

If you have any questions regarding the approved lists please contact the person/section indicated.

(1) AIR-ENTRAINING ADMIXTURES – (Physical Lab).....	3
(2) CHEMICAL ADMIXTURES FOR CONCRETE – (Physical Lab)	5
(3) CHEMICAL ADMIXTURES FOR CONCRETE TYPE S – (Physical Lab).....	10
(4) CORROSION INHIBITING ADMIXTURES – (Physical Lab).....	11
(5) COARSE AGGREGATE DATA – (Physical Lab).....	12
(5) FINE AGGREGATE DATA (Grading A) – (Physical Lab).....	17
(5) ASPHALT CONCRETE FINE AGGREGATE DATA – (Physical Lab).....	21
(5) LIGHTWEIGHT AGGREGATE DATA – (Physical Lab).....	25
(6) AGRICULTURAL LIMING MATERIALS REGISTRATION– (Chemistry Lab).....	26
(7) ANTISTRIPPING ADDITIVES – (Asphalt Lab).....	35
(8) ASPHALT RELEASE AGENTS – (Asphalt Lab).....	38
(9) APPROVED ELECTRODE AND FLUX-ELECTRODE COMBINATIONS – (Structures)	41
(10) POWDERED EPOXY REBAR COATINGS – (Physical Lab).....	44
(11) FIBER MULCH, WOOD CELLULOSE - ANNUAL CHECK - (Landscape Development)	45
(12) CERTIFICATE OF COMPLIANCE AND GUARANTEE - GUARDRAIL MATERIALS – (Structures).....	46
(13) ZINC RICH PAINT SYSTEMS LIST– (Chemistry Lab).....	47
(14) PIPE JOINTS AND CONNECTIONS AND COATINGS – (Soils Lab)	54
(15) APPROVED STUD SHEAR CONNECTORS – (Structures)	66
(16) APPROVED SURFACE MOUNTED and GROUND MOUNTED FLEXIBLE POST DELINEATORS – (Chemistry Lab) ...	67
(17) QUALIFIED PREFORMED TAPE LIST – (Chemistry Lab)	69
(18) ABRASIVES – (Chemistry Lab)	72
(19) APPROVED LIST OF ABSORPTIVE SOUNDWALL COLOR COATINGS – (Structures)	73
(20) APPROVED WATER BORNE TRAFFIC PAINT (TYPE A) – (Chemistry Lab)	74
(21) QUALIFIED #14 ALUMINUM EPOXY MASTIC COATINGS – (Chemistry Lab).....	76
(22) PAVEMENT MARKERS – (Chemistry Lab).....	77
(23) DELINEATORS – (Chemistry Lab).....	80
(24) MINERAL ADMIXTURES FOR HYDRAULIC CEMENT CONCRETE – (Physical Lab)	82
(25) CORRUGATED METAL PIPE PRODUCERS ON QA/QC PROGRAM – (Quality Assurance).....	84
(26) CONCRETE PIPE PRODUCERS ON QA/QC PROGRAM– (Quality Assurance)	85
(27) QUALIFIED SILICONE RUBBER JOINT SEALER – (Chemistry Lab)	86
(28) POLYMERS FOR SEALING CRACKS IN HYDRAULIC CEMENT CONCRETE- (Physical Lab).....	88
(29) CHEMICAL / MECHANICAL ANCHORING SYSTEMS - (Physical Lab)	90
(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS - (Physical Lab).....	96
(31) HYDRAULIC CEMENT CONCRETE REPAIR MATERIALS – (Physical Lab).....	102
(32) STABILIZERS FOR ASPHALT MIXTURES – (Asphalt Lab).....	108
(33) SHOTCRETE/GUNITE MIXTURES – (Physical Lab)	109
(34) CONCRETE PRECAST PRODUCERS ON QA/QC PROGRAM– (Quality Assurance)	110
(35) FIBERS FOR USE IN HYDRAULIC CEMENT CONCRETE – (Physical Lab).....	112
(36) MULCHES (HECP TYPES 1 THRU 4) – (Maintenance Div.)	113
(37) WALL DRAIN SYSTEMS – (Soils Lab).....	114
(38) PIPE REHABILITATION SYSTEMS FOR METHOD D (FLEXIBLE PIPE LINER) – (Soils Lab).....	115
(39) WICK DRAINS – (Soils Lab).....	121
(40) QUALIFIED SYSTEM W PAINTS – (Chemistry Lab).....	122
(41) SUPERPAVE GYRATORY COMPACTORS FOR ASPHALT CONCRETE MIXTURES – (Asphalt Lab)	123
(42) HIGH DENSITY POLYETHYLENE (HDPE) PIPE PRODUCERS – (Quality Assurance)	124
(43) APPROVED WHITE AND YELLOW THERMOPLASTIC PRODUCTS - (Chemistry Lab)	125
(44) APPROVED Q/A SUPPLIERS LIST – (Quality Assurance).....	128
(45) QUALIFIED WOOD TREATMENT PLANTS – (CHEMISTRY LAB).....	131
(46) SIGN SHEETING AND INK QUALIFIED PRODUCTS LIST – (Chemistry Lab).....	132
(47) ACRYLIC PAINT FOR ALUMINUM AND GALVANIZED SURFACES – (Chemistry Lab).....	138
(48) APPROVED TYPE F CONSTRUCTION MARKINGS – (Chemistry Lab).....	139
(49) QUALIFIED SEALERS AND TOPCOATS FOR METALLIZED SURFACES – (Chemistry Lab).....	143
(50) PERFORMANCE GRADED (PG) BINDER SOURCES ON VA ASPHALT ACCEPTANCE PROGRAM - (Asphalt Lab)	144
(50.1) EMULSIFIED ASPHALT SOURCES ON VA ASPHALT ACCEPTANCE PROGRAM (Asphalt Lab)	148

(50.1A) APPROVED NONTRACK TACK COAT MATERIALS (Asphalt Lab)	150
(51) APPROVED 2% COPPER NAPHTHENATE – (Chemistry Lab)	151
(52) ARTICULATED BLOCKS FOR SLOPE PROTECTION & DITCHLINING – (Location & Design).....	152
(53) EROSION CONTROL MULCHES – (Maintenance Div.).....	153
(54) FIBER MULCH SUPPLIERS – (Please see list No. 11)	155
(55) MULCH TACKIFIER SUPPLIERS – (Maintenance Div.).....	156
(56) STANDARD EC-2 EROSION CONTROL BLANKETS – (Maintenance Div.).....	158
(57) STANDARD EC-3 TYPE A, TYPE B, & TYPE C SOILS STABILIZATION MATS – (Maintenance Div.).....	161
(58) STANDARD EC-4 TYPE 2, ROCK CHECK DAM – (Location & Design)	168
(59) STD. EC-6, INLET PROTECTION APPROVED LIST – (Location & Design).....	169
(60) STD. EC-8, DEWATERING BAG APPROVED LIST – (Maintenance Div.).....	170
(61) GRAY IRON CASTING MANUFACTURERS/DISTRIBUTORS ON QA/QC PROGRAM – (Quality Assurance)	171
(62) CABLE GROUTS – (Physical Lab).....	172
(63) GEOSYNTHETICS – (Soils Lab).....	173
(64) HYDRAULIC BARRIERS FOR USE IN STORM WATER RETENTION – (Soils Lab).....	182
(65) APPROVED SOUND BARRIER PANELS – (James Ponticello).....	183
(66) APPROVED WARM-MIX ASPHALT PRODUCTS AND PROCESSES -- (Asphalt Lab)	184
(67) APPROVED PRECAST PAVEMENT SYSTEMS - (Affan Habib)	185
(68) STORM WATER MANAGEMENT – TRASH RACKS (SWM-DR) - (Location & Design).....	186
(69) APPROVED FENCE MANUFACTURERS - (Chemistry Lab)	187
(70) APPROVED QA FENCE SUPPLIERS LIST - (Quality Assurance)	188
(71) POLYETHYLENE SHEETING - (Physical Lab).....	189
(72) DETECTABLE WARNING PLATES - (Quality Assurance)	190
(73) APPROVED WHITE AND YELLOW PREFORMED THERMOPLASTIC - (Chemistry Lab)	192
(74) APPROVED POLYUREA PAVMENT MARKINGS -- (Chemistry Lab)	193
(75) APPROVED EPOXY PAVMENT MARKINGS -- (Chemistry Lab)	194
(76) VIRGINIA GLASS BEAD APPROVED LIST -- (Chemistry Lab)	195
(77) ASPHALT PLUG JOINT SYSTEMS - (Physical Lab)	196
(78) APPROVED COLD MIX ASPHALT - (Asphalt Lab).....	197
(79) MULCHES (HECP TYPES 1-4) – (Maintenance Division).....	199
(80) TEMPORARY ROLLED EROSION CONTROL PRODUCTS (EC-2 TYPES 1 THRU 4) – (Location & Design)	201
(81) PERMANENT ROLLED EROSION CONTROL PRODUCTS (EC-3 TYPES 1 THRU 3) – (Location & Design)	203
(82) BIOLOGICAL GROWTH STIMULANTS – (Maintenance Division)	204
(83) SEDIMENT RETENTION ROLLS (COMPOST FILTER SOCKS AND SEDIMENT TUBES – (Location & Design)	205
(84) CLASS B MANUFACTURED TOPSOIL – (Maintenance Division).....	206
(85) CEMENT MANUFACTURERS - (Physical Lab).....	207
(86) MANUFACTURED TREATMENT DEVICES - (Location & Design)	207
(87) APPROVED POWDER COATING MANUFACTURERS – (Chemistry Lab).....	213
(88) APPROVED POWDER COATING FACILITIES OF GALVANIZED SURFACES – (Chemistry Lab).....	214

(1) AIR-ENTRAINING ADMIXTURES – (Physical Lab)

The following list of air-entraining admixtures is approved for use in hydraulic cement concrete. They meet the requirements of AASHTO M-154.

To have a product included on this Approved List, the manufacturer shall submit a letter with a notarized signature stating that the chemical admixture meets the requirements in Section 215.02 of the VDOT Road and Bridge Specifications. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification. Upon approval, the Manufacturer will be required to submit a letter each year with a notarized signature stating that the chemical admixture meets the requirements of AASHTO M-154 and that the product has not changed in formulation since initial approval.

	Product	Code #
BASF, Inc./ Master Builders	MasterAir AE400	76
	MasterAir AE90	54
	MasterAir VR 10	3
	MasterAir AE 200	30
	MasterCell 25	71
Chryso, Inc.	Chryso Air R2	83
	Chryso Air 260	79
	Chryso Air 260 Ultra	81
Cellular Concrete Technologies	Stable Air	85
The Euclid Chemical Company	Eucon AEA-92	55
	Eucon Air MAC12	89
	Eucon Air Mix 200	56
	Eucon Air Mix	19
	Eucon Air 30	58
	Eucon Air 40	59
Fritz-Pak Corp.	Air Plus	63
	Super Air Plus	84
General Resource Technology	Polychem SA	90
	Polychem SA-50	91
	Polychem Vr	92
GCP Applied Technologies	Airalon 3000	75
	Daravir 1000	52
	Daravair AT30	70
	Daraviar AT60	65
	Darex AEA	1
	Darex II AEA	41
	Terapave AEA	82

List No. 1 (cont.)

(1) AIR-ENTRAINING ADMIXTURES

Manufacturer	Product	Code #
Premiere Concrete Admixtures	ConAir	77
	ConAir 260	78
RussTech	RAE 260	88
	RVR-15	53
	RSA-10	61
Sika Corp	Sika AEA 14	66
	Sika Air	64
	Sika Air 260	62
	Sika Air 360	73

(2) CHEMICAL ADMIXTURES FOR CONCRETE – (Physical Lab)

The following list of admixtures is approved for use in hydraulic cement concrete. They meet the requirements of ASTM C-494 for the respective types. The listed types are;

“A” – Water Reducing, “B” – Retarding, “C” – Accelerating, “D” – Water Reducing and Retarding, “E” - Water Reducing and Accelerating, “F” – High Range Water Reducing,

“G” - High Range Water Reducing and Retarding.

To have a product included on this Approved List, the manufacturer shall submit a letter with a notarized signature stating that the chemical admixture meets the requirements in Section 215.02 of the VDOT Road and Bridge Specifications. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification. Upon approval the Manufacturer will be required to submit a letter each year with a notarized signature stating that the chemical admixture meets the requirements of ASTM C-494 and that the product has not changed in formulation since initial approval.

Manufacturer	Product	Code #	Type A	Type B	Type C	Type D	Type E	Type F	Type G
BASF Corporation	MasterGlenium 3030	183	A					F	
	MasterGlenium 3400	193	A					F	
	MasterGlenium 7500	211	A					F	
	MasterGlenium 7620	366						F	
	MasterGlenium 7700	210						F	
	MasterGlenium 7710	227						F	
	MasterLife CI 30	279			C				
	MasterPolyHeed 1020	194	A					F	
	MasterPolyHeed 1025	195	A					F	
	MasterPolyHeed 900	204	A						
	MasterPolyHeed 997	76	A					F	
	MasterPolyHeed N	30	A						
	MasterPozzolith 200	143	A	B		D			
	MasterPozzolith 322	16	A	B		D			
	MasterPozzolith 700	357	A	B		D			
	MasterPozzolith 80	174	A	B		D			
	MasterRheobuild 1000	66						F	
	MasterSet AC 534	239			C				
	MasterSet Delvo	138		B		D			
	MasterSet FP 20	205			C		E		
	MasterSet R 100	141		B		D			
	MasterSet R 122	142		B		D			
	MasterSet R 300	159		B		D			
	MasterSet R 961	235		B		D			
	PS 1466	202	A					F	
Chryso, Inc.	Chryso Tard 100R	246				D			
	EnviroMix 340	250	A						

(2) CHEMICAL ADMIXTURES FOR CONCRETE

Manufacturer	Product	Code #	Type A	Type B	Type C	Type D	Type E	Type F	Type G
Chryso, Inc.	EnviroMix 380	248	A					F	
	EnviroMix 728	249	A						
	Fluid Optima 203	196	A					F	
	Fluid Optima 216	229	A					F	
	Fluid Optima 256 Emx	251	A					F	
	Fluid Premia 180	200	A					F	
	Plast 209	247	A						
	TurboCast 650A	262			C				
	TurboCast NCT	263			C		E		
The Euclid Chemical Company	Accelguard G3	407			C		E		
	Accelguard NCA	415			C		E		
	Accelguard 80	233			C				
	Eucon 1037	231	A					F	
	Eucon 37	5	A					F	
	Eucon 537	131				D			G
	Eucon CIA	416			C		E		
	Eucon LR	123	A			D			
	Eucon LW	121	A						
	Eucon MR	169	A					F	
	Eucon MRX	130	A					F	
	Eucon NR	144	A			D			
	Eucon NW	120	A						
	Eucon Retarder 75	164				D			
	Eucon Retarder 100	55				D			
	Eucon SP	124	A					F	
	Eucon SPC	269	A					F	
	Eucon SPJ	87	A					F	
	Eucon WR-75	18	A						
	Eucon WR-91	114	A			D			
	Eucon X-15	125	A					F	
	Plastol Ultra 109	234	A					F	
	Plastol Ultra 209	408	A					F	
	Plastol 6400	417						F	
	Plastol 6420	438	A					F	

(2) CHEMICAL ADMIXTURES FOR CONCRETE

Manufacturer	Product	Code #	Type A	Type B	Type C	Type D	Type E	Type F	Type G
Fritz-Pak Corp.	Delay Set	163		B		D			
	Delay Set Mini	163		B		D			
	FR-1	157		B		D			
	Supercizer 5	374						F	
	Supercizer 6	154						F	
	Supercizer 7	156						F	G
	NCA	373			C		E		
GCP Applied Technologies	ADVA 140M	212	A					F	
	ADVA 150M	399	A					F	
	ADVA 198	375						F	
	ADVA 390	370						F	
	ADVA Cast 555	404						F	
	ADVA CAST 575	209	A					F	
	ADVA CAST 585	367						F	
	ADVA Cast 600	184						F	
	ADVA Flex	206	A					F	
	ADVA ITM 750	440						F	
	Clarena MC 2000	439	A					F	
	Daracem 55	115	A						
	Daraset 400	244			C				
	Daratard 17	85				D			
	Daratard HC	82				D			
	DCI	368			C		E		
	Eclipse 4500	432						F	
	EXP 950	208	A					F	
	MIRA 95	376						F	
	Polarset	189			C				
	Recover	172				D			
	V-MAR VSC500	232				D			
	WRDA 35	23	A			D			
	WRDA 82	29	A						
	Zyla 620	252	A						
	Zyla 640	245	A						
	Zyla R	266		B		D			

(2) CHEMICAL ADMIXTURES FOR CONCRETE

Manufacturer	Product	Code #	Type A	Type B	Type C	Type D	Type E	Type F	Type G
General Resource Technology	Dynamon SX	423						F	
	EVO 2500	434						F	
	Polychem 3000	424	A					F	
	Melchem	435						F	
	Polychem CL	425			C				
	Polychem R	426		B		D			
	Polychem RENU	427		B					
	Polychem SPC	428						F	
	Polychem Super Set	429			C		E		
	Polychem Super Set Plus	430			C				
	Polychem 400 NC	436	A						
	Polychem 850	437	A						
Premiere Concrete Admixtures	EcoFlo Green	359	A					F	
	NitroCast K	261			C				
	NitroCast NC	412			C				
	NitroCast 701	289			C				
	OptiFlo 50	259	A			D			
	OptiFlo 100R	261		B		D			
	OptiFlo 500	255	A			D			
	OptiFlo 700	262	A					F	
	OptiFlo MR	257	A					F	
	OptiFlo Plus	256	A						
	Prolong	364		B					
	UltraFlo DP	414						F	
	UltraFlo 2000	254						F	
	UltraFlo 4600	253						F	
	UltraFlo 5600	413						F	
RussTech, Inc.	Extendflo X90	406	A						
	FinishEase NC	126	A						G
	LCNC 166	410					E		
	LC 400	106	A						
	LC 400 P	105	A			D			
	LC 400 R	109				D			
	LC 500	241	A			D			

(2) CHEMICAL ADMIXTURES FOR CONCRETE

Manufacturer	Product	Code #	Type A	Type B	Type C	Type D	Type E	Type F	Type G
RussTech, Inc.	Renu	365				D			
	Russ Tech RCI	242			C				
	Superflo 2000 SCC	400	A					F	
	Superflo 2000 RM	258	A					F	
	Superflo 2040 RM	409	A					F	
	Superflo 440	107	A					F	
	Superflo 443	108	A					F	
Sika Corporation	Plastiment	145				D			
	Plastiment XR	397				D			
	Plastocrete 10 N	151	A	B		D			
	Plastocrete 161	27	A						
	Sika CNI	381			C				
	Sikamix NCA	401			C				
	Sika Rapid -1	278			C		E		
	Sika Set NC	268			C		E		
	Sikament 686	203	A					F	
	Sikament AFM	161	A					F	
	Sikament SPMN	167	A					F	
	Sikament 475	422	A					F	
	Sikaplast 200	152	A						G
	Sikaplast 300 GP	223	A						
	Sikatard 440	272		B		D			
	ViscoCrete 1000	358	A					F	
	ViscoCrete 2100	190	A					F	
	ViscoCrete 4100	191	A					F	
	ViscoCrete 6100	168	A					F	

(3) CHEMICAL ADMIXTURES FOR CONCRETE TYPE S – (Physical Lab)

The following list of admixtures is approved for use in hydraulic cement concrete. They meet the requirements of ASTM C-494 for type “S” – Specific Performance.

To have a product included on this Approved List, the manufacturer shall submit a letter with a notarized signature stating that the chemical admixture meets the requirements of ASTM C-494 Type “S”. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification. Upon approval, the Manufacturer will be required to submit a letter each year with a notarized signature stating that the chemical admixture meets the requirements of ASTM C-494 and that the product has not changed in formulation since initial approval.

Manufacturer	Product	Code #	Type
BASF Corporation	MasterMatrix 33	411	Rheology Controlling Admixture
	MasterMatrix VMA 362	369	Viscosity-Modifying Admixture
	MasterMatrix VMA 450	379	Viscosity-Modifying Admixture
	MasterLife ASR 30	405	ASR Inhibiting Admixture
	MasterLife SRA 20	418	Shrinkage Reducing Admixture
	MasterLife SRA 35	419	Shrinkage Reducing Admixture
	MasterSure Z 60	273	Workability-Retaining admixture
EdenCrete Industries Inc.	EdenCrete	421	Special Performance Admixture
GCP Applied Technologies	Eclipse 4500	432	Shrinkage Reducing Admixture
	Rasir	395	ASR Mitigating Admixture
	V-Mar 3	274	Antiwashout Admixture
	V-Mar F100	271	Concrete rheology-modifying admixture
General Resource Technology			
	Polychem VMA	431	Viscosity-Modifying Admixture
Premier Construction Products Group	PREVent C	378	Shrinkage Reducing Admixture
Sika Corporation	Sika Control ASR	402	ASR Mitigating Admixture
	Sika Control NS	433	Shrinkage Reducing Admixture
	Sika Control 75	403	Shrinkage Reducing Admixture
	Sika Control-220	382	Shrinkage Reducing Admixture
	Sika Stabilizer 4 R	277	Viscosity-Modifying Admixture
	Sika Stabilizer 300 SCC	420	Viscosity-Modifying Admixture
	Sika ViscoFlow 2020	398	Workability-Retaining Admixture
	Sika Watertight Power	380	Permeability Reducing Admixture

(4) CORROSION INHIBITING ADMIXTURES – (Physical Lab)

The following list of corrosion inhibiting admixtures is approved for use in hydraulic cement concrete. They meet the requirements in Section 215.02(j) of the VDOT Road and Bridge Specifications.

Upon approval the Manufacturer will be required to submit each year a letter with a notarized signature stating that the chemical admixture meets the requirements of Section 215.02(j) of the VDOT Road and Bridge Specifications and that the product has not changed in formulation since initial approval.

Manufacturer	Product	Code #
BASF Corporation	MasterLife CI 30	279
Great Eastern Technologies, L.L.C.	Chemstrong CI	
Euclid Chemical	Eucon CIA	
Premiere Concrete Admixtures	Impede CNI	
RussTech, Inc	Russ Tech RCI	242
Sika Corporation	CNI	381
W. R. Grace & Company	DCI	368
	DCI S	

RESULTS OF QUALITY TESTS ON
(5) COARSE AGGREGATE DATA – (Physical Lab)

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	L.A. Abrasion Loss			Dry Bulk Specific Gravity
					A	B	C	
Acres Sand & Stone								
8090 Stuarts Draft, VA	4/16	Rv. Gvl.	2.58	1.0		38.3		2.56
Aggregate Industries								
4100 Charles City, VA 7 & 78	3/10		2.60	0.9			35.4	2.57
6043 Fulks	2/13	Qz.	2.63	0.5		35.5		2.62
6027 Mattaponi, VA #57	2/08	Qz.	2.63	0.4		40.5		2.62
8086 Millville, WV.	6/17	Ls.	2.85	0.4		17.1		2.84
6033 Rappahannock Farm #57	8/16	Qz.	2.64	0.3		34.4		2.630
Appalachian Aggregates								
8069 Hillsboro, WV	2013	Ls.	2.70	1.1		17.0		2.67
Ararat Rock Products								
3060 Eden Quarry Cascade	1/12		2.64	0.6		15.2		2.62
2003 Mt. Airy, NC	2015	Gn.	2.76	0.6		27.5		2.74
Aylett Sand & Gravel								
6018 Aylett, VA # 56	5/17	Qz.	2.62	0.4		36.3		2.611
Barger, C. W. & Sons								
8004 Lexington, VA	4/13	Ls.	2.73	0.2		18.9		2.72
Bluewater Industries								
1058 Abingdon	4/14	Do.	2.85	0.3	21.1	19.6		2.84
S. W Barrick								
9066 Woodsboro, MD #57	8/13	Ls.	2.71	1.4		22.2		2.70
Boxley Aggregates								
2004 Blue Ridge, VA	2014	Ls.& Do.	2.81	0.4		14.2		2.80
2009 Fieldale, VA	2017	Gn.	2.82	0.5		27.3		2.81
3003 Lynchburg, VA	2017	Do., Ls.	2.73	0.4		22.1		2.72
8025 Lowmoor, VA	7/14	Ls. & Do.	2.73	0.3		20.0		2.73
3030 Mt. Athos Plant Concord, VA	2017	Gs.	3.05	0.3		16.2		3.04
3034 Piney River, VA	2017	Ap	2.83	0.4		15.2		2.82
Branscome Charles City								
4005 Hofmyer Plant #57	8/13	Rv. Gvl.	2.61	0.7		37.8		2.590
4050 Layfield Plant #78	8/12	Rv. Gvl.	2.57	0.5			38.7	2.55

List No. 5 (cont.)

COARSE AGGREGATES (Cont.)

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	L.A. Abrasion Loss			Dry Bulk Specific Gravity
					A	B	C	
Carmeuse								
2006 Buchanan, VA	2013	L.s. & Do.	2.84	0.3		18.7		2.84
8005 Strasburg, VA	5/14	Ls.	2.70	0.3		25.4		2.694
8028 Winchester, VA	6/14	Ls.	2.71	0.2		23.1		2.706
Cedar Mountain Stone Corporation								
7031 Mitchell, VA # 57	4/14	Db. (Tr.)	3.04	0.5	20.4	20.3		3.02
Caney Enterprises								
6046 Moss Neck # 67	4/17		2.63	0.4		38.1		2.620
Chantilly Crushed Stone Co.								
9004 Chantilly, VA # 57	1/14	Db. (Tr.)	3.01	0.6		15.5		2.99
D. M. Conner								
8084 Stuarts Draft, VA	3/17	Rv. Gvl.	2.58	1.0		41.7		2.555
E. Dillon & Co.								
1064 Swords Creek, VA	3/14	Do.	2.83	0.3	20.5	19.6		2.822
F & M Construction Co.								
1011 Carroll County, VA	2013	Qzi.	2.65	1.2		19.5		2.62
Frazier Quarry								
8067 Elkton, VA	7/14	Ls. & Do.	2.79	0.2		18.5		2.79
8062 Harrisonburg, VA	5/14	Ls.	2.72	0.3		18.8		2.710
8083 Timberville, VA	6/16	Ls.	2.73	0.3		20.9		2.72
Hanson Aggregates								
8017 Front Royal, VA	6/15	Ls.	2.72	0.4		18.9		2.704
Heard Aggregates								
5072 Waverly, VA	2/13					17		
Ingleside								
1018 Princeton, WV	4/14	Ls.	2.67	0.4	26.8	21.8		2.658
Inwood Quarries,								
8092 Inwood, W. VA	4/13	Ls.	2.72	0.4		19.0		2.71
King William Sand & Gravel								
6045 Queenfield plant #57	12/16		2.65	0.3		37.0		2.645
LaFarge								
9067 Frederick, MD	8/13		2.71	0.4		21.0		2.70

List No. 5 (cont.)

COARSE AGGREGATES (Cont.)

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	L.A. Abrasion Loss			Dry Bulk Specific Gravity
					A	B	C	
Loudoun Quarry								
9011 Herndon, VA	2/16	Db.(Tr.)	2.98	0.4		14.2		2.97
Luck Stone Corp.								
7052 Bealton, VA #57	6/14	Db.	2.98	0.5		11.7		2.96
9003 Manassas, VA #57	4/14	Db. (TR.)	2.94	0.8		13.6		2.92
4002 Burkeville, VA #78	6/16	Am.Gn.& Gr	2.65	0.7			41.1	2.630
9007 Centreville, VA	1/14	Db.(Tr.)	2.92	0.7		13.4		2.90
9020 Goose Creek, VA	5/16	Db.(Gr.)	2.94	0.8		9.7		2.91
3063 Farmville, VA #57	10/17		2.74	0.5		31.6		2.725
9010 Leesburg, VA	2/16	Db.(Tr.)	2.97	0.7		14.5		2.94
4001 Manakin, VA #57	3/17	Gn.& Gr.	2.60	0.5		28.0		2.587
4045 Powhatan, VA #57	7/16	Am.Gn.& Mmp.Gr.	2.75	0.6		15.8		2.740
4011 Rockville, VA # 57	7/17	Qzi.& Gn.(Mmp)	2.65	0.3		17.2		2.641
7043 Ruckersville, VA #57	2/14	Gn. & Gr.	2.73	0.5		25.8		2.72
7005 Shadwell, VA #57	4/14	Gs	2.92	0.5		12.7		2.91
4021 South Richmond, VA	9/14	Am, Bi., Gn. & Gr.	2.74	0.3		39.3		2.73
6040 Spotsylvania, VA #57	9/15	Gr.	2.72	0.6		32.9		2.70
7006 Stevensburg, VA	5/16	Sis.	2.75	0.6		10.4		2.73
Martin Marietta Aggregates								
4054 Anderson Creek # 57	5/16		2.72	0.4		14.9		2.711
4008 Doswell, VA # 57	11/17		2.76	0.5		16.4		2.744
4046 Warbro Road # 57	4/16	Am.Gn.& Gr	2.70	0.3		29.0		2.692
7017 Red Hill Plant # 57	7/14	Gr.	2.80	0.4		22.4		2.79
Maymead Lime Co.								
1044 Mountain City, TN	3/14	Gr.	2.72	0.5	22.2	18.4		2.709
Mountain Aggregates								
1003 Burdine, KY	2014	Ls.	2.69	0.7	20.4	23.6		2.66
1063 Elkhorn City, KY	2014	Ls.	2.83	0.7	18.9	23.1		2.82
Mountain Materials								
1037 Castlewood, VA	3/14	Do.	2.74	0.3	21.8	18.7		2.728
1026 Dickensonville	2014	Ls.	2.70	0.6	25.6			2.687
1066 Glade Spring, VA	3/14	Ls.	2.77	0.2	18.0	17.3		2.762
1080 Mouth of Wilson, VA	3/14	Gr.	2.70	0.5	23.9	27.1		2.689
Pennsy Supply								
5085 Harrisonburg, PA #8	6/13		2.80	0.5			18.5	2.78

List No. 5 (cont.)

COARSE AGGREGATES (Cont.)

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	L.A. Abrasion Loss			Dry Bulk Specific Gravity
					A	B	C	
Stuart M. Perry, Inc.								
8020 Berryville, VA	5/14	Ls. & Do.	2.86	0.3		15.3		2.854
8021 Winchester, VA	6/14	Ls. & Do.	2.73	0.3		16.5		2.719
RBS Inc.								
8097 Greystone Lewisburg, WV	8/17	Ls.	2.72	0.3		18.0		2.710
Rockbridge Stone								
8013 Glasgow, VA	6/14	Ls. & Do.	2.80	0.3		17.4		2.789
8076 Stuarts Draft, VA	1/17	Rv. Gvl.	2.59	1.4		32.2		2.55
8087 Monterey, VA	5/16	Ls.	2.71	1.5		25.1		2.66
Rockydale Quarries								
3001 Appomattox, VA	2017	Do. Ma.	2.84	0.3		32.7		2.83
8007 Broadway, VA	5/14	Ls. & Do.	2.82	0.2		16.2		2.811
7072 Charlottesville #57	1/18		2.62	0.8		35.9		2.66
8057 Staunton, VA	4/13	Ls. & Do.	2.82	0.3		15.9		2.81
8006 Forestville, VA	4/16	Ls.	2.71	0.4		20.7		2.703
2015 Roanoke, VA	2014	Ls. & Do.	2.78	1.2		20.5		2.75
2065 Gladehill, VA	2017	Am.	3.08	0.7		28.5		3.06
Rogers Group								
1113 Creekside Wardell, VA	4/14	Ls.	2.73	0.6		23.5		2.717
1114 Dickensonville, VA	4/14		2.75	1.0	22.4	21.2		2.726
Salem Stone Corp.								
2059 Blacksburg, VA Ls. & Do 2.830.5 13.7 2.81	2014	Ls. & Do	2.81	0.5		20.3		2.80
2044 Dublin, VA	2014	Ls.	2.71	1.0		15.6		2.69
2076 Floyd, VA	2017	Am.	2.78	0.6		35.2		2.76
2047 Shawsville, VA	2014	Ls. & Do.	2.80	0.7		18.9		2.78
1062 Sylvatus, VA	4/14	Qzi.	2.69	0.9	19.5	16.8		2.667
Shenandoah Stone								
8074 Vesuvius, VA	3/16	Rv. Gvl.	2.61	0.8		31.1		2.588
Southside Materials								
3009 Shelton, NC	2017	Gn. & Gr.	2.63	0.4		23.6		2.62

[illegible]

List No. 5 (cont.)

COARSE AGGREGATES (Cont.)

[illegible]

List No. 5 (cont.)

(5) FINE AGGREGATE DATA (Grading A) – (Physical Lab)

The data listed herein represents the latest determinations as of publication date. All figures are subject to change, particularly the fineness modulus. They are, therefore, intended only as a guide.

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	F.M.	Soundness Loss	Percent Voids
Acres Sand & Stone 8090 Stuarts Draft, VA	1/15	Rv. Gvl.	2.62	0.7	2.0	8.6	47.8
Aggregate Industries 4100 Charles City, VA	4/10		2.59	0.5	2.9	7.8	49.7
6043 Fulks	1/13	N. S.	2.62	1.0	2.8	2.9	50.9
6029 Gloucester, VA	8/17		2.62	0.2	2.6	1.1	46.8
9040 Kirby Road Clinton, MD	8/13	N.S.	2.62	0.7	2.8	4.2	49.4
9060 LaPlata, MD	5/13	N.S.	2.62	0.8	3.1	6.3	48.0
6027 Mattaponi	7/12	Gr.	2.58	0.2	2.6	2.7	47.4
8086 Millsville, WV	5/17	Ls.	2.86	0.6	2.6	4.4	46.8
6033 Rappahannock Farm Fredericksburg, VA	4/15		2.62	0.9	3.1	13.0	50.4
APAC – Carolina 2061 Candor, NC	2013	N.S.	2.62	0.5	3.0	7.5	45.1
Aylett Sand & Gravel 6018 Aylett, VA	5/17	Qz.	2.62	0.2	2.9	4.4	47.4
Boxley Aggregates 2004 Blue Ridge, VA	2016	Ls. & Do.	2.68	2.0	2.7	6.3	44.3
2009 Fieldale, VA	2017	Gn.	2.73	2.1	2.7	10.6	49.0
3034 Piney River, VA	2013	Ap.	2.72	1.3		7.8	49.0
3003 Lawyers	2017	Ar. Ma	2.71	1.0	3.1	18.1	49.0
Branscome Sand 4005 Charles City, VA (Hoffmeyer Plant)	4/10	N.S.	2.61	0.4	2.9	9.9	49.4
5074 Stony Creek, VA	6/17	N.S.	2.61	0.5	3.0	4.9	51.0
Blair Sand & Materials 5091 Capron, VA	9/17	N.S.	2.61	0.7	3.0	5.1	44.5
Commercial Ready Mix Pit #2 5055 Pendleton, NC	3/06	N.S.	2.64	0.5	2.6	4.8	51.0
Cardinal Stone Co. 1009 Galax, VA	3/05	Gr.	2.75	0.8	3.0	9.4	54.4
Carmeuse 8005 Strasburg, VA	8/14	Ls.	2.67	0.7	3.0	10.9	44.4
8028 Winchester, VA	3/17	Ls.	2.68	1.0	3.1	16.8	46.7

List No. 5 (cont.)

FINE AGGREGATE DATA (Cont.)
(Grading A)

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	F.M.	Soundness Loss	Percent Voids
Chaney Enterprises							
6046 Moss Neck	3/17	N.S.	2.63	0.3	2.7	4.3	50.6
9061 Waldorf, MD	4/13	N.S.	2.61	0.6	3.0	4.5	47.7
D. M. Conner							
8084 Stuarts Draft, VA	3/17	N.S.	2.61	0.9	2.7	15.3	46.3
E. Dillon & Co.							
1064 Swords Creek, VA	3/14	Do.	2.85	0.3	2.67	8.6	49.1
Disney Sand & Gravel							
5082 Hebron, MD	5/16		2.61	0.6	2.47	6.0	40.4
English Sand & Gravel							
3051 Otter River Rte. 24	2013	N.S.	2.61	2.0	2.8	10.6	45.5
Frazier Quarry							
8062 Harrisonburg, VA	3/17	Ls.	2.69	0.7	2.9	6.1	43.7
G & S Materials							
3053 Candor, NC	2012		2.61	0.8	2.6	9.8	49.4
Hanson Aggregates							
8017 Front Royal, VA	2/15	Ls.	2.77	1.0	2.82	12.9	46.9
Heard Aggregate							
5072 Waverly, VA	3/17	N.S.	2.60	0.4	2.91	5.0	50.5
Howlin Concrete Co.							
9056 Mechanicsville, MD	8/13	N.S.	2.61	0.8	2.69	3.8	47.7
Inwood Quarries,							
8092 Inwood, W. VA	6/17	Ls.	2.67	1.0	3.1	7.3	45.98
King William Sand & Gravel							
6045 Queenfield plant	6/17	N.S.	2.63	0.3	2.9	3.9	49.8
Luck Stone Corp.							
6014 Caroline, VA	3/12	Qz.	2.62	0.4	2.76	6.0	48.1
4045 Powhatan, VA	7/16	Am.Gn.& Mmp.Gr.	2.63	0.2	2.81	4.3	49.4
M L Joseph							
5075 Georgetown Del	6/13		2.60	0.6	2.52	2.6	41.1

List No. 5 (cont.)

FINE AGGREGATE DATA (Cont.)
(Grading A)

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	F.M.	Soundness Loss	Percent Voids
Mason-Dixon							
9068 Port-Deposit, MD	2/13	N.S.	2.62	0.5	2.8	8.4	50.2
McCarty Sand							
3025 Danville, VA	2017	N.S.	2.61	1.3	2.85	20.1	47.4
Merrick Sand & Gravel							
9001 Ingleside, MD	10/10	N. S.	2.59	1.0	2.8	12.8	70.0
Mountain Materials							
1037 Castlewood, VA	3/14	Do.	2.74	0.7	2.9	7.4	46.4
Norman Sand							
Candor, NC	9/17	Ns.	2.62	0.4	2.6	2.2	49.7
Stuart M. Perry, Inc							
8021 Winchester, VA	6/14	Ls. & Do.	2.66	1.1	2.82	5.0	44.8
Rockbridge Stone							
8013 Glasgow	1/18	Ls.	2.80	1.0	3.1	6.4	46.4
Rockydale Quarries Corp.							
8007 Broadway, VA	4/16	Ls.	2.75	1.3	2.5	10.6	49.6
8006 Forestville, VA	5/16	Ls.	2.65	1.7	3.1	5.3	45.4
2015 Roanoke, VA	1/06	Ls. & Do.	2.80	1.6	3.1	5.4	51.1
Sand Mountain Sand, Inc.							
1083 Wytheville, VA	3/05	N.S.	2.64	0.4	2.5	10.9	49.8
Shenandoah Stone							
8074 Vesuvius, VA	2/15	N.S.	2.58	1.8	2.6	15.2	45.3
Shoreline							
5088 Stony Creek, VA	5/15	N.S.	2.59	0.8	2.83	11.5	45.3
Sloan Materials							
9062 Leonardtown, MD	4/13	N.S.	2.61	0.7	2.99	4.3	47.4
Southside Materials							
3055 Drake's Branch, VA	2017	N.S.	2.67	0.5	2.66	10.4	50.1
Stony Creek Sand & Gravel							
5035 Carson	4/11		2.58	0.9	3.03	15.4	41.0

FINE AGGREGATE DATA (Cont.)
(Grading A)

List No. 5 (cont.)

[illegible]

List No. 5 (cont.)

(5) ASPHALT CONCRETE FINE AGGREGATE DATA – (Physical Lab)

The data listed herein represents the latest determinations as of this publication date. All figures are subject to change. They are, therefore, intended only as a guide. NOTE: Tests performed with No. 10 screening are indicated.

Producer and Location	Date Test Performed	Classification *See Legend	Dry Bulk Specific Gravity	Absorption	Soundness Loss	Sand Equivalent
Adams Construction Company						
3052 Dan River	2015	N. S.	2.59	1.2	21.5	95
3045 South Boston, VA	2017	N. S.	2.57	1.3	20.1	94
Ararat Rock Products						
2003 Mt. Airy, NC # A	2017	Gn.	2.776	0.6	21.3	
Basic						
4102 New Kent, VA	3/10		2.575	1.1	8.6	28.0
C. W. Barger, & Sons						
8004 Lexington, VA #10	7/16	Ls.	2.615	1.5	6.7	76
Castle Sands Co.						
2005 New Castle, VA	2013	Ss.	2.591	1.0	8.8	
Boxley Aggregates						
2009 Fieldale, VA	2013	Gn.	2.755	1.2	11.8	63
2043 Goose Creek	2017	N.S.	2.579	2.8	20.9	
3003 Lawyers Road #B	2013	Ar.Ma.	2.609	1.6	11.5	668
8025 Lowmoor, VA #10	4/16	Ls.	2.578	2.2	8.7	66
3030 Mt. Athos, VA B	2017	Gs.	2.999	1.0	6.6	93
3034 Piney River, VA	2017	Ap.	2.75	1.1	3.8	89
Cardinal Stone Co.						
1009 Galax, VA	3/14	Bi.	2.742	1.0	13.7	93
Carmeuse						
8005 Strasburg, VA	8/14	Ls.	2.66	0.7	10.9	91
8028 Winchester, VA	3/17	Ls.	2.652	1.0	16.8	83
Castle Sand Co.						
2005 New Castle, VA	2013	Ss.	2.591	1.0	8.8	
Cedar Mountain Stone Corp.						
7031 Mitchell, VA #10	1/18	Db.(Tr.)	3.05	1.2	7.3	65

List No. 5 (cont.)

ASPHALT CONCRETE FINE AGGREGATE DATA (Cont.)

Producer and Location	Date Test Performed	Classification *See Legend	Dry Bulk Specific Gravity	Absorption	Soundness Loss	Sand Equivalent
Chantilly Crushed Stone Co						
9004 Chantilly, VA #10	1/14	Db. (Tr.)	2.99	0.6	11.8	53
Commercial Ready Mix Pit #2						
5055 Pendleton, NC	3/06	N.S.	2.64	0.5	4.8	98
D. M. Conner						
8084 Stuarts Draft, VA B sand	3/17	N.S.	2.591	0.9	15.3	69
English Sand & Gravel						
3051 Otter River	2013	N.S.	2.553	2.0	10.6	96
F & M Construction Co.						
1011 Carroll County, VA # A	2015	Qzi.	2.619	2.0	12.9	
Frazier Quarry						
8067 Elkton, VA. #10	1/16	Ls.	2.621	1.9	5.8	77
8062 North	3/17	Ls.	2.675	0.7	6.1	87
8083 Timberville, VA. #10	4/17	Ls.	2.603	1.8	7.2	55
P. C. Goodloe						
6019 Fredericksburg, VA	7/13	Qz	2.56	1.6	15.9	65
Hanson Aggregate						
8017 Front Royal, VA	2/15	Ls.	2.73	1.0	12.9	88
Inwood Quarries,						
8092 Inwood, W. VA	6/17	Ls.	2.648	1.0	7.3	81
LaFarge						
7067 Frederick, MD	8/13		2.66	0.9	5.1	56
Lawhorne Bros., Lynchburg						
3038 (Otter River) Rte. 24	2015	N.S.	2.58	1.6	18.9	98
Loudon Quarry						
9011 Herndon, VA #10	2/16	Db.	2.95	0.5	3.7	66
Luck Stone Corp.						
7052 Bealeton, VA #10	10/17	Db.	2.92	0.8	6.7	54
4001 Boscobel Manakin # B	3/17	Gn. & Gr.	2.573	0.6	8.5	90
9007 Centreville, VA #10	1/14	Db.(Tr.)	2.87	0.7	9.3	69
9010 Leesburg, VA # 10	2/16	Db.(Tr.)	2.96	0.6	5.2	52

List No. 5 (cont.)

ASPHALT CONCRETE FINE AGGREGATE DATA (Cont.)

Producer and Location	Date Test Performed	Classification *See Legend	Dry Bulk Specific Gravity	Absorption	Soundness Loss	Sand Equivalent
Luck Stone Corp. cont.						
9003 Manassas, VA #10	5/14	Db.(Tr.)	2.91	0.8	6.0	67
4045 Powhatan, VA	7/16	Am.Gn.& Mmp.Gr.	2.69	0.8	12.9	71
4021 Richmond, VA #10	6/10	Am.-Bi.-Gn. & Gr. Scr.	2.733	0.2	23.9	
7043 Ruckersville, VA #10	4/17	Gr. & Gn.	2.79	0.5	13.2	56
7005 Shadwell, VA #10	4/17	Gs.	2.87	0.8	6.1	63
6040 Spotsylvania, VA #10	12/16		2.754	0.3	11.0	74
Martin Marietta Aggregates						
4008 Doswell, VA #10	11/17		2.702	0.7	9.8	53
4054 Rockville, VA # B	7/17		2.688	0.5	6.3	87
7017 Red Hill Plant #10	7/14	Gr.	2.81	0.1	6.9	67
4046 Warbro Road Chesterfield, VA	6/16	Gr.& Am.Gn. Do. Ls	2.629	1.2	2.1	74
Maymead Lime Co.						
1044 Mountain City, TN	3/14	Gr.	2.675	1.2	9.3	78
Mountain Aggregates						
1003 Burdine, KY	3/14	Ls.	2.591	0.8	9.3	78
Mountain Materials						
1026 Dickensonville	2014	Ls.	2.655	1.1	11.9	83
1063 Elkhorn City, KY	3/14	Ls.	2.653	1.2	9.3	78
1066 Glade Spring, VA	3/14	Ls.	2.69	1.5	4.7	89
Pennsy Supply						
5085 Harrisonburg, PA #10	5/13		2.75	0.6	3.3	66
Perry, Stuart M., Inc.						
8020 Berryville, VA.#10	1/16	Ls.	2.855	1.0	3.2	86
8021 Winchester, VA	6/14	Ls.&Do.	2.63	1.1	5.0	89
Powell Valley Stone						
1048 Dot, VA	3/14	Ls.	2.651	1.3	20.0	63
Rockydale Quarries, Corp.						
3001 Appomattox, VA	2017	Ls.	2.79	0.8	2.3	98
8007 Broadway, VA	4/16	Do. & Ls.	2.714	1.3	10.6	74
7072 Charlottesville quarry #10	2/15		2.87	1.0	8.5	66
8006 Forestville, VA	5/16	Ls.	2.604	1.7	5.3	73
2015 Roanoke, VA	2016	Ls & Do	2.740	2.2	8.4	

8057 Staunton, VA #10	5/16	Ls.	2.653	1.9	7.6	81

List No. 5 (cont.)

ASPHALT CONCRETE FINE AGGREGATE DATA (Cont.)

Producer and Location	Date Test Performed	Classification *See Legend	Dry Bulk Specific Gravity	Absorption	Soundness Loss	Sand Equivalent
Rogers Group						
1114 Dickensonville, VA	4/14	Ls.	2.671	1.6	18.7	45.2
Salem Stone Company						
1062 Sylvatus, VA # 10	4/14	Qzi.	2.623	1.2	18.7	68
1062 Sylvatus, VA # A	2015	Qzi.	2.612	2.1	14.4	
Shenandoah Stone						
8076 Stuarts Draft, VA	2/15	N.S.	2.536	1.8	15.2	66
Southside Materials						
3009 Danville, VA #10	2017	Gr. Gn.	2.623	0.8	18.1	83
3010 South Boston, VA 10	2017	Gr.	2.741	1.3	12.0	58
Specialty Granules						
8098 Blue Ridge Summit, PA	8/17	B.	3.006	0.1	4.5	61
Vulcan Materials						
4015 Dale - Chester, VA #10	5/16	Bi.Gn.&Gr.Scr	2.70	0.5	4.2	
6012 Garrisonville, VA #10	11/16		2.916	0.6	9.7	98
7065 Hanover, PA #10	5/13		2.79	0.3	6.2	74
5016 Havre-de-Grace,MD#10	11/15	Di.(Tr.)	2.78	0.8	4.9	74
4016 Jack - Petersburg, VA #10	2/16	Bi.Gn.&Gr.Scr	2.542	1.3	2.9	
9022 Manassas, VA #10	2/16	Db.(Tr.)	2.88	1.5	5.0	31
1093 Norton, VA #1	3/14	Ls.	2.653	1.1	8.3	91
9023 Occoquan, VA #10	1/14	Gr.& Gn	2.72	1.5	9.8	68
8071 Staunton, VA	1/17	Ls.	2.599	1.9	11.2	72
4052 Union Level, VA #10	11/15		2.633	0.5	2.1	
7015 Warrenton, VA #10	2/16	Db.(Tr.)	2.87	1.3	5.1	67
W-L Construction						
3035 Turbeville, VA	2016	N.S.	2.57	1.4	23.5	98
Wythe Stone Co						
1082 Wytheville, VA	4/14	Ls.	2.767	0.7	3.8	89
York Building Supply						
5086 York, PA Roosevelt Quarry #10	5/13		2.77	1.0	5.1	90

List No. 5 (cont.)

(5) LIGHTWEIGHT AGGREGATE DATA – (Physical Lab)

Note: Lightweight aggregates must conform to section 206 of VDOT's 2002 Road and Bridge Specifications before used for VDOT work.

Producer and Location	Date Test Performed	Classification *See Legend	SSD Specific Gravity	Absorption	LA Abrasion Loss			Dry Bulk Specific Gravity
					A	B	C	
Carolina Stalite Co. 2070 Aquadale, NC		Sl.	1.5	5.4		27.0		
Carolina Stalite Co. 2069 Gold Hill, NC		Sl.	1.50	5.4			29.7	

LEGEND: Refer to following list for geological classification abbreviations used in the table above.

Am.	- Amphibole	Gr.	- Granite	Qz.	- Quartz
Ap.	- Aplite	Gs.	- Greenstone	Qzi.	- Quartzite
Ar.	- Arch	Gvl.	- Gravel	Rv.	- River Sand
B.	- Basalt	Ky.	- Kynite	Scr.	- Screenings
Bi.	- Biotite	Ls.	- Limestone	Sg.	- Slag
Db.	- Diabase	Ly	- Limy	Sh.	- Shale
Di.	- Diorite	Ma.	- Marble	Sis.	- Siltstone
Do.	- Dolomite	Mmp.	- Metamorphosed	Sl.	- Slate
Fs.	- Feldspar	N.S.	- Natural Sand	Ss.	- Sandstone
Gn.	- Gneiss	Phy.	- Phyllite	Tr.	- Traprock
(FT)	Freeze-Thaw Method of Soundness determination				

(6) AGRICULTURAL LIMING MATERIALS REGISTRATION– (Chemistry Lab)

A) Agricultural Liming Materials (Pulverized or Ground Limestone):

Pulverized and Ground Limestone are paid by Ton or Metric Ton

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Mesh Screen	Percent Passing 60 Mesh Screen	Percent Passing 100 Mesh Screen
Aggregates USA Abingdon, VA	Abingdon Ground Agricultural Limestone	96.00	90.00	50.00	30.00
Appomattox Lime Company Appomattox, VA	Appomattox Lime	90.00	90.00	50.00	40.00
Austinville Limestone Company Austinville, VA	Austinville Ground Limestone - Bulk	94.00	90.00	50.00	35.00
	Garden Lime Pulverized	99.00	95.00	80.00	70.00
	Pelletized Lawn Lime	99.00	95.00	80.00	70.00
	Pro Cal Pellets	96.00	95.00	80.00	70.00
Baker Lime York, PA	Bakers AG 18 Ground Damp	105.60	90.00	60.00	50.00
	Bakers Commercial Pulverized Damp	105.60	100.00	85.00	75.00
	Bakers Premier Pellets	100.00	100.00	85.00	75.00
Bluegrass Materials Cockeysville, MD	Texas AGLIME	92.50	90.00	70.00	35.00
Carmeuse Limestone, Incorporated Winchester, VA	Winchester Calcitic Limestone	89.70	95.00	75.00	50.00
Commonwealth Industrial Services, Inc. Hopewell, VA	Larry's Lime Pelletized	90.00	95.00	80.00	70.00
Crop Production Services Shelbyville, KY	Pelleted Lime	90.00	98.00	98.00	42.40
Culpepper Farmers Coop Culpepper, VA	Ground Dolomitic Limestone	85.00	90.00	50.00	30.00
	Pulverized Calcitic Limestone	85.00	90.00	75.00	70.00
E Dillon & Company Swords Creek, VA	E. Dillon & Co. Dolomite Ag-Lime	87.00	100.00	95.00	85.00
	E. Dillon & Company Bulk Ag-Lime	87.00	90.00	50.00	30.00
Easy Gardener, Inc. Paris, KY	Jobe's Organics Garden Lime	94.00	100.00	88.00	90.00
Espoma Company, The Millville, NJ	Espoma Organic Garden Lime	93.00	100.00	88.00	80.00
Frazier Quarry, Inc., The Harrisonburg, VA	Frazier Ag-Lime (Harrisonburg)	85.00	90.00		70.00
	Frazier Ag-Lime (Elkton)	90.00	90.00	50.00	30.00

January 2018

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Mesh Screen	Percent Passing 60 Mesh Screen	Percent Passing 100 Mesh Screen
Greer Lime Company <i>Morgantown, WV</i>	Greer Pulverized Ag-Lime	96.00	100.00	98.00	90.00
Hyponex Corporation <i>Marysville, OH</i>	Hyponex Dolomitic Ground Lawn & Garden Limestone	93.00	90.00	50.00	35.00
	Hyponex Dolomitic Pelletized Lawn & Garden Limestone	103.50	100.00	85.00	75.00
Jessee Stone Company <i>Woodway, VA</i>	Woodway Calcitic Lime	85.00	90.00	50.00	30.00
Kelly Limestone, LLC <i>Newark, MO</i>	Kelly's Capsulated Dolomitic Limestone	86.00	95.00	61.00	50.00
	Kelly's Capsulated High Calcium Limestone	93.00	95.00	61.00	50.00
Kirby Agri Incorporated <i>Lancaster, PA</i>	Pelletized Dolomitic Limestone	93.00	98.00	80.00	75.00
MC Greary Organics INC <i>Lancaster, PA</i>	Hi-Cal Pulverized Lime	96.20	100.00	100.00	90.00
New Enterprise Stone & Lime Co. Inc. <i>New Enterprise, PA</i>	New Enterprise #18 Magnesium Limestone	90.00	90.00	60.00	50.00
	New Enterprise Ag-16 Low Moisture Damp Lime	105.00	90.00	72.00	67.00
	New Enterprise Calcium Limestone	90.40	98.00	70.00	65.00
	New Enterprise Magnesium Limestone	103.50	98.00	80.00	75.00

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Mesh	Percent Passing 60 Mesh Screen	Percent Passing 100 Mesh
Oldcastle Lawn & Garden Inc. <i>Atlanta, GA</i>	Cal Turf Micro	95.00	100.00	80.00	70.00
	Cal Turf Pro	95.80	100.00	80.00	70.00
	Calcitic Micro Pellets	95.80	100.00	85.00	82.00
	Calcitic Pro Pellets	97.10	100.00	88.00	80.00
	Calcitic Pro Pellets (2)	95.80	100.00	88.00	80.00
	Calitic Pro Pulverized (2)	99.60	100.00	86.00	80.00
	Dolomitic Pro Pellets	90.00	90.00	50.00	40.00
	Mag Turf Micro-cas (D)	102.00	100.00	80.00	70.00
	Mag Turf Pro (D)	102.90	100.00	88.00	80.00
	Mag Turf Pro (2)-lee (D)	95.00	99.00	70.00	50.00
	Micro Select Dolomitic Pellets	96.90	99.00	85.00	75.00
	Micro Select Pellets (1)- calcitic-tho (C)	97.00	100.00	85.00	82.00
	Micro Select Pellets (2)-dolomitic-cas (D)	98.70	99.00	70.00	50.00
	Micro Select Pellets (3)-dolomitic-lee (D)	100.00	100.00	88.00	80.00
	Pro Granular	96.00	92.00	50.00	40.00
	Pro Granular Dolomitic	95.00	95.00	50.00	35.00
	Pro Pellets Dolomitic Limestone- buc (D)	94.20	95.00	70.00	50.00
	Pro Pulverized (1) -dolomitic-tho (D)	95.00	100.00	88.00	80.00

January 2018

		Cal Carb Equiv % (CCE)	Percent Passing 20 Mesh	Percent Passing 60 Mesh Screen	Percent Passing 100 Mesh
Firm Name	Product Name				
Oldcastle Lawn & Garden Inc.					
Atlanta, GA					
	Pro Pulverized Dolomitic (D)	102.90	100.00	88.00	80.00
	Pro Select Dolomitic Pellets	102.90	100.00	88.00	80.00
	Pro Select Dolomitic Pellets	96.90	99.00	85.00	75.00
	Pro Select Pellets (1)-cht-calcitic (C)	94.00	100.00	90.00	86.00
	Pro Select Pellets (2)-cas- dolomitic (D)	99.70	99.00	70.00	50.00
	Pro Select Pellets (3) -dolomitic-lee (D)	98.30	100.00	88.00	80.00
	Pro Select Pellets (4) -dolomitic-tho (D)	102.00	98.00	72.00	54.00
	SD EZ Spread Granular Cal	96.00	92.00	50.00	40.00
	SD Pelletized Lawnlime – Dol-lee (D)	95.00	99.00	70.00	50.00
	Soil Doctor EZ Spread Granular	95.00	95.00	50.00	33.00
	Soil Doctor Gardenlime -calcitic-tho (C)	99.60	100.00	88.00	80.00
	Soil Doctor Gardenlime (D)-lee	95.00	98.00	72.00	54.00
	Soil Doctor GardenLime- Dolomitic	102.90	100.00	88.00	80.00
	Soil Doctor Gardenlime- Dolomitic	96.90	99.00	85.00	75.00
	Soil Doctor Gardenlime (2) dolomitic-buc (D)	94.20	95.00	72.00	54.00
	Soil Doctor Gardenlime (4) (D)	90.00	90.00	50.00	40.00
	Soil Doctor Gardenlime (D)-lee (D)	95.00	100.00	88.00	80.00
	Soil Doctor Lawnlime (1) dolomitic-buc (D)	94.20	95.00	70.00	50.00
	Soil Doctor Lawnlime (2) dolomitic-cas (D)	99.70	99.00	70.00	50.00
	Soil Doctor Lawnlime (3) -cht (C)	97.80	100.00	88.00	80.00
	Soil Doctor Lawnlime (4) -calcitic-tho (C)	97.90	100.00	88.00	80.00
	Soil Doctor Lawnlime (5) -calcitic-car (C)	92.00	95.00	85.00	70.00
	Soil Doctor Lawnlime (6) (D)	90.00	90.00	50.00	40.00
	Soil Doctor Lawnlime – Calcitic (C)	95.80	100.00	88.00	80.00
	Soil Doctor Lawnlime- Dolomitic (D)	102.90	100.00	88.00	80.00
	Soil Doctor Lawnlime- Dolomitic	96.90	99.00	85.00	75.00
	Soil Doctor Pulverized Gardenlime-calcitic-cht(C)	96.90	100.00	88.00	80.00
Rockydale Quarries					
Linville & Roanoke VA					
	Ground Agri. Dolomitic Limestone - Bagged	94.00	90.00	50.00	35.00
	Ground Dolomitic Agri. Limestone - Bulk	94.00	90.00	50.00	35.00

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Mesh Screen	Percent Passing 60 Mesh Screen	Percent Passing 100 Mesh Screen
Salem Stone Corporation Blacksburg, VA	ACCO Ground Limestone	85.00	90.00	50.00	35.00
Sisson & Ryan Quarry, LLC Shawsville, VA	Sisson & Ryan Agri. Ground Limestone - Bulk	85.00	90.00	65.00	50.00
Southern States Cooperative Richmond, VA	Southern States Calcitic Pelleted Limestone	91.00	100.00	88.00	88.00
	Southern States Dolomitic Pelleted Limestone (A)	95.00	95.00	72.00	54.00
	Southern States Dolomitic Pelleted Limestone (C)	97.60	100.00	88.00	80.00
Staunton Lime Company Staunton, VA	Staunton Ground Agricultural Lime	98.00	90.00	50.00	30.00
Stuart M Perry Inc. Winchester, VA	Agricultural Pelletized Limestone	90.00	95.00	60.00	60.00
	High Mag Ground Limestone	90.00	95.00	80.00	70.00
	Pulverized Limestone	85.00	100.00	96.00	87.00
Tennessee Valley Resources Jefferson City, TN	Young Mine New Market TN Dolomite AG Lime	95.00	90.00	50.00	35.00
Turf Care Supply Corp	AMpxc Calcitic Limestone	90.00	99.90	85.00	82.00
	TCS Cal-Star Limestone	90.00	99.90	85.00	82.00
Vulcan Construction Materials, LP. Hanover, PA	Hanover Agri Lime	98.00	95.00	90.00	75.00
	Hanover Agri-Cal Lime	93.00	95.00	90.00	75.00
Waukesha Lime & Stone Waukesha, WI	Waukesha Farm & Lawn Lime	102.00	90.00	60.00	50.00
Winston Weaver Company Inc. Winston Salem, NC	Weaver's Pellet Lawnlime (D)	97.60	100.00	88.00	80.00

B) Hydrated Lime

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Screen	Percent Passing 60 Screen	Percent Passing 100 Screen
A. H. Hoffman Incorporated Lancaster, NY	Hoffman Horticultural Lime	128.00	99.90	99.70	99.00
Greer Lime Company Morgantown, WV	Greer Hydrated Lime	125.00	100.00	100.00	98.00
Lhoist North America of Virginia, Inc. Ripplemead, VA	Chemical Hydrated Lime	128.00	100.00	98.00	93.00
Oldcastle Lawn & Garden Atlanta, GA	Lee Double Strength Hydrate	137.00	99.00	96.00	95.00
	Soil Doctor Hydrated	148.00	100.00	99.00	97.00

C) Industrial Co-Product (Substandard Liming Materials)

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Screen	Percent Passing 60 Screen	Percent Passing 100 Screen
Baker Lime	Bakers AG 10 Bulk	105.60	50.00	40.00	28.00
Dominion Virginia Electric and Power Co	Wood Ash (Hopewell Location)	67.00	97.00	93.00	90.00
Glen Allen, VA	Wood Ash (Southampton Location)	67.00	97.00	93.00	90.00
	Wood Ash (Altavista Location)	67.00	97.00	93.00	90.00
Georgia Pacific LLC	BPB Fly Ash	63.36	99.98	99.90	99.80
Gladys, VA	GPB Bottom Ash	12.02	98.22	93.87	87.80
Greif Packaging LLC	Greifwood Ash Substandard Liming Material	50.00	76.00	63.00	51.00
Riverville, VA					
Montgomery Farm Supply	Cal-Plus	80.00	60.00	40.00	34.00
Wirtz, VA					
New Enterprise Stone & Lime Co. Inc	New Enterprise #18 Calcium Limestone	90.40	70.00	60.00	50.00
New Enterprise, PA					
Oldcastle Lawn & Garden	Pro Pulverized (2) -dolomitic-lee (D)	103.00	99.00	72.00	54.00
Atlanta, GA					
WestRock CP LLC (formerly named Rock Tenn)	Dregs	98.30	97.40	97.20	97.00
West Point, VA	Dry Lime After Kiln	125.00	98.50	97.00	96.60
	Grits	98.30	69.50	41.30	30.40
	Mixed Dry Lime and Grits	105.00	93.40	72.80	66.30
	Post-belt Press Lime Mud	94.70	99.90	99.80	99.50
South Boston Energy LLC	Cycleright	68.00	99.00	97.00	86.00
South Boston, VA					
Upper Occoquan Sewage Authority	UOSA Lime Solids	86.60	99.90	99.40	98.50
Centreville, VA					

D) Fast Acting Lime – 2016 Road and Bridge Specification 244.02 (e) 2

Fast acting lime is a highly processed grade of agricultural lime that has a higher percentage by weight of material passing the U.S. Standard 100 Sieve. Fast acting lime can be supplied in liquid or dry form. The minimum calcium carbonate equivalent (CCE) for fast acting lime shall be as follows:

Physical Form	Minimum CCE %
Liquid	55%
Dry	85 %

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Screen	Percent Passing 60 Screen	Percent Passing 100 Screen
Aqua-Aid, Inc. Rocky Mount, NC	Verde-Cal	91.00	100.00	98.00	95.00
	Verde-Lawn	91.00	100.00	98.00	95.00
	Verda Lawn Hydro	91.00	100.00	98.00	95.00
Austinville Limestone Company Austinville, VA	Lime Lite Fast Acting Pelletized Lime	99.00	100.00	98.00	95.00
	LimeLite Pro Cal	96.00	100.00	98.00	95.00
Bailey Nurseries Inc. St. Paul, MN	Color Me Pink Pelletized Lime	90.41	99.00	99.00	95.00
Bonide Products Incorporate Oriskany, NY	Bonide Dura Turf Turbo High Efficiency Lime	91.00	100.00	95.00	95.00
Burnett Athletics, Inc. Copobello, SC	Cal Flo Liquid Limestone	64.17	100.00	100.00	100.00
Calcium Products Incorporated Gilmore City, IA	Supercal 98G Pelletized Limestone	95.00	100.00	99.00	95.00
	Supercal 98MG Greens Grade Limestone	95.00	100.00	99.00	95.00
Carolina Precision Fibers Incorporated Ronda, NC	EZ Lime Liquid Plus	64.81	100.00	100.00	100.00
Cleary Chemicals, LLC Dayton, NJ	Limestone F Liquid	56.49	100.00	100.00	100.00
Encap, LLC Greenbay, WI	Fast Acting Lime Plus AST	92.50	100.00	93.00	93.00
	Fast Acting Lime	94.00	99.00	85.00	70.00
Espoma Company, The Millville, NJ	Espoma Organic Lightning Lime	91.00	100.00	95.00	95.00
Hawthorne Gardening Company, The Port Washington, NY	Whitney Farms Pelleted Dolomitic Lime	98.27	100.00	96.90	94.80
Lesco INC Cleveland, OH	Lesco Liquid Lime (190993)	64.17	100.00	100.00	100.00
Novelty Manufacturing Co Lancaster, PA	Earthbox All Natural Dolomite	98.10	100.00	98.00	93.00
Oldcastle Lawn & Garden Atlanta, GA	Green N Grow Fast Acting Lime (New) Calcitic	97.00	100.00	85.00	82.00
	Green N Grow Fast Acting Lime (New) Dolomitic	97.00	100.00	85.00	82.00
	Jolly Gardener Fast Acting Lime (Calcitic New) (1)	97.00	100.00	85.00	82.00
	Jolly Gardener Fast Acting Lime	97.00	100.00	85.00	82.00
Plant Food Company Inc. Cranbury, NJ	PFC's Phusion Calcitic Limestone	88.73	100.00	95.00	93.00
PLANT'S CHOICE INC West Wareham, MA	Plant's Choice Rapid Lime Enhanced Calcitic Lime	91.00	100.00	95.00	95.00
Profile Products, LLC.	ProPlus NeutraLime Liquid	73.00	100.00	100.00	100.00

		January 2018			
Buffalo Grove, IL	ProPlus NeutraLime Dry	97.00	100.00	99.50	96.00

D) Fast Acting Lime

		Cal Carb Equiv % (CCE)	Percent Passing 20 Mesh Screen	Percent Passing 60 Mesh Screen	Percent Passing 100 Mesh Screen
Firm Name	Product Name				
Solu-Cal USA LTD West Wareham, MA	Hydro-Cal Dry	94.5	100.00	100.00	100.00
	Solu-Cal Enhanced Calcitic Lime	91.00	100.00	95.00	95.00
	Solu-Cal with Cavalcade 0.37%	91.00	100.00	95.00	95.00
	Harrell's CalMax	91.00	100.00	95.00	95.00
	Sta-Green Rapid-Lime with Soluble Calcium	96.60	100.00	95.00	95.00
Southern States Cooperative Richmond, VA	Solu-Lime	91.00	100.00	95.00	95.00
Turf Care Supply Corp Brunswick, OH	Landscapers Select Rapid Release Lime	90.00	100.00	85.00	70.00
	Landscapers Select Rapid Release Lime W/AMP-XC	90.00	100.00	85.00	70.00

E) Soil Amendments

Firm Name	Product Name	Cal Carb Equiv % (CCE)	Percent Passing 20 Screen	Percent Passing 60 Screen	Percent Passing 100 Screen
AMSOL Incorporated Superior, WI	AG Grand Liquid Lime	25.00	100.00	100.00	100.00
Growmark Inc Le Mars, IA	Greenyard Crabgrass Preventer with 0.125% Dimersion	81.73	100.00		95.00
Central Garden & Pet Garden Division – Atlanta, GA	Pennington Fast Acting Lime Plus AST	90.00	90.00	50.00	40.00

(7) ANTISTRIPPING ADDITIVES – (Asphalt Lab)

Following is a list of approved Anti-stripping Additives:

Manufacturer	Brand Names	Notes
Akzo Nobel Surface Chem., LLC 7101 Adams St. Unit No. 7 Willowbrook, IL 60521	Kling Beta LV	100% Active
	Kling Beta LV-(HM)	100% Active
	Kling Beta2550-(HM)	100% Active
	Kling Beta 2600	100% Active
	Kling Beta 2700	100% Active
	Kling Beta 2912	100% Active
	Kling Beta 3024	100% Active
	Perma Tac Plus	100% Active
	Rediset LQ 1102C	100% Active
	Rediset LQ 1200	100% Active
	Wetfix 312	100% Active
Armak Chemicals Division Chicago, Illinois	Redicote 82-S	100% Active
ARR-MAZ Products Winter Haven, Florida	Ad-here HP Plus	100% Active
	Ad-here 65-00	100% Active
	Ad-here LOF 6500 LS	100% Active
	Ad-here 66-01	100% Active
	Ad-here 62-40	100% Active
	Ad-here (Regular)	100% Active
	ACRA-2000	100% Active
	SC-AT-50	100% Active
	Ad-here 6265-1	100% Active
	Adhere 77-00	100% Active
	Adhere 65-50	
Cargill Industrial Specialties 13400 15 th Ave N Suite B MS 103 Plymouth, MN 55441	ANOVA 1510	
Chemoran Oranmore Galway, Ireland	TPH	100% Active
Exxon Chemical Americas Tomah Products Milton, Wisconsin	ACRA-1000	100% Active
	ACRA-3000	100% Active
	ACRA-5000	100% Active
	ACRA-5092	100% Active
	ACRA-600L	100% Active
	No Strip Super Concentrate	90% Active
	101-25B	100% Active
	101-25D	100% Active
	101-25E	100% Active

Innophos 259 Prospect Plains Road Cranbury, NJ 08512	Innovalt W	100% Active
--	------------	-------------

List No. 7 (cont.)

Manufacturer	Brand Names	Notes
Road Science, Division of ArrMaz 6502 South Yale Avenue Tulsa, OK 74136	Kohere AS-500	100% Active
	Kohere AS-700	100% Active
	Kohere AS-1000	100% Active
	Kohere AT-1000	100% Active
Ingevity North Charleston, SC	Evotherm J1	
	Evotherm M1	
	Evotherm U3	
	Morlife 3300	100% Active
	MorLife4400	
	Morlife 5000	
	Pave Bond T-Lite	100% Active
	Pave Bond LITE	100% Active
Pre Tech Industries Dearborn Brook Circle Exter, NH 03833	Pavegrip 250 G	
	Pavegrip 275	100% Active
	Pavegrip 350	
	Pavegrip 400	100% Active
	Pavegrip AA-2	
	Pavegrip 550	
Seaboard Asphalt Products Co.	Super Bond 96	100% Active
SouthEastern Chemical Corp. P.O. Box 917 932 East Elm St. Graham, NC 27253	Aggrebond 275	100% Active
TAPCO, Inc. Greensboro, North Carolina	TAPCO 206	60% Active
Unichem International Santa Fe, TX	8162	100% Active
Unique Paving Materials 3993 E. 93 rd Street Cleveland, Ohio 44105-4096	HPM	
Westvaco Corp. Chemical Division Charleston Heights, South Carolina	Indulin AS-1	100% Active
	Indulin AS-Special	100% Active
	PC-705	100% Active

Zydex Industries Plymouth, MA 02360	Zycotherm	*Minimum dosage rate of 0.03%
	Zycotherm EZ	*Minimum dosage rate of 0.03%
	Zycotherm SP	*Minimum dosage rate of 0.03%
The quantity of Anti-stripping Additive used will be checked in accordance with VTM-13.		

(8) ASPHALT RELEASE AGENTS – (Asphalt Lab)

The following list of asphalt release agents is approved; however, they shall be diluted as recommended by the Manufacturer, and approved by the Department. The dilution recommendation shall be shown on a label attached to the Release Agent container. The dilution rates listed below are the maximums currently approved by the VDOT.

Manufacturer	Brand Names	Dilution Rate Agent:Water	Foaming (F) /Non-Foaming (NF)
Alzo, Inc.	REEEZ	1: 30	NF
ARR-MAZ Products	ARR-MAZ TBRA #7191	1: 40	F
Arrow Magnolia Int'l.	Slick II	1:20	F
	Super Slick	1:20	NF
Bowser-Morner Inc.	Econopave 1000	8:1	NF
Breakaway Advanced	Maintenance Mates	1:20	F
Bio-Clean Ind.	Bio-Clean	1:30	
Capital Janitorial Supply	Colonial Blue Blaze	1: 20	F
Capitol Supply Co.	Rapid Release	1:15	
Certified Laboratories	Citrus Claw	Not diluted	
Chem-Tech Solutions, Inc.	Westech CT-1440	1:15	
The ChemMark Corp.	Thermal-Slide	Not diluted	F
Chemstar Chemical	Chemsolve L-40	1:100	
ChemStation of Virginia	3917	1:20	
	2159	1:20	
	2620	1:20	
	2791	5:1	
	2406	1:20	
	2061-A	1:5	
	8194	1:5	
	8442	1:5	
Chemical Technologies, LLC	PM-25	1:30	
ChemTek Inc.	Aqua Slip 30	1:30	F
	Aqua Slip	1:15	
CleanEdge, formerly ChemStation	CleanEdge 2217	6:1	
	1475	1:20	
	HD-5565	1:27	F
	6992	1:40	
Cleaning Systems, Inc.	Slide	1:30	
	Asphalt Release	1:10	
Compound Technologies	BMF	1:18	F
	SPX-7	1:5	F
	No.1 Asphalt Release Agent	1:5	
D&A, Inc.	L-Slip	1: 100	F
	SP-Slip	3:100	
	SMA-Slip	1: 100	F
	SB-Slip	1: 25	F
	V-Slip	1:33	F
	Slippery-Slope	3:100	F
Drummand American	Slip N Slide DL 3510	1:12	F
Dubois Chemicals	Diver-Slip	20:1	F

Manufacturer	Brand Names	Dilution Rate Agent:Water	Foaming (F) /Non-Foaming (NF)
Diversey Corp./ DuBois Chemicals	Liqui-Slip	1: 19	F
	PolySlip	1: 30	F
	Slide-Eze	1: 30	F
	Slide-All	1:33	F
EDCO Mfg, Inc.	EDCO Asphalt Release	1: 10	F
Empire Services	Empire 2000 Phalt Free	1:30	
	Empire Slide Plus	1:30	
Engineering Chemistry Co.	Slip & Slide	1:100	F
	Slip & Slide H.D.	3:100	F
	Slip & Slide VOB	3:100	NF
Express Chemical Co.	Citra Slip	1:40	
Fine Organics Corp	FO Release	3:100	F
	FO Release II	3:100	F
Forcon Chemical Corp.	Super Slick	1:35	F
	Super "Release" All	1: 35	F
Foster and Company, Inc.	No Stick I	1: 10	NF
	No Stick II	1: 10	NF
Global Barrier Services	Slipcoat-IRC	1:20	NF
Handi-Clean Prod. Inc.	Super Slide	1:15	
Hydro-Chem Systems, Inc.	Slide Out	10:1	
Industrial Water Group	No-Phalt Release	1:40	F
	No-Phalt Equipment	1:60	F
Industrial Controls	Synthetic Release	1:25	
JJC Materials	570156	1:30	
KT Chemicals, Inc.	BioSlick-ClearRelease	Not diluted	
	Popcorn Buster	Not diluted	
L & F Products	Professional NL Concentrate All Purpose Cleaner Formula 177-62	1:32	F
Lawrence Sanitary Co. Chem Station	5895	1:20	F
	1475	1:20	F
	6996	1:10	NF
	6992	1:40	NF
Maxco Supply Co.	Max Slide	1:20	F
Meyer Laboratory	Avalanche	1:5	F
	Slider	1:10	
	UltraSlider	1:20	
MEPCO, Inc.	Mepcoat 103	1: 48	NF
Mid-Atlantic II	HD5510	1:20	
Momar Incorporated	TM-08-024 SS Mold-Cote NS-20	1:40	
Morton International	Mor-Release VL	1:40	NF
NCC, Inc.	NCC-60 (Release Foam)	1: 30	F
	Release Plus	1: 40	NF
	Super Foam - SF - 92	1: 35	F
	Phalt Free	1: 35	
New Dawn Manufacturing	ESE-100	1:31	
New Life Chemical Equip.	Quick Slick	1:50	
Petroform Inc.	PFC 265-13	1:40	

Manufacturer	Brand Names	Dilution Rate Agent:Water	Foaming (F) /Non-Foaming (NF)
Power Kleen	0268 Economy Asphalt Release	1:17	F
	8596 Soap Asphalt Release	1:35	F
Presto Chemical Co.	Bio-Kream	1: 38	NF
	Kwik Release	1: 40	F
	E-Z Slip	1: 35	NF
	Syn-Coat	1: 40	
Pro Chem, Inc	Release	1:15	
Puritan/Churchill Chemical Co.	Churchill L 901	1:40	F
Qualichem	Formula 5110	3:100	NF
	Formula 5111	1:100	F
	Formula 5119	3:100	F
	Q-Slide 554	1:5	
	S-Slide 766		
	Q-Slide 559		
Rhomar Industries, Inc.	Enviro-slide	1: 3	
Rochester Midland Corp.	Slipeazee	3: 100	NF
	Slipeazee SB	1: 30	F
	Slipeazee Natural	1: 20	
	Slipeazee Satin	1: 10	
	Slipeazee 2000	1: 30	
Roxxon Corp.	Rox-Release	2.5:100	F
	EzeSlip	1:10	F
Safety First Chemicals	Safety Slide	1: 30	F
Schaeffer Mfg. Co.	#4002 Bed Release Agent	1:30	NF
Schneid, Inc.	Release	1:15	F
Secco	EZE	1:30	F
Space Chemical, Inc.	AI-6235	1:5	NF
Spartan Chem. Co. Inc.	Spartan SD-20 Cleaner	1:30	F
Stop Stix Incorporated	StopStix	1:20	
Sun Coast Supply Corp.	Harvey's Power Grease & Tar Cutter	1:25	F
Tec-Team Industries, Inc.	TECLON-50	1:37	NF
	Teclon-Pro	1:5	
Texo Corporation	TEXOPE 515	1:30	F
TPC Team Ind. Inc.	Mega-Ton	1:53	
Tri-State Equip. Sales	I-So-Slick	1: 40	
U.S. Pro-Tec, Inc.	ECO-1000	1:20	F
Vibrant Products Unltd. Corp.	Envirofoam	1: 30	F
	Super Slick	1: 30	NF
West River Products, LLC	Power Plus	1:10	F
Zep Manufacturing	EZ008	1:10	NF
	E2008	1:1	
	R-6690	1:55	
	Zep Formula 4358	1:459	F
	Zep Pinnacle	1:15	NF
	Zep X-509 (formerly No.1 Asphalt Release Agent)	1:5	

(9) APPROVED ELECTRODE AND FLUX-ELECTRODE COMBINATIONS – (Structures)

Any electrode or flux-electrode combination which appears on the approved list may be accepted without evidence of test or certification. The electrodes are to be used in the welding of the following ASTM steel base metals: A709, Gr.36, Gr. 50, Gr. 100, Gr. 50W, 70W, and 100W.

If the Fabricator or Contractor desires to use any electrode or flux-electrode combination which is not on the approved list, he may do so, providing he submits certified copies of test reports of all pertinent required tests of the American Welding Society made on electrodes and flux-electrode combinations of the same class, size and brand, and which were manufactured by the same process and with the same materials as the brands being furnished.

*E6010 and E6011 rods may only be used for miscellaneous welding (piling, forms, railing, etc.).

**F6A2, F6A4, or F6A6 may only be used to weld A36 steel.

**FILLER METAL FOR M270M (M270) A709M (A709) GR. 36, 50, 100
AND PAINTED GR. 50W AND 100W STEEL**

MANUFACTURER	TRADE NAME	AWS CLASSIFICATION	AWS SPECIFICATION
The ESAB Group, Inc.	ATOM Arc 7018-1	E7018-1 H4-R	A5.1
	ATOM Arc 7018	E7018 H4-R	A5.1
	Core Weld C6	E70C-6M	A5.18
	Dual Shield 7100 Ultra	E71T-M/T-12M	A5.20
	Dual Shield R-70 Ultra	E70T-1CH8/T-1M1 T-9CH8/T-9M	A5.20
	ATOM Arc Acclaim	E7018 H4R	A5.1
Hobart Brothers, Co.	Hobart 335A	E6011	A5.1
	Hobart 335C	E6011	A5.1
	Quantum ARC 6	ER70S-6	A5.18
	Fabco RXR	E70T-1/9C, T55-2 T-11C, AH10	A5.20
	Fabco TR70	E70T-1 CH8, E70T-9 CH8	A5.20
	EXCEL-ARC 71	E71T-1C/M, , E71T-9C/M T46- 3 PC/M2 H10	A5.20
	Formula XL550	E71T-1C, E71T-12 C,JH8	A5.20
	TM71	E71T-1C,E71T-12,CJH8	
	TM 771	E 71T-1C, E71T-12 CJH8	A5.20
	TM 95K	E90T5-K2CH4, E90T5-K2M- H4	A5.29
The Lincoln Electric, Co.	Easy-Arc 6011C	E 6011	A5.1
	Easy-Arc 7018MR	E7018-H4R, E7018	A5.1
	Excalibur 7018 MR	E7018-H4-R	A5.1
	Fleetweld 5P	E6010	A5.1
	Fleetweld 5P+	E6010	A5.1
	Jet LH 78 MR	E7018-H4R, E7018	A5.1
	Jetweld LH-70	E7018-H4R, E7018	A5.1
	Lincolnweld 761(761-Pipe) Flux/L-61 Electrode	F7A2-EM12K-H8	A5.17

MANUFACTURER	TRADE NAME	AWS CLASSIFICATION	AWS SPECIFICATION
The Lincoln Electric, Co. (Cont'd)	Lincolnweld 780 Flux/L61 Electrode	F7A2 EM12K-H8)	A5.17
	Lincolnweld 960 Flux/L61 Electrode	F7A2-EM12K-H8	A5.17
	Metalshield MC-710XL	E70C6M-H8, E70C-G-H8	A5.18
	Outershield 70	E70T-1 CH16, E70T-9C H16	A5.20
	Outershield 71M	E71T-1C, E71T-H16	A5.20
	Super Arc L-50 Electrode	ER70S3	A5.18
	Superarc L-56 Electrode	ER70S6	A5.18
	Ultracore 71A85	E71T-1MH8, E71T-9MH8	A.520
	Ultracore 71C	E71T-1CH8, E71T-9CH8	A.520
Murex Welding Products	Murex 6011C	E6011	A5.1
	Murex 7018MR	E7018-H4-R, E7018	A5.1
Select Arc, Inc.	Select 70C-3	E70C-3M	A5.18
	Select 70C-6 (75AR/25C02)	E70C-6M	A5.18
	Select 70C-6 (90AR/10C02)	E70C-6M	A5.18
	Select 70C-6 LS (75AR/25 C02)	E70C-6M	A5.18
	Select 70C-6 LS (90AR/10C02)	E70C-6M	A5.18
	Select 70 C-T	E70C-6M	A5.18
	Select ER705-3	ER705-3	A5.18
	Select ER705-6	ER705-6	A5.18
	Select 71	E70T-1C,T-9C	A5.20
	Select 97	E70T-1C,T-9C	A5.20
	Select 70TR	E70T-1C,T-9C	A5.20
	Select 720HP	E71T-12MJ	A5.20
	Select 720	E71T-1M,T-1MJ, T-9M, T-9MJ	A5.20
	Select 720	E71T-1C, T-1CJ, T-9C,T- 9CJ,T-12C,T-12CJ	A5.20
	Select 727	E71T-1M, T-1MJ, T-9M, T- 9MJ	A5.20
	Select 727	E71T-1C, T-1CJ, T-9C, T-9CJ, T-12CT-12CJ	A5.20
	Encore	E71T-1M,T-9M	A5.20
	Encore	E71T-1C, T-9C	A5.20

**FILLER METAL FOR EXPOSED BARE APPLICATION OF
M270M (M270) A709M (A709) GR 345W (50W) STEEL**

MANUFACTURER	TRADE NAME	AWS CLASSIFICATION	AWS SPECIFICATION
ESAB Welding & Cutting Products	ATOM Arc 8018	E8018-C3 H4-R	A5.5
	ATOM Arc 9018	E9018-MH4R	
	Dualshield 8100-W	E81T1-W2C/W2M	A5.29
Lincoln Electric Co.	AXXX 10 Flux/L61 Electrode	F7A4-EM12K-Ni1-H8	A5.23
	Excalibur 8018-C3 MR	E8018-C3 H4R	A5.5
	Lincolnweld 860 Flux/LA-75 Electrode	F7A2-ENi 1K-Ni1-H8	A5.23
	Lincolnweld 960 Flux/LA-75 Electrode	F8A2-ENi1 K-Ni1-H8	A5.23
	UltraCore 81Ni1A75-H	E81T1-Ni1MJH4	A5.29
	UltraCore 81Ni1C-H	E81T1-Ni1C-JH4	A5.29
Select Arc, Inc.	Select 810-Ni1	E8171-NiMJ	A5.29
	Select 810-Ni1	E81T1-Ni1CT	A5.29
	Select 810-Ni2	E81T1-Ni2M	A5.29
	Select 810-Ni2	E81T1-Ni2C	A5.29
	Select 810-W	E81T1-W2M	A5.29
	Select 810-W	E81T1-W2C	A5.29
	Select 820-Ni1	E81T1-Ni1MJ	A5.29
	Select 820-Ni1	E81T1-Ni1CJ	A5.29
	Select 920-Ni1	E91T1-6C	A5.23
	Select ENi15 (Lincoln 960 Flux)	ECNi1	A5.23

**FILLER METAL FOR HIGH PERFORMANCE STEEL
HPS 70 W (HPS 485 W) STEEL ONLY**

MANUFACTURER	TRADE NAME	AWS CLASSIFICATION	AWS SPECIFICATION
ESAB Welding & Cutting Products	Atom Arc 8018	E8018-C3 H4-R	A5.5
	Dualshield 8100-W	E81T1-W2C/WM	A5.29
Hobart Brothers (Trimark)	TM 771	E 71T-1C, E71T-12CJH8	A5.20
Lincoln Electric, Co.	Excalibur 8018-C3 MR	E8018-C3 H4R	A5.5
	Excalibur 9018 M MR	E9018 – H4-R, E9018 M	A5.5
	Lincolnweld Mil 800 HPNi1 Flux/LA-85 Electrode	F9A4-ENi5-G-H2	A5.23

(10) POWDERED EPOXY REBAR COATINGS – (Physical Lab)

The following epoxy coatings for reinforcing steel are approved:

Aervoe-Pacific Co., Inc. Gardnerville, Nevada	Aervoe 156 Green Rebar
AKZO Powder Coatings	Resicoat 500607 Resicoat 500620* Resicoat RB-600 (HKF30R) Interpon HD-34 Green HR046G Green HK007U
Valspar North Kansas City, MO	720-A-009 Greenbar
Dupont Powder Coating Houston, TX	Nap-Gard 7-2719 Nap-Gard 7-2709
3-M Co., St. Paul, MN	ScotchKote 413
*When applied to blasted and chromate pretreated steel.	
**Limited approval for use only on wire mesh and post fabricated reinforcing steel	

(11) FIBER MULCH, WOOD CELLULOSE - ANNUAL CHECK
- (Landscape Development)

The following fiber mulches are currently approved and may be accepted on visual inspection:

Product	Manufacturer	Phone Number
Mulch&Grow 70/30 Wood Blend Mulch&Grow Premium Cellulose	Carolina Precision Fibers, Inc. P.O. Box 624 Elkin, NC 28621	(866) 476-3278
PFM Wood Fiber Wood Fiber Blend	Profile Products LLC Sandra House 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 shouse@profileproducts.com	(800) 508-8681
HY-C1	East Coast Erosion Blankets, LLC 443 Bricker Road Bernville, PA 19506	(610) 488-8496
Mat Blend Mat Fiber	Matt Norwood LLC P.O. Box 578 747 Harrisburg Drive SW Lenoir, NC 28645 Attn: Mr. Jim Sandherr	(828) 758-4463
GeoSkin Hydraulic Mulch	Mulch and Seed Innovations, LLC 7265 Alabama Hwy 9 South Centre, AL 35960	(256) 927 - 8823
1000 2000 Enviro-Blend	Profile Products P.O. Box 652 219 Simpson Street Conover, NC 28613	(828) 327-4165
Country Boy Conwed Cellulose Hydro Spray Terra Mulch Soil Cover	Profile Products 60 Dave Crockett Road Limestone, TN 37681 Attn: Mr. Gary Bower	(423) 257-2051
SoilCover Wood SoilCover Wood wTack SoilCover Blend TerraWood TerraWood wTack TerraBlend with UltraGro Seed Aide-CoverGrow	Profile Products LLC 750 Lake Cook Road – Suite 440 Buffalo Grove, IL 60089 Attn: Sandra Portrait-House	(800) 508-8681
Fiber mulches will be accepted only if bagged and shipped from the locations listed above.		

**(12) CERTIFICATE OF COMPLIANCE AND GUARANTEE - GUARDRAIL MATERIALS –
(Structures)**

In accordance with Sec. 204.18 herein, the following guardrail Erectors have submitted annual certificates of compliance and guarantee:

A&P Services, LLC	Long Fence
DBi Services, LLC (DBiS)	Makco, Inc.
DeAngelo Brothers, LLC (DBi)	Nickelston Industries, Inc.
Curtis Contracting	Penn Line Services, Inc.
Guardrail of Roanoke Inc.	Roadway Construction Products, Inc
Guardrails, Etc., Inc. (Maryland)	Webster and Webster
Interstate Specialties Services	Curtis Contracting
L.S. Lee, Inc.	Nationwide Construction Group

The following guardrail Manufacturers have submitted annual certificates of compliance and guarantee:

Brifen USA
Elderlee, Inc.
Gregory Highway Products
Highway Safety Corp.
R. G. Steel Corp
SPIG
Trinity Highway Products

(*P)=Probationary

These certificates have been reviewed and are on file at the office of the State Materials Engineer. For the period January 1, 2017 through December 31, 2017, steel material supplied by the above companies is to be accepted by visual inspection.

Guardrail end treatments must be crash tested in accordance with NCHRP 350 criteria. The Special design Group in Central office Location & Design Division maintains a NCHRP 350 product list at the following website:

<http://www.virginiadot.org/business/locdes/nchrp350-index.asp>

QUALIFIED LOW VOLATILE ORGANIC COMPOUND
(13) ZINC RICH PAINT SYSTEMS LIST– (Chemistry Lab)
(SYSTEM B)

Note: Effective with the March 2005 advertisement, all approved paint systems must not exceed the 2.8 lb/gal/ VOC as applied requirements, except zinc-rich primers, which must not exceed the 3.5 lb/gal requirement as applied.

The below listed systems have been prequalified for use, as listed and must be certified for each lot. Although these products are approved for use, no statement is made about relative ease of application. The contractor needs to determine the particular application techniques, spray equipment, etc., including inspection equipment that is needed for acceptance. In all cases, Manufacturers' recommendations shall be followed as to application requirements and temperature limitations. If there is a conflict between Manufacturer's recommendation and specification requirement, then, with the approval of the Engineer the Manufacturer's recommendation will rule. The Manufacturer is required to have a technical service representative on hand to assist the Contractor the first time that these products are used by the Contractor. Material exceeding stated range is to be removed and reapplied unless otherwise allowed by the Engineer. No two or more component material is to be mixed in less than packaged quantities and shall be mixed with power agitators.

All top coats shall be of sufficient dry film thickness to completely cover and hide the intermediate coat and produce a uniform color and appearance.

GROUP I

Primers in this group shall be used to paint new steel, including contact, bolted and faying surfaces and may be used to paint existing steel. Prime coats in this group meet Class B slip coefficient requirements.

System Type: Inorganic Zinc primer, cycloaliphatic epoxy intermediate and aliphatic acrylic-polyester urethane topcoat, organic zinc epoxy repair primer

<u>MANUFACTURER - Carboline Paint Co. – St. Louis, MO (888) 227-2654</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Carbozinz 11 HS	Green	2.0-3.0	2.4
Intermediate(s)	Carboguard 893	White	4.0-6.0	1.6
Topcoat(s)	Carbothane 133 LH	As Specified	3.0-5.0	2.7
Primer Repair(s)	Carbozinc 859		2.0-3.0	2.4
NTPEP Test No.: SSC(06)-05 12/15		Approval date 10/10		Review date

System Type: Inorganic zinc primer, polyamide epoxy intermediate and aliphatic acrylic polyurethane topcoat, organic zinc repair primer

<u>MANUFACTURER – International Paint, Houston, TX (800) 589-1267</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Interzinc 22 HS	Reddish gray	2.5-3.0	2.8
Intermediate(s)	Intergard 475 HS	White	2.0-4.0	1.76
Topcoat(s)	Interthane 990 HS	As specified	2.0-3.0	2.73
Primer Repair (s)	Interzinc 52		3.0	2.8
NTPEP Test No.: A8-97 12/15		Approval date 9/01		Review date

System Type: Inorganic zinc primer, epoxy intermediate and aliphatic acrylic polyurethane topcoat, inorganic zinc repair primer.

<u>MANUFACTURER – ICI Devco, Buffalo, NY (716) 824-6455</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Catha-Coat 304V	Gray	2.0-4.0	2.7
Intermediate(s)	Bar-Rust 231	White	4.0-8.0	2.1
Topcoat(s)	Devthane 379UVA	As Specified	2.0-3.0	2.6
Primer Repair(s)	Catha-Coat 302HA		2.0-4.0	2.8
NTPEP Test No.: SSC(04)-04		Approval date 10/07		Review date 12/15

System Type: Inorganic zinc primer, polyamide epoxy intermediate and polyester modified aliphatic acrylic polyurethane topcoat, organic zinc repair primer.

<u>MANUFACTURER – Sherwin Williams – Richmond, Va. (804) 387-4050</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Zinc Clad II Plus	Reddish gray	2.0-4.0	2.53
Intermediate(s)	Macropoxy 646	White	5.0-10.0	2.08
Topcoat(s)	Acrolon 218 HS	As specified	3.0-6.0	2.5
Primer Repair (s)	Zinc Clad IV		3.0-5.0	2.57
NTPEP Test No.: SSC(03)-07		Approval Date 7/10		Review date 12/15

List No. 13 (cont.)

System Type: Inorganic zinc primer, polyamide epoxy intermediate and Aliphatic Acrylic-polester urethane topcoat, organic zinc repair primer.

<u>MANUFACTURER – Sherwin Williams – Richmond, Va. (804) 387-4050</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Zinc Clad Dot	Gray-Green	2.0-4.0	2.6
Intermediate(s)	Steel Spec Epoxy	Off White	3.0-6.0	2.7
Topcoat(s)	Hi-Solids Polyurethane	As specified	3.0-4.0	2.8
Primer Repair (s)	Zinc Clad IV		3.0-5.0	2.6
NTPEP Test No.: SSC(09)-01 2017		Approval Date 11/10		Review date Fall

GROUP IA

Primers in this group shall only be used to paint existing steel and may be used on contact, bolted and faying surfaces. Prime coats in this group meet Class B slip coefficient requirements.

System Type: Organic zinc primer, polyamide epoxy intermediate, aliphatic acrylic urethane topcoat, organic zinc repair primer

<u>MANUFACTURER – PPG Industries, Inc. – Roswell, GA</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Amercoat 68 HS	Redish-Gray	3.0-5.0	2.4
Intermediate(s)	Amercoat 399	White	4.0-8.0	1.5
Topcoat(s)	Amercoat 450 H	As Specified	2.0-5.0	2.6
Primer Repair(s)	Amercoat 68 HS		3.0-5.0	2.4
NTPEP Test No.: SSC(10)-03		Approval Date 11/08		Review date Fall 2015

System Type: Organic zinc primer, polyamide epoxy intermediate, aliphatic acrylic polyester polyurethane topcoat, organic zinc repair primer

<u>MANUFACTURER – Sherwin Williams – Richmond, VA (804) 387-4050</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Zinc Clad III HS	Gray-Green	3.0-5.0	2.8
Intermediate(s)	Macropoxy 646	White	5.0-10.0	2.0
Topcoat(s)	Acrolon 218 HS	As Specified	3.0-6.0	2.3
Primer Repair(s)	Zinc Clad III HS		3.0-5.0	2.8
NTPEP Test No.: SSC(04)-03		Approval Date 11/05		Review date 12/15

System Type: Organic zinc primer, epoxy intermediate, aliphatic acrylic urethane topcoat, organic zinc epoxy repair primer

<u>MANUFACTURER – Akzo Nobel / International Paint – Jeffersonville, IN</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Interzinc 315 B	Green	2.0-6.0	2.42
Intermediate(s)	Intergard 475HS EVA 009 BUFF/056	Buff	4.0-8.0	1.72
Topcoat(s)	Interthane 870UHS	As Specified	3.0-5.0	1.91
Primer Repair(s)	Interzinc 315B			2.42
NTPEP Test No.: SSC(07)-02		Approval Date 7/10		Review date Fall 2016

List No. 13 (cont.)

System Type: Organic zinc primer, cycloaliphatic amine epoxy intermediate, aliphatic acrylic polyester polyurethane topcoat, organic zinc repair primer

MANUFACTURER – Carboline Paint Co. – St. Louis, MO (888) 227-2654				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Carbozinc 859	Green	3.0 – 5.0	2.7
Intermediate(s)	Carboguard 893	White	4.0 – 6.0	1.6
Topcoat(s)	Carbothane Aliphatic Acrylic-Polyester Polyurethane 133 VOC	As Specified	3.0 – 5.0	1.3
Primer Repair(s)	Carbozinc 859		3.0 – 5.0	2.7
NTPEP Test No.: SSC(12)-04 2018		Approval Date 4/15		Review date Spring

GROUP II

Primers in this group shall only be used for existing structures that require no painting of contact, bolted or faying surfaces. Prime coats in this group do not meet Class B slip coefficient requirements.

System Type: Organic zinc primer, epoxy intermediate, acrylic polysiloxane topcoat, organic zinc repair primer

<u>MANUFACTURER – International Paint, LLC – Houston, TX (800) 589-1267</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Interzinc 52	Blue, Gray, Green	2.0-3.0	2.8
Intermediate (s)	Intergard 475HS	Light Gray	4.0-8.0	1.46
Topcoat (s)	Interfine 979	As specified	4.0-6.0	1.82
Primer Repair (s)	Interzinc 52		2.0-3.0	2.8
NTPEP Test No.: SSC(03)-12 12/15		Approval Date 8/05		Review date

System Type: Organic zinc primer, polyamide epoxy intermediate, aliphatic acrylic-polyester polyurethane topcoat, organic zinc repair primer

<u>MANUFACTURER – Carboline Paint Co. – St. Louis, MO (888) 227-2654</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Carbozinc 859	Green	3.0-5.0	2.7
Intermediate(s)	Carboguard 888	White	3.0-5.0	2.7
Topcoat(s)	Carbothane 133 LH	As Specified	3.0-5.0	2.6
Primer Repair(s)	Carbozinc 859		3.0-5.0	2.7
NTPEP Test No.: SSC(04)-02 2015 Re-qualified as SSC(10)-04		Approval Date 3/08		Review date Fall

System Type: Organic polyamide epoxy zinc primer with OAP, aliphatic polyaspartic urethane topcoat, organic zinc repair primer

<u>MANUFACTURER – Sherwin Williams – Richmond, VA (804) 387-4050</u>				
COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC lb/gal
Primer(s)	Zinc Clad III HS OAP	Gray-Green	3.0-5.0	2.6
Topcoat(s)	Envirolastic 980 PA	As Specified	6.0-9.0	2.3
Primer Repair(s)	Zinc Clad III HS OAP	Gray-Green	3.0-5.0	2.6
NTPEP Test No.: SSC(12)-05 2017		Approval Date 3/14		Review date Fall

Note: The prime coat in this system contains OAP (Optically Activated Pigment). Inspection requires the use of deep purple UV light for holiday detection of the substrate and the finish coat in accordance with SSPC TU-11.

(14) PIPE JOINTS AND CONNECTIONS AND COATINGS – (Soils Lab)

The following joint and connection materials and joint and connection types and configurations are listed categorically by pipe type for which they are used and classified according to their tightness per AASHTO PP 63 (soil-tight, silt-tight, and leak-resistant). Sections 212, 232, and 302 of the VDOT Road and Bridge Specifications reference this approved list. Special design joints require a project Special Provision. This list will be refreshed every 5 years.

Note: Any leak-resistant joint is also silt-tight and soil-tight, and any silt-tight joint is also soil-tight. Higher classification joints are not listed again separately for the lower classifications for a given pipe type. Only silt-tight and leak-resistant joints require plant testing as described below.

Nitrile gaskets shall be considered oil-resistant.

CONCRETE PIPE, PIPE ARCH, BOX CULVERTS, AND MANHOLES**Soil-Tight Joints**

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Material meeting ASTM C990: Butyl-Tite E-Z Stik Pro-Stik RV 30 M-30-B Butyl Sealant Ram-Nek RN103 Flexible Plastic Sealant Ram-Nek RN101 preformed flexible plastic sealant Rub'R Nek LTMRN106 butyl rubber sealant ConSeal CS-102 butyl rubber sealant ConSeal CS-102B	Any pipe or arch with tongue and groove or bell and spigot joints Any concrete pipe or box culvert with tongue and groove, bell and spigot, single offset, or O-ring joints Any concrete pipe or box culvert with tongue and groove or bell and spigot joints	None None None	MultiSeal, Inc. Evansville, IN Press-Seal Corp. Fort Wayne, IN Ru Van, Inc. Evansville, IL Delta Pipe Products Gainesville, GA Concrete Sealants Inc. Tipp City, OH

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Clippership Bituminous Joint Compound MP-52 (asbestos-free trowel mastic)	Any pipe or arch with tongue and groove, bell and spigot, single offset, or O-ring joints	None	Seaboard Asphalt Baltimore, MD
Material meeting ASTM D1056, Type 2A: R-427-N	Any box culvert with tongue and groove or bell and spigot joints	None	Press-Seal Corp. Fort Wayne, IN
ConSeal CS101, 208	Any pipe or arch with tongue and groove or bell and spigot joints	None	Concrete Sealants, Inc. Tipp City, OH
Closed cell joint filler	Any concrete pipe or box culvert with tongue and groove, single offset, or O-ring joints	None	Press-Seal Corp. Fort Wayne, IN
Sika Greenstreak Swellstop Primer Adhesive and Waterstop	Any concrete box culvert		Sika St. Louis, MO
Infi-Shield Gator Wrap	Any pipe, arch, or box; 9" width up to 78" diameter, 12" width up to 108" diameter	None	Sealing Systems, Inc. Loretto, MN
Bidco C-56	Any pipe, arch, or box culvert	None	Trelleborg Milford, NH
Bidco Wrap	Any pipe, arch, or box culvert; 9" wrap to 78" diameter, 12" wrap to 108" diameter	None	Trelleborg Milford, NH

Silt-Tight Joints – Requires independent PE-sealed report of plant verification test on 24" and 48" diameter pipe (ASTM C443 at 2 psi for straight and deflected position). Plant testing is not required for joints using external wraps that meet ASTM C877; external wraps not meeting C877 must meet these test requirements and be of same material properties as those listed in C877.

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Material meeting ASTM C990: ConSeal CS102, 202, 302 Butyl-Nek BN109	Any pipe or arch with tongue and groove joints (3/4" for 12"-30" dia pipe; 1" for 36"-48" dia pipe; 1-1/2" for 54"-72" dia pipe) Any concrete pipe or box culvert with tongue and groove, bell and spigot, single offset, or O-ring joints	None	Concrete Sealants, Inc. Tipp City, OH Henry Company El Segundo, CA

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
External wraps meeting ASTM C877:	Any pipe or arch or box culvert with tongue and groove, bell and spigot, single offset, or O-ring joints; 9" width to 78" diameter, min. 11" width to 108" diameter, min. 13" width to 144" diameter		
CS-212 external joint wrap	Any concrete box culvert with tongue and groove joints; 9" width to 78" diameter, min. 11" width to 108" diameter, min. 13" width to 144" diameter	None	Concrete Sealants Inc. Tipp City, OH
Infi-Shield Gator Wrap 12"wide minimum external joint wrap	Any concrete pipe, arch, or box culvert	None	Sealing Systems, Inc. 9350 County Road 19 Loretto, MN 55357
Mar Mac DP Coupler, from 12" to 36" wide with 4 steel compression bands	Any concrete pipe or arch to any metal pipe or arch or concrete pipe to plastic pipe, in comparable diameters; min 13" width for diameters over 108"	None	Mar Mac Const. Products Co., Inc. 334 N. 7 th St. McBee, SC 29101
12" wide double wrap of VDOT drainage fabric	Any pipe, arch, or box culvert.	None	VDOT Approved List No. 63

Leak-Resistant Joints – Requires independent PE-sealed report of plant verification test on 24" and 48" diameter pipe (ASTM C443 at 10.8 psi for straight and 10 psi in the deflected position). No testing required for external wraps meeting ASTM C877 Type I or II. For wraps not meeting ASTM C877, the same plant verification test may be used to qualify wraps of same applicable material requirements listed in C877. Geotextile wraps not permitted to qualify joint.

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Material meeting ASTM C443 or C1619:			
Press-Seal gaskets 158-4G	Foltz pipe with profile offset joint, 15"-36" dia.	None	Press-Seal Corp. Fort Wayne, IN Foltz Concrete Pipe York, SC
Press-Seal 4G gaskets	CP&P round and elliptical pipe with profile offset joint; round, 12"-96" diameter; elliptical, 23"x14" through 91"x48"	None	Press-Seal Corp. Fort Wayne, IN Concrete Pipe and Precast Hanover & Chesapeake, VA;

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Delta Profile and O-ring rubber gaskets	Rinker Materials concrete pipe with single offset and confined O-ring joints	None	Jessup, MD; Oakboro, NC Delta Pipe Products Gainesville, GA Rinker Materials Pipe
Press-Seal gaskets 210-4G	Foltz pipe with profile offset joint, 42"-72" dia.	None	Press-Seal Corp. Fort Wayne, IN Foltz Concrete Pipe York, SC
Material meeting ASTM C443 or C1619 or C361: Press-Seal O-ring gaskets	CP&P round pipe with confined O-ring joint, 12"-108" diameter	None	Concrete Pipe and Precast Hanover, Chesapeake, Salem, VA; Jessup, MD; Oakboro, NC Press-Seal Corp. Fort Wayne, IN
Delta Profile and O-ring rubber gaskets	Rinker Materials concrete pipe with single offset and confined O-ring joints	None	Delta Pipe Products Gainesville, GA
Universal Polymer and Rubber Profile and O-ring rubber gaskets	PermaTile Concrete Products	None	PermaTile Concrete Products Bristol, VA Universal Polymer and Rubber, Ltd. Middlefield, OH
External wraps meeting ASTM C877, Type I or II: Macwrap and Seal Wrap, from 9" to 14" wide with 2 steel compression bands	Any concrete pipe, arch, or box culvert	None	MarMac Construction Products Co., Inc. 334 N. 7 th St. McBee, SC 29101
Mar Mac Polyseal Coupler, with 2 steel compression bands	Any concrete pipe, arch, or box culvert	None	MarMac Construction Products Co., Inc. 334 N. 7 th St. McBee, SC 29101

Leak-Resistant Horizontal Manhole Joints (no testing required)

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Material for horizontal joints meeting ASTM C990: Butyl-Tite E-Z Stik Pro-Stik RV 30 ConSeal CS102, 102B CS-212 external joint wrap	CP&P round manhole sections with tongue and groove or profile offset joint, 48"-126" diameter; Nansemond tongue and groove sections, 48"-84"	None	Concrete Pipe and Precast Ashland, Harrisonburg, Salem, VA; Martinsburg, WV ; Greencastle, PA MultiSeal, Inc. Evansville, IN Press-Seal Corp. Fort Wayne, IN Ru Van, Inc. Evansville, IL Concrete Sealants, Inc. Tipp City, OH
C-56 Bidco Sealant		None	Trelleborg Milford, NH
Material for horizontal joints meeting ASTM C443: Press-Seal 4G gaskets SP/SL Gaskets	CP&P round manhole sections with profile offset joint, 48"-120" diameter	None None	Press-Seal Corp. Fort Wayne, IN Concrete Pipe and Precast Ashland, Harrisonburg, Salem, VA; Martinsburg, WV ; Greencastle, PA Trelleborg Milford, NH
Material for horizontal joints meeting ASTM C443 or C361: Press-Seal O-ring gaskets	CP&P round manhole sections with confined O-ring joint, 48"-126" diameter	None	Press-Seal Corp. Fort Wayne, IN Concrete Pipe and Precast Salem, VA; Martinsburg, WV

Soil-Tight Connectors – Concrete Pipe to Structure

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection.	Any pipe, arch, or box culvert and structure	None	N/A
WS-30 Waterstop	Any pipe, arch, or box culvert and structure	None	Press-Seal Corp. Fort Wayne, IN

Silt-Tight Connectors – Concrete Pipe to Structure

Resilient connectors meeting ASTM C1478:			
None at this time			

Leak-Resistant Connectors – Concrete Pipe to Structure

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection, with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.	Any pipe, arch, or box culvert and structure	None	N/A

CORRUGATED METAL PIPE, ARCH, and PLATE**Soil-Tight Joints**

Joint Materials	For Use With Joint Type/ Configuration	Expiration Date	Man’f/Vendor & Facility Location
Annular corrugated or helical corrugated pipe with annular rerolled ends with: partially-corrugated (end rerolled to a 2-2/3-by-1/2 in corrugation) or fully-corrugated bands and connectors of banded angle, oval lugs, or bar and straps	Any VDOT approved corrugated metal pipe or arch	None	Hardware (band angle, lugs, bolts, bars, straps): Nucor – LMP Steel, Inc. 2000 East First Street Maryville, MO 64468 Gaskets: Pro Tech Fabricators 801 Macon Street Bedford, VA 24523

Silt-Tight Joints – No test method currently specified in AASHTO PP-63; therefore, an independent PE-sealed report is required on a plant verification test consisting of a minimum 10-ft section of pipe on each side of joint assembled similar to field assembly in straight and deflected positions and tested as per Section 7 of ASTM D3212, but at 2 psi in the straight and deflected position, on 24” and 48” diameter pipe. There is no report or testing requirement for joints using external wraps at least 10.5 inches wide.

Joint Materials	For Use With Joint Type/ Configuration	Expiration Date	Man’f/Vendor & Facility Location
Only annular rerolled ends with: partially-corrugated band, fully-corrugated band, or flat band, with O-ring gasket meeting ASTM D1056 and connectors of banded angle, oval and lugs, or bar and straps; and having a minimum 12-in wide double geotextile fabric wrap	Any VDOT approved corrugated metal pipe or arch	None	Hardware (angle, lugs, bolts, bars, straps): Nucor – LMP Steel, Inc. 2000 East First Street Maryville, MO 64468 O-rings:
Mar Mac Dissimilar Pipe (DP) Coupler, covering 2 corrugations or 8” minimum each side of joint for rerolled ends with 4 steel compression bands	Any metal pipe or arch to any concrete pipe or arch or metal pipe to plastic pipe, in comparable diameters	None	Mar Mac Const. Products Co., Inc. 334 N. 7 th St. McBee, SC 29101
Infi-Shield Gator Wrap 12” wide minimum external wrap	Any pipe, arch, or box culvert	None	Sealing Systems, Inc. 9350 County Road 19 Loretto, MN 55357
12” wide double wrap of VDOT drainage fabric	Any pipe, arch, or box culvert.	None	VDOT Approved List No. 63

Leak-Resistant Joints – No test method currently specified in AASHTO PP-63; therefore, an independent PE-sealed report is required on a plant verification test consisting of a minimum 10-ft section of pipe on each side of joint assembled in straight and deflected positions and tested as per Section 7 of ASTM D3212, but at 10.8 psi in the straight position and 10 psi in the deflected position, on 24” and 48” diameter pipe. External wraps require same test. Geotextile wraps not permitted to qualify joint.

Joint Materials	For Use With Joint Type/ Configuration	Expiration Date	Man’f/Vendor & Facility Location
None at this time			

Soil-Tight Connectors – Metal Pipe to Structure

Joint Materials	For Use With Joint Type/ Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection. For corrugated pipe, 2 corrugations must be covered.	Any pipe or arch and structure	None	N/A

Silt-Tight Connectors – Metal Pipe to Structure

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection, 2 corrugations covered for corrugated pipe, with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.	Any pipe or arch and structure	None	N/A

Leak-Resistant Connectors – Metal Pipe to Structure

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection, 2 corrugations covered for corrugated pipe, with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.	Any pipe or arch and structure	None	N/A

PLASTIC PIPE**Soil-Tight Joints**

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Split coupler, single or double wide, covering 2 corrugations each side of joint	12"-24" dia. ADS AASHTO M294 (N-12 plain end) pipe	None	Advanced Drainage Systems, Inc. 4640 Trueman Blvd., Hilliard, OH 43026
	30"-60" dia. ADS AASHTO M294 (N-12 plain end) pipe		McClarín Plastics 15 Industrial Dr., Hanover, PA 17331
Elastomeric gaskets meeting ASTM F477:	12"-60" dia. in-line bell and spigot joint, ADS AASHTO M294 HDPE pipe.	None	
Solenó double bell with clips; bell with clips welded to pipe; bell with O-ring gasket	12" dia. Soleno HDPE pipe; 15"-36" dia. pipe; 42"-60" dia. pipe	None	Solenó 64 North Lane McAdam, NB E6J 1K6 Canada
Split coupler or banded coupler from same as pipe man'f, covering 2 corrugations each side of joint	Any VDOT approved plastic pipe, 12" to 60" dia.	None	
External cleated snap coupler, covering 2 corrugations each side of joint	Any VDOT approved plastic pipe, 3" to 12" dia.	None	

Silt-Tight Joints – Requires independent PE-sealed report of plant verification test on 24" and 48" diameter pipe (ASTM D3212 with a maximum test pressure of 2 psi, in straight and deflected positions). This test is also required for external wraps. Geotextile wraps are not permitted to qualify joint.

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man'f/Vendor & Facility Location
Split coupler, single or double wide, covering 2 corrugations each side of joint, with external filter fabric wrap 1 ft each side of joint	12"-24" dia. ADS AASHTO M294 Type S or SP (N-12 plain end) pipe	None	Advanced Drainage Systems, Inc. 4640 Trueman Blvd., Hilliard, OH 43026
	30"-60" dia. ADS AASHTO M294 Type Sor SP (N-12 plain end) pipe	None	McClarín Plastics 15 Industrial Dr., Hanover, PA 17331

Leak-Resistant Joints – Requires independent PE-sealed report of plant verification test on 24” and 48” diameter pipe (ASTM D3212 with a maximum test pressure of 10.8 psi). External wraps must meet same testing. Geotextile wraps are not permitted to qualify joint.

Joint Materials	For Use With Joint Type/Configuration	Expiration Date	Man’f/Vendor & Facility Location
Elastomeric gaskets meeting ASTM F477:	In-line bell and spigot joints, ADS 12”-60” dia. AASHTO M294 HDPE or 330 Polypro pipe.		
Press-Seal 10.8 psi gasket		None	Press-Seal Corp. 2424 West State Blvd Fort Wayne, IN 46808
Vertex 10.8 psi gasket		None	Vertex, Inc. 3956 Mogadore Industrial Pkwy Mogadore, OH 44260
Hamilton Kent 10.8 psi gasket		None	Hamilton Kent 740 Baxter Lane Winchester, TN 37398 77 Carlingview Drive Toronto, ON M9W 5E6 Canada
Trelleborg 10.8 psi gasket		None	Trelleborg 250 Elm St. Milford, NH 03055
SpringSeal gasket		None	SpringSeal, Inc. 800 Enterprise Pkwy. Ravenna, OH 44266
Mar Mac Polyseal Coupler, covering 1 corrugation each side of joint with 2 steel compression bands	Any HDPE corrugated pipe 12”-60” dia. AASHTO M330 Polypropylene Pipe	None	MarMac Construction Products Co., Inc. 334 N. 7 th St. McBee, SC 29101

Soil-Tight Connectors – Plastic Pipe to Structure

Joint Materials	For Use With Joint Type/ Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection. For corrugated pipe, 2 corrugations must be covered.	Any pipe or arch and structure	None	N/A
Rubber boot connection or pre-cast into structure, secured to corrugated pipe stub with or without smooth solid HDPE sleeve welded over corrugated portion of pipe stub.	12”-60” dia. AASHTO M294 HDPE or M330 Polypro pipe	None	A-Lok (12” to 60” dia.) 697 Main Street Tullytown, PA 19007 Press-Seal Corporation (12” to 60” dia.) 2424 West State Blvd Fort Wayne, IN 46808 Trelleborg Kor-N-Seal (12” to 60” dia.) 250 Elm St. Milford, NH 03055
Corrugated Pipe Adaptors (CGA) with Kor-N-Seal Connectors	Pipe 8” – 60” diameter	None	Trelleborg Milford, NH

Silt-Tight Connectors – Plastic Pipe to Structure

Joint Materials	For Use With Joint Type/ Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.	Any pipe	None	N/A

Leak-Resistant Connectors – Plastic Pipe to Structure

Joint Materials	For Use With Joint Type/ Configuration	Expiration Date	Man’f/Vendor & Facility Location
Brick and mortar connection with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.	Any pipe	None	N/A

PIPE COATINGS (for corrosion protection)

Brand Name/Material	Manufacturer
Bitumastic 50, 300M	Koppers Company Pittsburgh, PA
Cooper Black #750	Coopers Creek Chemical Corp. West Conshohocken, PA
40 mils bonded PVC pre-coating	Any

(15) APPROVED STUD SHEAR CONNECTORS – (Structures)

The Manufacturers listed below have qualified their stud shear connectors in accordance with Sec. 232(h) of the Virginia Department of Transportation Road and Bridge Specifications. Effective immediately, these studs may be used on Virginia construction projects without evidence of test or certification.

Manufacturer	Division or Trade Name	Size
BlueArc Stud Welding	BlueArc	1/4, 3/8, 1/2, 5/8, 3/4, 7/8
Cox Industries	Cox	3/8, 1/2, 5/8, 3/4, 7/8
Nelson Stud Welding	Nelson	1/4, 3/8, 1/2, 5/8, 3/4, 7/8
Stud Welding Associates, Inc.	Ultra-Arc	1/4, 3/8, 1/2, 5/8, 3/4, 7/8
Tru-Fit Screw Products, Corp.	Tru-Weld	3/8, 1/2, 5/8, 3/4, 7/8

**(16) APPROVED SURFACE MOUNTED and GROUND MOUNTED FLEXIBLE POST
DELINEATORS – (Chemistry Lab)**

Trade Name	Manufacturer	Local Representative
SH 236 SMA – WS SH 336 SMA –WS SH 536 SST-YO Safe Hit Series includes various heights and mounting assemblies Dura-Post and Safe-Hit Series includes various heights and mounting assemblies.	Safe-Hit Corporation 35 East Wacker Drive, Suite 1100 Chicago, IL 60601 312.467.6750	Korman Signs, Inc. Richmond, VA 804.262.6050
Channelizer SDCF303601MB	Carsonite International 10 Bob Gifford Blvd. Early Branch, SC 29916 803-943-9115	Carsonite International Paul R. DuBay 605 Bob Gifford Blvd. Early Branch, SC 29916 804-778-7775
Tra-Flex 36"	Arkan Plastics 136 SE 20th Street Great Bend, KS 67530 620-792-3794	Protection Services 3027 Christian Ave Roanoke, VA 24012 540-362-2777
Flex Stake TM 750 series	Flexstake Inc. 2150 Andrea Lane Fort Myers, FL 33912 800-348-9839	RGA Inc. 454 Southlake Blvd. Richmond, VA 23236 804-794-1592
FG 300 UR FG300 EFX FG300 PE City Post Includes various heights and mounting assemblies.	Pexco-Davidson Traffic Control Products Tacoma, Inc. 3110 70 th Avenue East Tacoma, WA 98424 253-284-8000	Highway Safety Supply P.O. Box 128 Brandy Station, VA 22714 540-825-2675
D36F TUFFTP36 TUFFTP42 TUFFTP48	Impact Recovery Systems P.O. Box 12637 246 West Josephine St. San Antonio, TX 78212 210-736-4477	
TD-5200 TD-5275 TD-5500 TD-5600	Three D Traffic Works, Inc. 430 N. Varney St. Burbank, CA 91502 (877)843-9757	

Shur-Flex, Surface Mount Del. Shur-Flex, Driveable Del.	Shur-Tite Products P.O Box 2283 Round rock, TX 78680 512-218-9500	Shur-Tite Products Mike Ostler P.O Box 2283 Round rock, TX 78680 Cell 980-939-4551
TSM 360 Series FTSM 360 Series Includes various heights and mounting assemblies	NDM Marking Systems, Inc. 26 Gateway Dr. Jasper, GA 30143 (706) 253-3040	

(17) QUALIFIED PREFORMED TAPE LIST – (Chemistry Lab)

The following products have been prequalified, but the manufacturer must supply certification for each lot.

Manufacturer's instructions for installation shall be followed both as to method and temperature of application to pavement requirements. Primer/sealers may be required; the manufacturer's specific recommendations shall be followed, and the cost of the primer/sealer shall be included in the bid price or unit price. Although approved for use, not all products may be equal in all characteristics. Contractor needs to determine the best product for his intended use.

Name	Manufacturer	Approval No.
Type B Class IV		
These tapes may be used for stop lines, crosswalks, messages and arrows only:		
Series 1000, White	Brite-Line Technologies	STR-96-137-PA
ATM 300, White	Advance Traffic Markings	STR-98-TX-510
ATM 300, Yellow	Advance Traffic Markings	STR-98-TX-511
3M 390, White	3M	PMM-2010-01-026
3M 391, Yellow	3M	PMM-2010-01-027
Type B Class VI (See Note 2 below for Slurry and Latex Emulsion Surfaces)		
These tapes may be used for edge lines, center and skip lines, messages and arrows only:		
A 380I ES, White	3M	MS 13965
A 381I ES, Yellow	3M	MS 13966
A 380 WR, White	3M	MS 19276
A 381 WR, Yellow	3M	MS19277
A 380 WR ES, White	3M	MS 19276
A 381 WR ES, Yellow	3M	MS19277
A 380 AW, White	3M	MS 13965
A 381 AW, Yellow	3M	MS 13966
3M 390, White	3M	PMM-2010-01-026
3M 391, Yellow	3M	PMM-2010-01-027
A 380AW-5, White Contrast Tape	3M	MS13965
A 381 AW-5, Yellow Contrast Tape	3M	MS13966
A 380I-5 ES White Contrast Tape	3M	MS11107
A 381I-5 ES, Yellow Contrast Tape	3M	MS11108
XRP, White	Brite-Line Technologies, LLC	PMM-2011-01-017(PA), MS 21492

Name	Manufacturer	Approval No.
XRP-E Yellow	Brite-Line Technologies, LLC	PMM-2010-01-017(PA), MS21493
XRP-HCL, White Contrast Tape	Brite-Line Technologies, LLC	PMM-2011-01-017(PA), MS 21492
XRP-E-HCL, Yellow Contrast Tape	Brite-Line Technologies, LLC	PMM-2010-01-017(PA), MS21493
Note 1: The Prefix “A” = Adhesive - may not be designated on the product number tested.		
Note 2: A low VOC primer adhesive shall be used as part of the manufacturer’s installation instructions when installed on Slurry or Latex Emulsion surfaces.		

The following products have been prequalified, but the manufacturer must supply certification for each lot.

Name	Manufacturer	Approval No.
Type D Class I – Temporary Tape		
ATM 200 White	Advance Traffic Markings	STR-98-TX-507
ATM 200 Yellow	Advance Traffic Markings	STR-98-TX-508
ATM 2000W White	Advance Traffic Markings	PMM-02-12-MS
ATM 2000 Y Yellow	Advance Traffic Markings	PMM-02-13-MS
Series 100 White	Brite-Line Technologies	PMM-04-014-MS
Series 100 Yellow	Brite-Line Technologies	PMM-05-007-PA
RY-140 White	Trelleborg	PMM-2000-187-PA
RY-140 Yellow	Trelleborg	PMM-2000-188-PA
3M 710, White	3M	PMM-09-020-FL,MS 22605
3M 711, Yellow	3M	PMM-09-021-FL, MS 22606
Type D Class II – Temporary Tape		
ATM 200 White	Advance Traffic Markings	STR-98-TX-507
Series 100 White	Brite-Line Technologies	PMM-04-014-MS
Series 100 Yellow	Brite-Line Technologies	PMM-05-007-PA
ATM 2000W White	Advance Traffic Markings	PMM-02-12-MS
ATM 2000Y Yellow	Advance Traffic Markings	PMM-02-13-MS
3M 710, White	3M	PMM-09-020-FL,MS 22605
3M 711, Yellow	3M	PMM-09-021-FL, MS 22606
Type D Class III – Temporary Tape (Wet Reflective)		
Scotchlane 780™ White	3M	PMM- 06-010-MS, MS 18477
Scotchlane 781™ Yellow	3M	PMM- 06-011-MS, MS 18478
3M 710, White	3M	PMM-09-020-FL,MS 22605
3M 711, Yellow	3M	PMM-09-021-FL, MS 22606

Name	Manufacturer	Approval No.
Delta-Line TWR-White	Brite-Line Technologies, Inc.	PMM-09-005-FL, MS 21321
Delta-Line TWR- Yellow	Brite-Line Technologies, Inc.	PMM-09-006-FL, MS 21322

The following products have been prequalified, but the manufacturer must supply certification for each lot.

Name	Manufacturer	Approval No.
Type E		
3M, Series A145	3M	STR-93-111
3M, 715 Black	3M	2009-FL-022, MS 22940
ATM 280 Black	Advance Traffic Markings	STR-98-TX-509
Deltaline BTR	Brite-Line Technologies	STR-97-83-MN
RB-140 Black	Trelleborg	PMM-01-UT-28

(18) ABRASIVES – (Chemistry Lab)

EXPENDABLE ABRASIVES

- | | |
|--|-----------------------|
| 1. Starblast XL – DuPont | Phone: (800) 441-9487 |
| 2. Black Blast -- Virginia Materials and Supplies | Phone: (757) 855-0155 |
| 3. GMA ROM 30 x 60 Garnet – Barton Mines Company | Phone: (800) 792-5462 |
| 4. Crystalgrit -- Virginia Materials and Supplies | Phone: (757) 855-0155 |
| 5. Glass Jet – Virginia Materials and Supplies | Phone: (757) 855-0155 |
| 6. Western's Bengal Bay Garnet – Virginia Materials and Supplies | Phone: (757) 855-0155 |
| 7. Reed Minerals Black Beauty® 1240 from Moundsville WV plant | Phone: (717) 763-4200 |
| 8. Reed Minerals Black Beauty® 2040 from Moundsville WV plant | Phone: (717) 763-4200 |
| 9. Reed Minerals Black Beauty® 4490 from Moundsville WV plant | Phone: (717) 763-4200 |

(19) APPROVED LIST OF ABSORPTIVE SOUNDWALL COLOR COATINGS – (Structures)

The following color coating may be used on sound absorptive soundwall panels for the purpose of obtaining the specified color using brand names, provided manufacturing specifications are followed specifically.

Product	Manufacturer
Canyon Tone Stain	United Coatings
Cementrate	Harris Specialty Chemicals, Inc.
Cold-Flex Stain	Cold -Flex, Inc.
FX-430	Fox Industries
Nitocote Cementrate WB (Waterbased)	Harris Specialty Chemicals, Inc.
H&C Silicone Acrylic Concrete Stain	Sherwin Williams
Aquastain T-96	The Euclid Chemical Company
Rainstopper Concrete Stain	Textured Coatings of America, Inc.
Tex*Cote 300 Bridge-Cote Smooth Coating	Textured Coatings of America, Inc.
Tex*Cote XL-70 Bridge-Cote Smooth Coating	Textured Coatings of America, Inc.

(20) APPROVED WATER BORNE TRAFFIC PAINT (TYPE A) – (Chemistry Lab)

Manufacturer	Product Number	NTPEP Submittal Number
WHITE PAINT		
Sherwin Williams	BP14016	STR-97-41-AL
	BP14019	STR-97-44-AL
	BP15652 / TM 2324	STR-98-PA-135
	BP15622	STR-98-PA-150
	BP17312	PMM(2000PA)-170
	BP17313	PMM(2000PA)-171
	BP17316	PMM(2000PA)-174
Ennis Paint (formerly LaFarge Road Markings and Centerline)	CL-6000	STR-96-85-PA
	CL-6004	STR-96-68-PA
	CL-7018	STR-97-69-AL
	CL-8210	STR-98-PA-96
	CL-8214	STR-98-PA-100
	CL-8216	STR-98-PA-102
	CL-8218	STR-98-PA-104
	CL-8220	STR-98-PA-106
	CL-8222	STR-98-PA-108
Ennis Paint (formerly LaFarge Road Markings and Linear Dynamics)	LD96-1002	STR-96-85-PA
	LD96-1008	STR-96-91-PA
	LD971001C	STR-97-138-AL
	LD981001	STR-98-PA-158
	LD981002	STR-98-PA-159
	LD981003	STR-98-PA-160
	LD981004	STR-98-PA-161
	LD981005	STR-98-PA-162
Ennis Paint (formerly LaFarge Road Markings)	LRMOOWB-19	PMM(2000PA)-110
	LRMOOWB-20	PMM(2000PA)-111
Ennis Paint	Douglas 303-98	STR-98-PA-214
	Ennis EP200W13	STR-98-PA-17
	Ennis EP200W14	STR-98-PA-18
	Ennis EP200W16	STR-98-PA-20
	EP415W03	PMM(2000PA)-61
	EP415W04	PMM(2000PA)-62
Ozark Materials, LLC	14224 White	PMM-2015-01-110

Manufacturer	Product Number	NTPEP Submittal Number
YELLOW PAINT		
Sherwin Williams	BP-14021	STR-97-46-AL
	BP15611 / TM 2325	STR-98-PA-139
	BP15623	STR-98-PA-151
	BP17314	PMM(2000PA)-172
Ennis Paint (formerly LaFarge Road Markings and Linear Dynamics)	LD961009	STR-96-92-PA
	LD981009	STR-98-PA-165
	LD981010	STR-98-PA-166
Ennis Paint (formerly LaFarge Road Markings)	LRMOOWB-31	PMM(2000PA)-122
Aexcel	72Y-AO65	STR-96-148-PA
Ennis Paint	Douglas 306-98	STR-98-PA-217
	Douglas 307-98	STR-98-PA-218
	Ennis EP200Y-15	STR-98-PA-26
	Ennis EP200Y-18	STR-98-PA-29
	EP415Y03	PMM(2000PA)-66
	EP415Y04	PMM(2000PA)-67
	EP415Y05	PMM(2000PA)-68
	EP415Y06	PMM(2000PA)-69
Ozark Materials, LLC	24224 Yellow	PMM-2015-01-111

(21) QUALIFIED #14 ALUMINUM EPOXY MASTIC COATINGS – (Chemistry Lab)
(SYSTEM F)

Note: All approved paint systems must not exceed the 2.8 lb/gal/VOC requirement as applied.

The following coatings have been prequalified for use in accordance with Road & Bridge Specifications, Section 231. Each lot must be certified in accordance with the Materials Division Manual of Instructions.

Carboline	Carbomastic 15
Carboline	Carbomastic 90 Aluminum
International Paint	Interplus 670 HS AL
Sherwin Williams	Epoxy Mastic Aluminum II

The following epoxy mastic products are available in colors, and have been prequalified for use where colored topcoats are specified.

Carboline	Carboguard 890
Carboline	Carboguard 890 LT
Sherwin Williams	Macropoxy High Solids

The following urethane products may also be used for colored topcoats.

Carboline	Carbothane 133 LH
Carboline	Carbothane 134 HS
International Paint	Interthane 870UHS
Sherwin Williams	Acrolon 218 HS

(22) PAVEMENT MARKERS – (Chemistry Lab)

SNOW PLOWABLE RAISED PAVEMENT MARKERS				
Manufacturer	Casting Model No.	Reflector Description	Casting Adhesive	Reflector Adhesive
Ennis Traffic Safety Solutions (Note 5)	98 (Note 1) 101 - MS 08185 (Note 5)	Ennis 940 Ennis 944 Ray-O-Lite 2004/2004S 3M 190 Ennis C-40 (Note 2)	Epoplex MA-50 or Epoplex MA-52 or Lord Corp. Thermoset EP-87 Note 3, Note 4	Liquid Nails – 602
Accent Stripe, Inc. (Note 5)	Northstar 41 (Note 5)	Ray-O-Lite 2004/2004S 3M 190 Ennis C-40	Lumiline SMA Note 4	Liquid Nails – 602
Ray-O-Lite / Hallen (Note 5)	H-1010 HP H-960 HP Snow-Lite 100 (Note 5)	Ray-O-Lite 2004/2004S 3M 190 Ennis C-40	Epoplex MA-50 or Epoplex MA-52 or Slocum Type M-397 Note 4	BK0246-01 Liquid Nails – 602

NOTES:

1. The Model 98 has been discontinued. The 940 reflector can be used as a replacement in existing Model 98 castings. The Model 98 has been replaced with the approved castings listed above.
2. All reflectors are approved for use in any casting in which they fit.
3. Lord Corp. Thermoset EP-87 formerly Epoxy #2203.
4. Any approved casting adhesive may be used with any casting provided they meet AASHTO, M-237, Type IV specifications.
5. Castings meets “Made in America” requirements.

TEMPORARY PAVEMENT MARKERS			
Manufacturer	Marker No.	Size	Adhesive
Ennis Traffic Safety Solutions	88	4" x 4"	2202 Bitumen or AASHTO-M237, Type II
Ennis Traffic Safety Solutions	11	4" x 4"	2202 Bitumen or AASHTO-M237, Type II
Ennis Traffic Safety Solutions	948	2" x 4"	2202 Bitumen or AASHTO-M237, Type II
Ennis Traffic Safety Solutions	C-80	4" x 4"	2202 Bitumen or AASHTO-M237, Type II
Ennis Traffic Safety Solutions	C-40	2" x 4"	Bitumen Adhesive or AASHTO-M237, Type II
Ray-O-Lite	"Standard" Types – B, D, DR	4" x 4"	Bitumen Adhesive
Ray-O-Lite	2004, 2004S Types – B, C, D, DR, G, H, K, X, Z	2" x 4"	Bitumen Adhesive
Ray-O-Lite	Model AA Types – B, C, D, DR, G, H, K, X, Z	4" x 4"	Bitumen Adhesive
Ray-O-Lite	Model AA-ARC II Types – B, C, D, DR, G, H, K, X, Z	4" x 4"	Bitumen Adhesive
3M	290 (White) 291 (Yellow)	3.5" x 4" 3.5" x 4"	Bitumen Adhesive
PEXCO, LLC (formerly Filtrona / Bunzl Extrusion)	DAPCO RPM	4" x 4"	Bitumen Adhesive

FLEXIBLE TEMPORARY PAVEMENT MARKER (FTPM) (Chip Seal/Overlay) For 14 Day Maximum Usage			
Manufacturer	Marker No.	Size	Adhesive
PEXCO, LLC. (formerly Filtrona / Bunzl Extrusion)	TOM W-1 TOM W-2 TOM Y-1 TOM Y-2	4" Length	Bitumen Adhesive
APEX	MODEL 932 CW/CW2 CY/CY2 CWOL/CW2OL CYOL/CY2OL	4" Length	Bitumen Adhesive

RECESSED PAVEMENT MARKERS			
Manufacturer	Marker No.	Size	Adhesive
Ray-O-Lite	2004, 2004S Types – B, C, D, DR, G, H, K, X, Z	For 4" wide slots/grooves	EP-326 Epoxy
Ennis Traffic Safety Solutions	948	For 4.5" wide slots/grooves	2202 Bitumen or AASHTO-M237, Type II
Ennis Traffic Safety Solutions	944SB	For 4" wide slots/grooves	2202 Bitumen or AASHTO-M237, Type II
Ennis Traffic Safety Solutions	C-40	For 4" wide slots/grooves	2202 Bitumen or AASHTO-M237, Type II

(23) DELINEATORS – (Chemistry Lab)

<u>GUARDRAIL DELINEATORS</u>		
<u>Manufacturer</u>	<u>Model No.</u>	<u>Adhesive Part No.</u>
Pexco/Davidson TCP	DAPCO I-Flex Guardrail Marker Davidson Straight Guardrail Reflector	DAPCO 795A
Duraflex	Railrider	H.B. Fuller SCO 252124
Eastern Metal/USA-Sign	661 (one-sided) (Note 1)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
	662 (two-sided) (Note 1)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
	631 (one-sided) (Note 1)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
	632 (two-sided) (Note 1)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
Artuk, Inc.	FT-1 (Note 1)	Artuk Cement # SB-12
	FR-1	
	FB-33	
Pexco/Davidson TCP	PCBM-9	DAPCO 795A
	PCBM-T9 (3"x 4")	DAPCO 795
Pexco/Davidson TCP	PCBM-T9 (2" x 4.5")	DAPCO 795
NOTE 1: For use when guardrail has wooden blockout posts.		

List No. 23(cont.)

<u>BARRIER DELINEATORS</u>		
<u>Manufacturer</u>	<u>Model No.</u>	<u>Adhesive Part No.</u>
Pexco/Davidson TCP	PCBM-9	DAPCO 795A
Duraflex	Flexx 2020	H.B.Fuller SCO 252124
Eastern Metal/USA-Sign	661 (one-sided)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
	662 (two-sided)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
	631 (one-sided)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
	632 (two-sided)	Dow Corning #795 Silicone or Courtlauds PRC Rapid Seal
Artuk Inc.	FT-1	Artuk Cement # SB-12
	FB-33	
Pexco/Davidson TCP	PCBM-T9 (3" x 4")	DAPCO 795
Pexco/Davidson TCP	PCBM-T9 (2" x 4.5")	DAPCO 795

<u>ROAD EDGE DELINEATORS</u> (Single or Double Element Type)		
<u>Manufacturer</u>	<u>Model No.</u>	<u>Shape</u>
Ennis Paint/Stimsonite)	975	3.25" Circular
AKT	18 (Delineator only)	3.25" Circular
	181 (Delineator with Bracket)	
Ray-O-Lite	RT-90	3.25" Circular
NOTES:		

(24) MINERAL ADMIXTURES FOR HYDRAULIC CEMENT CONCRETE – (Physical Lab)

To have a product included on the Approved List for "Mineral Admixtures for Hydraulic Cement Concrete" the following shall be submitted to Materials Division's Physical Laboratory Assistant Concrete Program Manager a letter with a notarized signature stating that the mineral admixture meets the appropriate requirements in Section 215.02 (G, H or I) of the VDOT Road and Bridge Specifications. Fly Ash meets ASTM C-618, Class F, Slag meets ASTM C-989 grade 100 or 120. Silica Fume meets AASHTO M-307.

Upon approval the Mineral Admixtures Manufacturer will be required to submit each year a letter with a notarized signature stating that the chemical admixture meets the requirements of the appropriate method. Also quarterly mill certifications' showing that the material is staying within the specification range.

Fly Ash		
Class F Fly Ash Source	Plant ID	Remarks
AshVenture		
Roxboro, NC	113	Class F
Belews Creek, NC	102	Class F
Boral		
Bowen Plant, Stilesboro, GA	111	Class F
St. Johns River Plant	139	Class F
Charah		
Miami Fort Planr North Bend, OH	144	Class F
Fly Ash Direct		
John Amos Plant, Winfield, WV	127	Class F
Mountaineer Plant, New Haven, WV	145	Class F
Headwaters		
Brayton Point Station, Somerset, MA	133	Class F
W.H. Sammis Plant, Stratton, OH	134	Class F
Fort Martin Plant, Maidsville, WV	137	Class F
Riverside		
Civitavecchia, Italy	143	Class F
SEFA		
Bull Run Fossil Plant Oak Ridge, TN	132	Class F
Cumberland Station Cumberland City, TN	135	Class F
Cross Station Pineville, SC	129	Class F
Eastman Station Kingsport,, TN	123	Class F
Kingston Fossil Plant Harriman, TN	136	Class F
McMeekin Station Columbia, SC	128	Class F Bagged product
Morgantown Generation Station, Newburg, MD	120	Class F
Wateree Station Code Eastover, SC	130	Class F
Winyah Generation Station Georgetown, SC	131	Class F
SCE&G Williams Station Goose Creek, SC	140	Class F
Keystone Generating Station Shelocta, PA	141	Class F

List 24 (cont.)

Fly Ash (cont.)

Class F Fly Ash Source	Plant ID	Remarks
Sparation Technologies		
Brandon Shores Station	119	Class F
Brunner Island Station	125	Class F
EDP Sines, Portugal	142	Class F
Spartan Materials		
Spartan AC34, India	138	Class F

Slag

GGBF Slag Source	Plant ID	Remarks
Argos USA		
Tampa, FL	710	Grade 120
Larfarge / Holcim		
Sparrows Point, MD	700	Grade 120
Lehigh		
Camden, NJ	703	Grade 120
Evansville plant	704	Grade 120
Middlebranch OH	708	Grade 100

Silica Fume

Silica Fume Source	Plant ID	Remarks
Advanced Cement Technologies	904	
RED Industrial Products		
Mississippi Silicon	909	R-E-D Fume 102 DM
BASF	905	MasterLife SF 100
Elkem	908	EMS 970D
Sika	906	Sikacrete 950 DP
W. R. Grace	907	Force 10000 D

Metakaolin

Metakaolin Source	Plant ID	Remarks
BASF Corporation	912	MetaMax
Advanced Cement Technologies	910	PowerPozz
GCP Applied Technologies	911	Grace HRMK 100

(25) CORRUGATED METAL PIPE PRODUCERS ON QA/QC PROGRAM – (Quality Assurance)

The following manufacturers of corrugated metal culvert pipe have VDOT approved Quality Assurance programs as outlined in the instructions. For additions and deletions to this list contact the District Materials Engineer.

Manufacturer	Plant Location
ConTech Construction Products	Greencastle, PA
ConTech Construction Products	Charlotte, NC
ConTech Construction Products	Raleigh, NC
ConTech Construction Products	Ashland (Summit), KY
Lane Metal Products	Bedford, PA
Lane Metal Products	Dublin, VA
Public Drainage Supply	Blountville, TN
Smith Setzer & Sons, Inc.	Catawba, NC
Supplier	Plant Location
Bowie Sales, Inc.	Shawsville, VA
Carl M. Henshaw Drainage Products	Chester, VA
CMC Supply, Inc.	Roanoke, VA
ConTech Construction Products (Formerly Plateau Pipe, LLC)	Cookeville, TN
Eastern Supply, Inc.	Winchester, VA
Jennmar Specialty Products	Cedar Bluff, VA
Lane Metal Products	Bealton, VA

***P = Probationary**

(26) CONCRETE PIPE PRODUCERS ON QA/QC PROGRAM– (Quality Assurance)

The following manufacturers of concrete culvert pipe have VDOT approved Quality Assurance programs as outlined in the instructions. For additions and deletions to this list contact the District Materials Engineer or the Materials Division Physical Laboratory.

Manufacturer	Plant Location	Monitored By	Next Review Date
Foltz Concrete Pipe Co.	Winston –Salem, NC		
Concrete Pipe & Precast	Chesapeake, VA		
Concrete Pipe & Precast	Design Rd. Ashland, VA		
Concrete Pipe & Precast	Jessup, MD		
Concrete Pipe & Precast	Roanoke, VA		
Concrete Pipe & Precast	Salem, VA		
Concrete Pipe & Precast	Manassas, VA		
Foltz Concrete Pipe Co.	Winston –Salem, NC		
Oldcastle Precast	Fayetteville, NC		
Oldcastle Precast	Raleigh, NC	Central Office	
Permatile Concrete Pipe Co.	Bristol, VA		
Rinker Materials	Frederick, MD		
Rinker Materials	Middletown, DE		
Rinker Materials	Thomasville, NC		
Rinker Materials	Wilson, NC		
Smith Setzer & Sons, Inc.	Catawba, NC		
Smith Setzer & Sons, Inc.	Stoney Creek, VA		

(*P) = Probationary

List No. 27

(27) QUALIFIED SILICONE RUBBER JOINT SEALER – (Chemistry Lab)

The following products have been prequalified, *but* the manufacturer must supply certification for each lot.

Class A

Roadsaver Part #34902	Crafco, Inc. 6165 W. Detroit Street Chandler, AR 85226 (800) 528-8242
Dow Corning 888	Dow Corning Corp. 3901 South Saginaw Road Midland, MI 48686 (989)496-4400
Tremco Spectrum 800	Tremco Incorporated 3777 Green Road Beachwood, OH 44122 (216) 292-5000

Class B (for use on newly sawn or newly constructed joints only)

Roadsaver SL Part #34903	Crafco, Inc. 6165 W. Detroit Street Chandler, AR 85226 (800) 528-8242
Pecora 300SL (NTPEP, JS-2010-01-001)	Pecora Corp. 165 Wambold Rd. Harleysville, PA 19438 (215)799-7557

Class C (for use in newly sawn or newly constructed joints, including joints between hydraulic cement concrete pavement and asphaltic shoulders with no spalling of HCC edge)

Dow Corning 890 SL	Dow Corning Corp. 3901 South Saginaw Road Midland, MI 48686 (989) 496-4400
Tremco Spectrum 900 SL	Tremco Incorporated 3777 Green Road Beachwood, OH 44122 (216) 292-5000
SikSil 728 SL (formerly Bondaflex)	Bondaflex Technologies 995 Towbin Avenue Lakewood, NJ 08701 (201) 458-4146

List No. 27 (cont.)

Class D (to seal expansion joints on bridge decks, where rapid curing is required).

Dow Corning 902 RCS

Dow Corning Corp.
3901 South Saginaw Road
Midland, MI 48686
(989) 496-4400

Wabo Silicone Seal

Watson Bowman Acme Corp.
95 Pineview Drive
Amherst, NY 14228
(703) 691-9239

(28) POLYMERS FOR SEALING CRACKS IN HYDRAULIC CEMENT CONCRETE-
(Physical Lab)

Product	Type Polymer	Manufacturer
Degadeck Crack Sealer Plus	MMA	BASF Construction Chemicals, LLC
DECKSEAL	Epoxy	SSI Construction & Industrial Materials, Inc.
Dural 50 LM	Epoxy	The Euclid Chemical Company
Dural 335	Epoxy	The Euclid Chemical Company
E-Bond 523	Epoxy	E-Bond
E-Bond 550 Hi-Mod Low Viscosity	Epoxy	E-Bond
Mark-135 Safe-T-Seal	Epoxy	Olin Epoxy-POLY-CARB (Blue Cube Operations LLC)
Sikadur 55 SLV	Epoxy	Sika Chemical Corp.
Sikadur 35 Hi-Mod LV	Epoxy	Sika Chemical Corp.
SIL-ACT EP-700D	Epoxy	Advanced Chemical Technologies
Surepoxy HMLV	Epoxy	Kaufman Inc.
Versafill 60A/60B	Epoxy	Henkel Corporation
Crack Sealer ULV – 2 Part	HMWM (Mod)	Watson Bowman Acme
Duraguard 401-100 (Low Modulus)	HMWM	ChemMasters
Duraguard 401-3 (High Modulus)	HMWM	ChemMasters
Rhoca Gil HS-LV	HMWM	Rhone Poulenc
Rhoca Gil HS-2K	HMWM	Rhone Poulenc
Sealate T-70-MX-30 Bridge Deck Elongation	HMWM	Transpo Industries
Sika Pronto 19	HMWM	Sika Chemical Corp.
SikaPronto 19 TF	HMWM	Sika Chemical Corp.

Transpo T-70 MX	HMWM	Transpo Industries
Transpo T-70 X Static Loading	HMWM	Transpo Industries
Percol Concrete Healer	Urethane	Percol Polymerics, Inc.
ROADWARE 10 Minute Concrete Mender	Urethane	Roadware Incorporated
KBP-204 P SEAL	HMWM	Kwik Bond Polymers

LEGEND:

HMWM (Mod)	High Molecular Weight Methacrylate Modified
HMWM	High Molecular Weight Methacrylate
MMA	Methyl Methacrylate

(29) CHEMICAL / MECHANICAL ANCHORING SYSTEMS - (Physical Lab)

To have a product included on the Approved List for "Chemical / Mechanical Anchoring Systems" the following shall be submitted to Materials Division's Physical Laboratory Assistant Concrete Program Manager; A Safety Data Sheet (SDS) and any Technical Data Sheets, for the material being evaluated. Also needed is a sample of material that will be tested at a depth of .5 ½ inches. A minimum of 69,300 PSI needs to be obtained.

Upon approval the Manufacturer will be required to submit each year a notarized letter stating that the product has not changed in formulation since initial approval.

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<u>Chemical Anchors</u>		
<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>
Adhesives Technology Corporation Pompano Beach, FL	ASF-1000	A 2-component styrene free, acrylic system used for anchoring or doweling applications in good sound concrete using threaded rod or rebar.
	HS-1CC	A two-component, high performance epoxy anchoring system which has an application temperature range between 40 °F to 110 °F
	Ultrabond 1	Two component, 100% solids, high modulus, structural epoxy gel. Ultrabond 1 is solvent free, no odor, high strength moisture intensive, non-sag epoxy system. Recommended temperature range is 35° - 115°F.
	Ultrabond 1300	A two-component, fast-setting adhesive system that offers exceptional strength in anchoring and doweling applications It may be used in temperatures between 40 °F - 110 °F
	Ultrabond 2300	Epoxy adhesive anchors for fastening materials to masonry items. Sets in 8 hrs. at 80°F.
	Ultrabond 365 CC	Ultra Bond 365 CC is a 2-component high performance cement and silane hybrid anchoring system with an extended installation temperature range.
	Ultrabond HS-200	Two part cartridge epoxy system used to install reinforcing steel and threaded studs. Cures in temperatures of 32°F - 100°F.
Ankrtite Fastening Systems Tulsa, OK	Slam-Tite Hammer in Glass Chemical Capsule	Polyester resin and hardening agent with aggregate filler. Minimum cure time above 68F 10 min. 50-68°F 5 hrs., Store in original container at 50 to 100°F.
BASF Construction Chemicals, LLC Building Systems	Concressive 1420	Two component 100% solids nonsag epoxy adhesive. Mainly used for anchoring fasteners, rebar, and dowels into concrete.
Covert Operations Long Beach, CA	CIA – Gel Epoxy	Cartridge epoxy anchoring system for dowel bars, rebars and anchoring bolts.

List No. 29(Cont.)

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications

<u>Chemical Anchors</u>		
<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>
Dayton Superior Oregon, IL	Sure Anchor Epoxy J50	Cures above 40°F for use in anchoring bolts, dowels, and. reinforcing steel 1:1 by volume, pot life 30-40 min.
	Sure Anchor I Epoxy J51	Fast epoxy anchoring system used for grouting bolts, dowels, pins, 1:1 by volume, moisture insensitive, use above 30°F, sets in 5-10 minutes.
E-Bond Ft. Lauderdale, FL	Hi-Mod Gel 580, 590, 592	For use in anchoring bolts dowels, and pins, injection grouting and as a structural adhesive. Can be extended with salt free silica aggregate mixed 1:1 by volume. Cures to 40° F
Euclid Chemical Kirkland, IL	Dural Fast Set Epoxy Gel	Epoxy cartridge kit for anchoring dowel bars, rebars and anchoring bolts. Application temperature must be at least 35° F and rising.
Futura Companies Scottsdale, GA	Futura Bond 566R	For grouting anchoring dowels, re-bars, and bolts in concrete. Also for bonding in external steel reinforcing plates to concrete. For bonding concrete. Use above 40° F.
Henkel Corporation	Fixmaster Anchor Bolt Grout HP	Two component, 100% solids, high modulus, structural epoxy gel. Is solvent free, no odor, high strength moisture intensive, non-sag epoxy system. Recommended temperature range is 35° - 115°F.
Hilti, Inc. Tulsa, OK	Hilti HVA Adhesive Anchoring	Capsulated anchor for rods, dowel bars and rebar use above 23° F. Cure time at 23° F to 32° F is 5 hours, at 68° F and above the cure time is 20 minutes.
	Hilti Hit-HY 10 Plus	A two-component adhesive anchoring system for fastenings in concrete and masonry. Prior to use see manufacturer's instructions for uses and precautions.
	Hilti HIT-HY 200A	A two-component adhesive anchoring system for rebar and anchor fastenings in concrete. Prior to use see manufacturer's instructions for uses and precautions.
	Hilti HIT-HY 200R	A two-component adhesive anchoring system for rebar and anchor fastenings in concrete. Prior to use see manufacturer's instructions for uses and precautions.
	Hilti HIT-RE 100	Hilti HIT-RE 100 adhesive is an injectable, two-component epoxy adhesive. The two components are separated by means of a dual-cylinder foil pack attached to a manifold. Prior to use see manufacturer's instructions for uses and precautions.
	Hilti Hit Re 500	Two part epoxy system. Extended temperature range from 23° to 105° F. Has a working time of 30 minutes.

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<u>Chemical Anchors</u>		
<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>
Hilti, Inc. Tulsa, OK	Hilti HIT-RE 500 V3	Hilti HIT-RE 500 V3 adhesive is an injectable, two-component epoxy adhesive. The two components are separated by means of a dual-cylinder foil pack attached to a manifold. Prior to use see manufacturer's instructions for uses and precautions.
	Hilti HVU Adhesive Capsule Anchoring & Dowelling System	Urethane Methacrylate consisting of resin, hardener and aggregate in a foil capsule. Curing time above 68 F 20 min. Curing time above 50 F 30 min., 32 F 1 hr.
	Hilti HTE 50 (formerly Hilti HSE 2421)	Two part cartridge epoxy system used to install reinforcing steel and threaded studs. Cures in temperatures of 32°F - 100°F.
ITW Ramset/Red Head Wooddale, IL	Epcon Systems	Cartridge epoxy anchor system for threaded rod and rebar applications.
	Epcon System Acrylic 7	Two part, all weather adhesive for anchoring, dowling and pinning applications. Can be used down to -10° F without preheating the cartridge.
	Red Head A7+	The acrylic resin and hardening agent are completely mixed as they are simultaneously dispensed from the dual cartridge through a static mixing nozzle, directly into the anchor hole. A7 can be used with threaded rod or rebar for fastening to hollow base materials.
	Red Head G5+	The epoxy resin and hardener are completely mixed as they are dispensed from the dual cartridge through a static mixing nozzle, directly into the anchor hole.
J. Dedoes, Inc. Milford, MI	True Grip 590	Epoxy anchoring system for grouting, anchoring bolts, and dowel bars. Cure time is 24 hrs. at 75°F.
Kaufman Products, Inc. Baltimore, MD	Surepoxy 117 Epoxy Anchoring System	Epoxy anchoring system for grouting, anchoring bolts, and dowel bars. Use above 60°F, pot life of 8-10 min at 75°F.
	Surepoxy 116 Epoxy Anchoring System	Epoxy anchoring system for grouting, anchoring bolts, and dowel bars. Use 40-60°F, pot life of 8-10 min at 50°F.
Kelken Gold, Inc. Parlin, NJ	Keligrit	High strength, non-shrink polyester resin anchoring. May be used in freezing Conditions down to 10 F by keeping resin at 70° F- 90 F immediately prior to use.
	KeligROUT/ KeligROUT 101	Polyester anchoring system for grouting anchor bolts and dowel bars. Cure time is 48 hours at 70° F.
	Kelipoxy II	Epoxy anchoring system for grouting anchor bolts and dowel bars. Cure time is 48 hours at 77° F.
Meadow Burke Tampa, FL	Burke E Anchor	Two part cartridge epoxy system used to install reinforcing steel and threaded studs. Cures in temperatures of 32°F - 100°F.
MKT Fastening, LLC Lonoke, AR	Liquid ROC 300 Capsule	Capsule polyester anchor for dowel bars rebar, anchoring bolts.
	Liquid ROC 300 Twin Tube	Twin tube polyester anchor for dowel bars rebar, anchoring bolts.

List No. 29(Cont.)

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<u>Chemical Anchors</u>		
<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>
Olin Epoxy-POLY-CARB (Blue Cube Operations LLC)	Mark-198.1	Two part cartridge epoxy system used to install reinforcing steel and threaded studs. Substrate temperature should be above 40° F. at time of application.
PolyGem, Inc. West Chicago, IL	PolyBac/Polyject 1257-58	Polymer anchoring system for use anchoring threaded rods, bolts, reinforcing steel and smooth dowels to solid concrete. Pot life at 75° F is 15 minutes.
	PolyBac/Polyject 1605	Fast setting polymer anchoring system for use anchoring threaded rods, bolts, reinforcing steel and smooth dowels to solid concrete. Pot life at 75° F is 10 minutes.
Powers Fasteners Brewster, NY	AC100+ Gold	Injectable two component vinylester adhesive. See manufacturer's instructions for uses and applications.
	PE 1000+	Epoxy two component injectable adhesive. See manufacturer's instructions for uses and applications.
	Powers Fasteners Hammer Capsule	Hammer capsule adhesive for use in anchoring dowels, rebars, and bolts in concrete. Base material temp. 68°F and over, setting time 1 hr., 32-50°F, 5 hrs., 14-23°, 24 hrs.
	Powers Fasteners Power Fast Standard Set	Gel time 60 minutes at 40°F, min. cure time 16 hours, full cure 48 hours. Do not use below 40°F.
	Powers Fasteners T308+	An injection two component epoxy adhesive. See manufacturer's instructions for uses and applications.
	Pure 50+	A two-component adhesive anchoring system. See manufacturer's instructions for uses and applications.
	Pure 110+	A two-component adhesive anchoring system. See manufacturer's instructions for uses and applications.
	Pure GP	Pure GP is a two-component adhesive anchoring system designed for bonding threaded rod or reinforcing bar into drilled holes in solid concrete base. Prior to use see manufacturer's instructions for uses and precautions.
Schul International Co. Norcross, GA	Anchor Loc	Cartridge epoxy dowel bar anchoring system.
Sika Corp. Lyndhurst, NJ	Anchor Fix-1	High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in uncracked concrete.
	Anchor Fix 2	High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in uncracked concrete.
	Sikadur Anchor Fix 500	High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in uncracked concrete for transportation applications..
	Sikadur AnchorFix 3001	High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in both cracked and uncracked concrete.

List No. 29 (cont.)

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<u>Chemical Anchors</u>		
<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>
Sika Corp. Lyndhurst, NJ	Sikadur Injection Gel	A two component, moisture tolerant, high modulus, high strength, structural epoxy which give a smooth, nonabrasive paste adhesive for bolts, dowels, pins and special fasteners.
Simpson Strong-Tie Co., Inc. Columbus OH	AT Acrylic	A high strength acrylic based anchoring system formulated for use as a high strength anchor-grouting material in a wide range of temperature conditions.
	AT-XP	An injectible two component acrylic based adhesive that is mixed at a ten to one volume ratio of resin to initiator.
	ET-HP	A two component, high-solids, epoxy based system for use as a high strength, non-shrink anchor grouting material.
	EDOT	Two component high-solids epoxy based system that is non-shrink anchor grouting material. See manufacturer's instructions for uses and applications.
	SET	A high-strength, non-shrink, epoxy-based adhesive formulated for anchoring and doweling threaded rod or rebar
	SET –XP	An injectible two component 100 percent solids, epoxy based adhesive that is mixed at a one to one volume ratio of resin to hardner.
Superior Epoxies Coatings, Inc. Lilburn, GA	DBA-5	Epoxy gel anchor system for dowel bars, rebars, anchoring bolts, and bonding hardened concrete to other materials Mix 1:1 by volume. Apply above 33° F.
W. R. Meadows Austell, GA	Rezi-Weld Rapid Set Epoxy Anchor System	Epoxy anchoring system used for dowels, bars, and anchoring bolts. Pot life at 73° F is 10 min.
Unisorb, Inc. Jackson, MI	Unisorb Capsule Anchor	Urethane adhesive anchor for grouting bolts, dowels, and pins. Glass encapsulated package may be used in wet or damp conditions. Sets in 30 min. at room temperature.
Unitex Kansas City, MO	Propoxy 300 Fast	Fast epoxy anchoring system used for grouting bolts, dowels, pins, structural bonding of concrete, masonry, metal, and wood. 2 component 1:1 mix by volume, moisture insensitive use above 30° F sets 5-10 min.
	Propoxy 300	Epoxy anchoring system used for grouting bolts, dowels, pins, structural bonding concrete and masonry. 2 component epoxy, mix 1:1 by volume Use between 65-85° F Pot life above 30 min.
X-Calibur Construction Systems, Inc. Miramar, FL	X-Tite ResiLoc EX22	Two components, 100% solids, high modulus, structural epoxy gel. X-Tite ResiLoc EX22 is solvent free, no odor high strength moisture intensive, non-sag epoxy system. Recommended Temperature range is 35°F - 115°F.

List No. 29(Cont.)

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<u>Mechanical Anchors</u>		
<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>
Drillco Devices, Ltd Long Island City, NY	Drillco Maxi-Bolt	Expansion anchor
Hilti, Inc. Tulsa, OK	Hilti Kwik Bolt II Expansion Anchor.	Expansion Anchor Bolt
	Hilti Kwik Bolt 3 Expansion Anchor	Expansion Anchor Bolt
	Hilti HDI Anchor	Flush mount drop in expansion anchor.
ITS Ramset Redhead	Tru Bolt Wedge Anchors	Anchor bodies are made of plated carbon steel, hot-dipped galvanized carbon steel, type 304 stainless steel or type 316 stainless steel.
Liebig International, Inc. Charlottesville, VA	Liebig Safety Bolts	Concrete expansion anchor
MKT Fastening, LLC Lonoke, AR	Sup-R-Stud	Expansion anchor bolt
Powers Fasteners, Inc. Brewster, NY	Power-Bolt	Expansion Anchor Bolt
	Power-Stud	Expansion Anchor Bolt
	Wedge-Bolt	Screw Anchor
Simpson Strong-Tie Co., Inc. Colmbus OH	Drop-In	Expansion shell anchors for use in solid base materials featuring a positive-set marking indicator at the top of the anchor to see clearly when proper installation has taken place.
	Sleeve-All	Expanding sleeve anchors for use in all types of solid base materials.
	Titen HD	A high strength screw anchor for use in cracked or uncracked concrete or uncracked masonry.
	Wedge-All	A non-bottom bearing wedge style expansion anchor in solid concrete or grout filled masonry.

(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS - (Physical Lab)

To have a product included on the Approved List for "Hydraulic Cement Concrete Sealants, Stains and Coatings" the following shall be submitted to Materials Division's Physical Laboratory Assistant Concrete Program Manager. The Materials Safety Data Sheet (MSDS), Technical Data Sheets, Independent laboratory data demonstrating the material will meet the following, maximum weight loss allowed shall be 7% with a minimum durability factor of 60%. The maximum surface rating allowed shall be 3, when tested to ASTM C-666 for 300 cycles using Method A modified with 2% Sodium Chloride compliance to the specification.

If the material is to be tested by VDOT, then a quart of the material and the application tool (Paint brush, paint roller or etc.) is needed. The test the evaluation period for this material is usually between 6 - 12 months. The material will be tested to ASTM C 666 for 300 cycles using Method A modified with 2% Sodium Chloride. The maximum weight loss allowed shall be 7% with a minimum durability factor of 60%. The maximum surface rating allowed shall be 3.

Upon approval, the Manufacturer will be required to submit each year a notarized letter stating that the product has not changed in formulation since initial approval.

<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>	<u>VOC Level</u>
Advanced Chemical Technologies Oklahoma City, OK	Sil-Act ATS 42*	Can be applied to the surface by low-pressure spray, brush, roller or squeegee. It bonds with the substrate forming a penetrated layer below the surface that acts as a one-way filter. Water, chloride and other waterborne contaminants are repelled without restricting the substrates natural vapor permeability.	*589 g/l
BASF Construction Chemicals, LLC	Masterinject 1000	A two component ultra-low viscosity epoxy sealer and structural adhesive. Its low viscosity formula penetrates deeply into concrete to repair damaged structures. It accepts an aggregate broadcast to provide a slip-resistant surface.	0 g/L
	MasterProtect H 400	A water-based, 40% alkylalkoxysilane penetrating sealer. It provides long lasting protection against moisture intrusion, freeze/thaw cycles, and chloride intrusion.	<350 g/L
	MasterProtect HB 400	A water-based, high-build, 100% acrylic waterproof coating for above-grade concrete, masonry, stucco and EIFS.	107 g/L
	MasterProtect HB 400 DOT	A water-based, high-build, 100% acrylic waterproof coating for above-grade concrete, masonry, stucco and EIFS.	58 g/L
	MasterSeal 584	A cement based, waterproof coating for concrete, brick, or block. It can be used to eliminate the look of mortar joints and textured by both spray and trowel	0 g/L

*Non-Compliant in Arlington, Fairfax, Loudoun, Prince William, and Stafford Counties

(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS (cont.)

<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>	<u>VOC Level</u>
Chem-Crete Corporation Richardson, TX	Chem-Crete Pavix CCC100	A unique water-based penetrating product that permanently seals concrete from moisture erosion. It is 100% safe for the environment, protects reinforcing steel bars against corrosion without any negative effect on existing steel cathodic protection, no VOC's, used as a single application.	0g/L
ChemMasters Madison, OH	Aquanil Plus 40-A	A penetrating, chemically reactive solvent based sealer that repels moisture and water from concrete and masonry, is non-etching, will not harm most uncoated glass or metal frames, and leaves no residue to clean.	<250 g/L
	Silencure A	A pure acrylic copolymer curing and sealing compound for new concrete installations. Forms an effective curing and sealing film that penetrates capillary pores of fresh concrete forming a silicone matrix within the concrete preventing water and salt penetration.	<350 g/L
	Textured DOT	Water based high build 100% acrylic decorative coating. Develops a tough, durable, water repellent film that is alkali, acid, mildew, fungus and mold resistant.	
Crescent Industries Union, SC	CoatMasters Anti-Graffiti Coating	A modified silicon acrylic systems, which exhibit high water repellency upon cure, provide long term protection from efflorescence, and provide additional stain resistance. Quick drying, non-yellowing, and provide excellent protection from various water solutions, acids, alkalis, fumes, and ultraviolet degradation.	<100 g/l
E-Bond Epoxies, Inc Ft. Lauderdale, FL	E-Bond 120	Epoxy penetrating sealer for concrete. Mix 1:1 by volume, tack free time at 77°F is 45 min. Use above 40°F.	
The Euclid Chemical Company Kirkland, IL	Aquastain T-96	A penetrating, decorative, water-based, liquid polymer stain. It resists ultraviolet degradation, airborne dirt, smog, industrial fumes, acid rain and most other atmospheric chemicals.	<100 g/L
	Tammscoat	Water based emulsion of 100% acrylic resin polymer. Textured decorative & protective coating. Apply at surface, ambient temperatures between 45-90°F.	<100 g/L

*Non-Compliant in Arlington, Fairfax, Loudoun, Prince William, and Stafford Counties

(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS

<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>	<u>VOC Level</u>
Evonik Industries	Protectosil AQUA-TRETE 40	A clear penetrating, water repellent for use on concrete. A ready-to-use, low VOC, silane emulsion. Penetrates the substrate and chemically bonds with silica to form a permanent attachment of the water repellent molecule.	350 g/L
	Protectosil 300	A solvent-free silane with a corrosion inhibitor that protects against corrosion of steel reinforcement. Acts as a mixed inhibitor effectively working on both anodic and cathodic corrosion sites.	340 g/L
Fox Industries Baltimore, MD	*FX 430	Fox Industries Concrete stain and coating. Acrylic copolymer in clear, white, grey and colors, apply at 300 sq/ft/gal.	* 675 g/l
	FX 432	Polymer modified penetrating sealer for concrete. One component water based. Apply at a rate of 200-300 sq. ft./gal with brush, roller or spray.	0.0 g/L
	FX-441	Anti-Graffiti Aliphatic Urethane two part system: one component top coat and second component top coat apply at 300 square ft/gal apply above 40°F.	340 g/l
Kaufman Products Baltimore, MD	*Sure-Poxy Penetrating	Epoxy penetrating sealer. Mix 1:1 by vol. apply 150 sq. ft./gal/coat. Pot life 70°F is 24 hours, apply above 50°F.	*610 g/l
Northern Industries Inc. Coventry, RI	Hydro-Seal 75	A spray able high build water-based epoxy coating that protects & preserves concrete, masonry and block surfaces and contains no VOC's. Resists chemical attack, freeze thaw spalling and hydro-static pressure in excess of 40 PSI. Provides a decorative, smooth long lasting finish that is waterproof and highly durable. Apply above 40 degrees F.	0 g/L
Professional Products of Kansas, Inc. Wichita, Kansas	Professional Water Sealant Super Strength	One part, One coat penetrating, permanent weather proofing formula using RTV Silicone Rubber.	<250 g/l
Prosoco, Inc Lawrence, KS	SaltGuard WB	Water based siloxane water repellent and chloride screen	<120 g/L
	Sure Klean Weather Seal H-40	Protective silane coating apply 40-95°F.	
Surtreat Holding LLC Pittsburg, PA	Surtreat TPS II	A multi-phase, inorganic, surface applied corrosion inhibitor for use on hardened concrete. It will protect reinforcing steel by forming a passivating film on the steel surface, thereby extending the service life of the structure.	0 g/L

*Non-Compliant in Arlington, Fairfax, Loudoun, Prince William, and Stafford Counties

(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS

<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>	<u>VOC Level</u>
Sherwin-Williams Richmond, VA	Anti-Graffiti Coating B97C00150	A single component, non-sacrificial, ready-to-use siloxane coating that cures with atmospheric moisture. Intended for use over properly prepared colored or bare concrete surfaces. Excellent clean ability with either water power-washing, or solvent wipe.	< 250 g/l
	H & C Colortop Water Based Solid Color Concrete Stain	A low odor, water based stain that provides a long-lasting, durable and decorative finish on interior and exterior concrete and masonry	222 g/L
	*H & C Colortop Solvent Based Solid Color Concrete Stain	Solvent based concrete stain formulated with acrylic and silicone resins and alkali proof pigments.	*575 g/l
	Ultracrete Solvent Borne Textured Coating B46W800 series	A low VOC textured coating designed for use on concrete such as poured-in-place concrete and pre-cast concrete, to improve aesthetics. Available as a smooth finish or in fine, medium and extra-coarse textures.	396g/l
	Ultracrete Textured Coating A44W800 series	A heavy duty, VOC compliant, 100% acrylic aggregate-filled coating with outstanding color retention and durability. It can be used directly over numerous substrates.	55g/l
Sika Corporation Lyndhurst, NJ	Sikagard 705L	A one part low viscosity, solvent free, reactive impregnation for concrete and cementitious substrates.	100 g/l
	Sikagard 701W	Solvent-free siloxane emulsion concentrate. Coverage 100-250 sq.ft./gal. Mix ratio = 1 part to 4 parts water.	193 g/L
Textured Coatings of America, Inc Ft. Lauderdale, FL	Rainstopper 400*	Semi-transparent solvent free resin sealer. Covers 125 sq/ft/gal.	* 600 g/l
	Texcote XL -70*	One component ready to use concrete protective coating. Application temperature 40-100°F.	* 600 g/l
	Texcote 300 Bridgecote	High build latex acrylic coating. Rapid drying, good adhesion. Covers 1.25 m²/L at 40-100 F.	300 g/L
United Coatings Spokane, WA	Canyon Tone Stain	Pigmented stain for coloring and protecting concrete, Acrylic copolymer Apply at 150sq.ft./gal., 40-90°F.	163 g/L

*Non-Compliant in Arlington, Fairfax, Loudoun, Prince William, and Stafford Counties

(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS

<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>	<u>VOC Level</u>
Vexcon Chemicals, Inc Philadelphia, PA.	Certi-Vex EnvioSmooth VOC	Decorative smooth high-build coating that covers surface blemishes and cracks. Provides excellent adhesion, weatherability and waterproofing of concrete, masonry, block, wood and primed metal surfaces. Apply to green concrete without peeling or loss of adhesion, excellent resistance to UV light, molds or fungi and environmental chemicals.	296 g/L
	Certi-Vex EnvioTex VOC Textured Sand	Decorative textured high-build coating that covers surface blemishes and cracks. Provides excellent adhesion, weatherability and waterproofing of concrete, masonry, block, wood and primed metal surfaces. Apply to green concrete without peeling or loss of adhesion, excellent resistance to UV light, molds or fungi and environmental chemicals.	296 g/L
	Certi-Vex Guard CACS (Gray)	A decorative colored one step cure and penetrating water repellent sealer with excellent stain protection that can be applied to fresh or existing horizontal and vertical concrete surfaces in one application.	385 g/L
	Certi-Vex Guard	A <u>clear</u> one step cure and penetrating water repellent sealer with excellent stain protection that can be applied to fresh or existing horizontal and vertical concrete surfaces in one application.	326 g/L
	Certi-Vex Penseal 244	A premium high performance, breathable, efficient VOC penetrating clear water repellent sealer.	<250 g/l
	Powerseal 40	A premium high performance industrial and commercial grade breathable, efficient waterborne penetrating water repellent sealer for new or existing concrete and masonry surfaces.	<100 g/l

*Non-Compliant in Arlington, Fairfax, Loudoun, Prince William, and Stafford Counties

(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS

<u>Manufacturer</u>	<u>Product</u>	<u>Description</u>	<u>VOC Level</u>
Visual Pollution Technologies Scottsdale, AZ	Graffiti-Pruf	Completely non-toxic liquid, water-based emulsion used for protecting Surfaces from graffiti, atmospheric Pollution and corrosion. Apply only when ambient and surface temperatures are above 40°F.	0 g/l
	Prmakote	One step application no thinning or mixing. Dries and protects in 24 hours. Retards the growth of mold, mildew and algae. Apply 300 to 600 square ft/ gallon depending on the surface.	220 g/l

(31) HYDRAULIC CEMENT CONCRETE REPAIR MATERIALS – (Physical Lab)

The following lists of products are approved for use in repair of hydraulic cement concrete. These concrete repair materials meet the requirements of VTM 132 for repair of class A3, A4 or A5 concrete.

Table I repair materials are for repair of A3 Concrete Items

Table II repair materials are for repair of A4 Concrete Items.

Table III repair materials are for repair of A5 Concrete Items.

Products in Table III can also be used to repair A5, A4 and A3 concrete items. Products in Table II can be used to repair A4 and A3 concrete items. Product listed in Table I can only be used to repair A3 concrete items.

Products will be assigned to the highest table in which all the specifications are met.

All packaged, dry, rapid hardening repair materials shall meet the requirements of ASTM C 928, Section 4-**Chemical Composition.**

Table I - A3

Approved concrete repair materials for A3 Concrete and miscellaneous concrete Items

<u>Product</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Test Results</u>
All Approved concrete repair materials for A4 and A5 concrete items listed in Table II and Table III.			
HD 50	Dayton Superior Corporation	A fast setting, fiber reinforced, latex-modified, shrinkage compensated, heavy duty, one component concrete repair material requiring only water to mix and apply. HD 50 is a cement based compound having similar characteristics to normal portland cement mixes and is compatible with portland cement concrete.	Setting Time – Initial 25 min. Final 28 min. Compressive Strength – 2 hrs. 3,860 4 hrs. 4,910 6 hrs. 4,990 24 hrs. 5,630 28 days 8,640
HD 25VO	Dayton Superior Corporation	A high strength mortar containing Portland cement, special polymers and accelerators to provide an accelerated strength gain and set time. HD 25 VO is a single component, fiber enhanced trowelable material formulated for vertical and overhead repairs of concrete.	Setting Time – Initial 18 min. Final 20 min. Compressive Strength – 2 hrs. 3,650 4 hrs. 4,620 6 hrs. 5,020 24 hrs. 5,570 28 days 7,730

List No. 31 (cont.)

Approved concrete repair materials for A3 Concrete and miscellaneous concrete Items (cont.)

<u>Product</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Test Results</u>
Pave Patch 3000	Dayton Superior Corporation	A fast setting, heavy duty, one component concrete repair material requiring only water to mix and apply. A cement based compound having similar characteristics to normal portland cement mixes and is compatible with portland cement concrete.	Setting Time – Initial 20 min. Final 24 min. Compressive Strength – 2 hrs. 5,470 4 hrs. 6,040 6 hrs. 6,270 24 hrs. 7,140 28 days 9,800

Table II - A4
Approved concrete repair materials for A4 Concrete Items

<u>Product</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Test Results</u>
All Approved concrete repair materials for A5 concrete items listed in Table III.			
Commercial Grade FastSet DOT Mix	The Quikrete Companies	A fiber reinforced, rapid-setting repair material specifically designed for a high-performance repair material. 55 lb. bag can be extended.	Setting Time – Initial Final Compressive Strength – 1.5 hrs. 5020 28 days 8490
Commercial Grade FastSet DOT Mix Extended	The Quikrete Companies	A fiber reinforced, rapid-setting repair material specifically designed for a high-performance repair material. 80 lb. bag already extended.	Setting Time – Initial Final Compressive Strength – 1.5 hrs. 2780 28 days 6160
Duracrete II FT	Kaufman Products Inc.	Very rapid setting, non-staining, and non-metallic cementitious repair mortar.	Setting Time – Initial 11 min. Final 14 min. Compressive Strength – 2 hrs. 4480 4 hrs. 4730 6 hrs. 5220 24 hrs. 5030 28 days 8980
EucoRepair SCC	The Euclid Chemical Company	A versatile, one component, self-consolidating repair mortar that is shrinkage-compensated, polymer and microfiber modified, and contains an integral corrosion inhibitor.	Setting Time – Final 5 hrs. 10 min. Compressive Strength – 2 hrs. no strength 4 hrs. no strength 6 hrs. no strength 24 hrs. 3,060 28 days 6,280
EucoRepair V100	The Euclid Chemical Company	A single-component, quick-setting, low shrinkage repair mortar for trowel applied vertical and overhead repairs requiring.	Setting Time – Initial 11 min. Final 14 min. Compressive Strength – 6 hrs. 3080 28 days 5070
Planitop 18 ES	MAPEI	A one component, cementitious repair mortar with a corrosion inhibitor. It is suited for horizontal concrete repairs.	Setting Time – Initial 55 min. Final 60 min. Compressive Strength – 6 hrs. 5,870 28 days 9,410

Table III - A5
Approved concrete repair materials for A5 Concrete Items

<u>Product</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Test Results</u>
ChemPatch Fast VO	ChemMasters	A one component, polymer modified shrinkage compensated, very fast setting, non-shrink repair mortar with fiber and corrosion inhibitor.	Setting Time – Initial 17 min. Final 19 min. Compressive Strength – 1 day 6,500 28 days 9,060
Duracrete II VOFT	Kaufman Products Inc.	A single-component, rapid setting, vertical/overhead, cement based repair mortar for concrete.	Setting Time – Initial 26 min. Final 34 min. Compressive Strength – 2 hrs. 2,490 4 hrs. 3,110 6 hrs. 3,350 24 hrs. 3,640 28 days 6,290
HiCap FT	Kaufman Products Inc.	A patching and finishing compound that can be featheredged or shaved to the desired shape, after achieving an initial set.	Setting Time – Initial 20 min. Final 34 min. Compressive Strength – 2 hrs. 1,820 4 hrs. 2,370 6 hrs. 2,780 24 hrs. 4,440 28 days 7,400
Planitop 11 SCC	MAPEI	A one component cementitious, self-consolidating polymer modified concrete mix pre extended with coarse aggregate.	Setting Time – Initial 7 hrs. 30 min. Final 9 hrs. 50 min. Compressive Strength – 28 days 12,250
Planitop 12 SR	MAPEI	A sulfate resistant one component, shrinkage compensated cementitious repair mortar. Fiber reinforced, contains both silica fume and a corrosion inhibitor and is intended for the repair of vertical, overhead and horizontal concrete surfaces.	Setting Time – Initial 225 min. Final 400 min. Compressive Strength – 28 days 9,100
Planitop 15	MAPEI	A one component, shrinkage compensated cementitious, fiber reinforced fluid mortar. Contains a corrosion inhibitor and silica fume and is well suited where followability is required.	Setting Time – Initial 185 min. Final 370 min. Compressive Strength – 6 hrs. 3,370 28 days 12,290

Approved concrete repair materials for A5 Concrete Items (Cont.)

<u>Product</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Test Results</u>
Planitop X	MAPEI	A one component, fiber reinforced, shrinkage compensated, high early strength, fast setting polymer modified high build cementitious repair mortar with corrosion inhibitor.	Setting Time – Initial 13 min. Final 22 min. Compressive Strength – 2 hrs. 2390 28 days 7400
Planitop XS	MAPEI	An extended working time variation of Planitop X. Shrinkage compensated, fiber reinforced, polymer modified and containing a proprietary corrosion inhibitor.	Setting Time – Initial 34 min. Final 49 min. Compressive Strength – 6 hrs. 2090 28 days 7040
Rapid Set DOT Concrete Mix	CTS Cement Manufacturing Corp.	A high-performance, polymer-modified, fast-setting, fiber reinforced concrete repair material. Durable in wet environments,	Setting Time – Initial 30 min. Final 50 min. Compressive Strength – 2 hrs. - 4,380 4 hrs. - 7,100 6 hrs. - 8,360 24 hrs. - 6,170 28 days - 7,520
Rapid Set DOT Repair Mix	CTS Cement Manufacturing Corp.	A high performance, fast setting, multipurpose repair material, durable in wet environments.	Setting Time – Initial 46 min. Final 51 min. Compressive Strength – 2 hrs. - 6,980 4 hrs. - 7,580 6 hrs. - 8,340 24 hrs. - 9,900 28 days 13,370
RepCon 928	SpecChem, LLC	A single component concrete repair mortar with integral corrosion inhibitor for use on concrete floors, highway pavements, bridge decks.	Setting Time – Initial 23 min. Final 35 min. Compressive Strength – 3 hrs. 5210 28 days 11940
SikaQuick 211 SCC Plus	Sika Corporation	A one-component, self consolidating concrete containing factory blended coarse aggregate. This self consolidating concrete bag is silica fume and polymer modified and also contains a migrating corrosion inhibitor.	Setting Time – Initial 28 min. Final 70 min. Compressive Strength – 2 hrs. no measurable strength 4 hrs. no measurable strength 6 hrs. no measurable strength 24 hrs. 2,500 28 days 9,050

List No. 31 (cont.)

Approved concrete repair materials for A5 Concrete Items (Cont.)

<u>Product</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Test Results</u>
SikaQuick 2500	Sika Corporation	A 1-component, very rapid hardening, early strength gaining, cementitious, patching material for concrete	Setting Time – Initial 32 min. Final 57 min. Compressive Strength – 2 hrs. 3,563 4 hrs. 4,612 6 hrs. 4,856 24 hrs. ,6,006 28 days 7915
SikaQuick VOH	Sika Corporation	A fast setting, one component, ready-to-use repair mortar for vertical and overhead applications using specialty cement blends.	Setting Time – Initial 12 min. Final 25 min. Compressive Strength – 2 hrs. 2,120 4 hrs. 4,750 6 hrs. 5,580 24 hrs. 5,100 28 days 9,040
Tamms Form and Pour	The Euclid Chemical Co. Cleveland, OH	A flow able, one component, polymermodified cementitious repair mortar containing silica fume and a migratory corrosion inhibitor.	Setting Time – Initial 55 min. Final 60 min. Compressive Strength – 1 day 7364 28 days 11,968

To have a product included on this Approved List, the manufacturer shall submit a signed and notarized letter to Materials Division's Physical Laboratory Assistant Concrete Program Manager stating that the material meets the requirements listed in VTM 132 for A3, A4 and/or A5 concrete repair material. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification, a Safety Data Sheet (SDS) and Technical Data Sheets. Upon approval the Manufacturer will be required to submit a letter each December for the upcoming year, the notarized letter must state that the concrete repair material meets the requirements of VTM 132 for A3, A4 and/or A5 and that the product has not changed in formulation since initial approval showing it will meet the following requirements. VDOT Material's Division reserves the right to check any product on this list.

VTM 132 can be found at the following link;

<http://www.virginiadot.org/business/resources/Materials/bu-mat-VTMs.pdf>

(32) STABILIZERS FOR ASPHALT MIXTURES – (Asphalt Lab)

<u>Product</u>	<u>Minimum</u>	<u>Manufacturer</u>
Gilsonite HMA Modifier	Replaces 8% by weight of asphalt	American Gilsonite Co. Ziegler Chemical & Mineral Co.
Trinidad Lake Asphalt	Replaces 25% by weight of asphalt	Trinidad Asphalt Co. of America
BoniFibers	6 pounds per ton of total mix	Kapejo, Inc
Petroflex 402-1N	6 pounds per ton of total mix	GRC Materials Co.
Fiber Pave 3010	6 pounds per ton of total mix	Fiberized Products
P440 Natural Fibers	6 pounds per ton of total mix	Advanced Fiber Solutions

(33) SHOTCRETE/GUNITE MIXTURES – (Physical Lab)

<u>Product</u>	<u>Manufacturer</u>
Eucoshot Silica fume, modified shotcrete	Euclid Chemical Co. Cleveland, OH
Eucoshot F Silica fume, modified with polypropylene reinforcing fibers.	Euclid Chemical Co. Cleveland, OH
Eucoshot FM Silica fume, modified with polypropylene fibers	Euclid Chemical Co. Cleveland, OH
Eucoshot Supreme Latex modified shotcrete	Euclid Chemical Co. Cleveland, OH
FX-288 Micro Silica Fiber Reinforced Shotcrete Mortar	Fox Industries Baltimore, MD
ProSpec Shotcrete 300 Portland cement, well graded aggregates, microsilica and special additives to improve adhesion and reduce rebound.	Bonsal American Charlotte, NC St. Albans, WV White Marsh, MD
ProSpec Shotcrete 300V Portland cement, well graded aggregates microsilica and polypropylene fibers.	Bonsal American Charlotte, NC St. Albans, WV White Marsh, MD
Quikrete Shotcrete MS With polypropylene fibers	The Quikrete Companies Lawrenceville, GA
ShotPatch 21F Silica fume enhanced, fiber reinforced shotcrete	BASF Construction Chemicals, LLC Shakopee, MN
SikaCem 103	Sika Corp. Richmond, VA
SureShot Shotcrete Portland cement, specially proportioned aggregates microsilica and polypropylene fibers.	Kaufman Products, Inc. Baltimore, MD

(34) CONCRETE PRECAST PRODUCERS ON QA/QC PROGRAM– (Quality Assurance)

The following manufacturers of concrete precast products have VDOT approved Quality Assurance programs as outlined in the instructions. For additions or deletions to this list contact the District Materials Engineer or the Materials Division Physical Laboratory.

Manufacturer	Plant Location	Monitored By	Probation Start Date
A. C. Miller	Blairsville, PA		
Allied Concrete Company (Redi-Rock, Stone Strong) (*P)	Waynesboro, VA		11/20/17
American Stone Virginia, LLC (*P)	Ladysmith, VA		9/17/15
Boxley (ReCon) (*P)	Blue Ridge, VA		
Century Concrete, Inc.	Virginia Beach, VA		
Coastal Precast Systems, LLC	Chesapeake, VA		
Concrete Pipe & Precast	Va. Precast Rd., Ashland, VA		
Concrete Pipe & Precast	Chesapeake, VA		
Concrete Pipe & Precast	Greencastle, PA		
Concrete Pipe & Precast	Design Rd., Ashland, VA		
Concrete Pipe & Precast	Harrisonburg, VA		
Concrete Pipe & Precast	Jessup, MD		
Concrete Pipe & Precast	Manassas, VA		
Concrete Pipe & Precast	Martinsburg, WV		
Concrete Pipe & Precast	Salem, VA		
Concrete Pipe & Precast	Dunn, NC		
Concrete Safety Systems	Bethel, PA		
Concrete Specialties, Inc. (CSI)	Roanoke, VA		
Contractors Precast Corp.	Davidsonville, MD		
Curtis Contracting, Inc.	West Point, VA		
DOT Concrete and Precast L.L.C.	Pennington Gap, VA		
Eastern Vault	Princeton, WV		
Faddis Concrete Products	Downingtown, PA		
Faddis Concrete Products	King George, VA		
Faddis Concrete Products	Kutztown, PA		
Faddis Concrete Products	New Castle, PA		
Foltz Concrete Pipe	Winston Salem, NC		
Gillespie Precast – Plant 1	Chestertown, MD		7/19/17
Gillespie Precast – Plant 2	Chestertown, MD		7/19/17
Heartland Concrete	Petersburg, VA		
K. J. Williams Concrete Co., Inc.	Cresaptown, MD		
Lindsay Precast	Franklinton, NC		
Mack Industries, Inc.	Sharpsburg, NC		
Miscellaneous Concrete Products	Roanoke, VA		
Nansemond Precast Concrete Co.	Suffolk, VA		
Oldcastle Precast (**P)	Fredericksburg, VA		9/20/13
Oldcastle Precast	Fuquay-Varina, NC	Central Office	
Permatile Concrete Products Co.	Bristol, VA		
Rinker Materials	Frederick, MD		
Rinker Materials	Middletown, DE		
Rockingham Precast	Harrisonburg, VA		
Ross Prestress (*P)	Bristol, TN	Bristol	01/19/2018
Smith Carolina Corporation	Reidsville, NC		
Smith Midland Corporation	Midland, VA		

Manufacturer	Plant Location	Monitored By	Probation Start Date
Stonewall Precast, Inc.	Woodstock, VA		
Terre Hill Concrete Products	Lebanon, PA		
Tindall Corporation (*P)	Spartanburg, SC		
Winchester Building Supply Co.	Winchester, VA		

(*P) = Probationary (**P) = Probation with Cause

(35) FIBERS FOR USE IN HYDRAULIC CEMENT CONCRETE – (Physical Lab)**Blended Copolymer**

Supplier	Phone Number
The Euclid Chemical Company (TUF STRAND MAXTEN)	(706) 638-0055

Steel Fibers

Supplier	Phone Number
Bekart Wire Co (RC 80/60 BN)	(770) 514-2286, Contact: Heidi Helmink
Bekart Wire Co (RC 65/60 BN)	(770) 514-2286, Contact: Heidi Helmink
Maccaferri Inc	(301) 223-6910
Polytorx, LLC (Helix)	(734) 322-2114

Polypropylene Fibers

Supplier	Phone Number
Advanced Fiber Solutions, Inc. (Fibrillated)	(800) 351-5410
Advanced Fiber Solutions, Inc. (Monofilament)	(800) 351-5410
Advanced Fiber Solutions, Inc. (Ultimax Structural Fibers)	(800) 351-5410
Durafiber	(804) 371-7252
FiberMesh	(800) 621-1273
Forta	(412) 458-5221
The Euclid Chemical Company (PSI Fiberstrand 100)	(800) 321-7628
The Euclid Chemical Company (PSI Fiberstrand F)	(800) 321-7628
W. R. Grace	(617) 876-1400

Polyolefin

Supplier	Phone Number
3M	

Polyester

Supplier	Phone Number

***Approval does not grant permission to reduce steel requirements.**

August 2016

List No. 36

(36) MULCHES (HECP TYPES 1 THRU 4) – (Maintenance Div.)

**List # 36 on Mulches has been updated and moved to List (79)
MULCHES (Hydraulic Erosion Control Products TYPES 1-4) as of
August 2016**

July 2016

List No. 37

(37) WALL DRAIN SYSTEMS – (Soils Lab)

As of July 1, 2016, this Approved List is now included in Approved List No. 63.

(38) PIPE REHABILITATION SYSTEMS FOR METHOD D (FLEXIBLE PIPE LINER) – (Soils Lab)

VDOT's Drainage Manual Chapter 8 and VDOT's Special Provision for Pipe Rehabilitation list Methods A through E for pipe rehabilitation.

This Approved List 38 is for Method D (Flexible pipe liner) systems only. Method D is divided into 4 categories of products as shown below:

- Category A – Cured in Place Pipe (CIPP)
- Category B – Fold and form flexible liners
- Category C – HDPE, PVC, or Polypropylene (PE) slip liners
- Category D – Spray-on liners

Flexible pipe liner products falling in any of these 4 categories shall be on this Approved List in order to be used on VDOT projects. (Other types of pipe liners, Methods A, B, C, and E, are allowed also, such as corrugated metal, concrete, or solid-walled metal pipe, but are approved by other means.) Products covered by the VDOT Road & Bridge Specifications or the VDOT Special Provision for Pipe Rehabilitation are included on this Approved List, products not so covered shall be placed on the Special Products Evaluation List (SPEL). Approved products by category are listed below.

Product requirements for all Method D pipe rehabilitation systems are listed below:

- Shall list host pipe diameter ranges for which the product is applicable.
- Shall list any moisture limitations (e.g. installation in the dry, humidity restrictions, etc.).
- Shall list environmental controls to prevent discharge/impact to soils and water.
- Shall indicate corrosion potential/acid reaction potential.
- Shall require manufacturer's/supplier's representative on-site during installation or use certified contractor if certification exists.
- Shall show VDOT interest, and at 5-year resubmittal periods, must show use by VDOT in last 5 years. Otherwise, product will be removed from list. Product may also be removed from list for documented failure to perform properly in the field; or as a result of changes in materials or manufacture or installation processes unless a revised submittal to the VDOT Materials Division Soils Lab is made. (VDOT interest is typically indicated by providing, on the product submittal, the name of the VDOT person or office or project who is expressing a desire to try the product.)
- Shall describe training/certification for installers.
- Shall provide hydraulic data (initial surface roughness) of liners in place.

Further required evaluation criteria specific to each Category can be obtained from the VDOT Materials Division Soils Lab.

All entries below are required to resubmit every five (5) years starting from January 2013.

Category A – Cured in Place Pipe (CIPP)

Product	Vendor/Installer
Blue-Tek CIPP Liner (6" – 48")	Reline America, Inc. Mike Hoffmaster, Sales and Marketing Manager mhoffmaster@relineamerica.com
Alphaliner (6" – 54")	240.818.8639 24024 Frederick Road Clarksburg, MD 20871 www.relineamerica.com

Product	Vendor/Installer
InLiner (6" – 90")	Layne Inliner LLC Greg Laszczynski, District Manager Greg.laszczynski@layne.com 301.486.7570 6303 Macaw Court Elkridge, MD 21075 www.layneinliner.com
New Life Liner System (3" – 48")	Stephen's Technologies, Inc. Ken Barton, President stephenstechnologies@yahoo.com 888.783.7436 31004 Highway 27, PO Box 478 Lake Hamilton, FL 33851 www.stephenstech.com
Premier Pipe USA (6" and greater)	AM-Liner East, Inc. Mel Willett, Vice President mwillett@amlinereast.com 540.955.9671 601 Jack Enders Blvd. Berryville, VA 20117 www.amlinereast.com
RS MaxPatch (3"-48")	RS Technik David Kozman, PE, Product Manager dkozman@rstechnik.us 919.481.1977 P.O. Box 3745 Cary, NC 27519 www.rstechnik.us
RS MaxPatch (3"-48")	Capital City Services Company Wayne Norman-President capitalcityservices@yahoo.com Office: 804-746-9665 5404 Sandy Valley Rd. Mechanicsville, VA 23111
SAERTEX-LINER (6" – 52")	SAERTEX MultiCom LP Mark Hallett, Vice President m.hallett@saertex.com 704.584.4059 12200 Mt Holly-Huntersville Rd Huntersville, NC 28078 www.saertex-multicom.com
Terra Verde (Felt Liner, GRP-Felt Liner, CIPP Corp Felt Liner, CIPP Corp GRP-Felt Liner) (Felt Liners 3" – 100") (GRP-Felt Liners 8" – 100")	Tri-State Utilities Andy McSweeney, President andym@tristateutilities.com 757.366.9505 2111 Smith Avenue Chesapeake, VA 23320 www.tristateutilities.com

Product	Vendor/Installer
Trelleborg Pipe Seals (1.5" – 47")	Video Pipe Services John Terpak, President jterpak@videopipeservices.com 856.697.1900 / 301.931.0707 1566 Harding Highway Newfield, NJ 08344 www.videopipeservices.com

Category B – Fold and form flexible liner

Product	Vendor/Installer
None approved at this time.	

Category C – HDPE, PVC, Polypropylene (PP), or Fiberglass slip liners

Product	Vendor/Installer
Centrifugally Cast Fiberglass Reinforced Polymer Mortar Pipe (18" – 126")	Hobas Pipe USA, Inc. Bryant Welch, Area Manager Mid-Atlantic bwelch@hobaspipe.com 832.622.8883 1413 Richey Road Houston, TX 77073 www.hobaspipe.com
CONTECH A-2 PVC Corrugated Pipe (12" – 36")	Contech Engineered Solutions LLC Greg Nester, Virginia Representative gnester@conteches.com 540.797.6499 9025 Centre Pointe Drive, Suite 400 West Chester, OH 45069 www.conteches.com
HDPE Corrugated Pipe (4" – 60")	Advanced Drainage Systems, Inc. Shawn Coombs, PE, National Railroads/Field R&D/MS Zone Engineer Shawn.coombs@ads-pipe.com 704.451.8844 510 Factory Street Buena Vista, VA 24416 www.ads-pipe.com
InnerFlow HDPE Solid Wall pipe (8" – 63")	Contech Engineered Solutions LLC Greg Nester, Virginia Representative gnester@conteches.com 540.797.6499 9025 Centre Pointe Drive, Suite 400 West Chester, OH 45069 www.conteches.com
Link-Pipe SST-316 sleeves (4" – 48", joint and point repair) Link-Pipe PVC Sleeves (36" – 120")	Capital City Services Tom Arezzi, Director of Business Development t.arezzi@capitalcityservices.com 804.746.9665 5404 Sandy Valley Road Mechanicsville, VA 23111 www.capitalcityservices.com

Product	Vendor/Installer
Polypropylene Corrugated Pipe (12" – 60")	Advanced Drainage Systems, Inc. Shawn Coombs, PE, National Railroads/Field R&D/MS Zone Engineer Shawn.coombs@ads-pipe.com 704.451.8844/510 Factory Street Buena Vista, VA 24416 www.ads-pipe.com

List No. 38 (cont.)

Product	Vendor/Installer
Quick Lock (6" – 32", joint and point repair)	Uhrig-Rausch USA Adam Baker, Vice President Sales reusa@rauschusa.com 717.552.6460 4757 Innovation Way Chambersburg, PA 17201 www.rauschusa.com Capital City Services Tom Arezzi, Director of Business Development t.arezzi@capitalcityservices.com 804.746.9665 5404 Sandy Valley Road Mechanicsville, VA 23111 www.capitalcityservices.com
Snap-Tite HDPE Solid Wall Pipe (12" – 84")	PE Sales, Inc. Andy Cary, PE amcary@pesales.com 410.733.0748 PO Box 461 Perry Hall, MD 21128 www.pesales.com
Spirally Wound PVC Pipe (19" – 72" outside diameter for SL products) (8" – 36" inside diameter for DF products) (18" – 144")	Midwest Mole, Inc. David Howell, Project Manager David@midwestmole.com 317.545.1355 6814 W 350 N Greenfield, IN 46140 www.midwestmole.com Sekisui SPR Chris Lind, Regional Sales Manager Chris.lind@sekisui-spr.com 301.752.3363 4125 Welcome All Rd., Suite 100, Atlanta, GA 30349 www.sekisui-spr.com
Weholite HDPE Profile Wall Pipe (22" – 132")	Uponor Infra, Ltd. Tripp Waymack, Engineered Sales Consultant tripp.waymack@uponor.com 540.682.9110

Product	Vendor/Installer
	6507 Mississauga Road Mississauga, ON L5N 1A6 www.uponor.ca

Category D – Spray-on liners

Product	Vendor/Installer
Centri-Cast Pipe Repair Mortar (30" and greater)	Five Star Products, Inc. Claudio Petrucelli, Eastern Regional Manager petrucellic@fivestarpromducts.com 203.336.7900 60 Parrott Drive Shelton, CT 06484 www.fivestarpromducts.com
CentriPipe (30" and greater)	AP/M Permaform Keith Walker, General Manager keith@permaform.net 800.662.6465 PO Box 555 Johnston, IA 50131 www.permaform.net
Geospray (30" and greater)	Milliken Infrastructure Solutions, LLC Scott Naiva, PE, Northeast Region Manager Scott.naiva@milliken.com 610.971.0362 707 Old Eagle School Road Wayne, PA 19087 geopolymers.milliken.com

List No. 38 (cont.)

Product	Vendor/Installer
PolySpray FS-250 (36" and greater)	HydraTech Engineered Products LLC Tim Meyer, Sales Manager Tim.meyer@hydrattechllc.com 513.827.9169 10448 Chester Road Cincinnati, OH 45215 www.hydrattechllc.com
Spraywall (30" and greater)	SprayROQ Jerry Gordon, President jgordon@sprayroq.com 800.634.0504 248 Cahava Valley Parkway Pelham, AL 35124 www.sprayroq.com
Mountain Grout MGP 25	Capital City Services Tom Arezzi t.arezzi@capitalcityservices.com 804.746.9665 5404 Sandy Valley Road Mechanicsville, VA 23111

Product	Vendor/Installer
	www.capitalcityservices.com

CIPP Products

- Effluent from the curing process (i.e. process water/condensate and rinse water) shall only be discharged directly to a Publicly Owned Treatment Works (POTW) or pumped to above-ground containers for subsequent direct discharge to a POTW ; no effluent shall be released exterior to the rehabilitated pipe or containers. For any discharge to a POTW, the Contractor shall ensure the discharge conforms with the Industrial Pretreatment Program requirements of that POTW. In the absence of an Industrial Pretreatment Program, the Contractor shall notify, and obtain approval from, the POTW prior to any discharges and comply with all the requirements of the POTW receiving the discharge. If the POTW does not allow the discharge or the Contractor cannot meet the pre-treatment requirements, the Contractor shall collect the process water/condensate and rinse water at the construction site and dispose of it at a private industrial wastewater treatment facility. Irrespective of disposal method, the Contractor shall provide documentation of the POTW discharge approval or waste disposal documentation to the VDOT Engineer.
- The Contractor is responsible for reporting and taking the appropriate corrective actions for any accidental releases of CIPP waste or CIPP effluent into the environment.
- Refer to VDOT's Special Provision for Pipe Rehabilitation for additional specifications for CIPP.

Spray-on Liner Products

- Refer to VDOT's Special Provision for Pipe Rehabilitation for specifications for spray-on liner products.

July 2016

List No. 39

(39) WICK DRAINS – (Soils Lab)

As of July 1, 2016, this Approved List is now included in Approved List No. 63.

(40) QUALIFIED SYSTEM W PAINTS – (Chemistry Lab)

The following paint systems have been prequalified for use, but the manufacturer must provide certification for each lot.

COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC (lbs./Gal.)
#101 Primer	3356 - 2 Acrylic	Brown	2.0 – 3.0	1.17
#102 Intermediate	3356 - 1 Acrylic	White	2.0 – 3.0	1.02
#103 Finish	3356 - 3 Acrylic	As specified	2.0 – 3.0	1.17
MANUFACTURER – Carboline Company, (Contact) Mechanicsville, VA (804) 304-3113 Approved 7/10				

COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC (lbs./Gal.)
#101 Primer	W-103 Water-Guard	#595-30045	2.0 – 4.0	1.46
#102 Intermediate	W-112 Water-Guard	White	2.0 – 4.0	1.29
#103 Finish	W-XXX Water-Guard	As specified	2.0 – 4.0	2.01
MANUFACTURER – Elite Coatings, Gordon, GA (478) 628-2111 Approved 1/97				

COAT	PAINT	COLOR	DRY FILM THICKNESS (mils)	VOC (lbs./Gal.)
#101 Primer	B66NW1 Acrylic	Brown	3.0 – 6.0	1.79
#102 Intermediate	B66WW8 Acrylic	White	3.0 – 6.0	1.46
#103 Finish	B66XXXXX Acrylic	As specified	3.0 – 5.0	1.87
MANUFACTURER – Sherwin Williams, Richmond, VA (804) 387-4050 Approved 4/09				

**(41) SUPERPAVE GYRATORY COMPACTORS FOR ASPHALT CONCRETE MIXTURES –
(Asphalt Lab)**

INTERLAKEN TECHNOLOGY CORPORATION Gyratory Compactor, Model GYR-001
PINE INSTRUMENT COMPANY Gyratory Compactor, Model AFGC125X
PINE INSTRUMENT COMPANY Gyratory Compactor, Model AFG1 SGC
TEST QUIP INC. (Gilson) Brovold Gyratory Compactor, No Model Number
TROXLER ELECTRONIC LABORATORIES, INC. Gyratory Compactor, Model 4140
TROXLER ELECTRONIC LABORATORIES, INC. Gyratory Compactor, Model 5850

(42) HIGH DENSITY POLYETHYLENE (HDPE) PIPE PRODUCERS – (Quality Assurance)

Advance Drainage Systems/Hancor (ADS/Hancor) Bessemer City, NC Buena Vista, VA Findlay, OH (TR 172) Logan Township, NJ	Advance Drainage Systems/Hancor (ADS/Hancor) Ludlow, MA Muncy, PA Springfield, VT Wooster, OH
Crumpler Plastic Pipe, Inc. Roseboro, NC	Haviland Drainage Products Haviland, OH
JM Eagle Cochran, Pennsylvania Wharton, Texas	Lane Enterprises Shippensburg, PA Wytheville, VA
Solen Inc. Ibberville, QC McAdam, NB Hagersville, Ont	Southeast Culvert, Inc. Winder, GA

QA List No. 42 is for HDPE Pipe approval only.

All HDPE end sections and elbows must be

Approved prior to installation by the

Location and Design Division

Standards / Special Design Section Manager

(43) APPROVED WHITE AND YELLOW THERMOPLASTIC PRODUCTS - (Chemistry Lab)**MANUFACTURER / PRODUCT NO.****NTPEP SUBMITTAL NO.****ENNIS TRAFFIC SOLUTIONS****White**

884330 (VA-AK-SX-W-1)
885637

2006 MS-027
2008 PA-069

Yellow

884337 (counterpart to 884330)
884188 (formerly YID-5GX-VA-DCA)
884189 (formerly YID-5GX-VA-HRB)
884186 (Y1D-5GX-VA-DCC)
884187 (Y1D-5GX-VA-HRC)
VA-AK-SX-YNL-1

ENNIS - Alkyd Extrude Yellow:

32101462 (Formerly Cataphote)
32101464 (Formerly Cataphote)
32101466 (Formerly Cataphote)
32101468 (Formerly Cataphote)
32101463 (Formerly Cataphote)

ENNIS - Alkyd Spray Yellow:

32102462 (Formerly Cataphote)
32102464 (Formerly Cataphote)
32102466 (Formerly Cataphote)
32102468 (Formerly Cataphote)

E E VA AL F Y 99 1 (Formerly LaFarge and LDI)
P E VA AL F Y 99 1 (Formerly LaFarge and LDI)
E E VA AL F Y 99 2 (Formerly LaFarge and LDI)
P E VA AL F Y 99 2 (Formerly LaFarge and LDI)
E E VA AL F Y 99 3 (Formerly LaFarge and LDI)
P E VA AL F Y 99 3 (Formerly LaFarge and LDI)
EE VA AAL F Y998 (Formerly LaFarge and LDI)
EE VA AAL F Y04 (Formerly LaFarge and LDI)
EE VA AAL F Y06 (Formerly LaFarge and LDI)

MANUFACTURER / PRODUCT NO.**NTPEP SUBMITTAL NO.****SWARCO****White****Yellow**

Swarolux
 Swarolux
 VYALF001
 VYALF002

98 STR-115
 98 STR-116

CROWN TECHNOLOGY**White**

Crown-White (06-WAX-A1CF)
 Crown-White (06-WAS-A1CF)

2000-PMM-049
 2000-PMM-049

Yellow

Ecotherm 06-YAX-AACF
 Ecotherm 06-YAX-01CF
 Ecotherm 06-YAX-00CF

DOBCO**White**

(W1X0645)

Yellow

Y1X0605
 Y1S0605
 Y1X0615
 Y1X0625

OZARK**White**

Ozark White Thermoplastic

PMM-2014-01-047

Yellow

Ozark Yellow Thermoplastic

PMM-2012-01-054

<u>MANUFACTURER / PRODUCT NO.</u>	<u>NTPEP SUBMITTAL NO.</u>
-----------------------------------	----------------------------

3M**White**

3M All Weather White Thermoplastic	PMM-2008-PA-100
------------------------------------	-----------------

Yellow

3M All Weather Yellow Thermoplastic	PMM-2008-PA-101
-------------------------------------	-----------------

NOTE:

Both White and Yellow 3M Thermoplastic must be installed using the following reflective glass beads and 3M Elements:

- AASHTO, Type 3 glass Beads (0.11 lbs. /Ft²)
- 3M White or Yellow Elements (0.042 lbs. /Ft²)

(44) APPROVED Q/A SUPPLIERS LIST – (Quality Assurance)**Note: Approval does not include water and sewer line items.**

Supplier	Location
Atlantic Construction Fabrics / ACF Environmental	Chantilly, VA
Atlantic Construction Fabrics / ACF Environmental	Chesapeake, VA
Atlantic Construction Fabrics / ACF Environmental (*p)	Harrisonburg, VA
Atlantic Construction Fabrics / ACF Environmental	Richmond, VA
Atlantic Construction Fabrics / ACF Environmental	Manassas, VA
Atlantic Construction Fabrics / ACF Environmental	Staunton
Advanced Drainage Systems, Inc.	Buena Vista, VA
A. H. Harris & Sons, Inc	Bristol, VA
A. H. Harris & Sons, Inc	Charlottesville, VA
A. H. Harris & Sons, Inc	Chesapeake, VA
A. H. Harris & Sons, Inc (Saunders Oil)	Richmond, VA
A. H. Harris & Sons, Inc (Virginia Construction Supply)	Roanoke, VA
Capitol Foundry of VA, Inc.	Virginia Beach, VA
Chesapeake Foundries, Inc.	Gaithersburg, MD
Chesterfield Trading Co. Inc.	Richmond, VA
Colonial Construction Materials, Inc	Oilville, VA
Colonial Construction Materials, Inc (*p)	Virginia Beach, VA
Country Boy Seed, Inc. (*p)	Bristol, VA
Curtis Contracting, Inc.	West Point, VA
Eastern Supply Inc	Winchester, VA
Ferguson Waterworks	Chantilly, VA
Ferguson Waterworks (*p)	Chesapeake, VA
Ferguson Waterworks	Danville, VA
Ferguson Waterworks (*p)	Farmville, VA
Ferguson Waterworks	Forest, VA

Supplier	Location
Ferguson Waterworks (*p)	Martinsville, VA
Ferguson Waterworks (*p)	Radford, VA
Ferguson Waterworks (*p)	Roanoke, VA
Ferguson Waterworks (*p)	Williamsburg, VA
Form Services, Inc.	Baltimore, MD
GeoProducts, LLC	Kilmarnock, VA
GETSCO (*p)	Elizabeth City, NC
GETSCO (*p)	Frederick, MD
Guaranteed Supply Company (*p)	Chesapeake, VA
Guaranteed Supply Company (*p)	Richmond, VA
Hanes Geo Components	Winston Salem, NC
Hanes Geo Components	Butner, NC
Hanes Geo Components (*p)	Eldersburg, MD
Hanes Geo Components (*p)	Manassas, VA
HD Supply Construction and Industrial White Cap	Capitol Heights, MD
HD Supply Construction and Industrial White Cap	Chesapeake, VA
HD Supply Construction and Industrial White Cap	Gainesville, VA
HD Supply Construction and Industrial White Cap	Richmond, VA
HD Supply Construction and Industrial White Cap	Springfield, VA
Interstate Construction Product, Inc.	Norton, VA
Jett & Company	Newport News, VA
Jett & Company	Norfolk, VA
Landscape Supply, Inc. (*p)	Chantilly, VA
Landscape Supply, Inc. (*p)	Charlottesville, VA
Landscape Supply, Inc.	Richmond, VA (Southside)
Landscape Supply, Inc.	Richmond, VA (West End)

List No. 44 (Cont.)

Supplier	Location
Landscape Supply, Inc.	Roanoke, VA
Landscape Supply, Inc.	Virginia Beach, VA
McPeak Supply, LLC	Roanoke, VA
Public Drainage Supply, Inc.	Blountville, TN
RAMTOOL and Supply Company (*p)	Chesapeake, VA
RAMTOOL and Supply Company	Herndon, VA
RAMTOOL and Supply Company	Richmond, VA
RAMTOOL and Supply Company (*p)	Roanoke, VA
TransCon Supply	Harrisonburg, VA
Whitlock Brothers, Inc.	Norfolk, VA
Whitlock Brothers, Inc.	Toano, VA
Whitlock Brothers, Inc.	Newport News, VA
Virginia Contractors Supply, Inc.	Manassas Park, VA
Virginia Road and Bridge Supply, Inc.	Salem, VA

(*p) = probationary

(45) QUALIFIED WOOD TREATMENT PLANTS – (CHEMISTRY LAB)

The following wood treatment plants are approved to provide treated lumber to the Virginia Department of Transportation. They are required to provide certification documentation with each order.

If a wood treatment plant is not on this list they must be approved by meeting the requirements listed in the VDOT, Manual of Instructions, Section 204.29. They are required to provide certification documentation with each order. (Allow a minimum of two weeks for sampling and testing.)

Wood Treatment Plant Preservatives	Telephone #	Preservative	Date Approved
Acme Wood Preserving , Princeton, WV	(304) 425-0022	CCA, Creosote	Before 2006
Albemarle Wood Preserving, Albemarle, NC	(704) 982-2516	CCA	Before 2006
Amelia Lumber Co. Inc., Amelia, VA	(804) 561-2155	CCA	Before 2006
Cox Wood, Newsoms, VA - (formerly Atlantic Wood Industries)	(757) 654-9462	CCA	Before 2006
B&M Wood Products, Inc., Manor, GA	(912) 283-0353	CCA, Creosote	Reinstated 2014
Bestway South Inc., Stony Point, NC	(704) 585-6373	CCA	Before 2006
Carolina Pole, Inc. of Cox Wood, Eutawville, SC	(803) 492-7728	CCA	2009
Carolina Pole, Inc. of Cox Wood, Leland, NC	(910) 371-3131	PENTA, CCA	2012
Tri-State Lumber, Fulton, MS	(662) 862-2125	CCA	2010
Fortress Wood Products, Henderson, NC	(252) 492-3046 or (336) 580-3095	CCA	Before 2006
Gladys Timber Products, Gladys, VA	(434) 283-4744	CCA	Before 2006
Long Life Treated Wood, Inc., Hebron, MD	(800) 451-3137	CCA, CA-C	Before 2006
Madison Wood Preservers Inc., Madison, VA	(800) 844-8383	CCA	Before 2006
American Timber and Steel Co. (formerly Midwest Wood Treating)	(419) 668-1610	CCA, ACQ	Before 2006-name change in 2014
North-South Wood Preserving, North, SC	(803) 682-4812	PENTA	2009
Reliance Treated Wood, Federalsburg, MD	(410) 754-5711	CCA	2009
Storey, S.I. Lumber Co., Inc., Armuchee, GA	(706) 234-1605	CCA, ACQ	2013
Wood Preservers Inc., Warsaw, VA	(804) 333-4022	CCA, CA-C	Before 2006

Notes:

PENTA treatment is pentachlorophenol and is, also, called PCP.

Dispersed or micronized Copper Azole (MCA) has not been standardized by the American Wood Preservers Association (AWPA) and is not acceptable for VDOT use.

Treatment plants that are approved for Copper Azole-B (CA-B) treatment and that have moved to Copper Azole-C (CA-C) treatment, have maintained their qualified status as CA-C.

Plants formerly approved to treat with ACQ or CA-B that are now using only MCA, are no longer listed as qualified for the ACQ or CA-B treatments.

Durable Wood Preservers of Charlotte, NC requested removal from list 45.

(46) SIGN SHEETING AND INK QUALIFIED PRODUCTS LIST – (Chemistry Lab)

The following products have been prequalified, but the manufacturer must supply certification for each lot.

Reflective sheeting used on permanent signs to include: Object markers, nose of guardrails, permanent impact attenuators (except sand barrels), standard road edge delineators, special road edge delineators, barrier delineators, guardrail delineators, interstate road edge delineators, chevron panels, bridge end panel signs (VW-13), and railroad advance warning signs (including any supplemental plaques) vertical panels (Group 2 channelizing devices), traffic gates, Automatic Flagger Assistance Device (AFAD) gate arms, and the "STOP" side of sign paddles (hand signaling device).			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
Avery Dennison	T-9500	White	SSM-04-1073
Avery Dennison	T-9501	Yellow	SSM-04-1075
Avery Dennison	T-9505	Blue	SSM-04-1076
Avery Dennison	T-9507	Green	SSM-04-1074
Avery Dennison	T-9508	Red	SSM-04-1077
Avery Dennison	T-9511	Fluor. Yellow	SSM-05-1117
Avery Dennison	T-11500	White	SSM-08-1290
Avery Dennison	T-11501	Yellow	SSM-08-1291
Avery Dennison	T-11505	Blue	SSM-08-1292
Avery Dennison	T-11507	Green	SSM-08-1293
Avery Dennison	T-11508	Red	SSM-08-1294
Avery Dennison	T-11511	Fluor. Yellow	SSM-08-1295
Avery Dennison	T-11513	Fluor. Yellow Green	SSM-08-1296
Ink:			
Avery Dennison	4930 series	Black, red, blue, green, yellow	
Avery Dennison	4930 Series	Clear coat	
Inks and overlay films shall be specified by the sheeting manufacturer.			

Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	3930	White	SSM-04-1061
3M	3931	Yellow	SSM-04-1062
3M	3932	Red	SSM-06-1148
3M	3935	Blue	SSM-05-1079
3M	3937	Green	SSM-04-1063
3M	3939	Brown	SSM-07-1247

3M	3981	Fluorescent Yellow	SSM-99-6
3M	3990	White	SSM-04-1052
3M	3991	Yellow	SSM-94-5
3M	3992	Red	SSM-99-705
3M	3997	Green	SSM-04-1057
3M	3995	Blue	SSM-04-1056
3M	4081	Fluorescent Yellow	SSM-05-1107
3M	4090	White	SSM-05-1100
Permanent Signs Continued			
Manufacturer	Product No.	Color	NTPEP Submittal No.
3M	4091	Yellow	SSM-05-1103
3M	4092	Red	SSM-05-1104
3M	4095	Blue	SSM-05-1105
3M	4097	Green	SSM-05-1106
3M	4099	Brown	SSM-07-1246
Ink:			
3M	882	Traffic Sign Red	
3M	883	Blue	
3M	884	Yellow	
3M	885	Black	
3M	886	Orange	
3M	887	Brown	
3M	888	Green	
3M	891	Thinner	
3M	893	Violet	
3M	894	Lemon Yellow	
3M	895	Magenta	
Inks and overlay films shall be specified by the sheeting manufacturer			

Reflective sheeting used for: Bicycle and Pedestrian crossing, Playground, Deaf Child Area, Watch for Children, School Crossing, School Bus Stop Ahead, School plaque, School portion of the School Speed Limit, and supplemental plaques.			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	3983	Fluor. Yellow-Green	SSM-95-4
3M	4083	Fluor. Yellow-Green	SSM-05-1108
Ink:			
3M	885	Black	
Sheeting:			
Avery Dennison	T-11513	Fluor. Yellow-Green	SSM-08-1296
Avery Dennison	T-9513	Fluor. Yellow-Green	SSM-04-1079
Ink:			
Avery Dennison	4930 Series	Black	
Inks and overlay films shall be specified by the sheeting manufacturer			

Reflective sheeting used on permanent recreational and cultural interest area guidance signs, and for the hand symbol / DON'T WALK and numerals on permanent educational pedestrian signal signs (R 10-3b thru R10-3e)			
Manufacturer	Product No.	Color	NTPEP Submittal No.
ORAFOL Americas, Inc	5800	White	SSM-08-1265
ORAFOL Americas, Inc	5800-030	Red	SSM-08-1268
ORAFOL Americas, Inc	5800-080	Brown	SSM-08-1271
ORAFOL Americas, Inc	5800-5061-030	White with Red Overlay Film	SSM-08-1285
ORAFOL Americas, Inc	5800-5061-080	White with Brown Overlay Film	SSM-08-1289
ORAFOL Americas, Inc	5800-5081-070	White with Black Overlay Film	SSM-08-1281
Inks and overlay films shall be specified by the sheeting manufacturer			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Avery Dennison	T-6500	White	SSM-98-15
Avery Dennison	T-6501	Yellow	SSM-96-009
Avery Dennison	T-6507	Green	SSM-98-15
Avery Dennison	T-6508	Red	SSM-98-15
Avery Dennison	T-5509A	Brown	SSM-01-11
Avery Dennison	T-6505	Blue	SSM-96-009

Avery Dennison	T-7500	White	SSM-00-766
Avery Dennison	T-7501	Yellow	SSM-01-869
INK:			
Avery Dennison	4930 Series	Black, Red, Blue, Green, Yellow	
Ink and overlay films shall be specified by sheeting manufacturer			
Manufacturer	Product No.	Color	NTPEP Submittal No.
3M	3930	White	SSM-04-1061
3M	3931	Yellow	SSM-04-1062
3M	3932	Red	SSM-06-1148
3M	3935	Blue	SSM-05-1079
3M	3937	Green	SSM-04-1063
3M	3939	Brown	SSM-07-1247
3M	3930	White	SSM-04-1061
Ink:			
3M	882	Traffic Sign Red	
3M	883	Blue	
3M	884	Yellow	
3M	885	Black	
3M	886	Orange	
3M	887	Brown	
3M	888	Green	
3M	891	Thinner	
3M	893	Violet	
3M	894	Lemon Yellow	
3M	895	Magenta	
Reflective sheeting used on permanent recreational and cultural interest area guidance signs, and for the hand symbol / DON'T WALK and numerals on permanent educational pedestrian signal signs (R 10-3b thru R10-3e) (CONTINUED):			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Nippon Carbide	N812	White	SSM-97-7
Nippon Carbide	N512	White	SSM-97-7
Nippon Carbide	N804	Yellow	SSM-97-7
Nippon Carbide	N808	Green	SSM-97-7
Nippon Carbide	N805	Red	SSM-97-7
Nippon Carbide	N806	Blue	SSM-97-7
Nippon Carbide	N809	Brown	SSM-97-7
Ink:			
Nippon Carbide	3800N series		
Inks and overlay films shall be specified by sheeting manufacturer			

List No. 46 (Cont.)

Reflective sheeting used to delineate the trailer's back frame of Portable Changeable Message Signs (PCMS), Automatic Flagger Assistance Device (AFAD) gate arm, arrow boards and portable lights.			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	981-32	White/red	Not Required
Avery Dennison	V-5720	White/Red	Not Required
ORAFOL Americas, Inc	V82 Classic	White/Red	Not Required
ORAFOL Americas, Inc	V99 Daytime White	White/Red	Not Required
ORAFOL Americas, Inc	V92 Daybright	White/Red	Not Required

Reflective sheeting used on Type III Barricades			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	3334/3336	White/Orange	SSM-09-1342
3M	446R	White/Orange	SSM-05-1110
3M	336	White/Orange	SSM-06-1152
Avery Dennison	W-7140	White/Orange	SSM-03-988
Avery Dennison	W-6000	White/Orange	SSM-07-1240

Orange construction and maintenance signs, barrier vertical panels installed on concrete traffic barrier service, rear panel of truck mounted attenuators, temporary impact attenuators (except sand barrels) and the "SLOW" side of sign paddles.			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	3924	Fluorescent Orange	SSM-03-1028
3M	3924 S	Fluorescent Orange	SSM-03-1038
3M	3954	Fluorescent Orange	SSM-02-26
3M	4084	Fluorescent Orange	SSM-05-1109
Ink:			
3M	885	Black	

Sheeting:			
Avery Dennison	W-7514	Fluorescent Orange	SSM-00-25
Ink:			
Avery Dennison	4930 Series	Black	
Sheeting:			
Nippon Carbide	CRG 92847	Fluorescent Orange	SSM-02-909
Ink:			
Nazdar	4930	Black	
Nikkalite	N3603	Black	
Inks and overlay films shall be specified by the sheeting manufacturer			

List No. 46 (Cont.)

Reflective sheeting used on Tubular Delineators, Drums, and Temporary Sand Barrels			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	3810	White	SSM-01-03
3M	3814	Orange	SSM-01-03
3M	3914	Fluorescent Orange	SSM-98-13
Sheeting:			
Avery Dennison	WR-6100series	White	SSM-00-26
Avery Dennison	WR-6100series	Orange	SSM-00-27

Reflective sheeting used on Permanent Sand Barrels and Cones			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	3810	White	SSM-01-03
3M	3814	Orange	SSM-01-03
3M	3811	Yellow	SSM-96-7
Sheeting:			
Avery Dennison	WR-6100series	White	SSM-00-26
Avery Dennison	WR-6100series	Orange	SSM-00-27

Reflective sheeting used on Reflective Roll-up signs			
Manufacturer	Product No.	Color	NTPEP Submittal No.
Sheeting:			
3M	RS-20-CW	White	MS 09195
3M	RS-24-CW	Fluorescent Orange	MS 09177
3M	RS-60	White	MS (26334)
3M	RS-64	Fluorescent Orange	MS (26335)

Ink:			
3M	1805	Black	
Sheeting:			
ORAFOL Americas, Inc	Marathon	White	MS 19666
ORAFOL Americas, Inc	Marathon	Fluorescent Orange	MS 19667
Ink:			
Inks and overlay films shall be specified by the sheeting manufacturer			

List No. 47

(47) ACRYLIC PAINT FOR ALUMINUM AND GALVANIZED SURFACES – (Chemistry Lab)

<u>Manufacturer</u>	<u>Paint</u>	<u>Dry Film Thickness (DFT)</u>	<u>Color</u>
<u>Carboline Paint Co.</u> Primer: Top Coat:	Carbocrylic 120 Carbocrylic 3350	1.0 – 2.0 mils 2.0 – 3.0 mils	White As Specified
<u>Elite Coatings</u> Primer: Top Coat:	W – 186 Metal Primer Water Guard Series	3.0 mils 3.0 mils	Buff As Specified
<u>M.A.B. Paints</u> Primer: Top Coat:	HydroPrime (073-189) Seashore Enamel (024 Line)	1.5 – 2.0 mils 1.5 – 2.0 mils	White As Specified
<u>Porter Coatings</u> Primer: Top Coat:	212 DTM Acrylic 2809 Series	2.0 mils 2.5 – 3.0 mils	Red As Specified
<u>Sherwin Williams</u> Primer: Top Coat:	B71Y1 DTM Wash B66-200 Series Finish	0.7 – 1.3 mils 2.5 – 4.0 mils	Yellow – Green As Specified

Surface Preparation

All aluminum and galvanized surfaces shall be cleaned in accordance with SSPC-SP1 to remove oil, dirt, grease and any foreign matter that may be present. Secondly, the surface shall be cleaned using an acid etching solution (agreed upon by the manufacturer of the paint) to remove any aluminum oxide or zinc oxide present on the surface. Once etching is complete, the surface shall be washed with clean potable water to neutralize the acid. All of the above procedures are critical to assure proper adhesion and durability of the coating when painting either of these surfaces.

It may be necessary to sweep blast both aluminum and galvanized surfaces after cleaning the surface according to SSPC SP-1. This may be used as an alternative to acid etching. This type of surface preparation should be evaluated on a case-by-case basis and in conjunction with the manufacturer's recommendations.

(48) APPROVED TYPE F CONSTRUCTION MARKINGS – (Chemistry Lab)

All waterborne paint markings shall be applied at a wet film thickness of 15±1 mil and a glass bead application rate of 6 pounds per gallon.

WATERBORNE PAINT CLASS I

Manufacturer	Product No.	NTPEP Submittal No.
White		
Sherwin Williams	BP-14016	STR-97-41-AL
	BP-14019	STR-97-44-AL
	BP15652	STR-98-PA-135
	BP15622	STR-98-PA-150
	BP17312	PMM(2000PA)-170
	BP17313	PMM(2000PA)-171
	BP17316	PMM(2000PA)-174
Ennis Paint (formerly LaFarge Road Markings and Centerline)	CL-6000	STR-96-64-PA
	CL-6004	STR-96-68-PA
	CL-7018	STR-97-69-AL
	CL-8210	STR-98-PA-96
	CL-8214	STR-98-PA-100
	CL-8216	STR-98-PA-102
	CL-8218	STR-98-PA-104
	CL-8220	STR-98-PA-106
	CL-8222	STR-98-PA-108
Ennis Paint (formerly LaFarge Road Markings and Linear Dynamics)	LD96-1002	STR-96-85-PA
	LD96-1008	STR-96-91-PA
	LD971001C	STR-97-138-AL
	LD981001	STR-98-PA-158
	LD981002	STR-98-PA-159
	LD981003	STR-98-PA-160
	LD981004	STR-98-PA-161
	LD981005	STR-98-PA-162
Ennis Paint (formerly LaFarge Road Markings)	LRMOOWB-19	PMM(2000PA)-110
	LRMOOWB-20	PMM(2000PA)-111
Ennis Paint	Douglas 303-98	STR-98-PA-214
	Ennis EP200W13	STR-98-PA-17
	Ennis EP200W14	STR-98-PA-18
	Ennis EP200W16	STR-98-PA-20
	EP415W03	PMM(2000PA)-61
	EP415W04	PMM(2000PA)-62

--	--	--

WATERBORNE PAINT CLASS I

Manufacturer	Product No.	NTPEP Submittal No.
Yellow		
Sherwin Williams	BP-14021	STR-97-46-AL
	BP15611	STR-98-PA-139
	BP15623	STR-98-PA-151
	BP17314	PMM(2000PA)-172
Ennis Paint (formerly Linear Dynamics) and LaFarge Road Markings	LD96-1009	STR-96-92-PA
	LD981009	STR-98-PA-165
	LD981010	STR-98-PA-166
Ennis Paint (formerly LaFarge Road Markings)	LRMOOWB-31	PMM(2000PA)-122
Aexcel	72Y-AO65	STR-96-148-PA
Ennis Paint	Douglas 306-98	STR-98-PA-217
	Douglas 307-98	STR-98-PA-218
	Ennis EP200Y-15	STR-98-PA-26
	Ennis EP200Y-18	STR-98-PA-29
	EP415Y03	PMM(2000PA)-66
	EP415Y04	PMM(2000PA)-67
	EP415Y05	PMM(2000PA)-68
	EP415Y06	PMM(2000PA)-69

WATERBORNE PAINT CLASS II

Manufacturer	Product No.	NTPEP Submittal No.
White		
Sherwin Williams	BP-14016	STR-97-41-AL
	BP15652	STR-98-PA-135
	BP15622	STR-98-PA-150
	BP17312	PMM(2000PA)-170
	BP17313	PMM(2000PA)-171
Ennis Paint (formerly Centerline and LaFarge Road Markings)	CL-8214	STR-98-PA-100
	CL-8216	STR-98-PA-102
	CL-8218	STR-98-PA-104
	CL-8220	STR-98-PA-106
	CL-8222	STR-98-PA-108
Ennis Paint (formerly Linear Dynamics) and LaFarge Road Markings	LD981001	STR-98-PA-158
	LD981004	STR-98-PA-161
	LD981005	STR-98-PA-162
Ennis Paint	Douglas 303-98	STR-98-PA-214
	Ennis EP200W13	STR-98-PA-17
	Ennis EP200W14	STR-98-PA-18
	Ennis EP200W16	STR-98-PA-20
	EP415W03	PMM(2000PA)-61
	EP415W04	PMM(2000PA)-62
Yellow		
Sherwin Williams	BP-14021	STR-97-46-AL
	BP15623	STR-98-PA-151
	BP17314	PMM(2000PA)-172
Ennis Paint LaFarge Road Markings	LRMOOWB-31	PMM(2000PA)-122
Ennis Paint	Douglas 306-98	STR-98-PA-217
	Douglas 307-98	STR-98-PA-218
	EP415Y03	PMM(2000PA)-66
	EP415Y04	PMM(2000PA)-67
	EP415Y05	PMM(2000PA)-68
	EP415Y06	PMM(2000PA)-69

(49) QUALIFIED SEALERS AND TOPCOATS FOR METALLIZED SURFACES –
(Chemistry Lab)

Note: Effective with the February 2005 advertisement, all approved paint systems must not exceed the 2.8 lb/gal/ VOC requirement. Also paints manufactured after January 1, 2005 must meet these requirements if supplied to or applied in the Northern Virginia VOC Emission Control Area. This consists of the counties of Arlington, Fairfax, Loudoun, Prince William and Stafford, and the cities Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park City.

The following sealer/topcoat systems have been prequalified for use, but the manufacturer must provide certification for each lot.

Manufacturer	DFT, mils
Carboline:	
Rustbond FC	1.0-2.0
Carbothane 134 HG or 134 HS topcoat	2.0-3.0
ICI Devco Coatings:	
Pre-Prime 167	0.5-1.5
Devthane 378 topcoat	2.0-3.0
Xymax:	
Monolock PP	1.5-2.5
Bridge Finish topcoat	1.0-2.0

**(50) PERFORMANCE GRADED (PG) BINDER SOURCES ON VA ASPHALT ACCEPTANCE PROGRAM -
(Asphalt Lab)**

Code Number	Certifying Supplier	Shipping Location	Materials
10	Associated Asphalt, Inc.	Bristol, VA Associated Asphalt Bristol, LLC 10 Spurgeon Lane Bristol, VA 24203	PG 64-22 PG 70-22 PG 76-22 PMA PG 64S-22 PG 64H-22 PG 64E-22
11	Associated Asphalt, Inc.	Roanoke, VA Associated Asphalt Roanoke, LLC 2677 Roanoke Ave., SW Roanoke, VA 24015	PG 64-22 PG 70-22 PG 76-22 PMA PG 64S-22 PG 64H-22 PG 64E-22
12	Associated Asphalt, Inc.	Martinsburg, WV 855 Corning Way Martinsburg, WV 25401	PG 64-22 PG 70-22 PG 76-22 PMA PG 64S-22 PG 64H-22 PG 64E-22
13	Associated Asphalt, Inc.	Greensboro, NC 100 S. Chimney Rock Road Greensboro, NC 27409	PG 64-22 PG 70-22 PG 76-22 PMA PG 64S-22 PG 64H-22 PG 64E-22 PG 64V-28
14	Associated Asphalt LLC	Associated Asphalt Hopewell LLC 410 Water Street Hopewell, VA 23860	PG 64-22 PG 76-22 PG 64S-22 PG 64E-22
20	Bitumar USA	Baltimore, MD Bitumar USA 6000 Pennington Ave Baltimore, MD 21226	PG 64-22 PG 70-22 PG 70-28 PG 76-22 PMA PG 64S-22 PG 64H-22 PG 64E-22 PG 64V-28

Code Number	Certifying Supplier	Shipping Location	Materials
21	Bitumar USA	Baltimore, MD Westway Terminal Company, LLC 1055 Hull Street Baltimore, MD 21230	PG 64-22 PG 64S-22
22	Bitumar USA	Baltimore, MD Mid States Oil Terminal 5501 Pennington Ave Baltimore, MD 21226	PG 64-22 PG 64S-22
23	Bitumar USA	Allmine Paving 200 Development Drive Inwood, WV 25428	PG 64S-22
30	APEX Oil Company, Inc.	APEX Oil Company, Inc-Chesapeake 428 Barnes Road Chesapeake, VA 23434	PG 64-22 PG 64S-22
31	APEX Oil Company, Inc.	APEX Oil Company, Inc- Baltimore Petroleum Fuel & Terminal Co.-Apex 1622 S. Clinton Street Baltimore, MD 21224	PG 64-22 PG 64S-22 PG 64E-22
40	Marathon Petroleum Company, LLC	Ashland (Catlettsburg), KY Marathon Petroleum Company, LLC 11631 US Route 23 Catlettsburg, KY 41129	PG 64-22 PG 64S-22
41	Marathon Petroleum Company, LLC	Knoxville, TN 1808 Jones Street Knoxville, TN 37920	PG 64-22 PG 76-22 PG 64S-22 PG 64E-22

Code Number	Certifying Supplier	Shipping Location	Materials
42	Marathon Petroleum Company, LLC	Big Sandy Terminal 15085 OLD US-23 Catlettsburg, KY 41129	PG 64E-22
50	Associated Asphalt, Inc.	Dumfries, VA NuStar Energy 18000 Cockpit Point Rd Dumfries, VA 22026	PG 64-22 PG 70-22 PG 76-22 PMA PG 64S-22 PG 64H-22 PG 64E-22
51	Associated Asphalt, Inc.	Baltimore, MD NuStar Energy 1800 Frankfurt Ave. Baltimore, MD 21226	PG 64-22 PG 70-22 PG 58-28 PG 76-22 PMA PG 64S-22 PG 64H-22 PG 58S-28 PG 64E-22
53	Associated Asphalt, Inc.	Newport News, VA 801 Terminal Avenue Newport News, VA 23607	PG 64-22 PG 70-22 PG 76-22 PMA PG 70-28 PMA PG 58S-28 PG 64S-22 PG 64H-22 PG 64E-22 PG 64V-28
55	Associated Asphalt, Inc.	Gloucester (Terminal #B099) King Street & Jersey Avenue Gloucester City, NJ 08030-0031 Telephone: (856) 456-6673 Terminal Manager: Ted Davis	PG 70-28 PG 64V-28
56	Associated Asphalt, Inc.	Richmond, VA Kinder Morgan 4110 Deepwater Terminal Rd Richmond, VA 23234	PG 64-22 PG 64S-22

Code Number	Certifying Supplier	Shipping Location	Materials
80	Ergon Phillips 66	3111 McClure Lane Knoxville, TN 37290	PG 64-22 PG 76-22 PG 64S-22 PG 64E-22
90	Blacklidge Emulsions, Inc	Greer, SC 539 East Poinsett Street Greer, SC 29651	PG 64-22 PG 64S-22
100	J.T. Russell and Sons	Charlotte Terminal 601 North Hoskins Road Charlotte, NC 28126	PG 64-22 PG 64S-22
101	J.T. Russell and Sons	Albemarle Terminal 221 Snuggs Road Albemarle, NC 28001	PG 64-22 PG 64S-22
102	J.T. Russell and Sons	Healing Springs Terminal 18846 NC Hwy 8 Denton, NC 27239	PG 64-22 PG 64S-22
103	J.T. Russell and Sons	Branchville, VA 32420 Moore Lane Branchville, VA 23828	PG 64-22 PG 64S-22
110	Gardner Asphalt Supply, LLC	Seaford, DE 25935 Nanticoke Street Seaford, DE 19971	PG 64S-22
120	Asphalt Emulsions, Inc	Richmond, VA 1524 Valley Road. Richmond, VA 23222	PG64H-22
121	Asphalt Emulsions, Inc	Manassas, VA 8730 Vulcan Lane Manassas, VA 20109	PG64H-22
122	Asphalt Emulsions, Inc	Richmond, VA 7700 Fort Darling Road Richmond, VA 23237	PG64S-22
130	Gunvor USA, LLC	Targa Terminal 1955 Chesapeake Ave Baltimore, MD 21226	PG64S-22

(50.1) EMULSIFIED ASPHALT SOURCES ON VA ASPHALT ACCEPTANCE PROGRAM
(Asphalt Lab)

Code Number	Certifying Supplier	Shipping Location	Materials
10	Asphalt Emulsion, Inc	Richmond, VA 1524 Valley Road. Richmond, VA 23222	CRS-1, CRS-1h, CRS-2, CRS-2L, CQS-1H, CQS-1HLM, CSS-1H, RC-250
11	Asphalt Emulsion, Inc	Manassas, VA 8730 Vulcan Lane Manassas, VA 20109	CRS-1, CRS-1h, CRS-2, CRS-2L, CRS-2P, CQS-1H, CQS-1HLM, CSS-1H
12	Asphalt Emulsion, Inc	Dumfries, VA 18000 Cockpit Point Rd Dumfries, VA 22026	CRS-1, CRS-2, CRS-2L, CSS-1H
13	Asphalt Emulsion, Inc	Newport News, VA 801 Terminal Ave Newport News, VA 23607	CRS-1, CRS-1h, CRS-2, CRS-2L, CQS-1H, CQS-1HLM
14	Asphalt Emulsion, Inc	Dunn, NC 151 Emmett Rd Dunn, NC 28334	CRS-1, CRS-2, CRS-2L, CQS-1H, CQS-1HLM, CSS-1H
20	Associated Asphalt Roanoke, LLC	Bristol, VA 10 Spurgeon Lane Bristol, VA 24201	CRS-2, CRS-2L, CSS-1h
21	Associated Asphalt Roanoke, LLC	Roanoke, VA 2677 Roanoke Ave, SW Roanoke, VA 24015	CRS-1h, CRS-2, CRS-2L
31	Asphalt Emulsions, Inc	Richmond, VA 7700 Fort Darling Road Richmond, VA 23237	CRS-2, CRS-2L, THMACOBond
32	Hammaker East, LLC	Baltimore, MD 3450 Asiatic Ave Baltimore, MD 21226	CRS-1, CRS-2, CSS-1h, CRS-2L, CQS-1hLM, CQS-1h

33	Hammaker East, LLC	Chambersburg, PA 118 Siloam Rd Chambersburg, PA 17201	CRS-2, CSS-1h, CRS-2P
34	Hammaker East, LLC	Greensboro, NC 1124 S. Holden Rd Greensboro, NC 27407	CRS-2, CRS-2L
40	Blackledge Emulsions, Inc.	Greer, SC 539 East Poinsett Street Greer, SC 29651	CRS-1, CRS-2
50	Seaboard	Baltimore, MD 3601 Fairfield Road Baltimore, MD 21226	EM-50
60	Specialty Emulsions	York, PA 1194 Zinns Quarry Rd. York, PA 17404	CRS-1, EM-50
80	Gardner Asphalt Supply, LLC	Seaford, DE 25935 Nanticoke Street Seaford, DE 19971	CRS-1, CRS-2

(50.1A) APPROVED NONTRACK TACK COAT MATERIALS (Asphalt Lab)

The approved materials on List 50.1A must ship from an approved source and location on List 50.1.

Manufacturer	Product Name	Code
Blacklidge Emulsions	UltraTack	10
Blacklidge Emulsions	UltraFuse	11
Hammaker East	CNTTC	20
Asphalt Emulsions, Inc.	NTCQS-1HM	30
Seaboard Asphalt	EM-50TT	40
Associated Asphalt	NTCRS-1HSP	50
Specialty Emulsions	EM-50TT	60
Appalachian Materials Group	Drive on Tack Coat (DOT C-10)	70

(51) APPROVED 2% COPPER NAPHTHENATE – (Chemistry Lab)

The following products have been approved for field use on saw cut CCA-treated wood posts.

Jasco Termin-8

Behr #90

W. M. Barr Coppo-W

Green's Copper

(52) ARTICULATED BLOCKS FOR SLOPE PROTECTION & DITCHLINING – (Location & Design)

Armorflex	Armortec, Inc. Suite 1990, Peachtree Corners Plaza Norcross, Georgia 30071 (800)241-6313 Note: Mats come in 320 sq. ft. sections. Requires a crane to lift sections into place.
Hexagonal Interlocking Panels	Ecological Technology Company, Inc. Thesauer Weg D-04460 Kitzen Germany +4934296/779-20 +4934296/779-33 Fax
NOR-Bloc	Norwood, Inc. 222 George Street Beckley, West Virginia 25801 (304)252-6517 Note: Individual interlocking blocks.
Cable Concrete	Permatile Concrete Products Co. P. O. Box 2049 100 Beacon Road Bristol, Virginia 24203-2049 (540)669-5332 Note: Mats come in 2 ft. x 4 ft. sections or 16 ft. x 4 ft. sections.
Shoreloc (formerly GeoLink)	ACF Environmental 2831 Cardwell Road Richmond, VA 23234 (800) 223-9021 Note: Mats come in either 4" x 12" x 16" or 6" x 12" x 16" blocks.
Shoreblock SD	ACF Environmental 2831 Cardwell Road Richmond, VA 23234 (800) 223-9021

(53) EROSION CONTROL MULCHES – (Maintenance Div.)

Straw of Hay Mulch applied at a rate of 3,000 lbs. per acre (3,600 kg/hectare) so as to provide a minimum 95% coverage to the soil. Straw or hay shall be tacked with fiber mulch applied at a of 1,000 lbs. per acre, an approved mulch tackifier applied as recommended by the manufacturer, punching, or disking into the soil, or other method approved by the Engineer.

Manufacturers of Mulch Products acceptable for use as Erosion Control Mulch:

Airtrol	United States Gypsum Co. 125 South Franklin Street Chicago, IL 60606 (312)214-9192
Earth Guard Matrix	Terra Novo 2930 Patton Way Bakersfield, CA 93308
Excel Fibermulch II Bindex BFM Bindex Blend Bindex Blend WT Bindex Wood Bindex Wood WT	American Excelsior Company 831 Pioneer Ave Rice Lake, WI 54868 Attn: Kurt Kelsey (715) 236-5643
Flexterra Flexible Growth Medium (FGM) ProMatrix-Engineered Fiber Matrix	Profile Products, LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 (866) 325-6262
Hydra CX2	North American Green 14649 Highway North Evansville, IN 47725 (800) 772-2040
HY-C4	East Coast Erosion Blankets, LLC 443 Bricker Road Bernville, PA 19506 (610) 488-8496
HydroStraw Mulch HydroStraw Guar Plus Formulation HydroStraw Bonded Fiber Matrix	HydroStraw, LLC 3676 W 9000 N Road Manento, IL 60950 1-800-545-1755
Mulch & Grow Bonded Fiber Matrix	Carolina Precision Fibers P.O. Box 624 Elkin, NC 28621
PAM-12	ENCAP, LLC 3921 Algoma Rd. Green Bay, WI 54311-9707
Posi-Cube Seed and Soil Guard	LSC Environmental Products, LLC 2183 Pennsylvania Ave Apalachin, NY 13732
Spraymat	Profile Products LLC Sandra House 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681 shouse@profileproducts.com

Soil Guard	Mat, Inc. 12402 Highway 2 Floodwood, MN 55736
Soil Sement	Mid-West Industrial Supply Co., Inc. 14330 Heathland Terrace Midlothian, Virginia 23113 (804)794-4403 Hal Martin, representative
USG Enviro-Shield Brand Bonded Fiber	United States Gypsum Co. 125 South Franklin Street Chicago, IL 60606 (312)214-9192

(54) FIBER MULCH SUPPLIERS – (Please see list No. 11)

(55) MULCH TACKIFIER SUPPLIERS – (Maintenance Div.)

TacPac GT	Profile Products LLC Sandra House 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681 shouse@profileproducts.com
Contactack Contactack AT	Conwed Fibers 1850 Tate Blvd., S.E. Suite 350 Hickory, NC 28601 (800)366-1180
EcoTak OP-5 EcoTak SAT-11	Eastern Products, Inc. One Copperfield Way Mahwah, New Jersey 07430-3200 (201)684-0463, (201)684-0464 FAX EPINJ@aol.com
EC 1000 EC 3000 ECT 3000 (copolyacrylamide)	Erosion Control Technologies, Inc 3380 Route 22 West, Unit 3A Branchburg, NJ 08876 P. O. Box 5383 North Branch, NJ 08876 (800)245-0551, (908)707-1445 FAX
A500 Hydro Stik	Finn Corp. 9281 LeSaint Drive Fairfield, Ohio 45014 (800)543-7166
Jonathan Green Hydrogreen Tackifier Jonathan Green Super Tackifier	Joanathan Green Turf Products P. O. Box 326 Farmingdale, New Jersey 07727 (800)526-2303, (908)938-5788 FAX
Progacyl AG-50	Lyndal Chemical Co. P.O.Box 1740 Coronet Dr. Dalton, GA. 30720 (404)259-4831
Terra-Mulch Tacking Agent 3	Profile Products LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 (800) 215-3427
Mulch Mate Supertac StrawMate Tackifier	PRS Materials, Inc. 520 Pusey Avenue Collingdale, PA 19023 prsm@juno.com (610)532-3960, (610)534-1555 Fax (800)432-3966
Dirt Glue	Unocal Corp. Unocal Chemicals Division 1445 Alondra Blvd. La Mirada, CA. 90638 (714)228-4749

List No. 55 (cont.)

Tornado Tack ST-1000	Profile Products LLC 750 Lake Cook Road – Suite 440 Buffalo Grove, IL 60069 (800)215-3427
Fiber Rx	HydroStraw, LLC 3676 W 9000 N Road Manento, IL 60950 1-800-545-1755

(56) STANDARD EC-2 EROSION CONTROL BLANKETS – (Maintenance Div.)

NOTE: Products on this list may be selected for use only on VDOT projects still subject to the 2007 VDOT Road and Bridge Specifications. EC-2 type products to be used on VDOT projects subject to the 2016 (or newer) VDOT Road and Bridge Specifications must be selected from VDOT Approved Product List No. 80, Temporary Rolled Erosion Control Products (EC-2 Types 1 thru 4).

(VELOCITY 2.5 – 4.0 f.p.s.)	
Curlex Curlex I Curlex I CL Curlex II Curlex II CL Straw, Premier, Single, Green Net Straw, Premier, Double, White Net	American Excelsior Company 831 Pioneer Ave. Rice Lake, WI 54868 Attn: Kurt Kelsey (715) 234-6861
Anti-Wash/Geojute	Belton Industries 8613 Roswell Road, Suite 200 Atlanta, Ga. 30350 (800) 225-4099, (770) 992-6361 Fax
Jute Mesh	Bemis Brothers Bag Company St. Louis, Mo.
Jute Mesh	Belting Bagging Company Belton, South Carolina
Dekowe 700 Dekowe 900	Belton Industries Hambry Road Belton, South Carolina 29627
East Coast ECC-2; ECC-2B East Coast ECS-1; ECS-1B East Coast ECS-2; ECS-2B East Coast ECSC-2; ECSC-2B ECX-1 ECX-2	East Coast Erosion Blankets, LLC 443 Bricker Road Bernville, PA 19506 Diane M. Hitt (610) 488-8496, Fax (610) 488-8494
S1000	Enviroscape ECM, Ltd. 22700 State Route 613 Oakwood, OH 45873 (888) 550-1999, Fax (419) 594-3213
S32 UVD, SC32, S32, S31 UVD, S31, C32	ErosionControlBlanket.com Box 69 Riverton Manitoba, Canada R0C 2R0 Roy Nelsen (970) 875-1158, Fax (970) 871-6779
Earthlock St'd. Straw – Proguard SS High Velocity Straw – Proguard DS St'd. Excelsior – Everhold XL1 High Velocity Excelsior – Everhold XL2	Erosion Control Systems, Inc. 9015 Energy Lane Northport, Alabama 35406 (205)333-3080, Fax (205) 333-3090
ETRS-1 ETRS-2 ETSC-70/30 ETC-100	Erosion Tech, LLC 105 Plant Camellia Road Juliet, GA 31046 Josh Still

(VELOCITY 2.5 - 4.0 f.p.s.)	
Greenfix WS05 Straw Blanket Greenfix WSO5B Straw Blanket Greenfix WSO52 Straw Blanket Greenfix WSO72 Straw Blanket Greenfix WSO72B Straw Blanket Greenfix CFS072B Straw -Coir Blanket Greenfix CFSO72R Straw -Coir Blanket Greenfix CFO72RR Coir Blanket Greenfix CFO72B Coir Blanket	Greenfix America P. O. Box 23310 Santa Barbara, California 93121 (800)929-2184 (888)GREENFX
Jute Erosion Control Matting	The Griffith Bag Company, Inc. 510 Waterman Drive Harrisonburg, VA 22801 (800)433-2615, (540)433-2616
Soil Saver Heavy Jute Mesh	Jim Walls Company Commerce Plaza, Suite 109 12820 Hillcrest Road Dallas, Texas 75230
JMD Jute Mesh	JMD Manufacturing 5401 Progress Blvd. Bethel Park, PA. 15102
Jute Mesh	L & M Bag and Supply Co., Inc. 541 Hazel Avenue P.O. Box 865 Nashville, Georgia 31639
Jute Mesh	Ludlow Manufacturing & Sales Co. Needham Heights 94, MA
MA-S1	Mid America Erosion Control Products, Inc. P.O. Box 488, Charlestown, IN 47111 Kris Bernens (812) 289-1900 (812) 289-1599 Fax
Koir Mat 400	Nedia Enterprises, Inc. 22187 Vantage Pointe Place Ashburn, VA 20148 (571) 223-0200 (571) 223-0202 Fax
S-75, SC-150,C-125, S150, S75BN, S150BN, SC150BN, C125BN	North American Green 14649 Highway 41 North Evansville, Indiana 47711 (812)867-6632
RS-1 Straw RS-2 Straw	American Earth Solutions 5830 Highway 161 Springfield, Tennessee 37172 (615) 382-3300, (877) 56ROBEX
BioD Mat 70 BioD Mat 90 BioD-SiltCheck	RoLanka International, Inc. 155 Andrew Drive Stockbridge, GA 30281 (770)506-8211
S-1 S-2 CS-2 C-2	SI Geosolutions 6025 Lee Highway, Suite 435 Chattanooga, TN 37421 (800)621-0444, (423)485-9068 Fax
SEC-S1, SEC-S2, SEC-XL1, SEC-XL2, SEC-SC2, SEC-C2	Southern Environmental Conservation (SEC) 902 Main Avenue, Suite A Northport, Alabama 35476 (866) 252-4486 (205) 752-1206 Fax

(VELOCITY 2.5 - 4.0 f.p.s.)	
US-1S, US-2S, US-2S/C, US-2C	US Erosion Control Products 1800 Springhead Church Rd. Willacoochee, GA 31650
Verdyol Standard ERO-MAT Verdyol High Vel. ERO-MAT Verdyol Excelsior Standard Verdyol Excelsior High Vel.	Verdyol Alabama, Inc. P.O.Box 605 407 Miles Pkwy. Pell City, AL. 35125-0605 (205) 338-4411, (205) 338-4595 Fax
Terraguard SS Terraguard DS	WEBTEC, Inc. P. O. Box 19729 Charlotte, NC 28219 Dave Snyder (800)438-0027, (704)394-7946 Fax
X-Cel Permatat 100 Excel SS2 Excel SR-1 Excel R-1 Excel S-2 Excel CC-4	Western Excelsior 4609 E Boonville-New Harmony Rd Evansville IN, 47725 Ph: 866-540-9810 FX: 812-867-8928
WintersFiber WinterStraw SNG, WinterStraw HVW Winters Choice Winters Coir	Winters Excelsior Company 77 Holly Road P.O. Box 39 McWilliams, AL 36753 (800) 248-7237, (251) 746-2173, (251) 746-2579 fax

§244.02 (k)(2). Soil retention mats shall consist of a machine-produced mat of wood fibers, wood excelsior, or manmade fiber that shall intertwine or interlock. Matting shall be nontoxic to vegetation and germination of seed and shall not be injurious to the unprotected skin of the human body.

Mats shall be of consistent thickness, with fiber evenly distributed over its entire area, and covered on the top and bottom side with netting having a high web strength or covered on the top side with netting having a high web strength and machine sown on maximum 2-inch centers along the longitudinal axis of the material. Netting shall be entwined with the mat for maximum strength and ease of handling.

(57) STANDARD EC-3 TYPE A, TYPE B, & TYPE C SOILS STABILIZATION MATS – (Maintenance Div.)

NOTE: Products on this list may be selected for use only on VDOT projects still subject to the 2007 VDOT Road and Bridge Specifications. EC-3 type products to be used on VDOT projects subject to the 2016 (or newer) VDOT Road and Bridge Specifications must be selected from VDOT Approved Product List No. 81, Permanent Rolled Erosion Control Products (EC-3 Types 1 thru 3).

TYPE A MATS (Velocity 4.0 - 7.0 f.p.s.)	
AEC Premier Straw/Coconut AEC Premier Coconut Curlex I (.98)	American Excelsior Company 831 Pioneer Ave. Rice Lake, WI 54868 Attn: Kurt Kelsey (715) 234-6861
Earthlock Enkamat 7003 (formerly 7005) Enkamat 7010 Enkamat II	Colbond Inc. 1301 Sand Hill Road P.O. Box 1057 Enka, NC Attn: Jason Willis (800) 365-7391, (828) 665-5009 fax (Formerly Erosion Control Systems Northport, Al. 35476)
ECP-2; ECP-2 10 oz ECX-2 ECC-2 ECC-3 ECP-3 ECSC-2 ECSC-3 T-RECS	East Coast Erosion Blankets, LLC 443 Bricker Road Bernville, PA 19506 Diane M. Hitt (610) 488-8496, Fax (610) 488-8494
C4000 S2000 SC3000	Enviroscape ECM, Ltd. 22700 State Route 613 Oakwood, OH 45873 (888) 550-1999, Fax (419) 594-3213
ETSC-70/30 ETC-100 ETPP-10	Erosion Tech, LLC 105 Plant Camellia Road Juliette, GA 31046 Josh Still
Greenfix CF072RP	Greenfix America P. O. Box 23310 Santa Barbara, California 93121 (800)929-2184 (888)GREENFX
MacMat N10 MacMat N20 MacMat N6P MacMat N6G MacMat N8P MacMat N8G	Maccaferri Environmental Solutions 10303 Governor Lane Blvd Williamsport, MD 21795-3116 (301) 223-6910 (301)223-6134 Fax
C350 SC250 P300	North American Green 14649 Highway 41 North Evansville, Indiana 47711 (812)867-6632

P42	ErosionControlBlanket.com Box 69 Riverton Manitoba, Canada R0C 2R0 Roy Nelsen (970) 875-1158, Fax (970) 871-6779
CS-3	Western Excelsior 4609 E. Boonville-New Harmony Rd. Evansville IN, 47725 Ph: 866-540-9810 FX: 812-867-8928
Landlok 435	Propex Operating Company, LLC 428 Rollins Industrial Blvd. Ringgold, GA 30736 (706) 965-6300, Fax (423) 553-3758
RSSC-3 RSC-4	American Earth Solutions 5830 Hwy 161 Springfield, TN 37172 (615)382-3300 Fax (615) 382-9051
S32, S32 UVD	ErosionControlBlanket.com Box 69 Riverton Manitoba, Canada R0C 2R0 Roy Nelsen (970) 875-1158, Fax (970) 871-6779
SEC-C2, SEC-P2	Southern Environmental Conservation (SEC) 902 Main Avenue, Suite A Northport, Alabama 35476 (866) 252-4486 (205) 752-1206 Fax
US-2S/C, US-2C, US-2P10, US-2P12	US Erosion Control Products 1800 Springhead Church Rd. Willacoochee, GA 31650
*Mats listed in the Type B category may be substituted for the Type A material at no additional cost to VDOT.	

TYPE B MATS (Velocity 7.0 - 10.0 f.p.s.)	
AEC Curlex II (.98) AEC Curlex III AEC Curlex Enforcer AEC Curlex High Velocity Recyclex Recyclex TRM – V AEC Premier Coconut AEC Premier Straw/Coconut	American Excelsior Company 831 Pioneer Ave. Rice Lake, WI 54868 Attn: Kurt Kelsey (715) 234-6861
Enkamat 7012 Enkamat 7018 Enkamat 7020 Enkamat 7210 Enkamat 7220 Enkamat II	Colbond Inc. 1301 Sand Hill Road P.O. Box 1057 Enka, NC Attn: Jason Willis (800) 365-7391, (828) 665-5009 fax (Formerly Erosion Control Systems Northport, Al. 35476)
ECX-2 ECC-2; ECC-3 ECP-2 ECP-2 10 oz ECP-3 ECSC-2 ECSC-3 T-RECS	East Coast Erosion Blankets, LLC 443 Bricker Road Bernville, PA 19506 Diane M. Hitt (610) 488-8496, Fax (610) 488-8494
C32, SC32	ErosionControlBlanket.com Box 69 Riverton Manitoba, Canada R0C 2R0 Roy Nelsen (970) 875-1158, Fax (970) 871-6779
ETPP-10	Erosion Tech, LLC 105 Plant Camellia Road Juliette, GA 31046 Josh Still
PEC-MAT	Greenstreak, Inc. 3400 Tree Court Ind. Blvd. St. Louis, Missouri 63122 (800)325-9504, (314)225-9854 Fax
MacMat N10 MacMat N20 MacMat N6P MacMat N6G MacMat N8P MacMat N8G	Maccaferri Environmental Solutions 10303 Governor Lane Blvd Williamsport, MD 21795-3116 (301) 223-6910 (301)223-6134 Fax
P-300 P300P C350 SC250	North American Green 14649 Highway 41 North Evansville, Indiana 47711 (812)867-6632, (812) 867-0247 Fax

YPE B MATS (continued) (Velocity 7.0 - 10.0 f.p.s.)	
RSP-5	American Earth Solutions 5830 Hwy 161 Springfield, TN 37172 (615)382-3300 Fax (615) 382-9051
SEC-P2	Southern Environmental Conservation (SEC) 902 Main Avenue, Suite A Northport, Alabama 35476 (866) 252-4486 (205) 752-1206 Fax
Bon Terra America SFB Landlok 435 Landlok 450 Landlok 460 Landlok 1060	Propex Operating Company, LLC 428 Rollins Industrial Blvd. Ringgold, GA 30736 (706) 965-6300, Fax (423) 553-3758
TB1000 TM3000	Tensar Earth Technologies 5775-B Glenridge Drive Lakeside Center, Suite 450 Atlanta, Georgia 30328-5363 (800)292-4459, (404)705-9650 Fax
TerraGuard 44P TerraGuard 45P	WEBTEC, Inc. P. O. Box 240302 Charlotte, NC 28224-0302 (800)438-0027, (704)394-7946 Fax
Excel PP5-10 Excel PP5-8	Western Excelsior 4609 E Boonville-New Harmony Rd Evansville IN, 47725 Ph: 866-540-9810 FX: 812-867-8928
US-2S/C, US-2C, US-2P10, US-2P12	US Erosion Control Products 1800 Springhead Church Rd. Willacoochee, GA 31650

TYPE C MATS (Slopes 3:1 and flatter)	
Curlex Enforcer Recyclex TRM Recyclex TRM-V	American Excelsior Company 831 Pioneer Ave. Rice Lake, WI 54868 (715) 234-6861
Enkamat 7003 (formerly 7005) Enkamat 7010 Enkamat II	Colbond Inc. 1301 Sand Hill Road P.O. Box 1057 Enka, NC Attn: Jason Willis (800) 365-7391, (828) 665-5009 fax (Formerly Erosion Control Systems Northport, Al. 35476)
ECC-3 ECP-2 ECP-2 10 oz ECP-3 ECSC-3 T-RECS	East Coast Erosion Blankets, LLC 443 Bricker Road Bernville, PA 19506 Diane M. Hitt (610) 488-8496, Fax (610) 488-8494
ETPP-10	Erosion Tech, LLC 105 Plant Camellia Road Juliette, GA 31046 Josh Still
Greenfix CF072RP	Greenfix America P. O. Box 23310 Santa Barbara, California 93121 (800)929-2184 (888)GREENFX
PEC-MAT	Greenstreak 3400 Tree Court Industrial Blvd. St. Louis, MO 63122-6614 (800) 325-9504
MacMat N6P MacMat N6G MacMat N8P MacMat N8G	Maccaferri Environmental Solutions 10303 Governor Lane Blvd. Williamsport, MD 21795-3116 (301)223-6910, (301) 223-6134 Fax
MA-S2	Mid America Erosion Control Products, Inc. P.O. Box 488, Charlestown, IN 47111 Kris Bernens (812) 289-1900 (812) 289-1599 Fax
C350 SC250	North American Green 14649 Highway 41 North Evansville, Indiana 47711 (812)867-6632, (812) 867-0247 Fax
RSP-5	American Earth Solutions 5830 Hwy 161 Springfield, TN 37172 (615)382-3300 Fax (615) 382-9051

TYPE C MATS (continued) (Slopes 3:1 and flatter)	
Landlok 435	Propex Operating Company, LLC 428 Rollins Industrial Blvd. Ringgold, GA 30736 (706) 965-6300, Fax (423) 553-3758
Tenax Multimat	Tenax Corp. 4800 East monument Street Baltimore, Maryland 21205 (410)522-7000, (410)522-7015 Fax (800)356-8495
Excel PP5-10 Excel PP5-8	Western Excelsior 4609 E Boonville-New Harmony Rd Evansville IN, 47725 Ph: 866-540-9810 FX: 812-867-8928
US-2P12	US Erosion Control Products 1800 Springhead Church Rd. Willacoochee, GA 31650

TYPE C MATS (Slopes steeper than 3:1)	
Enkamat S Enkamat 7018 Enkamat II	Colbond Inc. 1301 Sand Hill Road P.O. Box 1057 Enka, NC Attn: Jason Willis (800) 365-7391, (828) 665-5009 fax (Formerly Erosion Control Systems Northport, Al. 35476)
ECP-2	East Coast Erosion Blankets, LLC 443 Bricker Road Bernville, PA 19506 Diane M. Hitt (610) 488-8496, Fax (610) 488-8494
MacMat N6P MacMat N6G MacMat N8P MacMat N8G	Maccaferri Environmental Solutions 10303 Governor Lane Blvd. Williamsport, MD 21795-3116 (301)223-6910, (301) 223-6134 Fax
P550	North American Green 14649 Highway 41 North Evansville, Indiana 47711 (812)867-6632, (812) 867-0247 Fax
Pyramat 4700	Propex Operating Company, LLC 428 Rollins Industrial Blvd. Ringgold, GA 30736 (706) 965-6300, Fax (423) 553-3758
P42	ErosionControlBlanket.com Box 69 Riverton Manitoba, Canada R0C 2R0 Roy Nelsen (970) 875-1158, Fax (970) 871-6779

(58) STANDARD EC-4 TYPE 2, ROCK CHECK DAM – (Location & Design)
for Synthetic Material Substitution

Substitutions may be made with the approval of the Engineer at no additional cost to VDOT.	
Erosion Eel	Friendly Environment 100 Prince Street Shelbyville, TN 37160 (615) 607-5953, (615) 333-7751 Fax
AEC Premier Straw Wattles 9" AEC Premier Straw Wattles 12" AEC Premier Straw Wattles 20" Curlex Sediment Logs	American Excelsior Company 850 Avenue H East Arlington, TX 76011 Phone: (817) 385-3500 Fax: (817) 649-7816 Toll Free: 800-777-7645
Triangular Silt Dike	Triangular Silt Dike Company, Inc. 608 Greenwood Midwest City, OK 73110 Attn: Jason Roach (405) 741-7406
Filtrexx DitchChexx	Filtrexx International 35841 Grafton Eastern Road Grafton, OH 44044 (440) 926-2607
Terra-Tubes – Filter Filtration Tubes (FFT)	Profile Products, LLC 750 Lake Cook Road Suite 440 Buffalo Grove, IL 60089 (847) 215-1144, (866) 325-6262
GeoHay 9" GeoHay 12" GeoHay 15" GeoHay 18"	GeoHay P.O. Box 160040 Spartinburg, SC 29316
Diamond Sock 8" Diamond Sock 12" Diamond Sock 18" Diamond Sock 24"	MKB Company 3450 East College Ave State College, PA 16801 (888) 578-0777

(59) ST'D. EC-6, INLET PROTECTION APPROVED LIST – (Location & Design)**for Synthetic Materials Substitution**

Substitutions may be made with the approval of the Engineer at no additional cost to VDOT.

Curb Drop Inlet	
Curlex Sediment Logs	American Excelsior Company 850 Avenue H East Arlington, TX 76011 (817) 385-3500, (817) 649-7816 Fax Toll Free: 800-777-7645
Dandy Curb (formerly Beaver Dam True Dam) Dandy Bag Dandy Sack Dandy Pop Dandy Curb Bag Dandy Curb Sack	Dandy Products P.O. Box 1680 Powell, OH 43065 (800) 591-2284, (614) 875-6305 Fax
Diamond Sock 8" Diamond Sock 12" Diamond Sock 18" Diamond Sock 24"	MKB Company 3450 East College Ave State College, PA 16801 (888) 578-0777
EZ-Flo, EZ-ClipGuard	Flo-Water, LLC 308 33 rd St. West DeMoines, IA 50265 (515)577-6763
Filtrexx InletSoxx	Filtrexx International 35481 Grafton Eastern Road Grafton, OH 44044 (440) 926-2607
GeoHay 9"	GeoHay P.O. Box 160040 Spartinburg, SC 29316 (864) 472-7000
Gutter Buddy Gutter Eel Gutter Gator Grate Gator Econocurb RockInFilter SiltSack	ACF Environmental 2831 Cardwell Road Richmond, VA 23234 (800) 223-9021, (804) 743-7779 Fax
Rapid Flow Drain Filter	Erosion Control Products, Inc. 4001 Van Dyke Ct. Monroe, NC 28110 (704) 821-3042, (704) 821-5239 Fax

July 2016

List No. 60

(60) STD. EC-8, DEWATERING BAG APPROVED LIST – (Maintenance Div.)

As of July 1, 2016, this Approved List is now included in Approved List No. 63.

(61) GRAY IRON CASTING MANUFACTURERS/DISTRIBUTORS ON QA/QC PROGRAM – (Quality Assurance)

Gray Iron Casting Domestic Manufacturers – compliant with Buy America

Bingham & Taylor	601 Nalle Place Culpeper, VA 22701
EJ	301 Spring Street East Jordan, Michigan, USA 49727
EJ	270 Red Wing Road Ardmore Industrial Park Ardmore, Oklahoma 73401
Neenah Foundry Co.	2121 Brooks Avenue Neenah, Wisconsin 54956
U.S. Foundry and Manufacturing Corporation	8351 N.W. 93 Street Medley (Miami), Florida, USA 33166-2096

(62) CABLE GROUTS – (Physical Lab)

Masterflow 1205	BASF Construction Chemicals, LLC
Euco Cable Grout PTX	Euclid Chemical Company

(63) GEOSYNTHETICS – (Soils Lab)**(63) Geosynthetics (Soils Lab)**

January 1, 2018

This list covers the geotextile products in VDOT Road & Bridge Specifications Section 245 Geosynthetics and Low Permeability Liners, and also of specialty high-strength geotextiles and geogrids.

Products on this list meet VDOT Road and Bridge Specification 245 or Special Provisions as noted and are evaluated through AASHTO's National Transportation Product Evaluation Program (NTPEP) where applicable.

For products for which evaluation is available through NTPEP, to be on this list the product must have current cycle test results listed in NTPEP's DataMine that meet the VDOT Specification or Special Provision requirements, and the source manufacturer and any downstream facility taking responsibility for the quality of the product must be listed as compliant in the NTPEP Geosynthetics or REGEO audit program, **and the local supplier must be listed on VDOT Approved List No. 44 of Approved Suppliers**. For products for which VDOT requires additional tests over those included in the NTPEP evaluation, or which are not included in the NTPEP evaluation program, the additional required tests are listed in each category and must be done by a 3rd party laboratory that is accredited by The Geosynthetics Research Institute (GRI-LAP) in the specific test and also accredited by an acceptable body for quality processes. Such additional test information shall be submitted to the VDOT Materials Division directly.

Temporary Silt Fence Fabric - 245.03(a)*
Fabric for Type A and Type B Silt Fence

Product	Expiration Date
ACF VSF	Jun 1, 2018
Beltech 806	Jun 1, 2018
TerraTex SF-D	Jan 1, 2021
W100	Jan 1, 2020
Winfab V10	Jan 1, 2019

Suppliers must be on VDOT Approved List No. 44.

*Additional test results for silt fence fabric per ASTM D5141-11 required every 3 years along with NTPEP product evaluation, run in triplicate as per NTPEP Erosion Control Products Committee Work Plan, to obtain flow rate and filtering efficiency.

Riprap Bedding Geotextile (Separation Fabric) - 245.03(b)

Product	Expiration Date
GT170	Jan 1, 2019
GT180	Jan 1, 2019
GEOTEX 250ST	Jan 1, 2019
GEOTEX 315ST	Jan 1, 2020
GEOTEX 601	Jan 1, 2019
GEOTEX 701	Jan 1, 2019
GEOTEX 801	Jan 1, 2019
LM 600NT	Jan 1, 2019
LM 2199FW	Jan 1, 2019
MACTEX N35.1	Jan 1, 2019
MACTEX N44.1	Jan 1, 2019
MACTEX N47.1	Jan 1, 2019
S250N	Jan 1, 2019
SW315	Jan 1, 2019
Skaps GT160	Jan 1, 2019
Tencate Mirafi 160N	Jan 1, 2021
Tencate Mirafi 170N	Jan 1, 2021
Tencate Mirafi 180N	Jan 1, 2021
Tencate Mirafi 600X	Jun 1, 2021
Tencate Mirafi FW403	Jan 1, 2021
Tencate Mirafi FW404	Jan 1, 2019
Tencate Mirafi FW500	Jan 1, 2020
Tencate Mirafi FW700	Jan 1, 2019
TerraTex HD	Jan 1, 2020
TerraTex N06	Jan 1, 2020
TerraTex N07	Jan 1, 2020
TerraTex N08	Jan 1, 2020
W250	Jan 1, 2019
Winfab 700N	Jan 1, 2020
Winfab 2404	Jan 1, 2019

Suppliers must be on VDOT Approved List No. 44.

Drainage Fabric - 245.03(c)

Product	Expiration Date
ADS 0451T	Jan 1, 2019
ADS 0601T	Jan 1, 2019
ADS 0701T	Jan 1, 2019
ADS 0801T	Jan 1, 2019
ADS 1071T	Jan 1, 2019
Dalco 1045	Jan 1, 2020
GEOTEX 401	Jan 1, 2019
GEOTEX 501	Jan 1, 2019
GEOTEX 601	Jan 1, 2019
GEOTEX 701	Jan 1, 2019
GEOTEX 801	Jan 1, 2019
GEOTEX 1101	Jan 1, 2019
GT110	Jan 1, 2019
GT160	Jan 1, 2019
GT170	Jan 1, 2019
GT180	Jan 1, 2019
LM 450NT	Jan 1, 2019
LM 600NT	Jan 1, 2019
MACTEX N21.1	Jan 1, 2019
MACTEX N35.1	Jan 1, 2019
MACTEX N44.1	Jan 1, 2019
MACTEX N47.1	Jan 1, 2019
N045N	Jan 1, 2019
Skaps GT142	Jan 1, 2019
Tencate 140N	Jan 1, 2021
Tencate Mirafi 160N	Jan 1, 2021
Tencate Mirafi 170N	Jan 1, 2021
Tencate Mirafi 180N	Jan 1, 2021
Tencate Mirafi 1100NPA	Jan 1, 2019
TerraTex N04.5	Jan 1, 2020
TerraTex N05	Jan 1, 2021
TerraTex N06	Jan 1, 2020
TerraTex N07	Jan 1, 2020
TerraTex N08	Jan 1, 2020
Thrace-LINQ 140EX	Jan 1, 2019
Winfab 450N	Jan 1, 2020
Winfab 700N	Jan 1, 2020
Winfab 800N	Jan 1, 2020

Suppliers must be on VDOT Approved List No. 44.

Subgrade Stabilization Fabric – 245.03(d)1

Product	Expiration Date
ADS 0451T	Jan 1, 2019
ADS 0601T	Jan 1, 2019
ADS 200W	Jan 1, 2019
ADS 250W	Jan 1, 2019
ADS 270HP	Jan 1, 2019
ADS 315W	Jan 1, 2019
ADS 370HP	Jan 1, 2019
GEOTEX 2x2 HF	Jan 1, 2020
GEOTEX 200ST	Jan 1, 2020
GEOTEX 250ST	Jan 1, 2019
GEOTEX 315ST	Jan 1, 2020
GEOTEX 401	Jan 1, 2019
LM 315NT	Jan 1, 2019
MACTEX N21.1	Jan 1, 2019
MACTEX N35.1	Jan 1, 2019
MACTEX N44.1	Jan 1, 2019
MACTEX N47.1	Jan 1, 2019
MACTEX W1 200	Jan 1, 2019
MACTEX W1 250	Jan 1, 2019
MACTEX W1 315	Jan 1, 2019
S200N	Jan 1, 2019
SW200	Jan 1, 2020
SW315	Jan 1, 2020
Tencate Mirafi 140N	Jan 1, 2021
Tencate Mirafi 160N	Jan 1, 2021
Tencate Mirafi 170N	Jan 1, 2021
Tencate Mirafi 180N	Jan 1, 2021
Tencate 500XTencate Mirafi 500X	Jan 1, 2020Jan 1, 2020
Tencate Mirafi 600X	Jan 1, 2021
Tencate Mirafi HP270	Jan 1, 2019
Tencate Mirafi HP370	Jan 1, 2019
Tencate Mirafi 1100NPA	Jan 1, 2019
TerraTex EP-12	Jan 1, 2021
TerraTex GS	Jan 1, 2020
TerraTex GS-180	Jan 1, 2021
TerraTex GS-270	Jan 1, 2021
TerraTex HD	Jan 1, 2020
TerraTex HPG-16	Jan 1, 2020
TerraTex HPG-27	Jan 1, 2021
TerraTex HPG-37	Jan 1, 2021
TerraTex HPG-500	Jan 1, 2020
TerraTex N04.5	Jan 1, 2020
TerraTex N05	Jan 1, 2021
TerraTex N06	Jan 1, 2020
TerraTex N07	Jan 1, 2020
TerraTex N07.5	Jan 1, 2021
TerraTex N08	Jan 1, 2020
Thrace-LINQ GTF200S	Jan 1, 2019
W180	Jan 1, 2020
W250	Jan 1, 2020

Product	Expiration Date
W270	Jan 1, 2020

Suppliers must be on VDOT Approved List No. 44.

Embankment Stabilization Fabric (for embankments up to 6 feet high) – 245.03(d)2*

Product	Expiration Date
ADS 0801T	Jan 1, 2019
ADS 2x2	Jan 1, 2019
ADS 370HP	Jan 1, 2019
GEOTEX 2x2 HF	Jan 1, 2020
GEOTEX 315ST	Jan 1, 2020
LM 315NT	Jan 1, 2019
LM 370HP	Jan 1, 2019
LM 800NT	Jan 1, 2019
MACTEX N47.1	Jan 1, 2019
MACTEX W1 315	Jan 1, 2019
S300N	Jan 1, 2019
Skaps GT180	Jan 1, 2019
SW315	Jan 1, 2020
Tencate Mirafi 180N	Jan 1, 2021
Tencate Mirafi 600X	Jan 1, 2021
Tencate Mirafi 1100NPA	Jan 1, 2019
Tencate Mirafi HP370	Jan 1, 2019
TerraTex 4x4HF	Jan 1, 2021
TerraTex HD	Jan 1, 2020
TerraTex HPG-16	Jan 1, 2020
TerraTex HPG-37	Jan 1, 2021
TerraTex HPG-57	Jan 1, 2021
TerraTex HPG-500	Jan 1, 2020
TerraTex N08	Jan 1, 2020

Suppliers must be on VDOT Approved List No. 44.

*Seam strength tests using ASTM D4632 also required per VDOT Road and Bridge Specification 245, to be provided by manufacturer or supplier or Contractor as required for project.

Prefabricated Geocomposite Pavement Underdrain (Edgedrain) – 245.03(e)*

Product	Expiration Date
AWD SITEDRAIN Strip 9400 with GEOTEX 401, with AWD fittings	Jan 1, 2019
J-Drain ESD III with Tencate Mirafi 140N, with J-Drain ESD fittings, connectors, end caps, and tape	Jan 1, 2021
TerraDrain Strip 640 with TerraTex N04.5 with J-Drain ESD fittings, connectors, end caps, and tape	Jun 1, 2020

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include edgedrains, except the fabric which must be evaluated by NTPEP and from a NTPEP-compliant manufacturer. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division. When submitting product request to VDOT for listing here, the manufacture must also submit connections for underdrain-to-outlet pipe.

Geocomposite Wall Drains – 245.03(f)*

Product	Expiration Date
American Wick Drain DS116, DS186, with Propex Geotex 601	Jan 1, 2019
J-Drain ES1162P with Tencate Mirafi 160N	Jan 1, 2019
TerraDrain 106/2-VDOT with Tencate Mirafi 160N	Jan 1, 2019

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include wall drains, except the fabric which must be evaluated by NTPEP and from a NTPEP-compliant manufacturer. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division.

Geomembrane Moisture Barrier – 245.03(g)*

Product	Expiration Date
EPT XTRM PLY PVC HP – 7100 Series 30 mil single ply ASTM 7176/FGI 1115	Jan 1, 2021

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include geomembrane moisture barriers. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division.

Dewatering Bag – 245.03(h)

Product	Expiration Date
CSB-series (Thrace-LINQ 245EX)	Jun 1, 2018
DIRTBAG 55 (R100)	Jan 1, 2020
DIRTBAG 55 (Propex 1001)	Jan 1, 2019
DIRTBAG 55 (SKAPS GT110)	Jan 1, 2019
Frank Roberts & Sons GTF-FB series (Thrace-LINQ 250EX)	Jan 1, 2019
Geo Products Filter Bags (Thrace-LINQ 250EX)	Jan 1, 2019
TerraTex Filter Bags N10 series (N10)	Jan 1, 2020

Suppliers must be on VDOT Approved List No. 44.

Pavement Interlayer (to inhibit reflective cracking) – 245.03(i) or VDOT Special Provision*

Product	Expiration Date
C040 (Type II Fabric)	Jan 1, 2020
TerraTex OLI (Type II Fabric)	Jan 1, 2020

Suppliers must be on VDOT Approved List No. 44.

* To make this list, the material must meet the requirements of the VDOT Special Provision for Pavement Interlayer.

Low Permeability Liners for Stormwater Management Facilities – 245.03(j)*

Product	Expiration Date
Bentomat 200R	Jan 1, 2020
Bentomat ST	Jan 1, 2020
GSE Bentoliner CNSL	Jan 1, 2020
GSE Bentoliner NSL	Jan 1, 2020

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include low permeability liners. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division.

Prefabricated Vertical Drains – VDOT Special Provision*

Product	Expiration Date

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include prefabricated vertical drains. These products must meet the material requirements of the VDOT Special Provision for Prefabricated Vertical Drains dated April 4, 2016. Test results are required every 3 years, to be submitted to VDOT Materials Division.

High Strength Geotextiles and Geogrids

At this time, these products must be designed, specified, and approved on a project basis.

Product	Expiration Date
TerraTex N12	Jan 1, 2020

Suppliers must be on VDOT Approved List No. 44.

July 2016

List No. 64

(64) HYDRAULIC BARRIERS FOR USE IN STORM WATER RETENTION – (Soils Lab)

As of July 1, 2016, this Approved List is now included in Approved List No. 63.

(65) APPROVED SOUND BARRIER PANELS – (James Ponticello)

Precast Concrete (Companies provide both absorptive and/or reflective)	Product Name	Contacts Name
Armtec 505 York Blvd., Suite 2 Hamilton, ON Canada L8R 3K4	Durisol ®	Mr. Brian Clarke
Concrete Innovations /Coastal Precast System 5125 Highway 421 North Wilmington, NC 28401	Whisper-Wall ®	Mr. Stephen McCowin
Faddis Concrete Products 2206 Horseshoe Pike Honey Brook, PA 19344	AcoustaCrete ® AngleWall ®	Mr. Gary Figallo
The Reinforced Earth Company 12001 Sunrise Valley Drive Suite 400 Reston, VA 20191	Fanwall	Mr. Keith Braybant
Smith-Midland Corporation P.O. Box 300 Midland, VA 22728	Softsound ®	Mr. Guy Schuch
Other	Product Name	Contacts Name
Atlantic Industries Limited 640 Waydom Drive Ayr, ON N0B 1E0	TUF-Barrier ® Silent Protector ®	Mr. Paul Sunseth
Carsonite Composites 19845 US Highway 76 Newberry, South Carolina 29108	AcoustaShield ®	Mr. Heath McCutcheon
Centria 1005 Beaver Grade Road Moon Township, PA 15108	Eco Sound Barrier	Mr. Cory Matchett
CYRO Industries 1796 Main Street Sanford, ME 04073	ACRYLITE ® Soundstop	Mr. Nathan Binette
Faddis Concrete Products 2206 Horseshoe Pike Honey Brook, PA 19344	AcoustAL™	Mr. Gary Figallo
HOOVER Treated Wood Products, Inc. 154 Wire Road Thomson, Georgia 30824	Plywall ®	Ms. Pam Floyd
Sound Fighter Systems P.O. Box 7216 Shreveport, LA 71137-7216	Sound Fighter Systems SonaGuard ®	Mr. Murray Stacy
Date: February 22, 2018		

(66) APPROVED WARM-MIX ASPHALT PRODUCTS AND PROCESSES -- (Asphalt Lab)

Manufacturer	Product/Process	Code
Sasol International	Sasobit	1
Ingevity	Evotherm ET	2
Astec, Inc.	Double Barrel Green System	3
Maxam	AQUABlack	4
Gencor	Ultrafoam Gx	5
Ingevity	Evotherm M-1	6
StanSteel	Accu-Shear	7
ArrMaz	AD-here ULTRA 1	8
Arkema Inc.	Cecabase RT 945	9
Sonneborn	SonneWarmix	10
Zydex Inc.	ZycoTherm	11

New products/processes will be evaluated by the District Materials Engineer and a central committee. Once approved, the product/process will be added to this approved list. The evaluation procedure involves documentation and independent test data to support the new WMA product or process, mix design submittals and a trial section.

(67) APPROVED PRECAST PAVEMENT SYSTEMS - (Affan Habib)

Manufacturer	Product/Process
The Fort Miller Co. P.O. Box 98 Schuylerville, NY 12871-0098 (518) 695-4970	Super Slab

The approval is subject to further clarification of the submitted specification/details and a successful trial installation.

(68) STORM WATER MANAGEMENT – TRASH RACKS (SWM-DR) - (Location & Design)

Substitutions may be made with the approval of the Engineer at no additional cost to VDOT.

Manufacturer Name	Product(s)
Plastic Solutions, Inc. 240 McGhee Road Winchester, VA 22603 PH: 540-722-4694	StormRax – Round Series 24”, 36”, 48”, 60” StormRax -- Pyramid Series 72”, 84”, 96” StormRax – Peak Roof Series Square/Rectangular

(69) APPROVED FENCE MANUFACTURERS - (Chemistry Lab)

Approved fence material shall be used in accordance with the R&B specifications, R&B Standards, Plans, or as directed by the Engineer.

Allied Tube and Conduit

Pipe, SS-40
Pipe, SCH-40

Bekaert Corporation

Barbed Wire, Galvanized
Woven Wire, Galvanized
Brace/Line Wire, Galvanized

Chicago Heights Steel

Post - "T"

CMC

Post – "T"

Guardian Fence Suppliers

Chain-Length Fence,
Galvanized
Chain-Link Fence, Aluminized
Chain-Link Fence, Vinyl Coated
Barbed Wire, Galvanized
Barbed Wire, Aluminized
Barbed Wire, Vinyl Coated
Tension Wire, Galvanized
Tension Wire, Aluminized
Tension Wire, Vinyl Coated

Iron World

Chain-Link Fence, Galvanized
Chain-Link Fence, Aluminized
Chain-Link Fence, Vinyl Coated
Barbed Wire, Galvanized
Barbed Wire, Aluminized
Barbed Wire, Vinyl Coated
Woven Wire, Galvanized
Woven Wire, Aluminized
Woven Wire, Vinyl Coated

Master Halco Inc.

Chain-Link Fence, Galvanized
Chain-Length Fence, Aluminized
Chain-Link Fence, Vinyl Coated

Merchants Metals

Pipe, Vinyl Coated
Chain-Link Fence, Galvanized
Chain-Link Fence, Aluminized
Chain-Link Fence, Vinyl Coated
Barbed Wire, Galvanized
Barbed Wire, Aluminized
Tension Wire, Galvanized
Tension Wire, Aluminized

Franklin Industries

Post - "T"

**Stateside Steel & Wire, LLC
Chain-Link Fence, Galvanized****Stephens Pipe & Steel, LLC**

Pipe, Galvanized
Pipe, Vinyl Coated
Chain-Link Fence, Galvanized
Chain-Link Fence, Aluminized
Chain-Link Fence, Vinyl Coated
Barbed Wire, Galvanized
Barbed Wire, Aluminized
Barbed Wire, Vinyl Coated
Tension Wire, Galvanized
Tension Wire, Aluminized
Tension Wire, Vinyl Coated
Woven Wire

Sonco Worldwide, Inc.

Chain-Link Fence, Aluminized
Chain-Link Fence, Vinyl Coated
Tension Wire, Aluminized
Tension Wire, Vinyl Coated

Wheatland Tube Company

Pipe, WT-40
Pipe, SCH-40

April 2017

April 2011
List No. 70

(70) APPROVED QA FENCE SUPPLIERS LIST - (Quality Assurance)

Supplier	Location
American Highway Fence, Inc.	Mt. Sterling, Ky
Atlantic Fence Supply	Ashland, VA
Hercules Fence	Ashland, VA
Hercules Fence	Manassas, VA
Hercules Fence	Norfolk, VA
Hercules Fence	York County, VA
Interstate Fence Supply	Mt. Sterling, KY
Long Fence	Chantilly, VA
Master Halco	Ashland, VA
NU-Valley Fence Co., Inc.	Greenville, VA
Webster & Webster Inc.	Verona, VA

(*P) = Probationary

(71) POLYETHYLENE SHEETING - (Physical Lab)

Note: PE film (ASTM C 171) used for curing shall be white except that opaque or transparent PE film may be used between November 1 and April 1.

White**Manufacturer****Product Number**

Akrotex Films	877141001216 (4 mils, 20 feet wide, white)
Poly America	CF0420W (4 mils, 20 feet wide, white) CF0428W (4 mils, 28 feet wide, white) CF0620W (6 mils, 20 feet wide, white)

Transparent/Opaque**Manufacturer****Product Number**

Akrotex Films	877141001193 (4 mils, 20 feet wide, transparent)
Poly America	CF0420 (4 mils, 20 feet wide, transparent) CF0428 (4 mils, 28 feet wide, transparent) CF0620 (6 mils, 20 feet wide, transparent)
Rodeo Plastic Bag	871222000822 (6 mil, 20 feet wide, transparent)

(72) DETECTABLE WARNING PLATES - (Quality Assurance)

Tiles must meet Light on Dark or Dark on Light contrast requirements

Product	Manufacturer	Description
AccessTile Cast in Place Replaceable	AccessTile	Engineer composite polymer cast in place replaceable plate
ADA Solutions (Cast In Place Composite Tactile)	ADA Solutions, Inc.	Homogenous glass and carbon composite cast in place panel
ADA Solutions (Replaceable composite tactile)	ADA Solutions, Inc.	Homogenous glass and carbon composite replaceable (wet set) plate
ADA Solutions (Surface Mount Tactile)	ADA Solutions, Inc.	Acceptable for temporary installations in which the product would be in service 6 months or less
AlertCast	AlertTile	Glass reinforced, thermoset composite replaceable cast in place plate
Armorcast Detectable Warning Wet Set Replaceable	Armorcast Products	Composite polymer wet set replaceable plates
Armor-Tile (Cast in Place)	Armor-Tile Tactile Systems	Cast in Place Vitrified Polymer Composite plate
Armor-Tile (Modular Pavers)	Armor-Tile Tactile Systems	Vitrified polymer paving system that can be dry laid on compacted fill or set in grout
Duralast	East Jordan Iron Works	Gray Iron Detectable Warning Plates
Neenah Foundry Detectable Warning Plates	Neenah Foundry	Gray Iron Detectable Warning Plates.
12" Matte VIP Paver 24" Matte VIP Paver	Nitterhouse Masonry Products LLC	Masonry Pavers
DWT Tough-EZ	Three D Plastics, Inc	Acceptable for temporary installations in which the product would be in service 6 months or less
Heritage Tile and Versatile Detectable Warning Device	ACO Polymer Products Inc.	Polymer detectable warning surface
Detectable Warning Style Prest Pavers	Hanover Architectural Products	Hydraulically pressed concrete pavers
TufTile Wet Set	TufTile, Inc	To be used for permanent installations High Impact Polymer Wet-Set (Replaceable) and the Cast Iron Tiles Wet-Set (Relaceable)

TufTile Surface Applied	TufTile, Inc.	For use in temporary installations in service for 6 months or less High Impact Polymer Surface Applied Tiles (Replaceable)

(73) APPROVED WHITE AND YELLOW PREFORMED THERMOPLASTIC - (Chemistry Lab)

Manufacturer	Product Name	VDOT Approval No.
WHITE		
Ennis-Flint	PreMark	PMM (05)-PA-042
	Hot Tape Pre-Heat	PMM (08)-PA-132
	Flame Tape Pre-Heat	PMM (08)-PA-059
Swarco	Preformed White	PMM(08)-PA-224
Ozark	Preformed White	PMM-2014-01-134
Geveko Markings	Optamark White	PMM-2015-01-075
YELLOW		
Ennis-Flint	PreMark	PMM (02)-PA-065
Geveko Markings	Optamark Yellow	PMM-2015-01-078

NOTES:

Pre-Heat = Requires pre-heating the road surface.

Above materials shall be supplied at 125 mils in thickness.

Materials shall be installed in accordance with Manufacturer's installation instructions.

If material is applied to hydraulic cement concrete, the primer/sealer used shall be listed on the C-85 (Contractors Daily Log).

During application (when molten) the above materials shall be "flooded" with additional glass beads conforming to AASHTO M247 Type1.

(74) APPROVED POLYUREA PAVMENT MARKINGS -- (Chemistry Lab)

Manufacture	Color	Product No.	Retroreflective Optics*	NTPEP Submittal No.
Epoplex Corp.	White	LS-90	M247 Type 1 (10lbs./Gal) Visibead Plus II (10 lbs/Gal)	PMM-2014-01-045
Epoplex Corp.	Yellow	LS-90	M247 Type 1 (10lbs./Gal) Visibead Plus II (10 lbs/Gal)	PMM-2014-01-046
Epoplex Corp.	White	GM-90	M247 Type 1 (6lbs./Gal) Visibead PlusII (6 lbs/Gal)	PMM-2006-MS-036
Ennis	White	HPS-5	M247 Type 1 (10 lbs./Gal) M247 Type 4 (10 lbs./Gal)	PMM-2008-PA-124
Ennis	Yellow	HPS-5	M247 Type 1 (Flood) M247 Type 4 (Flood)	PMM-2005-PA-050

* **Note:** The same retroreflective optics materials (Type and quantity (lbs/Gal) used for the NTPEP testing must be used with these products when installed on VDOT roads.

(75) APPROVED EPOXY PAVMENT MARKINGS -- (Chemistry Lab)

Manufacture	Color	Product No.	NTPEP No.
Ennis Traffic Safety Solutions	White	HPS-3	PMM-08-PA-180
Ennis Traffic Safety Solutions	Yellow	HPS-3	PMM-08-PA-121
Accent Stripe	White	Lumiline III	PMM-08-PA-110
Accent Stripe	Yellow	Lumiline III	PMM-08-PA-111
Olin Epoxy-POLY-CARB	White	MARK 55.3	PMM-08-PA-180
Olin Epoxy-POLY-CARB	Yellow	MARK 55.3	PMM-08-PA-181
Epoplex	White	LS-50	PMM-08-PA-190
Epoplex	Yellow	LS-50	PMM-08-PA-191

(76) VIRGINIA GLASS BEAD APPROVED LIST -- (Chemistry Lab)

Manufacturer	Plant	Date Approved
Potters Industries	Pottsdam, NY	July 2008
	72 Reynolds Road	
	Plant Manager – Jason Bell	
Potters Industries	Apex, NC	Prior to 2006
	820 Lufkin Road	
	Plant Manager – Jerry Franks	
Swarco Industries	Columbia, TN	October 2015
	901 North James Campbell Blvd.	
	Plant Manager – Jeff Johnson	
Hillcrest Industries	Attica, NY	March 2017
	40 Favor Street	VDOT batches
	Plant Contact – Lillie Williams	distributed by
	(lwilliams@ennisflint.com)	Ennis-Flint.

Note: These manufacturing plants meet the Virginia Glass Bead Acceptance Plan (VGBAP) described in Materials Division Memorandum, MD 388-15; Revision to the Manual of Instructions

If a glass bead manufacturing plant is not on this list, each batch must be tested and approved by meeting the requirements in the Materials Division Memorandum, MD 388-15 under Section 1 - Glass Bead Batch

Sampling/Testing Plan.

(77) ASPHALT PLUG JOINT SYSTEMS - (Physical Lab)

System	Manufacturer
Thorma-Joint	Dynamic Surface Application, Ltd. 373 Village Road Pennsdale, PA 17756 800-491-5663
Expandex Joint System (Wabo-Expandex)	Watson Bowman Acme, Inc. 95 Pineview Drive Amherst, NY 14228 800-677-4922
Matrix 502	D.S. Brown Company 300 East Cherry St. North Baltimore, OH 45872 419-257-3561
Matrix 501	Crafco, Inc. 6165 W. Detroit Street Chandler, AR 85226 (800) 528-8242
FlexAble Bridge Joint System	Deery American Corporation (also Crafco) 1896 Hwy 6 & 50 Grand Jct., CO 81502-4099 800-227-4059

(78) APPROVED COLD MIX ASPHALT - (Asphalt Lab)

The following list of cold mix material is approved for use.

Manufacturer	Product	Note
QPR 12735 Morris Road Ste 150 Alpharetta, GA 30004	QPR 2000	
Koch Materials Company 1464 Garner Station Blvd. Suite 311 Raleigh, NC 27603-3634	Styrelf	
Heilman Pavement Specialties, Inc. 290 North Pike Road Sarver, PA 16055-2700	Hei-Way	
Seaboard Asphalt Products 3601 Fairfield Road Baltimore, MD 21226	Bond-x Bond-x Green	
Sylcrete Corporation P.O. Box 413 South Salem, NY 10590	Sylcrete EV	
Logan County Asphalt 2905 Commerce Blvd. Guthrie, Oklahoma 73044	ProLine Cold Asphalt	
The EZ Street Company 1786 NW 82 nd Ave Miami, FL 33126	EZ Street Cold Mix Asphalt	
National Paving & Contracting 4200 Menlo Drive Baltimore, MD 21215	Perma Patch	
Unique Paving Material P.O. Box 764, Route 22 Ramseu, NC 27316	UPM Cold Mix Asphalt Repair	

RoadStone Production , LLC 1230 River Road Charlottesville, VA	Aquaphalt (6.0mm, 9.0mm, 12.0mm)	Water activated cold mix
Green Patch Corp 65 Edison Avenue Mount Vernon, NY 10550	Green Patch	

(79) MULCHES (HECP TYPES 1-4) – (Maintenance Division)

Hydraulic Erosion Control Products shall be dyed green or contain a green dye in the package that will provide a color to facilitate visual inspection of the uniformly spread slurry. Mulch, including dye and tackifiers, shall not contain germination-inhibiting or growth-inhibiting factors. The mulch shall be manufactured and processed so that it will remain in uniform suspension in water under agitation and will blend with seed, fertilizer, and other additives to form a homogenous slurry. The mulch shall form a blotter-like ground cover on application having moisture absorption and percolation properties. It shall cover and hold grass seed in direct contact with the soil, promoting the germination and growth of grass seedlings.

The manufacturer shall provide test reports or certification that all components are pre-packaged by the manufacturer to assure material performance and compliance with the minimum requirements of Section 244(g)(2) of the 2016 VDOT Road and Bridge Specifications. Under no circumstances will field mixing of HECP additives or HECP components be allowed. Mulch shall be delivered in packages of uniform weight bearing the name of the manufacturer, the net weight, and an additional statement of the net dry weight content.

Manufacturers of HECP Products acceptable for use as Erosion Control Mulch:

HECP TYPE 1	
HydraGS	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
Conwed Fibers Cellulose Conwed Fibers EnviroBlend Conwed Fibers HydroMulch 1000 Conwed Fibers Hydro Mulch 2000 Country Boy Cellulose EcoBlend HydroCover Blend HydroCover Cellulose HydroSpray Blend HydroSpray Cellulose EcoFibre Wood EcoFibre Plus Tackifier HydroCover Wood HydroCover Wood with Tack HydroSpray Wood HydroSpray Wood with Tack MulchPro Blend MulchPro Wood MulchPro Wood with Tack SoilCover Wood SoilCover Blend SoilCover Cellulose SoilCover Wood with Tack TerraBlend Terra-Mulch Cellulose Terra-Wood Terra-Wood with Tacking Agent 3	Profile Products LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681

HECP TYPE 2	
HydraGT	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
Terra-Matrix SMM	Profile Products LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681
HECP TYPE 3	
HydraCM	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
EcoAegis BFM EcoMatrix EFM Hydro-Blanket BFM ProMatrix EFM SprayMatt BFM	Profile Products LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681
HECP TYPE 4	
HydraCX	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
CocoFlex ET-FGM EcoFlex HP-FGM Flexterra HP-FGM SprayMatrix Fiber Reinforced Matrix (FRM)	Profile Products LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681

(80) TEMPORARY ROLLED EROSION CONTROL PRODUCTS (EC-2 TYPES 1 THRU 4) – (Location & Design)

Soil retention mats shall consist of a machine-produced mat of wood fibers, wood excelsior, or manmade fiber that shall intertwine or interlock. Matting shall be nontoxic to vegetation and germination of seed and shall not be injurious to the unprotected skin of the human body. The manufacturer shall provide test reports or certification that all components are pre-packaged by the manufacturer to assure material performance and compliance with the minimum requirements for EC-2 materials set forth in Section 244(l) of the 2016 VDOT Road and Bridge Specifications.

A product with a higher EC-2 Type number may be substituted for a product with a lower EC-2 Type number if that is cost-effective to the contractor and results in no additional cost to VDOT. For example, EC-2 Type 2 may be substituted for EC-2 Type 1; EC-2 Type 4 may be substituted for any of the lower-numbered EC-2 Types.

Manufacturers of EC-2 Products acceptable for use as Temporary Rolled Erosion Control Mulch:

EC-2, TYPE 1	
ECS-1 Single Net Straw ECS-1B Single Net Straw Biodegradable ECX-1 Single Net Excelsior ECS-2B Double Net Straw Biodegradable	East Coast Erosion Control 443 Bricker Road Bearnville, Pennsylvania 19506 (610) 448-8496
Curlex I CL	American Excelsior Company 831 Pioneer Avenue Rice Lake, Wisconsin 54868 (715) 236-6861
Excel SR-1	Western Excelsior 901 Grand Avenue Mancos, CO 81328 800-833-8573
S75	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
TerraGuard SS	Hanes Geo Components 815 Buxton Street Winston Salem, NC 27101 888-239-4539
EC-2, TYPE 2	
S150	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
ECS-2 Double Net Straw ECSC-2B Double Net Straw/Coconut	East Coast Erosion Control 443 Bricker Road Bearnville, Pennsylvania 19506 (610) 448-8496
TerraGuard DS	Hanes Geo Components 815 Buxton Street Winston Salem, NC 27101 888-239-4539
Nedia S400	Nedia Enterprises, Inc.

	44675 Cape Court, Suite 120 Ashburn, VA 20147 (888) 725-6999
Excel SS-2	Western Excelsior 901 Grand Avenue Mancos, CO 81328 800-833-8573
EC-2, TYPE 3	
ECC-2B Double Net Coconut Biodegradable ECSC-2 Double Net Straw/Coconut ECX-2 Double Net Excelsior	East Coast Erosion Control 443 Bricker Road Bearnville, Pennsylvania 19506 (610) 448-8496
Nedia SC-400 Nedia SC-400B	Nedia Enterprises, Inc. 44675 Cape Court, Suite 120 Ashburn, VA 20147 (888) 725-6999
Excel R-2	Western Excelsior 901 Grand Avenue Mancos, CO 81328 800-833-8573
SC150	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
TerraGuard DSC	Hanes Geo Components 815 Buxton Street Winston Salem, NC 27101 888-239-4539
EC-2, TYPE 4	
ECC-2 Double Net Coconut	East Coast Erosion Control 443 Bricker Road Bearnville, Pennsylvania 19506 (610) 448-8496
Curlex III Curlex High Velocity	American Excelsior Company 831 Pioneer Avenue Rice Lake, Wisconsin 54868 (715) 236-6861
Nedia C400 Nedia C400B	Nedia Enterprises, Inc. 44675 Cape Court, Suite 120 Ashburn, VA 20147 (888) 725-6999
Excel CC-4	Western Excelsior 901 Grand Avenue Mancos, CO 81328 800-833-8573
TerraGuard DC	Hanes Geo Components 815 Buxton Street Winston Salem, NC 27101 888-239-4539

(81) PERMANENT ROLLED EROSION CONTROL PRODUCTS (EC-3 TYPES 1 THRU 3) – (Location & Design)

Soil retention mats shall consist of a machine-produced mat of wood fibers, wood excelsior, or manmade fiber that shall intertwine or interlock. Matting shall be nontoxic to vegetation and germination of seed and shall not be injurious to the unprotected skin of the human body. The manufacturer shall provide test reports or certification that all components are pre-packaged by the manufacturer to assure material performance and compliance with the minimum requirements for EC-3 materials set forth in Section 244(l) of the 2016 VDOT Road and Bridge Specifications.

A product with a higher EC-3 Type number may be substituted for a product with a lower EC-3 Type number if that is cost-effective to the contractor and results in no additional cost to VDOT. For example, EC-3 Type 2 may be substituted for EC-3 Type 1; EC-2 Type 3 may be substituted for any of the lower-numbered EC-3 Types.

Manufacturers of EC-3 Products acceptable for use as Rolled Erosion Control Mulch:

EC-3, TYPE 1	
Nedia PTRM 340	Nedia Enterprises, Inc. 44675 Cape Court, Suite 120 Ashburn, VA 20147 (888) 725-6999
EC-3, TYPE 2	
Nedia PTRM 440	Nedia Enterprises, Inc. 44675 Cape Court, Suite 120 Ashburn, VA 20147 (888) 725-6999
LandLok 435	Propex GeoSolutions 4019 Industry Drive Chattanooga, TN 37416 (800) 621-1273
EC-3, TYPE 3	
ECP-2 10-oz. Double Net Poly ECP-2 Double Net Poly ECP-3 Triple Net Poly	East Coast Erosion Control 443 Bricker Road Bearnville, Pennsylvania 19506 (610) 448-8496
Nedia PTRM 640	Nedia Enterprises, Inc. 44675 Cape Court, Suite 120 Ashburn, VA 20147 (888) 725-6999
AEC Recyclax TRM-V AEC Recyclax TRM	American Excelsior Company 831 Pioneer Avenue Rice Lake, Wisconsin 54868 (715) 236-6861
SC250 C350	North American Green 5401 St. Wendel-Cynthiana Road Poseyville, Indiana 47633 (800) 772-2040
ArmorMax 75 PyrMat 25 PyrMat 50 PyrMat 75 LandLok 450	Propex GeoSolutions 4019 Industry Drive Chattanooga, TN 37416 (800) 621-1273

(82) BIOLOGICAL GROWTH STIMULANTS – (Maintenance Division)

Manufacturers of HECP Products acceptable for use as Biological Growth Stimulants:

BioPrime JumpStart	Profile Products LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681
-----------------------	--

**(83) SEDIMENT RETENTION ROLLS (COMPOST FILTER SOCKS AND SEDIMENT TUBES –
(Location & Design)**

COMPOST FILTER SOCKS (MINIMUM 12" DIAMETER)	
Filtrexx 5 mil High Density Polyethylene (HDPE) Photodegradable Filtrexx Multi-Filament Polypropylene (MFPP) Filtrexx Multi-Filament Polypropylene DuraSoxx (Heavy Duty) Filtrexx Multi-Filament Polypropylene DuraSoxx Filtrexx Multi-Filament Polypropylene SafetySoxx	Filtrexx International 244 Third Avenue Decatur, GA 30030 (404) 687-8393
SEDIMENT TUBES (MINIMUM 18" DIAMETER)	
Curlex Sediment Log Premier Straw Wattle	American Excelsior Company 831 Pioneer Ave. Rice Lake, WI 54868 (715) 226-5643
Terra-Tubes Fiber Filtration Tube (FFT)	Profile Products LLC 750 Lake Cook Road, Suite 440 Buffalo Grove, IL 60089 800-508-8681

August 2016

List No. 84

(84) CLASS B MANUFACTURED TOPSOIL – (Maintenance Division)

List to be populated starting August 2016

(85) CEMENT MANUFACTURERS - (Physical Lab)

The following list of cement manufacturers is approved for use in hydraulic cement concrete. To have a product included on the Approved List No. 85 for Cement Manufacturers, the following shall be submitted to the Materials Division's Physical Laboratory Assistant Concrete Program Manager: a letter with a notarized signature documenting that each cement type used on VDOT projects meets the requirements in Section 214 of the VDOT Road and Bridge Specifications. The letter shall include the maximum alkali content that the cement will not exceed for the calendar year. The percent mineral admixture for the types of blended cement that has a mineral admixture added. A one gallon sample of cement with the corresponding mill certification shall also be submitted for each type of cement.

Upon approval, the Cement Manufacturer will be required to submit a letter with a notarized signature stating that the cement meets the VDOT requirements, annually by December documenting the maximum alkalinity content for the following calendar year for each type of cement. Mill certification shall be submitted monthly and a gallon sample shall be submitted each quarter.

Cement Source	Type	Plant ID	Maximum Alkali Content (%)	Remarks
Argos				
Calera, AL	I / II	111	0.60	Roberta Plant
Devnya, Bulgaria	I / II LA	76	0.60	
Mylaki, Greece	I/II	85	0.60	
Harleyville, South Carolina	I/II/III	20	0.60	
Martinsburg, WV	I/II/III	12	1.00	
Martinsburg, WV	II LA	12	0.60	
Newberry, FL	I/II	108	0.60	
Cemex				
Knoxville, TN	I / II	15	0.60	
Federal White Cement				
Woodstock, Ontario Canada	I	112	0.35	
Giant Cement Company				
Harleyville, SC	I/II	52	0.60	
Keystone Cement				
Bath PA	II	114	0.80	
Lafarge/Holcim				
Hagerstown, MD	I / II / III	25	1.0	
Holly Hill, SC	I / II / III	16	0.60	
Holly Hill, SC	IL	16	0.60	
Lehigh Heidelberg Cement Group				
Canakkale, TR	I / II	73	0.60	Akcansa Cement
Evansville, PA	I/II/III	83	1.00	
Union Bridge, MD	I/II / III	10	0.60	

CEMENT MANUFACTURERS (cont.)

Cement Source	Type	Plant ID	Maximum Alkali Content (%)	Remarks
Roanoke Cement				
Kamari plant, Greece	I/II	62	0.59	
Huaxin plant, China	I/II	97	0.60	
Patras Plant, Greece	I/II	93	0.59	
Roanoke Plant, Troutville, VA	I/II/III	6	0.75	
Roanoke Plant, Troutville, VA	IL	6	0.75	

BLENDED CEMENTS

In order to comply with the VDOT Road and Bridge Specifications Sec. 217, additional mineral admixtures may need to be added.

Cement Source	Type	Plant ID	Maximum Alkali Content (%)	Remarks
Lafarge/Holcim				
Holly Hill, SC	IS(20)	16	0.60	*In order to comply with the VDOT Road and Bridge Specifications Sec. 217, additional mineral admixtures will need to be added.
Lehigh Heidelberg Cement Group				
Evansville, PA	IS(40)	83	0.95	*In order to comply with the VDOT Road and Bridge Specifications Sec. 217, additional mineral admixtures will need to be added.

(86) MANUFACTURED TREATMENT DEVICES - (Location & Design)

HYDRODYNAMIC DEVICES		
Device	Model(s)	Contact Information
Aqua-Swirl® Stormwater Treatment System	AS-2, AS-3, AS-4, AS-5, AS-6, AS-7, AS-8, AS-9, AS-10, AS-11, AS-12, AS-13, and AS-XX (custom)	AquaShield™, Inc. 2733 Kanasita Drive, Suite 111 Chattanooga, Tennessee 37343 www.aquashieldinc.com Contact: Northern Virginia (908) 284-5041 Contact: (704) 814-0603
BaySeparator™	½K, 1K, 3K, 5K, 10K, and XK (custom)	ADS/BaySaver Technologies 1030 Deer Hollow Drive Mt. Airy, Maryland 21771 www.baysaver.com Contact: (540) 526-6045 Contact: (800) 229-7283
Continuous Deflective Separator® (CDS)	CDS2015-4, CDS2015-5, CDS2020-5, CDS2025-5, CDS3020-6, CDS3025-6, CDS3030-6, CDS3035-6, CDS3535-7, CDS4030-8, CDS4040-8, CDS4045-8, CDS5640-10, CDS5653-10, CDS7070-DV, CDS10060-DV, CDS10080-DV, and CVS100100-DV	Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 www.ContechES.com Contact: (410) 740-8490
CrystalClean Separator – Single Vault	646, 846, 856, 866, 956, 1056, and 1266	CrystalStream Technologies 2090 Sugarloaf Parkway, Suite 245 Lawrenceville, Georgia 30045 www.crystalstream.com Contact: (800) 748-6945
Downstream Defender®	DD4, DD6, DD8, DD10, and DD12	Hydro International 94 Hutchins Drive Portland, Maine 04102 www.hydro-int.com Contact: Virginia (804) 614-6638 Contact: Corporate Office (207) 239-8997
Dual Vortex Separator (DVS)	DVS-36C, DVS-36S, DVS-48C, DVS-48S, DVS-60C, DVS-60S, DVS-72C, DVS-72S, DVS-84C, DVS-84S, DVS-96C, DVS-96S, DVS-120C, DVS-120S, DVS-144C, and DVS-144S	Oldcastle Precast, Inc. 5115 Massaponax Church Road Fredericksburg, VA 22407 oldcastleprecast.com Contact: (800) 579-8819
First Defense®	3, 4, 6, 8 feet diameter	Hydro International 94 Hutchins Drive Portland, Maine 04102 www.hydro-int.com Contact: Virginia (804) 614-6638 Contact: Corporate Office (207) 239-8997

Hydroguard	HG 4, HG 4i, HG 5, HG 6, HG 7, HG 8, HG 9, HG 10, and HG 12	Hydroworks, LLC 136 Central Avenue, 2nd Floor Clark, New Jersey 07066 www.hydroworks.com Contact: Hydroworks, LLC (888) 290-7900 Contact: Exact Stormwater Management LLC (804) 627-3260
Stormceptor® OSR	OSR 065, OSR 140, OSR 250, OSR 390, OSR 560, OSR 780, and OSR 1125	Rinker Materials - Stormceptor OSR 1751 Monocacy Boulevard Frederick, Maryland 21707 www.rinkerpipe.com/StormceptorProducts/Stormceptor.aspx Contact: (301) 698-7373
Stormceptor® STC	STC 450i, STC 900, STC 1200, STC 1200, STC 1800, STC 2400, STC 3600, STC 4800, STC 6000, STC 7200, STC 11000, STC 13000 and STC 16000	Rinker Materials - Stormceptor 1751 Monocacy Boulevard Frederick, Maryland 21707 www.rinkerpipe.com/StormceptorProducts/Stormceptor.aspx Contact: (301) 698-7373
StormPro	24, 36, 48, 510, 612, 714, 816, 918, 1020, 1224, and 2040	Environment 21, LLC 8713 Read Road East Pembroke, NY 14056-0055 www.env21.com Contact: Environment 21, LLC (585) 815-4714 Contact: Nansemond Precast (757) 538-2761 Contact: Maryland Concrete (443) 491-3598
Storm Water Quality Unit	3620WQA, 3640WQA, 3620WQB, 3640WQB 4220WQA, 4240WQA, 4220WQB, 4240WQB, 4820WQA, 4840WQA, 4820WQB, 4840WQB, 6020WQA, 6040WQA, 6020WQB, and 6040WQB	Advanced Drainage Systems, Inc. 70 Inwood Road, Suite 3 Rocky Hill, CT 06067 www.ads-pipe.com Contact: (609) 707-1576 Contact: (888) 892-2694
V2B1	2 to 40	Environment 21, LLC 8713 Read Road East Pembroke, NY 14056-0055 www.env21.com Contact: Environment 21, LLC (585) 815-4714 Contact: Nansemond Precast (757) 538-2761 Contact: Maryland Concrete (443) 491-3598
The Vortechs® System	1000, 2000, 3000, 4000, 5000, 7000, 9000, 11000, and 16000	Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350, Hanover MD 21076 www.ContechES.com Contact: (410) 740-8490
FILTER DEVICES		
Device	Model(s)	Contact Information
Aqua-Filter™ Stormwater Filtration System	AF-2.1, AF-3.2, AF-4.3, AF-5.4, AF-6.6, AF-7.8, AF-8.10, AF-9.12, AF-10.15, AF-11.18, AF-12.11 Twin, AF-13.13 Twin, and AF-X.X (custom)	AquaShield™, Inc. 2733 Kanasita Drive, Suite 111 Chattanooga, Tennessee 37343 www.aquashieldinc.com Contact: Northern Virginia (908) 284-5041 Contact: (704) 814-0603

BayFilter™ Stormwater Cartridge System	522, 530, 545	ADS/BaySaver Technologies 1030 Deer Hollow Drive Mt. Airy, Maryland 21771 www.baysaver.com Contact: (540) 526-6045 Contact: (800) 229-7283
Filtrerra Bioretention Systems	4x6/6x4, 4x8/8x4, 6x6, 6x8/8x6, 6x10/10x6, 6x12/12x6, 7x13/13x7, and custom	Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 www.ContechES.com Contact: (410) 740-8490
FocalPoint HighPerformance ModularBiofiltration System(HPMBS)	Modular with custom design as indicated on approved plans	Convergent Water Technologies/ACF Environmental 13810 Hollister Road #100 Houston, Texas 77086 www.convergentwater.com/www.acfenvironmental.com Contact: Convergent Water Tech. (800) 711-5428 Contact: ACF Environmental (800) 448-3636
Jellyfish® Filter	JF4, JF6, JF8M JF10, JF12, and custom	Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 www.ContechES.com Contact: (410) 740-8490
Perk Filter	4' x 8', 6' x 8', 6' x 10', 6' x 12', 6' x 14', 8' x 8', 8' x 14', 8' x 16', and Box Culvert and other custom sizes	Oldcastle Precast, Inc. 5115 Massaponax Church Road Fredericksburg, VA 22407 oldcastleprecast.com Contact: (800) 579-8819
The Stormwater Management StormFilter® with Phosphosorb media	SFCBx, SFMHxx, SFxxxx, SFLGxxxx, SFCIxxxx, SFPDxxxx, and custom design (x, xx, and xxxx vary by size and configuration)	Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 www.ContechES.com Contact: (410) 740-8490
The Stormwater Management StormFilter® with ZPG media	SFCBx, SFMHxx, SFxxxx, SFLGxxxx, SFCIxxxx, SFPDxxxx, and custom design (x, xx, and xxxx vary by size and configuration)	Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 www.ContechES.com Contact: (410) 740-8490
StormTank Module Debris Row	Modular Underground Storage with Built-in Treatment	Brentwood Industries 500 Spring Ridge Drive Reading, PA 19160 www.brentwoodindustries.com Contact: (610) 374-5109
StormTech® Isolator Row™	SC-310, RC310, SC-740, RC-750, DC-780, MC-3500, and MC-4500	ADS/StormTech 70 Inwood Road, Suite 3 Rocky Hill, CT 06067 www.stormtech.com Contact: (609) 707-1576 Contact: (888) 892-2694

Up-Flo Filter® with CPZ media	UFF 4-feet Diameter MH (1-6 filter modules), UFF Precast Vault (1-54 filter modules), and custom design	Hydro International 94 Hutchins Drive Portland, Maine 04102 www.hydro-int.com Contact: Virginia (804) 614-6638 Contact: Corporate Office (207) 239-8997
----------------------------------	---	---

(87) APPROVED POWDER COATING MANUFACTURERS – (Chemistry Lab)

Nortek Powder Coating, LLC
5900 Success Drive
Rome, NY 13440
Ph: (888) 667-8357
www.nortekpowder.com

Polytech Coating Labs
P.O. Box 111
951 Morgantown Road
Reading, PA. 19607
Ph: (610) 375-1417
www.polytechcoatinglabs.com

Protech, Inc.
939 Monocacy Road
York, PA. 17404
Ph: (713) 939-4000
www.protechpowder.com

TCI Powder Coatings
P.O. Box 13
734 Dixon Drive
Ellaville, GA. 31806
Ph: (800) 533-9067
www.tcipowder.com

Tiger Drylac USA Inc.
1100 Commons Boulevard
Reading, PA. 19605
Ph: (610) 926-8148
www.customerserviceeast@tiger-coatings.com

(88) APPROVED POWDER COATING FACILITIES OF GALVANIZED SURFACES – (Chemistry Lab)

ASAP Powder Coating, Inc.*
9724 Williamsport Pike
Falling Waters, WV 25419-3538
Ph: (304) 274-3200
www.asappowdercoating.com

Fortress Fusion Coatings, Inc
P.O. Box 37
New York Mills, NY 13417
Ph: (315) 736-8311
www.whyrust.com

ASCO – American Stripping Co.*
9025 Vassau Court
Manassas Park, VA. 20111
Ph: (703) 368-6573
www.ascoweb.com

Impreglon Inc.*
2915 Wilmarco Avenue
Baltimore, MD. 21223
Ph: (410) 644-4500

Frederick County Customs
441 Marple Road
Winchester, VA. 22603
(540) 323-7518
frederickcountycustoms@comcast.net

Lane Enterprises
1244 Claremont Road
Carlisle, PA. 17013
Ph: (717) 249-8342
www.lane-enterprises.com

Thomarios Powder Coating
1122 Jacoby Road
Copley, OH. 44321
Ph: (330) 670-6400
www.thomarios.com

*Provisional Approval