Certification of Patented or Proprietary Product By signature of this document, the State official is certifying that in accordance with the requirements of 23 CFR 635.411 (a) (2), this patented or proprietary item is: Essential for synchronization No equally suitable alternative exists Duration Project Specific Certification Statewide Application of 3M Wet Reflective Elements This certification covers the use of 3M White 70B and Yellow 71B Elements for grooved we and growed contrast wet reflective epoxy on conventional and multi lane long lines. Force: Journal v. 1.014 To: December 31, 2018 Description of Hently, Work: Wet Reflective Elements: Products covered under this certification will be placed with a modified epoxy binder on let contracts for 4" wite center lines, lane lines and edge inses and 8" wink channelizing lines and extensions. The double drop system of 5.3 pounds of 70E white or 71E yellow 3M wet reflective epoxy as shown below costs up to 4 times, 8" wide wet reflective epoxy personed slot for concrete and 80 mils slot for asphalt to ensure longevity of the marking from snow plow activity. Justification: 4" wide wet reflective epoxy as shown below costs up to 4 times, 8" wide wet reflective epoxy up to 6 times, more than standard surface placed epoxy for the same width but offers superior wet night visibility needed for motorist guidance on multi lane and conventional stapidynays. This cost includes groowing a slot to ensure longevity. Research conducted since 2009 has not found products capable of meetin the minimum Wis1OO requirements of 250 mcd(initial) and 80 mcd (after 1 year) based on the ASTM E-2177 text. Lane departure create the minimum Wis1OO requirements of 250 mcd(initial) and 80 mcd (after 1 year) based on the ASTM E-2177 text. Lane departure create only the standard of the same width but offers superior wet night visibility of year based on the ASTM E-2177 text. Lane departure remarks and center line markings such as grooved wet reflective epoxy increases the visibilit	U.S. Department of Transportation Federal Highway Administration	ı				
By signature of this document, the State official is certifying that in accordance with the requirements of 23 CFR 635.411 (a) (2), this patented or proprietary item is: Sesential for synchronization No equally suitable alternative exists	Cartific	ation of Patent	tad or Propriets	ry Droduct		
Duration □ Statewide Application of 3M Wet Reflective Elements Duration	Cerunc	ation of Fatem	led of Proprieta		,	
Project Specific Certification Statewide Blanket Certification (5 yrs maximum for blanket) Specify dates of term: From: January 1, 2014 Tro: December 31, 2018 Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Manufacturer Name and address: Stewardship: Full Oversight State Administered Pacturer Name and address: Stewardship: Full Oversight State Administered Pacturer Name and address: Stewardship: Full Oversight State Administered Pacturer Name and address: Stewardship: Full Oversight State Administered Pacturer Name and address: Stewardship: Full Oversight State Administered Pacturer Name and address: Stewardship: Full Oversight State Administered Pacturer Name and address: Stewardship: Full Oversight State Administered Pacturer Name and address: Pacturer Name and address: Pacturer Name and address: Pacturer Name and address: Pacturer N	patentend or proprietary item is: ☐ Essential for synchronization ☐ No equally suitable alternative exists ☐			-		
Statewide Blanket Certification (5 yrs maximum for blanket) Specify dates of term: From: January 1, 2014 To: December 31, 2018 Description of Item(s) Work: Wet Reflective Blements - Products covered under this certification will be placed with a modified epoxy binder on let contracts for 4" wide center lines, lane lines and edge lines and 8"wide channelizing lines and extensions. The double drop system of 5.3 pounds of 70E white or oncrete and 80 mils slot for asphalt to ensure longevity of the marking from snow plow activity. Justification: 4" wide wet reflective beads per gallon and Utah Performance bead mixture will be placed into a 60 mils deep grooved slot for concrete and 80 mils slot for asphalt to ensure longevity of the marking from snow plow activity. Justification: 4" wide wet reflective epoxy as shown below costs up to 4 times, 8" wide wet reflective epoxy up to 6 times, more than standard surface placed epoxy for the same width but offers superior wet night visibility needed for motorist guidance on multi lane and conventional state highways. This cost includes grooving a slot to ensure longevity. Research conducted since 2009 has not forpoducts capable of meetir the minimum WisDOT requirements of 250 mcd(initial) and 80 mcd (after 1 year) based on the ASTM E 2177 test. Lane departure crashes accounted for 25% of all fatal and high severity (K + A) crashes on rural roadway segments in Wisconsin between 2006-2010. Enhanced edge and center line markings such as grooved wet reflective epoxy increases the visibility of pavement markings during wet roadway conditions. The TIT Paper 09-0488, entitled "The Benefits of Pavement Markings: A Renewed Perspective Based on Recent and Ongoing Research" furthers the claim that no studies have evaluated the quantititative safety benefits of wet-reflective markings but a few studies have evaluated wider edge and center line markings to be a sudies have evaluated the quantititative safety benefits of wet-reflective markings but a few studies have evaluated with		Statewide Application of SW Wet Reflective Elements				
From: January 1, 2014 To: December 31, 2018 Description of Item(s)/Work: Wet Reflective Elements- Products covered under this certification will be placed with a modified epoxy binder on let contracts for 4" wice center lines, lane lines and edge lines and 8"wide channelizing lines and extensions. The double drop system of 5.3 pounds of 70E white o 71E yellow 3M wet reflective beads per gallon and Utah Performance bead mixture will be placed into a 60 mils deep grooved slot for concrete and 80 mils slot for asphalt to ensure longevity of the marking from snow plow activity. Justification: 4" wide wet reflective epoxy as shown below costs up to 4 times, 8" wide wet reflective epoxy up to 6 times, more than standard surface placed epoxy for the same width but offers superior wet night visibility needed for motorist guidance on multi lane and conventional state highways. This cost includes grooving a slot to ensure longevity. Research conducted since 2009 has not found products capable of meetir the minimum WisDOT requirements of 250 mcd(initial) and 80 mcd (after 1 year) based on the ASTM E 2177 test. Lane departure crashes accounted for 25% of all fatal and high severity (K + A) crashes on rural roadway segments in Wiscone between 2006-2010. Enhanced edge and center line markings such as grooved wet reflective epoxy increases the visibility of pavement markings during wet roadway conditions. The TTT Paper 09-0488, entitled "The Benefits of Pavement Markings: A Renewed Perspective Based on Recent and Ongoing Research" furthers the claim that no studies have evaluated the quantititative safety benefits of wet-reflective markings but a few studies have evaluated wider edge and center line markings. Average FY 2013 Let Bid Cost in dollars by width and linear feet: 4" Epoxy 8" Epoxy 4" wet epoxy 8" wet epoxy 4" wet cont 8" wet cont. 0.25 0.55 1.05 2.67 2.15 n/a Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastat	Statewide Blanket Certification (5 yrs maximum for blanket)	FA Project #:				
To: December 31, 2018 Description of Item(s)/Work: Wet Reflective Elements- Products covered under this certification will be placed with a modified epoxy binder on let contracts for 4" wix center lines, lane lines and edge lines and 8"wide channelizing lines and extensions. The double drop system of 5.3 pounds of 70E white o 71E yellow 3M wet reflective beads per gallon and Utah Performance bead mixture will be placed into a 60 mils deep grooved slot for concrete and 80 mils slot for asphalt to ensure longevity of the marking from snow plow activity. Justification: 4" wide wet reflective epoxy as shown below costs up to 4 times, 8" wide wet reflective epoxy up to 6 times, more than standard surface placed epoxy for the same width but offers superior wet night visibility needed for motorist guidance on multi lane and conventional state highways. This cost includes grooving a slot to ensure longevity. Research conducted since 2009 has not found products capable of meetin the minimum WisDOT requirements of 250 med(nitial) and 80 med (after 1 year) based on the ASTM E 2177 test. Lane departure crashes accounted for 25% of all fatal and high severity (K + A) crashes on rural roadway segments in Wisconsin between 2006-2010. Enhanced edge and center line markings such as grooved wet reflective epoxy increases the visibility of pavement markings during wet roadway conditions. The TIT Paper 09-0488, entitled "The Benefits of Pavement Markings: A Renewed Perspect Based on Recent and Ongoing Research" furthers the claim that no studies have evaluated the quantititative safety benefits of wet-reflective markings but a few studies have evaluated wider edge and center line markings. Average FY 2013 Let Bid Cost in dollars by width and linear feet: 4" Epoxy 8"Epoxy 4"wet epoxy 8"wet epoxy 4"wet cont 8"wet cont. 0.25 0.55 1.05 2.67 2.15 n/a Supporting/Reference Documentation: The following is attached to this document: 2013Certification2.docx draft 11/18/13 Reference- Wet Reflective Pavement Marking Demonstration Pro				State Auii	iiiistered	
Description of Item(s)/Work: Wet Reflective Elements- Products covered under this certification will be placed with a modified epoxy binder on let contracts for 4" wicenter lines, Iane lines and edge lines and 8"wide channelizing lines and extensions. The double drop system of 5.3 pounds of 70E white o 71E yellow 3M wet reflective beads per gallon and Utah Performance bead mixture will be placed into a 60 mils deep grooved slot for concrete and 80 mils slot for asphalt to ensure longevity of the marking from snow plow activity. Justification: 4" wide wet reflective epoxy as shown below costs up to 4 times, 8" wide wet reflective epoxy up to 6 times, more than standard surface placed epoxy for the same width but offers superior wet night visibility needed for motorist guidance on multi lane and conventional state highways. This cost includes grooving a slot to ensure longevity. Research conducted since 2009 has not found products capable of meetir the minimum WisDOT requirements of 250 mcd(initial) and 80 mcd (after 1 year) based on the ASTM E 2177 test. Lane departure crashes accounted for 25% of all fatal and high severity (K + A) crashes on rural roadway segments in Wisconsin beneve 2006-2010. Enhanced edge and center line markings such as grooved wet reflective epoxy increases the visibility of pavement markings during wet roadway conditions. The TTI Paper 09-0488.entitled "The Benefits of Pavement Markings: A Renewed Perspective Based on Recent and Ongoing Research" furthers the claim that no studies have evaluated the quantititative safety benefits of wet-reflective markings but a few studies have evaluated wider edge and center line markings. Average FY 2013 Let Bid Cost in dollars by width and linear feet: 4" Epoxy 8" Epoxy 4" wet epoxy 8" wet epoxy 4" wet cont 8" wet cont. 0.25 0.55 1.05 2.67 2.15 n/a Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf						
placed epoxy for the same width but offers superior wet night visibility needed for motorist guidance on multi lane and conventional state highways. This cost includes grooving a slot to ensure longevity. Research conducted since 2009 has not found products capable of meetir the minimum WisDOT requirements of 250 mcd(initial) and 80 mcd (after 1 year) based on the ASTM E 2177 test. Lane departure crashes accounted for 25% of all fatal and high severity (K + A) crashes on rural roadway segments in Wisconsin between 2006-2010. Enhanced edge and center line markings such as grooved wet reflective epoxy increases the visibility of pavement markings during wet roadway conditions. The TTI Paper 09-0488,entitled "The Benefits of Pavement Markings: A Renewed Perspective Based on Recent and Ongoing Research" furthers the claim that no studies have evaluated the quantititative safety benefits of wet-reflective markings but a few studies have evaluated wider edge and center line markings. Average FY 2013 Let Bid Cost in dollars by width and linear feet: 4" Epoxy 8"Epoxy 4"wet epoxy 8"wet epoxy 4"wet cont 8"wet cont. 0.25 0.55 1.05 2.67 2.15 n/a Supporting/Reference Documentation: The following is attached to this document: 2013Certification2.docx draft 11/18/13 Reference-Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary 12/18/2013	concrete and 80 mils slot for asphalt to ensur Justification:	e longevity of the mark	king from snow plow ac	tivity.		
4" Epoxy 8"Epoxy 4"wet epoxy 8"wet epoxy 4"wet cont 8"wet cont. 0.25 0.55 1.05 2.67 2.15 n/a Supporting/Reference Documentation: The following is attached to this document: 2013Certification2.docx draft 11/18/13 Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary State Traffic Engineer Name and Title: William R. McNary State Traffic Engineer	placed epoxy for the same width but offers su highways. This cost includes grooving a slot the minimum WisDOT requirements of 250 a accounted for 25% of all fatal and high sever edge and center line markings such as groove conditions. The TTI Paper 09-0488,entitled " Research" furthers the claim that no studies	uperior wet night visibito ensure longevity. Remcd(initial) and 80 movity (K + A) crashes on ed wet reflective epoxy The Benefits of Paven have evaluated the qua	lity needed for motorist esearch conducted since d (after 1 year) based o rural roadway segments increases the visibility nent Markings: A Rene	guidance on mule 2009 has not fo n the ASTM E 21 s in Wisconsin be of pavement mark wed Perspective 1	ti lane and conventional state und products capable of meeting 177 test. Lane departure crashes tween 2006-2010. Enhanced kings during wet roadway Based on Recent and Ongoing	
Supporting/Reference Documentation: The following is attached to this document: 2013Certification2.docx draft 11/18/13 Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary State Traffic Engineer 12/18/2013	Average FY 2013 Let Bid Cost in dollars by	width and linear feet:				
Supporting/Reference Documentation: The following is attached to this document: 2013Certification2.docx draft 11/18/13 Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary State Traffic Engineer 12/18/2013	4" Epoxy 8"Epoxy	4"wet epoxy	8"wet epoxy	4"wet cont	8"wet cont.	
The following is attached to this document: 2013Certification2.docx draft 11/18/13 Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary William R. McNary State Traffic Engineer						
The following is attached to this document: 2013Certification2.docx draft 11/18/13 Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary William R. McNary State Traffic Engineer						
Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary State Traffic Engineer Name and Title: William R. McNary State Traffic Engineer						
Reference- Wet Reflective Pavement Marking Demonstration Project. CTRE Final Report November 2011, 3M AW Paint(#5), Table 10. http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary William R. McNary State Traffic Engineer						
http://www.intrans.iastate.edu/reports/tr-597_wet_reflective_w_cvr.pdf State DOT Official (signature): William R. McNary William R. McNary State Traffic Engineer	2013Certification2.docx draft 11/18/13					
William R. McNary William R. McNary 12/18/2013 State Traffic Engineer	http://www.intrans.ia	state.edu/reports/tr-597	_	.pdf	3M AW Paint(#5), Table 10.	
State Traffic Engineer					/10/2012	
	WUUAM K. McNary	1		12	/18/2013	
	Note: A conv of the signed Cartification m			their records		