

INVITATION TO BID

Bid Number: 550-72-16-050	Bid Opening Date & Time: 02/23/2016 02:00 PM
Items: Tape, Pavement Marking - Preformed Patterned	Buyer: Alexis Wingo
Bid Mailing Address: 608 East Boulevard Avenue	Telephone Number: (701)328-2571
City, State, Zip: Bismarck, North Dakota, 58505	Email: awingo@nd.gov
Contract Period: 03/01/2016 TO 02/28/2017	Date Prepared: 2/9/16

BID RESPONSE

Please submit your bid response on the attached forms in conformance with the instructions and specifications in the NDAC 04-12-01 – 04-12-16. One copy of your bid response must be returned to the North Dakota Department of Transportation (NDDOT) prior to the time and date specified for the bid opening. Bid responses received after the time and day specified for the bid opening will be rejected. Mark envelope with word "BID" and the opening time and date. **If your bid response is accepted by NDDOT, then your bid response will constitute a binding contract.**

CONTRACT

This contract is made and entered into by and between NDDOT for the state of North Dakota (hereinafter state) and

Vendor Name 3M Company	Vendor Address 3M Center Bldg 225-4N-14 St. Paul, MN 55144
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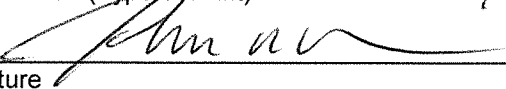
(hereinafter vendor). In consideration of and for the acceptance by the state of the offer made by the vendor pursuant to the bid response, the vendor agrees and promises to sell, furnish, and deliver to the state, at the time, places, and prices specified in the bid response, all goods, merchandise, supplies, commodities, equipment, or other items contained in the bid response and for which the vendor has been awarded this contract by the state. The vendor shall fully perform this contract in accordance with the terms and conditions contained in the bid response including all specifications, rules, or regulations mentioned therein, and shall comply with all applicable provisions of the NDAC 04-12-01 – 04-12-16 promulgated by the State Purchasing Division; such manual being made a part of this contract by reference. The Risk Management Appendix and Appendices A and E of the Title VI Assurances, attached, are hereby incorporated into and made a part of this agreement.

The following must be completed by the vendor; failure to do so may result in the rejection of the vendors bid proposal.

Vendor Name 3M Company		
Mailing Address 3M Center Bldg 225-4N-14 St. Paul, MN 55144-1000		
Telephone Number 651-737-8274	Fax Number 800-591-9293	E-mail Address tbidgroup@mmm.com

John N. Morris Contract Administrator

Name & Title (Type or Print)

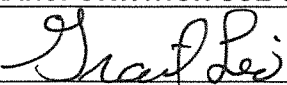
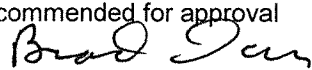
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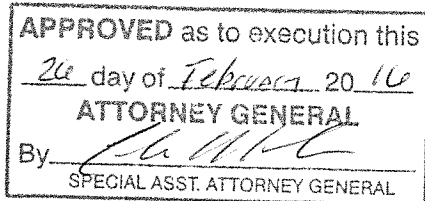
February 19, 2016

Date

To be signed by **Owner; Partner; Corp. Pres., Vice Pres., or other authorized Corp. Officer** or bid may be rejected. (if signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

FOR ND DEPARTMENT OF TRANSPORTATION USE ONLY Accepted by the state according to provisions of award.

Authorized Signature Grant Levi 	Date 2/29/16
Recommended for approval Brad Sar 	Date 2-25-16
Approximate contract amount \$ Unknown	



CLA 7480 (Div. 50)

MAILING INSTRUCTIONS

Mail only one completed and signed request for bid document per envelope, unless instructed otherwise. Request for bid documents not signed or received after the date and time specified in the request for bid will be rejected.

BID IS: ☒ SEALED ☐ NOT SEALED

Address the envelope containing your response in the following manner:

BID NUMBER – 550-72-16-050
BID OPENING DATE/TIME – February 23, 2016; 2:00 PM Central
N. D. DEPT. OF TRANSPORTATION
PROCUREMENT SECTION
608 E BOULEVARD AVE
BISMARCK ND 58505-0700

BIDDERS INSTRUCTIONS

1. **Assistance to Bidders with a Disability.** Bidders with a disability and/or language assistance, contact Civil Rights Division, NDDOT, 701-328-2978 or civilrights@nd.gov or TTY 711, as soon as possible so that reasonable accommodations can be made. Additionally, the Request for Reasonable Accommodations form (SFN 60135) can be accessed at the following NDDOT website location: <http://www.dot.nd.gov/forms/sfn60135.pdf>.
2. **Award.** Award will be made to a responsive, responsible bidder with the lowest price considering conformity with specifications, terms of delivery, quality, and serviceability. NDDOT reserves the right to consider bids varying in minor respects from any specific requirements herein, but judged to meet the intent of this request.
3. **Awards, Splitting of.** The state reserves the right to make awards by item, groups of items, or on the total low bid for all the items specified as indicated in the detailed specifications. Bidders interested only in the total low bid for all items are to state 'all or nothing' on their bid response.
4. **Bid Bond.** Waived in this instance; however, bidder(s) failing to enter into a contract with this office, upon notification of award, may be subject to removal from the bidder's list.
5. **Bid Held Firm.** Bids are not awarded at the bid opening. Bid responses will be firm for 30 days, unless stated otherwise.
6. **Bid Opening.** All sealed bids received by the NDDOT Procurement Office will be opened and read at 608 East Boulevard Avenue, Bismarck, North Dakota, at the time specified in the solicitation. Interested parties are invited to attend the bid opening.
7. **Bid Summary.** Bid summaries are available when the bid has been awarded. When bids are issued using the State's electronic bidding system, the bid summary will be posted and available for download from: <http://www.nd.gov/spo/>

Bid summaries will be mailed to those bidders who supply a self-addressed, stamped envelope with their bid response. A copy of the bid summary may also be obtained by visiting the NDDOT Procurement Office during normal working hours.

8. **Bidder Checklist.** HAVE YOU REMEMBERED TO:

- Review all instructions, terms and conditions, and specifications to ensure your bid response complies?
- Prepare your price in the specified unit of measure, F.O.B. Destination, Freight Prepaid to the delivery location listed on the cover sheet?
- Indicate whether you can meet the delivery date indicated on the cover sheet?
- Sign your bid response on the cover sheet?
- Initial all changes and corrections?
- Submit any required samples or enclosures, if applicable?
- Mark the envelope as indicated above?
- Review and complete all requirements contained in this solicitation to ensure compliance.

9. **Clarifications, Bid Changes and Questions Deadline.** The Procurement Officer is the point of contact. Any irregularities, lack of clarity, requested bid changes and all questions regarding this bid and the procurement process must be addressed to the Procurement Officer referenced on the first page of this document no later than end of business February 16, 2016. (Contact information is indicated on cover page). If a bid amendment is required, it will generally be issued after this date.

The bidder is cautioned that the requirement of this solicitation can be altered only by written amendments and that verbal communications from whatever source are of no effect.

10. **Corrections.** The bidder's authorized representative must initial any corrections and alterations (i.e. erasures, whiteouts, correction tape, etc.) made to the bid response. Those bid responses with corrections and alterations that are not initialed are subject to confirmation by the Procurement Officer.

11. **Definitions.**

- Bidder - any person or firm submitting a competitive bid in response to a solicitation.
- Bid summary - a summary of all bid responses received by the NDDOT Procurement Office.
- Bid response - the executed document submitted by a bidder in response to a solicitation.
- Contract - a deliberate written agreement between two or more competent persons to perform specific act or acts.
- Contractor - any person or firm having a contract with a governmental body.
- Solicitation - the process of notifying prospective bidders that the State wishes to receive bids for furnishing goods or services.

12. **Electronic & Facsimile Bids.** Bid responses are not to be email attached or faxed to the NDDOT unless this transmittal method has been authorized by the Procurement Officer or bid document. (Contact the Procurement officer regarding additional requirements and exceptions.) Bid responses electronically submitted or faxed may be rejected as non-responsive. Bids may be faxed to a third party who will put it in a properly-addressed envelope and deliver it to the NDDOT Procurement Office before the date and time specified in the solicitation.

13. **Freight/F.O.B. Destination.** Freight and transportation charges are to be included in the price of the products, unless otherwise specified in the solicitation. (F.O.B. - Free On Board).

14. **Indemnification.** Bidders must review the attached Risk Management Appendix for indemnification and insurance requirements. The indemnification and insurance provisions are incorporated and made part of this solicitation and the resultant final contract. Objections to any of the provisions of the indemnification and insurance requirements must be made in writing to the attention of the Procurement Officer by the time and date set for receipt of questions. No alteration of these provisions will be permitted without prior written approval from the Purchasing Agency or Entity in consultation with the North Dakota Risk Management Division. Upon receipt of the Notice of Award, the successful bidder must obtain the required insurance coverage and provide the Procurement Officer with proof of coverage prior to contract approval. The coverage must be satisfactory to the Purchasing Agency or Entity, in consultation with the North Dakota Risk Management Division. A bidder's failure to provide evidence of insurance coverage is a material breach and grounds for withdrawal of the award or termination of the contract.

15. **Late Bids.** It is the bidder's responsibility to ensure that a bid response is physically deposited with the NDDOT Procurement Office prior to the date and time specified for the opening. Late bid responses will not be opened and will be rejected and returned regardless of the degree of lateness or the reasons.

16. **Minor Informalities.** The State reserves the right to waive minor informalities in bid responses in accordance with N.D.A.C. 4-12-10. Minor informalities are insignificant omissions or nonjudgmental mistakes that are matters of form rather than substance, evident from the bid document, with a negligible effect on price, quantity, quality, delivery, or contractual conditions that can be waived or corrected without prejudice to other bidders.

17. **Multiple Bid(s).** Bidders may submit more than one bid response(s) for the item(s) specified in the solicitation. Each bid submitted must comply in all aspects with the bid requirements and these instructions.

18. **Negotiation.** NDDOT reserves the right to negotiate with the successful bidder to ensure the best possible consideration is afforded to all concerned.

19. **New Equipment and Materials.** Unless otherwise indicated in the detailed specifications of this solicitation, all equipment and materials shall be new and under current production for use in the United States.

20. **Open Records.** After the bid opening, bid documents will be subject to the North Dakota open records law. Records are closed or confidential only if specifically stated in law. If a request for public information is received, the procurement officer will determine whether the information is an exception to the North Dakota open records law, and the information will be processed appropriately. Those interested in reviewing the bid file are to make arrangements with the NDDOT Procurement Office. The NDDOT Procurement Office hours are 8:00 a.m. - 12:00 p.m. and 1:00 p.m. - 5:00 p.m. Monday through Friday.

21. **Packaging.** All shipments are to be packaged according to accepted commercial practices to avoid damage in shipment.

22. **Performance Bond.** Successful bidders will not be required to furnish a performance bond; however, failure to perform satisfactorily will result in the immediate termination of the contract(s) and bidders may be subject to removal from the bidder's list.

23. **Preparation of Bid.** Bids will be accepted on NDDOT forms only. If the document is located on the State Procurement Office website, then bidder is to download the document and type or write their responses as indicated by the bid document. Alteration of the bid document may be cause for bid rejection. Bidders are cautioned to examine specifications and all instructions. Failure to do so will be at the bidder's risk.

24. **Pricing.** Unit prices are to be stated in United States currency and based on the unit of measurement specified in the solicitation, F.O.B. Destination, to the NDDOT delivery locations specified herein.

In the event of mathematical differences between the unit price and extended total, the unit price will prevail.

25. **Protest of Award.** An interested party may protest the award within seven days after receiving notice in accordance with N.D.C.C. 54-44.4-12 and N.D.A.C. 4-12-14. Notice of award will be issued only to those bidders who submitted responses to this IFB. Seven calendar days after award or issuance of the Notice of Intent to Award; it will be assumed that all interested parties knew or should have known all the facts surrounding the award.

26. **Rejection.** Bid responses may be rejected if:

- The bid response is not legible.
- The bid response is not completed as requested.
- The bid response is faxed to the procurement office.
- The bid response is not responsive to the specifications or other requirements of the solicitation.
- The bid response is received after the time and date specified.
- The bidder has not met Vendor Registration requirements or is suspended or debarred.
- The bid document has been altered by the bidder.
- The bidder is determined to be not responsible (N.D.A.C. 4-12-11-04).

27. **Signature.** The bid must be signed manually in ink. The name and title of the person signing the bid response must be typed or printed above the signature. The bid must be signed by **Owner, Partner, Corp. Pres., Vice Pres., or other authorized Corp. Officer** or the bid may be rejected. If signed by other authorized Corp. Officer or representative, please attach a letter signed by the Owner, Partner, Corp. Pres., or Vice Pres. indicating the individual has authority to enter into a contract on behalf of the company (or a Power of Attorney).

28. **Specifications, Brand Name or Equivalent.** Unless otherwise indicated in the detailed specifications of this solicitation, the use of a specific brand name or make/model is for illustrative purposes only, and the State will consider equivalent products. If a commodity or service put forth by a bidder is rejected as not being equivalent, the Procurement Officer will notify the bidder of the rejection.

29. **Specifications, Compliance.** All bids submitted in response to this Invitation for Bid must comply with the specifications contained herein, and the successful bidder will be held responsible. Noncompliance with specifications is grounds for rejection of the bid response. Bidders who desire to submit commodities or services that deviate from these specifications or have any objections to the specifications stated herein must be clearly pointed out PRIOR TO THE DEADLINE FOR RECEIPT OF QUESTIONS; otherwise, it will be considered that the items offered are in strict compliance with these specifications, and the bidder will be held responsible.

30. **Supplemental Terms and Conditions.** Bids including supplemental terms and conditions will be accepted, but supplemental conditions that conflict with any conditions contained in this ITB or that diminish the State's rights will be considered null and void. The State is not responsible for identifying conflicting supplemental terms and conditions before issuing a contract award.

After award of contract:

- a) If a conflict arises between a supplemental term or condition included in the bid and a term or condition of the ITB, the term or condition of the ITB will prevail, and,
- b) If the State's rights would be diminished as a result of application of a supplemental term or condition included in the bid, the supplemental term or condition will be considered null and void.

Changes, modifications, additions, or alterations to the bid document could be cause for rejection of the submitted bid at the sole discretion of the NDDOT. Contact the Procurement Officer in writing prior to the deadline for clarifications.

31. **Taxes.** The State does not pay sales tax or federal excise tax. The state sales tax exemption number is E-2001. The federal tax-free transaction number is 45-70-0010K. The Purchasing Agency will furnish a tax exempt certificate upon request.

32. **Vendor Registration.** Bids will be accepted from bidders who are not currently Approved Bidders for the State of North Dakota; however, the successful bidder may be required to become approved prior to award, in accordance with N.D.C.C. 54-44.4-09. To become an Approved Bidder, you must: 1) register with the North Dakota Secretary of State (fees apply), and 2) submit a completed Bidder List Application to the ND State Procurement Office. Registration instructions and forms are available on-line at: www.nd.gov/spo/vendor. Contact the ND State Procurement Office at 701-328-2683 or infospo@nd.gov for assistance.

Placement on the bidders list does not guarantee a bidder will receive notice of every formal solicitation.

Bidders must maintain current information by submitting a Notice of Change form to the State Procurement Office (Fax 701-328-1615). Visit the website for forms: www.nd.gov/spo/vendor.

33. **Withdrawal or changes to a bid response prior to the bid opening date and time.** A bidder may withdraw or make a change to his bid response prior to the bid opening date and time. The request to make a change or withdraw must be in writing by a representative of the firm. The request to withdraw or change must be signed by the bidder or his designated representatives.

34. **Withdrawals after the bid opening date and time.** After the bid opening, no changes may be made to the bid response. The bidder may make a written request to withdraw the bid response, subject to approval by the NDDOT Procurement Office. Vendors continually withdrawing bids after the bid opening may be removed from the Vendor Database.

GENERAL CONTRACT TERMS AND CONDITIONS

1. **Affirmative Action.** The contractor will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of individuals with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin, or disability.

2. **Applicable Law and Venue.** Any dispute arising out of this agreement will be resolved under the laws of the State of North Dakota.

3. **Billing and Payment Procedures.** Purchase orders will be issued by the individual NDDOT district locations.

Invoices are to be submitted as indicated on the purchase orders unless otherwise instructed. Failure to submit correct invoices to the appropriate NDDOT office may delay contractor payment.

Payment will normally be made within thirty days after delivery and acceptance of commodities or services under this contract and receipt of a correct invoice. All invoice and payment inquiries must be directed to the purchasing agency.

4. **Binding Contract.** The acceptance of a bid response in writing by the purchasing agency constitutes a contract between the bidder and the State. Written acceptance from the purchasing agency will be in the form of a purchase order, notification of award, or contract. Any oral agreement or arrangement by a bidder with a State employee or purchasing agency will have no force or effect unless reduced to writing.

5. **Compliance with Laws.** The contractor must, in performance of work under this contract, fully comply with all applicable federal, state or local laws, rules, regulations and policies, including those relating to nondiscrimination, affirmative action, accessibility and civil rights including Title VI of the Civil Rights Act of 1964. The contractor agrees to file all required reports on time, to make required payroll deductions, and to pay all taxes and premiums owed on time, including sales and use taxes and unemployment compensation and workers' compensation premiums. The contractor shall have and keep current at all times during the term of this contract all licenses and permits required by law.

6. **Contract Amendments, Waivers.** After a binding contract has been entered into, no changes (i.e. additions, substitutions, subcontracting or a price adjustment) may be made, unless prior approval has been obtained from the purchasing agency and Procurement Officer.

The terms of this contract shall not be waived, altered, modified, supplemented, or amended, in any manner whatsoever, except by written instrument signed by the parties. No waiver consent, modification or change of terms of this agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification, or change, if made shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this agreement.

7. **Contract Price Adjustment.** The Contract Unit Prices shall be firm for the twelve (12) months of the contract period. On an annual basis, all unit prices may be subject to price adjustment (increase / decrease). The request for a price adjustment shall be submitted to the Procurement Office at least forty five (45) days before the scheduled contract expiration date and must include justification for the proposed change. The Procurement Officer will respond as follows:

- 1) The request may be granted,
- 2) The contract may be cancelled and solicitation may be re-advertised, or
- 3) The contract may be continued without change.

If a price increase is approved by the NDDOT, the date the increase will be effective along with the new unit prices will be included in an amendment document. Approval of any price increase renews the twelve month firm price period.

The State shall also be advised of and receive the benefit of any price decrease. The same notification and review process will apply to a decrease in cost.

8. **Contract Term and Renewal Option.** The NDDOT will enter into a contract with an effective date **beginning March 1, 2016, and ending February 28, 2017**, inclusive. This contract may be renewed upon satisfactory completion of the initial contract term. The NDDOT reserves the right to execute up to two options to renew this contract for a period of twelve (12) months each, not to exceed thirty-six (36) months total. Renewals will be documented by amendment.

The NDDOT reserves the right to renegotiate price and terms provided that such negotiated price and terms fall within the original scope of work for this bid. Negotiations may be conducted annually or at such times that additional and unexpected services falling within the scope of the contract may occur. Such changes will be documented by amendment to the contract.

9. **Contract Termination.**

- a. **Termination without Cause.** This contract may be terminated by mutual consent of both parties, or by either party upon 30 days' written notice.
- b. **Termination for Lack of Funding or Authority.** The State may terminate this contract effective upon delivery of written notice to the contractor, or on any later date stated in the notice, under any of the following conditions:
 - i. If funding from federal, state, or other sources is not obtained and continued at levels sufficient to allow for purchase of the services or supplies in the indicated quantities or term. The contract may be modified by agreement of the parties in writing to accommodate a reduction in funds.
 - ii. If federal or state regulations or guidelines are modified, changed or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this contract or are no longer eligible for the funding proposed for payments authorized by this contract.
 - iii. If any license or certificate required by law or regulation to be held by the contractor to provide the services required by the contract is for any reason denied, revoked or not renewed.

Any such termination of this contract under (i), (ii), or (iii), above, shall be without prejudice to any obligations or liabilities of either party already accrued prior to such termination.

- c. **Termination for Cause.** The State by written notice to the contractor may terminate the whole or any part of this contract:
 - i. If the contractor fails to provide services required by this contract within the time specified herein or any extension thereof; or
 - ii. If the contractor fails to perform any of the other provisions of this contract, or so fails to pursue the work as to endanger performance of this contract in accordance with its terms and after receipt of written notice from the State, fails to correct such failures within ten days or such longer period as NDDOT may authorize.

- iii. The rights and remedies of the State provided in the above clause related to defaults by the contractor are not exclusive and are in addition to any other rights and remedies provided by law or under this contract.

- d. **Termination, Deliveries.** If the contract is terminated for any reason, the contractor is responsible for delivery of all commodities and services ordered prior to the termination, unless those orders had been canceled by the Purchasing Agency or Entity.

10. **Inspection and Investigations.** The State reserves the right to conduct inspections and investigations related to the bidder and offered commodities or services, including but not limited to the firm, its facility, personnel, qualifications, and the commodities and/or services offered to make determinations regarding compliance with the bid requirements and responsibility of the bidder.

11. **Materials and Workmanship.** All material and workmanship shall be subject to inspection and testing at the discretion of the purchasing agency either at the point of manufacturer, place of storage, or upon receipt.

12. **Receiving.** Deliveries must arrive at the designated destination(s) during normal business hours unless other shipping/receiving instructions are issued by NDDOT personnel. The contractor shall contact the NDDOT to schedule delivery dates and times at least 24 hours in advance of delivery.

All NDDOT offices will be closed in recognition of State holidays. Any day declared a holiday by the President or Governor will also be recognized by office closure.

13. **Subcontracts, Assignment.** The contractor shall not subcontract, assign or transfer the contractor's interests or duties under this contract without express written consent of the purchasing agency. However, the contractor may enter into subcontracts provided that any such subcontractor acknowledges the binding nature of this contract and incorporates this contract, including any attachments. The contractor is solely responsible for the performance of any subcontractor. The contractor shall not have the authority to contract for or incur obligations on behalf of the State.

14. **Successors in Interest.** The provisions of this agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and assigns.

15. **Service Representative.** The contractor must provide a dedicated customer service representative to provide support for this contract. The contractor shall notify the Procurement Officer in the event the representative is changed.

NAME: Amy LaMusga Customer Service Representative
(Name of person servicing this contract)

BUSINESS NAME: 3M Company

MAILING ADDRESS: 3M Center Bldg 225-5N-14

CITY & STATE: St. Paul, MN ZIP CODE: 55144-1000

PHONE NUMBER: 800-553-1380 option 1 TOLL FREE: 800-553-1380 option 1

FAX NUMBER: 800-591-9293 E-MAIL: tcentral@mmm.com

PREFORMED PATTERNED PAVEMENT MARKING TAPE SPECIFICATIONS

Scope:

This solicitation is intended to establish pricing agreements for pavement marking tape for highway maintenance.

NDDOT will not be obligated to purchase any minimum quantity from any contract(s) resulting from this solicitation.

Award Criteria:

NDDOT reserves the right to award multiple contracts, by specification, for the pavement marking tape. Award will be made to the responsive bidder(s) considering price, specifications, terms of delivery and ability to provide service.

Specifications:

Pavement marking tape is required to meet the specifications indicated herein.

Specifications: Bidders must furnish specifications for each item bid. Sales literature generally does not contain sufficient data to determine whether the materials comply with specifications. Bids received without proper documentation or required certifications will be deemed unresponsive and may be rejected as such. Bidders must also furnish information on applicable warranties and/or guarantees, including the terms and conditions.

PREFORMED PATTERNED PAVEMENT MARKING FILM

A. General.

The markings shall be manufactured and packaged to permit storage at the manufacturer's recommended shelf life for a period of not less than one year from the date of purchase.

Legends and symbols shall meet the applicable shapes and sizes.

B. Composition.

- Provide retroreflective pliant polymer pavement markings that consist of a mixture of polymetric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a reflective layer of ceramic beads bonded to a polyurethane topcoat surface.
- Provide material with a patterned surface with between 35 and 65 percent of the surface area raised and presenting a near vertical face to traffic approaching from all directions.
- Ensure the channels between the raised areas are substantially free of exposed beads or particles.
- Provide material that has minimal exposed beads and particles between the raised areas.
- Provide preformed markings that conform to pavement contours by the action of traffic.
- Provide pavement markings applied using a pressure sensitive adhesive in accordance with the manufacturer's instructions. Provide markings that are immediately ready for traffic after application.

C. Skid Resistance.

- Provide tape that has a surface that provides an initial minimum skid resistance value of 45 BPN when tested according to ASTM E 303. Obtain the values at downweb and at 45 degree angle from downweb. Average the two values to find the skid resistance of the patterned surface.

D. Thickness.

- Provide patterned material that, without adhesive, has a minimum thickness of 65 mils at the thickest portion of the patterned cross-section and minimum thickness of 20 mils at the thinnest portion of the cross-section.

E. Beads.

- Provide ceramic beads on the surface of the material that have a minimum index of refraction of 1.7 when tested according to ASTM E 1967. Provide glass beads, that when mixed into pliant polymer, have a minimum index of 1.5 when tested according to ASTM E 1967.

F. Patchability.

- Provide film capable of being patched using the same type of material.

G. Reflectance.

- Provide markings that have minimum initial retroreflectance values specified in Table 880-05 when measured according to ASTM D 4061. Measure specific luminance (SL) expressed as millicandelas per square foot per foot candle. Use a 50 foot test distance and a sample size of a 2.0 x 2.5 foot rectangle.

Table 880-05		
	White	Yellow
Entrance Angle	86.5°	86.5°
Observation Angle	1°	1°
SL ¹	700	500
¹ Obtain reflectance measurements using an "Ecolux" brand retroreflectometer or equivalent.		

BID RESPONSE

BIDDERS MUST ATTACH COMPLETE PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION.

1. PREFORMED PATTERNED PAVEMENT MARKING FILM. Preformed patterned markings as per specification 880-05. Product shall be available in rolled goods of various widths and prefabricated legends and symbols. Submit separate price lists for available legends and symbols not identified below.

Brand 3M Company Warranty Please see attached Product Bulletin

DESCRIPTION	Brand and Product Number/Package Size		Bid Price
a. Rolled Goods (Indicate available width/length per roll)	Yellow: # 3M # A381IES Yellow		\$ 4.54 SF
	White: # 3M# A380IES White		\$ 4.54 SF
	30 Yard Length - 4", 5", 6", 8", 10", 12", 16", 18", 24" Widths - Also 48" x 20yards Roll sizes: 100 Yard Length - 4", 5", & 6" Widths		
b. Curved	# 3M# SMS-L380IES-RA (Right Arrow) or LA(Left Arrow)	Qty/Pkg 4	\$ 700.00/pkg
c. Only	# 3M# SMS-L380IES-ON	Qty/Pkg 2	\$ 560.00/pkg
d. Railroad crossing	# 3M# SMS-L380IES-RX	Qty/Pkg 1	\$ 555.00/pkg
e. Disabled symbol	# 3M# SMS-L380IES-HC	Qty/Pkg 1	\$ 205.00/pkg
f. Adhesive	# 3M# SPA60 Adhesive - 5 Gallon		\$165.00/ctn

Estimated delivery: 20-30 days ARO.

BIDDER: 3M Company

ITB 550-72-16-050, Tape, Pavement Marking – Preformed Patterned

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
APPENDIX A OF THE TITLE VI ASSURANCES**

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees as follows:

1. Compliance with Regulations: The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. Non-discrimination: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the Federal Highway Administration as appropriate, and will set forth what efforts it has made to obtain the information.
5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the Contractor under the contract until the Contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.



**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
APPENDIX E OF THE TITLE VI ASSURANCES**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).



Risk Management Appendix

Supply Contracts with Private Individuals, Companies, Corporations, Etc.:

Each party agrees to assume its own liability for any and all claims of any nature including all costs, expenses and attorney's fees which may in any manner result from or arise out of this agreement.

Contractor, or Contractor's delivery agent, shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

- 1) **Commercial general liability and automobile liability** insurance.
- 2) **Workers compensation** insurance.

Contractor shall produce certificates of insurance or copies of insurance policies upon request by the State.

When a portion of a Contract is sublet, the Contractor shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Contractor and the State as a result of work undertaken by the Subcontractor. In addition, the Contractor shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Contractor. The Contractor shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

RM Consulted 2007
Revised 6-07



**North Dakota Department of Transportation
AMENDMENT TO CONTRACT NO. 50160140
Project No.**

THIS AMENDMENT to the above-referenced contract is entered into by and between the State of North Dakota, acting through its Director of Transportation, hereinafter known as NDDOT, whose address is 608 East Boulevard Avenue, Bismarck, North Dakota 58505-0700, and 3M Company, hereinafter known as the Contractor, whose address is 3M Center Building 225-4N-14, St. Paul, MN 55144.

WHEREAS, the parties entered into a contract on March 1, 2016; and

WHEREAS, the contract was competitively bid and awarded to the Contractor; and

WHEREAS, the Contractor has performed satisfactorily under the terms of the contract; and

WHEREAS, the Contractor has expressed a willingness to extend the term of the above-referenced contract for an additional twelve (12) months; and

NOW THEREFORE, the Contractor and NDDOT agree that the term of the contract is extended through February 28, 2019.



All other terms and conditions of the above-referenced contract are incorporated herein by reference and remain in full force and effect.

EXECUTED the date last below signed.

WITNESS:

Leslie O'Hara

NAME (TYPE OR PRINT)

Leslie O'Hara

SIGNATURE

To be signed by Owner, Partner, Corp. Pres., Vice Pres., or other authorized Corp. Officer. (If signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

CONTRACTOR:

3M Company

COMPANY NAME

Matthew Leibel

OFFICER'S NAME (TYPE OR PRINT)

Matthew Leibel

SIGNATURE

Contract Administrator

TITLE

2/6/2018

DATE

WITNESS:

Sandra Goebel

NAME (TYPE OR PRINT)

Sandra Goebel

SIGNATURE

NORTH DAKOTA DEPARTMENT
OF TRANSPORTATION

for file
RONALD J. HENKE

DIRECTOR (TYPE OR PRINT)

RJ Henke

SIGNATURE

DATE

APPROVED as to substance by:

Brian Darr

DIVISION DIRECTOR (TYPE OR PRINT)

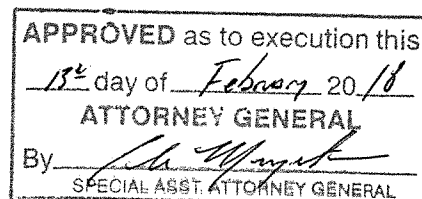
Brian Darr

SIGNATURE

DATE

2-13-18

CLA 52494 (Div. 06)
L.D. Approved 5-19-00; 5-03



**North Dakota Department of Transportation
AMENDMENT TO CONTRACT NO. 50160140
Project No.**

THIS AMENDMENT to the above-referenced contract is entered into by and between the State of North Dakota, acting through its Director of Transportation, hereinafter known as NDDOT, whose address is 608 East Boulevard Avenue, Bismarck, North Dakota 58505-0700, and 3M Company, hereinafter known as the Contractor, whose address is 3M Center Bldg. 225-4N-14, St. Paul, MN 55144.

WHEREAS, the parties entered into a contract on March 1st, 2016; and

WHEREAS, the contract was competitively bid and awarded to the Contractor; and

WHEREAS, the Contractor has performed satisfactorily under the terms of the contract; and

WHEREAS, the Contractor has expressed a willingness to extend the term of the above-referenced contract for an additional (12) months; and

NOW THEREFORE, the Contractor and NDDOT agree that the term of the contract is extended through February 28, 2018.



All other terms and conditions of the above-referenced contract are incorporated herein by reference and remain in full force and effect.

EXECUTED the date last below signed.

WITNESS:

Matthew R. Leibel

NAME (TYPE OR PRINT)

SIGNATURE

To be signed by Owner, Partner, Corp. Pres., Vice Pres., or other authorized Corp. Officer. (If signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

CONTRACTOR:

3M Company

COMPANY NAME

Denise McMahon

OFFICER'S NAME (TYPE OR PRINT)

Denise McMahon

SIGNATURE

Contract Administrator

TITLE

1/3/2017

DATE

WITNESS:

Sandra Goebel

NAME (TYPE OR PRINT)

SIGNATURE

NORTH DAKOTA DEPARTMENT
OF TRANSPORTATION

Grant Levi

DIRECTOR (TYPE OR PRINT)

SIGNATURE

DATE

APPROVED as to substance by:

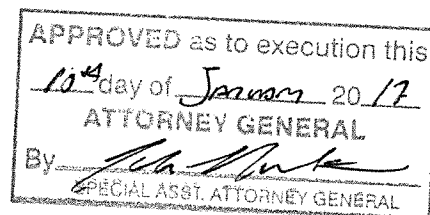
Brian Darr

DIVISION DIRECTOR (TYPE OR PRINT)

SIGNATURE

DATE

CLA 52494 (Div. 06)
L.D. Approved 5-19-00; 5-03



Power Of Attorney

By the authority granted the undersigned by the Deputy General Counsel and Secretary, the individuals listed below are appointed as 3M's, or its designated subsidiaries', true and lawful attorneys-in-fact for it, and in its name, for commercially-available products and services and government-unique products and services (except research and development services) for which 3M or its designated subsidiaries will be a prime contractor or subcontractor to any federal, state or municipal governmental agency in the United States, or to a federal, state or municipal prime contractor or higher tier subcontractor in the United States, to do acts specified on behalf of this Corporation.

(a) To submit or execute proposals, bids, binding purchase orders, contracts and subcontracts, and documents related thereto, (excluding certifications, representations and warranties to comply with certain laws or regulations), the following attorneys-in-fact

Authority for the below individuals applies to the specific Business Unit or staff function indicated, subject to the limitations imposed by their respective General Manager/Vice President or equivalent.

- | | | | |
|---|--|--|---|
| ● <u>3M Purification</u>
Towne, Richard B. | ● <u>Critical and Chronic Care Solutions Division</u>
McDonald, Michael S. | ● <u>Health Information Systems Division</u>
Black, Lisa M.
Cline, Jan C.
Garrison, Garri L.
Graves, Terri M.
Jennings, Gerald R.
Kim, Myung H.
Mason, Deborah A.
Mathison, John C.
McDonough, James R.
Mitchell, Brian D. | ● <u>Oral Care Division</u>
Barnard, Mathew C. |
| ● <u>3M Unitek Corporation</u>
Bernard, Mathew C. | ● <u>Electronics Markets Materials Division</u>
Anderson, Kevin G.
Koch, Joseph F. | | ● <u>Optical Systems Division</u>
Summers, Micki A. |
| ● <u>Abrasive Systems Division</u>
Canniff, Perry M. | | | ● <u>Personal Safety Division 3M Detection Solutions</u>
Canniff, Perry M.
Wesemann, Melissa J. |
| ● <u>Advanced Materials Division</u>
Davis, Scott J.
Giancola, John B.
Hanson, Scott R.
Ingstad, Cheryl A.
Lockhart, Bruce R.
Magrini, Dave L.
Moeller, Kent
Pearson, Claudia
Race, Robert J.
Utley, Elizabeth R. | ● <u>Electrical Markets Division</u>
Schiller, Fred K. | | |
| | ● <u>Food Safety Department</u>
Erdman, Michelle M.
Wadie, John A. | | |
| | ● <u>Government R&D Contracts Department</u> ¹
Charles, Ruth P.
Kays, Steven L.
Smith, Vivien L. | ● <u>Industrial Adhesive and Tapes Division / Venture Tape Corporation</u>
Authority for the below individual(s) applies to Federal Supply Schedule contracts only:
Canniff, Perry M. | ● <u>Traffic Safety and Security Division</u>
Benz, John P.
Christopherson, Nicole A.
Flatley, Doreen A.
Kester, Joseph H.
Leibel, Matthew R.
McMahon, Denise C.
Moran, Daniel F.
Morris, John N.
Pointon, David A.
Roose, Arnie K.
Schiralli, Ella M.
Selby, Megan A.
Shilling, Mitzi |
| ● <u>Aero Technologies LLC</u>
Canniff, Perry M. | ● <u>GTA-NHT, Inc</u>
Canniff, Perry M. | ● <u>Infection Prevention Division</u>
McDonald, Michael S.
-Health Care Service Support
Haataja, Brian J. | |
| ● <u>Aerospace and Aircraft Maintenance Division</u>
Canniff, Perry M. | ● <u>Stationery and Office Supplies Division</u>
Rihm, Diana L. | | |

Authority for the below individuals applies to the specific Business Unit or staff function indicated.

- | | | |
|---|--|--|
| ● <u>Global Channel Services</u>
Hilfer, Derrick E.
Mathers, Stephanie M. | ● <u>Government Markets</u>
Augustine, Rick
Kindem, Karen A.
Patrick, Laurie A. | ● <u>Government Contract Compliance</u>
Bordas, Richard J.
Carr, Torrance H.
Horwitz, Charles M.
Paraschou, Maria V.
Robinette, Thomas M. |
| | ● <u>Office of General Counsel</u>
Kuyath, Richard N. | |

1. Authority is delegated by 3M's Senior Vice President, Research and Development, and Chief Technology Officer, to the Vice Presidents, Research and Development, for their respective 3M Business Groups, and to certain specified employees in GR&DC, to execute proposals, contracts and subcontracts (including certifications, representations and warranties to comply with certain laws and regulations) for government R&D services. Authority to sign country of origin certifications for government R&D services is delegated to the Trade Compliance Department as specified below."

2 Product or performance warranties are to be reviewed and accepted by any 3M individual granted authority or responsibility to do so by the applicable business unit or staff

(b) To make certifications, (except Country of Origin certifications), the following attorneys-in-fact are hereby appointed. Authority may not be sub-delegated, except certifications made by other attorneys-in-fact listed in paragraph (a) may be authorized in writing by one of the individuals listed in paragraph (b) after a determination by one of the individuals in paragraph (b) that such certification is valid. Unfamiliar certifications must be cleared with the Government Contract Compliance department prior to execution.

Authority for the below individuals applies to any Business Unit or staff function indicated.

- 3M Unitek Corporation
Barnard, Mathew C.
- Aerospace and Aircraft Maintenance Division
Canniff, Perry M.
- Government R&D Contracts Department¹
Charles, Ruth P.
Keys, Steven L.
Smith, Vivien L.
- Industrial Adhesive and Tapes Division / Venture Tape Corporation
Authority for the below individual(s) applies to Federal Supply Schedule contracts only:
Canniff, Perry M.
- Abrasive Systems Division
Canniff, Perry M.
- Critical and Chronic Care Solutions Division
McDonald, Michael S.
- Health Information Systems Division
Black, Lisa M.
Cline, Jan C.
Garrison, Garri L.
Graves, Terri M.
Jennings, Gerald R.
Kim, Myung H.
Mason, Deborah A.
Mathison, John C.
McDonough, James R.
- Oral Care Division
Barnard, Mathew C.
- Advanced Materials Division
Davis, Scott J.
Giancola, John B.
Hanson, Scott R.
Ingstad, Cheryl A.
Lockhart, Bruce R.
Magrini, Dave L.
Moeller, Kent
Pearson, Claudia
Race, Robert J.
Utley, Elizabeth R.
- Electronics Markets Materials Division
Anderson, Kevin G.
Koch, Joseph F.
- Food Safety Department
Erdman, Michelle M.
Wadie, John A.
- Personal Safety Division 3M Detection Solutions
Canniff, Perry M.
Wesemann, Melissa J.
- GTA-NHT, Inc.
Canniff, Perry M.
- Infection Prevention Division
McDonald, Michael S.
-Health Care Service Support
Haataja, Brian J.
- Traffic Safety and Security Division
Benz, John P.
Kester, Joseph H.
Leibel, Matthew R.
McMahon, Denise C.
Moran, Daniel F.
Morris, John N.
Roese, Arnie K.
Shilling, Mitzi
- Aero Technologies LLC
Canniff, Perry M.

Authority for the below individuals applies to the specific Business Unit or staff function.

- Global Channel Services
Hilfer, Derrick E.
- Government Markets
Augustine, Rick
Kindem, Karen A.
Patrick, Laurie A.
- Government Contract Compliance
Bordas, Richard J.
Carr, Terrance H.
Horwitz, Charles M.
Paraschou, Maria V.
Robinette, Thomas M.
- Office of General Counsel
Kuyath, Richard N.

(c) To make Country of Origin certifications, the following attorney(s)-in-fact are hereby appointed:

- Trade Compliance Department
Authority may be sub-delegated in writing:
LaMere, Pierre J.

For all appointments, authority ceases or may be subsequently modified upon the individual's change in business unit, staff group or responsibilities, or when employment is terminated. Authority may be withdrawn or modified at any time.

This Power of Attorney revokes all prior Powers of Attorney with respect to the same matters and shall remain in effect until terminated by the undersigned or any other person authorized to grant powers of attorney on behalf of 3M. The undersigned has signed this Power of Attorney on this

16th day of May, 2016.

3M Company

By Charles Horwitz
Charles M. Horwitz
Director, Government Contract Compliance

**3M Traffic Safety
& Security Division**

3M Center, Building 225-4N-14
St. Paul, MN 55144-1000



February 22, 2016

North Dakota Department of Transportation
Procurement Section
608 E Boulevard Ave
Bismarck, ND 58505-0700
Attn: Alexis Wingo

RE: Bid# 550-72-16-050: Tape; Pavement Marking – Preformed Patterned

BID CLARIFICATIONS

GENERAL CONTRACT TERMS AND CONDITIONS:

P. 7 Section 10: Inspection and Investigations:

Subject to 3M confidentiality and safety requirements 3M will agree to inspections and investigations as to the company and its products. 3M is unable to provide information on its personnel that is considered confidential and/ or is protected from disclosure by law.

P. 13 Appendix E: Title VI Assurances:

3M's EEO policies prohibit all forms of discrimination or harassment against applicants, employees, vendors, contractors, or customers on the basis of race, color, creed, religion, sex, national origin, age, disability, veteran status, pregnancy, genetic information, sexual orientation, marital status, citizenship status, status with regards to public assistance, gender identity/expression, membership or activity in a local human rights commission, or any other reason prohibited by law. Our affirmative action policies and programs are designed to include the necessary reporting and monitoring required to ensure equal opportunities for qualified minorities, women, protected veterans, and individuals with disabilities, and also to

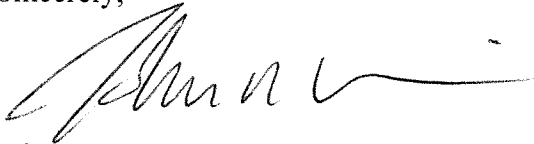
provide reasonable accommodation to individuals with disabilities, including disabled veterans.

3M's affirmative action policies and programs are designed to include the necessary reporting and monitoring required to ensure equal opportunities for qualified minorities, women, protected veterans, and individuals with disabilities, and also to provide reasonable accommodation to individuals with disabilities, including disabled veterans.

3M's commitment to EEO and affirmative action extends to all terms and conditions of employment, including, but not limited to, recruitment, selection, compensation, training, promotion, and benefits. And with respect to discrimination and harassment, all 3M employees must know and understand that consistent with our policies, 3M will not tolerate this behavior, meaning that any violation will be met with the appropriate company response, up to and including termination of employment.

3M's policies may differ slightly in detail from the various statutory provisions cited in Appendix E and a number of these provisions appear in applicable to the procurement. A copy of 3M's EEO policy is attached.

Sincerely,

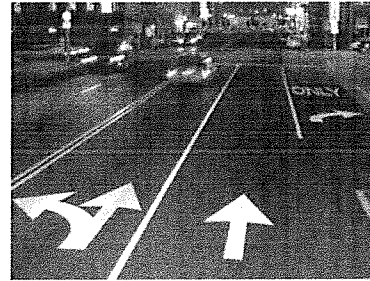
A handwritten signature in black ink, appearing to read "John N. Morris", with a stylized flourish at the end.

John N. Morris
Contract Analyst

Symbols and Legends

Tape L380I ES White

3M™ Stamark™ High Performance Tape L380I ES white pre-cut symbols and legends with pressure sensitive adhesive and liner.



Pavement Markings

Code	Description	Size	Quantity Per Package	Estimated Sq. Ft** Per Package	Net Price Per Package
SMS-L380IES-SA	Straight Arrow	115.2" x 38.4"	4	50	\$ 567.32 *
SMS-L380IES-LA	Left Curve Arrow	96" x 73"	4	62	829.97 *
SMS-L380IES-RA	Right Curve Arrow	96" x 73"	4	62	829.97 *
SMS-L380IES-SE	Elongated Straight Arrow	144" x 20"	2	25	572.58 (NR)
SMS-L380IES-LE	Elongated Left Arrow	145" x 31"	2	36	619.85 (NR)
SMS-L380IES-RE	Elongated Right Arrow	145" x 31"	2	36	619.85 (NR)
SMS-L380IES-RD	Lane Drop Right Arrow	216" x 62"	1	45	714.41 (NR)
SMS-L380IES-LD	Lane Drop Left Arrow	216" x 62"	1	45	714.41 (NR)
SMS-L380IES-ON	"ONLY" Legend, 8ft.	96" High	2	46	667.13 *
SMS-L380IES-ST	"STOP" Legend, 8ft.	96" High	1	23.5	378.22 (NR)
SMS-L380IES-AH	"AHEAD" Legend, 8ft.	96" High	1	29	467.52 (NR)
SMS-L380IES-SC	"SCHOOL" Legend, 8ft.	96" High	1	35	546.31 (NR)
SMS-L380IES-XI	"XING" Legend, 8ft.	96" High	1	20	362.46 (NR)
SMS-L380IES-ME	"MERGE" Legend, 8ft.	96" High	1	50	703.90 (NR)
SMS-L380IES-PE	"PED" Legend, 8ft.	96" High	1	31	504.29 (NR)
SMS-L380IES-YI	"YIELD" Legend, 8ft.	96" High	1	44	640.87 (NR)
SMS-L380IES-M8	"MPH" Legend, 8ft.	96" High	1	28	457.01 (NR)
SMS-L380IES-R	Letter "R" for Railroad Crossing	72" x 11-1/2"	2	11.5	199.61 (NR)
SMS-L380IES-RX	Railroad Crossing Pkg. Consists of: 2 "R's" 72" and One Roll 16" x 42' for "X"			69	656.62 *
SMS-L380IES-RP-78	Railroad Crossing Pkg. Consists of: 2 "R's" 78-3/4" and One Roll 16" x 42' for "X"			70	667.13 (NR)
SMS-L380IES-K4	Bicycle Symbol, 4ft.	48" x 25"	2	18	225.88 (NR)
SMS-L380IES-RK6	Right Bicycle Symbol, 6ft.	72" x 41"	2	40	388.72 (NR)
SMS-L380IES-LK6	Left Bicycle Symbol, 6ft.	72" x 41"	2	40	388.72 (NR)
SMS-L380IES-SH	Bicycle Sharrow	112" x 40"	2	48	672.38 (NR)
SMS-L380IES-BK	Bicycle Lane Symbol	40" x 72"	2	44	640.87 (NR)
SMS-L380IES-A6	Straight Arrow Bicycle, 6ft.	72" x 24"	2	13	178.60 *
SMS-L380IES-HC	Handicap Symbol, 4ft.	48" x 35"	1	12	262.65 (NR)

* Item in stock, will ship within 2 business days or less, up to 25 packages, when order is placed with 3M Customer Service by 1:00 CST.

All orders are subject to 3M credit approval. For orders over 25 packages please contact your customer service representative for ship date.

** Square footage for estimating surface preparation adhesive usage requirements when outside of current pavement marking tape climate guide.

3M™ Stamark™ Surface Preparation Adhesive is required for Series 380I ES tape when installation is outside of 3M Climate Guide dates.

For symbols and legends not listed here, please contact 3M's Bid and Contract Department at tbidgroup@mmm.com (Fax: 888-246-9793).

(NR) = Non-Returnable Item, see returned goods policy for more information.

Power Of Attorney

By the authority granted the undersigned by the Deputy General Counsel and Secretary, the individuals listed below are appointed as 3M's, or its designated subsidiaries', true and lawful attorneys-in-fact for it, and in its name, for commercially-available products and services and government-unique products and services (except research and development services¹) for which 3M or its designated subsidiaries will be a prime contractor or subcontractor to any federal, state or municipal governmental agency in the United States, or to a federal, state or municipal prime contractor or higher tier subcontractor in the United States, to do acts specified on behalf of this Corporation.

(a) To submit or execute proposals, bids, binding purchase orders, contracts and subcontracts, and documents related thereto, (excluding certifications, representations and warranties to comply with certain laws or regulations²), the following attorneys-in-fact are hereby appointed. Authority may not be sub-delegated.

Authority for the below individuals applies to the specific Business Unit or staff function indicated, subject to the limitations imposed by their respective General Manager/Vice President or equivalent.

- | | | | |
|--|--|--|---|
| ● <u>3M Purification</u>
Towne, Richard B. | ● <u>Critical and Chronic Care Solutions Division</u>
McDonald, Michael S. | ● <u>Health Information Systems Division</u>
Black, Lisa M.
Cline, Jan C.
Garrison, Garri L.
Graves, Terri M.
Hasbrouck, Kurt D.
Jennings, Gerald R.
Kim, Myung H.
Kirkpatrick, Gayl W.
Mason, Deborah A.
Mathison, John C.
McDonough, James R.
Mitchell, Brian D.
Terrill, Ray J. | ● <u>Oral Care Division</u>
Bernard, Mathew C. |
| ● <u>3M Unitek Corporation</u>
Barnard, Mathew C. | ● <u>Electronics Markets Materials Division</u>
Anderson, Kevin G.
Koch, Joseph F. | | ● <u>Optical Systems Division</u>
Summers, Micki A. |
| ● <u>Abrasive Systems Division</u>
Canniff, Perry M. | | | ● <u>Personal Safety Division 3M Detection Solutions</u>
Canniff, Perry M.
Wesemann, Melissa J. |
| ● <u>Advanced Materials Division</u>
Atwell, Mary
Davis, Scott J.
Giancola, John B.
Hanson, Scott R.
Ingstad, Cheryl A.
Lockhart, Bruce R.
Magrini, Dave L.
Moeckler, Kent
Pearson, Claudia
Race, Robert J.
Rushin, Sandra J.
Utley, Elizabeth R. | ● <u>Electrical Markets Division</u>
Schiller, Fred K. | | |
| | ● <u>Food Safety Department</u>
Erdman, Michelle M.
Wadie, John A. | | ● <u>Traffic Safety and Security Division</u>
Benz, John P.
Christopherson, Nicole A.
Flatley, Doreen A.
Kester, Joseph H.
Lehman, John W.
Leibel, Matthew R.
McMahon, Denise C.
Moran, Daniel F.
Morris, John N.
Pointon, David A.
Schialli, Ella M.
Selby, Megan A.
Zilles, Mary K. |
| | ● <u>Government R&D Contracts Department¹</u>
Charles, Ruth P.
Kays, Steven L.
Smith, Vivien L. | ● <u>Industrial Adhesive and Tapes Division /Venture Tape Corporation</u>
<i>Authority for the below individual(s) applies to Federal Supply Schedule contracts only:</i>
Canniff, Perry M. | |
| ● <u>Aero Technologies LLC</u>
Canniff, Perry M. | ● <u>GTA-NHT, Inc</u>
Canniff, Perry M. | ● <u>Infection Prevention Division</u>
McDonald, Michael S.
<i>-Health Care Service Support</i>
Haataja, Brian J. | |
| ● <u>Aerospace and Aircraft Maintenance Division</u>
Canniff, Perry M. | ● <u>Stationery and Office Supplies Division</u>
Rihm, Diana L. | | |

Authority for the below individuals applies to the specific Business Unit or staff function indicated.

- | | | |
|--|--|---|
| ● <u>Global Channel Services</u>
Hilfer, Derrick E.
Mathers, Stephanie M. | ● <u>Government Markets</u>
Kindem, Karen A.
Patrick, Laurie A. | ● <u>Government Contract Compliance</u>
Bordas, Richard J.
Carr, Terrance H.
Horwitz, Charles M.
Paraschou, Maria V.
Robinette, Thomas M. |
| | ● <u>Office of General Counsel</u>
Kuyath, Richard N. | |

¹ Authority is delegated by 3M's Senior Vice President, Research and Development, and Chief Technology Officer, to GR&DC to execute proposals and contracts for government research and development services.

² Product or performance warranties are to be reviewed and accepted by any 3M individual granted authority or responsibility to do so by the applicable business unit or staff group.

(b) To make certifications, (except Country of Origin certifications), the following attorneys-in-fact are hereby appointed. Authority may not be sub-delegated, except certifications made by other attorneys-in-fact listed in paragraph (a) may be authorized in writing by one of the individuals listed in paragraph (b) after a determination by one of the individuals in paragraph (b) that such certification is valid. Unfamiliar certifications must be cleared with the Government Contract Compliance department prior to execution.

Authority for the below individuals applies to any Business Unit or staff function indicated.

- **3M Unitek Corporation**
Bernard, Mathew C.
- **Aerospace and Aircraft Maintenance Division**
Canniff, Perry M.
- **Critical and Chronic Care Solutions Division**
McDonald, Michael S.
- **Electronics Markets Materials Division**
Anderson, Kevin G.
Koch, Joseph F.
- **Food Safety Department**
Erdman, Michelle M.
Wadie, John A.
- **GIA-NHT, Inc.**
Canniff, Perry M.
- **Government R&D Contracts Department**
Charles, Ruth P.
Kays, Steven L.
Smith, Vivien L.
- **Health Information Systems Division**
Black, Lisa M.
Cline, Jan C.
Garrison, Garri L.
Graves, Terri M.
Jennings, Gerald R.
Kim, Myung H.
Kirkpatrick, Gayl W.
Mason, Deborah A.
Mathison, John C.
McDonough, James R.
Terrill Jr, Ray J.
- **Infection Prevention Division**
McDonald, Michael S.
-Health Care Service Support
Haataja, Brian J.
- **Industrial Adhesive and Tapes Division /Venture Tape Corporation**
Authority for the below individual(s) applies to Federal Supply Schedule contracts only:
Canniff, Perry M.
- **Oral Care Division**
Bernard, Mathew C.
- **Personal Safety Division 3M Detection Solutions**
Canniff, Perry M.
Wesemann, Melissa J.
- **Traffic Safety and Security Division**
Benz, John P.
Leibel, Matthew R.
Moran, Daniel F.
Morris, John N.
Zilles, Mary K.
- **Aero Technologies LLC**
Canniff, Perry M.

Authority for the below individuals applies to the specific Business Unit or staff function.

- **Global Channel Services**
Hilfer, Derrick E.
- **Government Markets**
Kindem, Karen A.
Patrick, Laurie A.
- **Office of General Counsel**
Kuyath, Richard N.
- **Government Contract Compliance**
Bordas, Richard J.
Carr, Terrance H.
Horwitz, Charles M.
Paraschou, Maria V.
Robinette, Thomas M.

(c) To make Country of Origin certifications, the following attorney(s)-in-fact are hereby appointed:

To make Country of Origin certifications, the following attorney(s)-in-fact are hereby appointed:

- **Trade Compliance Department**
Authority may be sub-delegated in writing:
LeMere, Pierre J.

For all appointments, authority ceases or may be subsequently modified upon the individual's change in business unit, staff group or responsibilities, or when employment is terminated. Authority may be withdrawn or modified at any time.

This Power of Attorney revokes all prior Powers of Attorney with respect to the same matters and shall remain in effect until terminated by the undersigned or any other person authorized to grant powers of attorney on behalf of 3M. The undersigned has signed this Power of Attorney on this

3rd day of Dec, 2015.

3M Company

By Charles Horwitz

Charles M. Horwitz

Director, Government Contract Compliance

3M General Offices

3M Center
St. Paul, MN 55144-1000
651 733 1110




Equal Employment Opportunity (EEO) and Affirmative Action (AA)

Applicability	All regular full-time and regular part-time U.S. employees and applicants for U.S. employment.
Introduction	3M believes that successfully managing diversity in the work force is essential to the future competitive position of the company. To help us achieve this objective, we have implemented and now reaffirm our commitment to the company's equal employment opportunity (EEO) and affirmative action policies and programs.
Policy Statement	<p>Our EEO policies prohibit all forms of discrimination or harassment against applicants, employees, vendors, contractors, or customers on the basis of race, color, creed, religion, sex, national origin, age, disability, veteran status, pregnancy, familial status, genetic information, sexual orientation, marital status, citizenship status, status with regards to public assistance, gender identity/expression, membership or activity in a local human rights commission, or any other reason prohibited by law. Our affirmative action policies and programs are designed to include the necessary reporting and monitoring required to ensure equal opportunities for qualified minorities, women, protected veterans, and individuals with disabilities, and also to provide reasonable accommodation to individuals with disabilities, including disabled veterans. Progress reports on affirmative action are received/reviewed by the CEO.</p> <p>Our commitment to EEO and affirmative action extends to all terms and conditions of employment, including, but not limited to, recruitment, selection, compensation, training, promotion, and benefits. And with respect to discrimination and harassment, all 3M employees must know and understand that consistent with our policies, 3M will not tolerate this behavior, meaning that any violation will be met with the appropriate company response, up to and including termination of employment.</p> <p>These policies and programs also prohibit all forms of retaliation – including harassment, intimidation, threats, coercion, or discrimination – against any individual because such individual has (1) filed a complaint; (2) assisted or participated in an investigation, compliance evaluation, hearing, or other activity related to the administration of federal, state, or local EEO and affirmative action requirements; (3) opposed any act or practice made unlawful by these requirements; or (4) exercised any other right protected by these requirements.</p>
Related Information	<ul style="list-style-type: none">• Harassment Policy• Invitation to Self-Identify Form
Additional Elements	If you believe you have been or are being harassed or discriminated against in violation of 3M's EEO policies, please contact your supervisor, manager, or 3M Human Resources Representative. Complaints can also be made by contacting the 3M Business Conduct Helpline at 1-800-243-0857 (operated by EthicsPoint), or by visiting the Business Conduct & Policy Center website on 3M Source.
For Further Information	Administration of this policy is the responsibility of Rhonda Graves, Chief Diversity Officer and all supervisors and managers. To view the affirmative action program for protected veterans and individuals with disabilities, please contact the Office of Diversity and Inclusion during normal business hours at 651-737-4872 to make viewing arrangements.

Approved By 3M Human Resources Talent Management and Employee Relations

Original Issue Date January 1, 2015


Inge G. Thulin
Chairman of the Board, President and Chief Executive Officer



Stamark™ High Performance Tape

Series 380I ES

Product Bulletin 380I ES

November 2008

Replaces 380I ES dated October 2006

Description

3M™ Stamark™ High Performance Tape Series 380I ES can be used as an inlay marking on new asphalt or as an overlay marking on asphalt and concrete pavement surfaces in good condition.

Series 380I ES tape offers “Extended Season” applications due to an improved pressure sensitive adhesive (PSA) package on the bottom surface. Series 380I ES does not require 3M™ Stamark™ Surface Preparation Adhesive P-50 prior to application, if applied during the application season as outlined in the 3M Climate Guide for 3M™ Stamark™ Pavement Marking Tapes.

Series A380I ES: Used for long lines, edge lines, channelizing lines, gore markings, stop bars and crosswalks.

Series L380I ES: Lined. Used to cut symbols and legends.

Series SMS-L380I ES: Lined. Precut symbols and legends.

Properties

A. Product Features

- Durable, conformable to pavement and retroreflective
- Embedded net provides increased tear resistance
- Pressure sensitive adhesive (PSA) on bottom surface
- No surface preparation adhesive required when applied within standard tape application season as defined by the 3M Climate Guide
- Series 380I ES tape can be applied early and late season, down to 40°F (4°C) with use of 3M™ Stamark™ Surface Preparation Adhesive P-50
- Long-term reflectivity design
- Abrasion-resistant microcrystalline ceramic beads bonded in a highly durable polyurethane topcoat

- Yellow microcrystalline ceramic beads incorporated in Series 381I ES tape to improve nighttime yellow color
- Manufactured without the use of heavy metals, lead chromate pigments or other similar, lead-containing chemicals
- Patterned design presents a near vertical surface to traffic to maximize retroreflectance
- Nominal thickness of 0.065 in. (1.6 mm) at pattern heights
- White: 380I ES
- Yellow: 381I ES

B. Reflectance

Series 380I ES tape has the following initial minimum retroreflectance values when measured in accordance with ASTM-D4061. The photometric quality to be measured is coefficient of retroreflected luminance (R_L) and shall be expressed as:

English R_L : millicandelas per square foot per foot-candle $[(\text{mcd} \cdot \text{ft}^{-2}) \cdot \text{fc}^{-1}]$ or equivalently as:

Metric R_L : millicandelas per square meter per lux $[(\text{mcd} \cdot \text{m}^{-2}) \cdot \text{lx}^{-1}]$

	White	Yellow
Entrance Angle	88.76°	88.76°
Observation Angle	1.05°	1.05°
Retroreflected Luminance*	500	300
$R_L [(\text{mcd} \cdot \text{ft}^{-2}) \cdot \text{fc}^{-1}]$		

*The quantity of retroreflected luminance (R_L) “relates to the way the effective retroreflective surface is focused on the retina of the human eye and to the visual effect thereby produced. It is recommended for describing the performance of highway signs and striping, or large vehicular markings which are commonly viewed as discernible surface areas.” Federal Test Method Standard 370, 3.1.2, Note 6, March 1, 1977.

C. Color

The preformed markings consist of white or yellow films with pigments selected and blended to conform to standard highway colors.

D. Skid Resistance

The patterned surface of the retroreflective pliant polymer shall provide an initial average skid resistance value of 45 BPN when tested according to ASTM E 303 except values will be taken in one direction and at 45° angle from that direction. These two values will then be averaged to find the skid resistance of the patterned surface.

E. Application

All applications should be installed using the instructions in the appropriate section of 3M Information Folder 380I ES. Surface Preparation Adhesive is not needed when applying the tape during the application season outlined in the 3M Climate Guide for 3M™ Stamark™ Pavement Marking Tapes. The tape can be applied down to 40°F ambient temperature outside the dates outlined in the Climate Guide for Stamark pavement marking tapes with the use of 3M™ Stamark™ Surface Preparation Adhesive P-50. For long line applications, the P-50 Surface Preparation Adhesive should be applied with a 3M™ Adhesive Spray Applicator PS-14. For transverse markings, the Surface Preparation Adhesive should be applied using a 3/8" nap paint roller.

F. Patchability

Heavy traffic and snow plowing may cause wear and damage. New materials can be installed in these areas with minimal surface preparation by following the manufacturer's recommendations. Remove the damaged material and replace the damaged area by following the instructions in "Overlay Applications" of 3M Information Folder 380I ES.

General Performance Considerations

Stamark pavement marking tapes are weather resistant and provide excellent reflectivity and color retention. Experience has shown that these materials are highly effective traffic control devices and will show no appreciable fading, lifting, shrinkage or chipping when applied according to 3M's recommendations contained in product literature.

The durability of Stamark pavement markings will depend on traffic conditions, snow removal practices, application techniques used, and pavement and atmospheric conditions at the time of application. It is recommended that the customer thoroughly evaluate Stamark tapes under the conditions in the specified location before making large-scale applications.

Warranty

3M warrants that 3M™ Stamark™ High Performance Tape Series 380I ES sold by 3M for longitudinal and symbol and legend pavement marking applications in the United States and Canada will remain effective for its intended use under normal traffic conditions and meet the minimum retained coefficient of retroreflection value of 100 millicandelas per foot squared per foot-candle (measured at 1.05° observation and 88.76° entrance angles) subject to the following provisions:

Table 1

<u>Application*</u>	<u>Warranty Period</u>
Longitudinal markings	4 years
Symbols and legends	2 years
*Applications in mountainous, heavy snowfall areas above 5,000 ft. (1,500m) are not covered by this warranty.	

3M also warrants that 3M™ Stamark™ High Performance Tape Series 380I ES sold by 3M for transverse (stopbars and crosswalks) and channelizing marking applications in the United States and Canada will maintain road presence subject to the following provisions:

Table 2

<u>WARRANTY PERIOD</u>		
<u>APPLICATION</u>	<u>Snow Removal Areas</u>	<u>Non-Snow Removal Areas</u>
	Road presence and non wear-through	Road presence and non wear-through
CHANNELIZING MARKINGS		
New Asphalt Inlay	2 years	2 years
Asphalt Grooved/Recessed	2 years	2 years
Asphalt Overlay	1 year	2 years
New Concrete Overlay	1 year	2 years
Concrete Grooved/Recessed	2 years	2 years
STOP BARS, CROSSWALKS WITH ADT/LANE OF 6,000 OR LESS		
New Asphalt Inlay	1 year	2 years
Asphalt Grooved/Recessed	1 year	2 years
Asphalt Overlay	—	1 year
New Concrete Overlay	—	1 year
Concrete Grooved/Recessed	1 year	2 years

If Series 380I ES tape is applied in accordance with all 3M application procedures provided in 3M's product bulletins, information folders and technical memos; and fails to retain the minimum reflectance value (for longitudinal and symbol and legend markings) or fails to adhere to the roadway or fails due to complete wear-through (for transverse and channelizing markings) during the warranty period shown in Table 2 (from the date of installation), 3M's sole responsibility and purchaser's and user's exclusive remedy shall be:

3M will provide the replacement materials that will restore the pavement marking retroreflectivity values to warranty levels or greater.

Conditions

Such failure must be solely the result of design or manufacturing defects in the Stamark high performance tape and not of outside causes such as improper installation or substrate failure. Failure to follow recommended application procedures will void this warranty.

Damage to pavement markings caused by snow removal equipment is not covered under this warranty.

A visual night inspection must be made with a 3M representative and a customer representative present to identify areas of the installation which appear to be below the minimum retained reflectance values specified in Table 1. Areas which appear to be below the minimum retained reflectance value shall be identified as "zones of measurement." To qualify for material replacement, a "zone" must be at least 360 feet in road length and consist of either edge lines, center lines or lane lines, but not in combination, or a single word or symbol marking.

3M reserves the right to determine the type of replacement marking and method of installation.

Replacement markings will carry the unexpired warranty of the marking it replaces.

Claims made under this warranty will be honored only if the customer has maintained an accurate record of the dates of material installation, which constitutes the start of the warranty period.

Claims 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 of 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 lost 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.

Reflectance Measurement Procedures for Warranty

Step 1: A visual night inspection must be made with a 3M representative and a customer representative present to identify areas of installation which appear to be below the specified minimum retained reflectance values in the Table 1.

Areas which appear to be below the minimum retained reflectance value shall be identified as zones of measurement. To qualify for materials replacement, a zone must be at least 360 feet (108 meters) in road length and shall consist of either edge lines, center lines or lane lines, but not in combination.

Step 2: Within each zone, reflectance measurements must be taken at specified checkpoint areas.

a. Zones Measuring 360 Feet (108 m) to 1,080 Feet (324 m) in Length

No separate checkpoints are required. For continuous lines, reflectance measurements must be made at approximately 20 ft. (6 m) intervals throughout the zone. For skip lines, two measurements must be taken at two random locations on each skip.

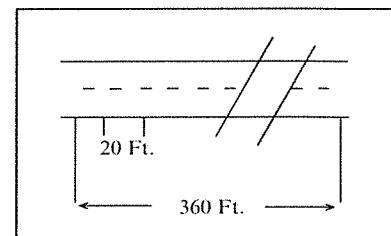


Figure 1

b. Zones Measuring 1,080 Feet (324 m) to 6 Miles (9.6 km) in Road Length

A total of 18 measurements must be made at each of three checkpoints within the zone, including the start point, the mid point and the end point. For continuous lines, reflectance measurements must be made at 20-foot (6 m) intervals throughout each checkpoint. For skip lines, two measurements must be taken at two random locations on each skip.

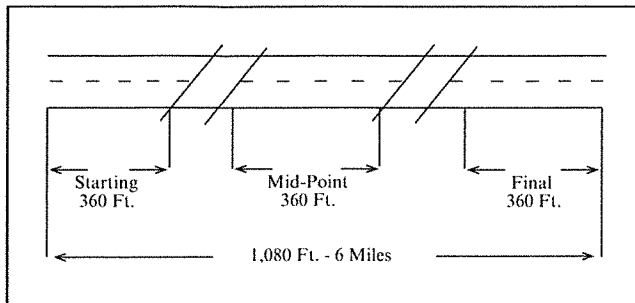


Figure 2: Measure every 20 ft. on continuous lines or 2 measurements per skip for each checkpoint.

c. Zone Greater than 6 Miles in Road Length

A total of 18 measurements must be made in each checkpoint within the zone, including the start point, the end point and at approximately 3-mile (4.8 kilometers) intervals throughout the zone. For measurement intervals on continuous lines, center lines or lane line skips, refer to Section b above.

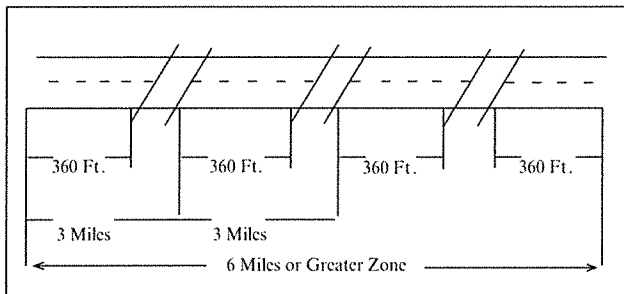


Figure 3: Measure every 20 ft. on continuous lines or 2 measurements per skip for each checkpoint.

Step 3: All reflectance measurements made at the checkpoints shall be made on a clean, dry surface at a minimum temperature of 40° F (4° C). The test instrument shall use an Entrance Angle of 88.76° and an Observation Angle 1.05° which represent a simulated driver viewing geometry at a 30 meter distance.

Step 4: All reflectance measurements within the zone must be averaged to determine if the minimum retained reflectance values have been met.

Materials Replacement Condition

Markings must be applied according to the instructions in 3M Information Folder 380I ES to qualify for any applicable materials replacement provisions.

Storage

Store in a cool, dry area indoors. Use within one year of receipt.

Health and Safety Information

Read all health hazard, precautionary and first-aid statements found in the Material Safety Data Sheet (MSDS) and/or product label of chemicals prior to handling or use. Also refer to the MSDS for information about the volatile organic compound (VOC) content of chemical products. Consult local regulations and authorities for possible restrictions on product VOC content and/or VOC emissions. Electronically, visit us at www.3M.com/us and select MSDS search.

Literature Reference

For additional information on Stamark tapes, application instructions or application equipment, refer to the following publications:

- IF 380I ES Application Guidelines for 3M™ Stamark™ High Performance Tape Series 380I ES
- IF 5.2 Information Folder for 3M Highway Tape Applicator - HTA
- IF 5.7 Pavement Surface Preparation and Application Procedures for Stamark Pavement Marking Tapes
- IF 5.8 Application of 3M Stamark Precut Symbols and Legends

FOR INFORMATION OR ASSISTANCE

CALL:

1-800-553-1380

IN CANADA CALL:

1-800-265-1840

Internet:

www.3M.com/tss

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Important Notice

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, or conditions express or implied. Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct, special or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for his/her intended use, and user assumes all risk and liability whatsoever in connection therewith. Statements or recommendations not contained herein shall have no force or effect unless in an agreement signed by officers of seller and manufacturer.

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3M™ Stamark™ Surface Preparation Adhesive P-50

Instructions for use with 3M™ Stamark™ Pavement Marking Tapes

Information Folder 5.17

May 2014

Replaces IF 5.17 dated March 2010

Directions for Use	3M™ Stamark™ Surface Preparation Adhesive P-50 is extremely flammable; handling and storage precautions on the container must be observed. Containers must be opened away from the face slowly and carefully to vent any internal vapor pressure. Stamark surface preparation adhesive P-50 is applied by using the Adhesive Spray Applicator PS-14. Use P-50 within two years of receipt. See Storage Recommendations for proper methods of storage.
Coverage	P-50 sprayable adhesive coverage is about 450 lineal ft/gal. (35 m/l) spraying a 6-inch (15 cm) wide pattern. The resulting wet thickness is approximately 6.0–7.0 mil. If tape wider than six inches (15 cm) is to be applied, make multiple passes with the adhesive spray applicator.
Application Conditions — Stamark™ Durable Tapes	<ol style="list-style-type: none">1. Air temperature — Minimum 40°F (4°C) and rising in a season when nighttime lows are above 40°F (4°C). To determine if P-50 is required, refer to the 3M Climate Guide or product bulletin for tape to be applied.2. No rainfall for previous 24 hours. Other visible signs of moisture (dew or frost) should not be present.3. Asphalt surfaces must be at least three days old before applying the P-50 adhesive.4. Concrete surfaces open to traffic less than 90 days must have the curing compound removed before applying P-50. Curing compound can be removed by sandblasting or other methods such as shotblasting or hydroblasting. If hydroblasting is used the road must be allowed to dry completely before application of P-50 and Stamark tapes.5. The pavement surface must be clean, dry, and in good condition.6. Do not apply P-50 over old pavement markings such as paint, epoxy, thermoplastic, and preformed tapes including Stamark tapes. Old pavement markings must be removed using methods such as sandblasting, shotblasting, or grinding. Hydroblasting may also be used, but the road must be allowed to dry for a minimum of 24 hours before application of P-50 and Stamark tapes. At least 90 percent of the old pavement marking material must be completely removed down to the road surface prior to application of P-50.7. Traffic must be kept off of pavement surfaces coated with a surface preparation adhesive prior to tape application.

Application Conditions — Stamark™ Temporary Removable Tapes	For application of P-50 with Stamark Temporary Removable Tapes, refer to Information Folder 3.2. For additional information on the application of P-50 for Series 710 under marginal weather conditions or on a poor surface, contact 3M Pavement Markings Technical Service at 1-800-553-1380.
Application Procedures	<ol style="list-style-type: none"> 1. Completely clean and flush the spray equipment with Acetone or Methyl Ethyl Ketone before spraying P-50. 2. Clean the pavement surface thoroughly and mark the position where the pavement marking will be applied. 3. Apply one coat of P-50 sprayable adhesive. Spray the adhesive a minimum of one (1) inch (2.5cm) beyond where the edges of the tape will be applied. 4. Allow the P-50 to set. P-50 is set when it feels tacky but is no longer in liquid form and has a matte finish rather than a glossy wet appearance. P-50 dries quickly under most circumstances. Typical time for P-50 to set is two to three (2 – 3) minutes under optimal conditions of 70°F (21°C) and medium to low humidity levels. Use methods described Information Folder 5.7 to verify that P-50 is set. 5. After P-50 is set, apply the tape by using methods described in Information Folder 5.7. Do not allow P-50 to remain on the road without tape application for an extended time. A delay will result in dirt and dust forming a film on the P-50 surface reducing adhesion performance. 6. Tamp the tape thoroughly with the 3M™ Roller Tamper Cart (RTC-2) with a minimum 200 lb (90 kg) load or slowly drive over the tape making six passes over each part of the tape. The vehicle should be equipped with a pointing device to aid in keeping the vehicle on the tape. Tamping is very important! <p>RTC-2 Operating Instructions</p> <ul style="list-style-type: none"> • Do not twist or turn the tamping device on tape. • Make six passes over each part of the tape. • Make sure all edges are firmly adhered. • Open to traffic as soon as tamping is complete.
Clean-Up	<ol style="list-style-type: none"> 1. When finished applying surface preparation adhesive, pull the PS-14 applicator backwards eight to ten (8-10) feet to draw the adhesive back into the can, and remove the siphon tube from the adhesive. 2. Insert the siphon tube into a can of Acetone or Methyl Ethyl Ketone. Place a catch pan under the spray nozzle and rotate the front wheel until the solvent from the spray nozzle appears clear. 3. Rotate the pump backwards to draw the solvent back into the can. 4. Dispose of the cleaning solvent according to local regulations and guidelines.
Recommended Storage	Store away from heat in a cool, dry place and protect from freezing. Store out of direct sunlight. Keep container closed when not in use. Keep container in well ventilated area. Contents may be under pressure; open carefully.
Health and Safety Information	Read all health hazard, precautionary, and first aid statements found in the Material Safety Data Sheet (MSDS), and/or product label of chemicals prior to handling or use. Also refer to the MSDS for information about the volatile organic compound (VOC) content of chemical products. Consult local regulations and authorities for possible restrictions on product VOC content and/or VOC emissions.

**FOR INFORMATION OR ASSISTANCE
CALL: 1-800-553-1380**

**IN CANADA CALL:
1-800-265-1840**

**Internet:
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