

EXHIBIT E

SIGN SHEETING APPROVED PRODUCTS LIST

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Approved Products List
Retroreflective Sign Sheeting (715.9.2)
Effective Date: June 14, 2013 (see notes 1, 2, and 22)

<u>TRANSFER FILMS</u>		
<u>MANUFACTURER</u>	<u>PRODUCT</u>	<u>LAB APPROVAL NUMBER</u>
3M	TPM5 clear transfer tape (see note 11)	1433733
Avery Dennison	Z1XXX clear application tape (see note 11)	1433734

<u>TYPE ASTM-I</u>		
<u>MANUFACTURER</u>	<u>PRODUCT</u>	<u>LAB APPROVAL NUMBER</u>
3M	34XX Series (See note 21)	1433735
Avery Dennison	T-15XX Series (See note 3)	1394149

<u>TYPE ASTM-III</u>		
<u>MANUFACTURER</u>	<u>PRODUCT</u>	<u>LAB APPROVAL NUMBER</u>
Nippon Carbide	ULG-II N8XX Series (See note 15)	1394159

<u>TYPE ASTM-IV</u>		
<u>MANUFACTURER</u>	<u>PRODUCT</u>	<u>LAB APPROVAL NUMBER</u>
3M	Series 393X (See note 3)	1392883
3M	Series 331X (See note 4)	1433736
3M	Series 333X (See note 5)	1433737
3M	Series 33X (See note 5)	1394157
3M	Series 3340 (See note 17)	1433738
Avery Dennison	T-6XXX Series (See note 3)	1394161
Avery Dennison	W-6XXX Series (See note 4)	1394160

<u>TYPE ASTM-VI</u>		
<u>MANUFACTURER</u>	<u>PRODUCT</u>	<u>LAB APPROVAL NUMBER</u>
3M	RS-2X Series (See note 6)	1394162
Orafol of Americas	High Performance Series (See note 20)	1394163

<u>TYPE ASTM-IX</u>		
<u>MANUFACTURER</u>	<u>PRODUCT</u>	<u>LAB APPROVAL NUMBER</u>
3M	399X Series (See note 7)	1394171
3M	3981 Series (NOTICE: See note 19)	1394169
3M	3983 Series (See note 13)	1394170
Avery Dennison	T-950X (See note 7)	1394166
Avery Dennison	T-9511 (See note 12)	1394167
Avery Dennison	T-9513 (See note 13)	1394168
Avery Dennison	W-9514 (See note 10)	1394165
Nippon Carbide	Nikkalite CRG 95847 (See note 16)	1424104

<u>TYPE ASTM-XI</u>		
<u>MANUFACTURER</u>	<u>PRODUCT</u>	<u>LAB APPROVAL NUMBER</u>
3M	409X Series (See note 14)	1395497
3M	4081 Series (See note 8)	1395498
3M	4083 Series (See note 9)	1395499
3M	4084 Series (See note 18)	1394172
Avery Dennison	T-1150X (See note 7)	1424106
Avery Dennison	T-11511 (See note 12)	1424107
Avery Dennison	T-11513 (See note 13)	1424108
Avery Dennison	W-11514 (See note 10)	1424105

NOTES:

1 - Note, significant revisions have been made to the WVDOH Material Standard Specifications for retroreflective sheetings. The Special Provision which includes these revisions is for Section 715 of the Standard Specifications, is dated 5/2/13, and includes revisions to Section 715.9.2. This APL has been updated to correspond with this Special Provision. The following tables are provided in order to determine the applicable lists of approved material types above to be utilized for the project.

If the Special Provision referenced above is **not** applicable to the project, the following table shall be utilized for determining the applicable material Type approved list(s) to be used. This shall be based on the material Type specified in other Sections of the Standard Specifications applicable to the project, on detail sheets (such as Standard Details or fabrication details) applicable to the project, and Plan Notes or Special Details included in the project plans. Conflicting notes associated with specific materials listed within each category shall take precedence. The appropriate designations from the right side of this table shall be the material types referenced on shop drawings submitted by the Contractor.

MATERIAL "TYPE" REFERENCE	APPLICABLE "TYPE(S)" LISTED ABOVE
I, ASTM-I	ASTM-I
II, ASTM-III, IV, ASTM-IV	ASTM-III or ASTM-IV
V	ASTM-VI for roll-up signs; ASTM-IX or ASTM-XI for aluminum substrate signs
VI, ASTM-IX, ASTM-XI	ASTM-IX or ASTM-XI

If the Special Provision referenced above is applicable to the project, the following table shall be utilized for determining the applicable material Type approved list(s) to be used. This shall be based on the material Type specified in other Sections of the Standard Specifications applicable to the project, on detail sheets (such as Standard Details or fabrication details) applicable to the project, and Plan Notes or Special Details included in the project plans. Conflicting notes associated with specific materials listed within each category shall take precedence. The appropriate designations from the right side of this table shall be the material types referenced on shop drawings submitted by the Contractor.

MATERIAL "TYPE" REFERENCE	APPLICABLE "TYPE(S)" LISTED ABOVE
I, ASTM-I	ASTM-I
II, ASTM-III, IV, ASTM-IV	ASTM-IV
V	ASTM-VI for roll-up signs; ASTM-XI for aluminum substrate signs
VI, ASTM-IX, ASTM-XI	ASTM-XI

- 2 - Matched component inks and overlay films, when required to be used, shall be the components recommended by the sheeting manufacturer providing warranty coverage.
- 3 - Various colored pressure sensitive sheetings for use with aluminum substrate signs, as specified. The reflective sheeting material and all manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
- 4 - Various colored pressure sensitive sheetings for use with plastic substrate work zone channelization and delineation devices, including "permanent" surface mounted tubular markers and soil mounted delineator posts, as specified and as recommended by the sheeting manufacturer.
- 5 - Pre-stripped pressure sensitive sheeting for use with rigid plastic substrate barricades, as recommended by the sheeting manufacturer.
- 6 - Sheeting for use in manufacturing work zone roll-up signs. This material is classified as being rotationally sensitive.
- 7 - Various colored pressure sensitive sheetings for use with aluminum substrate signs and delineators, as specified and as recommended by the sheeting manufacturer. This approval does not include fluorescent materials. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
- 8 - Fluorescent yellow pressure sensitive sheeting for use with aluminum substrate signs and delineators, as specified and as recommended by the sheeting manufacturer. This material is classified as being rotationally sensitive. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
- 9 - Fluorescent yellow green pressure sensitive sheeting for use with aluminum substrate signs and delineators, as specified and as recommended by the sheeting manufacturer. This material is classified as being rotationally sensitive. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
- 10 - Fluorescent orange pressure sensitive sheeting for use with aluminum substrate signs. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
- 11 - The Transfer Film category is applicable to the WVDOH's raw material supply Contract only and does not apply to private fabricators.
- 12 - Fluorescent yellow pressure sensitive sheeting for use with aluminum substrate signs and delineators, as specified and as recommended by the sheeting manufacturer. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
- 13 - Fluorescent yellow green pressure sensitive sheeting for use with aluminum substrate signs and delineators, as specified and as recommended by the sheeting manufacturer. The reflective sheeting material is approved for manufacturing

- purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
- 14 - Various colored pressure sensitive sheetings for use with aluminum substrate signs and delineators, as specified and as recommended by the sheeting manufacturer. This approval does not include fluorescent materials. This material is classified as being rotationally sensitive. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
 - 15 - Various colored pressure sensitive sheetings for use with aluminum substrate signs. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. The manufacturer matched components are not approved for manufacturing purposes within the WVDOH Central Sign Shop.
 - 16 - Fluorescent orange pressure sensitive sheetings for use with aluminum substrate signs. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. The manufacturer matched components are not approved for manufacturing purposes within the WVDOH Central Sign Shop.
 - 17 - Pressure sensitive sheeting for use with traffic cones, as specified and as recommended by the sheeting manufacturer.
 - 18 - Fluorescent orange pressure sensitive sheeting for use with aluminum substrate signs. This material is classified as being rotationally sensitive. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
 - 19 - Fluorescent yellow pressure sensitive sheeting for use with aluminum substrate signs and delineators, as specified and as recommended by the sheeting manufacturer. The reflective sheeting material is approved for manufacturing purposes within the WVDOH Central Sign Shop. All manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop. **NOTE: Approval of this material has been placed on "hold". No finished products utilizing this material are to be supplied on any projects advertised on or after 7/25/12.**
 - 20 - Sheeting for use in manufacturing work zone roll-up signs. This material shall not be considered approved on projects for which the 5/2/13 Special Provision referenced under Note #1 applies to.
 - 21 - Various colored pressure sensitive sheetings for use with aluminum substrate signs, as specified. This material is classified as being rotationally sensitive. The reflective sheeting material and all manufacturer matched components are approved for manufacturing within the WVDOH Central Sign Shop.
 - 22 - The value(s) "X" in material designations are place holders which indicate variable numerical values. These values vary based on different colors and/or widths (cut widths or stripe widths) configurations of the material and/or intended substrates for the material.