**Special Provisions**

1. These Contracts are established to obtain Permanent Dynamic message Signs for the Kansas Department of Transportation.
2. **Contract Period:** Date of Award through April 30, 2021 unless prematurely terminated as provided for below.
3. **Termination:** The contract may be terminated, without cause, by either party on the contract anniversary date, April 30th, with sixty (60) day prior written notice to the Procurement Officer,
4. Signs to be provided as described in the attached Kansas Department of Transportation Specifications
5. **Delivery:** Signs to be delivered to any designated destination with in the State of Kansas

**Contractors**

Group I (Walk-in) and Group II (Rear Access)

**Contract Number: 41773**

**Contractor:** Daktronics Inc

 117Prince Dr

 Brookings, SD 57106

 Vendor ID: 0000042688

 FEIN: 46-0306862

 Contact Person: DeWayne Anderson

 E-Mail: Dewayne.anderson@daktronics.com

 Toll Free Telephone: 800-833-3157

 Local Telephone: 605-651-2262

 Fax: 605-497-4700

Purchase orders to be directed to Scott Fuhrman, Project Manager

Cell: 605-691-4218

Email: scott.fuhrman@daktronics.com

Group III and Group IV ( Front Access)

**Contract Number: 41774**

**Contractor:** Ses America Inc

 21 Quinton St

 Warwick, RI 02888

 Vendor ID: 0000505004

 FEIN: 05-0420453

 Contact Person: Mike McKay

 E-Mail: Mike.mckay@sesamerica.com

 Toll Free Telephone: 800-252-6220

 Local Telephone: 401-316-3341

 Fax: 401-316-3341

**Price Schedule**

: UNIT PRICE

ITEM (Each)

**GROUP I: 20 CHARACTER WALK-IN DMS**

**CONTRACTOR; DAKTRONICS**

AMBER LED

 Brand/Make/Model: VF-2020-27x120-66-A $54,000.00

 Optional 4-Hour Controller Uninterruptible Power Supply $800.00

LOW RESOLUTION COLOR LED

 Brand/Make/Model: VF-2020-27x120-66-RGB $67,000.00

 Optional 4-Hour Controller Uninterruptible Power Supply $800.00

HIGH RESOLUTION COLOR LED

Brand/Make/Model: VF-2020-54X240-34-RGB$85,000.00

 Optional 4-Hour Controller Uninterruptible Power Supply $800.00

**GROUP II: 20 CHARACTER REAR ACCESS DMS**

**CONTRACTOR: DAKTRONICS**

AMBER LED BUTTERLY

 Brand/Make/Model: VF-2120-27x120-66-A $54,000.00

 Optional 4-Hour Controller Uninterruptible Power Supply $800.00

LOW RESOLUTION COLOR LED

 Brand/Make/Model: VF-2120-27x120-66-RGB $64,000.00

 Optional 4-Hour Controller Uninterruptible Power Supply $800

HIGH RESOLUTION COLOR LED

Brand/Make/Model: VF-2120-96X384-20-RGB$94,500.00

 Optional 4-Hour Controller Uninterruptible Power Supply $800

**Price Schedule**

**GROUP III: 15 CHARACTER FRONT ACCESS DMS**

**CONTRACTOR: SES AMERICA**

AMBER LED

 Brand/Make/Model: SES America/M6000/28x90 66MM $ 40,347.00

 Optional 4-Hour Controller Uninterruptible Power Supply $550.00

LOW RESOLUTION COLOR LED

 Brand/Make/Model: SES America/M6000/27x90 66MM 48,197.00

 Optional 4-Hour Controller Uninterruptible Power Supply $550.00

HIGH RESOLUTION COLOR LED

 Brand/Make/Model: SES America/M6000/54x180 33MM $53,381.00

 Optional 4-Hour Controller Uninterruptible Power Supply $550.00

**GROUP IV: AMBER LED – 2 OR 3 CHARACTER FRON ACCESS DMS**

**CONTRACTOR: SES AMERICA**

**2 CHARACTER FRONT ACCESS DMS**

Brand/Make/Model: SES America/M5000/FAA667X15$2,934.00

**3 CHARACTER FRONT ACCESS DMS**

Brand/Make/Model: SES America/M5000/27x90 66MM$3,169.00

**SIGN CONTROLLER**

 Brand/Make/Model: SES America/SCU6/V3 $2,562.00

**OTHER EQUIPMENT:**

 336S Pole Mounted Cabinet $1,604.00

 334 / 332 Ground Mounted Cabinet $2,524.00

 Small Ground Mounted Cabinet (336G) $2,184.00

**KANSAS DEPARTMENT OF TRANSPORTATION**

**SPECIFICATIONS**

**FOR**

**PERMANENT DYNAMIC MESSAGE SIGNS**

The following specifications and dimensions shall apply to purchases of PERMANENT DYNAMIC MESSAGE SIGNS (DMS) for the Kansas Department of Transportation (KDOT). The KDOT reserves the right to waive minor technicalities under this specification. Federal and State laws supersede any conflicting part of this specification. Bidders will be required to comply with KDOT standard specification Section 106 outlining “Buy America” requirements for iron and steel material and provide supporting documentation.

The Bidder/Contractor acknowledges and understands the funding for this project will be provided in part through the use of federal aid. The Bidder/Contractor agrees to comply with all appropriate federal laws and regulations applicable to federally funded projects. Furthermore, the Bidder/Contractor and any subcontractors to the Contractor agree to maintain for inspection and audit by KDOT, and the FHWA all books, documents, papers, accounting records and other evidence pertaining to all costs incurred under this Agreement and to make such materials available at their respective offices at all reasonable times during the life of this Agreement and for five (5) years from the date of the final payment to Contractor under this Agreement, and to furnish copies thereof if requested.

Each bidder should use the attached specification and cost sheet template and submit a completed sheet for each DMS they wish to propose. The equipment and parts furnished shall be a current model, new and unused, under standard production by the manufacturer. The bidder shall have a minimum of five (5) years of experience in the high quality standard production, manufacturing, service, support, and training of permanent DMS utilized in Intelligent Transportation Systems. Permanent shall be defined as a unit produced and manufactured for the sole purpose of functioning as a stand-alone unit constructed for installation on permanent supports or bridge structures over, or adjacent to, the roadway. Units fabricated to function as portable, trailer mounted, semi-permanent, single purpose, modular or that are retrofitted to be installed as permanent will not be accepted.

Bidders shall be established in, and maintain a local presence within 600 mile radius of, Topeka, Kansas to provide timely response for service calls, repairs, and scheduled maintenance.

Complete specifications and literature for the unit(s) offered shall accompany the bid. Any exceptions to these specifications shall be indicated on the bid or on a separate attachment to the bid, labeled as such. KDOT acknowledges there may be alternative products that meet the functional requirements of the DMS specifications. KDOT encourages Bidders to propose advances in technology and alternatives that meet the intent of this Request for Proposal (RFP). Each deviation to the specifications should be clearly shown and benefits explained. KDOT reserves the right to reject any offered alternate that does not meet the intent and/or requirements of the specifications, as determined by KDOT.

Any “equal” or “equivalent” item(s) for brand specified components shall be listed with the bid package. Complete description and literature on equivalent components shall be supplied for consideration by the KDOT. The burden of proof regarding offered equivalent items shall be the responsibility of the vendor.

**BIDDER DISCLOSURE:** It shall be the responsibility of all bidders to openly disclose any and all known manufacturer, equipment, or bidder limitations, defects, or deficiencies that could result in failure to meet the desired operability, compatibility, or successful implementation of procured equipment, services, and support.

**WARRANTY**: The bidder agrees, if his proposal is accepted, to guarantee the design, material and workmanship of the unit(s) bid according to the standard factory warranties, or for one year from the date of acceptance, whichever is greater. If manufacturer’s warranties are for a longer period, they shall apply. A copy of all warranties shall accompany the bid.

 **DELIVERY:** The Bidder must be able to manufacture and ship DMS and DMS components within 120 days after receipt of order (ARO) to the location specified by KDOT at the time of order.

**TRAINING**: Up to 16 hours of operational and maintenance training for the DMS and vendor software shall be provided at the request of KDOT per sign type. This training shall be provided through practical demonstrations, by a competent technician, thoroughly trained in the use, operation, and servicing of the unit. Training shall be provided at a time and location approved by KDOT. The technician shall instruct the KDOT and partnering personnel in the proper use, safety, operation, and preventative maintenance of the unit and to test the unit for satisfactory performance. The training shall include, but not be limited to "hands-on" operation of all sign control hardware, vendor software, explanation of all system commands, required preventative maintenance procedures, servicing procedures, system "troubleshooting" or problem identification procedures. The Bidder shall submit an agenda for the training and one complete set of training materials (manual and schematic) to KDOT for approval a minimum of two weeks prior to the training. The vendor agrees to provide KDOT with responses to all training related questions and concerns, through the life of the contract, within 5 working days of notification receipt.

**MANUALS:** The DMS Manufacturer shall provide 2 hard copies and an electronic copies of the operator, maintenance, and vendor software manuals and 1 copy for each equipment cabinet. The maintenance manual shall include parts specifications and wiring diagrams that cover all components of the unit, including motors, drive systems, and attachments. The DMS Manufacturer’s NTCIP Management Information Base (MIB) shall be provided for use by KDOT or any 3rd party designated by KDOT. The Protocol Implementation Conformance Statement (PICS) or Profile Requirements List (PRL) shall also be provided.

**GENERAL REQUIREMENTS:** Three different size signs will be considered in both amber and high/low resolution color for a total of nine (9) different sign types. The three DMS sizes will be a 20 character walk-in (over the road truss mounted), 20 character rear access (butterfly or over the road truss mounted), and 15 character front access (two-post mounted signs).

Each DMS bid shall consist of the DMS case including contents, all mounting hardware, IP addressable sign controller unit (SCU) and communication unit, equipment cabinet, outdoor rated communications cabling between the DMS case and the equipment cabinet, grounding and surge protection, display modules, power supplies, delivery, training, on-site installation support and acceptance testing, maintenance, software, and operation manuals and transfer of guarantees and warranties. Each DMS shall have the option to include a four (4) hour Controller Uninterruptible Power Supply, the cost of which will be in addition to the cost of the DMS.

The DMS shall meet NEMA TS 4 “Hardware Standards for Dynamic Message Signs with NTCIP Requirements” for Light Emitting Diode (LED)-fixed DMS. All DMS equipment shall meet all of the requirements in Section 3.2.4 "Power Interruption" of the National Electrical Manufacturers Association (NEMA) Standard TSI for Traffic Control Systems. All DMS Equipment shall meet all of the requirements in Section 2.1.6 "Transients, Power Service" of NEMA Standard TS 1. The DMS shall be NTCIP compliant and support NTCIP 1203, 2101, 2103, 2104, 2201, 2202, and 2301.

The DMS shall be a standard model with at least 5 deployments in the U.S. Custom design of features to meet this specification is not acceptable.

The DMS shall meet the latest KDOT approved Manual on Uniform Traffic Control Devices (MUTCD), Chapter 2L Changeable Message Signs section. All structural components of the DMS housing shall meet the latest KDOT approved American Association of State Highway and Transportation Officials (AASHTO) “Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.

Walk-in enclosure DMS must comply with the Occupational Safety and Health Standards (OSHA) Standard 1910.36 “Means of Egress” and must provide two exit doors/routes per enclosure. Walk-in enclosure DMS must have a positive pressure ventilation system.

**SOFTWARE REQUIREMENTS:** The Bidder shall provide NTCIP compliant software for stand-alone and remote acceptance testing. The submitted DMS solution must be compatible with the latest version of the existing KDOT and KC Scout head end DMS software package without the development of additional software drivers. The existing head end software package currently utilized at KDOT is MIST® and the existing head end software package currently utilized at KC Scout is TransSuite®. Documentation to support NTCIP compliance of stand-along software and at least one customer contact to document compatibility with MIST® and TransSuite® shall be included with bid submission. Any software upgrades necessary for stand-alone software to operate the unit shall be included from the date of award through the warranty period.

**MAINTENANCE AND SUPPORT:** The bidder shall provide continuous operational maintenance and support from post award through the end of the warranty period, by way of phone and on-site review when required. Telephonic inquiries shall be responded to within eight (8) working hours of receipt of inquiry. The bidder shall maintain parts and supplies necessary for incidental maintenance and repair to allow for operability of units within one week of report of incident. Full equipment replacement shall be provided within 120 days after receipt of order.

**BIDDING:** Bidders shall complete and return the attached item specifications sheets and item cost sheets for each item for which they wish to submit a bid.

**PRE-AWARD:** Prior to award of the contract, bidders may be required to furnish contact information for current and former customers supporting the successful implementation of similar DMS for Intelligent Transportation Systems projects within the past five years. Bidders may also be required to furnish a history of response and issue resolution for review by KDOT and corporate financial data upon request. Only bids from financially responsible organizations, as determined by KDOT, with experience in the field of manufacturing permanent DMS for Intelligent Transportation Systems shall be considered.

The DMS Manufacturer must be able to provide documentation and references to the satisfaction of KDOT of a minimum of five (5) successful installations of each approved model within the United States for Intelligent Transportation Systems (ITS).

**POST AWARD SUBMITTAL REQUIREMENTS:** The selected DMS Manufacturer will be required to fulfill the following requirements as part of the post award and pre-delivery activity. Failing to provide the required information may result in termination of the contract award. Prior to fabrication or purchase of any material or equipment for use on this project, the DMS Manufacturer shall submit, for review by KDOT, a complete set of shop drawings. Shop drawings shall be submitted within 30 calendar days after receipt of sign support structural drawings provided by KDOT. The shop drawings shall include appropriate catalog cut sheets and specifications for all standard, off-the-shelf items, detailed drawings and other necessary data for all non-catalog or custom-made items, and structural calculations needed to assure the integrity of the sign housing assembly and the sign mounting hardware contained herein. The shop drawings and structural calculations of the sign housing structural details and the sign mounting hardware shall be sealed by a Registered Professional Engineer licensed in the State of Kansas. KDOT reserves the right to comment on or reject and have the manufacturer resubmit any and all shop drawings should revisions be required. No additional cost considerations will be made for this iterative process. Spare parts must be available to KDOT for the duration of the contract for the selected Vendor and readily accessible within 30 days of request.

**PRE-DELIVERY SERVICE:** The DMS unit, including associated equipment, controllers, cabinets, manuals, and cabling shall be delivered complete, fully operational, and without defect. It shall be properly serviced, tested, and all mechanical adjustments made prior to delivery. This is to include any and all tasks required for the units to be fully functional and interoperable in a production environment.

**TESTING:** The DMS Manufacturer shall provide factory acceptance test results, stand-alone test results, and 90 day test procedures and data forms for KDOT approval. Stand-alone test will be performed by the vendor during sign commissioning for each DMS. Factory and stand-alone acceptance tests shall be performed by the selected vendor in the presence of a KDOT representatives or system integrator, at KDOT’s option. The DMS Manufacturer shall reimburse KDOT, in accordance with [State Travel Reimbursement Guidelines](http://www.da.ks.gov/ar/employee/travel/travbk.htm), for all travel expenses (including airfare and lodging) for up to three (3) persons/trips should the factory acceptance testing take place a distance greater than 600 miles from Topeka, KS. The tests shall include items addressed in the specifications and the latest version of the NTCIP Exerciser to demonstrate that no proprietary protocols have been used and that the vendor software and devices are NTCIP compliant. Failure to conform to the requirements of any test shall be counted as a defect and the equipment shall be subject to rejection by KDOT which could result in termination of the contract award. Rejected equipment may be offered again for a retest, provided that all non-compliance issues have been corrected and retested by the DMS Manufacturer and evidence thereof submitted to KDOT. The DMS Manufacturer will be required to be on site to perform stand-alone testing/sign commissioning and perform acceptance testing/re-testing and be able to provide product support in the presence of a KDOT representative or system integrator, at KDOT’s option.

The Bidder shall provide highly skilled, trained technicians to perform the testing of all equipment and associated peripherals. Technicians will be provided at no additional cost to KDOT for the entirety of the test period and until all equipment is fully operational and interoperable.

**90 DAY TEST PERIOD:** The 90 day test period will begin after successful completion of the stand-alone test. The successful Bidder will repair and replace defective equipment until the DMS has successfully operated for 90 days. Shipping, travel costs, labor and other costs associated with repair of the DMS during this period shall be the responsibility of the Bidder.

**ACCEPTANCE:** Final system acceptance will be defined as when all work and materials provided by the DMS Manufacturer have been furnished, completely installed and commissioned, all parts and work have been approved and accepted by KDOT, and the DMS has been operated continuously and successfully for a 90 calendar day test period with no more than 2 calendar days downtime due to mechanical, electrical and/or other malfunctions. The warranty period will begin upon final acceptance.

**PAYMENT:** Payment of 80 percent of the total price for each sign will be made upon receipt of invoice after delivery of the DMS to the designated KDOT facility. After successful completion of DMS commissioning and the 90 day test period as determined by the KDOT ITS Section, the remaining 20 percent will be paid.

**ITEM: EQUIPMENT CABINET**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

EXTERIOR:

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The equipment cabinet shall be a NEMA 3R Type 334 two-door ground mounted Aluminum cabinet or a NEMA 3R Type 336S two-door pole mounted Aluminum cabinet with bare Aluminum finish. Anchor rods and hardware are to be included with the cabinet

DIMENSIONS:

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The Type 334 cabinet shall not be less than 66” tall x 24” wide x 30” deep.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The Type 336S cabinet shall not be less than 46” tall x 24” wide x 22” deep.

CAPABILITIES:

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The equipment cabinet must be capable of accepting and landing a 120/240V power circuit in a load center, including circuit breakers.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The equipment cabinet shall have a slide-out work tray with ball bearing slides, capable of holding a lap-top computer, mounted inside.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The equipment cabinet shall contain a IP Addressable Sign Controller or a Remote sign Controller Access Panel containing a power-on indicator, RS-232 connection, RS-232 cable-4’ minimum length, Ethernet RJ-45 connection, GFI protected duplex outlet (with 2-receptacle), one additional convenience outlet (8 receptacle minimum), two internal fluorescent lights (for interior illumination) with door activated switch, fiberglass filter, ventilation fan and accompanying thermostat assembly, BEST 3L Series (with provisions to install a Corbin #2, if required) deadbolt cabinet lock, and heater strip. Sign controller shall meet all NTCIP requirements and be capable of posting graphics.

**ITEM: AMBER LED 20 CHARACTER WALK-IN DMS (Revised)**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be a walk-in enclosure with access from both sides.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be amber in color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall display a minimum of 3 lines by 20 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 27 x 120 pixel matrix with single column spacing, maximum 70 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum of 3 LEDs per pixel.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have the capability to be mounted to vertical support members of a truss design with vendor supplied standard Z brackets.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: OVER THE ROAD MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to vertical steel and/or aluminum wide flange beams spaced between 2’-6” and 5’-0” on centers.

Applicable Make/Model or Equivalent:

* AX9700-27x126-18A – Adaptive Micro Systems
* M6310-28x125-18 – SES America, Inc.
* VF-2020-27x120-66-A – Daktronics, Inc.
* VMSLED-W-3-18F-27x125-I – Skyline Products, Inc.

**ITEM: LOW RESOLUTION COLOR LED - 20 CHARACTER WALK-IN DMS**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be a walk-in enclosure with access from both sides.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be full color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall display a minimum of 3 lines by 20 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 27 x 120 pixel matrix with single column spacing, maximum 70 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have the capability to be mounted to vertical support members of a truss design with vendor supplied standard Z brackets.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: OVER THE ROAD MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to vertical steel and/or aluminum wide flange beams spaced between 2’-6” and 5’-0” on centers.

Applicable Make/Model or Equivalent:

* VF-2020-27x120-66-RGB – Daktronics, Inc.
* VMSLED-W-70F-27x125-RGB-I – Skyline Products, Inc.

**ITEM: HIGH RESOLUTION COLOR LED - 20 CHARACTER WALK-IN DMS**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be a walk-in enclosure with access from both sides.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be full color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall display a minimum of 3 lines by 20 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 54 x 240 pixel matrix with single column spacing, maximum 40 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have the capability to be mounted to vertical support members of a truss design with vendor supplied standard Z brackets.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: OVER THE ROAD MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to vertical steel and/or aluminum wide flange beams spaced between 2’-6” and 5’-0” on centers.

Applicable Make/Model or Equivalent:

* AX-2000-80x320 RGB – Adaptive Micro Systems
* M73330 54x240-33 WI – SES America, Inc.
* VF-2020-54x255-34-RGB – Daktronics, Inc.
* VMSLED-W-35F-54x250-RGB-I – Skyline Products, Inc.

**ITEM: AMBER LED - 20 CHARACTER REAR ACCESS DMS (Revised)**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the rear of the DMS with sliding bar door access panels.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be amber color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS display shall be a minimum of 3 lines by 20 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 27 x 120 pixel matrix with single column spacing, maximum 70 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum of 3 LEDs per pixel.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have the capability to be mounted to vertical support members of a truss design with standard vendor supplied Z brackets.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to vertical steel wide flange beams spaced between 3’-0” and 5’-0” on centers.

Applicable Make/Model or Equivalent:

* VF-2120-27x120-66-A – Daktronics, Inc.
* VMSLED-L-3-18F-27x105-I – Skyline Products, Inc.

**ITEM: LOW RESOLUTION COLOR LED - 20 CHARACTER REAR ACCESS DMS (Revised)**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the rear of the DMS with sliding bar door access panels.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be full color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS display shall be a minimum of 3 lines by 20 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 27 x 120 pixel matrix with single column spacing, maximum 70 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have the capability to be mounted to vertical support members of a truss design with standard vendor supplied Z brackets.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to vertical steel wide flange beams spaced between 3’-0” and 5’-0” on centers.

Applicable Make/Model or Equivalent:

* VF-2120-27x120-66-RGB – Daktronics, Inc.
* VMSLED-L-70F-27x105-RGB-I – Skyline Products, Inc.

**ITEM: HIGH RESOLUTION COLOR LED - 20 CHARACTER REAR ACCESS DMS (Revised)**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the rear of the DMS with sliding bar door access panels.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be full color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS display shall be a minimum of 3 lines by 20 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 54 x 210 pixel matrix with single column spacing, maximum 40 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have the capability to be mounted to vertical support members of a truss design with standard vendor supplied Z brackets.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to vertical steel wide flange beams spaced between 3’-0” and 5’-0” on centers.

Applicable Make/Model or Equivalent:

* VF-2120-96x368-20-RGB – Daktronics, Inc.
* VMSLED-L-35F-54x210-RGB-I – Skyline Products, Inc.

**ITEM: AMBER LED - 15 CHARACTER FRONT ACCESS DMS (Revised)**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the front of the DMS.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be amber color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be a minimum of 3 lines by 15 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 25 x 90 pixel matrix with single column spacing, maximum 70 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum of 3 LEDs per pixel.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: ROADSIDE MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to two vertical steel wide flange beams spaced at 12’-0” on centers.

Applicable Make/Model or Equivalent:

* AF0-2S2A8-1305H – Addco, LLC
* VF-2420-27x90-66-A - Daktronics, Inc.

**ITEM: LOW RESOLUTION COLOR LED - 15 CHARACTER FRONT ACCESS DMS**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the front of the DMS.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be full color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS display shall be a minimum of 3 lines by 15 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 25 x 90 pixel matrix with single column spacing, maximum 70 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: ROADSIDE MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to two vertical steel wide flange beams spaced at 12’-0” on centers.

Applicable Make/Model or Equivalent:

* VF-2420-27x90-66-RGB – Daktronics, Inc.
* VMSLED-L-70F-27x090-RGB-I – Skyline Products, Inc.

**ITEM: HIGH RESOLUTION COLOR LED - 15 CHARACTER FRONT ACCESS DMS (Revised)**

SHOW MFG. & MODEL OFFERED \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 EXCEPTIONS TO

MGF. CODE SPECIFICATION SPECIFICATIONS

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the front of the DMS.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be full color, full matrix with LED display.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS display shall be a minimum of 3 lines by 15 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 54 x 180 pixel matrix with single column spacing, maximum 40 mm pitch.

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30 degree cone of vision.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2-Manuals).

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2-General Requirements).

**ITEM: ROADSIDE MOUNTING HARDWARE**

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to two vertical steel wide flange beams spaced at 12’-0” on centers.

Applicable Make/Model or Equivalent:

* VF-2420-96x320-20-RGB – Daktronics, Inc.
* VMSLED-L-35F-54x180-RGB-I – Skyline Products, Inc.
* VMSLED-L-20F-96x288-RGB-I – Skyline Products, Inc.

**ITEM: AMBER LED – 2 CHARACTER FRONT ACCESS DMS**

SHOW MFG. & MODEL OFFERED: M5000-FAA66 7 x 15

WARRANTY PERIOD/TYPE: 2 year warranty on all parts and housing

MEETS EXCEPTIONS TO

SPECIFICATION (Y/N) SPECIFICATION SPECIFICATIONS

YES None The DMS shall provide for maintenance access from the front of the DMS.

YES None The DMS shall be amber color, full matrix with LED display.

YES None The DMS shall be 1 line by 2 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 7 x 15 pixel matrix with single column spacing, maximum 70 mm pitch.

YES None The DMS shall have a minimum of 3 LEDs per pixel.

YES None The DMS shall have a minimum 30-degree cone of vision.

YES NoneOperator, Maintenance, and Software Manuals (as specified on page 2 of Event 4330-Manuals).

YES None The DMS shall include all accessories, cables, etc. (as specified on page 2 of Event 4330-General Requirements).

**ITEM: SIGN CONTROLLER**

YES None IP addressable sign controller capable of controlling at least 3 sign panels as separate DMS. Sign controller shall meet all NTCIP requirements.

**ITEM: ROADSIDE MOUNTING HARDWARE**

YES None DMS mounting hardware shall be provided by the manufacturer capable of mounting to the face of a typical roadside static sign.

**ITEM: AMBER LED - 3 CHARACTER FRONT ACCESS DMS**

SHOW MFG. & MODEL OFFERED: M5000- FAA 66 7 x 20

WARRANTY PERIOD/TYPE: Two years, all parts and housing

MEETS EXCEPTIONS TO

SPECIFICATION (Y/N) SPECIFICATION SPECIFICATIONS

YES None The DMS shall provide for maintenance access from the front of the DMS.

YES None The DMS shall be amber color, full matrix with LED display.

YES None The DMS shall be 1 line by 3 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 7 x 20 pixel matrix with single column spacing, maximum 70 mm pitch.

YES None The DMS shall have a minimum of 3 LEDs per pixel.

YES None The DMS shall have a minimum 30-degree cone of vision.

YES NoneOperator, Maintenance, and Software Manuals (as specified on page 2 of Event 4330 -Manuals).

YES None The DMS shall include all accessories, cables, etc. (as specified on page 2 of Event 4330-General Requirements).

**ITEM: SIGN CONTROLLER**

YES None IP addressable sign controller capable of controlling at least 3 sign panels as separate DMS. Sign controller shall meet all NTCIP requirements.

**ITEM: ROADSIDE MOUNTING HARDWARE**

YES None DMS mounting hardware shall be provided by the manufacturer capable of mounting to the face of a typical roadside static sign.

**ITEM: AMBER LED - 2 CHARACTER FRONT ACCESS DMS**

SHOW MFG. & MODEL OFFERED: VM-1020-7x15-66-A

WARRANTY PERIOD/TYPE: One Year Gold- Parts Warranty

Meets Exceptions to

Specification (Y/N) Specification SPECIFICATIONS

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the front of the DMS.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be amber color, full matrix with LED display.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be 1 line by 2 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 7 x 15 pixel matrix with single column spacing, maximum 70 mm pitch.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum of 3 LEDs per pixel.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30-degree cone of vision.

Yes\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2 of Event 4330-Manuals).

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2 of Event 4330-General Requirements).

**ITEM: SIGN CONTROLLER**

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ IP addressable sign controller capable of controlling at least 3 sign panels as separate DMS. Sign controller shall meet all NTCIP requirements.

**ITEM: ROADSIDE MOUNTING HARDWARE**

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to the face of a typical roadside static sign.

**ITEM: AMBER LED - 3 CHARACTER FRONT ACCESS DMS**

SHOW MFG. & MODEL OFFERED: VM-1020-7x20-66-A

WARRANTY PERIOD/TYPE: One Year Gold- Parts Warranty

Meets Exceptions to

Specification (Y/N) Specification SPECIFICATIONS

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall provide for maintenance access from the front of the DMS.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be amber color, full matrix with LED display.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall be 1 line by 3 characters wide of 18” text using standard 5 wide x 7 high pixel characters in a minimum 7 x 20 pixel matrix with single column spacing, maximum 70 mm pitch.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum of 3 LEDs per pixel.

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall have a minimum 30-degree cone of vision.

Yes\_\_\_\_\_\_\_\_\_\_\_\_\_Operator, Maintenance, and Software Manuals (as specified on page 2 of Event 4330 -Manuals).

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ The DMS shall include all accessories, cables, etc. (as specified on page 2 of Event 4330-General Requirements).

**ITEM: SIGN CONTROLLER**

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ IP addressable sign controller capable of controlling at least 3 sign panels as separate DMS. Sign controller shall meet all NTCIP requirements.

**ITEM: ROADSIDE MOUNTING HARDWARE**

Yes \_\_\_\_\_\_\_\_\_\_\_\_\_ DMS mounting hardware shall be provided by the manufacturer capable of mounting to the face of a typical roadside static sign.