

# MAINE STATE LEGISLATURE

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# License Plates



## Department of the Secretary of State

### Proposal for a New License Plate General Issue

To the  
Joint Standing Committee  
on Transportation

February 2023



# Bureau of Motor Vehicles

Contents

1.0 Introduction and Background.....Page 3

2.0 Overview of a General New Plate Issue.....Page 6

3.0 Plates to be Replaced.....Page 7

4.0 Manufacturing and Distribution.....Page 9

5.0 Additional Challenges.....Page 10

6.0 Costs and Funding Considerations.....Page 11

7.0 Public Communication.....Page 14

8.0 Project Timeline.....Page 15

Appendix A Proposed Plate Design.....Page 16

Appendix B Proposed Legislation.....Page 19

Appendix C Costs Details.....Page 22

Appendix D Tour of the Plate Manufacturing Process.....Page 24

## 1.0 Introduction and Background

License plates serve the purpose of identifying motor vehicles and demonstrating compliance with vehicle registration laws. This compliance includes the payment of registration fees that are revenue to the Highway Fund and payment of excise taxes to a municipality, and ensures the vehicle is insured. A vehicle must also be registered before it can be inspected, which supports safety on our roadways.

The ability of police officers, tolling authorities, and citizens to quickly and easily identify license plates is fundamental to accurate identification of vehicles and owners. Accurate plate identification supports law enforcement efforts, highway safety, and may increase certain revenue collection such as tolls and parking fees.

Many states reissue license plates on a regular basis, usually every 5-10 years. The American Association of Motor Vehicles (AAMVA) has developed license plate standards which include replacement of plates at least every 10 years to ensure the plates are maintained in proper legible condition. Changing a plate design will also improve compliance and may result in increased registration revenue as it will be obvious that a vehicle has not been re-registered if the plate has not been replaced with the new design.

The last Maine general license plate issuance was in 1999 with the chickadee design; 24 years ago. This has resulted in plates which have significantly deteriorated, many beyond identification. Many plates cannot be read accurately creating safety and compliance concerns. Law enforcement may not be as effective as many crimes are prevented or solved through the identification of license plates. Automated toll collection will also be reduced when plates cannot be read. Additionally, vehicle visibility at night and in adverse weather conditions are reduced when the plates lose their retroreflectivity.

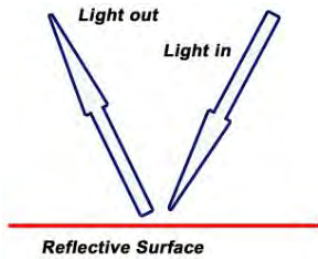
### 1.1 Retroreflective Sheeting

A license plate consists of a base layer of aluminum with a layer of sheeting over it. This bright reflective sheeting contains glass beads to provide the retroreflective layer that makes the plates more visible at night and in adverse weather.

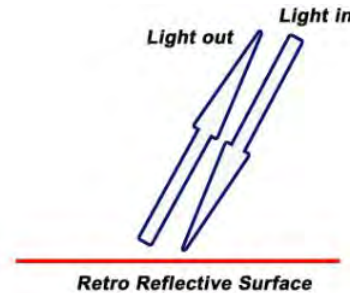
When a source of light hits the retroreflective sheeting, it becomes visible. For example, on a dark night, or in fog, rain, or snow, a driver can see the license plate on a vehicle in front of them which can help to increase visibility and to gauge distance between vehicles. The retroreflectivity will also help a driver see if a vehicle is parked on the side of the road at night without any lights on, which can be a safety hazard. License plates can also be read by law enforcement when their vehicle headlights illuminate the license plate. This can be especially helpful when trying to locate a vehicle involved in a crime. The retroreflectivity is an important component of the license plate. However, plates commonly lose the retroreflectivity over time.

The illustration below demonstrates the difference between reflective and retroreflective and the life span of retroreflective sheeting.

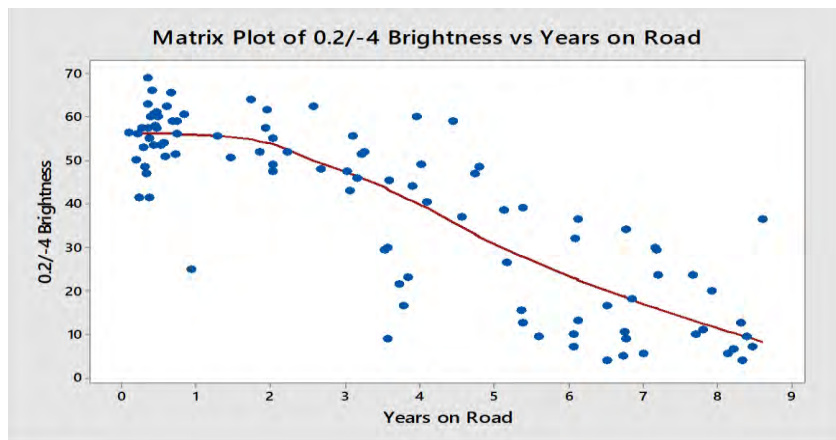
**A Mirror is an example of Reflective:** It sends light in different directions depending on the entrance. Light is scattered and is not returned back to the source.



**“Retro” – Means “Go back”;** Retroreflective in license plate sense means to return light back to where it came from.



A recent study provided by 3M measured the brightness of license plates that were on vehicles based on the number of years they had been in use.



This picture captures the retroreflective sheeting that was added to plates after 1949. The camera flash caught the retroreflectivity of the sample plates which have never been exposed to sunlight or weather conditions; therefore, these sample plates have retained their retroreflectivity.



**1.2 Examples of deteriorating plates currently on vehicles**



**Recommendation #1**

The Department of the Secretary of State recommends replacing all general issue plates with a new plate design.

## 2.0 Overview of a General New Plate Issue

A new plate issuance is a significant but necessary undertaking for the Bureau. It takes thoughtful planning, engaging many stakeholders, and significant advanced preparing for the manufacturing and distribution of over one million sets of plates.

A working group of BMV employees, along with input from municipal officials, considered all aspects of replacing plates. They developed the plan in this report which can serve as a roadmap to a successful new plate issue in the near future. The Bureau is very fortunate to have a handful of BMV employees and municipal officials who participated in and contributed to the successful new plate issuances in 1987 and 1999.

It is proposed that BMV replace all chickadee plates within one year, beginning March 1, 2025, through February 28, 2026. This provides the Bureau and municipal offices almost two years to prepare.

During the proposed time frame, municipal offices and BMV branch offices will issue new plates to replace the chickadee plates at the time each registration is renewed during the year. A new set of plates also would be issued when a registration for a new vehicle to that owner was processed during the year.

A new numbering sequence for each class of plates will be identified. However, when new plates were issued in 1987 and 1999, most registrants that had low digit number plates and vanity plates wanted to keep their same plate number or number and letter configuration. Therefore, we can assume some registrants will not want a plate number “off the shelf.” They will be given an opportunity to “reserve” their plate number. Reserving plates will require special planning and handling. Any registrant who wants to keep their current plate number in the new plate design would be able to reserve it and the plate will be mailed directly to the registrant prior to the registration renewal date.

### Recommendation #2

The issuance of the new plates should be accomplished within a one year period; March 1, 2025 - February 28, 2026.

## 2.1 Municipal Government Partnership

Approximately 80% of all registrations are issued in municipal offices. Therefore, a strong partnership with the municipal officials throughout this project is extremely important. Recognizing this, the BMV contacted several current municipal officials when drafting this








report and asked for their input and concerns. Their open and straightforward input was essential.

The challenges specific to small and large municipal offices were discussed. Several officials that participated in the research, indicated they had been part of the previous new plate reissuances in 1987 and in 1999. They indicated that staff training, clear procedures, public education and the appropriate level of supplies were essential to keep their operations running smoothly.

They also indicated that advance notice is very important to give them time to plan and prepare for the storage of additional plates and to have their computer systems updated.

### 3.0 Plates to be Replaced

Chickadee plates that are returned to municipal and BMV branch offices will be retrieved by BMV staff and recycled.

CLASS CODE	PLATE TYPE	PLATE GRAPHIC	ACTIVE PLATES AS OF 9/1/2022
AQ	ANTIQUÉ AUTO		24,045
BU	BUS		1,227
CM	COMBINATION		9,413
CO	COMMERCIAL		91,482
CV	CUSTOM VEHICLE		299
DX	DISABILITY		11,390
FM	FARM TRUCK		5,995



CLASS CODE	PLATE TYPE	PLATE GRAPHIC	ACTIVE PLATES AS OF 9/1/2022
HC	HORSELESS CARRIAGE		32
LS	LOW SPEED		202
MH	MOTOR HOME		5,013
PC	PASSENGER		804,832
SE	SPECIAL EQUIPMENT		9,834
SR	STREET ROD		709
TR	TRACTOR		1,512
TT	COMMERCIAL TRACTOR		1,841
TX	HIRE		607
		<b>TOTAL ACTIVE PLATES</b>	<b>968,433</b>

## 4.0 Manufacturing and Distribution

### 4.1 New Plate Design

A new design becomes a key decision in the project plan for a reissuance of license plates. This process can take up to four months due to various design edits and proper color matching on the reflective sheeting. This is a normal amount of time to consider in planning process. This project planning includes the design creation iterations and the printing lead times necessary to manufacture the plates.

### 4.2 Manufacturing

The Maine Department of Corrections (DOC) manufactures all license plates for the Bureau of Motor Vehicles at the Plate Shop in Warren. The process is managed collaboratively by the BMV and the DOC. Next to the Plate Shop is a warehouse where aluminum and reflective sheeting is stored before it is used in the manufacturing process.

The equipment used by the plate shop is so old and outdated it is not possible to determine its age. We do know one press has been in use since 1952 and the other was installed in 1986. The 1986 press is even less reliable than the 1952 model. There is a virtual tour of the plate shop in Appendix D, which includes pictures of the outdated equipment and manufacturing process. In addition to the lack of reliable equipment, there isn't a redundant manufacturing process available. When equipment breaks down and needs to be repaired, much of the operation is stalled until it is operational again.

The plate shop produces 300,000 sets of plates a year. The current equipment could not produce the approximately, one million sets of plates needed to replace all of the Chickadee plates, while also continuing to manufacture specialty plates and other non-chickadee plates.

To prepare for the reissuance of all chickadee plates, a year's worth of plates will need to be manufactured, inventoried, and stored.

The plate shop does not have the equipment or space to manufacture one million sets of plates in one year. MRSA 29A, section 451, subsection 6, indicates that the plates that cannot be produced at the prison may be purchased. There are third parties that manufacture plates for states. Initial research indicates this is a cost effective, viable option to accomplish the production of one million sets of plates within the required time frame. This model also allows for reserved numbers and vanity plates that need special handling to be manufactured at the current plate shop, along with specialty plates, long-term trailer plates, and other small batches of plates.

#### Recommendation #3

Contract with a third party to manufacture the general issue number series of plates and manufacture the reserved plate numbers at the current plate shop.

### 4.3 Distribution

Once the new plates are manufactured, they will be either shipped by the third party manufacturer or delivered by a BMV truck to municipal offices and BMV branch offices. Several shipments to each facility will be made over the course of the year as most offices do not have the capacity to store more than a month of plate inventory.

### 5.0 Additional Challenges

The BMV will face several challenges in planning and carrying out a new plate issue. Some of these challenges were handled during previous plate replacement projects. However, there are new challenges today that were not envisioned during the past plate replacement projects. As with any project, the better the upfront planning effort is, the fewer unexpected complications will be encountered.

**5.1 Labor.** The Bureau is experienced with the processes of manufacturing, inventorying, storing, and distributing large volumes of plates. However, there is a very manual, labor intense aspect of the project which BMV is not currently staffed to handle. It will be necessary to hire temporary staff in the BMV stockroom and registration unit for a period of up to 2 years, to manage the large volume of plates and validation stickers that will be manufactured. The plates will be retrieved, stored, inventoried, packaged and shipped or delivered to BMV branch offices and municipal offices. Reserved plates and registrations renewed on-line will be packaged individually and mailed directly to the registrant. It will be necessary to hire a temporary project manager to oversee the new plate issue to ensure all of the aspects of the project are successfully accomplished.

**5.2 Materials.** There are new challenges with supply chains due to the pandemic which are unpredictable. Ordering materials before they are needed and working closely with suppliers will help to mitigate delays in material availability. This will include validation sticker materials, plate aluminum and sheeting.

**5.3 Training for BMV and town office employees.** Information will be developed to give municipal officials an overview of the project plans to give them time to prepare and to secure storage areas. Training BMV branch office and municipal office employees will be necessary. Training materials and state-wide, in-person and on-line training schedules will need to be provided.

**5.4 Transactions for each customer will take a little longer.** Municipalities that currently do not issue a set of plates when a registration is renewed will need do so for this project. Their computer systems will also need to be updated. The BMV will need to train and monitor the towns which do not currently issue new plates.

**5.5 Managing the public's expectations will also be important.** In the past, most public outreach was done through newspapers and other printed material. Today, social media is the way in which many people receive news. Messages will need to be developed and provided to the general public. Maine residents are members of several generations, live in urban as well as

very rural areas and some may not speak English as their first language. Communications will need to reach a more diverse population today.

## 6.0 Costs and Funding Considerations

The estimated costs to complete a new plate issue will span over three years beginning in FY 24 and ending in FY 26. A detailed presentation of these costs is shown in Appendix C. The costs are summarized below and include the following categories:

	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Total</b>
Staffing	624,941	569,531	191,873	1,386,345
Distribution Costs	187,400	358,200	50,900	596,500
Supply Costs	133,250	736,503	326,627	1,196,380
Plate Production	602,183	2,408,732	0	3,010,915
Contingency	154,777	407,297	56,940	619,014
STACAP	51,860	136,469	19,078	207,407
<b>Total Estimated Costs</b>	<b>1,754,411</b>	<b>4,616,732</b>	<b>645,418</b>	<b>7,016,561</b>

## 6.1 Funding Considerations

The estimated costs of \$7 million are needed to complete the new plate issue. There are a few considerations for funding options.

- A. The Transportation Committee approves an allocation for \$7 million in the Highway Fund with a carrying provision allowing the funds to be carried throughout the duration of this project. This would enable the department to encumber funds in the first year for a project manager, temporary staff and a third-party vendor to manufacture plates in anticipation of the rollout over two fiscal years.
- B. Another option is the Transportation Committee approves an allocation for the \$5 million in a dedicated Other Special Revenue account. Consideration would have to be given as to how to generate sufficient funds (cash) to support the allocation. One option would be to increase the registration fee on those affected by the plate issue by \$5. The downside to this is the funding wouldn't be available to encumber the startup costs of the project. For example, a contract with a third-party vendor to manufacture plates needs to be encumbered in the first year. In other words, state laws require agencies to have sufficient funds upfront to cover the costs of contracts and this option wouldn't allow that to happen.
- C. After the last plate issue occurred in 1999, the Registration Plate Equipment and Production Program was established, per Title 29A, §466. One dollar from each registration fee paid must be paid into the Highway Fund and allocated to Registration Plate Equipment and Production Program. The intent was to reserve these funds for future plate issuance. Over time, this methodology changed, and the

funds became part of the Highway Fund annual revenues. If these revenues were set aside for the plate issue, \$1.2 million could be generated, however, it would create a budget gap in the Highway Fund. Currently, these funds are utilized by the Department of Transportation.

- D. The Specialty License Plate Fund, per Title 29A, §469 accrues \$1 for the sale of each specialty plate with the intent of generating revenue to pay for materials, which in turn, pays for the cost of manufacturing and producing specialty license plates. This fund has accumulated funding, of which, \$1 million could be used to help pay for a portion of this plate issuance. Authority allowing the department to use these funds for this purpose would need to be granted by the Legislature.

#### Recommendation #4

Option A above ensures the timing and funding of the general plate issuance is completed effectively and efficiently.

## 6.2 Front and Rear Plate

Common questions asked when considering new plates are “Do we really need to have a front plate?” “Isn’t 1 plate on the rear enough?” These questions have been asked several times over the years in Maine; most recently in 2014 and 2017. After significant discussion and study the conclusion has been yes, there is a justifiable need for a front and rear plate.

Many entities came forward and explained to the legislature that eliminating the front plate on motor vehicles would have an adverse effect on state, county and local law enforcement, public safety, border patrol, traffic management, toll collection, parking facilities and other government and private functions.

For example, when a law enforcement officer is driving down the street looking for a vehicle involved in a crime, they can view hundreds of plates on the front of vehicles. In 2016 the Sheriff’s Association testified that motor vehicles are used in 70% of all crimes committed in this country.

The Maine Turnpike is using automated toll collecting and uses plates to identify vehicles for billing purposes. In 2016, the Maine Turnpike Authority testified that they relied on front license plates on passenger vehicles to process over 114,000 toll transactions.

While there may be some cost savings in the purchase of raw materials by eliminating the front plate, it does not equate to a significant savings in the overall cost of manufacturing, distribution and the issuance of both plates. Therefore, savings in costs of the front plate doesn’t outweigh the importance of plate and vehicle identification in so many circumstances.

# License Plate Information

U.S. and Canada ▾



2 Plates

1 Plate

## AAMVA License Plate Policy

License plates serve one common purpose; to identify motor vehicles. Across jurisdictions, they also identify vehicle registrants and demonstrate compliance with motor vehicle registration laws. Through the use of bright, reflective surfaces, license plates contribute to highway safety and law enforcement efforts by making the vehicle more visible.

AAMVA supports the horizontal display of a front and rear plate and the uniform manufacture and design of plates, to increase the effective and efficient identification of license plates. Jurisdictions are encouraged to adopt the best practices identified in AAMVA’s License Plate Reader Program Best Practices Guide.

The use of common characteristics and predictable designs on license plates will enhance readability, usability, and connections to vehicle registration records. It will also support law

enforcement efforts and highway safety, and may increase certain revenue collection which is dependent upon license plate identification.

### Recommendation #5

Continue to require two plates; a front and rear plates

#### 7.0 Public Communication

The Bureau will be responsible for notifying numerous stakeholders of the plate reissuance plan and timeline. The notification will include outreach through the BMV website updates, direct mailings, social media, news outlets, and possibly texts and email. The notifications methods will be specifically designed to reach:

- General Public
- Police agencies in Maine, the US and Canada
- Border Patrol
- Tolling Authorities, in Maine and across the US
- Parking Districts and Authorities, Gated communities
- State, Municipal and County Government Agencies
- Motor Vehicle Agencies in the US and Canada

It will also be important to notify the general public about the opportunity to reserve their current plate number in the same class they currently hold. A direct outreach will go to all vanity and low digit plate holders.

## 8.0 Project Timeline

### **FY 24 July 1, 2023 – June 30, 2024**

- Legislative approval of plan and required resources
- Hire Project Manager
- Submit RFP for third party to produce plates
- Award contract to produce plates
- Begin the reserve number/vanity plate communications and process
- General issue number plates produced and stored

### **FY 25 July 1, 2024 – June 30, 2025**

- Manufacture stickers
- Manufacture reserved number/vanity plates
- Package and prepare general issue number plates for shipment for all towns and BMV branch offices
- Prepare reserved plates for shipment
- Send first shipment of plates to branch offices and towns
- March 1, 2025 - Begin issuing new plates at renewal and for new registrations

### **FY 26 July 1, 2025 – June 30, 2026**

- Continue shipments of plates to towns and BMV branch offices throughout the year
- Continue mailing reserved plates to registrants throughout the year
- February 28, 2026 – End of plate issue year
- March and beyond – issue plates to people that renew registration after expiration of current registration
- Summer - Wrap up plate issue; retrieve plates from towns that will not need them



## Appendix A

### Proposed Plate Design : Maine's Original Flag from 1901 – 1909

It is anticipated this design will meet the American Association of Motor Vehicle Administrators plate design standards.



January 12, 2021

#### 1901 – 1909 Flag History

State Archivist Katherine McBrien provided the following:

"Maine's state flag has undergone changes over the 200 years of our statehood. Perhaps most interestingly, our state did not designate an official flag until 1901, which specified the flag design similar to the proposed license plate design in this report. We had no official flag for our first almost 100 years of statehood. For an unknown reason, that design only lasted 8 years, before legislation changed the flag to its current design in February of 1909. Unfortunately, any record of the debate around the change in flag design does not survive, so we cannot provide any reasoning behind it."

The 1901 law specified the size and location of the tree and the star, but stylistically did not specify the exact design:

*The State Flag is hereby declared to be buff charged with the emblem of the State, a pine tree proper in the center and the polar star (a mullet of five points), in blue in the upper corner. The star to be equidistant from the hoist and upper border of the flag, the distance from the two borders to the center of the star equal to about one quarter the hoist. This distance and the size of the star being proportionate to the size of the flag.*

# AAMVA Plate Design Standards 2020

Chapter 2 of the AAMVA standard explains that license plate design has a significant impact on accurate license plate identification. This section provides specifications intended to optimize readability by the human eye and license plate reader (LPR) and connection to the correct vehicle record. These specifications also provide flexibility for innovation and allow for multiple license plate designs.

## 2.1 Issuing Jurisdiction

The name of the issuing jurisdiction is readable and appears in the top center location of the license plate. The full jurisdiction name is displayed to avoid confusion between jurisdictions with similar postal abbreviations.

Jurisdiction characters are no less than 0.75 inches and no more than 1 inch in height and width with .125 inches spacing and are at least 0.25 inches from the top edge of the license plate.

## 2.2 Character Sizing and Placement

Characters are at least 2.5 inches in height, proportionally wide, and spaced no less than 0.25 inches apart. Character stroke weight (thickness of lines) is between 0.2 and 0.4 inches. Characters are positioned on the license plate no less than 1.25 inches away from the top and bottom edges of the license plate.

## 2.3 Fonts

The font and spacing present each alphanumeric as a distinct and identifiable character. Standardized fonts and font sizes that clearly distinguish characters are used. For example, similar characters such as A and R, 8 and B, or O and Q are easily distinguishable from each other.

## 2.4 Stacked Characters

If stacked characters are used, they are part of the official license plate number and appear before or after the other characters, not between them. No more than two characters are to be stacked, and license plates do not have more than one set of stacked characters. When one character appears above the other, the top character is entered first, immediately followed by the bottom character, in sequence, with the other characters on the license plate.

Each individual stacked character is displayed vertically, not staggered or slanted, and is 45% the size of the regular license plate characters with 10% vertical spacing between each character to ensure readability.

## 2.5 License Plate Type Identifiers

License plate type identifiers such as COMMERCIAL, APPORTIONED, TRAILER, or DEALER are placed on the bottom of the license plate between the bolt holes and do not interfere with the identification of the characters.

## **2.6 Messaging**

When a name, phrase, motto, slogan, or other approved message is used, it is placed at the bottom of the license plate. The text is placed at least 0.25 inches below the license plate numbers.

## **2.7 Special Characters**

When used, non-alphanumeric characters such as ampersands and hashtags found on a standard keyboard are considered part of the license plate number, are entered into the vehicle registration database, and are displayed on the license plate (see Standard 2.8, Spaces and Dashes).

Symbols that appear on the license plate that are not found on a standard keyboard, such as hearts, diamonds, or emojis, are considered graphics and are not considered part of the license plate number sequence nor is any representation of the symbol entered into the vehicle registration database.

## **2.8 Spaces and Dashes**

If license plates include spaces or dashes, these spaces or dashes are not assigned a value. Dashes are treated the same as spaces in that they are not entered into the vehicle registration database (“ABC123,” “ABC 123,” and “ABC-123” are the same plate number).

## **2.9 Graphics**

Graphics on license plates do not distort or interfere with the readability of the characters or any other identifying information on the license plate. If text is included within the graphic, a translucent ink or other technique is used to prevent the text from being read by LPR.

## **2.10 Graphic Placement**

For license plates that contain a graphic, the graphic will either be on the right or left side of the license plate number. All graphics should be restricted to an area that will not interfere with meeting size requirements of the license plate number. Graphics can stretch from the edge of the license plate to within 0.25 inches from the closest character of the license plate number and to the top and bottom of the license plate.

## **2.11 Background**

When used, a background image does not interfere with the ability to read the license plate number by the human eye and LPR.

## Appendix B Proposed Legislation

### §451. Issuance and form of registration plates

**1. Authority to issue registration plates.** The Secretary of State shall provide a new general issue of registration plates periodically as determined by the Legislature. Each new general issue must be easily distinguishable by color from the preceding general issue.

**1-A. New general issue.** The Secretary of State shall provide for a new general issue of registration plates and shall begin issuing the new plates no later than ~~July 1, 1999~~ March 1, 2025. The Secretary of State shall ~~complete provide for~~ the issuance of new plates before ~~December 31, 2000~~ July 31, 2026 to all vehicles required to obtain new plates.

**1-B. New dealer plate issue.** The Secretary of State shall provide for a new issue of dealer plates and shall begin issuing the new dealer plates no later than December 31, 2000 to all dealers licensed pursuant to chapter 9, subchapter III.

**2. Furnishing registration plates.** The Secretary of State shall furnish registration plates, without charge, with each registration except to dealers, manufacturers and holders of transporter registration plates.

**3. Annual registration plates or devices.** The Secretary of State shall issue new registration plates or a suitable device in lieu of new registration plates each calendar year. The plate or device must clearly indicate the year or period for which it is issued. The Secretary of State may issue permanent registration plates designed to provide for renewal by changing the expiration date without issuing new registration plates. A device attached to the appropriate vehicle or registration plate is proper registration for the period specified.

**4. Registration plate design.** Registration plates must be designed as follows.

A. Registration plates must bear the year of issue or the last 2 numerals of that year and the word "Maine" ~~or the abbreviation "Me."~~ in letters of at least 3/4 inch in height centered at the top of the registration plate.

B. Except on motorcycle plates, registration plate numbers may not be substantially less than 3 inches high.

C. On registration plates issued for private use, the word "Vacationland" must be centered at the bottom, except, when the Secretary of State determines that for other than passenger vehicles, that space may be used for class identifiers.

D. Repealed

**4-A. New general issue design.** Notwithstanding subsection 4, the design of registration plates issued pursuant to subsection 1-A is governed by this subsection.

A. Registration plates must bear the year of issue or the last 2 numerals of that year and the word "Maine" ~~or the abbreviation "ME"~~ in letters of at least 3/4 inch in height centered at the top of the registration plate.

B. Except on motorcycle plates, registration numbers may not be substantially less than 3 inches high.

C. On registration plates issued for private use and trucks, the word "Vacationland" must be centered at the bottom in letters not less than 3/4 inch in height, except, when the Secretary of State determines that for other than passenger vehicles, that space may be used for class codes.

D. A new registration plate must have:

(1) A ~~green~~ buff shaded background;

(2) Identification numbers, letters and the border distinctly ~~black~~ dark blue; and

(3) An illustration of a ~~chickadee, pine cone and tassel~~ the original flag design for the State of Maine, set from 1901 to 1909. The plate shall be a buff background, with a green pine tree and a blue star on the side of the plate and shall not obstruct any identifying features on the plate.

E. The Secretary of State shall devise, with the advice of the joint standing committee of the Legislature having jurisdiction over transportation matters, a numbering system suitable for a new general issue of registration plates.

**5. Special classes of registration plates.** A vehicle required to be registered in a special class under this Title may display only the number plates designed for that special class of registration. If a vehicle registered for hire is disabled due to an accident or mechanical malfunction, another vehicle of the same passenger capacity may be substituted temporarily. The substitute vehicle is subject to the financial responsibility requirements in section 1611. Notwithstanding this subsection, the Secretary of State may issue a temporary credential in lieu of a special class of registration plate. The Secretary of State may adopt rules to implement this subsection. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

**6. Plates to be manufactured at State Prison.** The Secretary of State or the duly designated official in charge of vehicle registration shall purchase and cause to be installed at the State Prison the necessary equipment and materials for the production of all vehicle registration plates used in the State. Only plates that cannot be produced at the prison and plates for which anticipated demand is below a minimum number determined by the Secretary of State may be purchased for state use.

The Warden of the State Prison has charge of operations at the State Prison relative to the manufacture of all plates made for the State. The Warden of the State Prison, with the consent of the Secretary of State, may employ for limited periods of time a supervisor for the purpose of instructing inmates in the operation of making such plates.

**7. Rules.** The Secretary of State may adopt rules to protect the integrity of registration plates or provide for the issue of replacement plates.

#### **§461. Reservation of same number**

1. Plate issue year. In a year in which new registration plates are issued, the Secretary of State shall reserve for one year ~~until July 1st~~ the same registration number for the succeeding registration year for a person who notifies in writing the Secretary of State ~~prior to May 1st~~ of that person's desire to retain that registration number. The fee for retention of the same registration number is \$25.

The Secretary of State may issue a facsimile plate that is valid for a 90-day period during production of a reserved plate. A facsimile plate must be attached to the rear plate bracket.

If a person does not have a vehicle to register ~~on May 1st~~, a registration number may be held for a maximum of 2 registration years by depositing with the Secretary of State \$25 for each year. This fee is not refundable and may not be applied against the registration fee.

All numbers other than those reserved ~~must be released and~~ may be issued ~~after July 1<sup>st</sup>~~ 6 months after the plate issue is complete.

~~A person wishing to select a number out of rotation may do so by paying the registration fee and a reserved number fee of \$25.~~

## Appendix C Costs Summary

New License Plate Issue Cost Estimate			
	FY 2024	FY 2025	FY 2026
	7/1/23 to 6/30/24	7/1/24 to 6/30/25	7/1/25 to 6/30/26
<b>Staffing Needed</b>			
Contracted Project Manager (PSC I)	105,189	105,189	78,891
Contracted Dist. Staff ( 3 Inven & Prop Assoc, 1 Sup Off Svc)	225,963	225,963	112,982
Contracted VS Staff (4 CRA II)	238,379	238,379	
IS Staff	55,410		
<b>Est Total Staff Needs</b>	<b>624,941</b>	<b>569,531</b>	<b>191,873</b>
<b>Distribution Costs</b>			
Distribution Materials	25,000	5,000	5,000
Storage and Distribution Space	76,800	76,800	38,400
Handling Equipment Rental	15,000	15,000	7,500
Mailing Cost	63,600	254,400	0
Truck Rental	7,000	7,000	0
<b>Est Total Dist. Costs</b>	<b>187,400</b>	<b>358,200</b>	<b>50,900</b>
<b>Supply Costs</b>			
Reserved/Vanity Mailing		603,253	301,627
Materials est for Distribution (boxes, wrapping, tape, etc.)	50,000	50,000	25,000
Stickers	83,250	83,250	0
<b>Total Supply Estimate</b>	<b>133,250</b>	<b>736,503</b>	<b>326,627</b>
<b>Plate Production Estimate</b>			
1mm pair @ \$3/pair	600,000	2,400,000	0
Shipping to Central Maine Dist. Facility	2,183	8,732	0
<b>Est Total Production Cost</b>	<b>602,183</b>	<b>2,408,732</b>	<b>0</b>
<b>Contingency</b>	<b>154,777</b>	<b>407,297</b>	<b>56,940</b>
<b>Est Costs</b>	<b>1,702,551</b>	<b>4,480,263</b>	<b>626,340</b>
STACAP Rate	0.03046	0.03046	0.03046
STACAP	51,860	136,469	19,078
<b>Net Est Costs</b>	<b>1,754,411</b>	<b>4,616,731</b>	<b>645,418</b>
<b>Est total Project Cost:</b>			<b>7,016,561</b>





Appendix D Tour of the Plate Shop on the following pages.



**WELCOME  
to the  
Bureau of Motor Vehicles  
Plate Shop**





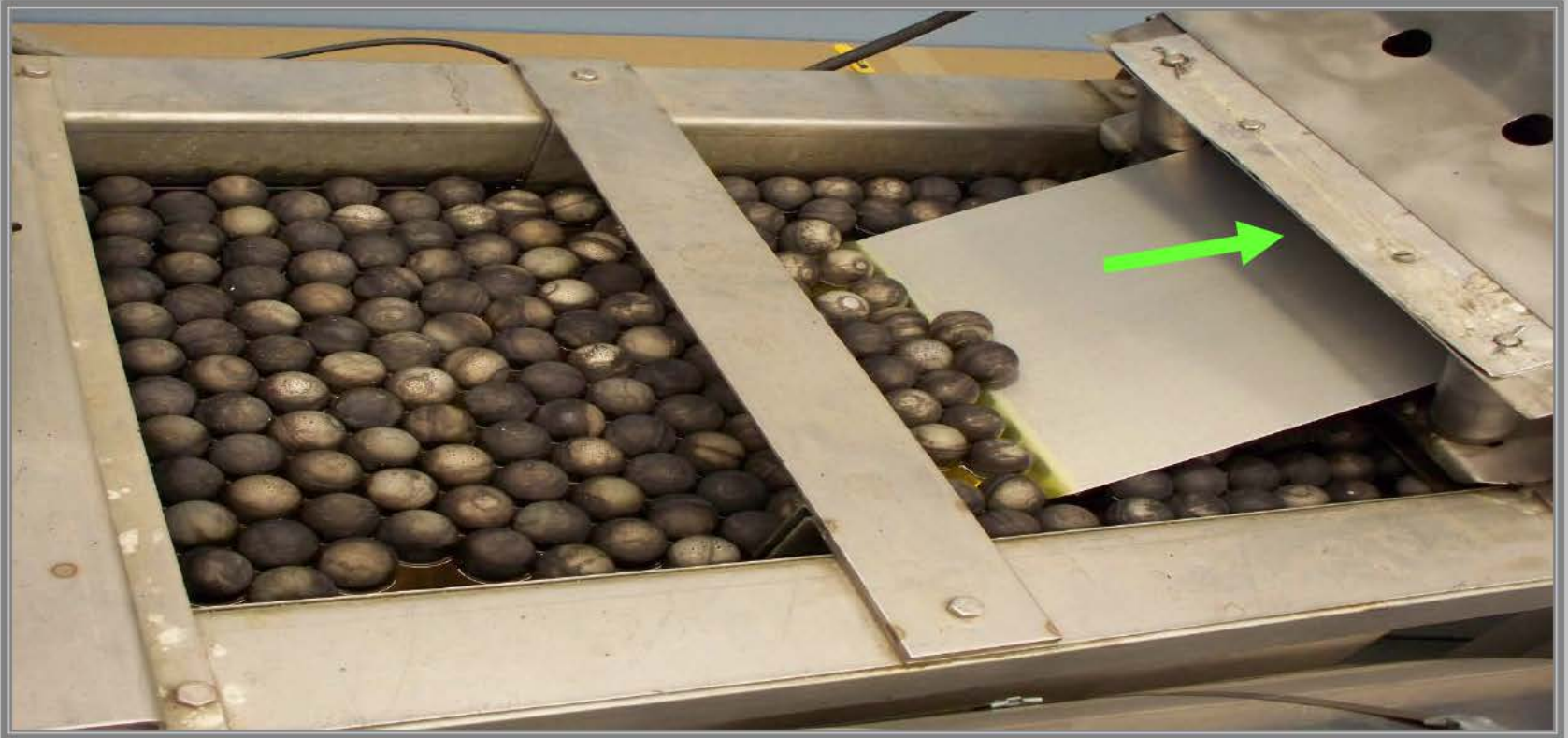
Upon entering the Plate Shop, rolls of aluminum are in view and standing upright ready for processing. Each roll of aluminum weighs between 1,200 and 2,200 lbs.



An electric hoist lifts a roll of aluminum so the roll can be placed on the Blanking Press spool. The roll is unrolled, washed, and dried in preparation for the 3M Scotchlite application, prior to the Blanking Press cutting the aluminum into plate size blanks. Thus the name, "Blanking Press".



As the aluminum unrolls, it is submerged in a pre-heated (350 degree) tub of hot water. Hollow (ping-pong type) balls float on the surface of the water and assists with holding the metal under water to maintain the necessary heat and moisture to soften the aluminum. The aluminum exits through two rollers that compress the metal to remove the water as the metal is guided through the roller slot. An offset fan waves air over the top of the aluminum to assist with the drying process.



**As the aluminum advances through the tub, it moves through steel rollers that press it flat and removes the dimples or any imperfections that couldn't be washed out.**



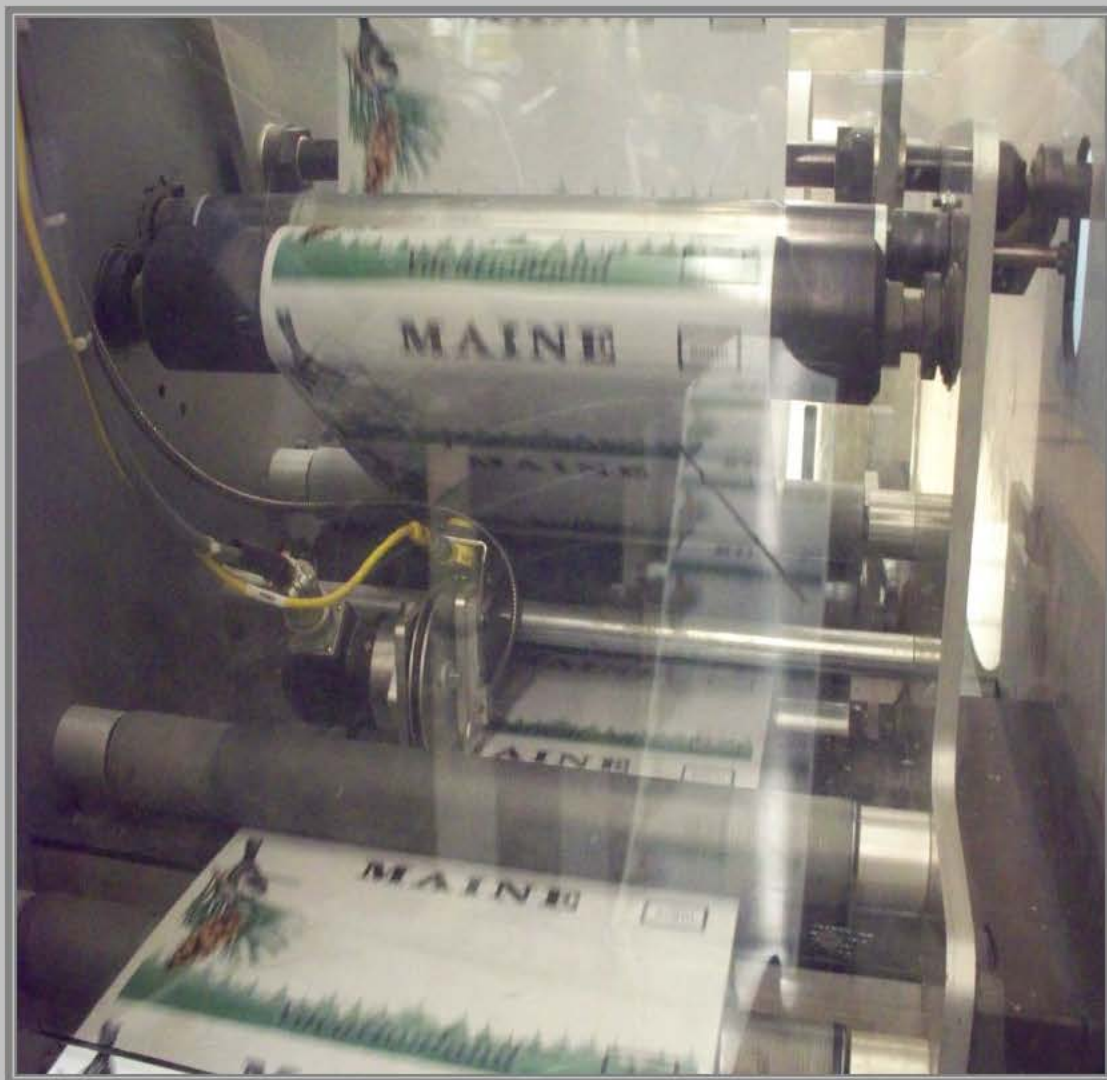
As the dried aluminum exits the hot water bath, the aluminum is still warm and now ready for the 3M Scotchlite to be applied.

When the Scotchlite arrives at the Plate Shop, the graphic design already has been imprinted onto the Scotchlite film.



**Rolls of 3M Scotchlite are marked with the type of plate design that was produced by 3M, and placed on shelves behind the Blanking Press waiting their turn to be applied to the aluminum. Each roll weighs between 60 to 65 lbs.**





It takes approximately 15 minutes to set-up a roll of Scotchlite before each design can be adhered to the aluminum.

Each roll of Scotchlite must be aligned properly for the Blanking Press to cut the plate precisely without misaligning the graphic or text.

As the warm dry aluminum passes through the applicator, the sticky backed Scotchlite is perfectly aligned and compressed onto the aluminum.



The Passenger Plate design that depicts Maine's State bird, the Chickadee, is being applied to the aluminum and will continue on its way to be cut into license plate blanks.

Once the 3M Scotchlite is applied, the roll of aluminum continues streaming on a course toward the blades of the Blanking Press where the corners are trimmed and four holes are punched to create these license plate blanks.



At this point, no rims, no letters or numbers are embossed, only the Scotchlite has been applied and the corners trimmed, and the holes punched.

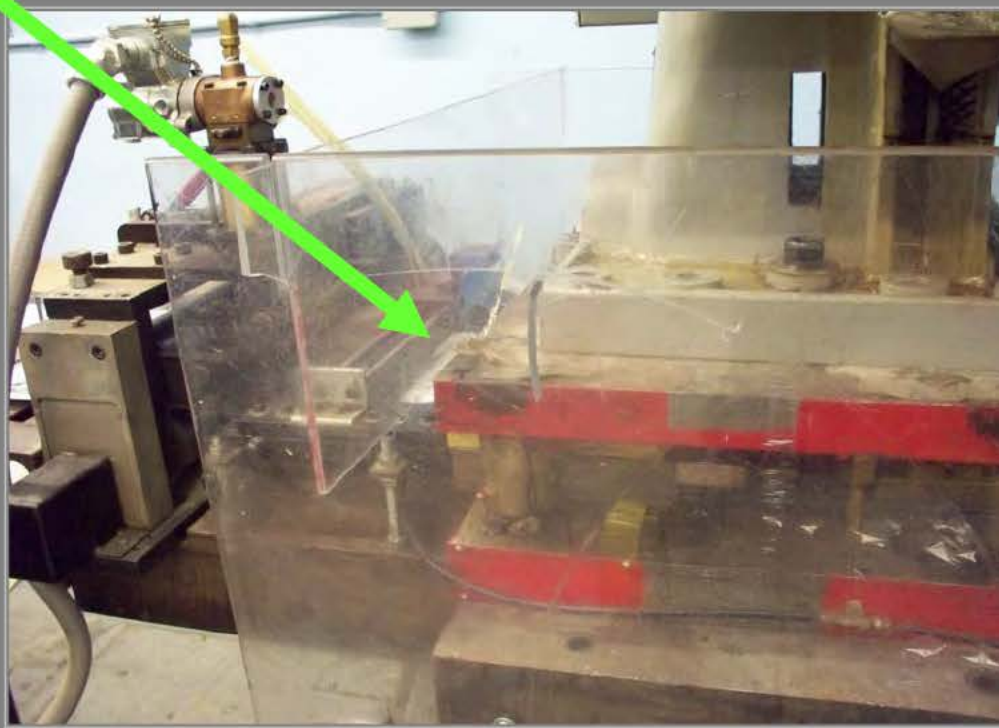


Views of the aluminum advancing to the Blanking Press to be cut, now that the 3M Scotchlite has been applied.





There's an older Blanking Press that dates back to 1952, but this newer hydraulic-driven machine was installed in 1987.



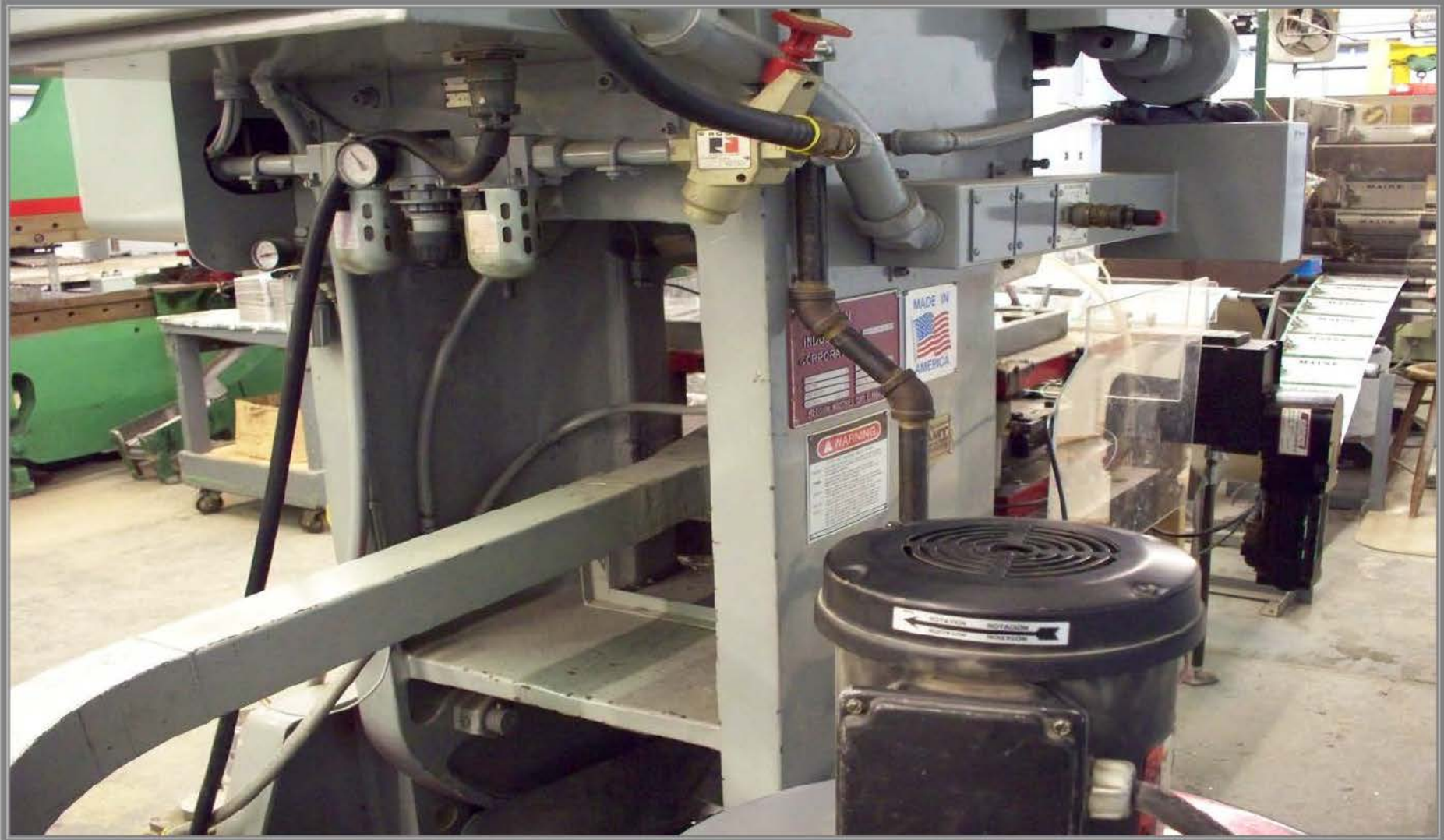
Guarded by heavy plastic walls, the aluminum enters the press that cuts it into license plate blanks, trims the corners and punches four holes. A large barrel and vacuum collect the metal cuttings.

Once the cut has been made, the individual plate is carried down a conveyor belt and slides into a tray where it's removed and placed in a stack to advance to the Embossing Press where the rims, letters and numbers are embossed.





A view of the vacuum that collects the metal trimmings (corners and punched holes).



**The Blanking Press, near the vacuum, as the aluminum advances to be cut into blanks.**





The newly trimmed plates are stacked face down and await their next journey through the Embossing Press.

The Blanking Press cuts 90 blanks a minute.

Each roll of 3M Scotchlite creates 900 pairs of license plates or 1,800 (single) trailer or motorcycle plates.



The Embossing Press creates the rims, numbers, and letters onto the blank plates. It takes three people to operate the Embossing Press. One to feed the machine, one to operate the machine and dies, and one to catch the plates from the conveyor belt and stack them.

The operator inserts a blank into the metal guide from one side of the machine.



The blank will drop into a slot that positions it for the embossing, which takes place from other side of the Embossing Press.



On a shelf in front of the operator, the dies are set in numeric order as he creates the series of plate numbers. (Two blanks are embossed with the same die for each pair of license plates).



The blank has been set into position and ready for embossing. The operator inserts one hinged die for each character placeholder necessary to create a license plate. (Spaces included). He swaps dies between those waiting on the shelf to those inserted above the shelf in the Embossing Press.



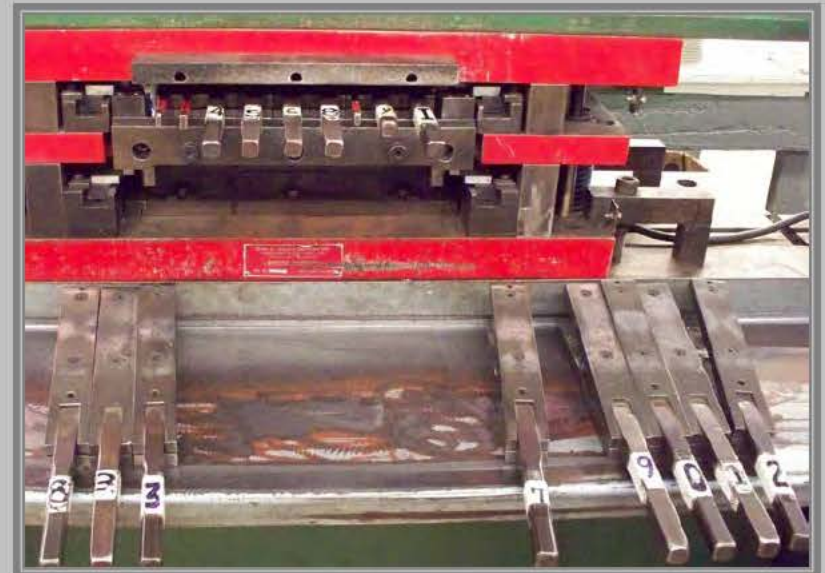
Each die is clearly marked so the operator can visibly identify the character without confusion. This process takes a great deal of concentration and coordination in conjunction with the operator feeding the blanks.



This die is the number "0". The embossing die resembles a giant clothes pin without the spring. It has a limited opening and is inserted in its place on the Embossing Press by the operator. When inserted into the Embossing Press, the blank sets inside this die, allowing the force of the machine to emboss the image into the blank.



The operator who sets the dies for embossing, has a plate board as their guide for the letter and number placement and the spaces and hyphens for that plate type and design.



It's time for the operator to place both hands on the start buttons allowing the force of the machine to emboss the impression of the set dies into the license plate blank.



This process is repeated for each blank in conjunction with the operator changing the rotation of the die characters to maintain a numeric series of license plates.





The embossed plate is face down and has received the impression of the die set characters and a rim.



The third operator catches the embossed plate from the exit tray and stacks the plates, preparing them for inking.



**These plates are stacked and ready to be inked.**



The Inking Machine was installed during this decade and uses oil-based ink. Each plate is inserted manually. The automated rollers pass over the raised characters to add color to the embossed Scotchlite.



Each plate is individually placed in a slot that is belt driven through the inking machine and runs over the conveyor rollers.



The plate passes under the ink roller and over the conveyor rollers and exits into a tray. The operator removes the plate and places it in a drying rack.



The racks are hung from a revolving monorail system that is suspended from the ceiling.

The operator places 14 plates on each side of one rack.

Each rack is sent by this monorail system, into a 250 degree Fahrenheit bake oven for 45 minutes.

There are 60 racks suspended by this monorail system, allowing 1,680 plates to be baked in one production batch.



**This monorail system has been overhauled twice since being installed in 1980.**





Once the rack returns from the oven, each plate is removed, checked, shrink wrapped as pairs, and strapped into 50 plate bundles or 25 pairs. The bundles are stacked on a skid pallet. (Single plates, such as trailers and motorcycles, are not shrink-wrapped, just strapped in bundles and stacked on skid pallets).



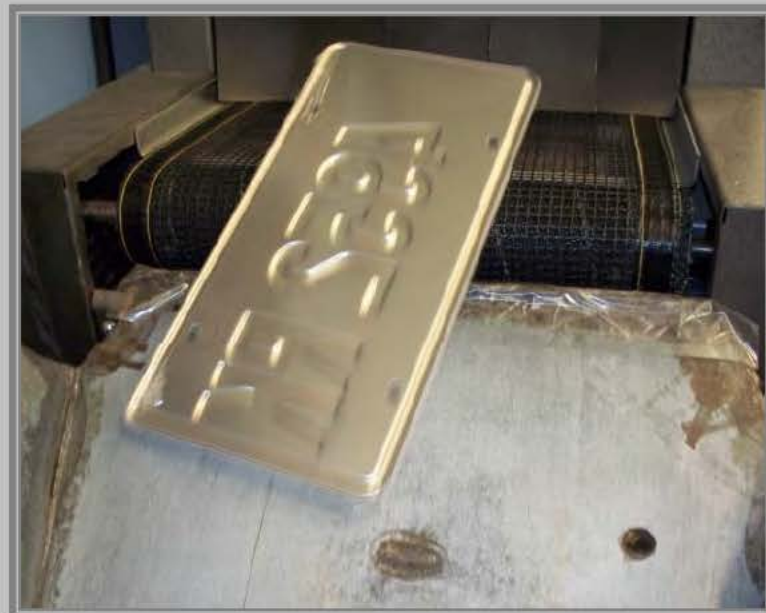
**The baked plates are checked for accuracy and imperfections.**



Pairs of plates must be brought to the Sealing Machine before receiving strapping. Each pair is placed on a tray and cellophane is wrapped around them. The pair proceed into the Sealer that shrink wraps the plastic to the plates as the sealed wrapped pair exits from a conveyor belt, down a shoot, and ready for bundling.



**Vanity and special order replacement plate (s) are also shrink wrapped, but they are packaged in individual envelopes and shipped to BMV for distribution.**





Plates are re-checked for accuracy.



Then they are strapped in 50 plate bundles.

The bundles are stacked on skid pallets and wrapped for shipping to BMV.





**A full skid pallet has 5,000 pairs or 10,000 plates stacked and ready for shipping and each full pallet weighs 2,500 pounds. (Four plates equal a pound).**





**The skid pallets are shrink wrapped and moved into the Warehouse for storage until shipped. There can be 100,000 processed plates stored in the Warehouse on any given day.**







**Rolls of aluminum also are stored in the Warehouse. Each roll of aluminum weighs between 1,200 and 2,200 lbs.**





**State Police, municipalities, individuals, and the Bureau of Motor Vehicles turn-in old and/or demolished license plates by the box full for recycling. These plates are brought back to the Warehouse and shredded before recycling.**



One person can shred a box of returned plates in less than 10 minutes, simply by feeding the top of the machine slot with a license plate so the machine teeth can shred them into 2, 3, or 4 pieces. The pieces drop into a bin, located under the shredding table. These shredded plates are then emptied into a dumpster for recycling along with the trimmings from the Blanking Press.



Approximately 600,000 to 700,000 individual plates are produced per year at the Plate Shop.



It took approximately one million sets of plates to complete the full re-issue from the old passenger Lobster plate design to the current passenger Chickadee plate design.

**Thank you for touring  
the Bureau of Motor Vehicles  
Plate Shop.**

