

Admin Minnesota

Office of State Procurement

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CONTRACT RELEASE: A-210(5)

DATE: FEBRUARY 23, 2024

PRODUCT/SERVICE: MOBILE TRAFFIC CONTROL AND SAFETY DEVICES

CONTRACT PERIOD: DECEMBER 1, 2021, THROUGH NOVEMBER 30, 2024

EXTENSION OPTIONS: UP TO 24 MONTHS

ACQUISITION MANAGEMENT SPECIALIST/BUYER: KAREN MCINTYRE

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NOTIFICATION OF MULTIPLE AWARDS

THIS RELEASE CONTAINS MULTIPLE AWARDS FOR SIMILAR OR LIKE ITEMS. STATE AGENCIES AND CPV MEMBERS SHOULD REVIEW AND COMPARE ALL MULTIPLE AWARD CONTRACT VENDORS IN ORDER TO ENSURE THE BEST VALUE FOR THEIR POTENTIAL PURCHASE. FACTORS SUCH AS, BUT NOT LIMITED TO, COST, EQUIPMENT WARRANTY TERMS, VENDOR LOCATION, DELIVERY LEAD TIMES, AVAILABLE SUBSTITUTES, SELECTED OPTIONS AND CURRENT FLEET AND EQUIPMENT OR PARTS INVENTORY LEVELS ALL MAY CONTRIBUTE TO THE TOTAL COST/VALUE OF AN INDIVIDUAL PURCHASE. MULTIPLE VENDORS MAY BE ABLE TO SATISFY THE REQUIREMENTS OF THE PURCHASER AND THEREFORE IT IS IMPORTANT FOR THE PURCHASER TO REVIEW ALL CONTRACTS AND CONTRACT PRICES BEFORE EXECUTING AN ORDER.

<u>CONTRACT VENDOR</u>	<u>CONTRACT NO.</u>	<u>TERMS</u>	<u>DELIVERY</u>
AMERICAN SIGNAL COMPANY 2755 Bankers Industrial Dr Atlanta, GA 30360	202185 CONTACT: Ahron Kudela Email: akudela@amsig.com	NET 30	45 Days PHONE: 770 448.6650 x 135 FAX: 770 448.8970
VENDOR NO.: 0000215732			

[Price Schedule](#)
[Price Sheet](#)

<u>CONTRACT VENDOR</u>	<u>CONTRACT NO.</u>	<u>TERMS</u>	<u>DELIVERY</u>
AMKA Global is a certified minority owned business.			
AMKA GLOBAL LLC 4445 W 77th Street Suite 223 Edina, MN 55435	202189	NET 30	8 – 10 Weeks
VENDOR NO.: 0000973563			
CONTACT: Bocar Kane Email: Bocar@amkaglobal.us		PHONE: 952-495-4492	

[Price Schedule](#)
[Blade Option Pricing](#)

CONTRACT VENDOR
ENERGY ABSORPTION
SYSTEMS, INC.
70 W Madison Street, Suite 2350
Chicago, IL 60602

CONTRACT NO.
202190

TERMS
NET 30

DELIVERY
45 Days

VENDOR NO.: 0000303391

CONTACT: Diane Sanchez & Erika Chavez
Email: diane.sanchez@valtir.com / erika.chavez@valtir.com

PHONE: 312-705-8454
or 312-705-8456

CONTACT: Christina Jones
Email: christina.jones@valtir.com

PHONE: 312-705-8455
TOLL FREE: 888-323-6374

[Pricing Schedule](#)

CONTRACT VENDOR
INTELICOM, INC.
DBA LITESYS®, INC.
150 Pollywog Lane
PO Box 239
Belgrade, MT 59714

CONTRACT NO.
202191

TERMS
NET 30

DELIVERY
45-60 Days

VENDOR NO.: 0000223206

CONTACT: Kendall Kanning
Email: kendall@litesys.com
Email for Orders: sales@litesys.com

PHONE: 406-388-9317
FAX: 406-388-9319
TOLL FREE: 800-533-7441

[Price Schedule](#)

CONTRACT VENDOR
STREET SMART
RENTAL, LLC
7526 4th Avenue
PO Box 548
Lino Lakes, MN 55014

CONTRACT NO.
202192

TERMS
NET 30

DELIVERY
Varies by product

VENDOR NO.: 0000234819

CONTACT: Adam Berg
Email: aberg@streetsmartrental.com
CONTACT: Matt Krengel
Email: mkrengel@streetsmartrental.com

PHONE: 651-653-4648
OR 888-653-8600
PHONE: 651-653-4648
OR 888-653-8600

[Price Schedule](#)

CONTRACT VENDOR
WARNING LITES OF MN INC.
4700 Lyndale Ave N
Minneapolis, MN 55430

CONTRACT NO.
202193

TERMS
NET 30

DELIVERY
2-4 Weeks

VENDOR NO.: 0000863098

CONTACT: Herb Bray
Email: hbray@warninglitesmn.com

PHONE: 612-459-0006
FAX: 612-521-0646
TOLL FREE: 800-766-

5483

[Price Schedule](#)
[Addco Price Schedule](#)

CONTRACT USERS. This Contract is available to the following entities as indicated by the checked boxes below

- State agencies
- Cooperative Purchasing Venture (CPV) members

AGENCY ORDERING INSTRUCTIONS. Orders are to be placed directly with the Contract Vendor. State agencies should use a Contract release order (CRO) or a blanket purchase order (BPC). The person ordering should include his or her name and phone number. Orders may be submitted via fax.

SPECIAL TERMS AND CONDITIONS

SCOPE. To provide mobile traffic control and safety devices such as attenuators, arrowboards, changeable message signs, auto flaggers and portable traffic control signals for all State agencies and members of the Cooperative Purchasing Venture (CPV) program.

1. Right to Add.

During the term of the contract, the State reserves the right to add additional equipment and accessories, upon mutual agreement between the State and the Contractor(s) through a duly executed amendment to the contract.

2. Buying "Off" Contract.

The State reserves the right to issue an additional RFB/Event, separate and aside from this RFB, if deemed in its best interest. The State may use whatever RFB/Event procedure that is most advantageous to the State. The State also reserves the right to issue another RFB/Event if new makes and models become available that would be of interest and benefit to the State or CPV members.

3. Equipment Literature.

Upon request by a State agency or CPV member, the Contractor shall provide equipment sales literature at no cost to the requestor. Equipment sales literature should include items such as, but not limited to, product information, product functionality, and operation instructions. A link to the manufacturer's website that includes technical data must be provided and should be included with the response to the Solicitation.

4. Equipment Orientation.

Unless the cost of orientation is itemized on the Price Schedule, the cost of the equipment includes orientation to familiarize the end user on how the vehicle will operate, the mounting and removal of accessories and options, and all operating and safety instruction. The Contractor must provide orientation where the ordering entity takes possession, unless otherwise requested by the ordering entity. Orientation for drop shipped goods may be accomplished via video or other means as approved by the ordering entity.

5. Miscellaneous Items.

State agencies may purchase incidental miscellaneous parts, accessories and labor that are not listed on the Price Schedule but are directly related to a specific item(s) included on the Contract. The total cost for these miscellaneous items may not exceed \$5,000.00 for an individual purchase order. If the Customer's entity requires a lower threshold for competitive bidding other than \$5,000.00, they must follow their local entity's requirements. Any purchase order must be issued to the Contractor.

6. Discontinued and Replacement Models.

All equipment offered must be available during the initial terms of the contract. If the manufacturer discontinues a model number during the initial term of the contract, the contractor must notify the AMS as soon as possible of the change.

No replacement models will be allowed unless confirmed in writing by the AMS through a fully executed amendment. The State is under no obligation to accept a replacement model.

UNSPSC. 46161700 Mobile Traffic Control & Safety Devices.
 46161508 Security & Safety Equipment Supplies

VERIFYING THE CONTRACT PRICES.

The following information explains the methods for calculating and/or confirming the contract prices.

The contracts for traffic control and safety devices under this release contain FIXED and PERCENTAGE DISCOUNT OFF OF LIST pricing.

- For FIXED pricing, the pricing offered must match or be lower than that detailed on this release on the MnDOT web page.
- For PERCENTAGE DISCOUNT OFF OF LIST pricing, calculate the contract price by following these steps:
 - 1) Locate the appropriate price list using this release and the MnDOT web page.
 - 2) Calculate the Contract Price by applying the Percentage Discount Off of the Appropriate Price List to the appropriate Price List.
 - 3) Confirm the price offered is equal to, or lower than, the price calculated in step 2.

Only accept contract vendor quotes that provide itemized contract pricing (lump sum price quotes must be rejected and revised by the contract vendor to show itemized State contract pricing).

Prior to accepting an order and/or issuing an invoice, inspect the products received to ensure they match both the terms and pricing of the contract.

Contact the AMS detailed on the first page of this release to report any pricing discrepancies or for assistance in confirming/calculating contract pricing.

PRICES. At no time should the ordering entity pay more than the Contract price. Agencies must contact the AMS immediately and fill out a Vendor Performance Report if there is a discrepancy between the price on the invoice and the Contract price.

1. Installation Services.

The Contractor must apply a charge as a separate line item for installation or mounting services if such service is requested in writing by the ordering entity. The price for equipment, attachments, or options does not include installation or mounting costs unless otherwise indicated in the Contract or Price Schedule.

2. Transportation.

Freight under this contract is Price per Loaded Mile. Price per Loaded Mile is the delivery charge per loaded mile from the delivery starting point (city, state, and zip code) to the ordering entity's delivery point. Freight must be included on the quote, and the amount invoiced may not exceed the amount quoted for freight unless the ordering entity agrees otherwise in writing. The State will not accept a flat, fixed price for shipping. If the Price per Loaded Mile is "No Charge" or "\$0.00," or that field on the Price Schedule is blank, delivery is included in the product cost. Mileage distance will be determined using an industry-standard product.

3. Taxes.

Do not add sales tax to the prices being offered. State Agencies hold a Direct Payment Authorization Letter which is used to pay applicable taxes directly to the Department of Revenue. Contractors may go to <http://www.revenue.state.mn.us> to learn about the applicable sales tax (search "Fact Sheet 142").

EQUIPMENT LIST AND PRICING

Detailed Price Pages by Equipment type is available on the MnDOT web page
<http://www.dot.state.mn.us/maintenance/fleet.html>

Select "Current list of equipment contracts" on the MnDOT web page

Contract Vendor Name	AMERICAN SIGNAL CO.	AMKA GLOBAL LLC	ENERGY ABSORPTION SYSTEMS, INC.	INTELICOM INC., DBA LITESYS®, INCORPORATED	STREET SMART RENTAL, LLC	WARNING LITES OF MN INC.
Contract Number	202185	202189	202190	202191	202192	202193
SPEC 2.0 ARROWBOARDS (GROUP I)	✓				✓	✓
SPEC 3.0 TRUCK & TRAILER-TRUCK MOUNTED ATTENUATORS (Group II)		✓	✓		✓	✓
SPEC 4.0 PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) (Group III)	✓			✓	✓	✓
SPEC 5.0 AUTOMATED FLAGGER ASSISTANCE DEVICES (AFAD) (Group IV)					✓	✓
SPEC 6.0 PORTABLE TRAFFIC CONTROL SIGNALS (PTCS) (Group V)					✓	
SPEC 7.0 MOBILE TRAILERS (Group VII)	✓				✓	✓

Items Awarded by Vendor

STREET SMART RENTAL, LLC Contract No. 202192

- Solar Technology Silent Sentinel 25-Light Arrowboard Trailer
- Solar Technology Silent Messenger 126"x76" PCMS Trailer
- Solar Technology Silent Messenger LR 54"x92" PCMS Trailer
- Solar Technology Silent Messenger 2 54"x92" PCMS Trailer

WARNING LITES OF MN INC. Contract No. 202193

- WTSP-LSAC 25-LED Solar Trailer Unit
- WFB8-LSAC 48"x96" 25-LED Manual Tilt
- WB8-LSAC 48"x96" Truck Mount Arrowboard
- WVMB-2LP Truck Mount 3-Line CMS
- WVMB-3LP Truck Mount Matrix, 3-Line CMS
- WVT3(B) Mini 3-Line CMS Trailer, Hand-Operated Lift
- WVTMM-L Metro VMS, Large
- WVTM(B) Mini Matrix CMS Trailer, Hand-Operated Lift
- WTM(MB)(A) Full Matrix CMS Trailer, Hydraulic Lift
- WTLMB(A) 3-Line Full Size CMS Trailer, Hydraulic Lift
- WVTMM-M Solar Trailer Metro-Medium CMS, Manual Lift
- WSDT3-S Radar Speed Trailer-Full Matrix
- WSDT3-SPD Radar Speed Trailer for Law Enforcement
- WSD-TF Folding Radar Speed Trailer

EQUIPMENT REQUIREMENTS

1. GENERAL EQUIPMENT REQUIREMENTS

- 1.1. This equipment must be the most current advertised production model, as modified per specifications and approved by Mn/DOT
- 1.2. This equipment must be furnished with all standard equipment advertised, whether or not specifically called for here, except where the item is replaced by optional over standard equipment or conflicting equipment is specified.

1.3. This equipment must be complete with all equipment required for immediate operation to function as listed in the equipment specifications and must meet all applicable codes and safety standards.

2. SPECIFICATION 2.0 ARROWBOARDS (GROUP II); CHANGEABLE MESSAGE BOARDS; and TRUCK & TRAILER MOUNTED ATTENUATORSARROWBOARD & TRAILER

2.1. Mn/DOT will only purchase arrowboards that are on Mn/DOT's qualified products list. Contractors can view and obtain information regarding Mn/DOT's qualified product list and evaluation process at Mn/DOT's Traffic Engineering's website. <http://www.dot.state.mn.us/trafficeng/products/index.html>

2.2. The Contractor shall ensure equipment meets all current Federal and Minnesota safety codes, the requirements of the Manual on Uniform Traffic Control Devices (MUTCD). View at: <http://www.dot.state.mn.us/trafficeng/otepubl/mutcd/index.html>

2.3. The portable sign system shall not overturn or change orientation when it is either fully deployed and raised (sign face parallel to axle) or in the transport position (sign face perpendicular to axle). This shall be based on a 3 second wind gust speed of 72 M.P.H., directed to the front face or rear wall of display (NEMA standards).

2.4. Arrowboard shall have a minimum of 14 elements comprised of amber sealed beams, halogen bulbs, flip discs or LEDs plus an indicator lamp on the reverse side of the panel. Solderless connectors are not acceptable. Lamps must be hooded.

2.5. Arrowboard display elements shall be capable of at least 50 % dimming from full brilliance. This shall be controlled by a potentiometer or a photocell located on the bottom channel where it is protected from direct ambient light.

2.6. The electrical system for arrowboard shall be protected from weather and damage.

2.7. Control box shall be weather protected with sealed touch membrane switches or enclosed in a sealed compartment. Panel shall indicate switch choices and/or positions.

2.8. Solar-charging systems shall be sufficient to operate in Minnesota without external charging.

2.9. The minimum element on time shall be 50% for the flashing mode, with equal intervals of 25% for each sequential phase.

2.10. The flashing rate shall not be less than 25 or more than 40 flashes per minute with the following mode selections:

2.10.1. A flashing arrow, sequential arrow or sequential chevron mode.

2.10.2. A flashing double arrow mode.

2.10.3. A flashing caution mode with four or more elements that does not indicate any direction.

2.11. The Contractor shall offer an option so Mn/DOT units can have the left and right sequential stem arrow function disabled if standard.

2.12. Manufacturer's standard color is acceptable, however paint must be lead free.

2.13. Each unit shall be supplied with one set of parts, service and operations manuals, as well as a complete wiring diagram.

2.14. The Contractor must give adequate training in mounting and removal, operation, safety and maintenance of supplied equipment at delivery site, before the purchase will be considered complete.

2.15. The Contractor must furnish a standard manufacturer's warranty. The Contractor shall be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period. This shall be performed without any delay. This warranty shall commence when the unit is put into service. The Contractor shall state warranty for all items requested on the pricing page.

3. SPECIFICATION 3.0 TRUCK & TRAILER-TRUCK MOUNTED ATTENUATORS

3.1. TRUCK MOUNTED ATTENUATOR REQUIREMENTS

- 3.1.1. Mn/DOT will only purchase truck mounted attenuators that are on Mn/DOT's qualified products list. Contractors can view and obtain information regarding Mn/DOT's qualified product list and evaluation process at Mn/DOT's Traffic Engineering's website. <http://www.dot.state.mn.us/products/index.html>.
- 3.1.2. TMA and mounting hardware must meet federal MASH requirements per the AASHTO Manual for Assessing Safety Hardware.
- 3.1.3. TMA and mounting hardware must meet or exceed NCHRP 350 Test Level 2 (TL-2), Test #50 or the latest tests with an 1,800-pound inertial mass vehicle.
- 3.1.4. TMA and mounting hardware must meet or exceed NCHRP 350 Test Level 2 (TL-2), Test #51 or the latest tests with a 4,500-pound inertial mass vehicle.
- 3.1.5. TMA and mounting hardware must meet or exceed NCHRP 350 Test Level 2 (TL-2), Tests 52, and 53.
- 3.1.6. TMA must be furnished with a standard trailer lighting system including brake, tail, turn signal, and ICC bar lights that are visible in the lowered and 90° tilt position.
- 3.1.7. The Contractor must provide an optional light hook-up capable of being connected to a Mn/DOT truck with a standard ICC 7-pin connector and be compatible with Mn/DOT's wiring pattern (per attached MnDOT wiring diagram).
- 3.1.8. TMA must be equipped with two heavy-duty, double- wheeled jacks at the front end of the TMA and one-wheel jack at the rear center.
- 3.1.9. TMA cartridge must be painted yellow with 4"-wide black inverted "V" chevrons on the rear. All steel members on the quick mount shall be primed and painted. Paint must not contain lead.
- 3.1.10. Each unit shall be supplied with one set of parts, service, and operations manuals as well as a complete wiring diagram.
- 3.1.11. The Contractor must give adequate training in mounting and removal, operation, safety and maintenance of supplied equipment at delivery site, before the purchase will be considered complete.
- 3.1.12. The Contractor shall furnish a standard manufacturer's warranty. The Contractor shall be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period. This shall be performed without any delay. This warranty shall commence when the unit is put into service. The Contractor shall state warranty for all items requested on the pricing page.

3.2. TRAILER-TRUCK MOUNTED ATTENUATOR REQUIREMENTS

- 3.2.1. Mn/DOT will only purchase trailer, truck mounted attenuators (Trailer TMA) that are on Mn/DOT's qualified products list. Contractors can view and obtain information regarding Mn/DOT's qualified product list and evaluation process at Mn/DOT's Traffic Engineering's website. <http://www.dot.state.mn.us/trafficeng/products/index.html>.
- 3.2.2. TMA and mounting hardware must meet federal MASH requirements per the AASHTO Manual for Assessing Safety Hardware.
- 3.2.3. Trailer TMA and mounting hardware must meet or exceed NCHRP 350 Test Level 3 (TL-3), Test #50 or the latest tests with a 1,800-pound inertial mass vehicle.
- 3.2.4. Trailer TMA and mounting hardware must meet or exceed NCHRP 350 Test Level 3 (TL-3), Test #51 or the latest tests with a 4,400-pound inertial mass vehicle.

- 3.2.5. Trailer TMA and mounting hardware must meet or exceed NCHRP 350 Test Level 3 (TL-3), Tests 52, and 53.
- 3.2.6. Trailer TMA must meet all current Federal and Minnesota safety codes.
- 3.2.7. TMA cartridge shall be painted yellow with 4"-wide black inverted "V" chevrons on the rear. All steel members on the quick mount shall be primed and painted. Paint must not contain lead.
- 3.2.8. Manufacturer's standard color is acceptable but must have 4"-wide black/yellow inverted "V" chevrons on the rear. Paint must not contain lead.
- 3.2.9. Each unit shall be supplied with one set of parts, service, and operations manuals as well as a complete wiring diagram.
- 3.2.10. The Contractor shall give adequate training in mounting and removal, operation, safety and maintenance of supplied equipment at delivery site, before the purchase will be considered complete.
- 3.2.11. The Contractor shall furnish a standard manufacturer's warranty. The Contractor shall be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period. This shall be performed without any delay. This warranty shall commence when the unit is put into service. The Contractor shall state warranty for all items requested on the pricing page.

4. SPECIFICATION 4.0 CHANGEABLE MESSAGE SIGN (PCMS)

4.1. CHANGEABLE MESSAGE SIGN (PCMS) REQUIREMENTS

- 4.1.1. Mn/DOT will only purchase changeable message signs that are on Mn/DOT's qualified products list. Contractors can view and obtain information regarding Mn/DOT's qualified product list and evaluation process at Mn/DOT's Traffic Engineering's website. <http://www.dot.state.mn.us/trafficeng/products/index.html>
- 4.1.2. Mn/DOT shall only purchase PCMS's with messages listed on Mn/DOT's Traffic Engineering website.
- 4.1.3. The Contractor shall ensure equipment meets all current Federal and Minnesota safety codes, and the requirements of the Manual on Uniform Traffic Control Devices (MUTCD). View at: <http://www.dot.state.mn.us/trafficeng/publ/mutcd/index.html>.
- 4.1.4. PCMS elements shall be comprised aluminum indium phosphide LEDs (approx. 590nm) of flip disk/LEDs.
- 4.1.5. Except for Type A and flip disk PCMS's, a pixel shall be comprised of four LEDs.
- 4.1.6. Unit shall be NTCIP compliant and shall allow for remote accessing via cellular phone system of the State's choice or wireless internet.
- 4.1.7. The sign system shall not overturn or change orientation when it is either fully deployed and raised (sign face parallel to axle) or in the transport position (sign face perpendicular to axle). This shall be based on a 3 second wind gust speed of 72 MPH, directed to the front face or rear wall of display (NEMA standards).
- 4.1.8. Control box shall be weather protected with sealed, touch membrane switches or be enclosed in a sealed compartment. Panel to indicate switch choices and/or positions.
- 4.1.9. Solar charging capacity shall be sufficient to operate year-round in Minnesota without external charging and with no loss of battery charge.
- 4.1.10. The electrical system for PCMS shall be protected from weather and damage.

- 4.1.11. Manufacturer's standard color is acceptable. The paint must be powder coated and lead-free.
- 4.1.12. Each unit shall be supplied with one set of parts, service, and operations manuals as well as a complete wiring diagram.
- 4.1.13. The Contractor shall give adequate training in mounting and removal, operation, safety and maintenance of supplied equipment at delivery site, before the purchase will be considered complete.
- 4.1.14. The Contractor shall furnish a 3-year manufacturer's warranty. The Contractor shall be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period. This shall be performed without any delay. This warranty shall commence when the unit is put into service. The Contractor shall state warranty for all items requested on the pricing page.

4.2. PCMS TRAILER REQUIREMENTS

- 4.2.1. Deck shall be constructed to be structurally adequate to serve both as a carrier of, and as an operation platform for, all components of the PCMS.
- 4.2.2. Trailer shall be designed for unlimited highway travel.
- 4.2.3. Tire size shall be largest available (minimum 13").
- 4.2.4. Trailer shall have heavy-duty fenders.
- 4.2.5. Trailer shall be equipped with electric brakes if required by state and federal standards.
- 4.2.6. The trailer shall be equipped with a lighting system consisting of taillights, stoplights, and turn signal lights along with the required reflex reflectors. All lights shall be protected.
- 4.2.7. Trailer wiring shall be protected against weather and damage.
- 4.2.8. The Contractor shall provide an optional light hook-up capable of being connected to a Mn/DOT truck with a standard ICC 7-pin connector and be compatible with Mn/DOT's wiring pattern (per attached MnDOT wiring diagram).
- 4.2.9. Hitch shall have screw jack, with locking pin, that rotates for transporting.
- 4.2.10. Contractor shall have four screw jacks with locking pins for leveling the trailer deck.

5. SPECIFICATION 5.0 AUTOMATED FLAGGER ASSISTANCE DEVICES

- 5.1. Mn/DOT will only purchase changeable message signs that are on Mn/DOT's qualified products list. Contractors can view and obtain information regarding Mn/DOT's qualified product list and evaluation process at Mn/DOT's Traffic Engineering's website. <http://www.dot.state.mn.us/trafficeng/products/index.html>
- 5.2. Automated Flagger Assistance Devices (AFADs) enable a flagger(s) to be positioned out of the lane of traffic and are used to control road users through temporary traffic control zones. These devices are designed to be remotely operated either by a single flagger at one end of the TTC zone or at a central location, or by separate flaggers near each device's location.
- 5.3. There are two types of AFADs:
 - 5.3.1. An AFAD that uses a remotely controlled STOP/SLOW sign on either a trailer or a movable cart system to alternately control right-of-way.
 - 5.3.1.1. A STOP/SLOW Automated Flagger Assistance Device (AFAD) shall include a STOP/SLOW sign that alternately displays the STOP (R1-1) face and the SLOW (W20-8) face of a STOP/SLOW paddle.

- 5.3.1.2. The AFAD STOP/SLOW sign shall have an octagonal shape, shall be fabricated of rigid material, and shall be mounted with the bottom of the sign a minimum of 6 feet above the pavement on an appropriate support.
- 5.3.1.3. The size of the STOP/SLOW sign shall be at least 36 x 36 inches with letters at least 12 inches high.
- 5.3.1.4. The background of the STOP face shall be red with white letters and border.
- 5.3.1.5. The background of the SLOW face shall be diamond shaped and orange with black letters and border.
- 5.3.1.6. Both faces of the STOP/SLOW sign shall be retro-reflectorized.
- 5.3.2. An AFAD that uses remotely controlled red and yellow lenses and a gate arm to alternately control right-of-way.
 - 5.3.2.1. The AFAD STOP/SLOW sign shall have a means to positively lock, engage, or otherwise maintain the sign assembly in a stable condition when set in the STOP or SLOW position.
 - 5.3.2.2. The AFAD STOP/SLOW sign shall be supplemented with active conspicuity devices by incorporating either:
 - 5.3.2.2.1. White or red flashing lights within the STOP face and white or yellow flashing lights within the SLOW face to meet the provisions contained in Section 6E.3 of the Minnesota Manual on Uniform Traffic Control Devices; or
 - 5.3.2.2.2. A Stop Beacon (see Section 4L.5 of the Minnesota Manual on Uniform Traffic Control Devices) mounted a maximum of 24 inches above the STOP face and a Warning Beacon (see Section 4L.3 of the Minnesota Manual on Uniform Traffic Control Devices) mounted a maximum of 24 inches above, below, or to the side of the SLOW face. The Stop Beacon shall not be flashed or illuminated with the SLOW face is displayed, and the Warning Beacon shall not be flashed or illuminated when the STOP face is displayed. Except for the mounting locations, the beacons shall comply with the provisions of Chapter 4L of the Minnesota Manual on Uniform Traffic Control Devices.
 - 5.3.2.3. Type B warning light(s) (see Section 6F.83 of the Minnesota Manual on Uniform Traffic Control Devices) may be used in lieu of the Warning Beacon during the display of the SLOW face of the AFAD STOP/SLOW sign. If Type B warning lights are used in lieu of a Warning Beacon, they shall flash continuously when the SLOW face is displayed and shall not be flashed or illuminated when the STOP face is displayed.
 - 5.3.2.4. The faces of the AFAD STOP/SLOW sign may include louvers to improve the stability of the device in windy or other adverse environmental conditions. If louvers are used, the louvers shall be designed such that the full sign face is visible to approaching traffic at a distance of 50 feet or greater.
 - 5.3.2.5. The STOP/SLOW AFAD should include a gate arm that descends to a down position across the approach lane of traffic when the STOP face is displayed and then ascends to an upright position when the SLOW face is displayed. In lieu of a stationary STOP/SLOW sign with a separate gate arm, the STOP/SLOW sign may be attached to a mast arm that physically blocks the approach lane of traffic when the STOP face is displayed and then moves to a position that does not block the approach lane when the SLOW face is displayed.

- 5.3.2.6. Gate arms shall be fully retro-reflectorized on both sides and shall have vertical alternating red and white stripes at 16-inch intervals measured horizontally. When the arm is in the down position blocking the approach lane:
 - 5.3.2.6.1. The minimum vertical aspect of the arm and sheeting shall be 2 inches; and
 - 5.3.2.6.2. The end of the arm shall reach at least to the center of the lane being controlled.

5.4. RED/YELLOW LENS AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) REQUIREMENTS

- 5.4.1. A Red/Yellow Lens Automated Flagger Assistance Device (AFAD) must alternately display a steadily illuminated CIRCULAR RED lens and a flashing CIRCULAR YELLOW lens to control traffic without the need for a flagger in the immediate vicinity of the AFAD or on the roadway.
- 5.4.2. Red/Yellow Lens AFADs must have at least one set of CIRCULAR RED and CIRCULAR YELLOW lenses that are 12 inches in diameter. Unless otherwise provided in this Section, the lenses and their arrangement, CIRCULAR RED on top and CIRCULAR YELLOW below, must comply with the applicable provisions for traffic signal indications in Part 4 of the Minnesota Manual on Uniform Traffic Control Devices.
- 5.4.3. If the set of lenses is post-mounted, the bottom of the housing (including brackets) must be at least 7 feet above the pavement. If the set of lenses is located over any portion of the highway that can be used by motor vehicles, the bottom of the housing (including brackets) must be at least 15 feet above the pavement.
- 5.4.4. A Red/Yellow Lens AFAD must include a gate arm that descends to a down position across the approach lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an upright position when the flashing CIRCULAR YELLOW lens is illuminated.
- 5.4.5. The gate arm must be fully retro-reflectorized on both sides and must have vertical alternating red and white stripes at 16-inch intervals measured horizontally. When the arm is in the down position blocking the approach lane:
 - 5.4.5.1. The minimum vertical aspect of the arm and sheeting must be 2 inches; and
 - 5.4.5.2. The end of the arm must reach at least to the center of the lane being controlled.

6. SPECIFICATION 6.0 PORTABLE TRAFFIC CONTROL SIGNALS

6.1. General Requirements

- 6.1.1. Portable Traffic Control Signals (PTCS) in this Section refer to Trailer-Mounted and Pedestal-Mounted Portable Traffic Control Signals.
- 6.1.2. Mn/DOT will only purchase Portable Traffic Control Signals (PTCS) that are on Mn/DOT's qualified products list. Contractors can view and obtain information regarding Mn/DOT's qualified product list and evaluation process at Mn/DOT's Traffic Engineering's website.
<http://www.dot.state.mn.us/products/index.html>
- 6.1.3. The Contractor must ensure equipment meets all current Federal and Minnesota safety codes. All equipment offered must meet the applicable standards and specifications prescribed in Part 4 of the current Minnesota Manual on Uniform Traffic Control Devices and the applicable provisions of Minnesota Department of Transportation (Mn/DOT) 2565, Mn/DOT 3834 and Mn/DOT Light Emitting Diode (LED) 12 and 8 Inch Ball Traffic Control Signal Indication Specifications, except as specifically provided otherwise in this document. View at:
<http://www.dot.state.mn.us/trafficeng/publ/mutcd/index.html>.

- 6.1.4. All equipment offered must meet Institute of Transportation Engineers (ITE) LED requirements for:
 - 6.1.4.1. Photometric
 - 6.1.4.2. Colorimetric
 - 6.1.4.3. Environmental
- 6.1.5. All equipment offered must meet the physical display requirements of conventional traffic signals as specified in Part 4 of the current Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD), and Mn/DOT specifications 2565 and 3834. Signal Heads must be cast aluminum or polycarbonate. All PTCS heads must have three 12-inch LED indications conforming to Mn/DOT LED 12- and 8-Inch Ball Traffic Control Signal Indication Specification. If polycarbonate signal heads are used, they must conform to MN/DOT Polycarbonate Signal Head Specification without Indications as specified in the Mn/DOT Approved Product List.
- 6.1.6. Signal Indications must be vertically arranged.
- 6.1.7. PTCS must have background shields and visors.
- 6.1.8. PTCS must be equipped with operating system having the NEMA TS1 or TS2 Standard capabilities. It must have the capabilities of being operated in a fixed time, actuated and/or manual mode.
- 6.1.9. PTCS must be capable of operating independently in the fixed time mode (each PTCS by itself).
- 6.1.10. PTCS must communicate between signals via hardwire connection and/or wireless radio link communication when operated in the actuation or manual mode. If the hardwire communication is utilized, the communication cable must be deployed in a manner that will not intrude in the direct work area of the project or obstruct vehicular and pedestrian traffic. If the radio link communication option is utilized, the radio system must conform to Federal Communication Commission requirements and all applicable State and Local requirements.
- 6.1.11. PTCS must be capable of accommodating a pre-emption request which provides a priority green phase in the direction of approaching emergency vehicles.
- 6.1.12. PTCS must be equipped with diagnostic capabilities in the event of a system default.
- 6.1.13. PTCS must have a self-contained primary power source. The primary source of power must have sufficient capacity to operate the unit for at least 10 days continuously without external recharge and must be continuously operational as needed for a project.
- 6.1.14. PTCS must be constructed or equipped for legal transport on public highway system and must be able to travel at posted highway speeds.
- 6.1.15. The PTCS must be structurally stable, and all connections must conform with current AISC (American Institute of Steel Construction) standards.
- 6.1.16. PTCS must be equipped with stabilizing and leveling devices.
- 6.1.17. Each unit must be supplied with one set of parts, service, and operations manuals as well as a complete wiring diagram.
- 6.1.18. The Contractor must give adequate orientation in setup, operation, safety and maintenance of supplied equipment at delivery site, before the purchase will be considered complete.
- 6.1.19. The Contractor must furnish a minimum 3-year manufacturer's warranty. The Contractor must be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period. This must be performed without any delay. This warranty must commence when the unit is put into service. The Contractor must state warranty for all items requested on the pricing page.

6.2. TRAILER-MOUNTED PORTABLE TRAFFIC CONTROL SIGNAL (PTCS) REQUIREMENTS

- 6.2.1. Trailer Mounted Portable Traffic Control Signal in this section is defined as those Portable Traffic Control Signals (PTCS) that have a mast arm with one signal head mounted vertically on the upright and with one or more signal head(s) mounted vertically on the mast arm.
- 6.2.2. PTCS must meet all the requirements listed in the 6.1 General Requirements section, as well as requirements listed in this section of this specification.
- 6.2.3. PTCS must be mounted with the centers of the signal heads at least 8 feet apart. The bottom of the signal housing (including brackets) of a signal face not located over a roadway must be at least 8 feet but not more than 19 feet above the sidewalk or, if there is no sidewalk, above the pavement grade at the center of the roadway. The bottom of the signal housing and any related attachments to signal face located over a roadway must be at least 17 feet and no more than 19 feet above the pavement. The top of the signal housing of a signal face located over a roadway shall not be more than 25.6 feet above the pavement.
- 6.2.4. PTCS shall be able to withstand a 90mph wind speed in operating mode per AASHTO (2001) Standard Specification for Highway Signs, Luminaries and Traffic Signals. A proof of conformance shall be provided to Mn/DOT.
- 6.2.5. PTCS shall have four (4) 2" X 72" long sections of Reflective Vehicle Conspicuity Tape located on the trailer, such that it is completely visible from all four directions.

6.3. PEDESTAL-MOUNTED PORTABLE TRAFFIC CONTROL SIGNAL (PTCS) REQUIREMENTS

- 6.3.1. Pedestal Mounted Portable Traffic Control Signal in this section is defined as those Portable Traffic Control Signals (PTCS) with pedestal and vertical upright mounted signal heads.
- 6.3.2. PTCS must meet all the requirements listed in 6.1 General Requirements section, as well as requirements listed in this section of this specification.
- 6.3.3. The bottom of the signal housing (including brackets) of a signal face not located over a roadway must be at least 8 feet but not more than 19 feet above the sidewalk or, if there is no sidewalk, above the pavement grade at the center of the roadway. Any part of the device located over a roadway must be at least 17 feet above the pavement.
- 6.3.4. PTCS must be able to withstand a 60-mph wind speed in operating mode. A proof of conformance must be provided to Mn/DOT.
- 6.3.5. PTCS must have four (4) 2" X 72" long sections of Reflective Vehicle Conspicuity Tape located on the trailer, such that it is completely visible from all four directions.

6.4. PORTABLE TRAFFIC CONTROL SIGNAL (PTCS) TRAILER REQUIREMENTS

- 6.4.1. Deck must be constructed to be structurally adequate to serve both as a carrier of, and as an operation platform for, all components of the PTCS.
- 6.4.2. Trailer must be designed for unlimited highway travel.
- 6.4.3. Tire size must be the largest available (minimum 13").
- 6.4.4. Trailer must have heavy-duty fenders.
- 6.4.5. Trailer must be equipped with electric brakes if required by State and Federal standards.
- 6.4.6. The trailer must be equipped with a lighting system consisting of taillights, stoplights, and turn signal lights along with the required reflectors. All lights must be protected.
- 6.4.7. Trailer wiring must be protected against weather and damage.

- 6.4.8. The Contractor must provide an optional light hook-up capable of being connected to a Mn/DOT truck with a standard ICC 7-pin connector and be compatible with Mn/DOT's wiring pattern (per attached MnDOT wiring diagram).
- 6.4.9. Hitch must have screw jack, with locking pin, that rotates for transporting.
- 6.4.10. Contractor must have four screw jacks with locking pins for leveling the trailer deck.

7. SPECIFICATION 7.0 MOBILE TRAILERS

7.1. MOBILE TRAILER UNIT REQUIREMENTS

- 7.1.1. For purposes of this section, mobile trailers may include, but are not limited to: Speed Trailers, Radar Trailers, CCTV Trailers, Traffic Detection Sensors, Cell Modems, or any other Traffic Control/Traffic Monitoring equipped trailers.
- 7.1.2. Mn/DOT will only purchase items that are on Mn/DOT's qualified products list. Other entities/CPVs are not limited to this list. Contractors can view and obtain information regarding Mn/DOT's qualified product list and evaluation process at Mn/DOT's Traffic Engineering website.
<http://www.dot.state.mn.us/products/index.html>
- 7.1.3. The Contractor must ensure equipment meets all current Federal and Minnesota safety codes, as well as the requirements of the Manual on Uniform Traffic Control Devices (MUTCD). View at:
<http://www.dot.state.mn.us/trafficeng/publ/mutcd/index.html>
- 7.1.4. The mobile trailer system must not overturn or change orientation when it is either fully deployed and raised (sign face parallel to axle) or in the transport position (sign face perpendicular to axle). This must be based on a 3 second wind gust speed of 72 M.P.H., directed to the front face or rear wall of display (NEMA standards).
- 7.1.5. The electrical system must be protected from weather and damage.
- 7.1.6. All Boxes must be weather protected with sealed touch membrane switches or enclosed in a sealed compartment. Panel must indicate switch choices and/or positions.
- 7.1.7. Solar-charging systems must be sufficient to operate in Minnesota without external charging.
- 7.1.8. The Contractor must offer all options associated with trailer/system.
- 7.1.9. Manufacturer's standard color is acceptable. The paint must be lead free.
- 7.1.10. Each unit must be supplied with one set of parts, service, and operations manuals, as well as a complete wiring diagram.
- 7.1.11. The Contractor must give adequate orientation in mounting and removal, operation, safety and maintenance of supplied equipment at delivery site, before the purchase will be considered complete.
- 7.1.12. The Contractor must furnish a standard manufacturer's warranty. The Contractor must be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period. This must be performed without any delay. This warranty must commence when the unit is put into service. The Contractor must state warranty for all items requested on the pricing page.

7.2. TRAILER REQUIREMENTS

- 7.2.1. Deck must be constructed to be structurally adequate to serve both as a carrier of, and as an operation platform for, all components.
- 7.2.2. Trailer must be designed for unlimited highway travel.
- 7.2.3. Tire size must be largest available (13" minimum).

- 7.2.4. Trailer must have heavy-duty fenders.
- 7.2.5. Trailer must be equipped with electric brakes if required by State and Federal standards.
- 7.2.6. Trailer must have lighting that meets FMVSS 108.
- 7.2.7. Trailer wiring must be protected against weather and damage.
- 7.2.8. The Contractor must provide an optional light hook-up capable of being connected to a Mn/DOT truck with a standard ICC 7-pin connector and be compatible with Mn/DOT's wiring pattern (per attached Mn/DOT wiring diagram).
- 7.2.9. Hitch must have a screw jack that rotates for transporting.
- 7.2.10. Unit must have outrigger-type jacks or sliding legs with locking pins for leveling the trailer deck.

8. **MNDOT CUSTOM SIGN TRAILERS** - This product is being removed from this contract and will be managed directly by a separate contract RFP process solicited and issued by MNDOT.

REVISIONS.

2/23/2024 For Street Smart Contract 202192, the following items are added to the contract. All other prices, terms, conditions, and specifications remain the same.

- Wanco | WLTT-4LM4K | Compact diesel light tower, Mitsubishi L2E engine, 350W LEDs, 4kW genset
- Wanco | WLTT-4LK106K | Compact diesel light tower, Kubota D-1005 engine, 350W LEDs, 6kW gen set

12/01/2023 Contracts are extended through November 30, 2024. For AMKA Contract No. 202189 pricing remains the same. For American Signal Company Contract No. 202185, Energy Absorption Systems, Inc. Contract No. 202190, Intelicom Inc., DBA LITESYS®, Incorporated Contract No. 202191, Street Smart Rental, LLC Contract No. 202192 and Warning Lites of MN Inc. Contract No. 202193, the pricing is updated. All other terms, conditions and specifications remain the same.

04/05/2023 For Warning Lites Contract No. 202193, the contact info is updated.

02/28/2023 For Energy Absorption Contract No. 202190, the contact email addresses have been updated.

12/27/2022 For Street Smart Contract 202192, the following items are added to the contract. All other prices, terms, conditions and specifications remain the same.

- SAFETY TECHNOLOGIES | AF-54 | AF-54 AUTOFLAGGER
- SAFETY TECHNOLOGIES | AF-67X | AUTOFLAGGER AF-76X

10/04/2022 For Warning Lites Contract No. 202193, the Addco Price Schedule is replaced with Addco Price Schedule dated 10/04/2022. All other pricing, terms, conditions and specifications remain the same.

04/08/2022 For Street Smart Contract 202192, the following items are added to the contract. All other prices, terms, conditions, and specifications remain the same.

12/17/2021 For Street Smart Contract 202192, the following items are added to the contract. All other prices, terms, conditions and specifications remain the same.

- Ver-Mac | PSLT-6000 | 6,000 Lumen LED Portable Solar Light Tower Trailer (6 LED Fixtures, 26' Mast, 1,000 watt Solar)
- Ver-Mac | PSLT-4000S | 4,000 Lumen LED Portable Solar Light Tower Trailer (4 LED Fixtures, 20' Mast, 600 watt Solar)
- Ver-Mac | PSLT-4000S-SL | Portable Solar Street Light Trailer (1 Street Light, 20' Mast, 300 watt Solar)
- Ver-Mac | PSLT-4000-SL | Portable Solar Street Light Trailer (1 Street Light, 26' Mast, 450 watt Solar)
- Ver-Mac | PPL-1000 | Portable Presence Light (1 LED fixture w/balloon canopy, 14' Mast)
- Ver-Mac | PTL-1000 | Portable Target Light (1 LED fixture, 14' Mast)