

Traffic Operations

APPROVED PRODUCTS LIST

TRAFFIC SIGNALS, HIGHWAY LIGHTING, AND HIGHWAY SIGNING EQUIPMENT

TRAFFIC SIGNALS AND HIGHWAY LIGHTING EQUIPMENT

I. GENERAL

This Approved Products List (APL) is based on equipment meeting department specifications and being tested for the specified test period with satisfactory performance. All models shall conform to the latest revision of the Missouri Standard Specifications for Highway Construction unless otherwise indicated. The models indicated on the list are approved, but are subject to final field inspection before acceptance.

The department frequently tests new products and equipment for traffic signals and highway lighting. These new products may be installed on a construction project, purchased on parts orders, or with controller orders. Vendors may also submit a device, at no cost to the department, for the test period. MoDOT will determine the methods and needs of the product for test. Only a limited number of units will be accepted for test statewide until an item is added to the Approved Products List. A vendor wishing to initiate a test on a new product shall submit a Product Evaluation Request Form - Signal and Lighting Equipment. Copies of this form can be obtained from our website at http://contribute.modot.mo.gov/business/contractor_resources/traffic.htm. Minor model changes do not require an evaluation period; however the vendor shall submit specification sheets, a summary of changes from the current to former model, and a sample of the product for the Department to inspect.

All equipment evaluations are coordinated through MoDOT Traffic Operations. The vendor supplying the equipment shall provide equipment specifications and a certification that the equipment meets department specifications before the test is performed. The equipment is tested for the period specified in the APL. Products not performing satisfactorily or falls below established standards will be replaced with an approved product if the vendor cannot provide timely correction of the problem or if unsatisfactory operation of the intersection results.

If a vendor is proposing a product that does not meet department specifications, an explanation of why the product meets or exceeds the current specifications must be provided by the vendor in writing to Traffic Operations. If approved, the product may be tested for the specified period noted in the APL. If the product is satisfactory, the Department will consider a revision to the applicable specifications. Any modification to the device must be reviewed and approved by MoDOT prior to sale/use of the modified device. Products will not be added to the Approved Products List that does not meet department specifications.

Products on the APL shall continue to perform satisfactorily. In addition, the vendors shall support the products. Products not performing as required or not supported are subject to removal from the APL.

Grounds for removal of products include, but limited to:

Significant change in product specifications or design without notification to the department.

Failure to correct or replace products that are defective in manufacturing or workmanship.

Repeated patterns of malfunctions of a product not adequately corrected by the vendor.

Unreasonable pricing of repair parts or repair work. Repair work not completed in a reasonable time frame.

Excessive delivery times for new purchases or replacement parts.

Changes in standard specifications may also necessitate removal of specific products from the APL. If this occurs, there will be a grace period where the product will be retained on the list after the specifications are changed. However, the product will be removed from the list if it is not revised to meet specifications.

II. TRAFFIC SIGNAL EQUIPMENT

All traffic signal equipment requires a one-year evaluation period.

CONTROLLERS

NEMA TS1 CONTROLLERS

MODEL

MODEL

MODEL

Econolite	ASC/3-2100
Econolite	Cobalt Series
Intelight	
Siemens	EPAC M52
Trafficware	

NEMA ON-STREET MASTER CONTROLLER

EconoliteASC/2M SiemensEPAC M52 with SEMARC

SOLID STATE PRETIMED CONTROLLERS (ALL TYPES)	MODEL
No currently accepted models.	

170 CONTROLLERS

McCain	170E
Phillips/Sisson Industries, Inc.	
Safetran	

CABINETS AND BACK PANELS (NEMA & S.S. PRETIMED)

NOTE: Cabinets and Back panels that meet MoDOT specifications from the following manufacturers will be accepted. ALL other manufacturers must provide a model that meets specifications and complete a satisfactory one-year evaluation as described above to be added to the list.

NEMA CABINET AND BACK PANEL ASSEMBLIES

Control Technology Econolite Henke/Bison IDC/Gibbons Naztec P-44 Eagle

SOLID STATE PRETIMED CABINET AND BACK PANEL ASSEMBLIES

Eagle

CABINETS AND RACKS (TYPE 170 CONTROLLERS)

NOTE: Cabinets and Racks that meet MoDOT specifications from the following manufacturers will be accepted. ALL other manufacturers must provide a model that meets specifications and complete a satisfactory one-year evaluation as described above to be added to the list.

332 AND 336S CABINET AND RACK ASSEMBLIES

McCain Phillips/Sisson Industries, Inc. Safetran Eagle

CONFLICT MONITORS

NEMA CONFLICT MONITORS

MODEL

Eberle Design Incorporated (EDI)	NSM-6E
Eberle Design Incorporated (EDI)	
Eberle Design Incorporated (EDI)	SSM-12LE
Eberle Design Incorporated (EDI)	MMU-16E
Eberle Design Incorporated (EDI)	MMU2-16LE
Naztec, Incorporated	NM512
Power Distribution & Control (PDC)	CM82-03
Power Distribution & Control (PDC)	CM82-06
Power Distribution & Control (PDC)	CM82-12
Reno A&E	MMU-1600 Series
Solid State Devices	NM-6
Solid State Devices	NM-12
Solid State Devices	LCD-6P
Solid State Devices	LCD-12P

170 CONFLICT MONITORS

CABINET ACCESSORIES

AUXILIARY TIME CLOCK

MODEL

MODEL

Eltec	NTC-17E
Eltec	TC-14
RTC	AP41
Applied Information	

EXTERNAL T.B.C. COORDINATORS

MODEL

MODEL

FLASHERS (NEMA & 170)

Eberle Design Incorporated (EDI)	
Power Distribution & Control (PDC)	
Power Distribution & Control (PDC)	
Reno A & E	
Traffic Sensor Corp	204

Traffic Sensor Corp	204-15
Traffic Sensor Corp	
Traffic Sensor Corp	

FLASH TRANSFER RELAYS

MODEL

MODEL

AMECO	
Struthers-Dunn	21ACPX-2/21ACPXD-5
Mid-Tex	136-62T-3A1
Power Distribution & Control (PDC)	
Reno	

LOAD SWITCHES (NEMA & 170)

ISOLATORS (170 only) (242=DC, 252=AC)

Eberle Design Incorporated	
GDI	
Power Distribution & Control (PDC)	242
Power Distribution & Control (PDC)	252
RENO A&E	
Safetran	242
Safetran	252

SURGE PROTECTORS

ASCO	258120NF015ATBN0
TONE RECEIVERS	MODEL
Iniven	IR30M-05-30

TONE TRANSMITTERS	MODEL

InivenIT30

DETECTORS

MICROWAVE DETECTORS	MODEL
Microwave Sensors Electronic Integrated Systems, Inc. (EIS)	

MODEL

MICROLOOP, PROBE	MODEL
ЗМ	.Canoga 701
PEDESTRIAN PUSH BUTTONS Campbell Polara Engineering, Inc.	MODEL .4 EVR 120 .BDSP-010-B
POWER SUPPLY FOR CARD RACK DETECTORS - NEMA	MODEL
ICC EDI	
SINGLE CHANNEL SHELF MOUNT DETECTORS, STANDARD	MODEL
Eberle Design Incorporated (EDI) Sarasota	
SINGLE CHANNEL SHELF MOUNT DETECTORS, TIME DELAY	MODEL
Eberle Design Incorporated (EDI) Sarasota	
ULTRASONIC DETECTORS	MODEL
Microwave Sensors	.TC-30
2-CHANNEL CARD RACK COUNTING DETECTORS, DUAL OUTPUT	
Eberle Design Incorporated (EDI)	.LMD632
2-CHANNEL CARD RACK COUNTING DETECTORS, SINGLE OUTPUT PULSE MODE (NEMA)	MODEL
Eberle Design Incorporated (EDI) ICC Reno A & E	.S27B
2-CHANNEL CARD RACK DETECTORS, STANDARD (170)	MODEL
Eberle Design Incorporated (EDI) Eberle Design Incorporated (EDI) Reno A & E Sarasota Sarasota	.LMD222 .222 .222-GP5
2-CHANNEL CARD RACK DETECTORS, STANDARD (NEMA)	MODEL
Eberle Design Incorporated (EDI)	

Reno A & E Reno A & E	
2-CHANNEL CARD RACK DETECTORS, TIME DELAY (NEMA)	MODEL
Eberle Design Incorporated (EDI)	LMD602TR
Reno A & E	C
Reno A & E	GT
NAL HEADS	
BACKPLATES	MODEL
Chapel Hill	
Intelight	BP INTLIT Series
Pelco	BK-100x Series
Neodesia Plastics	BP Series
LOUVERS	MODEL
Pelco	GPL
POLYCARBONATE SIDE-MOUNT BRACKETS WITH RELATED HARDWARE	MODEL
Component Products	Anv
Eagle	
SIGNAL HEADS - OPTICALLY LIMITED	MODEL
Intelight, Inc.	ESB Series
McCain	HPTS Series
SIGNAL HEADS - POLY CONVENTIONAL	MODEL
Chapel Hill	SIG-TPB-305-CTN-NVN-0N (3 sec
Chapel Hill	
Chapel Hill	SA Series
Chapel Hill Eagle	SA Series
Chapel Hill Eagle Econolite	SA Series TP Series T-30 POLY
Chapel Hill Eagle Econolite General Traffic Equipment Corp	SA Series TP Series T-30 POLY LT Series
Chapel Hill Eagle Econolite General Traffic Equipment Corp IDC/Safetrans	SA Series TP Series T-30 POLY LT Series MTSTP Series

PEDESTRIAN LED SIGNAL INDICATION

Pedestrian LED signal indications must be ETL verified. The ETL verified listing is located at: <u>http://www.intertek.com/lighting/infrastructure/traffic-signals/</u>

HARDWARE

NOTE: Hardware that meets MoDOT specifications from the following manufacturers will be accepted. ALL other manufacturers must provide equipment that meets specifications and complete a satisfactory six-month evaluation as described above to be added to the list.

SIGNAL HARDWARE

Pelco

STRANDVISE

MODEL

Reliable 3/8" Strandvise	
Reliable 1/4" Strandvise	

POSTS AND MAST ARMS

Note: Posts and Mast Arms do not require an evaluation period. Posts and Mast Arms shall be fabricated in accordance with MoDOT specifications and standards. Posts and Mast Arms shall be preapproved as required by the MoDOT standards and specifications to be added to the list. The following manufacturers have pre-approved fabrication details and documentation on file with the department. Posts and Mast Arms are subject to field inspection before acceptance.

STEEL POSTS AND MAST ARMS

DRAWING NUMBER

Ameron Pole Products	MO13TR11 - Rev. B (Type C)
Ameron Pole Products	MO13TR12 - Rev. B (Type CL)
Ameron Pole Products	
Ameron Pole Products	MO13TR14 - Rev. B (Type BL)
JEM Engineering & Manufacturing	

Maico Industries, Inc Millerbernd Manufacturing Company	
Millerbernd Manufacturing Company	
Millerbernd Manufacturing Company	
Millerbernd Manufacturing Company	1003523 (Type CL)
Millerbernd Manufacturing Company	500A971
Pelco Structural, LLC	MODMA1001 & 1002 (Type B)
Pelco Structural, LLC	MODMAL1001 & 1002 (Type BL)
Pelco Structural, LLC	MOSMA1001 & 1002 (Type C)
Pelco Structural, LLC	MOSMAL1001 & 1002 (Type CL)
Union Metals	
Valmont	DB00408 - Rev. H (Types B, BL, C, & CL)

MISCELLANEOUS

LOOP SEALANTS

(Loop sealants do not require material certification)

PEDESTAL BASES

MODEL

MODEL

Akron Foundry	TS-1000-L-P
Akron Foundry	TS-1000-L-WP
Component Products	CPI-BAS-1
Pelco	PB5336
Pelco	
Pelco	PB5340
Pelco	PB5341
Traffic Parts	TP 289 X

SPLICE KITS (DETECTOR LEAD-IN)

MODEL

3M	DBY Series
HOMAC HMC Industries	RAB 1/0 Series

METER SERVICE PEDESTAL (SIGNALS/SIGNALS & LIGHTING) MODEL

Milbank 120V Signal Only	CP3B51C1PAAOMO1
Milbank 120V Signal with 2 – Circuit 240V Lighting	CP3B51C1PBAOMO2
Milbank 120V Signal with 2-Circuit 240V Lighting Dual Meter	CP3B62C2NBAOMO1
Myers 120V Signal with 2-Circuit 240V Lighting	MEUGLA-M100-MDOT
Myers 120V Signal with 2-Circuit 240V Lighting	MEUG 20
Pacific Utility Products 120V Signal Only	

Pacific Utility Products 120V Signal with 2-Circuit 240V LightingUSPAR-100-100-MODOT Note: -- (Pacific Utility Products - product listed with "R" is ring less meter sockets, other utilities requiring ring type meter socket, have the "6" at the end of the catalog number)

Pacific Utility Products 120V Signal with 2-Circuit 240V LightingUSP16R-M2100-112C-MODOT Note: -- (Pacific Utility Products - product listed with "R" is ring less meter sockets, other utilities requiring ring type meter socket, have the "6" at the end of the catalog number)

LIGHT EMITTING DIODES (LED)

LEDs (circular and arrow) must be ETL verified. The ETL verified listing is located at: <u>http://www.intertek.com/lighting/infrastructure/traffic-signals/</u>

PROGRAMMABLE VIEW

MODEL

MODEL

Dialight	P463R33003 (Red Ball)
Dialight	P463Y33003 (Yellow Ball)
Dialight	
GELcore	DR3-RCFB-01A (Red Ball)
GELcore	
GELcore	

VIDEO DETECTION SYSTEMS

VIDEO DETECTOR

Aldis GridSmart Econolite Autoscope RackVision Econolite Autoscope RackVision Terra Iteris Vantage Edge2 Iteris Vantage Next Iteris Vantage Vector Peek Traffic Corp. VideoTrak IQ-P Peek Traffic Corp. VideoTrak IQ-ITS FLIR VIP 3D.x Series

III. HIGHWAY LIGHTING

All highway lighting equipment require a one-year evaluation period except for items noted requiring a six-month evaluation.

LIGHTING POLES

Note: Poles do not require an evaluation period. Poles shall be fabricated in accordance with MoDOT specifications and standards. They shall be pre-approved as required by the MoDOT standards and specifications in order to be added to the list. The following manufacturers have pre-approved fabrication details and documentation on file with the department. Lighting poles are subject to field inspection before acceptance.

STEEL POLES

DRAWING NUMBER

Ameron Pole Products	MO98AT3 – Rev. 4 (Type AT45) Design 1 & 2
Ameron Pole Products	
Ameron Pole Products	MO98B2 – Rev. 3 (Type B45 & MB45)
Ameron Pole Products	MO98B4 – Rev. 2 (Type B30)
JEM Engineering and Manufacturing	MO-AT30 – Rev. 3 (Type AT30)
JEM Engineering and Manufacturing	MO-AT45 – Rev. 3 (Type AT45)
Millerbernd Manufacturing Co.	730B907 (Type AT30)
Millerbernd Manufacturing Co	730B653 (Type AT45)
Millerbernd Manufacturing Co.	730B908 (Type B30)
Millerbernd Manufacturing Co.	730В909 (Туре В45)
Millerbernd Manufacturing Co.	730B910 (Type MB45)
Union Metals	71020-B2 - Rev. 5 (Type AT30)
Union Metals	71020-B3 - Rev. 4 (Type B30)
Union Metals	71019-B6 - Rev. 7 (Type AT45)
Union Metals	71019-B7 - Rev .4 (Types B45 & MB45)
Union Metals	71019-B8 – Rev. 3 (Type B30)
Union Metals	71019-B9 – Rev. 3 (Type B45)
Union Metals	71019-B10 – Rev. 3 (Type MB45)
Union Metals	71020-B103 – Rev. 3 (Type AT30)
Union Metals	71020-B104 – Rev. 4 (Type AT45)
Valmont	DB00019 – Rev. N (Types AT30 & B30)
Valmont	DB00020 – Rev. N (Types AT45, B45 & MB45)

ALUMINUM POLES

DRAWING NUMBER

ValmontMO-051707 (Type AT-30)

FOUNDATIONS

Note: Screw anchor foundations do not require an evaluation period. Screw anchor foundations shall be fabricated in accordance with MoDOT specifications and standards. They shall be pre-approved as required by the MoDOT standards and specifications in order to be added to the list. The following manufacturers have pre-approved fabrication details and documentation on file with the department. Screw anchor foundations are subject to field inspection before acceptance.

SCREW ANCHOR FOUNDATIONS

DRAWING NUMBER

Component Products, Inc.	SLSF 8-5 (Type AT30)
Component Products, Inc.	SLSF 10-7 (Type AT45)
Hubbell Chance	
Hubbell Chance	
Integrated Traffic Solutions, Inc.	ITS AT30 (Type AT30)
Integrated Traffic Solutions, Inc.	ITS AT45 (Type AT45)
J. H. Botts	
J. H. Botts	JHB MOH 45 – Rev. D (Type AT45)

LED LUMINAIRES

NOTE: LED Luminaires do not require a field evaluation period. LED Luminaires shall be fabricated in accordance with MoDOT specifications and standards. LED Luminaires shall be pre-approved by submittal of documents as required by the MoDOT standards and specifications in order to be added to the list. Submittal of documentation shall occur prior to approval for use on MoDOT projects.

LED LUMINAIRES

MODEL

MODEL

LUMINAIRES

NOTE: Luminaires will not be furnished with photoelectric cells. Receptacles will have a shorting plug in place of cell. Multi-tap ballast for 120 Volt and 240 Volt fixtures is permissible.

BRACKET ARM MOUNT - 150 WATT

American Electric Lighting	115 Series
American Electric Lighting	
Crouse-Hinds/Cooper	
Crouse-Hinds/Cooper	
General Electric (GE)	
Holophane	Mongoose Series

BRACKET ARM MOUNT - 250 WATT

115 Series
Durastar 2000, Series 30
OVZ Series
OVX Series
MSRL Series
Mongoose Series

BRACKET ARM MOUNT - 400 WATT

MODEL

American Electric Lighting	125 Series
American Electric Lighting	Durastar 2000, Series 30
Crouse-Hinds/Cooper	
General Electric (GE)	
Holophane	

HIGH MAST LIGHTING

MODEL

MODEL

MODEL

MODEL

MODEL

NOTE: High mast lighting is custom designed for the location. Fixtures from the following manufacturer's series are considered pre-approved.

Cooper	HMC Series
General Electric (GE)	HMA Series
Holophane	HMAO Series
Holophane	HMS Series
Metrolux	VA Series

POLE TOP MOUNTING

Holophane	HL2A Series
Holophane	Mongoose Series

SIGN LIGHTING - 250 WATT

SIGN LIGHTING - 400 WATT

Holophane	PANL Series
Holophane	SNVW Series

UNDERPASS (WALLPACKS)

CONTROL EQUIPMENT

CONTACTORS-ELECTROMECHANICAL	MODEL
Square D Westinghouse/Cutler-Hammer	Type S A202 Series
CONTACTORS-MERCURY	MODEL

Dayton/Duracool	.6A/6X Series
Magnecraft	.WM Series

BASE MOUNTED CONTROL CABINETS

NOTE: Cabinets that meet MoDOT specifications from the following manufacturers will be accepted. All other manufacturers must provide a model that meets specifications and complete a satisfactory six-month evaluation as described above to be added to the list.

Cleveland Switchboard Coxline Hoffman Shallbetter Inland Technologies

MOUNTING SOCKET FOR PHOTOELECTRIC CONTROL......MODEL

NOTE: Mounting sockets require a six-month evaluation.

American Electric Lighting	DUR
Fischer-Pierce	
General Electric (GE)	MB-PECTL

PHOTOELECTRIC CONTROL

MODEL

Area Lighting ResearchSST-240 (240 volt)	\I+\
	\ I +\
Area Lighting ResearchSST-PV (120/240 volt)	1+1
American Electric LightingD120-1.0-STJ (Dark to Light) (120 vol	л()
American Electric Lighting	,
American Electric Lighting	
American Electric LightingDE480-1.0-TJ (480 volt)	
Fischer-Pierce	
Fischer-Pierce	
Fischer-PierceFPN7794 (480 volt)	
Fischer-PierceFPN7760 (120 volt)	
General Electric (GE)PEC01TL (>120v/< 305v w/ time delay)	
General Electric (GE)PEC1TL (120v)	
General Electric (GE)PEC5TL (480v)	
ITTSAT-15	
Tyco6190 VPS	

TYPE A CIRCUIT BREAKERS

Square D	FAL Series
Westinghouse/Cutler-Hammer	EHD Series (1-Pole)
Westinghouse/Cutler-Hammer	

MISCELLANEOUS

AVIATION LIGHTING	MODEL
Hughey & Philips	KG114
FUSED SLIP CONNECTORS	MODEL

NOTE: Slip connectors require a six-month evaluation.

Buss	HEB-JWRYC
IDEAL	

METER SERVICE PEDESTAL (LIGHTING)

Milbank 4-Circuit 240V Lighting	CP3B51C1PBAOMO3
Milbank 4-Circuit 480V Lighting	
Milbank 4-Circuit 480V Lighting (used for Ameren cold sequence) .	
Pacific Utility Products 4-Circuit 240V Lighting	USP24-M2100-100-MODOT6
Pacific Utility Products 4-Circuit 480V Lighting	USP16-M2100-100-MODOT
Pacific Utility Products 4-Circuit 480V Lighting	USP24-M2100-100-MODOT6-480

NAVIGATION LIGHTING

Tideland	
Pharos Marine Automatic Power, Inc.	FA-143

SPLICE KITS

TRANSFORMER BASES

Akron Foundry	
Akron Foundry	TB3-17H (for AT45)

MODEL

MODEL

MODEL

IV. POWER SUPPLY EQUIPMENT AND PULL BOXES

All items require a six-month evaluation period.

MAIN SERVICE DISCONNECT ENCLOSURE WITH SAFETY SWITCH (NEMA 4)

MODEL

MODEL

MODEL

General Electric (GE)	TE 100 CS
Square D	FA-100-DS Series E2
Westinghouse	

PREFORMED PULL BOX-CLASS 1 Straight

Straight	
Armorcast Products Company	
Carson Industries	H1730-24 (Box)
CDR	
Composite Industries	CI183024PB1P
Highline	PHA173024HO1R
•	H1730-PI (Lid)
Martin Enterprises	
Strongwell/Quazite	
C C	PG1730H511 (Lid)
	PG1730BA Series

SynertechS1730B24AA (Box	()
S1730HBB0A (Lid)

Flared

Armorcast Products Company	A6001640TAX24 (Box & Lid)
CDR	
Highline	CHA173024HO1R
Martin Enterprises	1730/22 FRP
NewBasis	FCA173022CC4126-62 (Box & Lid)
NewBasis	FCA173022CC4749-61 (Box & Lid)
NewBasis	
Pencell Plastics	PEM-1830-PCX (Box & Lid)

PREFORMED PULL BOX-CLASS 2

PREFORMED PULL BOX-CLASS 2 Flared

MODEL

MODEL

Armorcast Products Company	A6001974TAX26 (Box & Lid)
Armorcast Products Company	A6001974TAX24
CDR	A12-2436 series-24" (Box & Lid)
Highline	
Martin Enterprises	
NewBasis	
NewBasis	· · · · · · · · · · · · · · · · · · ·
NewBasis	· · · · · · · · · · · · · · · · · · ·
Pencell Plastics	
Pencell Plastics	
Synertech	

PREFORMED PULL BOX-CLASS 3

Straight

otraight	
Armorcast Products Company	A6001430TAPCX36 (Box & Lid)
Carson Industries	H3048-36 (Box)
	H3048-P1 (Lid)
CDR	
Composite Industries	CI304836PB1P
Highline	
Martin Enterprises	
Strongwell/Quazite	
C C	PG3048H517 (Lid)
	PG3048BA Series
Synertech	S3048B36AA (Box)
-	S3048HCB0A (Lid)

Flared

Armorcast Products Company	A6001550TAX36 (Box & Lid)
CDR	A12-3048-series 36" (Box & Lid)
Highline	
Martin Enterprises	
NewBasis	
NewBasis	
Pencell Plastics	PEM-3048-36-PCX-SPLIT (Box & Lid)

PREFORMED PULL BOX-CLASS 5 Flared

Armorcast Products CompanyA6001466TA (Box & Lid)Armorcast Products CompanyA6000172TAX36 (Box & Lid)CDRA12-3200 series-36" (Box & Lid)Highline ProductsCRA3236H01Martin Enterprises320036 FRPNewBasisFCA320036T SeriesNewBasisFCA540036C4800 (Box & Lid)NewBasisFCA540036C40336 (Box & Lid)NewBasisFCA540036C4036 (Box & Lid)NewBasisFCA540036-MODOTQuazitePR3944Z504

HIGHWAY SIGNING EQUIPMENT

V. GENERAL

This Approved Products List (APL) for highway signing equipment contains current pre-approved products for highway signing. This list is applicable to department purchases and construction contracts. The list includes products that have been approved for use based on satisfactory performance during a specified test period. Products listed have undergone sufficient field testing to be considered acceptable for use at any time. All field tests of new products or pending products should be arranged with Central Office Traffic.

The department frequently tests new products and equipment for highway signing. These new products may be installed on a construction project or used for normal department installations and maintenance. Vendors may also submit items, at no cost to the department, for the test period. Only a limited number of units will be accepted for test statewide until the product is added to the Approved Products List. A vendor wishing to initiate a test on a new product shall submit a Product Evaluation Request Form. Copies of this form can be obtained from our website at www.modot.state.mo.us or contact MoDOT Central Office Traffic. Minor model changes of previously approved products do not require a new evaluation period, although the vendor shall submit specification sheets and a sample of the product for the Department to inspect. Any modifications determined to potentially alter the performance of the product may require the product to undergo additional field testing and evaluation.

All product evaluations are coordinated through MoDOT Central Office Traffic. The vendor supplying the equipment shall provide equipment specifications and a certification that the equipment meets department specifications before the test is performed. The equipment is tested for the period specified by Central Office Traffic (typically one year). Products that are not performing satisfactorily will be left off of the list. Products that were previously approved that begin to perform unsatisfactorily will be removed or replaced with an approved product if the vendor cannot provide timely correction of the problem.

If a vendor is proposing a product that does not meet department specifications, an explanation of why the product meets or exceeds the current specifications must be provided by the vendor in writing to Central Office Traffic. If approved, the product may be tested for the specified period as described above. If the product is satisfactory, the Department will consider a revision to the applicable specifications. Products will not be added to the Approved Products List that does not meet department specifications.

Products on the APL shall continue to perform satisfactorily. In addition, the vendors shall support the products. Products not performing as required or not supported are subject to removal from the APL.

Grounds for removal of products include but are not limited to:

- Significant change in product specifications or design without notification to the department.
- Failure to correct or replace products that are defective in manufacturing or workmanship.
- Repeated patterns of malfunctions of a product not adequately corrected by the vendor.
- Unreasonable pricing of repair parts or repair work. Repair work not completed in a reasonable time frame.
- Excessive delivery times for new purchases or replacement parts.

Changes in standard specifications may also necessitate removal of specific products from the APL. If this occurs, there will be a grace period where the product will be retained on the list after the specifications are changed. However the product will eventually be removed from the list if it is not revised to meet specifications.

VI. HIGWAY SIGNING EQUIPMENT

BREAKAWAY DEVICES

MANUFACTURER	DESCRIPTION, MODEL
Ultimate Highway Products Xcessories Squared Xcessories Squared	Kleen Break 425 for 2" PSST, XKB42520-G
Xcessories Squared Xcessories Squared	Redi-Torque 280 for 2.5" PSST, SB8C-250A-G Redi-Torque 280 Pre-Assembled Slip Base for 2.5" PSST, RT8UX-25C25-G
Xcessories Squared	Redi-Torque Triangular Surface Mount Base, SMSB9-10-G
Xcessories Squared Northwest Pipe Company Designovations, Inc Designovations, Inc Dent Breakaway Industries, Inc	S-Q 8" Square Slipbase for 2.5" PSST, 31209 Snap n Safe S200 and S200S (2") Snap n Safe S250 and S250 S (2.5") 3/4" Dent Bolt, #6882 5/8" Dent Bolt, #6878 1/2" Dent Bolt, #6874 5/8" Ground Anchors (Galvanized) 5/8" Modified Dent Bolt, #6220

FOUNDATIONS/ANCHORS

MANUFACTURER

DESCRIPTION, MODEL

NoneNone

SIGN HARDWARE

MANUFACTURER

DESCRIPTION, MODEL

Aluminum Post Clamp for 2.5" Pipe, XAPC278RD
Aluminum Post Clamp for 3" Pipe, XAPC350RD
Aluminum Post Clamp for 4" Pipe, XAPC450RD
Aluminum Bar for Post Clamps, XAB750
Aluminum Sign Backer Bar, ASB200P1
Extruded Panel Clamp for 2" PSST, EPPCS200SQ
Extruded Panel Clamp for 2.5" PSST, EPPCS250SQ
Extruded Panel Clamp for 2.5" Pipe, EPPCS250RD
Extruded Panel Clamp for 3" Pipe, EPPCS300RD
Extruded Panel Clamp for 4" Pipe, EPPCS400RD
Extruded Panel Clamp for 4x4 Wood, EPPCS44W
Extruded Panel Clamp for 4x6 Wood, EPPCS46W
Extruded Panel Clamp for 6x6 Wood, EPPCS66W

<u>SIGNS</u>

MANUFACTURER

DESCRIPTION, MODEL

Tapco.....Blinkersigns

TRAFFIC SIGNALS AND HIGHWAY LIGHTING EQUIPMENT

ADDED:

CONTROLLERS

NEMA TS1 CONTROLLERS	MODEL
Intelight	X-3 Series (Added 7/27/17)
Econolite	Cobalt Series (Added 7/27/17)

CABINETS AND RACKS (TYPE 170 CONTROLLERS)

332 AND 336S CABINET AND RACK ASSEMBLIES

Eagle (Added 7/27/17)

CONFLICT MONITORS

170 CONFLICT MONITORS	MODEL
Eberle Design Incorporated (EDI)	
Eberle Design Incorporated (EDI)	

CABINET ACCESSORIES

AUXILIARY TIME CLOCK	MODEL
Applied Information	Al-500-070 (Added 4/2/18)

ISOLATORS (170 only)	MODEL
(242=DC, 252=AC)	
RENO A&E	242 (2 Channel)

DETECTORS

POWER SUPPLY FOR CARD RACK DETECTORS - NEMA	MODEL
EDI	PS-175B (Added 4/2/18)

HARDWARE

PEDESTRIAN HEAD – POLY 1-SECTION	MODEL
General Traffic Equipment	

POSTS AND MAST ARMS

STEEL POST AND MAST ARMS	DRAWING NUMBER
Ameron Pole Products	MO13TR13 - Rev. B (Type B)
(December 2015)	
Ameron Pole Products	MO13TR14 - Rev. B (Type BL)
(December 2015)	

MISCELLANEOUS

FUSED SLIP CONNECTORS	MODEL
IDEAL	30-S2212

VIDEO DETECTION SYSTEMS

VIDEO DETECTOR Aldis Iteris Iteris Peek Traffic Corp Peek Traffic Corp FLIR	Vantage Next (December 2015) Vantage Vector (December 2015) VideoTrak IQ-P VideoTrak IQ-ITS
PERFORMED PULL BOX-CLASS 1 Flared	MODEL
Martin Enterprises	1730/22 FRP
PERFORMED PULL BOX-CLASS 2 Flared	MODEL
Martin Enterprises	2436/24 FRP
PERFORMED PULL BOX-CLASS 3 Flared	MODEL
Martin Enterprises	
PREFORMED PULL BOX-CLASS 5 Flared	MODEL
Martin Enterprises	320036 FRP

DELETED:

3MCanoga C800 Series (This product is no longer manufactured per Global Traffic Technologies – 5/21/15)

LOOP SEALANTS

MODEL

CONTROLLERS

NEMA TS1 CONTROLLERS Siemens	MODEL EPAC Genesis M40
Siemens	
(These products are no longer manufactured per MoboTrex – 2/27/17)	
Econolite	ASC/2-2100
Econolite	ASC/2S-2100
(These products are no longer manufactured per Traffic Control Corp 7/27/17)	
Peek	3000
Traffic Control Technologies (TCT)	LMD-8000
(These products are no longer manufactured per Pinkley Sales 5/23/17)	
Intelight	X-1
Intelight	X1L
Intelight	
(These products are no longer manufactured per Intelight 4/2/18)	

NEMA ON-STREET MASTER CONTROLLER

MODEL

EconoliteKMC	;-10,000
(This product is no longer manufactured per Traffic Control Corp 7/27/17)	

SOLID STATE PRETIMED CONTROLLERS (ALL TYPES) MODEL

Siemens	EPIC Series
(This product is no longer manufactured per MoboTrex – 2/27/2017)	
Traffic Control Technologies (TCT)	LMD 40 Series
(This product is no longer manufactured per Pinkley Sales 5/23/17)	

170 CONTROLLERS

MODEL170E

Siemens
(This product is no longer manufactured per MoboTrex – 2/27/2017)

CONFLICT MONITORS

NEMA CONFLICT MONITORS	MODEL
Pook/Transvt	1200

reen/iialisyl	
Traffic Control Technologies (TCT))LNM Series

170 CONFLICT MONITORS Eberle Design Incorporated (EDI)	MODEL 210E
(This product is no longer manufactured per EDI – 4/2/2018)	
Solid State Devices (<i>This product is no longer manufactured – 4/2/2018</i>)	210P

CABINET ACCESSORIES

LOAD SWITCHES (NEMA & 170)	MODEL
Traffic Control Technologies (TCT)	SSS-86
SURGE PROTECTORS Emerson Network Power	MODEL SHA 1210
DETECTORS	

POWER SUPPLY FOR CARD RACK DETECTORS - NEMA MODEL PGKPS-1.2

VIDEO DETECTION SYSTEMS

VIDEO DETECTOR

Traficon	VIP 3D.1 (July 2015)
Traficon	VIP 3D.2 (July 2015)
Econolite	
Econolite	
(These products are no longer manufactured per Traffic Control Corp 7/27/17)	•

REVISED:

CABINETS AND BACK PANELS (NEMA & S.S. PRETIMED)

NOTE: Cabinets and Back panels that meet MoDOT specifications from the following manufacturers will be accepted. ALL other manufacturers must provide a model that meets specifications and complete a satisfactory one-year evaluation as described above to be added to the list.

NEMA CABINET AND BACK PANEL ASSEMBLIES

Control Technology Econolite Henke/Bison IDC/Gibbons Naztec P-44 Siemens Changed to (June 2014 – to the recent ownership of Brown Traffic acquiring and marketing under the brand name of "Eagle".) Eagle

MODEL

MODEL

MODEL

CONTROLLERS

Naztec	
Changed to (April 2018)	
Trafficware	

NEMA ON-STREET MASTER CONTROLLER

Siemens	
	nodel number is now EPAC M52 with SEMARC – 2/27/17)
	EPAC M52 with SEMARC

CONFLICT MONITORS

NEMA TS1 CONTROLLERS

Eberle Design Incorporated (EDI) Changed to (model # change only, per MoboTrek, model number is now NSM Eberle Design Incorporated (EDI)	-6E – 2/27/17)
Eberle Design Incorporated (EDI) Changed to (model # change only, per MoboTrek, model number is now NSM Eberle Design Incorporated (EDI)	-6E – 2/27/17)
Eberle Design Incorporated (EDI) Changed to (model # change only, per MoboTrek, model number is now NSM: Eberle Design Incorporated (EDI)	-6E – 2/27/17)

METER SERVICE PEDESTAL (SIGNALS/SIGNALS & LIGHTING) MODEL

 Pacific Utility Products 120V Signal with 2-Circuit 240V LightingUSPA-100-100-MODOT Changed to (April 2015)
 Pacific Utility Products 120V Signal with 2-Circuit 240V LightingUSPAR-100-100-MODOT

Pacific Utility Products 120V Signal with 2-Circuit 240V LightingUSP16-M2100-112C-MODOT Changed to (April 2015) Pacific Utility Products 120V Signal with 2-Circuit 240V LightingUSP16R-M2100-112C-MODOT

METER SERVICE PEDESTAL (LIGHTING)MODEL

Pacific Utility Products 4-Circuit 480V Lighting	USP16-M2100-112C-MODOT
Changed to (April 2015)	
Pacific Utility Products 4-Circuit 480V Lighting	USP16-M2100-100-MODOT

MOUNTING SOCKET FOR PHOTOELECTRIC CONTROLMODEL

NOTE: Mounting sockets require a six-month evaluation.

American Electric LightingPB	C
Changed to (April 2013)	
American Electric LightingDL	JR

NAVIGATION LIGHTING

MODEL

DRAWING NUMBER

SCREW ANCHOR FOUNDATIONS

Hubbell Chance	SA112-0696 – Rev. G (Type AT30)
Changed to <i>(November 2013)</i> Hubbell Chance	
Hubbell Chance	SA112-0786 – Rev. D (Type AT45)
Changed to (November 2013) Hubbell Chance	SA112-0786 – Rev. E (Type AT45)

SOLID STATE PRETIMED CABINET AND BACK PANEL ASSEMBLIES

Siemens

Changed to (June 2014 – to the recent ownership of Brown Traffic (MoboTrex – Brown Traffic changed their name to MoboTrex in March 2016) acquiring and marketing under the brand name of "Eagle".)

Eagle

HARDWARE

SIGNAL HEADS - POLY CONVENTIONAL	MODEL
Traffic Control Technologies (TCT)	PSS Series
Changed to (This product purchased by Peek per Pinkley Sales 5/23/17))	
Peek	. PSS Series

STEEL POST AND MAST ARMS

DRAWING NUMBER

Changed to <i>(December 2015)</i> Ameron Pole Products	MO13TR12 - Rev. B (Type CL)
Millerbernd Manufacturing Company Changed to (April 2016)	780С388 (Туре В)
Millerbernd Manufacturing Company	1005022 (Туре В)
STEEL POST AND MAST ARMS	DRAWING NUMBER
Millerbernd Manufacturing Company Changed to (April 2016)	780C389 (Type BL)
Millerbernd Manufacturing Company	1003534 (Type BL)
Millerbernd Manufacturing Company Changed to (April 2016)	780C49 (Type C)
Millerbernd Manufacturing Company	1005004 (Туре С)
Millerbernd Manufacturing Company Changed to (April 2016)	780C51 (Type CL)
Millerbernd Manufacturing Company	1003523 (Туре СL)
Valmont Changed to (revised 10/18/13)	DB00408 – Rev. C (Types C, CL, B & BL)
Valmont	DB00408 – Rev. G (Types C, CL, B & BL)
Changed to <i>(revised 10/18/13)</i> Valmont	DB00408 – Rev. H (Types B, BL, C & CL)
SURGE PROTECTORS	MODEL
Emerson Network Power Changed to	1250
Emerson Network Power	Edco SHA-1250

HIGHWAY SIGNING EQUIPMENT

ADDED:

BREAKAWAY DEVICES

MANUFACTURER	DESCRIPTION, MODEL
Designovations, Inc	Snap n Safe S200 and S200S (2") (January 2014)
Xcessories Squared	Kleen Break Surface Mount 425 for 2" PSST, XKBSM42520-G (December 2013)
Xcessories Squared	Redi-Torque 280 Pre-Assembled Slip Base for 2.5" PSST, RT8UX-25C25-G (December 2013)
Xcessories Squared	Redi-Torque Triangular Surface Mount Base, SMSB9-10-G (December, 2013)