

VILLAGE OF LOMBARD
REQUEST FOR BOARD OF TRUSTEES ACTION
For Inclusion on Board Agenda
Bids and Proposals



July 1, 2026

To: Village President and Board of Trustees
Through: Nicole Aranas, Village Manager
From: Carl Goldsmith, Director of Public Works *g*
Subject: **Scorpion II TL-3 Towable Attenuator Trailer Purchase**

Included in the budget is the purchase of a towable attenuator trailer that will be used to increase the safety in work zones for Village personnel. The Village has conducted extensive research on the various makes/models of attenuators available and has determined that the best application for the Village's use is the Scorpion II Towable Attenuator.

The Scorpion II is a safety device designed for ease of use and effective impact management. With minimal modification required for the host vehicle, this towable attenuator connects quickly via a standard pintle hook and is fabricated using a robust steel frame plate. The Scorpion II Blocker's innovative modular design allows it to absorb and dissipate collision forces, significantly reducing the risk of injury to both emergency responders and motorists. The TMA provides impact protection for the full width of the truck, safely protecting and redirecting impacting vehicles away from the rear corner of the fire apparatus, commonly referred to as the "coffin corner." With an overall length of 13 ft, the shortest in the market, the Scorpion II Blocker provides the highest level of crash protection while still maintaining a compact size. Additionally, the Energy Absorbing Cushions feature an aluminum honeycomb core enclosed by powder-coated modules to provide maximum durability and longevity.

The notable features of the Scorpion II are the following:

- **Streamlined Installation:** The Scorpion II Towable Attenuator is distinguished by its straightforward attachment process, allowing for rapid deployment on various support vehicles.
- **Progressive Impact Attenuation:** Upon impact, the Scorpion II's modular design strategically collapses in stages, helping to safeguard vehicle occupants by reducing the forces transmitted during a collision. This thoughtful engineering can lead to lower repair costs and facilitate the replacement of parts.
- **Enhanced Stability:** Positioned to optimize stability, the rear axle placement of the Scorpion II TA mitigates the risk of the attenuator "bottoming out" on uneven surfaces, contributing to a steady and reliable performance.
- **Compact and Comprehensive Safety:** At a total length of only 17' 10", the Scorpion II TA boasts a design that's not only the most compact on the market but also includes an integrated electric brake system for additional safety in case of separation or hitch failure.

- **Advanced Warning System:** Equipped with omnivolt LED lighting, the Scorpion II enhances driver awareness with clear brake, directional, signal, and running lights.
- **Versatile Vehicle Compatibility:** Suitable for use with support vehicles of a minimum curb weight of 12,000 lbs and with no upper weight limit, the Scorpion II TA is as versatile as it is robust.
- **Telescoping Anti-Rotational System (TARS™):** The innovative TARS™ minimizes rotational forces during angled impacts, ensuring the attenuator remains attached to the host vehicle, enhancing safety during critical moments.
- **Full-Width Impact Protection:** The corrosion-resistant aluminum side rails offer comprehensive protection, redirecting vehicles away from hazardous areas and contributing to overall roadside safety.
- **MASH Tested and Eligible:** Proudly standing as the world's first and only MASH Tested, Passed, and Eligible Towable Attenuator for TL-3 applications, the Scorpion II TA is suitable for a variety of road safety scenarios, with or without display panels or message boards.

The Village solicited proposals from several suppliers of the Scorpion II Attenuator and have received the following quotes. Each of the quotes is based upon a joint purchasing program either through a national consortium (Sourcewell) or via an approved state DOT contract (Minnesota DOT).

Vendor	Purchasing Contract	Proposal Amount
Croc Crash Solutions 2989 SE Monroe Street Stuart, FL 34997-5950	Sourcewell 042225-TFX	\$45,285.00
RoadSafe Traffic Systems, Inc. 1740 Internationale Pkwy Woodridge, IL 60517	N/A	\$37,580.00
Street Smart Rentals, LLC 6811 137 th Avenue NE Columbus, MN 55025	MNDOT 279465	\$33,735.00

Staff recommends purchasing the Scorpion II Attenuator from Street Smart Rentals, LLC of Columbus, MN in the amount of \$33,735.



Sale Quote

Street Smart Rentals, LLC
6811 137th Ave NE
Columbus, MN 55025

Quote # Q-80963-1

Date 6/11/2026

Expires On 7/31/2026

Rep Name Ryan Kilpatrick

Rep Phone (612) 597-5547

Rep Email rkilpatrick@streetsmartrental.com

PREPARED FOR

Carl Goldsmith

Village of Lombard

6306205740

goldsmithc@villageoflombard.org

Billing Address

Village of Lombard
1051 Hammerschmidt Avenue
Lombard, IL 60148

Shipping/Pick Up Address

Village of Lombard
1051 Hammerschmidt Avenue
Lombard, IL 60148

Pricing provided on this quote is valid for up to 30 days after the printed date. Thank you for your business!

DESCRIPTION	QTY	UNIT PRICE	TOTAL
Scorpion II MASH Trailer Attenuator TL-3 MnDOT Spec	1	\$26,000.00	\$26,000.00
25L Vehicle-Mount AB	1	\$3,400.00	\$3,400.00
AB Folding upright for TA	1	\$2,900.00	\$2,900.00
AB Install	1	\$250.00	\$250.00
Small NEMA Box for TMA's & TA's	1	\$185.00	\$185.00

Subtotal* \$32,735.00

Est. Freight* \$1,000.00

Total* \$33,735.00

***Totals do not include Tax. Taxes are applied on invoices if your account is not exempt.**

Notes

Terms and Conditions

To accept this quote and terms outlined above, sign and date, and return.

**Village of Lombard
Signature**

Print Name

Date

PO Number

**Traffix
Devices Inc.** 
Engineered Products for Safer Highways

**Traffix
Devices Inc.** 
Engineered Products for Safer Highways



FIRST MASH ELIGIBLE TMA
(CC-132, 6.15.17)
FIRST MASH ELIGIBLE TA
(CC-138, 9.15.17)

**Scorpion®
SIMPLY
THE BEST**

**BEST SAFETY RECORD
BEST SUPPORT
BEST TMA'S**

Traffix Devices, Inc.
160 Ave. La Pata, San Clemente, CA 92673
(949) 361-5663 • www.traffixdevices.com



THE FACTS
 **Scorpion® &
Scorpion II®**

SAVING LIVES WORLDWIDE FOR OVER 20 YEARS

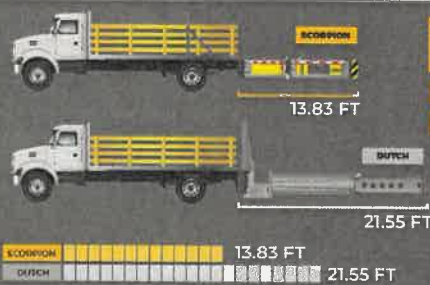
We have recently seen marketing material from a manufacturer in the Netherlands, (will be referred to as the Dutch Product), that is disseminating information on our product which is not factual and misleading.

This misinformation has prompted us to provide users, distributors, and road authorities with **THE FACTS** regarding our Scorpion & Scorpion II Truck Mounted Attenuator.



ACTUAL DIMENSIONS

LENGTH



SHORTEST LENGTH

EASIER TO DRIVE
LESS INCIDENTAL IMPACTS

WIDTH



WIDEST IN THE INDUSTRY

FULL WIDTH PROTECTION
REDIRECTS IMPACTING VEHICLE

HEIGHT



LOWEST IN THE INDUSTRY

DRIVES COMFORTABLY
REDUCES DRAG
INCREASES FUEL ECONOMY

GROUND CLEARANCE



AMPLE SPACE FROM THE GROUND

BARRELY BOTTOMS OUT
NO JOCKEY WHEELS

RELIABILITY

Keep It Simple ... with the Scorpion

COMPLEX

DUTCH

2	SERVICE REQ / YEAR	0.5
16	SENSORS	0
8	FUSES	1
2	GEAR MOTORS & ISACS	10
4	ELECTRICAL	1
1	PC BOARDS	0
6	ACTUATORS	0
39	TOTAL COMPONENTS	2.5

SCORPION SIMPLE

1 FUSE

Leak Bag for the PC Board must be replaced every 12 months, according to manufacturers recommendation.

NOTE: THESE ARE JUST THE ONES WE HAVE SEEN AND KNOW OF, THERE COULD BE MORE

POST IMPACT REPAIR

Modular and easy to repair



The above was repaired and returned to service in 2 hours.

HIGHWAY ENGINEERING AUSTRALIA — AUGUST 2016
"Scorpion" TMA's not only deliver outstanding work site protection for workers and motorists alike, they have also been designed to overcome the cost and inconvenience of having to replace the entire unit even after only a minor or medium level impact... The key to their performance capabilities - both in minor and severe impacts - lies within their unique modular design."

INFINITE WEIGHT

SCORPION SAFELY MET THE TOUGHER TESTING REGIMEN OUTLINED BY MASH STANDARDS AND DEMONSTRATED THAT IT ABSORBS THE FULL IMPACT IN THE MOST EXTREME CIRCUMSTANCES WITHOUT THE BENEFIT OF HOST VEHICLE ROLL AHEAD.

SCORPION TMA ABSORBS 100% OF THE IMPACT WITHOUT THE AID OF THE HOST VEHICLE

SCORPION MASH TEST 3-52



TMA HOST VEHICLE WEIGHT RANGES	MINIMUM:	MAXIMUM:
SCORPION	16,000 lbs.	unlimited
SCORPION II	15,000 lbs.	unlimited
DUTCH	16,010 lbs.	22,120 lbs.

THIS INFINITE WEIGHT CERTIFICATION ALLOWS SCORPION II TMA TO BE MOUNTED ON THE LARGEST VARIETY OF TRUCKS, FROM 15,000 LBS MINIMUM WITH NO MAXIMUM WEIGHT LIMIT.



DEBRIS FIELD

20 years of impacts have demonstrated and proven that when impacted, the Scorpion's modular design and curved side aluminum tubes contain the debris collected between the host vehicle and impacting vehicle, making for a safer post impact crash scene for workers and first responders and is also easier to transport back to the shop for repairing.



1 APL/QPL Background

MnDOT has established this APL/QPL category to help assure the quality of materials and construction in projects, in accordance with 23 CFR §637, and for MnDOT's own use for maintenance work.

MnDOT Need: MnDOT must perform an engineering and environmental evaluation in order to comply with the FHWA/MnDOT stewardship agreement, meet other regulatory requirements, and comply with MnDOT's own Approved/Qualified Products policy. In addition, MnDOT must develop specifications and standards for procuring new materials, products, or engineered systems.

MnDOT Review of Alternatives: MnDOT has analyzed other options, including allowing contractors and MnDOT staff to select any product available in the marketplace. MnDOT has determined that using an APL/QPL is the most beneficial alternative to ensure that the product will meet technical and environmental requirements and has further determined the need to limit its use to certain products that have enough usage to justify managing an APL/QPL.

2 Relevant MnDOT Standards/Requirements

For a product to be eligible for inclusion on MnDOT's APL/QPL for Truck/Trailer Mounted Attenuators, the product must meet the following standards and requirements:

- MASH 16, TL-3 or better
- Have an FHWA Hardware Eligibility Letter(s)

MnDOT will not evaluate products that do not meet the standards/requirements of the APL/QPL category. By submitting an application, the manufacturer certifies that they have reviewed the standards/requirements and their product meets the standards/requirements. MnDOT may reject an APL/QPL submittal without further review if MnDOT determines that the product does not meet standards/requirements.

3 MnDOT Contact Information

For questions about the APL/QPL application and approval process for Truck/Trailer Mounted Attenuators, please contact:

Name: Tiffany Kautz
Title: Traffic Standards Engineer
Office: Traffic Engineering
Email: tiffany.kautz@state.mn.us
Phone Number: 651-234-7388

4 Authorized Submitters

Only the product's manufacturer is authorized to submit the product to MnDOT. MnDOT will generally not accept submissions from independent authorized distributors, but MnDOT may, in its sole discretion, allow an authorized distributor, with the cooperation and authorization of the manufacturer, to be the submitter.

5 Evaluation Process

MnDOT will not evaluate products that do not meet the standards/requirements of the APL/QPL category. By submitting an application, a product manufacturer certifies that they have reviewed the standards/requirements and their product meets the standards/requirements. MnDOT may reject an APL/QPL submittal without further review if MnDOT determines that the product does not meet standards/requirements.

To apply for MnDOT's Truck/Trailer Mounted Attenuators approved products list (APL/QPL), the manufacturer must submit an application packet for MnDOT's review. The application packet shall include the following:

1. A complete [Application Form](#)
2. **Technical Drawing(s)** of the product.
3. All **Manuals and/or Users Guides** associated with the product.
4. A copy of the **FHWA Hardware Eligibility Letter(s)**
5. A copy of the **MASH 16 Crash Report and videos**
6. **Technical Assistance Contacts:** A single point of contact for the submitted product including name, email address, phone number, and mailing address. This single point of contact must be knowledgeable about the specifications, manufacturing, and performance of the product.

6 MnDOT Will Make a Case-By-Case Determination

Following the [Evaluation Process](#), MnDOT will determine whether the product met, or failed to meet, the required criteria. MnDOT will promptly notify the product manufacturer of MnDOT's determination.

6.1 Effect of Favorable Determination

If MnDOT determines the product met the evaluation criteria, MnDOT will place the product on the APL/QPL, and the product will be authorized for use on MnDOT construction or maintenance projects. Merely being placed on the APL/QPL does not guarantee that MnDOT, or a MnDOT contractor, will purchase and use the product. Being placed on the APL/QPL also does not mean that the product meets other legal requirements for any particular use. Being placed on an APL/QPL does not constitute an "endorsement" of the product, and the submitter must not state or imply that MnDOT "endorses" the product.

6.2 Effect of Non-Favorable Determination

If MnDOT determines the submitted product did not meet the technical criteria, MnDOT will notify the product manufacturer accordingly. MnDOT will provide test results and other information specifying how the product failed to meet the criteria. The product manufacturer may discuss the test results with the MnDOT contact identified above. If the product manufacturer disagrees with MnDOT's determination, the product manufacturer may submit additional documentation supporting its position. The MnDOT contact will review the submission and make a final determination.

The product manufacturer may not submit the product for re-evaluation until the product manufacturer has made material changes to the product or manufacturing methods that are likely to resolve the identified shortcomings. The product manufacturer must discuss the changes with the MnDOT Contact person prior to re-submitting. MnDOT will, in its sole discretion, determine whether the changes are material.

7 Ongoing Notice Requirements

A manufacturer of a product placed on this APL/QPL must immediately notify the MnDOT contact listed above if any of the following apply:

- The product manufacturer has made a material change to the product that may affect its performance or environmental impact. These changes include, but are not limited to, changes in materials, chemicals, or manufacturing processes.
- The product has become the subject of legal action under a "False Claims Act" of the United States or any state.
- It is determined that material information was not disclosed to MnDOT during the evaluation process.

MnDOT may, at its option, remove the product from the APL/QPL, or determine that the product must be re-evaluated. If MnDOT requires a re-evaluation, it will follow the same process as the initial evaluation.

8 Minnesota Government Data Practices Act Notice

All data and information submitted to MnDOT is "Government Data" under the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13 (the "Act"). The Act generally classifies information as "public data" or "non-public data". Data is presumed "public" unless an exception applies, such as "trade secret data" (see Minnesota Statutes §13.37 subdivision 1). The submitter bears the burden of establishing the trade secret exception and properly marking trade secret data; simply marking data "confidential" or "proprietary" will not suffice to make it trade secret data under the Act. All MnDOT product evaluations and APL/QPLs are public data.

Admin Minnesota

Office of State Procurement

Room 112 Administration Bldg., 50 Sherburne Ave., St. Paul, MN 55155; Phone: 651.296.2600, Fax: 651.297.3996
Persons with a hearing or speech disability may contact us through the Minnesota Relay Service by dialing 711 or 1.800.627.3529.

CONTRACT RELEASE: A-210(5)

DATE: DECEMBER 1, 2025

PRODUCT/SERVICE: MOBILE TRAFFIC CONTROL AND SAFETY DEVICES

CONTRACT PERIOD: DECEMBER 1, 2025, THROUGH NOVEMBER 30, 2027

EXTENSION OPTIONS: UP TO 36 MONTHS

ACQUISITION MANAGEMENT SPECIALIST/BUYER: KAREN MCINTYRE

PHONE: 651.201.3124

E-MAIL: karen.mcintyre@state.mn.us

WEB SITE: <https://mn.gov/admin/osp/>

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 CONTRACTORS 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.

CONTRACTOR

ADDCO ACQUISITION, LLC

955 Wells Street
St. Paul, MN 55106

CONTRACT NO.

279461

TERMS

Net 30 Days

DELIVERY

60 Days

VENDOR NO.: 0000860553-001

CONTACT: John Mueller
Email: jcmueller@addco.com

PHONE: 651-728-4818

[ADDCO ACQUISITION, LLC Sample Quote and Sample Invoice](#)

CONTRACTOR

ARAMSCO INC.

Five Radnor Corporate Center, 100
Matsonford Rd., Suite 510
Radnor, PA 19087

CONTRACT NO.

279462

TERMS

Net 30 Days

DELIVERY

60 Days

VENDOR NO.: 0000217453

CONTACT: Janice Cornish
Email: trafficsafety@aramsco.com

PHONE: 856-686-7817

[ARAMSCO INC. Sample Quote and Sample Invoice](#)

CONTRACTOR
INTELCOM INC. DBA LITESYS INC.
PO Box 239, 150 Pollywog Lane
Belgrade MT 59714

CONTRACT NO.
279463

TERMS
Net 30 Days

DELIVERY
45 - 60 Days

VENDOR NO.: 0000223206

CONTACT: Kendall Kanning
Email: sales@litesys.com

PHONE: 406-388-9317

[LITESYS@.INC Sample Quote and Sample Invoice](#)

CONTRACTOR
INTERSTATE POWER SYSTEMS INC.
21568 Highview Ave
Lakeville, MN 55044

CONTRACT NO.
279464

TERMS
Net 30 Days

DELIVERY
4-6 Weeks

VENDOR NO.: 0000202170

CONTACT: Gabe Krebs
Email: Gabe.Krebs@istate.com

PHONE: 763-269-5866

[INTERSTATE POWER SYSTEMS INC. Sample Quote and Sample Invoice](#)

CONTRACTOR
STREET SMART RENTALS LLC
6811 137th Ave NE
Columbus, MN 55025

CONTRACT NO.
279465

TERMS
Net 30 Days

DELIVERY
30-90 Days

VENDOR NO.: 0000234819

CONTACT: Ryan Kilpatrick
Email: rkilpatrick@streetsmartrental.com

PHONE: 651-653-4648

[STREET SMART RENTAL Sample Quote and Sample Invoice](#)

CONTRACTOR
VALTIR LLC DBA ENERGY ABSORPTION SYSTEMS
PO Box 18461
Chicago, IL 60618

CONTRACT NO.
279466

TERMS
Net 30 Days

DELIVERY
45 Days

VENDOR NO.: 0000303391

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

PHONE: 888-323-6374

[ENERGY ABSORPTION Sample Quote and Sample Invoice](#)

CONTRACTOR
WARNING LITES OF MINNESOTA INC.
4700 Lyndale Ave N
Minneapolis, MN 55430

CONTRACT NO.
279476

TERMS
Net 30 Days

DELIVERY
6-8 Weeks

VENDOR NO.: 0000863098

CONTACT: Herb Bray
Email: hbray@warninglitesmn.com

PHONE: 612-521-4200

[WARNING LITES Sample Quote and Sample Invoice](#)

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 Contractor . 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.

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 Contractor quotes that provide itemized contract pricing (lump sum price quotes must be rejected and revised by the Contractor 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.

Exhibit D – Price Schedules

[Contract No. 279461 ADDCO ACQUISITION LLC Price Schedules](#)

[Contract No. 279462 Aramsco Inc Price Schedules](#)

[Aramsco Product Catalog](#)

- [Aramsco Wanco Arrowboard Price Catalog](#)
- [Aramsco Wanco Message Board Price Catalog](#)

[Contract No. 279463 INTELICOM INC., DBA LITESYS®, INCORPORATED Price Schedules](#)

[Contract No. 279464 INTERSTATE POWER SYSTEMS Price Schedules](#)

[Contract No. 279465 STREET SMART RENTAL, LLC Price Schedules](#)

[Contract No. 279466 VALTIR DBA ENERGY ABSORPTION SYSTEMS, INC. Schedules](#)

- [Valtir DBA Energy Absorption List Prices](#)

[Contract No. 279476: WARNING LITES OF MN INC. Price Schedule](#)

EQUIPMENT OFFERINGS LIST

Contractor Name	ADDCO ACQUISITION LLC	ARAMSCO INC	INTELCOM INC., DBA LITESYS®, INCORPORATED	INTERSTATE POWER SYSTEMS INC	STREET SMART RENTAL, LLC	VALTIR DBA ENERGY ABSORPTION SYSTEMS, INC.	WARNING LITES OF MN INC.
Contract Number	279461	279462	279463	279464	279465	279466	279476
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)				✓	✓		✓

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 will be determined by the Ordering Entity. The Contractor will be responsible for ground delivery. Equipment must be delivered and unloaded by the Contractor and/or Delivering Entity without assistance by the Ordering Entity. The State reserves the right to refuse acceptance of any equipment that requires the Ordering Entity to assist in unloading without penalty to the State.

FOB Destination prepaid and added (with freight and/or Price per loaded Mile allowed as a separate line item), to the ordering entity's receiving dock or warehouse, or as otherwise instructed on the purchase order by the ordering entity. In those situations, in which the "deliver-to" address has no receiving dock or agents, the Contractor must be able to deliver to the person specified on the purchase order. The Contractor will provide the most economical shipping method possible when quoting, unless, otherwise directed by the ordering entity. Upon request by the State, or CPV Member, the Contractor must furnish the third-party freight quote and/or invoice.

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. 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.

The Ordering Entity may choose to pick up the equipment or may contract with a 3rd party for transportation services/delivery services of the order. The Contractor is responsible for advising the Ordering entity when the product is ready for pick-up which will be no later than the quoted lead time. If the Ordering Entity chooses to arrange for their own transportation methods; the Ordering Entity will be responsible to provide a bill of lading/shipping label/shipping documents to the Contractor. The Contractor will be responsible for attaching any documents to the outside of the order, box, crate, etc. and have ready for pick-up at a mutually agreed upon time.

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 the [MN Department of Revenue](#) to learn about the applicable sales tax (search "Fact Sheet 142").

SPECIFICATIONS, DUTIES, AND SCOPE OF WORK

SECTION 1: EQUIPMENT REQUIREMENTS & SPECIFICATIONS

1. GENERAL EQUIPMENT REQUIREMENTS

- 1.1. This equipment must be the most current advertised production model, as modified per specifications and approved by MnDOT.
- 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

- 2.1. MnDOT will only purchase arrowboards that are on MnDOT's qualified products list. Contractors can view and obtain information regarding MnDOT's qualified product list and evaluation process at [MnDOT's Traffic Engineering's website](#).
- 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) can be viewed [here](#).
- 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 MnDOT 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 Exhibit D Price Schedule.

3. SPECIFICATION 3.0 TRUCK & TRAILER-TRUCK MOUNTED ATTENUATORS

3.1. TRUCK MOUNTED ATTENUATOR (TMA) REQUIREMENTS

- 3.1.1. MnDOT will only purchase truck mounted attenuators that are on MnDOT's qualified products list. Contractors can view and obtain information regarding MnDOT's qualified product list and evaluation process at [MnDOT's Traffic Engineering's website](#).
- 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-degree tilt position.
- 3.1.7. 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.
- 3.1.8. 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.
- 3.1.9. Each unit shall be supplied with one set of parts, service, and operations manuals as well as a complete wiring diagram.
- 3.1.10. 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.

- 3.1.11. 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 Exhibit D Price Schedule.

3.2. TRAILER-TRUCK MOUNTED ATTENUATOR REQUIREMENTS

- 3.2.1. MnDOT will only purchase trailer, truck mounted attenuators (Trailer TMA) that are on MnDOT's qualified products list. Contractors can view and obtain information regarding MnDOT's qualified product list and evaluation process at [MnDOT's Traffic Engineering's website](#).
- 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 an 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 Exhibit D Price Schedule.

4. SPECIFICATION 4.0 CHANGEABLE MESSAGE SIGN (PCMS)

4.1. CHANGEABLE MESSAGE SIGN (PCMS) REQUIREMENTS

- 4.1.1. MnDOT will only purchase changeable message signs that are on MnDOT's qualified products list. Contractors can view and obtain information regarding MnDOT's qualified product list and evaluation process at [MnDOT's Traffic Engineering's website](#).
- 4.1.2. MnDOT shall only purchase PCMS's with messages listed on MnDOT'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 \(MUTCD\)](#).
- 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 Exhibit D Price Schedule.
- 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. Hitch shall have screw jack, with locking pin, that rotates for transporting.
 - 4.2.9. Contractor shall have four screw jacks with locking pins for leveling the trailer deck.

5. SPECIFICATION 5.0 AUTOMATED FLAGGER ASSISTANCE DEVICES

- 5.1. MnDOT will only purchase changeable message signs that are on MnDOT's qualified products list. Contractors can view and obtain information regarding MnDOT's qualified product list and evaluation process at [MnDOT's Traffic Engineering's website.](#)
- 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. MnDOT will only purchase Portable Traffic Control Signals (PTCS) that are on MnDOT's qualified products list. Contractors can view and obtain information regarding MnDOT's qualified product list and evaluation process at [MnDOT's Traffic Engineering's website](#).
- 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 (MnDOT) 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](#).

- 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 MnDOT specifications 2565 and 3834. Signal Heads must be cast aluminum or polycarbonate. All PTCS heads must have three 12-inch LED indications conforming to MnDOT LED 12- and 8-Inch Ball Traffic Control Signal Indication Specification. If polycarbonate signal heads are used, they must conform to MNDOT Polycarbonate Signal Head Specification without Indications as specified in the MnDOT 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 calendar 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 Exhibit D Price Schedule.

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 MnDOT.
- 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. Hitch must have screw jack, with locking pin, that rotates for transporting.
- 6.4.9. 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. MnDOT will only purchase items that are on MnDOT's qualified products list. Other entities/CPVs are not limited to this list. Contractors can view and obtain information regarding MnDOT's qualified product list and evaluation process at [MnDOT's Traffic Engineering website](#).
- 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 \(MUTCD\)](#).
- 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 Exhibit D Price Schedule.

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. Hitch must have a screw jack that rotates for transporting.
- 7.2.9. Unit must have outrigger-type jacks or sliding legs with locking pins for leveling the trailer deck.

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 Solicitation/Event, separate and aside from this, if deemed in its best interest. The State may use whatever Solicitation/Event procedure that is most advantageous to the State. The State also reserves the right to issue another Solicitation/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.

- 6.1. 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.
- 6.2. 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.

7. AUTHORIZED DISTRIBUTORS.

- 7.1. The Contractor may choose to provide all quotes, accept all purchase orders, accept all payments, perform all deliveries, and provide all invoices, or the Contractor may delegate these duties to its authorized distributors. The Contractor is responsible for its authorized distributor's performance. No authorized distributor shall serve to terminate or in any way affect the primary legal responsibility of the Contractor for timely and satisfactory performance of the obligations of the Contract. The State shall not be required to enter into any additional agreement or terms to purchase from any authorized dealer. The terms of this contract shall govern any such purchase.
- 7.2. The Contractor is responsible for collecting, and submitting, all sales reports from their sales and the

authorized distributors, and submitting all Administration Fees on invoiced sales whether they have been paid or not.

- 7.3. The Contractor may add and/or delete Authorized Distributors at any time during the Contract term upon request to the State Authorized Representative and mutual agreement by the State, through a duly executed amendment.

ESTIMATE

Croc Crash Solutions - Croc
Enterprises LLC EIN: 47-2876221
2989 SE Monroe St
Stuart, FL 34997-5950

mike@wearecroc.com
+1 (772) 220-3434
www.wearecroc.com



Bill to
Village of Lombard
255 E. Wilson Avenue
Lombard, IL 60148 USA

Ship to
Village of Lombard
255 E. Wilson Avenue
Lombard, IL 60148 USA

Estimate details

Estimate no.: 10758
Estimate date: 06/08/2026

#	Product or service	SKU	Description	Qty	Rate	Amount
SOURCEWELL CONTRACT# 042225-TFX Traffic Devices						
1.	TraFFix Devices Sourcewell Contract #042225-TFX / Scorpion II MASH TL-3 Towable Attenuator, Un-Assem	SOURCEWELLU	TraFFix Devices Sourcewell Contract #042225-TFX / Scorpion II MASH TL-3 Towable Attenuator, Un-Assembled - Includes: - 48" x 96" 25 Lamp LED Arrow Board - TDI Manual Arrow Board Uprights - Assembly by customer required	1	\$41,785.00	\$41,785.00
	Subtotal		Subtotal			\$41,785.00
2.	TraFFix Devices Sourcewell Contract #042225-TFX / Traffic Devices 10002- A TL3M-12TA-A, Scorpion II MAS	SOURCEWELLT	TraFFix Devices Sourcewell Contract #042225-TFX / Scorpion II MASH TL-3 Towable Attenuator, Fully Assembled and ready to work - Includes: - 48" x 96" 25 Lamp LED Arrow Board - TDI Manual Arrow Board Uprights - Comes Fully Assembled and ready to work	1	\$45,285.00	\$45,285.00
	Subtotal		Subtotal			\$45,285.00
Total						\$87,070.00

Note to customer

Unless otherwise noted, freight to be determined at time of delivery

IMPORTANT Customer is responsible for unloading equipment/material from truck. Forklift or loading dock is required for trailers or oversized packages.

For Titled assets, Additional Titling Fees may apply!

Feel free to contact us if you have any questions.

Accepted date

Accepted by

**TraFFix
Devices Inc.**



Engineered Products for Safer Highways



Scorpion II®

TraFFix Devices Inc.

www.traffixdevices.com

PHX: 48.024.241 48.081.982 81 48.020.324 81 47.263.864 01
47.438.337 01 48.082.829 48.481.80001

**Scorpion II® TL-3 Trailer Attenuator
MASH Tested, Passed and Eligible**



10002-TL3M-12TA
(Arrowboards, Uprights Sold Separately)

- The FIRST and ONLY Trailer Attenuator eligible for MASH, TL-3.
- FHWA Eligibility Letter, CC-138.
- Infinite weight tested and eligible allows the Scorpion II® Trailer to be used on heavy host vehicles (minimum 12,000 lbs.), with no upper weight limit.
- Scorpion II® remained attached to the host vehicle and pintle hook during all impact testing.
- Telescoping Anti-Rotational System (TARS) minimizes Scorpion II Trailer rotation during angled and offset impacts, preventing trailer separation from host vehicle.
- No additional hardware required for connection to host vehicle.
- The Scorpion II® proven modular design crushes in progressive stages allowing quick and economical replacement of damaged parts.
- LED Lights standard on all Scorpion II® Trailer Attenuators.
- The unique curved design gives full width protection to the back of the host vehicle and shields the deadly "coffin corners" of the truck.
- Rear axle placement improves trailer stability and prevents the tail from "bottoming out" on driveways and uneven surfaces.
- MASH tested and eligible with optional display panel, which can be easily attached to Scorpion II® Trailer Attenuator.

www.traffixdevices.com

PRODUCT BULLETIN



Scorpion II®

TraFFix Devices Inc.

www.traffixdevices.com

TEL: 949.361.5663 FAX: 949.361.9205
 87-428.237-81 86-092.109 86-481.82001

Scorpion II TL-3 Trailer Attenuator
MASH Tested, Passed and Eligible



Scorpion II TL-3 Trailer Attenuator

Specification

The Trailer Attenuator (TA) is a mobile crash cushion designed with a trailer tongue and axle/wheel that connects directly to the support vehicle's trailer connection and from a lunette eye on the attenuator. The TA can be used on support vehicles with a minimum actual/curb weight of 12,000 lbs with no upper weight limit (infinite weight). The TA has overall dimensions of 17.8 ft (5.4 m) x 8 ft (2.4 m) x 4.3 ft (1.3 m) with ground clearance of 12.0 in $\pm$ 1.0 in (305 mm $\pm$ 25 mm). The TA consists of three main components: the trailer tongue, front Strut, and rear Cartridge. The trailer tongue is positioned nearest to the support vehicle, the Strut is bolted to the tongue and Cartridge. The Cartridge is the rear most component, furthest away from the support vehicle. The trailer tongue acts as a standard single point connection under normal towing conditions. The trailer tongue is designed with an integral Telescoping Anti-Rotation System (TARS) that is activated when the TA is impacted. The forward sliding action occurs during an impact, upon completion of the full telescoping action the outboard anti-rotation supports come into contact with support vehicle frame plate which in turn prevents angular rotation about the rear of the host vehicle. The Strut consists of four outboard convex aluminum tubes forming an aluminum structural weldment. The aluminum structural weldments bolt directly to the TARS tongue and the rear Cartridge. The structural assembly encompasses the aluminum crush Module D. The Cartridge consists of four outboard convex aluminum tubes forming an aluminum structural weldment. The aluminum structural weldments bolt directly the Struts steel angles and rear trailer diaphragm. The TA uses a Cartridge Trailer Diaphragm with an axle/wheel attachment for towing the TA. The structural assembly encompasses the two-aluminum crush Module C's. Attached to the rear most end of the Cartridge is the single crush Module A.



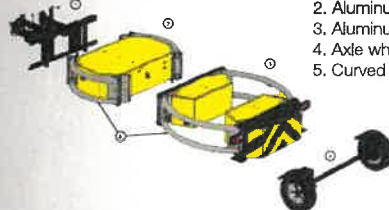
Scorpion II® TL-3 Trailer Attenuator with Display Panel Impacted by 5,006 lbs (2,271 kg) Pick-Up Truck

TL-3 SPECIFICATIONS

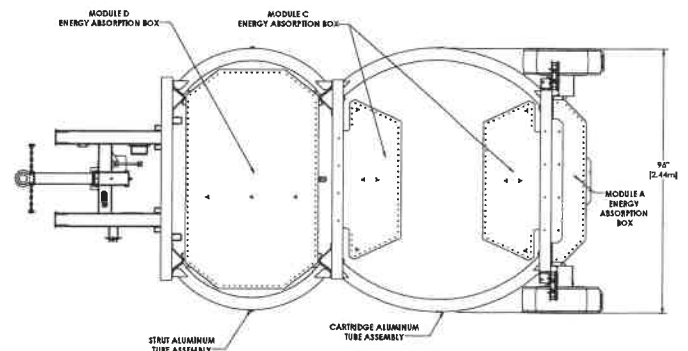
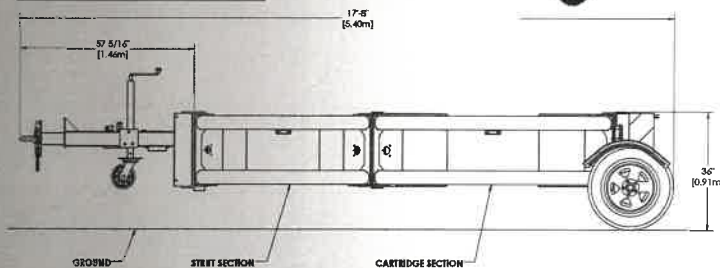
Length: 17.8 ft (5.4 m)

Width: 7.8 ft (2.4 m)

Height from the ground:
 12.0 in $\pm$ 1.0 in
 (304.8 mm $\pm$ 25.4 mm)



1. Steel tongue section including TARS™
2. Aluminum strut section
3. Aluminum cartridge section
4. Axle wheel assembly
5. Curved re-directing aluminum tubes



160 Avenida La Pata, San Clemente, CA 92673
 (949) 361-5663 FAX (949) 361-9205
 www.traffixdevices.com

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 www.stripingserviceandsupply.com

(800)590-1593

Goldsmith, Carl

From: Samantha Ruppenthal <SRuppenthal@roadsafetraffic.com>
Sent: Monday, July 6, 2026 4:54 PM
To: Goldsmith, Carl
Subject: Re: Scorpion II Quote

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Sorry for the delay. I was waiting for the price of the uprights to mount the arrow board.

10000-TL3M-12FBS

10000-TL3M-12FBS:

Scorpion II Model C TL3 TMA MASH Eligible, 12V

\$27,375.00

FREIGHT

to ship (1) unit

\$2395.00

Uprights are **\$3,110.00**

15-lamp Wanco Arrow Board WB8-LSA is **\$3800.00** /each + frt is estimated at **\$900.00**

Wireless controller is separate **\$1500.00** /each

RoadSafe

Sam Ruppenthal | Sr. Project Manager | RoadSafe Traffic Systems, Inc.
1740 Internationale Pkwy
Woodridge, IL 60517
Phone: 630.972.7770 | Cell: 708.846.8428
sruppenthal@roadsafetraffic.com

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From: Goldsmith, Carl <GoldsmithC@villageoflombard.org>
Sent: Monday, July 6, 2026 9:41 AM
To: Samantha Ruppenthal <SRuppenthal@roadsafetraffic.com>
Subject: RE: Scorpion II Quote

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This message came from outside your organization.

Samantha

I wanted to check and see if you were able to put together a quote for the Scorpion towable attenuator with the arrow board. Please advised. Thanks



Carl Goldsmith
Director of Public Works
Village of Lombard
255 E Wilson Ave. Lombard, IL 60148

Phone: (630) 620-5740
Email: goldsmithc@villageoflombard.org
Web: www.villageoflombard.org

Follow us:   

From: Samantha Ruppenthal <SRuppenthal@roadsafetraffic.com>
Sent: Wednesday, July 1, 2026 9:36 AM
To: Goldsmith, Carl <GoldsmithC@villageoflombard.org>
Subject: Scorpion II Quote

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From: Samantha Ruppenthal <SRuppenthal@roadsafetraffic.com>
Sent: Tuesday, June 9, 2026 2:24 PM
To: goldsmithc@villageoflombard.org <goldsmithc@villageoflombard.org>
Subject: Scorpion II Quote

Hello,
Please see the quote as requested.

	10000-TL3M-12FBS Scorpion II Model C TL3 TMA MASH Eligible, 12V	
10000-TL3M-12FBS:		\$27,375.00
FREIGHT	to ship (1) unit	\$2395.00

Sam Ruppenthal | Sr. Project Manager | RoadSafe Traffic Systems, Inc.

1740 Internationale Pkwy

Woodridge, IL 60517

Phone: 630.972.7770 | Cell: 708.846.8428

sruppenthal@roadsafetraffic.com

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