

## Fast Facts: Benefits of 3M™ License Plate Design Services

We all want license plates that look great and are readable. But it's also increasingly important that our plates are readable by infrared (IR) cameras being used by law enforcement and tolling agencies. Our team of full-time professional designers can help create beautiful license plates that are optimized to be visible by both human drivers and machine vision.

### Who cares?

- Department of Public Safety/Motor Vehicles
- General motorists/taxpayers
- Law enforcement
- Toll agency/turnpike authority
- Department of Revenue/Treasury
- Department of Tourism and special interest groups

### What are the benefits?

- Complete design services to help you create great looking, one-of-a-kind license plates
- Electronic proofs of design concepts
- Physical samples for approval
- Onsite design training for new digital printer installation and testing
- Production artwork for 3M produced graphics—long run graphic and multiple short run graphic types—and customer owned digital printers
- Expertise in multiple printing technologies, including rotogravure, thermal transfer/digital and Inkjet digital

### Why should you care?

- **Aesthetics:** In-house design experts to help you produce beautiful license plates—including specialty plates—that'll make your state proud.
- **Readability:** Designs optimized to be read by humans, machine vision systems and infrared cameras used in automated license plate readers (ALPR).
- **Security:** Customized authenticity features to strengthen the security of your plates.

Over  
**2,000**  
different styles  
of specialty plates  
available in the U.S.



Visible  
spectrum  
proof



Image of  
infrared  
spectrum  
plate at  
~850nm



Image of plate  
designed for  
maximum IR  
readability  
~850nm

## Fast Facts: Benefits of a Direct Fulfillment System

Are you dealing with long lines and customer wait times in your DMV? Accelerate your operations with a 3M™ Direct Fulfillment System. Our Direct Fulfillment System is made up of a suite of products and services that give you the ability to deliver license plates and registration forms directly to motorists—reducing foot traffic and inventory in your branch offices.

### Who cares?

- Department of Public Safety/ Motor Vehicles
- General motorists/taxpayers
- Department of Revenue/Treasury
- Plate manufacturers

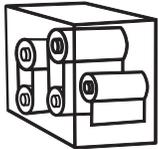
### What are the benefits?

- Reduced branch office foot traffic and wait times
- Reduced inventory of plates, stickers and forms
- Increased efficiency with an all-digital process
- Access to 3M's in-house design team
- Keep existing plate manufacturing partner
- Data visibility throughout production and distribution
- Reduced delivery time for personalized/specialty plates

### Why should you care?

- **Efficiency:** Increase the efficiency of your operations while reducing costs.
- **Customer satisfaction:** Motorists get their license plates and registration delivered right to their homes—no need to visit a branch office.
- **Flexible and customizable:** Get a complete direct fulfillment system or a hybrid model using a combination of direct fulfillment and branch office fulfillment.

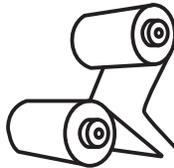
## What's in a DFS?



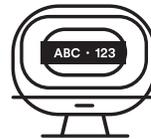
Digital Printing: 3M™  
Precision Plate System or  
3M™ Digital License Plate Printer



Plate Builder  
Software



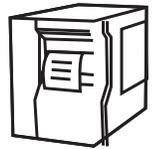
License Plate &  
Validation Sheeting  
and other Consumables



3M Design  
Services



Inventory  
Management System



Digital Validation  
Registration System

## Fast Facts: License Plate Reissues

License plates provide important services for society. They help law enforcement and others identify vehicles. They provide reflective elements on vehicles, which make them more visible at night. They can be a symbol of state identity and pride. They are also an important source of revenue and help ensure registration compliance. Periodic license plate reissues ensure optimal appearance and performance that benefit each of these services.

### Who cares?

- General motorists/tax payers
- Law enforcement
- Toll agency/Turnpike authority
- Department of Revenue/Treasury
- Department of Tourism
- Department of Public Safety/  
Motor Vehicles

### Lost Reflectivity

On average, plates  
**lose 50%**  
of their original reflectivity  
between 5–10 years in service

Source: Internal 3M studies—124 original stored plates,  
102 plates in service

[3M.com/vehicleregistration](http://3M.com/vehicleregistration)

### What are the benefits?

- New license plates are more visible and have higher reflectivity
- Increased vehicle registration compliance
- Assist law enforcement in identifying vehicles
- Improved camera readability for tolls & parking
- Helps prevent vehicle insurance avoidance
- Enhanced plate appearance helps promote state

### Lost Revenue

Studies have found approximately **4%** of vehicles have non-compliant registration, which results in over **\$1.5 billion** of lost revenue in the U.S.

Source: Studies by Oklahoma City University (2015), Arizona State University (2012), and University of Nevada-Las Vegas (2015)

Estimating 10.8M non-compliant vehicles and average registration of \$145 (NCSL, National Conference of State Legislatures - Vehicle Registration Fees 2017; and "Total Cost of Owning a Car" - Nerdwallet.com, Aug. 2017

### Why should you care?

- **Safer roads:** improved visibility in low light helps motorists identify stalled or crashed vehicles
- **Revenue:** increased state funding through higher vehicle registration compliance and improved tollway and parking enforcement
- **Law enforcement:** low-cost tool to help identify vehicles and crime suspects

**\$1.5**  
billion 

Nearly **270 million** vehicles  
registered in the U.S.



Source: FHWA—State Motor Vehicle Registration 2016–November 2017



# Fast Facts: Benefits of Two License Plates

Since first appearing on American cars in 1901, the license plate has been displayed on both the front and rear of vehicles in a large majority of states. Their importance to public safety, revenue and criminal apprehension remains as strong as ever. Here are some quick facts on the difference the front plate makes.

## Who cares?

- General motorists/tax payers
- Law enforcement/border patrol
- Toll agency/turnpike authority
- Dept. of Revenue/Treasury
- Dept. of Public Safety/Motor Vehicles
- Retail/gas station owners/associations
- Organizations against impaired driving
- Rideshare customers

## Revenue Generation

# 270,000,000

Registered vehicles in 50 states

Source: U.S. Department of Transportation, Bureau of Transportation Statistics – [www.bts.gov](http://www.bts.gov)

For more information, visit: [Frontplate.org](http://Frontplate.org)

## What are the benefits?

- Vehicle identification
- Reflectivity at night
- Enforcing tolls and parking
- Enforcing vehicle registration
- Crime apprehension
- Amber alerts
- National security – border control



Today, **19 states** have only one plate. Other states have proposed removing the front plate to show cuts in their transportation budgets. In reality, removing the front plate removes the means to collect a significant portion of tollway and parking revenue.

## Why should you care?

- **Safety:** plates help identify stalled or crashed vehicles with no lights at night
- **Law Enforcement:** low-cost tool to help identify crime suspects, such as impaired driving, gas station drive-offs, & stolen vehicles
- **Lost Revenue:** vehicle registration, toll enforcement, and parking fees are negatively impacted in states that only require rear plates

## Criminal apprehension works better with two plates



# 70%

of all serious crimes involve a motor vehicle in the United States. This includes kidnapping, violent crime, major theft, drug smuggling and much more.

Source: International Association of Chiefs of Police – [www.theiacp.org](http://www.theiacp.org)

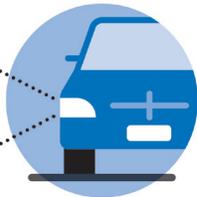
## Fast Facts: High Definition License Plate Sheeting

3M™ High Definition License Plate Sheeting is brighter and easier to read, especially at night. It's whiter, allowing for more vibrant graphics. It features higher reflectivity, any time of day. And it offers enhanced 3M™ Dynamic Security Script (DSS) embedded during production to help prevent counterfeit plates.\*

### Who cares?

- General motorists/citizens
- Law enforcement
- Dept. of Public Safety/Motor Vehicles
- Dept. of Revenue/Treasury
- Toll agency/Turnpike authority
- Dept. of Tourism and special interest groups

### The case for great plates



**Visible safety**

Better visibility means better road safety.

### What are the benefits?

- Brighter and whiter sheeting
- Improved visibility
- Integrated DSS and customized security marks
- Vehicle identification, crime apprehension
- Crisp, vibrant graphics.  
License plates are mini billboards

3M Beaded License Plate



3M High Definition License Plate



**More than 2X brighter**  
than 3M™ Beaded License Plate Sheeting\*

\*All comparisons made are to 3M Beaded License Plate Sheeting.

### Why should you care?

- **Safer roads:** improved visibility in low light helps motorists identify stalled or crashed vehicles
- **Law enforcement:** brighter & whiter sheeting is more legible than traditional plates and allows for identification at greater distances
- **More secure credential:** embedded security features helps deter counterfeiting and assures authenticity



Just like a driver's license or passport, secured license plates connect vehicles to owner's identities. This helps protect public safety as well as the revenue that could be lost to counterfeiting.

[3M.com/vehicleregistration](https://www.3m.com/vehicleregistration)

# 3M™ High Definition License Plate Sheeting and 3M™ Beaded License Plate Sheeting Comparison

	3M High Definition License Plate	3M Beaded License Plate
Day		
Night		
Reflectivity	>150 od/lx/m2	~45-70 od/lx/m2
Whiteness	Cap Y >55	Cap Y ~40-50
Security	Embedded during production	Directional/laser—added post production
Construction	Prismatic sheeting*	Glass beads with an aluminum layer
Plate Manufacturing	Requires adjustments to the manufacturing process (3M will assist with conversion)	Uses existing processes
Printing	Compatible with roll coat or digital printing methods. Extends printhead life by 4X vs. beaded (when using 3M's DLP printer)	Compatible with roll coat or digital printing methods

\*3M High Definition License Plate Sheeting has a fabrication line characteristic that's invisible at normal road distances and does not affect its performance.