



March 18, 2015

Bidder:

The City of Traverse City will receive sealed bids in the Office of the City Manager, Second floor, Governmental Center, 400 Boardman Avenue, Traverse City, Michigan, 49684, until **Tuesday, April 7, 2015, at 2:00 PM** for the following:

Solar Powered Trailer-Mounted Arrow Board
(specifications attached)

If the specifications are obtained from the City's new updated website link at: http://www.traversecitymi.gov/bids_and_rfps.asp, it is the sole responsibility of the Bidder to check the website for updates and addenda prior to the bid being submitted. Bidder may also sign up to receive notifications when bids and RFPs are posted by sending an e-mail requesting same to jdalton@traversecitymi.gov

The City of Traverse City reserves the right to accept or reject any or all bids, waive irregularities, and to accept the bids either on an entire or individual basis that is in the best interest of the City.

The City accepts no responsibility for any expense incurred by the Bidder in the preparation and presentation of a bid. Such expenses shall be borne exclusively by the Bidder.

Only the successful Bidder will be notified. If you so desire, you may call for results.

You must indicate on the outside of the sealed envelope that the bid is for the **“Arrow Board.”**

You must submit **TWO (2) SEALED COPIES** of the bid to the City Manager's Office prior to the above-indicated time and date or the bid will not be accepted. Telefaxed or E-Mail bids will not be accepted.

Please note that if you have previously submitted an informal quote, you will still need to submit a sealed bid prior to the date and time specified above in order to be considered. Please ensure that all requirements listed in the specifications are met.

If you have any questions, please contact Dave Courtad, Garage Superintendent, at (231) 922-4900, ext. 111, before the bid is submitted.

PLEASE SUBMIT BID TO: Julie Dalton, Purchasing Agent
400 Boardman Avenue, 2nd floor
Traverse City, MI 49684

**BID SPECIFICATIONS:
Solar Powered Trailer-Mounted Arrow Board**

MINIMUM REQUIREMENTS: The attached detailed specification shall be construed as minimum. Should manufacturer's current published data or specifications exceed these, such standards shall be considered minimum and furnished. All integral parts not specifically mentioned in the scope of these specifications which are necessary to provide a complete working unit shall be furnished.

SILENCE OF SPECIFICATIONS: The apparent silence of this specification and any supplemental specification as to any details or the omission from it of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and that only material of first quality and correct type, size, and design are to be used. All workmanship is to be first quality. All interpretations of this specification shall be made upon the basis of this statement.

COMPLIANCE: Bidder must complete and return the enclosed bid forms, including bid sheet. Enter "COMPLY" in the "BIDDER PROPOSES TO FURNISH" column if your equipment meets or exceeds the requested specification. If your equipment does not comply with the requested specification then enter "EXCEPTION" or other information which may pertain. If the item is equivalent then please indicate that fact. All exceptions must be fully explained in the "bidder proposes to furnish" column or on another sheet of paper. If nothing is written in the column then the City will assume that the bidder will precisely and exactly meet the specifications requested.

THE CITY OF TRAVERSE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS, WAIVE IRREGULARITIES, AND TO ACCEPT THE BIDS EITHER ON AN ENTIRE OR INDIVIDUAL BASIS THAT ARE IN THE BEST INTEREST OF THE CITY OF TRAVERSE CITY.

IN ANY CIRCUMSTANCE DURING OR PRIOR TO DELIVERY OF THE VEHICLE/ EQUIPMENT, WHEREUPON THE CITY OF TRAVERSE CITY (CUSTOMER) BECOMES ELIGIBLE TO RECEIVE A REBATE FOR ANY VEHICLE PURCHASED UNDER THIS BID, IT SHALL BE THE SUCCESSFUL BIDDERS RESPONSIBILITY TO INFORM DAVE COURTAD GARAGE SUPERINTENDENT, OF ITS QUALIFICATION FOR SUCH REBATE AND TO ADVISE THE PROCEDURES FOR OBTAINING SUCH REBATES. It is the intent of these specifications to describe various installed equipment, per the following specifications. There are numerous makes and models of equipment available that will meet or closely meet these criteria. If the specifications requested do not exactly coincide with your equipment you may take exception and bid your equipment. All exceptions must be noted and fully explained on a separate sheet of paper.

If you have ANY questions, or are unclear about what we may be requesting, please contact Dave Courtad at, 231-922-4900, ext. 111. Please ask questions or request clarifications before the bid is submitted.

**Bidder Proposes
To Furnish**

Specifications: Based on a Solar Tech Trailer-mounted 25 Lamp Silent Sentinel Arrow Board. Please include all specifications at time of bid.

Year, Make and Model of unit bid: _____

Consists of an arrow display panel, a supporting structure for the display panel, photovoltaic array, a battery power supply and an electronic control console, all mounted on a heavy duty trailer frame. _____

Shall have a high contrast arrow display panel with long life expectancy, high reliability LED lamp technology. _____

Shall meet or exceed the standards for Arrow Boards as listed with the U.S. Federal Highway Administration Manual on Uniform Traffic Control Devices. _____

Manufacturer shall have a factory authorized service center located within 150 miles of point of delivery. Delivery directly from a manufacturer's facility without inspection and prep by an authorized service center shall not be permitted. Additionally, authorized service center shall be capable of performing warranty repairs, and shall provide on-site training on use and maintenance of all equipment. _____

Length Overall - 100". _____

Overall width – 96". _____

Across Fenders – 74". _____

Overall height in transport position – 92". _____

Overall height in operating position – 134". _____

Ground Clearance, minimum – 13 ½". _____

Weight approximately 1200# (please specify). _____

Transport position maximum towing speed 70 MPH. _____

Operating position @ max. height, outriggers in place 80 mph sustained wind. _____

**Bidder Proposes
To Furnish**

Electrical interference – unaffected by RFI and EMI.

Trailer frame shall be constructed of a welded 3/16" CNC formed steel plate and structural steel tubing with a 3 x 3 x 3/16" structural steel tubing receiver for the tongue, reinforced and welded to the front crossmember.

Trailer tongue shall consist of 2 1/2 x 2 1/2 x 3/16" structural steel tubing. The tongue shall bolt into the receiver to facilitate ease of removal. Also to be equipped with a swivel type screw jack with a formed foot pad.

Trailer tongue shall be equipped with an adjustable height coupler with provisions for a 3" pintle ring.

Trailer shall be equipped with 1/4" safety chains with snap type hooks.

Paint shall consist of a polyimide epoxy primer with a minimum dry thickness of 2.5 mils or comparable please specify.

Final color to be a high gloss acrylic urethane finish and applied to a dry film thickness of 2.5 mils safety orange or yellow acceptable (specify).

Trailer shall be equipped with sealed flush mounted stop, turn, tail lights.

Trailer shall be equipped with a lighted license plate holder.

Trailer wiring harness shall be completely sealed and water resistant.

Trailer shall be equipped with unbreakable, molded, solid color fenders completely closed on the inside. Fenders shall be mounted with a zinc or stainless hardware.

Trailer shall be equipped with four telescoping jacks consisting of 2 x 2 x 12 gauge galvanized steel tubing with a 3 x 3 x 3/16" x 6" wide steel foot plate.

Jack stands shall be configured such that, when in operating position, they create a footprint of at least 93", front to rear and 56" side to side to provide adequate stability of unit in high winds.

Wheels shall be a 13" 5 lug pattern (4 1/2" bolt circle), white spoke with B78-13 load range C tires.

**Bidder Proposes
To Furnish**

Trailer superstructure shall provide complete support of the arrow panel in the transport (down) position. Cantilevered support of the arrow panel is unacceptable.

All aluminum to steel attachments shall be made with stainless steel hardware and stainless or nylon spacers to minimize corrosion.

Arrow panel lifting mechanism shall consist of a minimum 1,000 pound capacity, automatic brake type winch with 1/4 " wire rope capable of holding the arrow panel in any position from full upright to down.

Winch shall be zinc plated to minimize corrosion.

Winch shall be designed for handle removal for security while not interfering with the automatic brake operation.

Arrow panel to be an overall width of 96".

Arrow board to have an overall height of 48".

Arrow board to have an overall depth of 3".

Arrow panel frame including braces shall consist of 3 x 1 x 1/8" aluminum alloy channel, welded at corners and internal braces.

Front and rear surfaces shall consist of a .063" aluminum alloy sheet with a baked matte black enamel finish.

Arrow panel shall be equipped with a light sensing device to monitor ambient light and provide information to the control module to regulate the intensity of the arrow lamps.

Arrow panel shall be equipped with 25 lamps, approximately 5" in diameter.

Arrow panel lamps shall consist of an array of at least 21 LEDs mounted in a weather resistant high impact polycarbonate housing.

The arrow panel lamp housing shall be completely sealed to protect the Internal components from harsh environmental conditions.

**Bidder Proposes
To Furnish**

The lamps shall provide an Approximate Initial Maximum Beam Candlepower of 1000 candela typical, 750 candela minimum, over an operating range of 10.7 to 16.0 VDC. The lamp intensity shall remain constant over the entire operating voltage range.

The color of the light produced by the lamps shall be amber.

The lamps shall have a minimum life expectancy of 100,000 hours.

Arrow panel lamps shall be secured to the arrow panel by a black, molded impact resistant shroud, approximately 5” in diameter and approximately 4” high. Lamp shroud shall mount to the panel with stainless screws through keyholes such that the shroud and the lamp can be removed from the panel without the need to remove the screws from the panel.

Arrow panel lamps shall be keyed to the shroud and the shroud shall be keyed to the front panel so lamps are secured to front panel with proper lamp orientation.

The rear of the arrow panel shall be equipped with three ultra-bright LEDs, in water tight housings, to indicate the arrow panel pattern currently being displayed to provide a visual indication to individuals in the work zone that the arrow board is functioning properly.

Arrow panel to be equipped with a watertight connector to allow “quick” detach for serviceability. Cable shall be suitable for outdoor use and completely sealed against moisture. Arrow panel control cable connector shall be equipped with gold flash pins to provide maximum conductivity.

Control module shall consist of a totally solid state fully integrated device which provides control of the arrow sign panel , lamp pattern generation, battery status monitoring and indication, solar electric charge control, low battery voltage disconnect, high battery voltage disconnect, reverse battery polarity and surge protection.

Control module shall be enclosed in a weather protected, lockable, and molded High density Polyethylene enclosure secured to the trailer chassis.

Control module front panel shall be completely sealed to accommodate operation in all types of weather.

**Bidder Proposes
To Furnish**

Control module shall be equipped with multi colored LED indicators for monitoring battery charge level, solar charger activity, and lamp intensity control settings.

Control module power consumption, not including lamps, shall be less than 0.5 Watts to optimize overall energy consumption.

Control module operating firmware shall be field upgradeable.

Operating voltage – 12 Volts DC nominal.

Main power switch shall be unnecessary, when arrow pattern selection switch is in the OFF position, the control module shall automatically shut down all unnecessary operations to reduce energy consumption to less than 0.05 Watts. Solar generator charge controller shall operate automatically, as required, during daylight hours and shut down completely at night.

Batteries shall consist of (4) four 6-Volt Gel-Cel Heavy Duty Deep Cycle.

Shall have 520 Amp-Hours energy capacity to operate the arrow panel, displaying a single flashing arrow for more than 30 days, without any energy input from the solar array.

Battery/Equipment Compartments to be constructed of High Molecular Weight Polyethylene.

Solar Array power output of 80 Watts.

Entire unit shall tilt back and rest on jack stands for ease of cleaning and maintenance.

Solar array energy output shall be sufficient to operate the arrow sign, under normal operating conditions, with the solar array in a flat, horizontal position. It shall not be necessary to tilt or rotate the solar array to provide sufficient energy output from the solar array to operate the arrow panel continuously.

Solar power system shall include a solid state charge controller.

**Bidder Proposes
To Furnish**

Charge controller shall monitor battery voltage and ambient temperature. _____

Charge controller shall regulate energy flow from the solar array into the battery bank so as to avoid over charging of the batteries. _____

Shall have a standard “Bumper to Bumper” 5 year warranty. _____

Charger type- Switching regulator, constant voltage with automatic switch to maintenance or trickle charge. _____

Shall be a 110 Volt, 45 Amp battery charger that shall install in the field with minimal effort. _____

Adjustable height coupler shall accept a 2” ball coupler or a 3” pintle ring. _____

Trailer to be equipped with a Traffic Cone Carrier. _____

Bidder - Please complete and return

BID SUMMARY

TITLE: Solar Powered Trailer-Mounted Arrow Board

DUE DATE: Tuesday, April 7, 2015, at 2:00 PM

Having carefully examined the specifications and any other applicable information, the bidder proposes to furnish all items necessary for and reasonably incidental to the proper completion of this bid. Bidder submits this bid and agrees that the bid may not be withdrawn for a period of thirty (30) days from the actual date of the opening of the bid.

Bidder understands and agrees, if selected as the successful bidder, to accept a Purchase Order / Service Order / Contract from the City and to provide proof of any required insurance.

Bidder submits this bid and agrees to meet or exceed all the City of Traverse City's requirements and specifications unless otherwise indicated in writing and attached hereto.

Bid forms are to be completed, including bid sheet, and submitted. Items not meeting specifications must be noted in the "comply" column and bidder shall fully describe every variance, exception, and/or deviation. Additional sheets may be used and submitted with bid.

Bidder is also required to submit, with the bid, the latest printed manufacturer's specifications and advertising literature on the equipment (including components) to be provided. Completed unit MUST be equipped in compliance with all applicable ANSI, OSHA, State and Federal Motor Vehicle Safety standards and regulations in effect at time of manufacture.

Bidder understands that the City reserves the right to accept any or all bids in whole or in part and to waive irregularities in any bid in the best interest of the City of Traverse City. The bids will be evaluated and awarded on the basis of the best value to the city. Criteria used will include, but not be limited to, bidder/contractor's ability, qualifications, experience, type and amount of equipment, purchase price, maintenance cost(s), insurance, resale, license and permits and overall capability meeting the needs of the City of Traverse City. The City is sales tax exempt – Government.

The Bidder certifies that it is in compliance with the City's Nondiscrimination Policy as set forth in Administrative Order No. 47 and Chapter 605 of the City's Codified Ordinances.

The Bidder certifies that none of the following circumstances have occurred with respect to the Bidder, an officer of the Bidder, or an owner of a 25% or more share in the Bidder's business, within 3 years prior to the bid:

(a) conviction of a criminal offense incident to the application for or performance of a contract;

(b) conviction of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense which currently, seriously and directly reflects on the Bidder's business integrity;

(c) conviction under state or federal antitrust statutes;

(d) attempting to influence a public employee to breach ethical conduct standards; or

(e) conviction of a criminal offense or other violation of other state, local, or federal law, as determined by a court of competent jurisdiction or an administrative proceeding, which in the opinion of the City indicates that the bidder is unable to perform responsibility or which reflects a lack of integrity that could negatively impact or reflect upon the City of Traverse City, including but not limited to, any of the following offenses or violations of:

i. The Natural Resources and Environmental Protection Act.

ii. A persistent and knowing violation of the Michigan Consumer Protection Act.

iii. Willful or persistent violations of the Michigan Occupational Health and Safety Act.

iv. A violation of federal, local, or state civil rights, equal rights, or non-discrimination laws, rules, or regulations.

v. Repeated or flagrant violations of laws related to the payment of wages and fringe benefits.

(f) the loss of a license or the right to do business or practice a profession, the loss or suspension of which indicates dishonesty, a lack of integrity, or a failure or refusal to perform in accordance with the ethical standards of the business or profession in question.

Pre-delivery Inspection: Successful bidder shall make a complete inspection of vehicle (and/or equipment) to insure it meets specifications and perform any pre-delivery service(s) required before the vehicle is delivered. Acceptance shall be subject to complete inspection and approval of the City.

Terms: Net Cash. Payment will be made as soon as possible after delivery/acceptance of vehicle/equipment. Price quoted shall include any title fee and all delivery costs to the City Garage, 625 Woodmere Ave., Traverse City, MI 49686.

Bidder certifies that as of the date of this bid, Bidder's company or Bidder is not in arrears to the City of Traverse City for debt or contract and is in no way a defaulter as provided in Section 152, Chapter XVI of the Charter of the City of Traverse City.

The City may require an in house equipment demonstration for your bid to be considered.

Bidder agrees that the bid may not be withdrawn for a period of thirty (30) days from the actual date of the opening of the bid.

Please direct ALL questions to: Dave Courtad, Garage Superintendent, City of Traverse City, at 231-922-4900, ext. 111.

Price quoted shall include title fee, any documentation fee, and all transportation (delivery) charges fully prepaid to the City Garage, 625 Woodmere Ave. Traverse City, MI 49686

YEAR MAKE AND MODEL OF EQUIPMENT BID: _____

COST OF SPECIFIED EQUIPMENT: \$ _____

EXPECTED DELIVERY DATE: _____
(Length of time after receipt of purchase order)

Submitted by:

Signature

Company Name

Name and Title (Print)

Company Address

Phone Fax

City, State, Zip

Sole proprietorship/partnership/corporation

If corporation, state of corporation