promoting safety.

Additionally, LPR would afford us additional safety measures for our PSAs. During the night hours when the safety and security of our agents could be compromised, they will always be in or very close to their vehicles. In inclement weather, PSAs will be in or near their vehicles for most of their shift, saving from multiple breaks or less efficient work practices.

Privacy is Protected

If a car is properly credentialed and/or parked legally, NO DATA IS COLLECTED. The plate number is merely compared to the database of license plates that are valid. If a car is not properly credentialed, a ticket is issued to the car but the identity of the owner IS NOT KNOWN to the PSA. The identity of the owner of the vehicle is only obtained if a ticket is not paid within 30 days. That time, Parking Services Coordinators access the DMV database, acquire the owners name and address and mail a late fee notice. The process of accessing DMV data is regulated by FBI policy and requires CJIS certification (Criminal Justice Information System). Protecting the connection of plate numbers to a names (via DMV) is taken very, very seriously by the Parking Services Team.

Fraud Control

Use of a validations and other special products has been a demonstrated source of fraud in the PARCS system. Customers have, in the past, “discovered” loop holes in parking management software that allowed for anonymous misuse of products. For example permits intended for guests used for employees. Now, in these cases, we can audit the system to ensure appropriate usage. If fraud is discovered, because we have the vehicles plate number, the perpetrator of the fraud is no longer anonymous and we have the opportunity potentially recoup unpaid parking fees. This is clearly a sensitive area and the decision to pursue compensation would certainly be on a case-by-case basis.

We also see fraud with permits when one permit has multiple plates associated with it. Only one “plate” is allowed in the garage at one time. LPR will be able to recognize if more than one plate on the same permit is in the garage at the same time. Since only one vehicle is allowed at a time, the second would receive a ticket, adding to the revenue collected for the general fund.

Garage Inventory Control

Whereas the PSA’s would use mobile cameras mounted to enforce ordinance on the streets, a separate fixed LPR can be used in the garages to assist with inventory control and capacity assessment. A fixed LPR in the garage would be different than the mobile system in that it WOULD record the plate number upon entry and exit. This would give us real-time occupancy PLUS additional data resolution that helps us understand utility. This tracking would NOT be connected to the ticket writing software, but can be used to identify who is in the garage and when. This is a function that we have traditionally used with the PARCS system. For example, we have group customers that request reports detailing who is using their permits and when. This allows the group to better manage for whom they are paying for parking. Another example would be for our Hotel Partners that use the garages for both guests and employees. They would be interested in adding services for their guests, such as hotel shuttles, that could utilize this information.

Regulatory Context

In discussions with the City Attorney, DPW understands the cleanest path to implementing LPR technology is to change Vermont Statue 23V.S.A. § 1607 to explicitly provide the ability for non-law enforcement agencies to use LPR technology. We are aware that the University of Vermont and the City of St Albans

are using this technology in their parking enforcement departments. However, the City Attorney’s Office has advised us that we aren’t able to use LPR because we aren’t law enforcement agents. DPW would use the LPR technology differently than law enforcement. While we would send data to the Vermont Justice Information Sharing System as required, we plan to keep all data internal to DPW Parking Services, for use with ticketing only, and not share this information with the Police Department. We are a completely separate department from the Burlington Police Department and have a different computer network / operating system. To ensure a clear path forward, we recommend adding language to this statute providing the ability for non-law enforcement agencies to use the LPR technology for internal use only.

Cost

We have received an unofficial quote of \$41,000 upfront costs, and an additional \$14,000/year charge. However, it is expected that the lifetime costs will be more than covered by operational efficiencies.

| | Upfront Cost | Yearly Charge | Cost of total revenue FY2023 | Estimated Increase in Revenue |
|----------------------------------|--------------|---------------|------------------------------|-------------------------------|
| Year 1 | \$ 41,000.00 | | 2.83% | \$ 31,445.11 |
| Year 2 | | \$ 14,000.00 | 0.97% | \$ 58,445.11 |
| Year 3 | | \$ 14,000.00 | 0.97% | \$ 58,445.11 |
| Year 4 | | \$ 14,000.00 | 0.97% | \$ 58,445.11 |
| Year 5 | | \$ 14,000.00 | 0.97% | \$ 58,445.11 |
| 5 Year Total | | \$97,000.00 | | \$ 265,225.56 |
| Total Net Benefit | | | | \$ 168,225.56 |
| Net Average Per Year for 5 years | | | | \$ 33,645.11 |

Estimated 5% increase revenue per year. We believe this is conservative and believe the total increase will exceed 5%. Numbers based on FY23 Revenues on ticket = \$1,448,902.25