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—including rotogravure, thermal transfer/digital and Inkjet digital 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.
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

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

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

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

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)


Lost Revenue

$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

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

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

Revenue Generation

270,000,000
Registered vehicles in 50 states


For more information, visit: Frontplate.org

Criminal apprehension works better with two plates

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.

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
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

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

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

The case for great plates

Visible safety
Better visibility means better road safety.

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

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

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

<table>
<thead>
<tr>
<th></th>
<th>3M High Definition License Plate</th>
<th>3M Beaded License Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day</strong></td>
<td>![Image](ABC 123.png)</td>
<td>![Image](ABC 123.png)</td>
</tr>
<tr>
<td><strong>Night</strong></td>
<td>![Image](ABC 123.png)</td>
<td>![Image](ABC 123.png)</td>
</tr>
<tr>
<td><strong>Reflectivity</strong></td>
<td>&gt;150 od/lx/m²</td>
<td>~45-70 od/lx/m²</td>
</tr>
<tr>
<td><strong>Whiteness</strong></td>
<td>Cap Y &gt;55</td>
<td>Cap Y ~40-50</td>
</tr>
<tr>
<td><strong>Security</strong></td>
<td>Embedded during production</td>
<td>Directional/laser—added post production</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Prismatic sheeting*</td>
<td>Glass beads with an aluminum layer</td>
</tr>
<tr>
<td><strong>Plate Manufacturing</strong></td>
<td>Requires adjustments to the manufacturing process (3M will assist with conversion)</td>
<td>Uses existing processes</td>
</tr>
<tr>
<td><strong>Printing</strong></td>
<td>Compatible with roll coat or digital printing methods. Extends printhead life by 4X vs. beaded (when using 3M’s DLP printer)</td>
<td>Compatible with roll coat or digital printing methods</td>
</tr>
</tbody>
</table>

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