



Frank Sadeghi, Director
Jennifer Bacchione, Deputy Director
Robert S. Arace, Commissioner
Sam Ellenbogen, Commissioner
Ray Gormley, Commissioner

Jennifer L. Bowens, Qualified Purchasing Agent

County of Ocean
Administration Building
101 Hooper Avenue
Toms River, NJ 08754

BID

SOLAR POWERED LED AND SPEED RADAR SIGNS

2026

ADVERTISEMENT DATE: March 11, 2026
OPENING: March 31, 2026, 11:00 am

Bid Category: 04- Automotive Products, Vehicles and Services
13- Highway Road Equipment, Materials, and Related Equipment

Notice to Bidders

NOTICE IS HEREBY GIVEN that sealed bids for the furnishing and delivery of **SOLAR POWERED LED AND SPEED RADAR SIGNS** for the County of Ocean, will be received by the Purchasing Agent of the County of Ocean on **Tuesday, March 31, 2026 at 11:00 am**, prevailing time.

Bids will be received electronically via the County's Online Procurement Portal. Specifications are available on the Procurement Portal or for viewing only, in the Department of Purchase, Room #224, Administration Building, 101 Hooper Avenue, Toms River, New Jersey. Direct all inquiries to Jennifer L. Bowens, Purchasing Agent.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and P.L. 1975 C. 127 (N.J.A.C. 17:27-1 et seq.) regarding equal employment opportunities and with the requirements of P.L. 1977 C.33 regarding corporate and/or partnership ownership.

The right to reject any and all bids is reserved in accordance with applicable law.

By order of the Board of Commissioners of the County of Ocean.

Signed:

FRANK SADEGHI, Director

JENNIFER L. BOWENS, Qualified Purchasing Agent

Contact Information and Project Timeline

Summary

The purpose of this bid package is to provide the County of Ocean with a Contractor who will supply the materials or services described and specified herein.

Contact Information

For further information regarding these specifications, contact

Jessica Hannold

Assistant Purchasing Agent

Email: ocpurchasing@co.ocean.nj.us

Phone: [\(732\) 929-2103](tel:(732)929-2103)

Department:

Engineering

Timeline

Advertising Date	March 11, 2026
Bid Opening Date	March 31, 2026, 11:00am Administration Building, 101 Hooper Ave., Room 119, Toms River, NJ, 08753

Important Instructions for Electronic Submittal

Instructions for Electronic Bid Submission

The County is accepting electronic bid submissions with Open Gov by following these instructions:

Sign up for a FREE account at <https://procurement.opengov.com/portal/oceancounty>

Once you have completed account registration, browse back to this page: [County's OpenGov Electronic Bid Portal](https://procurement.opengov.com/portal/oceancounty/) (<https://procurement.opengov.com/portal/oceancounty/>)

Click on the bid of interest, then click "Draft Response".

Follow the instructions to submit the electronic bid.

It is important to note that this process should be completed well in advance of the bid deadline / bid opening. DO NOT WAIT UNTIL THE LAST MINUTE. The County's electronic submission system will not allow electronic bids to be submitted once the deadline has passed, even if you've already started the process. The deadline is based on the countdown timer found on the OpenGov bid submission page.

Instructions to Bidders

Bid Opening

All bids will be opened publicly in the Administration Building, Room 119, 101 Hooper Avenue, Toms River, New Jersey, commencing at 11:00 am, prevailing time on Tuesday, March 31, 2026.

Electronic Bid Submissions

Bids must be submitted electronically through Ocean County's Procurement Portal by the date and time stipulated in the Notice to Bidders.

Bidder Review and Questions

Bidders are responsible for thoroughly reviewing all bid documents, including specifications, pricing proposals, and attachments, prior to submitting questions or a bid response. Questions submitted that are clearly addressed within the bid documents will be answered by directing the bidder to the applicable section of the bid, rather than restating the information.

Deadline Instructions

The County will not be responsible for late bids, and no bids will be accepted if received after the time stipulated in the notice to bidders.

Completion of all Documents

Bidders shall complete all documents and acknowledge all terms included with the bid package. All documents should be from this bid package and must not be dated or executed prior to the date of advertising. Failure to follow these instructions is cause for rejection.

NOTE: In order to access any DocuSign forms in this solicitation, you must first click "Draft Response". Instructions on how to access the forms through DocuSign are available in the Attachments. Please note that in order to view the forms as a .pdf document, you must access DocuSign first. Once you access DocuSign, the option to download, save, print and complete the forms becomes available

Right to Reject

The County reserves the right to reject all bids in accordance with N.J.S.A. 40A:11-13.2, to waive any informalities in the bid and to accept the lowest responsible bid in accordance with applicable law.

Bidder Default

In case of default by the bidder or contractor, the County of Ocean may procure the articles or services from other sources and hold the bidder or contractor responsible for any excess cost occasioned thereby.

Indemnity

The bidder, if awarded a contract, agrees to protect, defend and save harmless the County against any damage for payment for the use of any patented material process, article or device that may enter into the manufacture, construction or form a part of the work covered by either order or contract, and he further agrees to indemnify

and save harmless the County from suits or actions of every nature and description brought against it, for, or on account of injuries or damages received or sustained by any party or parties by, or from any of the negligent acts of the contractor, his servants or agents.

Specifications

It is to be understood by the bidder that this bid is submitted on the basis of specifications prepared by the County and the fact that any bidder is not familiar with these specifications or conditions will not be accepted as an excuse.

Bid Security

NO BID SECURITY

Performance Bond

NO PERFORMANCE BOND

Pricing Proposal

Bidders must use the pricing proposal provided in the bid specifications. Failure to use the pricing proposal in the bid specifications shall be cause for rejection of the bid.

Pricing

Insert prices for furnishing all of the material and/or labor described or required. Prices shall be net, including any charges for packing, crating, containers, etc. and all transportation charges fully prepaid by the contractor F.O.B. destination and placement at locations specified by the County. No additional charges will be allowed for any transportation costs resulting from partial shipments made at the vendor's convenience when a single shipment is ordered.

Payment

Payments will be made upon the approval of vouchers submitted by the successful bidders in accordance with the requirements of the Board of Commissioners and subject to the Board of Commissioners customary procedures. The County will not pay interest or late fees regardless of language provided.

Discrepancy in Pricing

In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the OWNER of the extended totals shall govern.

Award Timeframe

Award will be made by Ocean County Board of Commissioners within sixty (60) days after receipt of bids.

Equal or Tie Bids

The County of Ocean reserves the right to award at their discretion to any one of the tie bidders where it is most advantageous for the County to do so, pursuant to N.J.S.A. 40A:11-6.1.

Tax Exempt

The County of Ocean is exempt from any State sales tax or Federal excise tax.

Equivalent Product

When offering an equivalent product, the bidder must clearly specify any variations from the stated specifications, regardless of how minor. The County will determine whether the proposed item meets or exceeds the specified product based on its quality, performance, and suitability for the intended use. Where equivalent equipment is offered, the County will determine if the proposed item is equal to or better than specified.

Evaluation

In addition to pricing, evaluation will include an assessment of quality, adherence to specifications, suitability for the County's needs, delivery terms, and warranty provisions. If no deviations from the specifications are noted, the bid will be assumed to be fully compliant with the stated requirements.

Quantities

The quantities shown on the pricing proposal are **estimates only**, and Ocean County will not guarantee any minimum purchase. The County reserves the right to decrease or omit quantities as needed over the course of the contract. The county will not consider any minimum requirements imposed on order quantities. The County also reserves the right to increase quantities to twenty (20) percent of the maximum quantities listed at the unit price bid, in accordance with N.J.A.C. 5:30-11.3. *Note: Actual orders are placed upon receipt of a Purchase Order, on an as needed basis. The County will not be responsible to pay for any product that was not ordered through a Purchase Order.*

Delivery of Goods and Services

Delivery of items shall only be made upon receipt of a Purchase Order issued by the Ocean County Department of Purchase, upon which delivery locations and needed quantities shall be indicated.

American Goods and Products

All contractors must comply with the provisions of New Jersey Statute Title 40A:11-18, when applicable.

BUY AMERICAN PROVISION - FOOD RELATED CONTRACTS

In accordance with 7 CFR 210.21(d) and USDA Memo SP 38-2017, all food and food service products provided under this contract must be domestic. Products must be either 100% domestic or contain more than 51% domestic agricultural components by weight or volume. Exceptions are permitted only when the item is not available domestically in sufficient quantity/quality or when competitive pricing shows domestic products are significantly higher in cost. Any exception requests must be submitted in writing and approved by the SFA prior to purchase.

No Assignment

This agreement shall not be assigned without the written consent of the County of Ocean.

NJ One Call

By presenting a bid, contractor declares that he is aware of and, if required, will comply with the requirements of the "Underground Facility Protection Act (Public Law 1994, Chapter 118)" prior to commencing any intended excavation. The telephone number to call is 1-800-272-1000.

Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48 et seq

The bidder must comply with the provisions of "The Public Works Contractor Registration Act", if applicable.

- All named contractors must be registered with the Department of Labor and Workforce Development pursuant to the Public Works Contractor Registration Act at the time the proposal is received, or the proposal will be determined to be non-responsive.
- Any non-listed contractor must be registered with the Department of Labor and Workforce Development prior to physically starting work. It is the responsibility of the General Contractor to insure that all non-listed sub-contractors comply.
- Contractors are encouraged to submit their and all named sub-contractors' Public Works Contractor Registration Certificates with the bid.

Prevailing Wage & Labor Laws

The New Jersey Prevailing Wage Act (P.L. 1963, Chapter 150) and provisions of the State Labor Laws must be complied with by the successful bidder, if applicable. The current Prevailing Wage Rates can be found online at <https://www.nj.gov/labor/wageandhour/prevailing-rates/public-works/currentprevailingwage.shtml>

All Certified Payrolls for Public Works Projects **must** be submitted online via the New Jersey Wage Hub website which can be accessed through the following link: <https://njwages.nj.gov/>. Certified payrolls must be submitted within ten (10) days of the payment of wages for each pay period, **both** online via New Jersey Wage Hub and hard copy to the contracting unit.

Special Surety Bid Requirements for Certain Construction Projects

The attention of the bidder is called to the provisions of N.J.S.A. 2A:44-143 which requires that the County of Ocean shall only accept performance and payment bonds from surety companies meeting the requirements of that statute. The bidder shall deliver with its bid a Consent of Surety. The Bidder's Surety Company shall complete the "Certificate of Surety Company" which bidder shall submit with its bid.

New Jersey Business Registration Requirements

Pursuant to N.J.S.A. 52:32-44, Ocean County ("Contracting Agency") is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the Contracting Agency with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Contracting Agency prior to the time a contract, purchase order, or other

contracting document is awarded or authorized.

During the course of contract performance:

(1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.

(2) the contractor shall maintain and submit to the Contracting Agency a list of subcontractors and their addresses that may be updated from time to time.

(3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.

Before final payment is made under the contract, the contractor shall submit to the Contracting Agency a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

Pay to Play Requirements

Starting in January 2007, all business entities are advised of their responsibility to file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC) pursuant to N.J.S.A. 19:44A-20.27 if they receive contracts in excess of \$50,000 from public entities in a calendar year. Business entities are responsible for determining if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us.

Statement of Ownership

The provisions of N.J.S.A. 52:25-24.2 apply to all forms of corporations and partnerships, including, but not limited to, limited partnerships, limited liability corporations, limited liability partnerships, and Subchapter S corporations.

Disclosure of Investment Activities in Iran

Pursuant to Public Law 2012, c. 25, any person or entity that is a successful bidder or proposer, or otherwise proposes to enter into or renew a contract, must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any parent entity, subsidiary, or affiliate is identified on the State Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The list is found on Treasury's website at www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.

The Chapter 25 list must be reviewed prior to completing the certification. If a vendor or contractor is found to be in violation of law, action may be taken as appropriate and as may provided by law, rule or contract, including but not limited to imposing sanctions, seeking compliance, recovering damages, declaring the party in

default and seeking debarment or suspension of the party. Prior to contract award or authorization, the contractor shall provide the Contracting Agency with a completed Certification on Disclosure of Investment Activities in Iran.

Certification of Non-Involvement in Prohibited Activities in Russia or Belarus

Pursuant to N.J.S.A. 52:32-60.1, et seq. ([L. 2022, c. 3](#)) any person or entity (hereinafter "Vendor") that seeks to enter into or renew a contract with a State agency for the provision of goods or services, or the purchase of bonds or other obligations, must complete the certification below indicating whether or not the Vendor is identified on the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, available here: <https://sanctionssearch.ofac.treas.gov/>. If the Department of the Treasury finds that a Vendor has made a certification in violation of the law, it shall take any action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

Insurance Requirements

The contractor shall maintain primary insurance to protect against all claims under Workmen's Compensation, Comprehensive General Liability and Automobile. Except for Workmen's Compensation, all coverage shall apply as primary coverage with respect to any other insurance or self-insurance program afforded to the County. There shall be no endorsement or modification of this coverage to make it excess over other available insurance/coverage; alternatively, if the CGL and umbrella, excess of reinsurance states that it is pro rata, it shall be endorsed to be primary with respect to the County. Primary Coverage shall be subject to approval for adequacy of protection as per the following limits:

Worker's Compensation

1. Limits according to Worker's compensation Laws of the State of New Jersey.
2. Contractor's Liability not less than \$100,000.

Comprehensive General Liability

1. Bodily Injury - \$500,000 per person; \$1,000,000 per occurrence.
2. Property Damage - \$1,000,000 per occurrence.

Comprehensive General Liability Details

Comprehensive Automobile Liability shall include the following:

Business auto liability insurance or its equivalent with a minimum limit of \$1,000,000 per accident and including coverage for all of the following:

- A. Liability arising out of the ownership, maintenance or use of any auto;
- B. Auto non-ownership and hired car coverage.
- C. Contractor's Worker's Compensation, Comprehensive General Liability and
- D. Comprehensive Automobile Liability arising out of subcontractor's operations shall be identical as that listed above.

Proof of Insurance

Copies of each insurance certificate shall be furnished to the County when requested.

Certificate of Insurance

Upon contract award, when a Certificate of Insurance is required, it shall be provided to Ocean County listing the County as an additional insured, as follows:

County of Ocean, 101 Hooper Avenue, P.O. Box 2191, Toms River, NJ 08754-2191

Open Public Records Act (OPRA)

**** ATTENTION****

Responses received pursuant to this solicitation are subject to complete disclosure pursuant to the Open Public Records Act. Please note that disclosure includes any and all attachments and addenda supplementing the solicitation response. Accordingly, please do not include personal identifying information in any supplementary documents submitted with the solicitation response.

County Cooperative Contract Purchasing System

The County has established a "COUNTY COOPERATIVE CONTRACT PURCHASING SYSTEM" pursuant to N.J.S.A. 40a:11-1 et seq...

The IDENTIFIER for this system is:

CK-02-OC

This system allows local government contracting entities located within the geographical boundaries of the County to purchase goods and services awarded as a result of this bid proposal if it is extended by the low bidder.

Goods and services must be made available without substitution or deviation from specifications, size, features, quality, price or availability as herein set forth. It is understood that orders, if any, will be placed directly by contracting units, subject to the overall terms of the contract to be awarded by the County of Ocean.

The estimated quantities listed in this specification reflect only the needs of the agencies under the direct control of the Ocean County Board of Commissioners. If the vendor chooses to extend the resulting contract to all other contracting units, the quantities could be higher.

Please check (✓) the YES or NO box in the Vendor Questionnaire to indicate whether or not you will extend contract prices to all contracting units.

Award Method

Contract will be awarded on a lump sum by item basis for Item #1 through Item #6. Line Items 7 through 12 will be awarded on a line item basis. In order to be considered for award of each of Items Sections #1 through Item #6, you must bid on all Options for that Item.

Specifications and Scope of Work

Scope of Work

Please see Question #11 "Compliances Pages" in the Vendor Questionnaire for the specifications for this bid. Please download, complete, and upload the Compliance Pages in the Vendor Questionnaire.

Intent

CONTRACT TERMS

The contract shall be for a one (1) year term, from date of award, or until delivery is complete unless otherwise stated. The County reserves the right to extend the term of the contract pursuant to N.J.S.A. 40A:11-15.

INTENT

The purpose of this bid package is to provide the County of Ocean with a Contractor who will supply the materials described and specified herein.

BID REVIEW

Bids may be reviewed at the bid opening and results will be made available online through the County's procurement portal once the bid meeting has concluded. Additionally, bid results are available in the Ocean County Purchasing Department on the day following the bid openings for any interested party that may wish to review them.

AVAILABILITY OF FUNDS

The County's obligation hereunder is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the County for payment of any money shall arise unless, and until funds are made available each year to the Ocean County Purchasing Agent.

MODIFICATIONS AND WITHDRAWALS

Bids may be withdrawn from the bidder prior to the time fixed for opening. No right for withdrawal exists after the bid has been opened. Written request for withdrawal shall be signed by the bidder or proper corporate officers.

USE OF OTHER NAMES AND REFERENCES

Unless otherwise stated, the use of manufacturers' names and product numbers are for descriptive purposes, and establishing general quality levels only. They are not intended to be restrictive. Bidders are required to state exactly what they intend to furnish, otherwise it is fully understood that they shall furnish all items as stated.

QUALITY

The materials and supplies called for herein, shall be the best of their grade and types, prepared according to the best available standards or accepted formulas, and thoroughly tested and subjected to rigid examinations and standardization. Items not meeting these requirements shall be replaced at no cost to the County upon due notice of deficiency.

WARRANTY

Manufacturer's warranty shall apply.

MODEL INFORMATION REQUIRED

The manufacturer, make or exact models proposed as substitutes shall also be submitted on bidder's letterhead with any proposal contended to be "equivalent."

AVAILABILITY AND DELIVERY

The bidder should indicate the number of days required for the delivery After Receipt of Order (A.R.O.). If not submitted with the bid proposal, the County reserves the right to request this information prior to the award of contract.

TRANSITIONAL PERIOD

In the event services are terminated by contract expiration or by voluntary termination by either the Contractor or the County of Ocean, the Contractor shall continue all terms and conditions of said contract for a period not to exceed one (1) month at the County's request.

COMPLIANCE TO MINIMUM BID REQUIREMENTS / EQUIVALENT PROPOSALS

These specifications intend to describe and govern the purchase of a new and unused SOLAR POWERED LED AND SPEED RADAR SIGNS with all accessories as noted herein. The products shall conform to the highest quality of manufacturing and design standards. Any item or items not specifically mentioned herein, but which would be required to produce a complete working unit, shall be supplied by the vendor.

All compliance pages must be completed in full if required within the specifications. A general exception cannot be taken for any paragraph or item. Suppose a bidder is basing his proposal on equipment other than what is specified in these bid documents and wishes the equipment he proposes to be considered as an "approved equal". In that case, he shall submit on a separate sheet, in the exact format of the technical specifications contained herein, an item-by-item description of that which he proposes to substitute including all variations from or exceptions to the conditions and specifications of this bid. Failure to comply may result in the rejection of the bid.

CURRENT BID RESULTS

If there is a current contract in place for this bid, those results may be obtained by accessing our procurement portal at the below link:

<https://procurement.opengov.com/portal/oceancounty>

Once you have clicked the link, click "Advanced Search" to begin searching for the current opportunity.

Americans with Disabilities Act

Equal Opportunity For Individuals With Disabilities

The CONTRACTOR and the COUNTY do hereby agree that the provisions of title II of the Americans with Disabilities Act of 1990 (the "Act") (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the COUNTY pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the CONTRACTOR, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the CONTRACTOR shall defend the COUNTY in any action or administrative proceeding commenced pursuant to this Act. The CONTRACTOR shall indemnify, protect and save harmless the COUNTY, its agents, servants and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall, at its own expense, appear, defend and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the COUNTY'S grievance procedure, the CONTRACTOR agrees to abide by any decision of the COUNTY which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the COUNTY or if the COUNTY incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its own expense.

The COUNTY shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the COUNTY or any of its agents, servants and employees, the COUNTY shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the COUNTY or its representatives.

It is expressly agreed and understood that any approval by the COUNTY of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect and save harmless the COUNTY pursuant to this paragraph.

It is further agreed and understood that the COUNTY assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provision of this indemnification clause shall in no way limit the CONTRACTOR'S obligations assumed in this Agreement, nor shall they be construed to relieve the CONTRACTOR from any liability, nor preclude the COUNTY from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

Mandatory Equal Employment Opportunity

N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)

N.J.A.C. 17:27

GOODS, PROFESSIONAL SERVICE AND GENERAL SERVICE CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union of the contractor's commitments under this chapter and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to meet targeted county employment goals established in accordance with N.J.A.C. 17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the targeted employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual

orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

- Letter of Federal Affirmative Action Plan Approval
- Certificate of Employee Information Report
- Employee Information Report Form AA302 (electronically provided by the Division and distributed to the public agency through the Division's website at www.state.nj.us/treasury/contract_compliance)

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Purchase & Property, CCAU, EEO Monitoring Program as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Purchase & Property, CCAU, EEO Monitoring Program for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code at N.J.A.C. 17:27.**

Vendor Questionnaire

OpenGov Vendor Account Verification*

I hereby confirm that I am logged into OpenGov using an account directly associated with the **Business Name (and corresponding Tax ID number)** as provided in all solicitation documentation. I fully understand that, if awarded a contract with Ocean County, the company information listed in the Contract Information Field will be used for the preparation of all contract documents. *Failure to adhere to these requirements may result in the rejection of this bid.*

☐ Please confirm

*Response required

County Cooperative Contract Purchasing System*

Vendor will extend contract prices to "County Cooperative Contract Purchasing System" Participants as described in [Instruction to Bidders](#) .

☐ Yes

☐ No

*Response required

DOCUMENTS TO BE EXECUTED*

Documents include:

- Signature Page
- Non-Collusion Certification
- Affirmative Action Questionnaire
- **Statement of Ownership (N.J.S.A. 52:25-24.2) (Mandatory Document)**
- Disclosure of Investment Activities in Iran
- Certification of Non-Involvement in Prohibited Activities in Russia or Belarus

FAILURE TO SUBMIT ANY OF THESE DOCUMENTS **MAY BE CAUSE FOR REJECTION OF YOUR PROPOSAL.**

All documents should be from this proposal package as forms change frequently and the most updated forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising.

NOTE: For detailed instructions on how to complete the forms via DocuSign, please access the "Instructions for Completing Forms in DocuSign" document available in the Attachments.

Please note: The County's preferred method of submission is DocuSign.

DOCUSIGN WORKS BEST IN THE GOOGLE CHROME BROWSER

[Click here to go to the form](#)

*Response required

CONTRACT INFORMATION*

Should your company be awarded a contract with Ocean County, please provide the **contact name, contact phone number and the physical mailing address** where the contract documents should be mailed. *(no email addresses, please!)*

*Response required

Copy of Bidder's Certificate of Employee Information Report

Within seven (7) days after receipt of the notification of intent to award the contract or receipt of the contract, whichever is sooner, a Contractor should present one of the following to the County of Ocean:

- (a) An existing federally approved or sanctioned affirmative action program.
- (b) A New Jersey Certificate of Employee Information Report Approval.
- (c) If the Contractor cannot present "a" or "b", the Contractor is required to submit a completed Employee Information Report (Form AA302 for Goods and Services; Form AA201 for Construction). This form is available [here](#).

QUESTIONS BELOW MUST BE ANSWERED BY ALL CONTRACTORS ON THE AFFIRMATIVE ACTION DOCUMENT:

1. Do you have a Federally approved or sanctioned Affirmative Action Program?

If yes, please upload a photocopy of such approval.

2. Do you have a State of New Jersey "Certificate of Employee Information Report" approval?

If yes, please upload a photocopy of such certificate.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

Copy of Bidder's New Jersey Business Registration Certificate

Please use this area to upload your company's BRC.

Use this link to verify your company's BRC:

https://www1.state.nj.us/TYTR_BRC/jsp/BRCLoginJsp.jsp

Please note that a BRC is not required at the time of bid submission but shall be required prior to the award of a contract.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

Vendor Forms

In order to conduct business with the County, your company must be built as a vendor in our financial system. Please download the below documents, complete and upload.

- [Blank_W9.pdf](#)
- [New_Vendor_Form_4.0.pdf](#)

Mandatory Equal Employment Opportunity Statement*

Does the BIDDER comply with the [#Mandatory Equal Employment Opportunity Statement?](#)

☐ Yes

☐ No

*Response required

Americans with Disabilities Act Provisions*

Does the BIDDER comply with the [#Americans with Disabilities Act Provisions](#)?

☐ Yes

☐ No

*Response required

Descriptive Literature and Warranty Details*

Please supply all descriptive literature and warranty details for all items being bid as well as a list of all diagnostic tools and testing equipment, if applicable.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

*Response required

Compliance Pages*

Please download the attached Compliance Pages. Complete each compliance line by placing a check mark in the box for YES or NO. Upload the completed document here. If you are taking any exceptions to any of the compliance lines, please list and explain each exception in detail on company letterhead. Please upload the exceptions letter with the completed compliance pages.

- [COMPLIANCE PAGES - SOLAR_PO...](#)

*Response required

ADDITIONAL DOCUMENTATION

Please add any additional documentation you wish to be considered here.

Acknowledgement of Submission of Forms from Current Bid Package*

Bidders shall complete all documents and acknowledge all terms included with the bid package. All documents should be from this bid package as forms change frequently and the most updated forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising. Failure to follow these instructions is cause for rejection.

☐ Please confirm

*Response required

Submission of Bid Package*

By submitting a response to this solicitation, the Vendor understands and acknowledges that all required documents to this solicitation must be submitted and that failure to do so may be cause for rejection.

Bidder also understands that only one (1) bid submission shall be considered. Please DO NOT Submit a manual bid response. Submitting a manual response in addition to the electronic response is cause for rejection of your bid.

☐ Please confirm

*Response required

Pricing Proposal

ITEM #1 - 30" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Delivery A.R.O.	Comments
1	30" Solar Powered LED Sign Assembly, As Specified, or Equal	10	EA					
OPTIONS:								
1A	Steel Sign Post, As Specified	10	EA					
1B	Battery for Solar-Powered LED Sign Assembly, As Specified	10	EA					
1C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	10	EA					
TOTAL								

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Delivery A.R.O.	Comments
2	36" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA					
OPTIONS:								
2A	Steel Sign Post, As Specified	30	EA					
2B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA					
2C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA					
TOTAL								

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Delivery A.R.O.	Comments
3	48" Solar Powered LED Sign Assembly, As Specified, or Equal	50	EA					
OPTIONS:								
3A	Steel Sign Post, As Specified	50	EA					
3B	Battery for Solar-Powered LED Sign Assembly, As Specified	50	EA					

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Delivery A.R.O.	Comments
3C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	50	EA					
TOTAL								

ITEM #4 - 48" X 24" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
4	48" X 24" Solar Powered LED Sign Assembly, As Specified, or Equal	5	EA				
OPTIONS:							
4A	Steel Sign Post, As Specified	5	EA				
4B	Battery for Solar-Powered LED Sign Assembly, As Specified	5	EA				
4C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	5	EA				
TOTAL							

ITEM #5 - 24" X 30" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
5	24" X 30" Solar Powered LED Sign Assembly, As Specified, or Equal	5	EA				
OPTIONS:							
5A	Steel Sign Post, As Specified	5	EA				
5B	Battery for Solar-Powered LED Sign Assembly, As Specified	5	EA				
5C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	5	EA				
TOTAL							

ITEM #6 - 30" X 36" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
6	30" X 36" Solar Powered LED Sign Assembly, As Specified, or Equal	5	EA				
OPTIONS:							
6A	Steel Sign Post, As Specified	5	EA				
6B	Battery for Solar-Powered LED Sign Assembly, As Specified	5	EA				

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
6C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	5	EA				
TOTAL							

SOLAR SPEED RADAR SIGNS AND ACCESSORIES, ITEM #'S 7 - 12

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
7	Solar Speed Radar Sign, 12", Traffic Logix Safespace Evolution 12, As Specified, or Equal	4	EA				
8	Solar Speed Radar Sign, 15", Traffic Logix Safespace 450 Full Radar Speed Sign, As Specified, or Equal	50	EA				
9	Steel Sign Post, As Specified, or Equal	30	EA				
10	Battery for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA				
11	Solar Panel for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA				
12	Solar-Powered LED Pedestrian Crossing Warning System with Push Buttons, As Specified, or Equal	4	EA				

ITEM #1 - 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL**COMPLIANCE**
YES **NO****DESCRIPTION:**

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

☐ ☐
MATERIALS:

The assembly shall include the following items:

☐ ☐
SIGN:

Sign blanks shall be .080" gauge aluminum

☐ ☐

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

☐ ☐

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

☐ ☐

Mounting hardware shall be Stainless Steel 5/16"

☐ ☐
LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

☐ ☐

The various sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Ped Crossing 30" x 30" (Facing) Fluorescent Yellow Green	W11-2	White or Yellow	8	☐	☐
Turn Symbol 30" x 30" (Facing) Yellow	W1-1L	White or Yellow	8	☐	☐
Turn Symbol 30" x 30" (Facing) Yellow	W1-1R	White or Yellow	8	☐	☐
Curve Symbol 30" x 30" (Facing) Yellow	W1-2L	White or Yellow	8	☐	☐
Curve Symbol 30" x 30" (Facing) Yellow	W1-2R	White or Yellow	8	☐	☐
Stop Ahead 30" x 30" Stop Symbol, White on Red, Border & Arrow Black On Yellow (Facing)	W3-1	White or Yellow	8	☐	☐
Yield Ahead 30" x 30" Stop Symbol, White on Red, Border & Arrow Black On Yellow (Facing)	W3-2	White or Yellow	8	☐	☐

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

				<u>COMPLIANCE</u>	
				<u>YES</u>	<u>NO</u>
	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Signal Ahead 30" x 30" Symbol, Border & Arrow Black on (Facing) Yellow	W3-3	White or Yellow	8	☐	☐
<u>LED: (CONT'D)</u>					
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				☐	☐
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				☐	☐
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				☐	☐
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				☐	☐
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐
<u>SOLAR PANEL:</u>					
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.				☐	☐
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.				☐	☐
All fasteners used shall be anti-vandal.				☐	☐
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.				☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐
<u>CONTROL CIRCUIT:</u>					
Control circuit shall have the capability of independently flashing dual outputs.				☐	☐
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.				☐	☐
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.				☐	☐
Control circuit covering shall be waterproof and anti-vandal.				☐	☐
Control circuit shall remain operational between the temperatures of -40°F and 176°F.				☐	☐
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	☐	☐
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	☐	☐
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D	☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D	☐	☐
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

		<u>COMPLIANCE</u>	
		<u>YES</u>	<u>NO</u>
<u>OPTIONS:</u>			
<u>1A – Steel Sign Post, As Specified</u>			
<u>Description:</u>			
Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaway (or approved equal).		☐	☐
<u>Measurements:</u>			
10' length		☐	☐
3-1/16" width		☐	☐
3/8" holes on 1" centers		☐	☐
2.5 lbs/ft linear weight		☐	☐
<u>Materials:</u>			
Mounting hardware shall be Stainless Steel 5/16"		☐	☐
<u>1B - Battery For Solar-Powered LED Sign Assembly, As Specified</u>			
<u>Description:</u>			
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.		☐	☐
<u>Materials:</u>			
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.		☐	☐
<u>Battery:</u>			
Batteries shall not weigh more than 1.8 lbs.		☐	☐
Batteries shall have a waterproof connection		☐	☐
Batteries shall be sealed and spill-proof		☐	☐
Batteries shall have an in-line power connector		☐	☐
Batteries shall be replaceable independently of other components		☐	☐
Batteries shall be fused for short circuit protection		☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor		☐	☐
Batteries shall have the following dimensions:			
Grouped: 2.66" H X 2.66" W X 2.78" D		☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D		☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D		☐	☐

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)**COMPLIANCE**
YES **NO****OPTIONS: (CONT'D)****1B - Battery For Solar-Powered Led Sign Assembly, As Specified (Cont'd)****Operation:**

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

☐☐**Electrical:**

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐**1C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified****Description:**

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

☐☐**Mounting:**

The solar panel assembly shall be mounted securely to the sign assembly.

☐☐

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

☐☐**Hardware:**

All fasteners used shall be anti-vandal.

☐☐**Electrical:**

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

☐☐

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL**COMPLIANCE**
YES **NO****DESCRIPTION:**

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

☐☐**MATERIALS:**

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

☐☐

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

☐☐

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

☐☐

36" Signs shall have four (4) holes punched to allow dual post mounting

☐☐

Mounting hardware shall be Stainless Steel 5/16"

☐☐**LED:**

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

☐☐

The various sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Stop 36" x 36" (Facing)(White on Red)	R1-1	White or Red	8	☐	☐
Yield 36" x 36" x 36" (Facing)(White on Red)	R1-2	White or Red	9	☐	☐
School Crossing (Symbol) 36" x 36" (Facing) Fluorescent Yellow Green/ Black/ Red	S1-1	White or Yellow	6	☐	☐
Ped Crossing 36" x 36" (Facing) Fluorescent Yellow Green	W11-2	White or Yellow	8	☐	☐
Turn Symbol 36" x 36" (Facing) Yellow	W1-1L	White or Yellow	8	☐	☐
Turn Symbol 36" x 36" (Facing) Yellow	W1-1R	White or Yellow	8	☐	☐
Turn Symbol L / speed 36" x 36" (MPH) to be noted at time of order (Facing) Yellow	W1-1a	White or Yellow	8	☐	☐

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

				<u>COMPLIANCE</u>	
				<u>YES</u>	<u>NO</u>
<u>LED: (CONT'D)</u>					
	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Turn Symbol R / speed 36" x 36" (MPH) to be noted at time of order (Facing) Yellow	W1-1a	White or Yellow	8	☐	☐
Curve Symbol 36" x 36" (Facing) Yellow	W1-2L	White or Yellow	8	☐	☐
Curve Symbol 36" x 36" (Facing) Yellow	W1-2R	White or Yellow	8	☐	☐
Curve Symbol L / speed 36" x 36" (MPH) to be noted at time of order (Facing) Yellow	W1-2a	White or Yellow	8	☐	☐
Curve Symbol R / speed 36" x 36" (MPH) to be noted at time of order (Facing) Yellow	W1-2a	White or Yellow	8	☐	☐
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				☐	☐
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				☐	☐
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				☐	☐
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				☐	☐
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐
<u>SOLAR PANEL:</u>					
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.				☐	☐
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.				☐	☐
All fasteners used shall be anti-vandal.				☐	☐
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.				☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	☐	☐
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time.		
Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	☐	☐
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	☐	☐
Control circuit covering shall be waterproof and anti-vandal.	☐	☐
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	☐	☐
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	☐	☐
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	☐	☐
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D	☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D	☐	☐
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐

**ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL
(CONT'D)****COMPLIANCE**
YES **NO****OPTIONS:****2A – Steel Sign Post, As Specified****Description:**

Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).

☐☐**Measurements:**

10' length

☐☐

3-1/16" width

☐☐

3/8" holes on 1" centers

☐☐

2.5 lbs/ft linear weight

☐☐**Materials:**

Mounting hardware shall be Stainless Steel 5/16"

☐☐**2B - Battery For Solar-Powered LED Sign Assembly, As Specified****Description:**6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO®
Blinkersigns®.☐☐**Materials:**Batteries shall be sealed in a plastic film to provide resistance to moisture and
corrosion.☐☐**Battery:**

Batteries shall not weigh more than 1.8 lbs.

☐☐

Batteries shall have a waterproof connection

☐☐

Batteries shall be sealed and spill-proof

☐☐

Batteries shall have an in-line power connector

☐☐

Batteries shall be replaceable independently of other components

☐☐

Batteries shall be fused for short circuit protection

☐☐

Batteries shall be protected from overheating by means of a thermocouple sensor

☐☐

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

☐☐

Stacked: 1.34" H X 1.34" W X 10.6" D

☐☐

Flatpack: 5.24" H X 2.68" W X 0.67" D

☐☐

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)**COMPLIANCE**
YES **NO****OPTIONS: (CONT'D)****2B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)****Operation:**

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

☐☐**Electrical:**

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐**2C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified****Description:**

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

☐☐**Mounting:**

The solar panel assembly shall be mounted securely to the sign assembly.

☐☐

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

☐☐**Hardware:**

All fasteners used shall be anti-vandal.

☐☐**Electrical:**

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

☐☐

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL**COMPLIANCE****YES****NO****DESCRIPTION:**

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

☐☐**MATERIALS:**

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

☐☐

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

☐☐

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

☐☐

48" Signs shall have four (4) holes punched to allow dual post mounting

☐☐

Mounting hardware shall be Stainless Steel 5/16"

☐☐**LED:**

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

☐☐

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Stop 48" x 48" (Facing)(White on Red)	R1-1	White or Red	8	☐	☐
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				☐	☐
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				☐	☐
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				☐	☐
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				☐	☐
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	☐	☐
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	☐	☐
All fasteners used shall be anti-vandal.	☐	☐
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.	☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	☐	☐
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	☐	☐
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	☐	☐
Control circuit covering shall be waterproof and anti-vandal.	☐	☐
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	☐	☐
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	☐	☐
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	☐	☐
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>BATTERY: (CONT'D)</u>		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D	☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D	☐	☐
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐
<u>OPTIONS:</u>		
<u>3A – Steel Sign Post, As Specified</u>		
<u>Description:</u>		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	☐	☐
<u>Measurements:</u>		
10' length	☐	☐
3-1/16" width	☐	☐
3/8" holes on 1" centers	☐	☐
2.5 lbs/ft linear weight	☐	☐
<u>Materials:</u>		
Mounting hardware shall be Stainless Steel 5/16"	☐	☐
<u>3B - Battery For Solar-Powered LED Sign Assembly, As Specified</u>		
<u>Description:</u>		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.	☐	☐
<u>Materials:</u>		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
<u>Battery:</u>		
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)**COMPLIANCE**
YES **NO****OPTIONS: (CONT'D)****3B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)****Battery: (Cont'd)**

Batteries shall be fused for short circuit protection

☐☐

Batteries shall be protected from overheating by means of a thermocouple sensor

☐☐

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

☐☐

Stacked: 1.34" H X 1.34" W X 10.6" D

☐☐

Flatpack: 5.24" H X 2.68" W X 0.67" D

☐☐**Operation:**

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

☐☐**Electrical:**

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐**3C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified****Description:**

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

☐☐**Mounting:**

The solar panel assembly shall be mounted securely to the sign assembly.

☐☐

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

☐☐**Hardware:**

All fasteners used shall be anti-vandal.

☐☐**Electrical:**

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

☐☐

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL**DESCRIPTION:**

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

☐ ☐
MATERIALS:

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

☐ ☐

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

☐ ☐

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

☐ ☐

48" Signs shall have four (4) holes punched to allow dual post mounting

☐ ☐

Mounting hardware shall be Stainless Steel 5/16"

☐ ☐
LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

☐ ☐

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Large Arrow Left 48" x 24" (Facing) Black on Yellow	W1-6L	White or Yellow	8	☐	☐
Large Arrow Right 48" x 24" (Facing) Black on Yellow	W1-6R	White or Yellow	8	☐	☐
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				☐	☐
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				☐	☐
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				☐	☐
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				☐	☐
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

<u>COMPLIANCE</u>		
	<u>YES</u>	<u>YES</u>
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	☐	☐
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	☐	☐
All fasteners used shall be anti-vandal.	☐	☐
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.	☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	☐	☐
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	☐	☐
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	☐	☐
Control circuit covering shall be waterproof and anti-vandal.	☐	☐
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	☐	☐
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	☐	☐
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	☐	☐
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>BATTERY: (Cont'd)</u>		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D	☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D	☐	☐
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐
<u>OPTIONS:</u>		
<u>4A – Steel Sign Post, As Specified</u>		
<u>Description:</u>		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	☐	☐
<u>Measurements:</u>		
10' length	☐	☐
3-1/16" width	☐	☐
3/8" holes on 1" centers	☐	☐
2.5 lbs/ft linear weight	☐	☐
<u>Materials:</u>		
Mounting hardware shall be Stainless Steel 5/16"	☐	☐
<u>4B - Battery For Solar-Powered LED Sign Assembly, As Specified</u>		
<u>Description:</u>		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.	☐	☐
<u>Materials:</u>		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
<u>Battery:</u>		
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)**COMPLIANCE**
YES **NO****OPTIONS: (CONT'D)****4B - Battery For Solar-Powered LED Sign Assembly, As Specified (CONT'D)****Battery: (Cont'd)**

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

☐ ☐

Stacked: 1.34" H X 1.34" W X 10.6" D

☐ ☐

Flatpack: 5.24" H X 2.68" W X 0.67" D

☐ ☐**Operation:**

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

☐ ☐**Electrical:**

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

☐ ☐**4C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified****Description:**

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

☐ ☐**Mounting:**

The solar panel assembly shall be mounted securely to the sign assembly.

☐ ☐

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

☐ ☐**Hardware:**

All fasteners used shall be anti-vandal.

☐ ☐**Electrical:**

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

☐ ☐

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

☐ ☐

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL**COMPLIANCE****YES****NO****DESCRIPTION:**

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

☐☐**MATERIALS:**

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

☐☐

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

☐☐

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

☐☐

48" Signs shall have four (4) holes punched to allow dual post mounting and horizontal install

☐☐

Mounting hardware shall be Stainless Steel 5/16"

☐☐**LED:**

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

☐☐

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Speed Limit (blank) 24" x 30"					
(Facing) Black on White	R2-1	White	8	☐	☐
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				☐	☐
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				☐	☐
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				☐	☐
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				☐	☐
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	☐	☐
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	☐	☐
All fasteners used shall be anti-vandal.	☐	☐
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.	☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	☐	☐
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	☐	☐
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	☐	☐
Control circuit covering shall be waterproof and anti-vandal.	☐	☐
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	☐	☐
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	☐	☐
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	☐	☐
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>BATTERY: (Cont'd)</u>		
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D	☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D	☐	☐
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐
<u>OPTIONS:</u>		
<u>5A – Steel Sign Post, As Specified</u>		
<u>Description:</u>		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	☐	☐
<u>Measurements:</u>		
10' length	☐	☐
3-1/16" width	☐	☐
3/8" holes on 1" centers	☐	☐
2.5 lbs/ft linear weight	☐	☐
<u>Materials:</u>		
Mounting hardware shall be Stainless Steel 5/16"	☐	☐
<u>5B - Battery For Solar-Powered LED Sign Assembly, As Specified</u>		
<u>Description:</u>		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.	☐	☐
<u>Materials:</u>		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
<u>Battery:</u>		
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)**COMPLIANCE****YES****NO****OPTIONS (Cont'd)****5B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)**

Batteries shall be protected from overheating by means of a thermocouple sensor

☐☐

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

☐☐

Stacked: 1.34" H X 1.34" W X 10.6" D

☐☐

Flatpack: 5.24" H X 2.68" W X 0.67" D

☐☐**Operation:**

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

☐☐**Electrical:**

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐**5C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified****Description:**

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

☐☐**Mounting:**

The solar panel assembly shall be mounted securely to the sign assembly.

☐☐

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

☐☐**Hardware:**

All fasteners used shall be anti-vandal.

☐☐**Electrical:**

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

☐☐

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL**COMPLIANCE**
YES **NO****DESCRIPTION:**

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

☐ ☐
MATERIALS:

The assembly shall include the following items:

Sign blanks shall be .080" gauge aluminum

☐ ☐

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

☐ ☐

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

☐ ☐

Mounting hardware shall be Stainless Steel 5/16"

☐ ☐
LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

☐ ☐

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Speed Limit (blank) 30" x 36" (Facing) Black on White	R2-1	White	8	☐	☐
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				☐	☐
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				☐	☐
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				☐	☐
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				☐	☐
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				☐	☐
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				☐	☐

SOLAR PANEL:

Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.

☐ ☐

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

☐ ☐

All fasteners used shall be anti-vandal.

☐ ☐

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>SOLAR PANEL: (CONT'D)</u>		
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.	☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	☐	☐
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	☐	☐
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	☐	☐
Control circuit covering shall be waterproof and anti-vandal.	☐	☐
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	☐	☐
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	☐	☐
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	☐	☐
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D	☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D	☐	☐
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>OPTIONS:</u>		
<u>6A – Steel Sign Post, As Specified</u>		
<u>Description:</u>		
Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).	☐	☐
<u>Measurements:</u>		
10' length	☐	☐
3-1/16" width	☐	☐
3/8" holes on 1" centers	☐	☐
2.5 lbs/ft linear weight	☐	☐
<u>Materials:</u>		
Mounting hardware shall be Stainless Steel 5/16"	☐	☐
<u>6B - Battery For Solar-Powered LED Sign Assembly, As Specified</u>		
<u>Description:</u>		
6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.	☐	☐
<u>Materials:</u>		
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	☐	☐
<u>Battery:</u>		
Batteries shall not weigh more than 1.8 lbs.	☐	☐
Batteries shall have a waterproof connection	☐	☐
Batteries shall be sealed and spill-proof	☐	☐
Batteries shall have an in-line power connector	☐	☐
Batteries shall be replaceable independently of other components	☐	☐
Batteries shall be fused for short circuit protection	☐	☐
Batteries shall be protected from overheating by means of a thermocouple sensor	☐	☐
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	☐	☐
Stacked: 1.34" H X 1.34" W X 10.6" D	☐	☐
Flatpack: 5.24" H X 2.68" W X 0.67" D	☐	☐
<u>Operation:</u>		
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	☐	☐
<u>Electrical:</u>		
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)**COMPLIANCE****YES****NO****OPTIONS: (CONT'D)****6C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified****Description:**

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

☐☐**Mounting:**

The solar panel assembly shall be mounted securely to the sign assembly.

☐☐

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

☐☐**Hardware:**

All fasteners used shall be anti-vandal.

☐☐**Electrical:**

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

☐☐

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐

ITEM #7 - SOLAR SPEED RADAR SIGN, 12”, TRAFFIC LOGIX SAFEPLACE EVOLUTION 12, AS SPECIFIED, OR EQUAL

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>DESCRIPTION:</u>		
Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD-compliant “YOUR SPEED” sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.	☐	☐
<u>SPEED DISPLAY:</u>		
Individual digits within display shall be 12” h x 6.4” w, and each digit shall be comprised of a matrix of no fewer than 196 yellow LEDs per digit; total 936 yellow LEDs.	☐	☐
The LEDs shall be displayed on a black background.	☐	☐
The yellow digits shall have a viewing angle at 50% IV of 30° and a partial flux (brightness) of 9000-22400 Ev, [lux]/LED.	☐	☐
Display face shall be constructed of non-glare UV stabilized polycarbonate.	☐	☐
Display shall have an operating temperature range of -40°F to 185°F with 95% humidity non-condensing. (-20°F for Bluetooth communication)	☐	☐
Speed display size shall be maximum 17.25” (h) x 23” (w) x 5.625” (d).	☐	☐
The speed display shall be capable of displaying speeds in miles per hour and ranging from 3 – 99.	☐	☐
There shall be a conformal coating on all circuit boards	☐	☐
There shall be a built in ambient light sensing and automatic brightness control.	☐	☐
<u>SIGN:</u>		
Sign shall conform to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination.	☐	☐
Sign shall measure at least 29” h x 23” w.	☐	☐
Sign blanks shall be aluminum.	☐	☐
Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.	☐	☐
The sign shall measure 29.0” (h) x 23.0” (w) x 5.625” (d) and display the message “YOUR SPEED” on two (2) lines.	☐	☐
Sign weight with speed radar shall be a maximum of 20 pounds.	☐	☐
Mounting hardware shall be Stainless Steel 5/16”	☐	☐

ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPLACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>PROGRAMMING:</u>		
There shall be 24/7 365 day programming and scheduling.	☐	☐
The unit shall be capable of display On/Stealth Modes.	☐	☐
The unit shall display the closest/fastest vehicle speed.	☐	☐
The unit shall have a digit flashing speed threshold.	☐	☐
The following are the flashing speeds for the LEDs: Fast 1.5 Hz, Medium 1 Hz, and Slow 0.75 Hz.	☐	☐
The unit shall be capable of collecting and storing traffic data by location.	☐	☐
The unit shall capture traffic data when in Stealth Mode.	☐	☐
The data shall be downloaded via a wireless connection.	☐	☐
The program shall be capable of statistical reporting and charts.	☐	☐
The program shall be capable of compiling the reports as summaries, weekly reports, period comparison reports, or full custom reports and charts.	☐	☐
The program shall be capable of reporting the following parameters: average vehicle count, total vehicle count, average speed, average number of speed violations, total number of speed violations, minimum/maximum speed, 85th percentile speed.	☐	☐
The reports shall print directly and exported into CSV, MS Excel, Adobe Acrobat PDF and HTML formats.	☐	☐
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently.	☐	☐
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	☐	☐
All fasteners used shall be anti-vandal.	☐	☐
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.	☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
The solar panel shall be a 50W or 90W solar panel.	☐	☐

ITEM #7 - SOLAR SPEED RADAR SIGN, 12", TRAFFIC LOGIX SAFEPLACE EVOLUTION 12,AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>ENCLOSURE:</u>		
The enclosure shall be vandal resistant and have a lightweight polymer.	☐	☐
The enclosure shall have a matte black front.	☐	☐
The enclosure shall have a light gray body.	☐	☐
The enclosure shall be weatherproof and be NEMA 4X-12 and IP65 compliant.	☐	☐
The enclosure shall be non-sealed and ventilated.	☐	☐
<u>RADAR:</u>		
The unit shall use an internal radar that is Doppler and FCC approved.	☐	☐
The radar RF out shall be 5 mW maximum.	☐	☐
The radar f-center shall be 24.125 GHz or 24.200 GHz.	☐	☐
The radar shall have a maximum pickup distance of 400 feet.	☐	☐
The beam angle shall be 24° (vertical) x 12° (horizontal).	☐	☐
The radar beam polarization shall be linear.	☐	☐
The radar shall have CE Mark.	☐	☐
<u>BATTERY:</u>		
The sign shall have Lithium-ion batteries with a weight of 4 pounds.	☐	☐
The universal mounting bracket system shall come with a sign bracket (2 pounds) and a pole bracket (5 pounds).	☐	☐
The power input shall be 100~240V AC @ 150 mA, 12V DC (11-14.5V @ 1A).	☐	☐
The power input shall be capable of wireless battery charge monitoring via software interface.	☐	☐
<u>COMMUNICATIONS:</u>		
The device shall be Bluetooth Capable.	☐	☐
<u>ASSEMBLY:</u>		
Assembly shall be capable of mounting to pole, timber post, or u-channel.	☐	☐
Mounting hardware shall be tamper-resistant.	☐	☐

ITEM #7 - SOLAR SPEED RADAR SIGN, 12”, TRAFFIC LOGIX SAFEPLACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐
Manufacturer shall offer (at minimum) ten (10) years warranty on LEDs.	☐	☐
Manufacturer shall offer (at minimum) two (2) year warranty on the sign.	☐	☐
Manufacturer shall offer (at minimum) one (1) year warranty on the batteries.	☐	☐

ITEM # 8 - SOLAR SPEED RADAR SIGN, 15”, TRAFFIC LOGIX SAFEPLACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL**DESCRIPTION:**

Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD – compliant “YOUR SPEED” sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.

☐ ☐

SPEED RADAR SIGN:

The assembly shall include the following items:

The Speed Radar Sign Digits shall be 15.0”(h)x8.0”(w) with 112 yellow LEDs per digit.

☐ ☐

The “YOUR SPEED” text on the speed radar sign shall be 6” H and on two (2) lines.

☐ ☐

The full Speed Radar Sign size shall be 40.0” H x 30.0” W x 3.5” D.

☐ ☐

The sign weight without the “YOUR SPEED” sign and with the solar power panel and bracket shall be 20 pounds *maximum*.

☐ ☐

The sign shall come with 4 cell lithium ion battery (4 lbs max).

☐ ☐

The sign shall come with a universal mounting bracket system including the sign bracket (2 lbs) and pole bracket (5 lbs).

☐ ☐

The speed radar sign shall measure the speed in miles per hour (MPH).

☐ ☐

The speed radar sign shall have an aluminum protective cover 0.1875” D.

☐ ☐

The sign shall have yellow high-intensity prismatic reflective sheeting on the sign face with black colored text in MUTCD approved colors and format.

☐ ☐

The operating temperature shall be -40°F to 185°F *minimum*.

☐ ☐

The sign shall have a built in ambient light sensor.

☐ ☐

The sign shall have a wireless battery charge monitor.

☐ ☐

POWER SOURCE:

The sign shall have be solar powered.

☐ ☐

ITEM #8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>RADAR:</u>		
The radar sign shall have a ten (10) year warranty on the LEDs.	☐	☐
The internal radar shall be Doppler (FCC approved).	☐	☐
The radar RF out shall be 5mW maximum.	☐	☐
The radar f-center shall be 24.125 GHz center ± 25 MHz.	☐	☐
The radar pick-up distance shall go up to 1,200 feet <i>minimum</i> .	☐	☐
The radar beam angle shall be 11°x11°.	☐	☐
The radar beam polarization shall be linear.	☐	☐
The FCC ID for the radar shall be TIADR1500.	☐	☐
<u>DISPLAY:</u>		
LED Digits shall have 224 yellow LED, 23°, 5mm, luminous intensity (5,680-8,200 mcd/LED).	☐	☐
The display shall have an ambient light sensor and automatic brightness adjuster.	☐	☐
<u>ENCLOSURE:</u>		
The enclosure shall be 12 gauge aluminum with flat black powder coated front.	☐	☐
The body of the enclosure shall be light gray powder coated.	☐	☐
The enclosure shall be weather proof, non-sealed, and ventilated.	☐	☐
The enclosure shall be NEMA 4X-12 and IP65 level compliant.	☐	☐
<u>MOUNTING:</u>		
The brackets shall be theft resistant.	☐	☐
The sign shall lock into the bracket with a key.	☐	☐
The universal mounting bracket system shall have the following options: circular, square, and telspar poles.	☐	☐
The mounting system shall come with banding brackets.	☐	☐
<u>COMMUNICATIONS:</u>		
The system shall be both WiFi and Bluetooth 4.0 compatible.	☐	☐
<u>PROGRAMMING:</u>		
Safe Pace Pro management software or approved equal shall be utilized.	☐	☐
There shall be 24 hours a day, 7 days a week, 365 days a year unlimited programming and scheduling.	☐	☐

ITEM #8 - SOLAR SPEED RADAR SIGN, 15", TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>DISPLAY SETTINGS:</u>		
The display shall have both 'ON' and 'Stealth Mode' settings.	☐	☐
In stealth mode, the speed will not be displayed and the data will be collected.	☐	☐
The display will be capable of a minimum speed and maximum speed.	☐	☐
The display will be capable of flashing the digits when the speed is measured above the selected speed.	☐	☐
<u>DATA COLLECTION:</u>		
Traffic data shall be collected and stored by location.	☐	☐
Traffic data shall be downloaded through a wireless connection.	☐	☐
The program shall be capable of statistical reports and charts.	☐	☐
The following reports shall be compiled: summary reports, weekly reports, period comparison reports, and customizable reports.	☐	☐
The following shall be the reporting parameters:	☐	☐
• average vehicle count • total vehicle count • average speed • average number of speed violations • total number of speed violations • minimum and maximum speed • 85th percentile speed		
The reports shall be capable of printing directly from the program and exported into CSV format, MS Excel, Adobe Acrobat PDF, and HTML.	☐	☐
The charts shall be capable of printing directly from the program and Adobe Acrobat PDF format.	☐	☐
<u>SOLAR PANEL:</u>		
The solar panel power output shall be 20 W.	☐	☐
The solar panel operation temperature range shall be -40°C to 85°C <i>minimum</i> .	☐	☐
The solar panel shall be composed of laminate: glass, EVA, TPT (tedlar/pet/tedlar), or TPE.	☐	☐
The front side of the solar panel shall have high-transmission 3.2mm tempered glass.	☐	☐
The back side of the solar panel shall be made of wither TPT or TPE.	☐	☐
The solar panel frame shall be clear anodized aluminum.	☐	☐
The solar panel shall be output to a junction box.	☐	☐

ITEM #9 – STEEL SIGN POST, AS SPECIFIED, OR EQUAL**COMPLIANCE****YES** **NO****DESCRIPTION:**

Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaways (or approved equal)

☐☐**MEASUREMENTS:**

10' length

☐☐

3-1/16" width

☐☐

3/8" holes on 1" centers

☐☐

2.5 lbs/ft linear weight

☐☐**Materials:**

Mounting hardware shall be Stainless Steel 5/16"

☐☐**ITEM #10 - BATTERY FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL****DESCRIPTION:**

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

☐☐**MATERIALS:**

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

☐☐**BATTERY:**

Batteries shall not weigh more than 1.8 lbs.

☐☐

Batteries shall have a waterproof connection

☐☐

Batteries shall be sealed and spill-proof

☐☐

Batteries shall have an in-line power connector

☐☐

Batteries shall be replaceable independently of other components

☐☐

Batteries shall be fused for short circuit protection

☐☐

Batteries shall be protected from overheating by means of a thermocouple sensor

☐☐

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

☐☐

Stacked: 1.34" H X 1.34" W X 10.6" D

☐☐

Flatpack: 5.24" H X 2.68" W X 0.67" D

☐☐**OPERATION:**

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

☐☐**ELECTRICAL:**

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

☐☐

ITEM #11 - SOLAR PANEL FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>DESCRIPTION:</u> Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	☐	☐
<u>MOUNTING:</u> The solar panel assembly shall be mounted securely to the sign assembly. All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	☐ ☐	☐ ☐
<u>HARDWARE:</u> All fasteners used shall be anti-vandal.	☐	☐
<u>ELECTRICAL:</u> Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket. All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	☐ ☐	☐ ☐

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL

<u>DESCRIPTION:</u> Fully self-contained Solar-Powered LED Pedestrian Crossing Warning System, including an LED-enhanced pedestrian crossing sign assembly (conforming to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination). Each system shall consist of two (2) solar-powered LED pedestrian crossing signs, two (2) cabinets, two (2) pedestrian push button assemblies, two (2) sign mounting kits, two (2) wireless controller kits, and all appurtenances incidental to the Solar-Powered LED Pedestrian Crossing Warning System.	☐	☐
<u>MATERIAL:</u> The system shall include the following items:		
<u>SIGN:</u> MUTCD compliant Pedestrian warning sign type W11-2. 36" x 36"	☐	☐
Sign blanks shall be .080" gauge aluminum.	☐	☐
Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.	☐	☐
Sign assembly shall use anti-vandal fasteners to mount components to sign and sign to fixture.	☐	☐
Mounting hardware shall be Stainless Steel 5/16"	☐	☐

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>LEDS:</u>		
Sign assembly shall utilize a minimum of eight (8) high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20°.	☐	☐
LEDs shall be amber in color.	☐	☐
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.	☐	☐
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.	☐	☐
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).	☐	☐
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	☐	☐
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.	☐	☐
All LED connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	☐	☐
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	☐	☐
All fasteners used shall be anti-vandal.	☐	☐
Wire used shall conform to military specification MIL-W-1687D, Type D, vinyl nylon jacket.	☐	☐
The solar panel assembly shall be mounted securely to the sign assembly.	☐	☐
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>PUSH BUTTON:</u>		
Sign assembly shall include a Polara Bulldog Push Button (or approved Equal), yellow in color and with an LED for visual confirmation of activation.	☐	☐
Push button connectors shall conform to Ingress Protection, IP-65 rating or better.	☐	☐
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	☐	☐
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time.		
Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	☐	☐
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	☐	☐
Control circuit covering shall be waterproof and anti-vandal.	☐	☐

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>CONTROL CIRCUIT: (CONT'D)</u>		
Control circuit shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C).	☐	☐
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14000 mAh nickel metal hydride (NiMH).	☐	☐
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion. Dimensions shall be 10.5" x 1.5" to be house in a 2-3/8" aluminum tube.	☐	☐
Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize heat protection.	☐	☐
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	☐	☐
<u>WIRELESS COMMUNICATION:</u>		
Each system shall include a radio-control cabinet for communication with and synchronization within the system.	☐	☐
Each sign assembly shall include a self-powered wireless transmitter / receiver for communication with the control cabinet.	☐	☐
Transmitter units shall have a minimum operating range of 1000 ft (line of sight).	☐	☐
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	☐	☐