



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**Request for
 Quotation**

PR14656

ADDRESS CORRESPONDENCE TO ATTENTION OF:
JOHN ABBOTT
304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

BODZARK

3M Company
 3M Center, Bldg. 225-5S-08
 P.O. Box 33225
 St. Paul, MN 55133-3225

SHIP TO

WV PRISON INDUSTRIES
 MOUNT OLIVE CORRECTIONAL CTR
 1 MOUNTAINSIDE WAY
 MOUNT OLIVE, WV
 25185 304-442-5958

DATE PRINTED 12/09/2007	TERMS OF SALE	SHIP VIA	FOB.	FREIGHT TERMS
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BID OPENING DATE: 12/18/2007	BID OPENING TIME 01:30PM
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LINE	QUANTITY	LOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #03 THIS ADDENDUM IS ISSUED TO MODIFY THE REQUIREMENT(S) OF THE ORIGINAL SPECIFICATIONS, AND TO CHANGE THE BID OPENING DATE FROM 12/05/2007 TO 12/18/2007. BID OPENING DATE: 12/18/2007; 1:30 PM						
0001	1	LS		550-68		
REFLECTIVE SHEETING FOR LICENSE PLATES						
***** THIS IS THE END OF RFQ PR14656 *****						TOTAL: \$419,363.01

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	Richard J. LaClair	TELEPHONE 651-575-5521	DATE 12-14-07
TITLE Contract Administrator	FBN 41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

Addendum #3 to PRI4656

1. To amend the bid opening date to December 18, 2007 @ 1:30 p.m.
2. To add the following language to Paragraph 2. Warranty Provisions:

The security marks offered by Avery Dennison & 3-M have been approved by the State of West Virginia.

3. To add the following language to Paragraph D. Security Marks:

The security marks offered by Avery Dennison and 3-M have been approved by the State of West Virginia.



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VENDOR

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SHIP TO

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 MOUNT OLIVE, WV
 25185 304-442-5958

DATE PRINTED 11/27/2007	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
ID OPENING DATE: 11/27/2007	BID OPENING TIME			01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #02						
THIS ADDENDUM IS ISSUED TO POSTPONE THE BID OPENING UNTIL FURTHER NOTICE.						
0001	1	LS		550-48		
REFLECTIVE SHEETING FOR LICENSE PLATES						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	TELEPHONE 651-575-5521	DATE 12-14-07
TITLE Contract Administrator	FON 41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE

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DATE PRINTED 11/14/2007	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
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BID OPENING DATE: **12/05/2007** BID OPENING TIME: **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		550-48		
<p style="text-align: center;">ADDENDUM #01</p> <p>THIS ADDENDUM IS ISSUED TO ANSWER VENDOR QUESTIONS, EXTEND THE BID OPENING DATE FROM 11/15/2007 TO 12/05/2007; 1:30 PM, AND ADD EXHIBIT 10 (ADDENDUM ACKNOWLEDGEMENT).</p> <p>NEW BID OPENING DATE: 12/05/2007; 1:30 PM</p> <p>REFLECTIVE SHEETING FOR LICENSE PLATES</p> <p>EXHIBIT 10</p> <p>REQUISITION NO.:</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p> <p>NO. 1 X</p> <p>NO. 2 X</p> <p>NO. 3 X</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	Richard J. LaClair	TELEPHONE 651-575-5521	DATE 12-14-07
TITLE Contract Administrator	REN 41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ. INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

3043443130
State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
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Request for
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RFQ NUMBER
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2

ADDRESS CORRESPONDENCE TO ATTENTION OF
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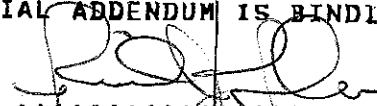
RFQ COPY
TYPE NAME/ADDRESS HERE

3M Company
3M Center, Bldg. 225-5S-08, Box 33225
St. Paul, MN 55133-3225


WV PRISON INDUSTRIES
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DATE PRINTED 11/14/2007	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
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BID OPENING DATE: 12/05/2007 BID OPENING TIME: 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
NO. 4						
NO. 5						
<p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p style="text-align: center;">  SIGNATURE Richard J. LaClair 3M Company COMPANY 12-14-07 DATE </p>						
***** THIS IS THE END OF RFQ PRI4656 *****						TOTAL: \$419,363.01

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	RICHARD J. LaClair	TELEPHONE 651-575-5521	DATE 12-14-07
TITLE Contract Administrator	41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE	

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 St. Paul, MN 55133-3225

SUPPLIER

**WV PRISON INDUSTRIES
 MOUNT OLIVE CORRECTIONAL CTR
 1 MOUNTAINSIDE WAY
 MOUNT OLIVE, WV
 25185 304-442-5958**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
10/22/2007				

OPENING DATE: **11/15/2007** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
101	1	LS		550-48		
<p>REFLECTIVE SHEETING FOR LICENSE PLATES</p> <p>OPEN-END CONTRACT TO PROVIDE REFLECTIVE SHEETING FOR THE WV CORRECTIONAL INDUSTRIES' LICENSE PLATE PROGRAM, PER THE SPECIFICATIONS.</p> <p>MANDATORY PRE-BID: 11/7/2007; 1:30 PM MOUNT OLIVE CORRECTIONAL CENTER 1 MOUNTAINSIDE WAY MT. OLIVE, WV 25185</p> <p>CONTACT JOHN ABBOTT @ 304-558-2544 TO CONFIRM ATTENDANCE.</p> <p>EXHIBIT 3</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	Richard J. LaClair	TELEPHONE 651-575-5521	DATE 12-14-07
FILE Contract Administrator	FEIN 41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE	

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GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125.00 registration fee.
5. All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA Business Associate Addendum** - The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Covered Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in cases of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications.

SIGNED BID TO:

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130



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ADDRESS CORRESPONDENCE TO ATTENTION OF
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RFQ COPY
TYPE NAME/ADDRESS HERE

VENDOR

3M Company
 3M Center, Bldg. 225-5S-08, Box 33225
 St. Paul, MN 55133-3225

SHIP TO

WV PRISON INDUSTRIES
 MOUNT OLIVE CORRECTIONAL CTR
 1 MOUNTAINSIDE WAY
 MOUNT OLIVE, WV
 25185 304-442-5958

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
10/22/2007				

BID OPENING DATE: **11/15/2007** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	Richard J. LaClair	TELEPHONE	651-575-5521	DATE	12-14-07
TITLE	Contract Administrator	FEIN	41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE	

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PROPERTY

RFQ COPY

TYPE NAME/ADDRESS HERE

3M Company
 3M Center, Bldg. 225-5S-08, Box 33225
 St. Paul, MN 55133-3225

SHIP TO

WV PRISON INDUSTRIES
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1 MOUNTAINSIDE WAY
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<p>MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 04/11/2001 EXHIBIT 4</p> <p>LOCAL GOVERNMENT BODIES: UNLESS THE VENDOR INDICATES IN THE BID HIS REFUSAL TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO COUNTY, SCHOOL, MUNICIPAL AND OTHER LOCAL GOVERNMENT BODIES, THE BID SHALL EXTEND TO POLITICAL SUBDIVISIONS OF THE STATE OF WEST VIRGINIA. IF THE VENDOR DOES NOT WISH TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO ALL POLITICAL SUBDIVISIONS OF THE STATE, THE VENDOR MUST CLEARLY INDICATE SUCH REFUSAL IN HIS BID. SUCH REFUSAL SHALL NOT PREJUDICE THE AWARD OF THIS CONTRACT IN ANY MANNER.</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.</p>						

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VENDOR

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BID OPENING DATE: 11/15/2007		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>VENDOR PREFERENCE CERTIFICATE</p> <p>CERTIFICATION AND APPLICATION* IS HEREBY MADE FOR PREFERENCE IN ACCORDANCE WITH WEST VIRGINIA CODE, 5A-3-37 (DOES NOT APPLY TO CONSTRUCTION CONTRACTS).</p> <p>A. APPLICATION IS MADE FOR 2.5% PREFERENCE FOR THE REASON CHECKED:</p> <p>() BIDDER IS AN INDIVIDUAL RESIDENT VENDOR AND HAS RESIDED CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR</p> <p>() BIDDER IS A PARTNERSHIP, ASSOCIATION OR CORPORATION RESIDENT VENDOR AND HAS MAINTAINED ITS HEAD-QUARTERS OR PRINCIPAL PLACE OF BUSINESS CONTINUOUSLY I WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR 80% OF THE OWNERSHIP INTEREST OF BIDDER IS HELD BY ANOTHER INDIVIDUAL, PARTNERSHIP, ASSOCIATION OR CORPORATION RESIDENT VENDOR WHO HAS MAINTAINED ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR</p> <p>() BIDDER IS A CORPORATION NONRESIDENT VENDOR WHICH HAS AN AFFILIATE OR SUBSIDIARY WHICH EMPLOYS A MINIMUM OF ONE HUNDRED STATE RESIDENTS AND WHICH HAS MAINTAINED ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS WITHIN WEST VIRGINIA CONTINUOUSLY FOR THE FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION.</p> <p>B. APPLICATION IS MADE FOR 2.5% PREFERENCE FOR THE</p>						

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<p>REASON CHECKED:</p> <p>() BIDDER IS A RESIDENT VENDOR WHO CERTIFIES THAT, DURING THE LIFE OF THE CONTRACT, ON AVERAGE AT LEAST 75% OF THE EMPLOYEES WORKING ON THE PROJECT BEING BID ARE RESIDENTS OF WEST VIRGINIA WHO HAVE RESIDED IN THE STATE CONTINUOUSLY FOR THE TWO YEARS IMMEDIATELY PRECEDING SUBMISSION OF THIS BID;</p> <p>OR</p> <p>() BIDDER IS A NONRESIDENT VENDOR EMPLOYING A MINIMUM OF ONE HUNDRED STATE RESIDENTS OR IS A NONRESIDENT VENDOR WITH AN AFFILIATE OR SUBSIDIARY WHICH MAINTAINS ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS WITHIN WEST VIRGINIA EMPLOYING A MINIMUM OF ONE HUNDRED STATE RESIDENTS WHO CERTIFIES THAT, DURING THE LIFE OF THE CONTRACT, ON AVERAGE AT LEAST 75% OF THE EMPLOYEES OR BIDDERS' AFFILIATE'S OR SUBSIDIARY'S EMPLOYEES ARE RESIDENTS OF WEST VIRGINIA WHO HAVE RESIDED IN THE STATE CONTINUOUSLY FOR THE TWO YEARS IMMEDIATELY PRECEDING SUBMISSION OF THIS BID.</p> <p>BIDDER UNDERSTANDS IF THE SECRETARY OF TAX & REVENUE DETERMINES THAT A BIDDER RECEIVING PREFERENCE HAS FAILED TO CONTINUE TO MEET THE REQUIREMENTS FOR SUCH PREFERENCE, THE SECRETARY MAY ORDER THE DIRECTOR OF PURCHASING TO: (A) RESCIND THE CONTRACT OR PURCHASE ORDER ISSUED; OR (B) ASSESS A PENALTY AGAINST SUCH BIDDER IN AN AMOUNT NOT TO EXCEED 5% OF THE BID AMOUNT AND THAT SUCH PENALTY WILL BE PAID TO THE CONTRACTING AGENCY OR DEDUCTED FROM ANY UNPAID BALANCE ON THE CONTRACT OR PURCHASE ORDER.</p> <p>BY SUBMISSION OF THIS CERTIFICATE, BIDDER AGREES TO DISCLOSE ANY REASONABLY REQUESTED INFORMATION TO THE PURCHASING DIVISION AND AUTHORIZES THE DEPARTMENT OF TAX AND REVENUE TO DISCLOSE TO THE DIRECTOR OF</p>						

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SIGNATURE 	TELEPHONE 651-575-5521	DATE 12-14-07
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TITLE Contract Administrator	FEIN 41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE
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RFQ COPY

TYPE NAME/ADDRESS HERE

VENDOR

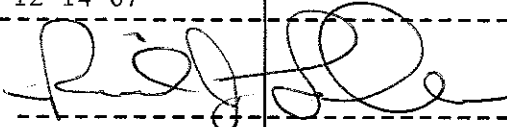
3M Company
 3M Center, Bldg. 225-5S-08, Box 33225
 St. Paul, MN 55133-3225

SHIP TO


**WV PRISON INDUSTRIES
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BID OPENING DATE: **11/15/2007** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>PURCHASING APPROPRIATE INFORMATION VERIFYING THAT BIDDER HAS PAID THE REQUIRED BUSINESS TAXES, PROVIDED THAT SUCH INFORMATION DOES NOT CONTAIN THE AMOUNTS OF TAXES PAID NOR ANY OTHER INFORMATION DEEMED BY THE TAX COMMISSIONER TO BE CONFIDENTIAL.</p> <p>UNDER PENALTY OF LAW FOR FALSE SWEARING (WEST VIRGINIA CODE 61-5-3), BIDDER HEREBY CERTIFIES THAT THIS CERTIFICATE IS TRUE AND ACCURATE IN ALL RESPECTS; AND THAT IF A CONTRACT IS ISSUED TO BIDDER AND IF ANYTHING CONTAINED WITHIN THIS CERTIFICATE CHANGES DURING THE TERM OF THE CONTRACT, BIDDER WILL NOTIFY THE PURCHASING DIVISION IN WRITING IMMEDIATELY.</p> <p>BIDDER: 3M Company</p> <p>DATE: 12-14-07</p> <p>SIGNED:  Richard J. LaClair</p> <p>TITLE: Contract Administrator</p> <p>* CHECK ANY COMBINATION OF PREFERENCE CONSIDERATION(S) IN EITHER "A" OR "B", OR BOTH "A" AND "B" WHICH YOU ARE ENTITLED TO RECEIVE. YOU MAY REQUEST UP TO THE MAXIMUM 5% PREFERENCE FOR BOTH "A" AND "B". (REV. 12/00)</p> <p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO: DEPARTMENT OF ADMINISTRATION</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	Richard J. LaClair	TELEPHONE 651-575-5521	DATE 12-14-07
TITLE Contract Administrator	FEIN 41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
PRI4656

PAGE
8

ADDRESS CORRESPONDENCE TO ATTENTION OF:
JOHN ABBOTT
304-558-2544

RFQ COPY
TYPE NAME/ADDRESS HERE

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3M Company
 3M Center, Bldg. 225-5S-08, Box 33225
 St. Paul, MN 55133-3225

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WV PRISON INDUSTRIES
MOUNT OLIVE CORRECTIONAL CTR
1 MOUNTAINSIDE WAY
MOUNT OLIVE, WV
25185 304-442-5958

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
10/22/2007				

BID OPENING DATE: **11/15/2007** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ PRI4656 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	Richard J. LaClair	TELEPHONE 651-575-5521	DATE 12-14-07
TITLE Contract Administrator	FEIN 41-0417775	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

WV Correctional Industries
PRI4656
PART A
LICENSE PLATE SPECIFICATIONS

Section I - GENERAL

This specification shall cover the materials, performance characteristics, quality, and testing of retroreflective sheeting and support services necessary to produce finished license plates.

1. DESCRIPTION

- a. The retroreflective license plate shall consist of retroreflective (hereinafter referred to as "reflective" only) sheeting laminated to a specified aluminum substrate which is then embossed and message roll coated according to the sheeting manufacturer's recommendations.
Vendor is required to provide manufacturer and product numbers/codes of all reflective sheeting and inks proposed for use under this contract.
- b. The reflective sheeting shall consist of lens elements enclosed within a transparent resin and shall have a precoated pressure sensitive adhesive backing protected by a removable liner. The pre-printed design, in the reflective sheeting, shall be buried below the sheeting surface to insure reliable long-term durability.
- c. The reflective sheeting, when applied to the license plate substrate and blanked to finished size, shall contain identifying marks for purposes of on-vehicle traceability, warranty enforcement, and anti-counterfeiting in accordance with these specifications. The identification marks shall be buried below the sheeting surface for durability and shall incorporate the manufacturer's logo, lot, and year of manufacture. The identification marks shall not interfere or detract from the graphic design or reduce sheeting brightness. The final design will be determined by the Division of Motor Vehicles, hereinafter referred to as the DMV.
- d. Vendor may, at not cost to the State, add enhanced security threads, marks or other features for purposes of anti-counterfeiting. Enhanced security features are not to interfere or detract from the graphic design or reduce sheeting brightness.
- e. Pre-printed reflective sheeting shall conform to the design, colors and sheeting type as approved by the State. When using white

background sheeting all graphic inks shall be transparent to facilitate the same daytime/night-time appearance.

- f. In addition to a price-per-roll for pre-printed reflective sheeting, each bidder shall include pricing of plain white reflective sheeting and any colored sheeting offered. The specifications contained herein shall apply to all standard size plate classifications and are inclusive of all special category plates issued by the state wherein reflective material is requested.

2. PREQUALIFICATION

Before any bid is considered, the vendor shall meet the following criteria:

- a. There are approximately 210 license plate designs currently in use. To assure high quality license plate performance, durability and service, the sheeting manufacturer shall provide references of experience to the satisfaction of the state agency. The successful manufacturer shall also:

- 1. Provide at no expense or liability to the State of West Virginia, five (5) full color license plates duplicated from random samples provided by the State, and one (1) additional sample imaged as described in Section IV.2. Samples shall not be embossed (or debossed). The State will use the samples to evaluate color match, quality and other specifications herein defined. To allow a reasonable period of time for each potential bidder to duplicate samples, the total advertisement period shall be a minimum of 45 days. **Mr. George Hill, 304-442-5958** will provide samples to be duplicated. Each vendor shall duplicate the same samples for a fair evaluation. Samples will be available for pick-up during the entire advertisement period. **A refundable deposit will be required in the amount of \$150 in the form of a cashier's check or a certified check. No personal checks or cash will be accepted. The deposit will be held until the samples are returned. All samples provided by the STATE shall be returned to Mr. Hill.**

The vendor should provide their samples to the WV Purchasing Division, along with the required Request for Quotation (RFQ) at the time of bid opening, to the attention of: John Abbott, 2019 Washington St. E., Charleston, WV 25305. Bidder should affix a label with the following information on each sample:

RFQ No. _____

Company Name _____

Contact _____

Telephone No. _____

2. Provide and install within 30 days of award of contract state-of-the-art application and processing equipment at no charge (if required). The sheeting manufacturer shall also provide a list of equipment and flow diagrams with the bid. Any equipment provided by the manufacturer shall be considered property of the State during the life of the contract and for a period not to exceed 6 months, as determined by the State, after the termination of the contract. The manufacturer shall be responsible for maintenance of the equipment during the life of the contract at no additional cost.
 3. Provide list and qualifications of experienced, full-time design, customer, technical, and sales services personnel.
 4. Provide expert installation service and on-site technical service within 48 hours at no charge; provide immediate toll-free call-in technical service.
 5. Provide next day delivery of stocked equipment parts.
 6. Provide all inks, thinners, and any other required supplies.
 7. Ship sheeting rolls via 9 or 12 roll "bulk-pack" configuration for ease of handling in the tag shop.
 8. Conform to all performance requirements of this specification as specified in Section II and as tested by the State designated testing lab.
 9. Properly warrant the plates produced from the manufacturer's sheeting. The sheeting manufacturer shall also provide a warranty mark in the sheeting in accordance with Section IV.2.
 10. Certify and demonstrate the ability to provide special graphic designs in quantities as limited as one 12-1/16" x 300 ft. roll upon request by the State.
- B. A corporate officer of the reflective sheeting manufacturer shall certify that the license plate materials and equipment shall perform according to this specification. Furthermore, the corporate officer shall also certify that sufficient technical services shall also be

provided by the sheeting manufacturer until quality license plates are produced by the State's manufacturing facility.

- C. The sheeting manufacturer shall submit technical data exhibiting characteristics of all materials proposed. Information submitted shall include detailed processing conditions for each phase of license plate manufacture. Such information shall also include times and temperatures required for curing of any inks and clear-coats (if required) for use in the production of completed license plates.

Vendors failing to conform to any requirement may be disqualified.

- D. Provide all inks, thinners and, warrant for life of sheeting at no additional cost to the State of West Virginia.

3. PERIODIC EVALUATION:

The State reserves the right to periodically evaluate the performance of materials. Samples for periodic evaluation of performance will be selected at random from materials submitted on State purchase orders. Failure of materials to comply with the requirements of this specification shall be cause for removal.

TECHNOLOGICAL IMPROVEMENTS:

The sheeting manufacturer may, with agreement of the state, incorporate technological improvements that better optimize the license plate production process and/or license plate performance.

Section II - PERFORMANCE STANDARDS

1. LICENSE PLATE SHEETING

- a. Substrate - The sheeting shall be laminated to a properly treated aluminum substrate recommended by the sheeting manufacturer.
- b. Diffuse Daytime Color - Through instrumental color testing, the diffuse daytime color of the reflective sheeting shall conform to color requirements as determined spectrophotometrically in accordance with ASTM E1164 and E1349, utilizing either 45/0 or 0/45 degree illumination/viewing conditions as described in E1164 and E1349 for retroreflective materials. Chromaticity and the Luminance Factor based on CIE tristimulus values for the 2° observer and Illuminant D65, shall be calculated in accordance with ASTM E308.

The color specification limits for white license plate sheeting are listed below. See Appendix I for other sheeting colors.

COLOR SPECIFICATION

Color	Chromacity Coordinates		Luminance Factor, Y(%)
	X	Y	
White	.303	.287	42 min.
	.368	.353	
	.340	.380	
	.274	.316	

c. Adhesive and Protective Liner

1. The precoated adhesive shall form a durable bond to flat license plate surfaces as recommended by the reflective sheeting manufacturer.
2. The protective liner attached to the adhesive shall be removable by peeling without soaking in water or other solvents and shall be easily removed after accelerated storage for four hours at 150 F (66 C) under weight of 2.5 lbs. per sq. in. (1.14 kg per 6.45 sq. cm.). The liner shall be non-printed to permit reuse.

d. Flexibility-Embossing - The sheeting shall, when correctly applied to treated aluminum, conform to the minimum/maximum tolerances for embossing and/or debossing dies as used by the manufacturing facility that supplies finished plates to the state and as recommended by the sheeting manufacturer.

e. Roll Coating - The reflective sheeting shall be roll coated and compatible with transparent and opaque colors as provided by the sheeting manufacturer.

2. FINISHED LICENSE PLATES

Test panels shall be prepared in accordance with Section III, Paragraph 1.

a. Retroreflective Characteristics - The coefficient of retroreflection for the sheeting shall be measured on flat, clean, finished license plate test panels and shall have the following minimum values at 0.2 observation angle, expressed as candlepower per foot-candle per square foot (candelas per lux per square meter) of material. Measurements shall be conducted in accordance with ASTM E810,

"Standard Test Method for Coefficient of Retroreflection of
Retroreflective Sheeting."

Color	ENTRANCE ANGLE	
	-4	40
White	50	16
Yellow	25	10
Orange	25	10
Lemon-Yellow	25	10
Gold	25	10
Green	18	7
Blue	18	7
Red	9	3

NOTE: Pastel background colors shall have initial reflectance values of at least 65% of values of standard white sheeting.

Pastel colors are as follows:

Salmon
 Sunflower
 Silver Gray
 Sand
 Lime Yellow
 Sea Green
 Sky Blue
 Straw
 Chamois

- b. Rainfall Performance - The Coefficient of Retroreflection of the same finished license plate test panels, measured on the same flat area of the test panels, totally wet by rain, shall not be less than 90% of the values specified above. Wet performance measurements shall be conducted at 0.2x observation and -4x entrance angles in accordance with ASTM E810 and using the test set-up described in Section 7.10.1 of AASHTO M 268.

- c. Daytime/Nighttime Color - To assist in positive daytime/nighttime identification of license plates, the color of the reflective background of the sheeting, including any pre-printed design, shall be similar in daylight and by illumination at night.
- d. Cleanability - Finished license plates, manufactured in accordance with the recommendations of the reflective sheeting manufacturer, shall be easily cleansed of normal dirt accumulation by washing with water and mild detergent. A test panel shall be sprayed with water-suspended soils collected from the underside of vehicle fenders, mixed with water in the proportion of five pounds (2.27 kg) of soil to one gallon (3.78 liters) of water, and poured through a paint strainer.

The mixture shall then be sprayed onto the panel while particles are in suspension. After the panel is thoroughly dry, it shall be cleaned by washing with a mixture of water and mild detergent, rinsed with clean water and wiped dry for examination. The panel shall show no appreciable difference when compared to a new clean panel.

- e. Solvent Resistance - License plates finished according to the manufacturer's recommendations shall be sufficiently solvent resistant to permit cleaning with VM&P naphtha, mineral spirits, turpentine, or other solvents commonly used on vehicle finishes. Rinsed and dried, the plate surface shall show no appreciable change following cleaning.

As a performance measurement, the finished license plate test panel shall be immersed for one minute in a test fuel (ASTM D471 Reference Fuel B). After removal, the test panel shall not show any visible change which would reduce its effective performance.

- f. Temporary Water Repellent Surface Coating - To check for temporary water-repellent surface coatings, a test panel shall be exposed for 150 hrs. to Twin Arc Weathering per ASTM G23-81 type E. Following exposure, the panel will be washed in a 5% HCl solution for 45 seconds, rinsed thoroughly with water, dried with a soft clean cloth, and brought to equilibrium at 72° F plus or minus 5° F and 50% RH plus or minus 5% RH. The panel shall then be measured for coefficient of retroreflection and shall maintain not less than 90% of the specified dry and wet minimum values in II.2.a. The panel shall show no appreciable discoloration, cracking, crazing, blistering, lifting, or dimensional change. The surface shall continue to be essentially smooth and provide a compatible surface for direct application of validation stickers with pressure sensitive adhesive.

Section III - TEST PANELS AND QUALITY CONFORMANCE

1. TEST PANELS

Finished license plate test panels 6" x 12" (15.2 cm x 30.5 cm) must be provided for testing and evaluation within ten (10) calendar days if required by the State, and shall be produced of the same materials on the same equipment and by the same general processes of substrate preparation, laminating, embossing or debossing, and roll coating as the production plates, in accordance with the sheeting manufacturer's recommendations. Note the following test panel exemption for photometric testing.

Special test panels for photometric testing shall be produced as above, except that they shall not be embossed (or debossed) and they shall not be roll coated.

All test panels must be conditioned for at least 24 hours at 72°F \pm 5°F (22°C \pm 1°C) and 50% \pm 2% RH prior to testing.

2. QUALITY CONFORMANCE

Failure of the reflective sheeting to meet any requirement specified herein shall be cause for refusal to accept materials until evidence has been provided by the manufacturer that corrective action has been taken to eliminate deficiencies.

Section IV - PERFORMANCE LIFE AND WARRANTIES

1. PERFORMANCE LIFE

Reflective sheeting applied and processed into finished license plates according to the sheeting manufacturer's instructions shall be considered to perform effectively for the service life specified (excluding those plates showing mechanical damage) if:

- a. The plates show no fading, cracking, blistering, or peeling which will significantly impair the intended visibility or legibility of the plate, and if
- b. The clean plate retains at least 5 candlepower per foot candle per plate (0.46 candelas per lux per plate) for the length of the intended issue being bid.

Measurements shall be conducted at 0.2x observation angle and -4x entrance angle. Coefficient of Luminous Intensity shall be measured using the test method outlined in ASTM E810 except that the Coefficient of Luminous Intensity shall be determined in

accordance with ASTM E808 Para. 4.2.1 and ASTM E809 Para. 12.1.1.

2. WARRANTY PROVISIONS

For warranty purposes, the sheeting shall be imaged with the manufacturer's logo, year of manufacture, and lot number. If at any time during the specified performance life of the reflective material provided, a one-half of one percent sample of clean, plates produced from a given production run reveals that 10 percent or more of that sample are found to be defective in visual or brightness performance requirements as defined herein, the vendor shall be responsible for replacement of all plates manufactured from that specific lot of material.

The sheeting manufacturer shall be responsible for all replacement costs associated with a specific lot; a maximum liability assessment of \$7.50 per plate may be invoked for failed plates associated with a specific lot. Reimbursement of the State shall be in dollars and/or materials equal to the assessed damage, at the State's discretion.

To assure effective identification, the identification marks shall be approximately 1.125 inches in diameter on standard 6" x 12" plates and shall be of a design mutually agreed upon by the State and the sheeting manufacturer. The manufacturer may vary the number, design and placement of the marks for motorcycle or smaller license plate sizes.

The identification marks shall be verifiable on a license plate once properly affixed to the vehicle's designated mounting area, from an approximate head-on distance of six (6) feet; warranty marks shall not be observable at 2 feet or 20 feet or when the viewer steps to one side from the head-on viewing position so as not to compete or conflict with vital plate information.

The identification marks shall be verifiable under both ambient light and retroreflected light at night, shall not interfere or conflict with the plate design or aesthetics, and shall not alter sheeting colors or reduce sheeting brightness below specified levels.

Section V - SUPPORT SERVICES

1. PLATE DESIGN SERVICE

The manufacturer shall maintain a full-time design service to assist the State in creating a license plate of high legibility, recognition and desired aesthetics. Such services shall be provided at no additional cost to the State.

The manufacturer shall work directly with the Division of Motor Vehicles, State of West Virginia, in creating and developing license plate designs. All designs must be approved by the Commissioner of the Division of Motor Vehicles or his designee.

Consistency of printing and roll coat inks must be maintained throughout the contract period. The vendor must provide for and maintain a compatible color match to existing and/or selected designs by the State. The sheeting manufacturer will be required to furnish sheeting based on the current license plate design/format or any approved State design. Failure to match and maintain colors in accordance with this section will be cause for contract cancellation.

Special-plate-category designs shall be provided in standard roll form so that they can be manufactured into finished plates by the same process and on the same machinery as used for the basic design(s) covered by this contract. The successful bidder must be able to provide these designs in quantities as limited as one 100 ft. roll of material. Any variance in price related to volume or the number of colors used in a particular design must be noted in the vendor's bid.

The State reserves the right to redesign any or all of the plates required under these specifications during any resulting contract period.

2. TECHNICAL SERVICE

The reflective sheeting supplier shall, without additional cost, provide the license plate manufacturing shop with expert technical service and product information to ensure the shop operating personnel are proficiently trained to manufacture quality license plates. All training must be completed within two weeks after all equipment is installed and in satisfactory working condition and materials are provided to the shop personnel.

To ensure continued quality license plate manufacturing, the sheeting supplier shall, without additional cost, provide the State with a minimum of one day on-site technical maintenance service per 100 days of actual production.

3. EQUIPMENT

The sheeting supplied must be compatible with existing State equipment or the reflective sheeting supplier shall provide the necessary equipment for the intended contract period to laminate plain or pre-printed sheeting to the substrate inclusive of, but not limited to, the reflective sheeting applicator, stretch control mechanics, brake table and corresponding registry feed controls. All required training shall be completed and equipment installed and operational within forty-five (45) days of notice of award of contract. Installation and training shall be

acceptable upon consistently running the required line(s) at representative speeds not to exceed 100 strokes per minute with a rejection rate of 2% or less. The acceptability of the blanks shall be determined by the issuing agency in conjunction with the license plate plant management.

If the application registry control and stretch control equipment is not installed in the time and manner as specified above or if any sheeting, ink or coating fails to meet specifications, the entire order is subject to cancellation and the State reserves the right to purchase all sheeting, ink and coating covered by the order from an alternate source, with the defaulting contractor reimbursing any cost differential.

The sheeting manufacturer shall provide a list of available stocked parts to the State. In the event of equipment failure the sheeting manufacturer shall ship stocked replacement parts by express carrier within 12 hours of notification.

On site technical service shall be available within 48 hours of notification by the State of production difficulties.

The cost of any waste materials, including metal and sheeting generated because of faulty installation and testing of application, stretch and registry equipment will be reimbursed to the State by the successful vendor. Any salary costs incurred outside of normal operating hours of the shop operating personnel, because the successful bidder requested to work outside of normal scheduled work hours of the license plate plant employees, will be borne by the vendor.

Upon expiration of the existing contract, the existing sheeting supplier's equipment, if provided, shall be removed within thirty (30) days unless an extension of the sheeting contract has been negotiated with the sheeting supplier.

Section VI - PACKAGING AND SHIPPING

To ensure easy access and proper inventory control and to prevent roll damage due to double stacking, the reflective sheeting shall be shipped in bulk packages. Each package should contain twelve (12) 750 ft. rolls per layer, by three (3) layers high with two single packaged rolls on top. Production run sequence numbers shall be affixed to the outside of each shipping package that corresponds to the materials contained therein. Each roll shall be additionally designated by a core identifier stamped or affixed with a permanent label to the inside of each roll core. Sheeting shall be shipped with no more than three (3) production lots per pallet. Mismatch of numbers on the box and inside the roll core can be cause for rejection. A shipping or packaging list shall be affixed to one box on a pallet identifying all production runs contained within the shipment.

Section VII - DELIVERY SCHEDULE

All deliveries shall be provided F.O.B. destination to the State's designated point of delivery. The first expected delivery of reflective sheeting shall be not later than forty-five (45) days following official notification of contract award, initial order and receipt of State approved artwork. All subsequent deliveries shall be F.O.B. destination within thirty (30) days after receipt of order. Penalty for non-delivery of material within the thirty (30) day window will be charged at \$500 per business day and will be deducted from the invoice upon receipt.

Section VIII - ACCOUNTABILITY

The manufacturer shall be accountable for all sheeting from the place of manufacture to the point of delivery. All over-run materials remaining in the manufacturer's possession after discontinuation of any design or the contract's cancellation, shall be destroyed and used for no other purpose.

Engraved printing cylinders used to manufacture pre-printed sheeting shall be supplied and remain in the possession of the sheeting manufacturer until such time as the cylinders are destroyed.

The vendor must provide adequate security methods and supervision to protect sheeting from unauthorized use.

Section IX - PROCESSING

The reflective sheeting processing shall be in accordance with the recommendations of the manufacturer. All processing procedures for reflective material, thinners, coatings, solvents and inks must be compatible, or made compatible at the vendor's expense, with equipment and procedures currently employed by the State.

Failure to meet the terms, conditions and specifications of the contract shall be considered as a breach of contract and may subject the contract to cancellation and/or other penalty as provided for under law.

The contractor will be required to deliver all thinner, inks and clear coat if required on an "as needed" basis. Delivery in the amounts required must be completed within thirty (30) days after receipt of order.

Projected volumes are estimates only. The contract shall be for actual amounts ordered during the selected contract production period. Delivery schedules and quantities must be coordinated with the State's designated manufacturer.

PART A**APPENDIX I****COLOR SPECIFICATIONS**

Color	Chromaticity Corner X	Coordinate Points Y	Luminance Factor, Y(%)
1. White	.303	.287	42 Min.
	.368	.353	
	.340	.380	
	.274	.316	
2. Yellow	.498	.412	28-38
	.557	.442	
	.479	.520	
	.438	.472	
3. Lemon Yellow	.455	.455	40-50
	.514	.485	
	.440	.558	
	.395	.508	
4. Orange	.505	.354	14-24
	.600	.360	
	.550	.412	
	.478	.385	
5. Blue	.181	.069	11-20
	.270	.220	
	.230	.250	
	.103	.246	
6. Green	.210	.275	15-25
	.280	.385	
	.180	.520	
	.080	.310	
7. Red	.613	.297	5-10
	.708	.292	
	.636	.364	
	.558	.352	

WV Correctional Industries
PRI4656
PART B
SPECIFICATIONS FOR THERMAL TRANSFER
PRINTABLE VALIDATION SHEETING

SECTION I – GENERAL

This specification shall cover the equipment, materials, performance characteristics, quality, testing and support services for retroreflective sheeting with verifiable security marks to produce thermal transfer printed validation stickers for license plates.

A. DESCRIPTION

The retroreflective (hereafter referred to as (“reflective”) sheeting shall consist of lens elements enclosed within a transparent resin and shall have either two pre-coated pressure sensitive adhesives separated by a liner or a single adhesive layer, depending on customer requirements. The first layer assures maximum adhesion to the license plate, while the second layer, piggyback coated on the liner of the first adhesive, facilitates sheeting and cardstock processing through the manufacturer’s thermal transfer printing system.

The sheeting shall contain identifying marks for purposes of on-vehicle traceability, warranty enforcement, and anti-counterfeiting in accordance with these specifications. The identification marks shall be buried below the sheeting surface for durability and shall incorporate the manufacturer’s logo, lot, and year of manufacture. The identification marks shall not interfere or detract from the graphic design or reduce sheeting brightness. The final design shall be determined by the Division of Motor Vehicles. These security marks shall facilitate visual verification of authenticity.

The reflective sheeting shall have a smooth weather resistant surface, which is receptive to durable thermal transfer resin colorants. The surface shall enable high quality thermal transfer imaging. The reflective stickers shall be processed according to the sheeting manufacturer’s recommendations.

B. PREQUALIFICATION

Prospective bidders who desire to pre-qualify materials governed by this specification, should submit technical data exhibiting characteristics and processing parameters of the sheeting, adhesives, thermal transfer printing colorants, and equipment systems for the production of completed validation stickers. In addition bidder shall provide, at no expense or liability to the State of West Virginia, five (5) validation decals, each of a different color, duplicated from each type of the five (5) different types of

decals the agency has. The State will use the samples to evaluate color match, quality and other specifications herein defined. To allow a reasonable period of time for each bidder to duplicate samples, the total advertisement period shall be a minimum of 45 days. Mr. Chuck Welling, 304-684-5521, will provide five samples to be duplicated. Samples will be available for pick-up during the entire advertisement period.

A refundable deposit will be required in the amount of \$250 in the form of a cashier's check or a certified check. No personal checks or cash will be accepted. The deposit will be held until the samples are returned. All samples provided by the State shall be returned to Mr. Welling on or before the formal bid opening date. The vendor should provide their samples to the WV Purchasing Division, along with the required Request for Quotation (RFQ) at the time of bid opening, to the attention of: John Abbott, 2019 Washington St. East, Charleston, WV 25305. Bidder should affix a label with the following information on each sample:

RFQ No. _____

Company Name _____

Contact _____

Telephone No. _____

If a review of the technical data and samples indicate that the proposed materials and equipment comply with the requirements of this specification, the pro-spective bidder or supplier shall be so notified.

The successful bidder will be required to provide all equipment, software programming, and operator training to produce validation stickers.

In the event of equipment failure, the vendor shall ship stocked replacement parts by express carrier within 12 hours of notification of equipment failure.

SECTION II – REQUIREMENTS

A. RETROREFLECTIVE CHARACTERISTICS

1. The unprinted reflective sheeting shall have the following minimum coefficients of retroreflection expressed as candlepower per foot candle per square foot of material (candelas per lux per square meter). Test samples shall be oriented as specified in the manufacturer's instructions. The coefficient of retroreflection shall be measured in accordance with ASTM E-810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting," except that only one reading shall be taken at each position; the sample shall not be rotated 90 degrees.

Observation Angles	White <u>0.2 DEGREES</u>
Entrance Angles	
-4 Degrees	50.0
40 Degrees	10.0

See Appendix I for Retroreflective Characteristics of other colors

2. RAINFALL PERFORMANCE

The coefficient of retroreflection of the same sheeting, totally wet by rain, shall not be less than 90% of the above values. Wet performance measurements shall be conducted at 0.2 degrees observation and -4 degrees entrance angle in accordance with ASTM-810 and using the test set-up described in FHWA Specification FP-85, Section 718.03 (a) and Section 7.10.1 of AASHTO M 268.

B. ADHESIVE AND PROTECTIVE LINER

1. The first pre-coated pressure-sensitive adhesive shall form a durable, vandal resistant bond to clean, dry, properly painted or reflective sheeting license plate surfaces or sticker surfaces of the same material.
2. Adhesive No. 2, if required for a piggyback construction and applied to the backside of adhesive No. 1's liner, shall hold retroreflective stickers on a temporary support liner prior to release and tipping onto cardstock.
3. The adhesive shall not exude from sheeting edges when processed into finished stickers so as to cause pieces to stick together during printing, handling or while packaged in shipment and distribution.
4. The protective liner of adhesive No. 1 shall be removed by peeling without soaking in water or other solvents and shall be easily removed after storage for four hours at 150 degrees F. (66 degrees C.) Under a weight of 2.5 lbs. per sq. in. (0.17 kg/cm squared).

C. DIFFUSE DAYTIME COLOR

Through instrumental color testing, the diffuse daytime color of the reflective sheeting shall conform to color requirements as determined spectro-photometrically in accordance with ASTM E-1164 and E-1349, utilizing either 45/0 or 0/45 degree illumination/viewing conditions as

described in E-1164 and E-1349, utilizing either 45/0 or 0/45 degree illumination/viewing conditions as described in E-1164 and E-1349 for retroreflective materials. Chromaticity and the Luminance Factor based on CIE tristimulus values for the 2⁰ observer and Illuminant D65, shall be calculated in accordance with ASTM E-308.

<u>Color</u>	<u>Chromaticity Coordinate</u> <u>Corner Points</u>		<u>Luminance Factor</u>
	<u>X</u>	<u>Y</u>	<u>Y%</u>
1. White	.303	.290	35 min.
	.365	.354	
	.340	.378	
	.278	.316	

D. SECURITY MARKS

The sheeting shall have protective security marks which are an integral part of the sheeting, and which make unauthorized sticker reproduction extremely difficult. The security marks shall be of a design mutually agreed upon by the State and the sheeting manufacturer and shall meet the following additional requirements:

1. Stickers (25 inches - 64 cm - from the ground) properly applied to a vertically-mounted license plate shall provide effective visual verification by exhibiting the following:
 - a. The marks shall be visible to a 6 ft. (180 cm) tall viewer directly facing the sticker's surface at 30 degrees above the perpendicular to the sticker.
 - b. The marks shall not be visible to the viewer standing 2 ft. (.6m) and 20 ft. (6.1m) from and directly facing the sticker.
 - c. The marks shall not be visible when viewed at an angle greater than 45 degrees to the left or right side of the sticker.
2. The security marks shall: a) be verifiable in diffuse daylight and by retroreflected light at night; b) be visible on a sticker when held at arm's length and slightly titled. These same marks shall not be visible when rotated 90 degrees from the first viewing position; c) not alter sheeting colors or reduce sheeting brightness below specified levels; and d) not be removable by chemical or physical means from the sheeting or finished validation sticker, applied or unapplied, without irreparable damaged to the reflective system.

E. PROCESSABILITY

The successful bidder shall furnish a matched component system inclusive of all sheetings, adhesives, thermal transfer colorants, and equipment needed to produce license plate validation stickers meeting the requirements of this applications.

All components shall be compatible with all procedures and equipment used by the State to manufacture license plate validation stickers. Verification of compatibility will be required by the State's sticker manufacturing facility prior to initiating the production of validation stickers of each size and color specified; the components shall be submitted to the appropriate agency for visual examination and testing. Print quality of finished stickers shall meet commonly accepted industry standards to include machine readable symbology, when required.

F. PRODUCTION EQUIPMENT

The sticker sheeting manufacturer shall provide all equipment required on a bailment agreement to manufacture finished validation stickers to include the printer, printer control device, and printer/driver software.

The state shall be responsible for development of the interface software between the printing equipment and the State's database(s).

The State shall utilize the thermal transfer printer for other non-reflective sticker printing without the expressed permission from the reflective sheeting manufacturer.

The equipment shall be removed from the State's manufacturing facility within 30 days of contract expiration and non-removal.

In the event of equipment failure, the vendor shall ship stocked replacement parts by express carrier within 12 hours of notification of equipment failure.

G. CLEANABILITY

The sheeting processed into finished stickers and applied in accordance with the recommendations of the reflective sheeting manufacturer, shall be readily cleansed of normal dirt accumulation by washing with water and mild detergent.

The surface shall also be sufficiently solvent-resistant to permit cleaning with solvents commonly used to clean vehicle finishes. Accordingly, the surface printed colorant shall show no wear after exposure to 25 cycle rubs (one cycle equals one rub back and forth) with a "Q-tip" type cotton swab with gasoline, methyl alcohol, kerosene, mineral spirits, VM & P naphtha, 409 cleaner, window cleaners, and other common cleaners used to clean automotive paint finishes. See Appendix II for the test method.

H. WET ABRASION RESISTANCE

Finished stickers shall show good wet abrasion resistance after 1000 cycles of "Wet Scrub" testing. No appreciable wear shall be observed. See Appendix II for the test method.

I. PERFORMANCE LIFE

Finished stickers, including surface printed colorants, shall remain clear and durable and shall provide a compatible surface for direct application of additional annual validation stickers of the same material.

J. GENERAL AND DIMENSIONAL REQUIREMENTS

The sheeting shall be furnished as die cut stickers in roll form to the size and shape specified. Rolls shall be wound to provide proper orientation of the security mark.

K. TECHNICAL SERVICE

The printing equipment vendor shall provide the validation sticker manufacturing shop with competent technical service and product information until the site operating personnel are able to manufacture quality validation stickers in keeping with the State's requirements and according to the manufacturer's recommendations. A listing of the technical service personnel and their qualifications shall be provided.

In the event production difficulties are experienced with the successful bidder's materials, the sheeting manufacturer shall provide telephone toll-free technical service call-in consultation. Telephone technical service shall be furnished by the sheeting manufacturer at no additional cost until such times as the difficulties are resolved.

L. Packaging and Delivery

All reflective sheeting and other materials shall be packaged in accordance with accepted commercial standards. All deliveries shall be provided F.O.B. destination to the State's designated point of delivery. The first expected delivery of validation sheeting shall be not later than forty-five (45) days following official notification of contract award, initial order and receipt of State approved art work. All subsequent deliveries shall be F.O.B. destination within thirty (30) days after receipt of order. Penalty for non-delivery of material within the (thirty) 30 day window will be charged at \$500 per business day and will be deducted from the invoice upon receipt.

PART B**APPENDIX I****VALIDATION SHEETING RETROREFLECTIVE CHARACTERISTICS**

The coefficient of Retroreflection shall be measured on flat, clean Validation Sheeting and shall have the following minimum values at 0.2° observation angle, expressed as candlepower per foot-candle per square foot (candelas per lux per square meter) of material. Measurements shall be conducted in accordance with ASTM E-810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting".

Color	Entrance Angles	
	-4°	40°
White	50	10
Yellow	30	8
Lemon-Yellow	28	11
Green	28	8
Blue	14	5
Red	10	3
Orange	6	2
Gold	30	10
Yellow-Green	24	8
Magenta	12	3

PART B**APPENDIX II****TESTING OF THERMAL TRANSFER PRINTED VALIDATION DECALS**

These testing procedures cover the testing of thermal transfer printed validation stickers for abrasion resistance and resistance to cleaners and solvents. NOTE: Only cleaners and solvents commonly used on or around vehicle paint finishes need to be tested.

1. Wet Scrub Abrasion Resistance

References: Federal Test Method Standard 141a, Method 6142; Gardner Laboratory Bulletin WG2000

Equipment:

The test used here is a modification of the Federal Test Standard No. 141a, Method 6142, "Scrub Resistance". An apparatus such as Gardner Model M-105 or the Gardner Straight Line Washability and Abrasion Tester No. 1364 is required.

Sample Preparation:

Prepare samples by adhering two test decals to conversion coated aluminum weathering panels available from Q-Lab 800 Canterbury Road, Westlake, Ohio 44145; Telephone: (440/835-8700). Panels measure 11" x 2.75". After applying the decals, roll them down firmly with a small wallpaper rubber roller (approximately 1.5" dia.).

Allow samples to stand for 48 hours in a constant temperature/humidity room before testing.

Procedure:

1. After conditioning the brush in lukewarm water for 30 minutes, shake out the excess water. Then condition the brush in a 0.5 percent detergent ("Dreft") solution for 5 minutes. Place the Chinese hogs bristle brush in the brushholder.
2. Mount the test panel in the test apparatus. The test apparatus may need to be modified slightly to accommodate the 11" x 2.75" test panel
3. Turn on the machine and allow 1,000 scrub cycles to pass before stopping the machine. During the test period, a 0.5% detergent ("Dreft") solution is dipped on the test panel at the approximate rate of 12 drops per minute through a titration column or just enough to keep the panel wet.

4. Rinse and dry the test panel.

Results:

If the decal print does not show sufficient wear so that the tester can see the substrate sheeting, the sample decal passes the test.

2. RESISTANCE TO SOLVENTS AND CLEANERS

Printed stickers may be tested on the card stock or on the liner.

Test Solvents: methyl alcohol, mineral spirits, kerosene, VM & P naphtha, and gasoline. (NOTE: Solvents that damage automobile paint or lacquer finishes, should not be used as a test solvent).

Test Cleaners: "409", window glass, ammonia, bug and tar (with petroleum distillates or mineral spirits)

Procedure:

Wet a "Q-tip" type cotton swab (mounted on the end of a stick) with the respective solvent or test cleaner.

The tester holds the swab at a 45 degree angle to the test sticker and with approximately 40 grams of pressure, wipes the wet swab back and forth across the printed sticker for 10 cycles (one cycle is once across the sample and back). The tester conducts the same test on a second sample for 25 cycles.

Results:

The sample passes if the solvent or cleaner does not solvate the print sufficiently to wear through to the substrate.

(SEE PART A FOR SPECIFICATIONS)
COMMODITY CODES DMV 1 THRU DMV 16 ARE:

SPECIAL CATEGORY PLATES, 5 YEAR DURABILITY, PRE-PRINTED DESIGN, 12-1/16" x 100 & 300 Yd. Roll

Price Per 100 & 300 Yard Roll

Commodity Code No.	No. Of colors	Short Run (up to 40 rolls)	Long Run (more than 40 rolls)	
DMV 1	1			
DMV 2				
DMV 3	2			
DMV 4				
DMV 5	3			
DMV 6				
DMV 7	4			
DMV 8				
DMV 9	5			
DMV 10				
DMV 11	6			
DMV 12				
DMV 13	7			
DMV 14				
DMV 15	8			
DMV 16				

(SEE PART A FOR SPECIFICATIONS)

COMMODITY CODES DMV 17 THRU DMV 32 ARE:

SPECIAL CATEGORY PLATES, 5 YEAR DURABILITY, PRE-PRINTED DESIGN, 7-1/16" x 200 Yd. Roll

(SEE PART A FOR SPECIFICATIONS)

COMMODITY CODES DMV 33 THRU DMV 34 ARE:

Reflective Sheeting, Enclosed Lens, Graphic, Solid Color - *White Only* – See Bid form for sizes

(SEE PART B FOR SPECIFICATIONS)

COMMODITY CODES DMV 35 THRU DMV 44 ARE:

Thermal Transfer Printable Validation Sheeting/Laminating Adhesive Film Liner

Commodity Code No.	Description & Size		
DMV 35	Vehicle, Trailer and Recreational Decals: 2,800 decals per roll, without back print 3/8" staple tab, die-cut, 1-up. 1.875"w x 1.125"h x 0.125" corner radius.		
DMV 36	Same as 35		
DMV 37	Motorcycle Decals: 2,800 decals per roll, without back print 3/8" staple tab, die-cut, 1-up. .75"w x 1.5"h x 0.125"corner radius.		
DMV 38	Same as 37		
DMV 39	Motorboat Decals: 2,500 decals per roll, without back print 3/8" staple tab, die-cut, 1-up. 3"w x 3"h x 0.125" corner radius.		
DMV 40	Same as 39		
DMV 41	Farm Decal: 1,000 decals per roll, 3" x 100 yard roll Face Adhesive Validation (FAV) for inside windshield use.		
DMV 42	Same as 41		

DMV 43	Laminating Adhesive Film Liner: To be used with Farm Decal FAV (above). 2 Mil x 2-7/8" x 100 yds.		
Misc. 5460 - 3"	Misc. Decal, 3" x 50 yards		
Misc. 5460 - 4"	Misc. Decal, 4" x 50 yards		

PRI4656 - Reflective License Plate Materials - Bid Form				
Item #	Description	Est. Oder Qty.	Unit Price	Total
	Licens Plate Material			
DMV 1	1 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	1 Roll	\$ 1809.38	\$ 1809.38
DMV 2	1 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	1 Roll	\$ 1019.58	\$ 1019.58
DMV 3	2 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	13 Rolls	\$ 1981.27	\$ 25,756.51
DMV 4	2 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	1 Roll	\$ 1042.20	\$ 1,042.20
DMV 5	3 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	1 Roll	\$ 2197.49	\$ 2,197.49
DMV 6	3 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	126 Rolls	\$ 1067.53	\$ 134,508.78
DMV 7	4 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	1 Roll	\$ 2714.06	\$ 2,714.06
DMV 8	4 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	3 Rolls	\$ 1091.05	\$ 3,273.15
DMV 9	5 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	1 Roll	\$ 3089.50	\$ 3,089.50
DMV 10	5 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	1 Roll	\$ 3089.50	\$ 3,089.50
DMV 11	6 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	1 Roll	\$ 3472.19	\$ 3,472.19
DMV 12	6 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	2 Rolls	\$ 3472.19	\$ 6,944.38
DMV 13	7 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	1 Roll	\$ 3980.63	\$ 3,980.63
DMV 14	7 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	1 Roll	\$ 3980.63	\$ 3,980.63
DMV 15	8 Color - Short Run - Up to 40 Rolls - 300 Yard Rolls	1 Roll	\$ 5753.81	\$ 5,753.81
DMV 16	8 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	1 Roll	\$ 5753.81	\$ 5,753.81
			Subtotal	\$ 208,385.60

Vendor: 3M Company

Contract Coordinator: Richard J. LaClair

Telephone Number: 651-575-5521

Fax Number: 800-591-9293

Email Address: tvsmmm.com

PRI4656 - Reflective License Plate Materials - Bid Form				
Item #	Description	Est. Oder Qty.	Unit Price	Total
	Licens Plate Material			
DMV 1A	1 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 603.13	\$ 603.13
DMV 2A	1 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 339.86	\$ 339.86
DMV 3A	2 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 660.42	\$ 660.42
DMV 4A	2 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 347.40	\$ 347.40
DMV 5A	3 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 732.50	\$ 732.50
DMV 6A	3 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 355.84	\$ 355.84
DMV 7A	4 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 904.69	\$ 904.69
DMV 8A	4 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 363.68	\$ 363.68
DMV 9A	5 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,029.84	\$ 1,029.84
DMV 10A	5 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,029.84	\$ 1,029.84
DMV 11A	6 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,157.40	\$ 1,157.40
DMV 12A	6 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,157.40	\$ 1,157.40
DMV 13A	7 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,326.88	\$ 1,326.88
DMV 14A	7 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,326.88	\$ 1,326.88
DMV 15A	8 Color - Short Run - Up to 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,917.94	\$ 1,917.94
DMV 16A	8 Color - Long Run - Over 40 Rolls - 100 Yard Rolls	1 Roll	\$ 1,917.94	\$ 1,917.94
			Subtotal	\$ 15,171.64

PRI4656 - Reflective License Plate Materials - Bid Form

Item #	Description	Est. Oder Qty.	Unit Price	Total
	Licens Plate Material			
DMV 17	1 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	1 Roll	\$ 706.25	\$ 706.25
DMV 18	1 Color - Long Run - Over 40 Rolls - 200 Yard Rolls	1 Roll	\$ 397.97	\$ 397.97
DMV 19	2 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	7 Rolls	\$ 773.34	\$ 5,413.38
DMV 20	2 Color - Long Run - Over 40 Rolls - 300 Yard Rolls	1 Roll	\$ 406.80	\$ 406.80
DMV 21	3 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	1 Roll	\$ 857.74	\$ 857.74
DMV 22	3 Color - Long Run - Over 40 Rolls - 200 Yard Rolls	1 Roll	\$ 416.69	\$ 416.69
DMV 23	4 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	1 Roll	\$ 1,059.38	\$ 1,059.38
DMV 24	4 Color - Long Run - Over 40 Rolls - 200 Yard Rolls	1 Roll	\$ 425.87	\$ 425.87
DMV 25	5 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	1 Roll	\$ 1,205.92	\$ 1,205.92
DMV 26	5 Color - Long Run - Over 40 Rolls - 200 Yard Rolls	1 Roll	\$ 1,205.92	\$ 1,205.92
DMV 27	6 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	1 Roll	\$ 1,355.29	\$ 1,355.29
DMV 28	6 Color - Long Run - Over 40 Rolls - 200 Yard Rolls	1 Roll	\$ 1,355.29	\$ 1,355.29
DMV 29	7 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	1 Roll	\$ 1,553.75	\$ 1,553.75
DMV 30	7 Color - Long Run - Over 40 Rolls - 200 Yard Rolls	1 Roll	\$ 1,553.75	\$ 1,553.75
DMV 31	8 Color - Short Run - Up to 40 Rolls - 200 Yard Rolls	1 Roll	\$ 2,245.88	\$ 2,245.88
DMV 32	8 Color - Long Run - Over 40 Rolls - 200 Yard Rolls	1 Roll	\$ 2,245.88	\$ 2,245.88
			Subtotal	\$22,405.76

PRI4656 - Reflective License Plate Materials - Bid Form				
Item #	Description	Est. Oder Qty.	Unit Price	Total
	Licens Plate Material			
DMV 33	12-1/16" X 300 Yards - White	18 Rolls	\$ 958.06	\$ 17,245.08
DMV 34	7-1/6" X 200 Yards - White	1 Roll	\$ 373.96	\$ 373.96
DMV 35	See Specifications	560 Rolls	\$ 222.60	\$ 124,656.00
DMV 36	See Specifications	100 Decals	\$0.0795	\$ 7.95
DMV 37	See Specifications	29 Rolls	\$ 222.60	\$ 6,455.40
DMV 38	See Specifications	100 Decals	\$ 0.0795	\$ 7.95
DMV 39	See Specifications	87 Rolls	\$ 259.50*	\$ 22,576.50
DMV 40	See Specifications	100 Decals	\$ 0.2595	\$ 25.95
DMV 41	See Specifications	24 Rolls	\$ 80.03	\$ 1,920.72
DMV 42	See Specifications	100 Decals	\$ 0.08	\$ 8.00
DMV 43	See Specifications	1 Roll	\$ No Charge	\$ No Charge
Misc. 5460-3"	Misc. Decal, 3"X50 Yards	1 Roll	\$ 52.50	\$ 52.50
Misc. 5460-4"	Misc. Decal, 4"X50 Yards	1 Roll	\$ 70.00	\$ 70.00
			Subtotal	\$173,400.01

GRAND TOTAL	\$ 419,363.01
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* 1,000 Stickers per roll. Note: Due to the size of the stickers, Motorboat Decals will be supplied in rolls of 1,000 decals.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

LICENSING: Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY: The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

Vendor's Name: 3M Company

Authorized Signature: _____

Richard J. LaClair

Date: 12-14-07



December 14, 2007

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Re: Request for Quotation # PRI4656
Reflective Sheeting for License Plates
Opening December 18, 2007 @ 1:30PM

CERTIFICATION

3M Company hereby certifies that the reflective materials and required state-of-the-art application and processing equipment proposed for the above referenced reflective sheeting license plates bid have been successfully utilized by other states for full license plate issues under conditions the same and different than that experienced in the State of West Virginia and will meet all requirements of the specifications submitted.

3M Company certifies that we will provide sufficient technical services until quality license plates are being produced by the State's manufacturing facility. 3M Company will also provide special graphic designs in quantities as limited as one, one hundred yard roll, upon request by the state.

Sincerely,

A handwritten signature in black ink, appearing to read 'Richard J. LaClair', written over a horizontal line.

Richard J. LaClair
Contract Administrator



Preclear Reflective License Plate Sheeting

With Ensure™ Image and Optional Ensure™ Virtual Security Thread

For Use on Multi-Year License Plates

Series 4770E/4770T

Product Bulletin 4770E/4770T

August 2007

Replaces PB 4770E/4770T dated October 2005

Description

3M™ Preclear Reflective License Plate Sheeting Series 4770E/4770T is a durable, all-weather, retroreflective sheeting consisting of lens elements enclosed within a transparent resin, designed for use in the fabrication of multi-year reflective license plates. Plates can be embossed and roll coated with either transparent or opaque roll coating inks to produce attractive license plates which function 24 hours a day to enhance nighttime safety and the legibility of the vehicle identification system. Series 4770E/4770T sheeting appears similar during the day and at night (when viewed by reflected light) and is highly reflective when viewed both head-on and at wide entrance angles.

The backside of the reflective sheeting is pre-coated with a pressure sensitive adhesive, protected by a removable liner, for application to license plate substrates.

Series 4770E/4770T sheeting is available with personalized graphic designs which offer a unique opportunity to promote a country, state or national attraction, event or image while continuing to provide the motorist with the safety aspects of fully reflective license plates. Additional stretch and registry control equipment is required to process graphic printed sheetings.

3M sheetings, processing materials and equipment provide flexibility in the design of a license plate system, specific to the desires and requirements of plate issue relative to color, reflectivity, durability, design and plate manufacture.

3M™ Ensure™ Image

Series 4770E/4770T sheeting with 3M™ Ensure™ Image contains directional positive identification images or marks that are an integral part of the sheeting and are visible only within a specific viewing angle range. The marks are extremely difficult to counterfeit and facilitate visual examination of the finished license plates for specified purposes of:

- A. Inventory control.
- B. Production traceability.
- C. Identification of year of manufacture.
- D. Identification of sheeting manufacturer.
- E. Positive field verification of license plate authenticity.

The Ensure image may be a custom design mutually agreed upon by the purchaser and 3M. The Ensure image size and spacing depends on the width of the sheeting purchased. Each license plate will have a minimum of two images visible on the finished plate.

Orientation

Directional identification marks allow for easy visual verification of the license plate authenticity as follows:

- A. The centermost mark on the plate will be visible to a viewer standing directly in front of the plate at a distance of 4-8 feet (1.2 - 2.5 m). This represents an angle of 30° above perpendicular to the plate.
- B. The centermost mark on the plate shall not be visible to a viewer:
 - 1. Standing at a distance of either 2 feet (.6 m) or 20 feet (6.1 m) directly in front of the plate.
 - 2. When the viewer has stepped from the head-on viewing position to either side thus forming an angle greater than 45° to the plate.

The directional identification marks will be visible in either diffuse daylight or by retroreflected light at night. The marks will not alter the color of the sheeting, reduce the sheeting brightness below the minimum specified levels, or interfere with appearance and legibility of finished license plates. In diffuse daylight, the directional identification marks are equally visible in all standard colors.

The marks cannot be removed by chemical or physical means from the sheeting or the finished license plate without visibly damaging the reflective sheeting.

Optional 3M™ Ensure™ Virtual Security Thread

Series 4770T sheeting with 3M™ Ensure™ Virtual Security Thread contains a second mark that runs vertically or horizontally through standard vehicle registration plates for purposes of security and anti-counterfeiting. The virtual security thread is buried beneath the surface of the sheeting and consists of two sinusoidal waves where one wave appears to float above and one wave appears to float below the Ensure image in the retroreflective sheeting. The virtual security thread is durable for the service life of the license plate.

The virtual security thread is visible in the unprinted areas of the plate from within a standard police vehicle under high beam headlight illumination, as well as outside of the vehicle, on a license plate properly affixed to the vehicle's designated mounting area, from an approximate distance of 0 to 50 feet (0 to 15 meters) at a head-on viewing angle.

The two sinusoidal wave images are visibly distinct from an approximate distance of 0 to 20 feet (0 to 6 meters). The virtual security thread is not visible when viewed from an angle greater than 45 degrees from the head-on viewing position.

The virtual security thread is verifiable under both diffuse daylight and retroreflected light at night. The virtual security thread does not alter the color of the sheeting, reduce sheeting brightness below the minimum specified brightness levels, or interfere with appearance and legibility of finished license plates. In diffuse daylight the virtual security thread is visible in all standard sheeting colors.

Performance Considerations

Series 4770E/4770T license plate sheetings are designed for multi-year applications. Experience indicates that finished plates, processed and applied as recommended, will perform without appreciable fading, cracking, blistering or peeling for the intended period.

A. Reflectivity

The minimum reflectivity values of 3M sheeting series 4770E/4770T are shown in Table A.

Table A

Minimum Coefficient of Retroreflection
Candlepower per foot candle per Square Foot
Candelas per Lux per Square Meter
(0.2° Observation Angle¹)

Sheeting Color		Entrance Angle ²	
		-4°	40°
White	4770E/4770T	50	16
Yellow	4771E/4771T	25	10
Red	4772E/4772T	9	3
Gold	4773E/4773T	25	10
Orange	4774E/4774T	25	10
Lt. Blue	4776E/4776T	18	7
Lt. Green	4777E/4777T	18	7
Lemon Yellow	4781E/4781T	25	10
Pastel Colors			
Salmon	PC751E/PC751T	35	12
Silver Gray	PC752E/PC752T	35	12
Sand	PC753E/PC753T	35	12
Sunflower	PC754E/PC754T	35	12
Lime Yellow	PC755E/PC755T	35	12
Sea Green	PC756E/PC756T	35	12
Sky Blue	PC757E/PC757T	35	12
Straw	PC758E/PC758T	35	12
Chamois	PC759E/PC759T	35	12

¹Observation (Divergence) Angle - The angle between the illumination axis and the observation axis

²Entrance (Incidence) Angle - The angle from the illumination axis to the retroreflector axis. The retroreflector axis is an axis perpendicular to the retroreflective surface.

All measurements shall be conducted in accordance with ASTM E810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting."

Measurements on reflective sheeting with a preprinted graphic design shall be taken in an unprinted sheeting area.

The reflectivity of the flat area of the same test plate, totally wet by rain, will not be less than 90% of the values specified above. Wet performance measurements shall be conducted in accordance with ASTM E810. Contact your 3M Technical Representative for wet performance measurement test set-up.

To measure the reflectivity values of applied 3M sheeting, prepare test plates as follows:

- Test plates of the same size and format as the actual issue must be produced of the same materials, on the same equipment, and by the same general process of metal cleaning, laminating, embossing or debossing and roll coating as production plates.
- The plates must be designed to have a minimum of 36 square inches (230 sq. cm) of flat area, in one section of the plate to facilitate photometric testing.
- All test plates should be conditioned for 24 hours at 72°F ± 5°C (22°C ± 1°C) and 50 ± 5% R.H. prior to testing.
- Each plate must be thoroughly hand washed (see Cleaning) prior to testing.

B. Adhesive

Test plates as prepared above will resist peeling, scuffing and marring from recommended application surfaces, during normal use handling, and resist shocking off when jabbed with a spatula at -10°F (-23°C).

Prior to application, the protective paper liner can be removed from the adhesive by peeling without soaking in water or other solvents. The liner can be removed after accelerated storage for 4 hours at 150°F (65°C) under a weight of 2.5 pounds per square inch (0.18 kg/cm²).

Fabrication of Reflective License Plates

Note: For recommended manufacturing procedures used in the fabrication of license plates refer to Information Folder 9.8.

A. Substrates

The pre-coated adhesive will form a permanent bond to the surface of clean, chemically treated or conversion coated aluminum substrates normally used in the manufacture of license plates and as recommended by 3M. Contact your 3M Technical Service Representative for specific substrate recommendations.

B. Application

3M sheeting is designed for application to clean flat coil or sheet stock by continuous squeeze roll application.

A minimum of 48 hours storage after application of sheeting is recommended before embossing or debossing. Laminated blanks must be stored on edge and used within one year after date of receipt of the 3M sheeting for best embossing results.

C. Embossing and Debossing

3M reflective sheeting as applied to flat metal is sufficiently flexible to permit the embossing or debossing requirements of most conventional license plate designs.

3M reflective sheeting may be embossed or debossed up to 2mm or .080 inches with standard embossing equipment and dies used for license plate production. Minimum embossing temperature is 70°F (21°C).

To enhance the printable and quality of the embossed or debossed license plates, they must be roll coated within 24 hours.

D. Color Processing

The legend is applied to embossed or debossed plates by roller coating with the following 3M recommended high quality transparent or opaque inks and foils. *Note: Care should be taken in choosing color combinations to ensure attractiveness and maximum legibility. This is especially true with graphic design sheetings. To assure suitable contrast for maximum legibility and safety, 3M recommends use of dark color roll coated characters on a white or yellow reflective sheeting background.*

Oven Dried Inks:

3M Series 4800 Opaque

3M Series 4850 Opaque

3M Series 4900 Transparent

3M Series 4950 Transparent

Contact your 3M Technical Representative for assistance with oven drying conditions. Cool the license plates to room temperature before packaging.

D2. Dry Roll Coat Foils

Note: For recommended dry roller coating practices, refer to Product Bulletin HSF100/200. Use series HSF100 or 200 dry roller coat foils. Contact your 3M Technical Service Representative for additional information on dry roller coating foils.

Cleaning

For maximum service, do not use abrasive, or chemically concentrated harsh cleaners. Use the same care as is used in cleaning the paint surface on the vehicle. The license plate surface should be cleaned of normal use dirt accumulation by washing with a mild detergent and water using a soft bristle brush or cloth. Following cleaning, the plate should be thoroughly rinsed with water.

To remove tar, oil, or road film, cautious use of mild solvents such as mineral spirits, turpentine, or kerosene may be employed. Use of aromatic solvents and ketones or solvent mixtures containing them should be avoided.

Storage

Sheeting and roll coat inks must be stored in their original package in a cool, dry area and should be used within one year after date of receipt.

General Characteristics and Packaging

The reflective sheeting as supplied will be of good appearance, free from ragged edges and cracks, and packaged according to commercial standards. The sheeting must be spliced for continuous roll application. Additional sheeting is supplied to compensate for splices.

Specifications

The information contained herein on 3M reflective sheeting Series 4770E/4770T is considered to describe typical minimum requirements for an effective reflective license plate material. As such, the information may be incorporated into a product purchase specification to be used in conjunction with a specification for finished retroreflective license plates.

Health and Safety Information

Read all health hazard, precautionary, and first aid statements found in the Material Safety Data Sheet, and/or product label of chemicals prior to handling or use.

Warranty

3M warrants that 3M™ Preclear Reflective License Plate Sheeting Series 4770E/4770T (with Ensure™ Warranty Mark) sold by 3M for fabrication of reflective safety plates in the United States, Mexico and Canada will remain effective for its intended use and retain a coefficient of retroreflection of at least nine (9) candlepower per foot candle per plate³ for the number of years indicated in the following table and subject to the following provisions:

<u>Sheeting Color</u>	<u>Years</u>
White	5
Pastel colors	5
Yellow	5
Lemon Yellow	5
Gold	3
Orange	3
Blue	2
Green	2
Red	1

Notes: All measurements are at .2 degrees observation angle and -4 degrees entrance angle.

All measurements shall be made after cleaning the plate according to 3M recommendations and in accordance with ASTM E 810 "Standard Test Method of Coefficient of Retroreflective Sheeting," except that the coefficient of luminous intensity shall be determined in accordance with ASTM E 808-01 Para. 3.2.2 and ASTM E 809-02 Para. 12.3.

Graphic preprinted transparent colored areas are warranted for the same number of years as the background sheeting as stated above.

If 3M preclear reflective license plate sheeting is applied to 3M-approved substrate materials in accordance with all 3M application procedures found in 3M's product bulletins, information folders, and technical memos (which will be furnished to the agency upon request), including the appropriate use of 3M matched component systems, roll coat inks, and recommended application equipment; and

If at any time during the period specified in the table above: a) plates show fading, cracking, blistering or peeling which will significantly impair the intended visibility or legibility of the plate; or b) a one-half of one percent sample of clean, rear plates provided from a given production run (which is identified by the integral Ensure warranty mark) reveals that 10 percent or more of that sample fails to retain at least nine (9) candlepower per foot candle per plate³ (0.84 candelas per lux per plate) as defined herein;

3M will, at its expense, replace all of the plates manufactured from that specific lot of material, up to a maximum of \$5.00 per plate. Reimbursement to the using agency will be in dollars and/or materials, as determined by the needs of the using agency.

³Graphic printed reflective plates may not meet this requirement as large graphic printed areas can affect the reflectivity values of the finished license plates.

Conditions

Such failure must be solely the result of design or manufacturing defects in the 3M preclear reflective license late sheeting and not of outside causes such as: improper fabrication, handling, maintenance or installation; use of roll coat pastes or overlay films and sheetings not made by 3M; exposure to excessively high oven temperatures; use of a reflective sheeting applicator, stretch control mechanism, brake table or corresponding registry feed controls not provided and installed by 3M; failure of plate substrate; exposure to chemicals, abrasion, or damage from fasteners used to mount the plate; collisions, vandalism or malicious mischief.

Replacement sheeting will carry the unexpired warranty of the sheeting it replaces.

Claims made under this warranty will be honored only if the plates have been marked with the Ensure warranty mark so as to be traceable to the specific 3M production run numbers from which the material originated.

Claims made under this warranty will be honored only if 3M is notified of a failure within a reasonable time, reasonable information requested by 3M is provided, and 3M is permitted to verify the cause of the failure.

Limitation and Liability

3M's liability under this warranty is limited to replacement as stated herein, and 3M assumes no liability for any incidental or consequential damages, such as profits, business or revenues in any way related to the product regardless of the legal theory on which the claim is based. **THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING OR OF PERFORMANCE, CUSTOM OR USAGE OF TRADE.**

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3M

Roll Coat Inks

Series 4800/4900

Product Bulletin 4800/4900

August 2005

Replaces PB 4800/4900 dated January 1997

Description

3M™ Roll Coat Inks are used in conjunction with 3M™ Reflective License Plate Sheeting to produce fully reflective vehicle registration plates for multi-year use. When processed according to the manufacturer's recommendations, 3M roll coat inks will last for the intended life of the registration plate. The inks are supplied in transparent colors as Series 4900 and opaque colors as Series 4800. They are intended for use on 3M™ License Plate Sheeting Series 3570/3750 and Series 4550/4770/4780.

Application

Transparent and opaque roll coat inks are applied to the embossed or debossed license plate by roller coating with a high quality roller coating machine. When roll coating license plates with the depressed style rim, hold down rollers are recommended to prevent the plate background from being painted.

Roll coat inks may be thinned with 3M 4904 or 4905 Thinner for ease of coating on the machine.

DO NOT THIN MORE THAN 10%. Thinning by more than 10% may affect the ability to meet local VOC emission levels.

Drying

Drying is best accomplished when baked for a minimum of 20 minutes at 225°F in a convection oven with good air circulation. Contact your 3M Technical Representative for assistance in establishing time and temperature settings.

Colors

	<u>Transparent Inks</u>	<u>Opaque Inks</u>
Blue	4901	4806
Dark Blue	-	4811
Red	4902	4802
Light Red	4909	-
Green	4903	4807
Dark Green	4913	4803
Cranberry	4906	-
Blue Violet	-	4808
Maroon	4914	-
Orange	-	4814
Purple	-	4815
Brown	4900	4816
Violet	-	4801
Black	-	4805
White	-	4812
Clear Toner	4911	-
Yellow Toner	4912	-
Yellow	-	4809

Health and Safety

Read all health and hazard, precautionary, and first aid statements found in the Materials Safety Data Sheet, and/or product label of chemicals prior to handling or use. Consult local regulations and authorities for possible restrictions on product volatile organic content (VOC) and/or VOC emissions.

Storage

3M roll coat inks must be stored in their original package in a cool, dry area and should be used within one year after date of receipt.

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Preclear Reflective License Plate Sheeting Recommended Manufacturing Procedures

Information Folder 9.8

August 2005

Replaces IF 9.8 dated July 1998

Blanking Line

Metal Cleaning

- The temperature of the water in the cleaning tanks must be maintained to assure adequate adhesion of the precleared sheeting to the metal substrate.
- Rinse Tank: 130° - 190°F for maximum rinsing and warming of the metal, and to ensure thorough drying of the metal prior to metal straightening and subsequent application of the reflective sheeting.
- With precleared sheeting, the metal cleanliness and surface temperature are most important to ensure good adhesion of the precleared sheeting to the metal substrate. To check metal cleanliness, see Quality Checklist, Metal Cleaning.

Reflective Sheeting Application

- Applicator operators must maintain proper side to side alignment of the sheeting on the metal by adjusting steering on the 3M™ Squeeze Roll Applicator (16 inches) as needed.
- For graphic printed precleared sheeting the 16 inch squeeze roll applicator adjustment must be set and monitored to maintain the correct repeat pattern measurement on the sheeting after it is applied to the metal substrate. This adjustment is set by the thumbwheel switches in the applicator electronic control panel (refer to Applicator Information Folder 9.4).

Cut Blanks

- Cut blanks must be stored on edge after being removed from the blanking press. Avoid packing blanks too tightly to minimize sticking of blanks and scuffing or scraping of the sheeting.

- The cut blanks must be stored for a minimum of 48 hours prior to embossing to allow the sheeting to reach maximum adhesion to the metal substrate. To check the adhesion of the sheeting to the metal after the 48 hour time period, see Quality Checklist, Sheeting Adhesion.
- The surface of the precleared license plate sheeting scratches very easily. Care needs to be taken during handling of the cut blanks to prevent the surface of the sheeting from getting scratched.
- The blanking dies need to be kept sharpened as any burrs on the bolt holes or along the edge of the plate can cause surface scratching of the precleared sheeting.

Embossing

- Embossing height must be maintained uniformly and sufficiently high to avoid smudging of the background during roll coating.
 - a. Satisfactory height of emboss is usually .070 - .080 inches (1.8 - 2.0 mm).
 - b. If registration characters and fixed copy can not be maintained at a uniform height, registration characters may be slightly higher but the difference should not exceed .003 inches (.076 mm).
- Dies causing excess scuffing and cutting should be removed from production and polished, adjusted, and/or repaired for continued use.
- Check all new die setups for roll coating before beginning any volume production.
- Cover tops of racks of embossed tags to prevent accumulation of dust and other foreign matter.
- License plate blanks must be handled with care during the embossing operation to prevent surface scratching of the precleared sheeting.

Roll Coat and Oven Drying Operations

- The roll coat color should be applied to match the shade as established by the appropriate state agency.
 - a. Mount sample plates on or near roll coaters for operator reference. See Quality Checklist, Color Shade
 - b. Match the shade of color by adjusting the doctor roll on the roll coater (refer to roll coater operator's manual).
- Roll coat ink can be thinned as necessary according to the manufacturer's recommendations.
 - a. Colors may be pre-thinned using up to 10% of recommended thinner per gallon of ink.
 - b. Additional thinning on the rolls may be necessary to keep the ink from drying on the rolls during equipment shutdowns or other production delays by use of a pistol oiler or spray can.
- Roll coat ink smudges on background areas of the plates must be removed prior to drying.
 - a. Smudges or all of the wet coating may be wiped off using a cloth saturated with a mild solvent such as Mineral Spirits, Naphtha, Varsol, or Stoddard solvent.
 - b. Wiped off plates must be completely dry before re-coating.
- Oven temperature and dwell time must be maintained to provide thorough curing of the roll coat ink.
 - a. The hardness of the dried roll coat color, when applied to the bare metal backside of the plate, must be sufficient enough to resist rupture of the coating by a "B" hardness pencil. See Quality Checklist, Hardness Test.
- License plates must be allowed to cool down to room temperature after being removed from the oven, prior to stacking or packaging.

Quality Checklist

Metal Cleaning

- Test and record the cleanliness of the metal substrate using the Water Break Test.
 - a. Pour water onto the surface of the substrate.
 - b. The water should not bead up, but should flow out to form a uniform film on the surface (See Figure 1).

- c. If the substrate does not pass the water break test the detergent wash tank should either be completely recharged or additional detergent added to increase the detergent strength.
- d. If the water break test cannot be passed after recharging the wash tank, contact the shop foreman.
- e. Following the water break test, be sure to wipe the water off of the substrate before the reflective sheeting is laminated.

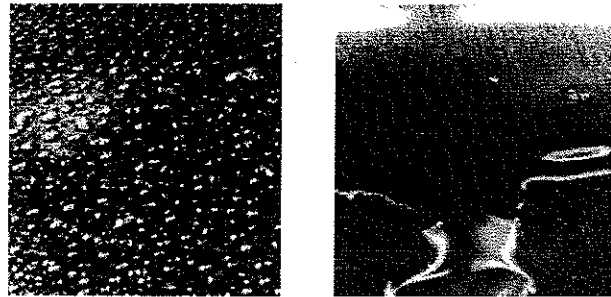


Figure 1

Sheeting Adhesion

- Test the sheeting adhesion on a scrap blank 48 hours after application
 - a. Starting at the rounded corner of a scrap blank, peel the sheeting away from the metal substrate with your fingernail.
 - b. Peel sheeting away until you have enough to hold with your fingers.
 - c. Hold the sheeting and pull it away from the substrate using uniform tension.
 - d. As you peel the sheeting away, the adhesive should stay on the metal surface.
 - e. If the adhesive stays on the sheeting, recheck metal cleanliness.

Color Shade

- Compare the color shade on the roller coated plates with the target color shade sample and record lighter, equal to, or darker on a sample plate or sheeting.
 - a. If necessary, adjust the doctor roll on the roll coater to achieve the correct color shade match.

Hardness Test

- Test and record the hardness of the dried roll coat ink applied to the back of the license plate (emboss a blank upside down so the embossed alpha/numeric characters are on the backside of the blank).

- Equipment
 - a. A set of graded drawing pencils consecutively rated for hardness B, HB, F, and H. A recommended brand which has provided a consistently good reproducibility of measurements is Castell-9000, made by A.W. Faber of Stein Bei Nurnberg, Germany.
 - b. No. 600 "TRI-M-ITE" Brand Wetordry Sandpaper.
- Procedure (See Figure 2)
 - a. Pencils shall be sharpened to produce a usual conical point.
 - b. The point of each pencil lead shall be "squared" prior to each test by abrading vertically on the sandpaper, so as to provide a truncated cone shape with a small end at least one half diameter of the lead.
 - c. The ink hardness should always be tested on the side without reflective sheeting to eliminate cushion effect. Press the lead into the surface to be tested at the writing angle (see attached diagram). Apply sufficient pressure in a forward direction to crumble the lead or penetrate the ink film, but not enough to break the main piece of lead.
 - d. Testing should be started with pencil leads of relative softness, applying the next harder grade until the ink film is penetrated before the lead crumbles.
 - e. Results shall be reported as the range of hardness of consecutive pencils, the softer of which crumbles, and the harder of which penetrates the ink film.
Example: Pencil B-HB.
- Minimum roll coat ink hardness.
 - a. Ink coatings showing pencil hardness of B-HB, or harder, are needed for best reflectorized license plate durability and performance.

Health and Safety Information

Read all health hazard, precautionary, and first aid statements found in the Material Safety Data Sheet, and/or product label of chemicals prior to handling or use. Electronically, visit us at www.3M.com/us and select MSDS search.

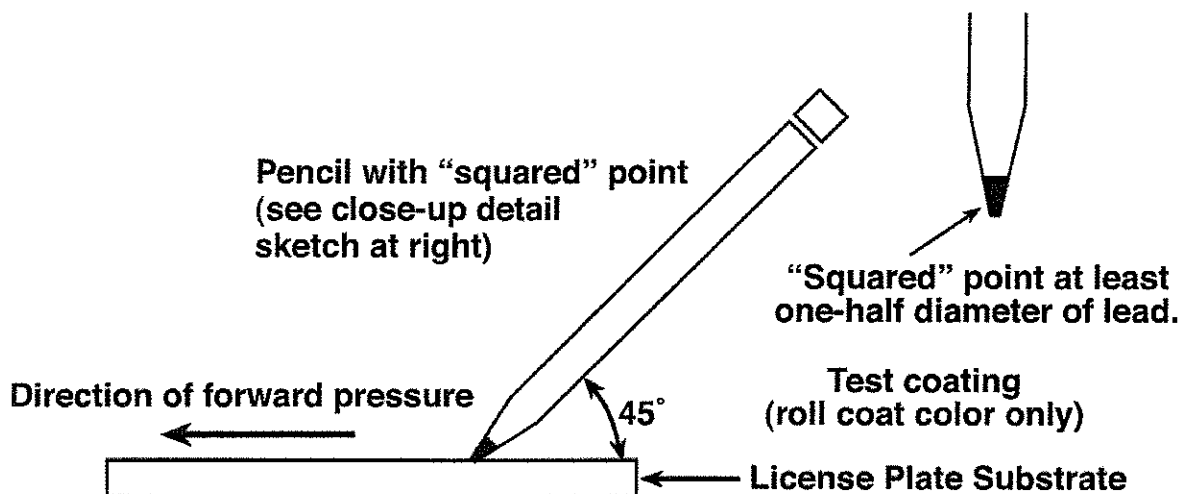


Figure 2

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Validation Security Sheeting with Ensure™ Custom Image

Series VP5560

For use on Multi-Year Licenses

Product Bulletin VP5560

April 2005

Replaces PB VP5560 dated August 1997

Description

3M™ Validation Security Sheeting Series VP5560 is designed and manufactured for fabrication of reflective validation stickers for application to a smooth surfaced, multi-year license and reciprocity plates. The sheeting is precoated with pressure sensitive adhesive protected by a removable paper liner. The sheeting is supplied in roll form with the stickers precut on the roll.

The day and night color of the 3M sheeting is similar and will remain highly reflective when viewed at wide entrance angles. The sheeting is designed for thermal transfer printing to produce various color and design combinations on finished validation stickers using the 3M™ Thermal Transfer Imaging System VP5000.

3M Series VP5560 sheeting contains directional security marks that are an integral part of the sheeting which makes unauthorized sticker reproduction extremely difficult. These marks are spaced no further than .75 inches (1.9 cm) from each other so that a part of one mark is visible on each 1 inch x 1.5 inch (2.54 cm x 3.81 cm) validation sticker. 3M sheeting is available with customized marks as mutually agreed upon by the purchaser and 3M.

3M™ Ensure™ Image

The directional security marks facilitate effective visual verification of validation sticker authenticity, when properly applied to a vertically mounted license plate on an automobile as follows:

1. The marks will be visible to a viewer standing directly in front of the sticker at a distance of 4-8 feet (1.2-2.5m). This represents an angle of 30° above the perpendicular to the plate.

2. The mark will not be visible to a viewer:
 - a. When standing directly in front of the sticker at a distance of either 2 feet (.6m) or 20 feet (6.1m).
 - b. When the viewer has stepped from the head-on viewing position to either side thus forming an angle greater than 45° to the sticker.

The directional security mark will be visible in either diffuse daylight or by retroreflective light at night and will not alter the color of the sheeting or reduce the sheeting brightness below the minimum specified levels. The marks will not interfere with appearance and legibility of finished validation stickers.

The directional security marks cannot be removed by chemical or physical means from the sheeting or the finished validation sticker, applied or unapplied, without visibly damaging the reflective sheeting.

Performance Considerations

Series VP5560 sheeting has been designed for the economical and effective production of reflective validation stickers for use on multiple year license and reciprocity plates. Recommended 3M application procedures should be followed for maximum durability. Although no warranty is offered, stickers printed with thermal transfer ribbon should have up to 24-month durability.

A. Reflectivity

The minimum reflectivity value of 3M™ Validation Security Sheetings Series VP5560 are shown in Table A.

Table A
Minimum Coefficient of Retroreflection
Candlepower per foot candle per Square Foot
Candelas per Lux per Square Meter

Sheeting Color		0.2° Observation Angle ¹	
		Entrance Angle ²	
		-4°	40°
White	VP5560	50	15
Yellow	VP5561	30	8
Red	VP5562	10	3
Gold	VP5563	30	10
Orange	VP5564	6	2
Yellow-Green	VP5565	24	8
Blue	VP5566	14	5
Green	VP5567	28	8
Magenta	VP5568	12	3
Lemon-Yellow	VP5569	28	11

¹Observation (Divergence) Angle - The angle between the illumination axis and the observation axis.

²Entrance (Incidence) Angle - The angle from the illumination axis to the retroreflector axis. The retroreflector axis is an axis perpendicular to the retroreflective surface.

All measurements shall be conducted in accordance with ASTM E-810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting."

The reflectivity of the sticker totally wet by rain, will not be less than 90% of the values specified in Table A. Wet performance measurements shall be conducted in accordance with ASTM E-810. Contact your 3M Technical Representative for wet performance measurement test set-up.

Application

Series VP5560 validation security sheeting is supplied with a pressure sensitive adhesive for easy, vandal resistant application using finger pressure to license and reciprocity plates that are properly prepared (smooth, dry and clean). The minimum application temperature for applying finished stickers to a plate is -10° F (-23° C).

A maximum of three stickers overlaid per plate is recommended for these stickers. Depressed areas for locating stickers should be provided on the plates to make removal of the stickers more difficult.

3M validation security sheeting is warranted to be compatible with license plates made from 3M reflective sheetings. User should verify proper adhesion performance on any other surface before using.

Fabrication

- A. Sheeting — The 3M validation security sheeting is provided in rolls with stickers precut in the roll. The rolls of stickers can be perforated and back instructions printed. Contact your 3M Technical Representative for more information.
- B. Thermal Transfer Printer VP5000L.
- C. Thermal Transfer Ribbon Series VP5130.
- D. Cutting — The stickers may be hand cut individually or into strips of multiple stickers or processed into book form. Stickers can also be packaged in roll form or into fanfold boxes. Contact your 3M Technical Representative for more information on sticker packaging formats.

Cleaning

The reflective sheeting stickers may be cleaned with a soft cloth or brush, using warm water, soap, then a clean water rinse, or with non-abrasive automobile cleaners or polishes. Tar, oil or road film may be removed by using a cloth moistened with kerosene.

Storage

Sheeting should be stored in a cool, dry area and used within one year after date of receipt.

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Traffic Safety Systems Division

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SEND BIDS TO: 3M COMPANY
TRAFFIC SAFETY SYSTEMS DIVISION
ATTN: RICHARD LACLAIR
3M CENTER BLDG. 225-5S-08
P.O. BOX 33225
ST. PAUL, MN 55133-3225
Email: tvs@mmm.com

Effective April 8, 2002 "3M Company" replaces "Minnesota Mining and Manufacturing Company" as our legal name.

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