

TO RECEIVE A BID PACKAGE, BIDDER MAY EITHER DOWNLOAD THE BID FROM THE AUTHORITY'S WEBSITE AT <http://www.state.nj.us/turnpike/purchasing.html> OR REQUEST A BID BY COMPLETING THIS FORM AND FAXING IT TO THE NUMBER STATED BELOW FOR RECORD KEEPING PURPOSES. WE REQUEST THAT THE BIDDER COMPLETE THIS FORM AND RETURN TO US, EVEN WHEN BIDDER IS DOWNLOADING THE BID. THIS IS THE ONLY NOTICE OF BIDDING FOR THE FOLLOWING GOODS / SERVICES YOU WILL RECEIVE.

**THE NEW JERSEY TURNPIKE AUTHORITY
PROCUREMENT AND MATERIALS MANAGEMENT DEPARTMENT**

P.O. Box 5042
581 Main Street
Woodbridge, New Jersey 07095-5042
Tel. - 732-750-5300
Fax - 732-750-5399

REQUEST FOR BIDS

TITLE: SOLAR-POWERED MESSAGE BOARDS

BID NO: R-102186

DUE DATE: August 27, 2013

TIME: 2:00 PM

SUBMIT BIDS BEFORE THE DUE DATE AND TIME TO THE ABOVE ADDRESS

BIDDER INFORMATION (PLEASE PRINT)

NAME OF BIDDING ENTITY

ADDRESS

CITY, STATE AND ZIP CODE

E-MAIL ADDRESS

REPRESENTATIVE TO CONTACT-NAME & TITLE

TELEPHONE NO.

FEDERAL TAX I.D. NO. or TAXPAYER I.D. NO.

FAX NO

WE HAVE DOWNLOADED THE BID FROM THE AUTHORITY WEBSITE

**THE NEW JERSEY TURNPIKE AUTHORITY
PROCUREMENT AND MATERIALS MANAGEMENT DEPARTMENT**

P.O. Box 5042
581 Main Street
Woodbridge, New Jersey 07095-5042
Tel. - 732-750-5300
Fax - 732-750-5399

REQUEST FOR BIDS

TITLE: SOLAR-POWERED MESSAGE BOARDS

BID NO: R-102186

DUE DATE: August 27, 2013

TIME: 2:00 PM

SUBMIT BIDS BEFORE THE DUE DATE AND TIME TO THE ABOVE ADDRESS

**BIDDER INFORMATION
(TO BE COMPLETED BY THE BIDDER)**

Please Print

NAME OF BIDDING ENTITY

ADDRESS

CITY, STATE AND ZIP CODE

E-MAIL ADDRESS

REPRESENTATIVE TO CONTACT-NAME & TITLE

TELEPHONE NO.

FEDERAL TAX I.D. NO. or TAXPAYER I.D. NO.

FAX NO.

____BUSINESS CORPORATION____PARTNERSHIP____INDIVIDUAL

____OTHER (SPECIFY):_____

BIDDER GUIDELINES/CHECKLIST

PURSUANT TO N.J.S.A. 27:23-6.1 AND N.J.A.C. 19:9-2.1 et seq. BID PROPOSALS WHICH FAIL TO CONFORM TO THE FOLLOWING REQUIREMENTS MAY BE REJECTED:

1. Bids must be received at or before the public opening time stated on the cover page at the following place: New Jersey Turnpike Authority, Administration Building, 581 Main Street, Woodbridge, New Jersey 07095. Telephone or Facsimile bids will not be accepted.
2. The bid proposal must include all price information. Bid prices shall include delivery of all items F.O.B. destination or as otherwise provided. Bids must be firm through issuance of contract.
3. All bid proposal prices must be typed or written in ink. Quote the specified unit of measure. If bidding an alternate, provide detailed specifications.
4. All corrections, white-outs, erasures, re-striking of type, or other forms of alteration or the appearance of alteration, to unit and/or total prices must be initialed in ink by the bidder.
5. **Have you included the following documents?**
 - (a) State of New Jersey Division of Revenue Business Registration Certificate(s)
 - (b) Certification of Registration with the Secretary of State (only if a foreign (non- NJ) corporation)
 - (c) Acknowledgement of Requirement for Disclosure of Political Contributions (ELEC)
 - (d) Public Works Contractor Registration Certificate(s) (if applicable)
 - (e) Affirmative Action Information Sheet with Certificate or Form AA302
 - (f) Signed Mandatory Equal Employment Opportunity Language
 - (g) SBE/WBE/MBE Certificates and Form
 - (h) Vendor Disclosure Form (EO129 - Location of Services)
 - (i) Notice of Set-Off for State Tax (P.L. 1999, c.159)
 - (j) Automobile Waiver
 - (k) Insurance Requirement
 - (l) **See the Authority's Instructions to Bidders (attached) for a complete list of the Authority's standard contract Terms and Conditions, as well as Required Forms that must be included with the bid.**
6. **Failure to comply with the requirements set forth in 1-5 above may result in bid rejection.**
7. **This Request for Bids requires the following Mandatory Documents or the bid will be rejected:**
 - Stockholder/Partnership Disclosure Statement**
 - Bid Bond and/or Letter of Surety, Cashiers Check Requirement**
8. Bidder must sign the Bid, or it may be rejected.
9. Contract Bond Requirement – Full amount of contract.
10. 3-Year Open End Option

REQUEST FOR BIDS
THIS IS NOT AN ORDER

Sealed Bid R-102186 will be received at the New Jersey Turnpike Authority Administrative Offices, 581 Main St., Woodbridge, New Jersey, as stated on the cover page at which time and place said bid will be publicly opened and read. Bidders mailing bids should allow for their normal mail delivery time to ensure timely receipt of their Public Bids. Please be advised that using overnight/next-day delivery service does not guarantee overnight/next-day deliveries to our location. The Authority will not be responsible for any bid not being received by the required date and time.

INTENTION

It is the intention of the Authority to issue a Purchase Order for the purchase of **SOLAR-POWERED MESSAGE BOARDS, AS PER ATTACHED SPECIFICATIONS.** Items purchased under this Contract will be delivered as directed by the Authority. Please contact Richard Bava with any questions regarding this procurement at 732-750-5300 X 8636.

BID SHEET INSTRUCTIONS

Prospective Bidders should follow all instructions in this Request for Bids and in the standard Instructions to Bidders issued by the Authority, and any other documents issued by the Authority in connection with this Request for Bids (collectively, "Bid Documents"). Prospective Bidders must examine the Bid Documents carefully before bidding and must ask the Director of Procurement and Materials Management in writing for any interpretation or correction of any apparent ambiguity, inconsistency or apparent error therein. Any written request for interpretation or correction shall be directed to the Director of Procurement and Materials Management. Written requests can be submitted by FAX at 732-750-5399. If necessary, an interpretation or correction shall be issued by the Director of Procurement and Materials Management as an Addendum and FAXED to prospective Bidders who have obtained the Bid Documents. Upon the issuing of an Addendum, the content of the Addendum shall become part of the Bid Documents. **Requests for interpretation or correction shall be considered only if received at least 5 business days prior to the bid opening date.**

Only written interpretations or corrections issued by the Director of Procurement and Materials Management by Addendum shall be binding.

The submission of the Bid is conclusive evidence that the Bidder is fully aware of the conditions, requirements, and details as stated in the Bid Documents. If the Bidder, prior to submitting its

Bid, fails to notify the Director of Procurement and Materials Management of the existence of an ambiguity, inconsistency in the Bid Documents, a Bid will conclusively be presumed to have been based upon the interpretation of such ambiguity or inconsistency. All erasures, interpolations or other physical changes on the Bid form shall be signed or initialed by the bidder. Bids containing any conditions, omissions, erasures, alterations, or items not called for in this Request for Bids, or irregularities of any kind, may be rejected by the Authority, in its sole discretion, as being incomplete. The bidders shall not attach conditions, limitations or provisos to their Bid, except in cases where "Exceptions" are permitted.

The Authority will accept Approved Equivalent items on this bid. If a bidder is basing the proposal on items other than what is specified, and wishes the items he proposes to be considered as an "Approved Equivalent," the Bidder shall enter a price on the bid sheet then submit on the Exception Sheet in the exact format of the line item on the Request for Bids contained herein, the item number, an item description, including manufacturers name, model number, and packaging quantities of those Items which the Bidder proposes to substitute.

Bidders must quote only one price per line item. If a bidder quotes multiple prices per line item, the bid proposal may be rejected. All items are to be bid FOB Destination. All shipping, handling, and other costs should be considered in the bid price. The Authority will purchase amounts of any given item as needed, at the sole discretion of the Authority and shall not be bound by any quantities listed. The Authority reserves the right to make reasonable increases to line item quantities.

Contract award will be made to the lowest, responsible bidder for the Total Bid Price.

BID PRICE FORM

VENDOR MUST LIST COSTS OF ALL ITEMS BELOW. FAILURE TO DO SO MAY RESULT IN REJECTION OF BID.

THE AUTHORITY RESERVES THE RIGHT TO PURCHASE ITEM # 1 AND/OR ITEM # 2.

ITEM	QUAN	UNIT OF MEAS.	DESCRIPTION	UNIT PRICE	EXTENDED BID PRICE
1	15	Each	SOLAR POWERED MESSAGE BOARDS, WITH GPS, AS PER ATTACHED SPECIFICATIONS.	\$	\$
2	5	Each	SOLAR POWERED MESSAGE BOARDS, WITH GPS, RADAR AND CAMERA, AS PER ATTACHED SPECIFICATIONS.	\$	\$

TOTAL BID PRICE - \$ _____

Contract award will be made to the lowest, responsible bidder for the Total Bid Price.

DELIVERY DATE _____, to sites as specified in the bid specifications.
Discount Terms Based On Net 30 Days Only.

NEW JERSEY TURNPIKE AUTHORITY

AUTHORIZED SIGNATURE

Name of Company and / Authorized Signature of Bidder

SIGNATURE PAGE

ADDENDA / INQUIRIES: COMPLETE (if applicable) BEFORE SUBMITTING BID:

Receipt of Addendum / Inquiries # _____ dated _____ is hereby acknowledged.

Receipt of Addendum / Inquiries # _____ dated _____ is hereby acknowledged.

CHECK BOX IF NO ADDENDA/INQUIRY ISSUED

(All Addenda / Inquiries must be acknowledged as indicated above.)

BID IRREVOCABLE: This offer shall be irrevocable for ninety (90) working days after the date on which the Authority publicly opens this bid except in those instances where an unsuccessful bidder has filed a Protest pursuant to N.J.A.C. 19:9-2.12. Upon notification of a Protest, Bidders are required to hold their prices for an additional 90 days. All bidders will be notified in writing of the action taken by the Authority.

OFFER/CERTIFICATION: The undersigned offers and agrees to furnish to the New Jersey Turnpike Authority the services and/or materials in compliance with all terms, conditions, specifications and addenda of the RFB, Bid Documents, and resulting contract. The undersigned further certifies understanding and compliance with the requirements of the standard terms and conditions as stated in the Instructions to Bidders included with the Bid Documents. The undersigned certifies that he or she executes this bid with full authority so to do; and that all statements contained in this bid and in this certification are true and correct, and made with full knowledge that the Authority relies upon the truth of the statements contained herein and in any statements requested by the Authority showing evidence of qualifications in awarding the contract. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

AUTHORIZED SIGNATURE: _____

Print Name and Title: _____

Bidding Entity: _____

Address: _____

City, State, Zip: _____

Telephone #: _____ Fax: _____

NEW JERSEY TURNPIKE AUTHORITY

NO RESPONSE BID SURVEY

BID REQUISITION NUMBER: R-102186

BID TITLE: SOLAR-POWERED MESSAGE BOARDS

If you do not choose to respond to this Bid, please complete the form below:

Name of Company _____

Reason you did not respond (Check all that apply)

- Cannot supply product or service
- Cannot meet technical specifications
- Cannot meet delivery specifications
- Cannot meet legal requirements
(i.e. bid/performance/security/insurance, etc.)
- Cannot provide a competitive price at this time
- Interested in receiving specifications for informational purposes only.
- Insufficient lead time to respond
- Other :(please be specific)

Do you wish to remain on our mailing list?

Yes No

Additional comments: _____

Signed : (optional) _____

Company: _____

ADDITIONAL YEARS PURCHASING OPTION, for R-102186

BID TITLE: SOLAR-POWERED MESSAGE BOARDS

3- Year Open End Option: The Authority shall have the option for one (1) Model Year* from the date of Contract, to order additional units conforming to the requirements of these specifications at the same price and under the same terms and conditions as those required herein.

The Authority shall further have the option to purchase additional units conforming to these specifications for two (2) additional Model Years. Any unit(s) offered during the two (2) subsequent Model Years shall be of the model equivalent to that specified herein. In the latter instances, if there have been any price changes in the two subsequent Model Years, the vendor shall submit a request to the Authority covering the aforesaid price changes, and shall include appropriate explanation and justification for any such price changes.

Any such request for price adjustment shall be in writing and directed to the Director, Procurement and Materials Management and Materials Management Department and shall be accompanied by the following evidence as a basis for your request;

1. The published price lists for equipment, which were in effect at the time of your original proposal.
2. The equivalent published price lists in effect at the time of your request.
3. Any additional evidence which the Authority deems necessary in the evaluation of your request.

The Authority shall, within its sole discretion, have the right to accept the price changes proposed by the vendor or if it is so desires re-bid the requirement.

*Model Year is defined as the Model Year of the Manufacturer of the unit(s) offered by you in this Request For Quotation. In that instance where proposals are for equipment for which "Model Year" and "Production Cut-Off Dates" are undefined or non-existent, the "Model Year" is defined, for bid purposes, as one calendar year from the date on which the Contract is accepted. The last date on which orders may be placed for the Model currently in effect is _____.

NEW JERSEY TURNPIKE AUTHORITY

GENERAL INSTRUCTIONS AND SPECIFICATIONS FOR: SOLAR-POWERED MESSAGE BOARD

Quantity	Description	Maximum Delivery Date
20	Solar-Powered Message Board	90 Days After Receipt of Order

SPECIFICATIONS: SPMB: SOLAR-POWERED MESSAGE BOARD

COMPLIANCE WITH RULES AND REGULATIONS: The unit and associated equipment furnished must comply with all Federal and State Motor Vehicle Safety Laws and Regulations and shall be capable of passing the New Jersey State Motor Vehicle Inspection Laws, where applicable.

ENERGY STAR REQUIREMENTS: If applicable for items specified in bid package, the vendor must provide products that earn ENERGY STAR and meet the ENERGY STAR specifications for energy efficiency. The vendor is encouraged to visit energystar.gov for complete product specifications and updated lists of qualifying products. The ENERGY STAR label must also be affixed to each delivered item. The bidder's signature on the signature page certifies that items so indicated that have earned ENERGY STAR and meet the ENERGY STAR specifications or other standards for energy efficiency will be supplied.

ERRORS AND OMISSIONS: Inadvertent omissions or errors in the attached specifications must be brought to the attention of the New Jersey Turnpike Authority's Director of Procurement and Materials Management at 732-750-5300 before bid submission date. If, with knowledge of such error or omission and prior to the correction thereof, the bidder proceeds with any work affected hereby, they shall do so at their own risk and the work so done shall not be considered as work done under and in performance of this Agreement unless and until approved and accepted.

PILOT MODEL: Questions, which arise before or during the preparation of the pilot models (2-styles), shall be addressed in writing via e-mail from the vendor to Peter Perperas (Project Supervisor), perperas@turnpike.state.nj.us at the New Jersey Turnpike Authority on a not to delay basis. The awarded bidder shall make available one **fully completed** pilot model for inspection and approval by the Authority. The unit shall be transported (responsibility of the awarded vendor) to the NJTA Garden State Parkway Division's Telegraph Hill Maintenance Facility located at Garden State Parkway Exit 116 in Holmdel, NJ 07733.

DELIVERY INSTRUCTIONS:

- A. Vendor must contact Peter Perperas (Project Supervisor) at 732-442-8600 ext. 2868 for authorization to schedule date and time prior to delivery. **Deliveries shall be made to the NJTA Garden State Parkway Division Telegraph Hill Central Maintenance Facility located at GSP Exit 116 in Holmdel, NJ 07733.**
- B. Vendor shall be responsible for all delivery, shipping and pick-up expenses.
- C. All units must be pre-delivery serviced, completely assembled, operational, and cleaned prior to delivery.
- D. The following administrative package **must** accompany all deliveries:
 - Certificate of Origin: stamped “Sales Tax Satisfied” and shall be made out to New Jersey Turnpike Authority, 581 Main St. Woodbridge, NJ 07095. Certificate of Origin shall have current date and be hand delivered to Peter Perperas after final acceptance of complete order.
 - Invoice: purchase order number must be displayed on vendors invoice. Invoice shall have current date and be hand delivered to Peter Perperas after final acceptance of complete order.
 - Warranty forms properly executed.
 - Four (4) keys, keyed alike for the control boxes, battery compartments, and any other enclosed compartments shall be furnished for each board. **NO EXCEPTIONS**
 - Delivery of all units fully completed and fully compliant shall be made no later ninety (90) days after receipt of Purchase Order.
 - In the event the vendor fails to deliver the units on the agreed upon time frame set by the vendor and Authority, the vendor shall pay the Authority liquidated damages in the amount of \$199.60 per unit for each calendar day (**No Exceptions for Liquidated Damages**) beyond the maximum delivery date, as per Dataquest’s Rental Rate Blue Book for Construction Equipment.

WARRANTY: All units delivered must be guaranteed to be free from defects in materials, design and workmanship for a minimum of one (1) year from the time of acceptance by the New Jersey Turnpike Authority. All warranties shall start upon written acceptance of units by the New Jersey Turnpike Authority. Warranty must include service availability from any manufacturers authorized dealer establishment most closely located to Parkway and Turnpike area. This repair facility may not be further than 100 miles from Telegraph Hill Central Maintenance Facility in

Holmdel, NJ 07733 or Central Shops Maintenance Facility located in Hightstown, NJ 08520. If warranty service is required, the vendor who supplied the unit shall provide for pickup, delivery and repair of unit at no charge to the New Jersey Turnpike Authority. The vendor shall also have a program to include an in-house warranty. All warranty periods shall start from date of acceptance of unit by the New Jersey Turnpike Authority.

EXCEPTION SHEET: Bidders taking exceptions must note exceptions by item and indicate substitution in lieu and submit with bid, detailed specifications on the substitution. If the vendor is submitting an alternate product, component, feature or part to what is referenced in the specifications, the proposals **must** be accompanied by descriptive literature, marked and indicate the exact items to be furnished, with an engineering drawing of the same. **Failure to supply information requested may result in rejection of bid.** Where no exception is taken, the word “None” shall be neatly printed or typed on the exception sheet. **Failure to supply information and/or failure to complete the bidder’s exception spaces in the prescribed manner may disqualify bid. It shall be understood that if no exception is taken, the vendor shall supply all material exactly as specified. No substitution will be permitted after receipt of bids.**

UNIT INFORMATION FORM: Vendor shall complete the entire Unit Information Form. **Failure to complete form may result in rejection of bid.**

TRAINING: It shall be the responsibility of the successful bidder to supply all safety, operational and service training to New Jersey Turnpike Authority personnel in accordance with all applicable ANSI and OSHA regulations. The safety and operational training shall consist of a complete review and understanding of the manufacturer’s owner manual, along with actual operation of equipment. The instructor shall emphasize all proper uses for safe operation. The training shall be scheduled and take place at one (1) site consisting of at least eight (8) hours designated by the New Jersey Turnpike Authority.

LABELS: Plastic stick-on labels shall not be acceptable.

ADVERTISEMENTS: No Dealer advertisements shall appear on unit.

ACCESSORIES: All accessories shall be manufacturer installed when the item is available from the manufacturer.

FACILITIES: Bidders shall represent a manufacturer, which has in operation a factory adequate for the manufacture of the equipment, which it proposes to furnish. The manufacture(s) whose associated equipment or products are bid shall have a full service warranty and parts supply facility that can guarantee availability of parts within 24 hours after telephone order and shall be located within a 100 mile radius of either Central Shops Maintenance Facility (exit 8 on the NJ Turnpike) located in Hightstown, NJ 08520 or Telegraph Hill Central Maintenance Facility (exit 116 on the GSP) located in Holmdel, NJ 07733. This facility will be required to establish an in-house warranty program and provide all warranty work related to the equipment in the bid

proposal. The bidder shall submit the locations, names and telephone numbers of people who are authorized to service the equipment or who can be reached for emergency service.

Location _____

Phone # _____

Contact _____

Name & Title

**SPECIFICATIONS: SPMB-2013
SOLAR-POWERED MESSAGE BOARD**

INTENT: The intent of this specification is to describe and govern the purchase of a 2013 or new current model trailer-mounted full matrix solar-powered message board. Specifications shall describe full matrix solar-powered message board with GPS along with describing a full matrix solar-powered message board with GPS, side-fired radar and camera system.

BIDDER’S INSTRUCTIONS

IT SHALL BE THE BIDDER’S RESPONSIBILITY TO CAREFULLY EXAMINE EACH ITEM OF THE SPECIFICATION. BIDDERS MUST INDICATE WHETHER THEY COMPLY OR NON-COMPLY FOR EACH LINE ITEM IN THE SPECIFICATION. FAILURE TO PROVIDE A COMPLETED BID MAY CAUSE REJECTION OF BID. ALL NON-COMPLY RESPONSES AND/OR BIDDERS PROPOSED “APPROVED EQUIVALENTS” MUST BE FULLY EXPLAINED ON EXCEPTION FORM, NOTING SECTION AND ITEM. FAILURE TO EXPLAIN NON-COMPLY RESPONSES OR FAILURE TO SUPPLY DETAILED LITERATURE/BROCHURES ON THE BIDDERS PROPOSED “APPROVED EQUIVALENTS” MAY CAUSE REJECTION OF BID. WHERE “MINIMUM/MAXIMUM” IS SPECIFIED, BIDDERS MUST PROPOSE AT LEAST THE MINIMUM/MAXIMUM SIZES OR THE BID MAY BE REJECTED.

GENERAL:	COMPLY	
	YES	NO
A. Fifteen (15) 2013 or newer current model trailer-mounted full matrix solar-powered message board with GPS.		
B. Five (5) 2013 or newer current model trailer-mounted full matrix solar-powered message board with GPS, side-fired radar and camera system.		
C. The units shall be new and of the latest design and be in current production at time of submission of bid.		
D. Bidders must provide with their bid submission detailed specifications, diagrams with dimensions describing exact units that shall be provided. NO EXCEPTIONS		
E. All standard and optional equipment shall be Original Equipment Manufacturer (OEM).		
MESSAGE SIGN:		
A. Display panel dimensions: 133" long x 82" high. <ul style="list-style-type: none"> • Operating height: 200". • Overall length: 175". • Overall width: 85". 		

B. Display:		
<ul style="list-style-type: none"> • Full matrix. NO EXCEPTIONS • 30 x 48 pixels. • Up to 3 lines of 8 characters per line. • 18" character default font. • Rotation of sign: 360°. 		
SIGN CONSTRUCTION:		
A. Material: aluminum sheet 5052-H32, .060" thick minimum.		
B. Panels shall be riveted together and incorporate internal ribs to add lateral strength.		
C. Interior and exterior paint color shall be flat black powder coated and oven baked for added durability and corrosion.		
D. Door: single piece construction hinged for ease of servicing sign.		
E. Door material: aluminum extruded frame with sheet metal corner brackets.		
F. Window: Anti-glare Lexan solar grade polycarbonate .150" thick. Weather type seal shall be used to seal between window and extrusion.		
G. Lockable and vandal resistant.		
HARDWARE:		
A. Stainless steel hinges.		
B. Telescoping prop slides shall be supplied in order to hold door open for servicing.		
C. Two (2) cooling fans shall be located at the top of the cabinet to provide circulation through and out of cabinet. <ul style="list-style-type: none"> • Temperature sensor shall be mounted on or near the photocell pc board. • Each fan shall have different thermal settings adjustable by the on-board computer as not to waste battery power. 		
WIRING:		
A. All harnesses shall be modularized for ease of servicing.		
B. All wiring connectors and procedures shall be per CSA or UL standards and the National Electrical Code.		
C. Wire service loop from computer box to sign shall be routed inside weather tight loom and clamped to trailer frame.		
D. Wire service loop shall be designed for 360° sign rotation.		
E. Display module connectors: all modules shall have quick-connect connectors for ease of servicing.		
DISPLAY MODULES:		
A. Module nominal size: 20" wide x 22½" high.		
B. Pixel type: four (4) amber LED's shall form a pixel.		
C. Number of pixels per character: 8 wide x 9 high, totaling = 72, with default font.		
D. Size of LED pixel: 2.5" x 2.5" pixel pitch with a 30° viewing angle.		

E. Each LED module shall mount to cabinet via rubber vibration mounts.		
F. LED shall be 590 nm (\pm 2 nm) amber color.		
G. Optical lenses and sunshades: <ul style="list-style-type: none"> • Shall enhance the brightness and angularity of the LED's. • Each pixel row shall have polycarbonate sunshades over the character face to prevent sun wash out. • Each pixel shall have an optical lens over pixel to direct light to 30° visibility cone and reduce power requirements. 		
H. Photocell dimming: two (2) photocells shall be mounted in sign (one facing rear and one facing front). <ul style="list-style-type: none"> • Photocells shall work in conjunction with the controller to adjust the brightness of the LED's. 		
CONTROL BOX:		
A. Self-contained on-board computer with a sealed membrane keyboard that can be removable or touch screen.		
B. Control box shall be located on either the right front or right side of trailer and not lower than 36" above the ground in order for the operator to stand and view on-coming traffic.		
C. Control box shall be dust and weatherproof. <ul style="list-style-type: none"> • A keyed lockable door (4 keys, keyed alike per unit shall be supplied). • A manual holder (computer operation) shall be located in the control box (manual pages shall be laminated). • All wiring in control box shall have quick-connect plugs. 		
D. Control box shall house the sign controller, solar regulator, and modem.		
E. External all-weather hydraulic lift switch (located outside of control box).		
F. Face of control panel shall have easy to read labels and instructions (stickers or decals shall not be acceptable).		
G. Panel light shall be supplied to illuminate the control panel for nighttime reading. Light shall be designed to shut off automatically with no keyboard activity.		
H. LCD display: <ul style="list-style-type: none"> • Large pixel size. • LED backlighting. 		
CONTROLLER SOFTWARE:		
A. Full National Transportation Communications for ITS Protocol (NTCIP) 1203 v2 compliant software that shall be remotely upgradeable.		
B. Password protection. Multiple levels for users and technicians.		
C. Messaging: <ul style="list-style-type: none"> • One-touch quick message selection from 12 pre-programmed function keys. • Minimum of 50 permanent messages including arrows and Federal 		

<p>Highway Administration (FHWA) standards.</p> <ul style="list-style-type: none"> • Create and store over 100 created messages. • Text alignment: selectable from left, center, or right. • User selectable fonts including 8 x 9 pixel and 5 x 7 pixel. • Each character shall be able to blink individually. • Display shall be able to be viewed while programing. 		
D. Real time clock/calendar with National Time Protocol (NTP) client support.		
E. Troubleshooting: status and diagnostic menu.		
<p>F. Arrow board functions:</p> <ul style="list-style-type: none"> • Number of modes: 12. • Single flashing left or right arrow. • Sequencing left or right arrow. • Sequencing stem left or right arrow. • Chevron left or right arrows. • Four corner caution warning. • Caution bar warning. • Alternating diamonds. 		
TRAILER CONSTRUCTION:		
<p>A. Dimensions:</p> <ul style="list-style-type: none"> • Length including hitch: 175". • Trailer width: 85". • Travel height: 9½'. • Weight: 2,500 lbs. minimum. 		
B. Trailer shall be constructed of rectangular steel tubing and manufactured to be structurally sound in design to support all components.		
C. Draw bar shall be a heavy-duty A-frame type design.		
D. An appropriate rated 3" i.d. lunette eye for towing unit shall be supplied and be vertically adjustable in 2" increments totaling 12".		
E. Two (2) safety chains ¾" diameter x 36" long with grab hooks on each end of each chain shall be bolted to the trailer frame.		
F. Sign shall be designed to store easily and securely for transport.		
G. Fenders: stand-on type fenders coated with black non-skid material shall be attached to the trailer frame.		
H. Paint: complete unit shall be powder coated safety orange color and baked for durability and corrosion.		
I. Axle assembly: 3,500 lbs. capacity.		
J. Springs: double leaf springs.		
K. Tires: ST205/75 D15 black wall tires appropriately rated for trailer load.		
L. Electric brakes shall be wired within the trailer plug harness as outlined in section: 7PTC.		

M. Stabilizers: <ul style="list-style-type: none"> • Four (4) hand crank weld-on round tube swivel jack with 2,000 lbs. capacity each located at each corner of trailer. • Hand crank square tube drop leg jack shall be located on the trailer tongue. 		
N. Wind stability: trailer with message sign in operating position shall be able to resist sliding or overturning in 70 mph winds in any direction.		
O. Trailer lights: <ul style="list-style-type: none"> • LED type. • Sealed, combination stop, turn, and taillight. • All wiring shall be enclosed in a UV protective sleeve. • Meet all State and Federal Motor Vehicle Regulations. • Include license plate bracket and light. • Wired into a weatherproof and corrosion resistant 7-pole junction box mounted to the trailer "A" frame. 		
P. Trailer plug: 36" long 7-prong round pin trailer plug shall be wired into a weatherproof and corrosion resistant 7-pole junction box mounted to the trailer "A" frame.		
Q. Mounted on inside rail of A-frame shall be a Grote 43901 or approved equivalent weatherproof documentation holder.		
TOWER ASSEMBLY:		
A. Sign shall be raised by a hydraulic power unit and lowered by gravity return. An external all-weather hydraulic lift switch shall be located outside of control box.		
B. Height: sign fully telescoped shall be 7' from ground to bottom of sign.		
C. Rotation: 360° and shall lock in place with a disc brake/caliper and adjustable lever.		
D. Single stage hydraulic cylinder.		
E. Hydraulic power unit: <ul style="list-style-type: none"> • Electric motor driven. • 12-volt DC operation. • Hydraulic fluid (approximately 1-gallon capacity). • Metal lockable (Authority shall supply padlocks) compartment shall house power unit from vandalism and weather. 		
F. Tower material: <ul style="list-style-type: none"> • Two (2) sections of steel tubing. • Inner section shall telescope inside outer tubing. • Inner section shall be zinc coated to prevent corrosion. 		
G. Swivel base: <ul style="list-style-type: none"> • Steel tubular weldment shall be bolted to the trailer frame. • Outer tower section shall rotate inside the swivel base. 		
H. Tower brake: mechanical friction caliper, caliper clamping by adjustable		

brake handle.		
I. Sight tube: a sight tube for aiming the message sign to the desired location shall be located on the tower mast.		
J. The trailer-mounted display shall be structurally adequate to withstand sustained freeway travel speeds of 65 miles per hour with the sign panels in the travel position.		
K. When in operation with all stabilizing devices in place, the sign shall be capable of withstanding wind gusts up to 72 miles per hour without overturning or changing orientation and shall be capable of withstanding wind gusts up to 100 miles per hour without damage.		
POWER/CHARGING SYSTEM:		
A. Message board shall operate from a 12VDC power system.		
B. Battery box: <ul style="list-style-type: none"> • Box shall be designed with steel or polycarbonate construction. • Location shall be centered over axle. • Pad-lock type of latch to secure lid (Authority shall provide padlocks). • Sides of battery box shall be louvered allowing cross ventilation. • Batteries shall be able to be charged with 110 volt AC charger with lid closed and locked. • Battery box shall be designed to hold the required batteries needed and charger. 		
C. Batteries: <ul style="list-style-type: none"> • Maintenance free batteries as required to power board. • High-freeze resistance. 		
D. Charger: <ul style="list-style-type: none"> • Location shall be inside battery box with divider opposite batteries. • Output volts (DC): 13.4 Vdc @ full load. • Standard float voltage: 13.6V. • Output capacity: 45A minimum. • Max AC amp draw: 12A. • Input voltage: 96-140 Vac, three prong plug. • Cooling fan shall activate when charger reaches 95° F. 		
SOLAR PANELS:		
A. High efficiency multi-crystal photovoltaic module.		
B. Regulation: solar panels regulated by controller power board.		
C. Solar panel array shall be attached to message sign frame and be able to independently tilt and rotate to receive maximum exposure to the sun.		
LIFT MECHANISM/MESSAGE BOARD):		
A. The mast assembly shall include an electric hydraulic lift to raise and lower the sign board and hold it securely in place.		
B. Bottom of sign shall be 7 feet above the ground.		

C. In the event of loss power or failed hydraulics, the sign shall be able to be lowered manually.		
D. The up/down toggle switch shall be located in the control box.		
CELLULAR ROUTER:		
A. All Full Matrix Solar-Powered Message Board shall be equipped with a cellular router with built-in GPS. NO EXCEPTIONS		
B. Modem: <ul style="list-style-type: none"> • Commercial grade 4G cellular router shall provide secure high-speed wireless connectivity to remote sites and devices. • LTE service with fallback to EV-DO Rev. A. certified Verizon Wireless network. • NJTA shall establish and maintain cellular service. • External high-gain multi-band diversity and GPS antennas for remote communication and real-time GPS reporting. • Support for TCP/IP, UDP/IP, DNS, NAT, Host Port Forwarding, DHCP, VLAN, DMZ, Port filtering, MAC address filtering, SSL, SSH, SNMP, SMTP, Host Ping. • GPS support for NEMA 0138 V3.0, TAIP and RAP protocols and less than 5 meter positional accuracy. • Support for Over-the Air network initialization and firmware upgrades. • Password protected remote management through web browser. • -30°C to +70°C. 90% RH operating range. 		
SIDE-FIRED RADAR TRAFFIC DETECTION SENSOR:		
A. Five (5) of the message boards ordered in this bid package shall be equipped with a side-fired radar traffic detection sensor in order to detect, measure, and report traffic volume, percent occupancy, average speed, individual speed, and individual vehicle length.		
B. The sensor shall be able to simultaneously detect and report information from up to ten lanes of traffic with a minimum detection range of 10 to 250 feet from the sensor.		
C. Volume data shall be within 5% of actual for any direction of travel when average speeds are greater than 10 miles per hour in every lane.		
D. Average speed data shall be accurate within 3 mph for each lane, and 90% of individual vehicle speed estimates shall be within 4 mph for any direction of traffic and for all conditions.		
E. The sensor shall be able to meet all performance specifications from all lanes within the specified detection range including unequally sized or spaced lanes or lanes separated by medians, guard rail, or concrete barrier.		
F. The sensor shall be supplied with software to allow verification and manual adjustment of the sensor configuration. The software shall provide a visual representation of the lane configuration and real-time traffic patterns		

including the display of the measured volume, individual vehicle speed, and vehicle length to allow for lane width and spacing adjustments and verification of sensor performance.		
G. The sensor shall be capable of continuous operation over an ambient temperature range of -40°C to 75°C and a relative humidity range of 5% to 95% (non-condensing).		
H. The sensor shall be mounted on a retractable and structurally stable mast with a minimum operating height of 18' above ground.		
I. It is intended that the sensor shall communicate with and the data be integrated with the Authority's existing third-party traffic management application. The vendor shall provide at no additional cost, protocol information, MIB tables, a Software Development Kit or Application Programming Interface and technical support as necessary to enable the Authority's third-party developer to fully integrate the sensor data.		
REMOTE VIDEO TRAFFIC MONITORING PACKAGE:		
A. Five (5) of the message boards ordered in this bid package shall be equipped with a color PTZ dome camera to monitor traffic. The camera shall be able to be controlled remotely and can be panned, tilted and zoomed.		
B. Remote video traffic monitoring package shall come with telescoping (electric/hydraulic) mast assembly enabling camera to be positioned at least 6' higher than the top of the message sign.		
C. Tower assembly shall mount to the back of the message sign support frame.		
D. Extended camera height from ground shall be a minimum of 20'.		
E. An electric winch shall raise and lower camera tower.		
F. Electric winch shall have a friction brake allowing designated heights.		
G. Momentary winch switch shall be located inside the lockable control box.		
H. Camera: <ul style="list-style-type: none"> • Dome day/night Pan Tilt Zoom (PTZ) digital camera. • 360° pan movement. • Vertical tilt: unobstructed 0° to -90°. • Low light sensitivity. • Zoom: optical 35X, 12X digital. • M-JPEG and H.264 video streams. • Resolution: CIF and 4CIF/D1. • Support for UDP, IP V4/6, HTTP, IGMP V2/V3, Telnet, RTP, FTP, DHCP, SNMP V3, SSH, SSL, ARP. • Support for NTCIP 1205, 1101, 2301, 2202, 2101, 2102. • Firmware up-loadable. • Operating temperature: 0°F to 140°F. 		
I. Video server: <ul style="list-style-type: none"> • Shall be integrated into existing NJTA Genetec video server. 		

<ul style="list-style-type: none"> • Vendor must ensure and demonstrate full compatibility and operability with the Genetec system. • Vendor shall be responsible for providing a perpetual software license for each camera added to the Genetec system. 		
<p>J. Cellular router:</p> <ul style="list-style-type: none"> • One (1) cellular router shall control the camera system, radar unit, and message board sign. • Antennas shall be mounted on top of message sign. 		
<p>K. Low voltage disconnect module (LVDM):</p> <ul style="list-style-type: none"> • Electronic module shall provide power management control to the camera system. • Camera system shall be able to operate independently from the main system. • Toggle switch shall turn camera LVDM on and off. 		
INCREASED POWER SUPPLY:		
<p>A. Battery bank shall be sized to allow sign, camera, radar unit, and communications equipment to operate for thirty (30) days without solar assist.</p>		
<p>B. Solar panels: larger or an additional solar panel shall be supplied if needed to adequately and efficiently supply the correct power source for all functions and additional options (Message Board, GPS, Radar, and Camera system).</p>		
MANUALS:		
<p>A. One (1) of each of the following paper manuals shall be supplied with each message board ordered. A PDF copy of each manual shall also be supplied:</p> <ul style="list-style-type: none"> • Operators manual (message board-laminated) • Programing manual (message board) • Parts manual (message board) • Maintenance manual (message board) • Operators manual (cellular modem) • Operators manual (radar system) • Operators manual (camera system) • Maintenance manual (trailer) • Parts manual (trailer) 		
SPARE PARTS LIST:		
<p>A. Upon delivery the awarded vendor must supply a complete spare parts list with costs for both types of VMS boards. NO EXCEPTIONS</p>		

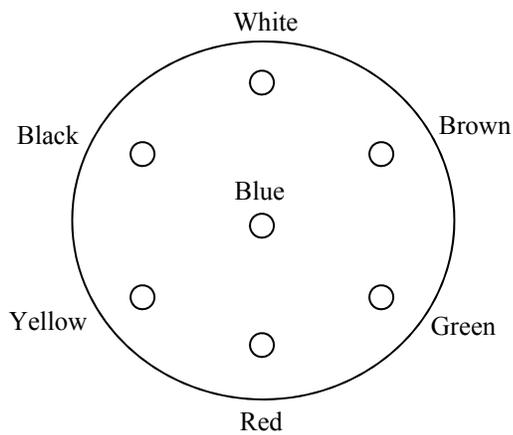
**SPECIFICATIONS: 7PTC
7-POLE ROUND PIN TRAILER CONNECTORS ON TRUCKS AND TRAILERS**

CONNECTOR MARKING COLOR

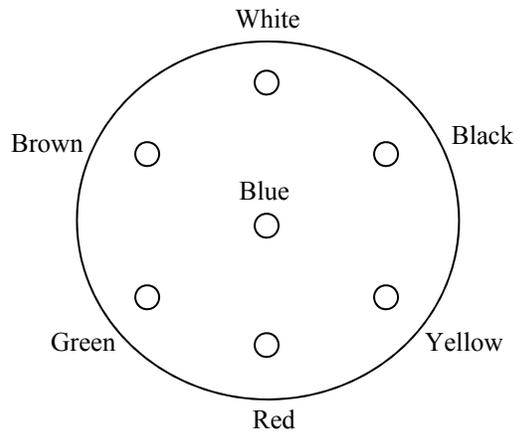
APPLICATION

WHITE.....	GROUND
BLACK.....	TAIL LIGHT
BROWN.....	TAIL LIGHT
YELLOW.....	LEFT TURN SIGNAL
GREEN.....	RIGHT TURN SIGNAL
RED.....	ELECTRIC BRAKE
BLUE.....	12-VOLT BATTERY- WITH 30-AMP AUTOMATIC BIMETAL THERMAL RESET CIRCUIT PROTECTION.

SOCKET MARKINGS



PLUG MARKINGS



FAILURE TO COMPLETE ALL AREAS MAY RESULT IN REJECTION OF BID

UNIT INFORMATION FORM

(Must be submitted by vendor with bid documents)

FULL MATRIX MESSAGE BOARD WITH (GPS) GLOBAL POSITIONING SYSTEM:

YEAR: _____ MAKE: _____ MODEL: _____

SERVICING
AGENCY: _____

LOCATED AT: _____

TELEPHONE #: _____

CONTACT: _____
Name & Title

**FULL MATRIX MESSAGE BOARD WITH (GPS) GLOBAL POSITIONING SYSTEM,
SIDE-FIRED RADAR AND CAMERA SYSTEM:**

YEAR: _____ MAKE: _____ MODEL: _____

SERVICING
AGENCY: _____

LOCATED AT: _____

TELEPHONE #: _____

CONTACT: _____
Name & Title

