



*John P. Kelly, Director*  
*Frank Sadeghi, Deputy Director*  
*Robert S. Arace, Commissioner*  
*Jennifer Bacchione, Commissioner*  
*Virginia E. Haines, Commissioner*

*Tristin J. Collins, Director, Management & Budget*  
*Jennifer L. Bowens, Purchasing Agent*

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

***BID***

***VARIOUS EQUIPMENT FOR THE TRAFFIC DIVISION***

***2025***

***ADVERTISEMENT DATE: January 15, 2025***  
***OPENING: February 4, 2025, 11:00 am***

***Bid Category: 24- Safety and Protection Equipment and Related Services***

## ***Notice to Bidders***

**NOTICE IS HEREBY GIVEN** that sealed bids for the furnishing and delivery of **VARIOUS EQUIPMENT FOR THE TRAFFIC DIVISION** for the County of Ocean, will be received by the Purchasing Agent of the County of Ocean on **Tuesday, February 4, 2025 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:

**JOHN P. KELLY**, Director

**JENNIFER L. BOWENS**, 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**

Senior Buyer

Email: [ocpurchasing@co.ocean.nj.us](mailto:ocpurchasing@co.ocean.nj.us)

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

**Department:**

Engineering

### **Timeline**

<b>Advertising Date</b>	January 15, 2025
<b>Bid Opening Date</b>	February 4, 2025, 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, February 4, 2025.

### **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.

### **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**

For purpose of evaluation where an equivalent product is being furnished, bidder must indicate any variation to our specifications no matter how slight. If no variations are indicated, it will be construed that the bid fully complies with our specifications.

### **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.

### **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/reasury/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](http://www.elec.state.nj.us).

### **Statement of Ownership**

The provisions of N.J.S.A. 52:25-24.2 applies 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](http://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.

**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 line item basis.

## *Specifications and Scope of Work*

### **SCOPE OF WORK**

Please see "Attachments", "Project Documents", for detailed specifications.

## ***Intent***

### **CONTRACT TERMS**

The contract shall be one (1) year 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.

### **NO ASSIGNMENT**

This agreement shall not be assigned without the written consent of the County of Ocean which consent shall not be unreasonably withheld. Assignee shall promptly prepare and complete such documents as the County shall require.

### **OWNERSHIP DISCLOSURE**

All contractors shall comply with all laws governing the disclosure of all stockholders or partners, as included in N.J.S.A. 52:25-24.2.

### **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.

### **EVALUATION**

The quality of the equipment supplied, their conformity with the specifications, their suitability to requirements, delivery terms, guaranty clauses, price of the materials shall all be taken into consideration. Where equivalent equipment is offered, the County will determine if the proposed item is equal or better than that specified.

### **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.

## **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.

## **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."

## **WARRANTY**

Equipment shall be unconditionally guaranteed for a minimum of one (1) year beginning after the acceptance by the County, including all labor, parts, travel time and freight. Manufacturer's warranty shall apply if greater.

## **AVAILABILITY AND DELIVERY**

Where the item bid is not a stock item, the bidder shall state lead time needed for delivery, After Receipt of Order, (A.R.O.). 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.

## **N.J.D.O.T. APPROVAL**

All traffic signal equipment, poles, arms, and hardware must meet N.J.D.O.T. specifications and have a current N.J.D.O.T. approval number.

## **COMPLIANCE TO MINIMUM BID REQUIREMENTS / EQUIVALENT PROPOSALS**

These specifications intend to describe and govern the purchase of a new and unused VARIOUS EQUIPMENT FOR THE TRAFFIC DIVISION 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](http://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.**

[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 and 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/BRCLLoginJsp.jsp](https://www1.state.nj.us/TYTR_BRC/jsp/BRCLLoginJsp.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)**

**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

**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***

### **VARIOUS EQUIPMENT FOR THE TRAFFIC DIVISION**

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
1	Aluminum "C" Pole, As Specified	20	EA					
2	Aluminum "C" Pole, As Specified, Black Epoxy Powder Coat Finish	10	EA					
3	TB-2 Bases with Anchorage	50	EA					
4	TB-2 Bases with Anchorage, Black Epoxy Powder Coat Finish	10	EA					
5	15' K Mast Arms	10	EA					
6	15' K Mast Arms, Black Epoxy Powder Coat Finish	10	EA					
7	20' K Mast Arms	10	EA					
8	20' K Mast Arms, Black Epoxy Powder Coat Finish	10	EA					
9	25' K Mast Arms	10	EA					
10	25' K Mast Arms, Black Epoxy Powder Coat Finish	10	EA					
11	30' K Mast Arms	10	EA					
12	30' K Mast Arms, Black Epoxy Powder Coat Finish	10	EA					
13	15' T Mast Arms	10	EA					
14	15' T Mast Arms , Black Epoxy Powder Coat Finish	10	EA					
15	20' T Mast Arms	10	EA					
16	20' T Mast Arms, Black Epoxy Powder Coat Finish	10	EA					
17	25' T Mast Arms	10	EA					
18	25' T Mast Arms, Black Epoxy Powder Coat Finish	10	EA					
19	Mast Arm Back Plates for K Mast Arm	40	PR					
20	ECS-30 MA Aluminum Arm	2	EA					
21	ECS-35 MA Aluminum Arm	2	EA					
22	ECS Pole Base with Hardware	115	EA					
23	8' Aluminum Ped Pole with Caps	50	EA					
24	8' Aluminum Ped Pole with Caps, Black Epoxy Powder Coat Finish	10	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
25	10' Aluminum Pedestal Poles	20	EA					
26	10' Aluminum Pedestal Poles, Black Epoxy Powder Coat Finish	10	EA					
27	12' Aluminum Pedestal Poles	20	EA					
28	12' Aluminum Pedestal Poles, Black Epoxy Powder Coat Finish	10	EA					
29	16' Aluminum Ped Pole	10	EA					
30	16' Aluminum Ped Pole, Black Epoxy Powder Coat Finish	10	EA					
31	16' Ped Pole with Transition Base & Pole Cap	20	EA					
32	6' Aluminum Ped Pole with Transition Base and Pole Cap	50	EA					
33	6' Aluminum Ped Pole with Transition Base and Pole Cap, Black Epoxy Powder Coat Finish	10	EA					
34	Square D B-100 1" Raintight HUB	10	EA					
35	Square D B-150 1 1/2" Raintight HUB	10	EA					
36	Square D Electrical Held Lighting Contactor 8903LG40	10	EA					
37	14' Aluminum Ped Pole with Transition Base	20	EA					
38	12' Aluminum Ped Pole with Transition Base and Pole Cap Color: Black Epoxy Powder Coat	20	EA					
39	16' Aluminum Ped Pole with Transition Base and Pole Cap Color: Black Epoxy Powder Coat	20	EA					
40	3/4" Pedestal Pole Anchorage	80	SET					
41	12' K Pole Aluminum	2	EA					
42	12' K Pole Aluminum, Black Epoxy Powder Coat Finish	10	EA					
43	18' K Pole Aluminum	20	EA					
44	18' K Pole Aluminum, Black Epoxy Powder Coat Finish	10	EA					
45	K Pole Extension " L-E-S-X-Ext" Drawing B-98271 RevA	20	EA					
46	SFK Base with Anchorage (Foundation Type K) NJDOT Approved	30	EA					
47	SFK Base with Anchorage (Foundation Type K) NJDOT Approved, Black Epoxy Powder Coat Finish	10	EA					



Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
48	Pole & Base Collar Assembly, Alum Squarer Base , PB-5325 - PNC	50	EA					
49	8 Phase Controller "P" Cabinet per NJDOT Spec. EBTSC8CL/ with Econolite Cobalt Traffic Controller	10	EA					
50	8 Phase Controller "P" Cabinet per NJDOT Spec. EBTSC8CL/ with Econolite Cobalt Traffic Controller, Black Epoxy Powder Coat Finish	10	EA					
51	4 Phase Controller "K" Size Enclosure Cabinet with Pole Mound Bracket and Hardware with Econolite Cobalt Traffic Controller	10	EA					
52	4 Phase Controller "K" Size Enclosure Cabinet, "Base Mount" with 18" skirt	5	EA					
53	4 Phase Controller "K" Size Enclosure Cabinet, "Base Mount" with 18" Skirt with Econolite Cobalt Traffic Controller	10	EA					
54	GTT Opticom Model 764 Multimode Phase Selector 4 Channel, NO SUBSTITUTIONS	50	EA					
55	GTT Opticom Model 768 Auxiliary Interface Panel, NO SUBSTITUTIONS	50	EA					
56	GTT Opticom Model 1070 Cable (1000ft), NO SUBSTITUTIONS	10	EA					
57	GTT Opticom Model 760 Card Rack, NO SUBSTITUTIONS	10	EA					
58	18" Aluminum Skirt ONLY for K Size Cabinet	5	EA					
59	18" Aluminum Skirt ONLY for K Size Cabinet, Black Epoxy Powder Coat Finish	10	EA					
60	NEMA Flashers with Cabinets	10	EA					
61	Flasher Cabinet with Time Clock (Chronomex Time Switch) (1 Year Clock)	10	EA					
62	Fire Signal Flasher Cabinet with 115 V.A.C. Relay & Timer 0-5 Mins.	10	EA					
63	Tall Meter Cabinet 50"	20	EA					
64	Tall Meter Cabinet 50", Black Epoxy Powder Coat Finish	10	EA					
65	Mast Arm Back Plates for T Mast Arm	40	PR					
66	Aluminum T Pole	15	EA					
67	Aluminum T Pole, Black Epoxy Powder Coat Finish	10	EA					
68	2-Way Bracket 12" Signals with Bottoms	200	EA					
69	3-Way Bracket 12" Signals with Bottoms	20	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
70	Pelco Aluminum Span Wire Signal Mountings, 1-½" Horizontal Span Wire Assembly, Part No. AB-0127	50	EA					
71	Pole Clamp with 12" Nipples, 6"-8" per NJDOT Drawing T-0607	100	EA					
72	Pole Clamp with 12" Nipples, 8"-10" per NJDOT Drawing T-0607	100	EA					
73	Pole Clamp with 12" Nipples, 10"-12" per NJDOT Drawing T-0607	100	EA					
74	Astro Bracket (Mid-Mast Mount) Pelco - 2C Lamps	50	EA					
75	3M Astro Brackets - Pelco - 2C Lamps	30	EA					
76	Cluster Assembly, Cluster Band Mount with Cast Uppers 17" CTC, Pelco Astro-Brac #AB-0167-42, 42" Band Length	20	EA					
77	74" Astro Bracket Tube - Pelco	50	EA					
78	12" 3 Section Aluminum Back Plates with 2" Yellow Reflective Tape, McCain Signals, NO SUBSTITUTIONS	100	EA					
79	12" 3 Section Aluminum Back Plates with 2" Yellow Reflective Tape, Econolite	100	EA					
80	12" 4 Section Aluminum Back Plate with 2" Yellow Reflective Tape, Econolite	100	EA					
81	12" 4 Section Aluminum Back Plate with 2" Yellow Reflective Tape, McCain Signals	40	EA					
82	12" 3 section Aluminum Back Plate with 2" Yellow Reflective Tape, Chapel Hill	100	EA					
83	12" 4 section Aluminum Back Plate with 2" Yellow Reflective Tape, Chapel Hill	100	EA					
84	3 section (HAWK) Cluster Back Plate, Aluminum with 2" Reflective Tape	30	EA					
85	5 section (Doghouse) Cluster Backplate, Aluminum with 2" Reflective Tape	30	EA					
86	12" 3 Section Aluminum Back Plates with 2" Yellow Reflective Tape - Eagle	100	EA					
87	12" 4 Section Aluminum Back Plates with 2" Yellow Refelctive Tape - Eagle	25	EA					
88	8" Poly Signal Heads, As Specified	100	EA					
89	12" Aluminum Signal Heads with LED Color: Black or Yellow	40	EA					
90	12" Poly Signal Heads, As Specified	200	EA					
91	Programmable 12" signal head with LEDs, McCain	20	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
92	LED Full Field Hand/Man Pedestrian with Countdown and Housing U.S. Traffic #LEDP-HMC-001, or Equal	150	EA					
93	LED Hand/Man Pedestrian with Countdown Retro Kit	300	EA					
94	Vandal Resistant Push Button with LED, Momentary Bull Dog Polara # BDSP-14	200	EA					
95	12" Pelco GPL Louver #GL-1010-07	200	EA					
96	12" Standard Aluminum Louver Insert - Black Finish	60	EA					
97	4 ½" 1-Way Slipfitter	20	EA					
98	4 ½" Slipfitter 4-Way with Closures	20	EA					
99	Wire Entrance Fittings with Universal (DOT T-0401)	100	EA					
100	1 ½" Band-it Hubs	60	EA					
101	7/16" Span Wire Hander (S.S. Hardware)	30	EA					
102	3-Bolt Clamp (7/16" Span Wire)	40	EA					
103	7/16" Dead End	40	EA					
104	7/16" Strand Vise	40	EA					
105	⅝" x 12" Thimble-Eye Bolt	30	EA					
106	⅝" x 14" Thimble-Eye Bolt	30	EA					
107	⅝" Thimble-Eye Nut	60	EA					
108	⅝" Angle Thimble Eyelets	20	EA					
109	⅝" Forged Oval Eyenut	20	EA					
110	⅝" Square Nut	40	EA					
111	⅝" Square Pole Washer	40	EA					
112	14" Swamp Screw Anchor	10	EA					
113	7/16" Guy Guard	20	EA					
114	7/16" 20,000 lb. Test Span Wire, 1,000' Roll	5	ROLL					
115	¼" 4500 lb. Test Span Wire, 1,000' Roll	20	ROLL					
116	3-Bolt clamp (¼" Span Wire)	20	EA					
117	¼" Dead Ends	20	EA					
118	¼" Strand Vise	20	EA					
119	¼" Span Wire Splice	20	EA					
120	35' Class 5 Wood Pole	12	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
121	¼" x 4' Safety Chain	100	EA					
122	⅝" x 10' Copper Clad Ground Rod	50	EA					
123	⅝" Bronze Ground Rod Clamp (WB ⅝")	50	EA					
124	4" Square Box Surface Mount ½" KO	5	EA					
125	15 Amp. Single Pole Switch	5	EA					
126	4" Cover 1 Switch - 1 GFI Receptacle	5	EA					
127	20 Amp. GFI Receptacle	20	EA					
128	4" Blank Cover	10	EA					
129	100 Amp. Meter Socket with 1" Hub	10	EA					
130	70 Amp. Surface Mount Disconnect Q02-4L705	20	EA					
131	70 Amp. Rain Proof Disconnect Q02-4L70RB	20	EA					
132	15 Amp. Circuit Breaker (S.D. Q0115)	10	EA					
133	20 Amp. Circuit Breaker (S.D. Q0120)	10	EA					
134	30 Amp. Circuit Breaker (S.D. Q0130)	20	EA					
135	50 Amp. Circuit Breaker (S.D. Q0150)	20	EA					
136	70 Amp. Circuit Breaker (S.D. Q0170)	30	EA					
137	AGC ½ Amp. Fuse 125 V.A.C.	40	EA					
138	AGC 1 Amp. Fuse 125 V.A.C.	40	EA					
139	AGC 1 ½ Amp. Fuse 125 V.A.C.	40	EA					
140	AGC 2 Amp. Fuse 125 V.A.C.	40	EA					
141	AGC 5 Amp. Fuse 125 V.A.C.	40	EA					
142	½ Amp. Fuse 125 V.A.C. SLO-BLO	40	EA					
143	1 Amp. Fuse 125 V.A.C. SLO-BLO	40	EA					
144	1 ½ Amp. Fuse 125 V.A.C. SLO-BLO	40	EA					
145	10 Amp. Fuse 125 V.A.C. SLO-BLO	40	EA					
146	200 Amp 5 Terminal Commercial Lever Bypass Meter Pan with closure	30	EA					
147	200 Amp 5 Terminal Commercial Lever Bypass Meter Pan with 1" HUB	20	EA					
148	200 Amp 5 Terminal Commercial Lever Bypass Meter Pan with 1 1/2" HUB	25	EA					
149	1 1/2 " HUB for 200 Amp Meter Pan.	25	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
150	Closure plate for HUB Opening in 200 Amp. Meter Pan.	25	EA					
151	Cable Tie Base (T&B TC 5828)	200	EA					
152	Cable Tie Base (T&B TC 5344A)	200	EA					
153	Identification Cable Ties (T&B TY 5512M)	1,500	EA					
154	Plastic Cable Ties, 10 x 4"	2,000	EA					
155	Plastic Cable Ties, 10 x 8"	50	EA					
156	Sunlight Resistant Cable Ties, 30 x 15"	5,000	EA					
157	Duct Seal 1 lb.	200	EA					
158	Never-Seize, Brush Top Can	30	EA					
159	Scotchkote Sealer, 15 oz. Can	20	EA					
160	Scotch 7730 Splice Kits, 10/Box	5	BX					
161	Scotch 33+ Tape ¾" x 66' Black, 10/Box	250	BX					
162	Scotch 33+ Tape ¾" x 66' Blue, 10/Box	10	BX					
163	Scotch 33+ Tape ¾" x 66' Green, 10/Box	10	BX					
164	Scotch 33+ Tape ¾" x 66' Orange, 10/Box	10	BX					
165	Scotch 33+ Tape ¾" x 66' Red, 10/Box	10	BX					
166	Scotch 33+ Tape ¾" x 66' Yellow, 10/Box	10	BX					
167	Scotch 33+ Tape ¾" x 66' White, 10/Box	45	BX					
168	12/2 Romex Staples, 100/Box	5	BX					
169	#8 Armored Ground Wire Staples, 100/Box	5	BX					
170	3 Wire Male Connector Body (Hubbell 5266C)	20	EA					
171	3 Wire Female Connector Body (Hubbell 5269C)	20	EA					
172	Split Bolt Connector #8 Wire (S-8)	50	EA					
173	Copper Wire Lugs #121 Wire (SLU-35)	100	EA					
174	Copper Wire Lugs #2 Wire (BTC-208)	100	EA					
175	½" Romex Box Connectors	100	EA					
176	¾" Romex Box Connectors	100	EA					
177	Blue Wire Nuts MMBG	300	EA					
178	Red Wire Nuts (GB10006)	1,000	EA					
179	Yellow Wire nuts (GB10004)	5,000	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
180	Waterproof Wire Nuts 8-22 Gauge	2,000	EA					
181	Street Lighting Mast Arm, 8' per NJDOT Drawing T-0807	16	EA					
182	Street Lighting Mast Arm, 15' - per NJDOT Drawing T-0807	16	EA					
183	Over Head Vertical Roadway Lighting, 150w HPS Bulb, per NJDOT Drawing L-0107	16	EA					
184	Over Head Cobrahead Roadway Lighting, 150w HPS Bulb, per NJDOT Drawing L-0107	16	EA					
185	Pedestal Pole Base Base Type TS-1000 Transition Base	30	EA					
186	Intuicom Communicator II Wireless Data Transceiver, NO SUBSTITUTIONS	10	EA					
187	Intuicom DIO Wireless Transceiver, NO SUBSTITUTIONS	10	EA					
188	Array Pedestal Control Battery Cabinets ONLY Qty (2) For Type G/ K Cab on Meter, Reference Drawing 1-050-002115	50	EA					
189	RR2P-U 8 Pin AC120 V IDEC relay	15	EA					
190	SRP2P-06 IDEC Socket for 8 Pin relay	15	EA					
191	Model SE481616 - Alpha Technologies Complete UPS Stand Alone Nema 3R Aluminum Enclosure/Locking Door (48"x16"x16"), NO SUBSTITUTIONS	50	EA					
192	Model SE481616 - Alpha Technologies Complete UPS Stand Alone Nema 3R Aluminum Enclosure/Locking Door (48"x16"x16") NO SUBSTITUTIONS, Black Epoxy Powder Coat Finish	10	EA					
193	8" Riser Subbase for SE481616	10	EA					
194	8" Riser Subbase for SE481616, Black Epoxy Powder Coat Finish	10	EA					
195	12" Riser Subbase for SE481616	10	EA					
196	12" Riser Subbase for SE481616, Black Epoxy Powder Coat Finish	10	EA					
197	18" Riser Subbase for SE481616	30	EA					
198	18" Riser Subbase for SE481616, Black Epoxy Powder Coat Finish	10	EA					
199	FXM-HP2000 Rugged UPS Module Alpha Technologies 120 VAC Input /Output 48V dc Battery Bus, NO SUBSTITUTIONS	50	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
200	FXM-HP1100---Rugged UPS Module Alpha Technologies 120 VAC Input /Output 48V dc Battery Bus, NO SUBSTITUTIONS	100	EA					
201	FXM-HP650-24--Rugged UPS Module Alpha Technologies 120 VAC Input /Output 24V dc Battery Bus, NO SUBSTITUTIONS	20	EA					
202	FXM-HP650-48--Rugged UPS Module Alpha Technologies 120 VAC Input /Output 48V dc Battery Bus, NO SUBSTITUTIONS	20	EA					
203	Alpha Technologies Battery Cable Harness 24 Volt Battery Buss	20	EA					
204	Alpha Technologies 150XTV Battery 80 ah for use with Alpha FXM1100 Series UPS, NO SUBSTITUTIONS	100	EA					
205	Alpha Technologies 240XTV Battery 112 ah for use with Alpha FXM1100 Series UPS, NO SUBSTITUTIONS	100	EA					
206	Dialight 556-3505-304F 125V AC/ 1 inch Round Red Pael Mount Indicator Lamp/ Dome	300	EA					
207	U Bolt Security Hook with Mounting Hardware	300	EA					
208	Generator Input Cable/ Twelve Foot Oil Resistant SJTOW 10 AWG Power Cord w/One End Factory Wired 30A 125VAC 2W3P NemaL5-30R Female Locking Connector. Opposite End of the Cord is Wired with a L5-30P, 30A, 125VAC 2W3P Twist Lock Male Plug	300	EA					
209	Model SE481616 Cabinet Alpha Technologies NO SUBSTITUTIONS	10	EA					
210	Model SE481616 Cabinet Alpha Technologies NO SUBSTITUTIONS, Black Epoxy Powder Coat Finish	10	EA					
211	Complete Single Free Swinging Cluster Assembly/Doghouse 12" Traffic Signal with LEDS	6	EA					
212	Complete 2-way Free Swinging Cluster Assembly/Doghouse 12" Traffic Signal with LEDS	16	EA					
<b>NON INSULATED CRIMP STYLE SPADE TERMINALS</b>								
213	12-10 Wire No. 6 Stud	1,000	EA					
214	12-10 Wire No. 8 Stud	1,000	EA					
215	12-10 Wire No. 10 Stud	1,000	EA					
216	12-10 Wire ¼" Stud	1,000	EA					
217	14-16 Wire No. 6 Stud	1,000	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
218	14-16 Wire No. 8 Stud	1,000	EA					
219	14-16 Wire No. 10 Stud	1,000	EA					
220	14-16 Wire ¼" Stud	1,000	EA					
221	18-20 Wire No. 4 Stud	1,500	EA					
222	18-20 Wire No. 6 Stud	1,000	EA					
223	18-14 Wire No. 8 Stud	1,000	EA					
224	#8 Wire ¼" Stud Ring Terminal	1,000	EA					
225	#6 Wire ¼" Stud Ring Terminal	1,000	EA					
<b>INSULATED CRIMP STYLE QUICK SLIDE DISCONNECT</b>								
226	14-16 Wire ¼" Tab Female	2,000	EA					
227	14-16 Wire ¼" Tab Male	5,000	EA					
<b>CRIMP STYLE BUTT SPLICES</b>								
228	10-12 Wire Insulated	1,500	EA					
229	14-16 Wire Insulated	1,500	EA					
230	18-20 Wire Insulated	1,500	EA					
231	Nylon Insulated Crimp Joints (T&B RC55), or Equal	1,500	EA					
232	Amphenol #31-219RFX Female Coaxial Union	50	EA					
233	Amphenol #31-71032 Coaxial Crimp Connectors	100	EA					
<b>MISCELLANEOUS SIGNAL PARTS</b>								
234	4 Channel Detector Cards (NJDOT) 724DB, or Equal	100	EA					
235	4 Pos Channel Detector Rack with Power Supply (NJDOT) 201, or Equal	100	EA					
236	12 Channel Conflict Monitor (NEMA) with LCD Display and Logging/Reporting Capabilities	200	EA					
237	Econolite "D" Panel NO SUBSTITUTIONS	50	EA					
238	Econolite AS2M Master NO SUBSTITUTIONS	5	EA					
239	12" Econolite Poly Signal Head Complete with Tunnel Visor and LEDs. Color: Yellow & Black NO SUBSTITUTIONS	100	EA					
240	12 " Eagle Poly Signal Head Complete with Tunnel Visors and LEDs. Color: Yellow & Black, NO SUBSTITUTIONS	100	EA					



Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
241	12 " Chapel Hill Poly Signal Head Complete with Tunnel Visors and LEDs. Color: Yellow & Black, NO SUBSTITUTIONS	100	EA					
242	NEMA Flasher (NJDOT Approved)	200	EA					
243	NEMA Load Switch (NJDOT approved) Two LED Indicators per Circuit to Provide Confirmation of Input and Output States	200	EA					
244	NEMA L5-30R, 30A 125V 3 wire Connector Hubbell HBL2613	40	EA					
245	NEMA L5-30P, 30A 125V 3 wire Connector Hubbell HBL2611	40	EA					
246	IN4004 Diode	50	EA					
247	5AMP Bridge Diode	50	EA					
248	W21ACPx2 Flash Transfer Relay, or Equal	50	EA					
249	KRPA-14AG Relay (AMF)	20	EA					
250	KRPA-14DG Relay (AMF)	20	EA					
251	KRPA-11 AG Relay (AMF)	20	EA					
252	KUP-11A15 Relay (AMF)	20	EA					
253	KUP-11D15 Relay (AMF)	20	EA					
254	KUP-14A55 Relay (AMF)	20	EA					
255	27E121 Relay Socket	30	EA					
256	LED 2-Color Turn Arrow (EBTS-3) (Double Arrow)	100	EA					
257	Peek Unitrak Image Detector Card	10	EA					
258	Auto Scope 4 Channel Detector Card	30	EA					
259	UPS Battery Backup for P Cabinet / NJDOT Approved / Alpha Technologies FXM1100/ NO SUBSTITUTIONS	300	EA					
260	UPS Automatic Transfer Switch / NJDOT Approved / Alpha Technologies / NO SUBSTITUTIONS Complete with Mounting Bracket and Wiring Harness	300	EA					
261	UPS Automatic Generator Transfer Switch / NJDOT Approved / Alpha Technologies / NO SUBSTITUTIONS Complete with Mounting Bracket and Wiring Harness	300	EA					
262	Alpha Technologies 195 XTV Battery For use with Alpha FXM1100 UPS/ NO SUBSTITUTIONS	1,200	EA					
263	Alpha Technologies Battery Cable harness / 48 Volt Battery Buss / NO SUBSTITUTIONS	300	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
264	Aluminum Enclosure with 30A Generator Input Receptacle / Wiring Harness / Locking Door Mounting Plate Template / Gasket / Mounting Hardware / Field Installable	300	EA					
265	Aluminum Enclosure with 30A Generator Input Receptacle / Wiring Harness / Locking Door Mounting Plate Template / Gasket / Mounting Hardware / Field Installable, Black Epoxy Powder Coat Finish	300	EA					
266	8" Red L.E.D. Retro Kits	25	EA					
267	8" Yellow L.E.D. Retro Kits	25	EA					
268	8" Green L.E.D. Retro Kits	50	EA					
269	12" Red L.E.D. Retro Kits	100	EA					
270	12" Yellow L.E.D. Retro Kits	100	EA					
271	12" Green L.E.D. Retro Kits	100	EA					
272	12" Red L.E.D. Arrow	50	EA					
273	12" Yellow L.E.D. Arrow	50	EA					
274	12" Green L.E.D. Arrow	50	EA					
275	8" Poly-Tunnel Visor	50	EA					
276	12" Poly-Tunnel Visor	500	EA					
277	1 1/2" Aluminum Serrated Elbows with Set Screws	25	EA					
278	1 1/2" x 10' Aluminum Pipe	20	EA					
279	Mark-Out Paint (Electric), Red, Upside Down Spray	200	EA					
280	Band-It 5/8" S.S. Strapping (C-205), 100 Ft./Roll	5	ROLL					
281	Band-It 5/8" S.S. Buckles (C-255), 100/Box	3	BX					
282	Band-It 5/8" Brackets (D-004)	150	EA					
283	DR3-RTFB-01A Red LED for 3M-Signal	30	EA					
284	DR3-YTFB-01A Yellow LED for 3M-Signal	30	EA					
285	DR3-GTFB-01 Green LED for 3M-Signal	30	EA					
286	Red Signal Ahead Sign, per NJDOT Drawing T-1407	6	EA					
287	No Right Turn Lighted Sign, per NJDOT Drawing T-1407	6	EA					
288	Photo Control 105-285 V twist lock cell (PTL-8)	20	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
289	Photo Control Receptacle with Bracket (K122)	20	EA					
290	JSF Technologies AB-7412 Dual 12", vertical pole mounting assemblies Color: Black, NO SUBSTITUTIONS	20	EA					
291	JSF Technologies AB-4400 Pedestrian Activated Pole Top Transmitter Color: Black, NO SUBSTITUTIONS	20	EA					
292	VAL Valet LED #VAL-E02-LED-E-U-WQ-AP-WM	4	EA					
293	Holphane Mongoose Medium LED # MGLEDM P2 40K MVOLT FT UN GRSD	20	EA					
294	Push Button Switch Cord for police panel manual controls	30	EA					
295	Transformer Door, Plastic (T) PB-0522-0506-PNC	30	EA					
296	Transformer Door, Plastic (K) PB-0522-19-PNC	30	EA					
297	Transformer Door, Plastic (T w/latch) PB-0522-08-PNC	30	EA					
298	Shim 1/8" x 2" x 2", Steel, Galv PB-0603-GLV	100	EA					
299	Shim 1/16" x 2" x 2", Steel, Galv PB-0602-GLV	10	EA					
300	Hardware Kit, Transformer Base/Pole (Set of 4) DOT Drawing #T-0107	30	EA					
301	Industrial DIN Rail Hardened Power Supply PS-AMR1-12	20	EA					
302	1 Port Ethernet over UTP Extender (Hardened) #CLFE1EOU	20	EA					
303	Direct Burial UTP CAT5 cable	2,000	LF					
304	Hub Plate Extended 1 1/2" NPS w/ Downhole, Alum SE-0382- 3/4"- PNC	40	EA					
305	Removable Tenon Adapter T1A-R-6-NJDOT Drawing # 9694-R1	20	EA					
<b>3-M OPTICOM PRE-EMPTIONS ONLY - NO SUBSTITUTIONS</b>								
306	138 Detector Head Lead-in Wire	3,000	LF					
307	722 Detector Head	100	EA					
308	754 Phase Selector	20	EA					
309	760 Card Rack	50	EA					
310	711 Detector, single Channel, One Direction	20	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
311	762 Phase Selector/ 2 Channel/ IR Only	30	EA					
312	2100 GPS Vehicle Kit ( High Priority)	3	EA					
313	794H IR LED Vehicle Unit Emitter ( High Priority)	2	EA					
314	1070 GPS Detector Cable, 250 Ft roll	20	ROLL					
<b>MISCELLANEOUS SUPPLIES</b>								
315	TEKS Self-Drilling Screws ¼ - 14 x ¾"	250	EA					
316	TEKS Self-Drilling Screws ¼ - 14x1"	250	EA					
317	TEKS Self-Drilling Screws ¼ - 14 x 1 ½"	250	EA					
318	Portland Cement, 90 lb. Bag	100	BAG					
319	3M-5000 Loop Sealant, 5 Gallon Can	10	CAN					
320	#6 XLP Stranded Wire-Black	10,000	LF					
321	#8 XLP Stranded Wire-Black	4,000	LF					
322	#8 XLP Stranded Wire - Green	10,000	LF					
323	#6 Stranded Wire-Bare	1,000	LF					
324	#8 Stranded Wire-Bare	2,000	LF					
325	14/3 SJ Cord	500	LF					
326	Adhesive Remover, Citrus Base, 5 Gallon Solvent Free Can	10	CAN					
327	Bondo 606V Epoxy, 1 Gallon Container	30	CONT					
328	3M High Gel Re-enterable Encapsulant 8882, 750 Gram Container	20	CONT					
329	10/2 Romex Cable	500	LF					
330	10/2 UF Cable	500	LF					
331	10/3 Romex Cable	500	LF					
332	14/2 P.V.C. Jacket Cable (IMSA 19-1)	10,000	LF					
333	14/4 P.V.C. Jacket Cable (IMSA 19-1) (Black, Red, Green, White)	10,000	LF					
334	14/5 P.V.C. Jacket Cable (IMSA 19-1) (Red, Green, White, Black, Orange)	20,000	LF					
335	14/7 P.V.C. Jacket Cable (IMSA 19-1)	20,000	LF					
336	18/2 PVC Jacket Cable	500	LF					
337	14/10 PVC Jacket Cable (IMSA 19-1)	8,000	LF					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
338	24 Hour Solar Flashing Beacon, 8" Red JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	5	EA					
339	24 Hour Solar Flashing Beacon, 8" Yellow JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	5	EA					
340	24 Hour Solar Flashing Beacon, 12" Red JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	24	EA					
341	24 Hour Solar Flashing Beacon, 12" Yellow JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	20	EA					
342	Solar Ped-X Wireless Cross Walk System, 2 Pole System with Buttons	6	EA					
343	Solar Ped-X Wireless Cross Walk System, 3 Pole System with Buttons	6	EA					
344	4 Way Signal Head Brackets, per NJDOT drawing T-0507 with Bottom	30	EA					
345	Astro- Brac Stellar Assy, 1-way for OPS Band Mount , Tri Bolt Pelco # AS-0103-3-48-SS-PNC	20	EA					
346	Astro- Brac Stellar Assy, 1-way for OPS Band Mount , Tri Bolt Pelco # AS-0103-4-48-SS-PNC	20	EA					
347	Astro- Brac Stellar Assy, 1-way for OPS Band Mount , Tri Bolt Pelco # AS-0103-5-48-SS-PNC	20	EA					
348	Astro-Brac Stellar Assy, 5 Sec Cluster for OPS Signals Band Mount Pelco # AS-0191-48-SS-PNC	20	EA					
349	Astro-Brac Stellar Assy, 5-Sec Cluster Band Mount Pelco #AS-0109-48-PNC	20	EA					
350	Clamp Screw Kit, 7/16"-14, Stainless Pelco# AB-204-SS	50	EA					
351	V Bolt Kit, 5/16"-18 Stainless Pelco# AB-0256-SS	100	EA					
352	Slip Fitter Assy, 1 Way Offset for 4-1/2" OD pole Pelco # SE-3310-PNC	30	EA					
353	Pelco# SM-200-BRS Long Key, Type 1 Cabinet Lock, 2-5/8"	50	EA					
354	Signal Closure Kit, Plastic Pelco # SE-3054-P01	100	EA					
355	1- Way Kit, 8-1/2" CTC, Alum Pelco # AB-4005-PNC	50	EA					
356	Astro- Brac Gusseted tube w/ 3/4" Opening & PVC Insert, 1-1/2" x Length, Threaded One End Pelco# AB-2003-74-PNC	20	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
357	Astro- Brac Gusseted tube w/ 3/4" Opening & PVC Insert, 1-1/2" x Length, Threaded One End Pelco# AB-2003-46-PNC	40	EA					
358	Astro- Brac Gusseted tube w/ 3/4" Opening & PVC Insert, 1-1/2" x Length, Threaded One End Pelco# AB-203-58-PNC	20	EA					
359	Astro-Brac, Stellar Series Clamp Kit, Band Mount Pelco# AS-3004-48-SS-PNC	20	EA					
360	Astro-Brac, Stellar Series Clamp Kit, Tenon Mount Pelco # AS-3010-PNC	20	EA					
361	Astro Mini Bracket Clamp Kit AB-0121-48-SS-PNC	50	EA					
362	Hubbell Weatherproof Boot HBL6031	40	EA					
363	Hubbell Weatherproof Boot HBL6032	40	EA					
364	2 Way Standar H Bar Pelco SP-6025-18-PNC	20	EA					
365	Preformed Conduit Strap Pelco SP-6049-3-PNC	10	EA					
366	Conduit Stand - Off Bracket with Adjustable Stand Off and H Bar Pelco SP-6042-18-PNC	10	EA					
367	Bluewave Guardian Yagi Antennas	10	EA					
368	Tenergy 12.8 V 15Ah Battery Pack with PCB (DGR-A)	20	EA					
369	1 Section Signal Head Cover	20	EA					
370	Pedestrian Crossing Signal Head Cover	32	EA					
371	3 Section Signal Head Cover	50	EA					
372	4 Section Signal Head Cover	20	EA					
<b>POLARA ENGINEERING NAVIGATOR APS SYSTEMS, OR EQUAL</b>								
373	2 Button with Control and Programmer	15	EA					
374	4 Button with Control	15	EA					
375	6 Button with Control	15	EA					
376	752 Phase Selector	40	EA					
377	721 Detector Head	100	EA					
378	iNS23TN0-X** 9x15 iNS2/ 2 Wire APS Push Button Station (Black Or Yellow Color)	10	EA					
379	iDS23RN0-X** 9x15 iNS2/2 wire APS Push Button Station with iDetect Feature & Sign (-Black, -Yellow Color )	10	EA					
380	iNs Complete 2 Button System	10	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
381	iNs Complete 4 Button System	10	EA					
382	iNs Complete 8 Button System	10	EA					
383	iDs Complete 2 Button System	10	EA					
384	iDs Complete 4 Button System	10	EA					
385	iDs Complete 8 Button System	10	EA					
386	iCCU-S2 , iCCU Shelf Model, includes BIU Capability	10	EA					
387	ACCP - Any Cabinet Cable Package (includes CABLE-A, CABLE-C,iN2-ICB)	10	EA					
388	iN2-ICB - Interconnect Board for iCCU-S/iCCU-S2	10	EA					
389	iN2-SDLC-CABLE - SDLC Cable (6' length)	50	EA					
390	iN2-SDLC-YCABLE - SDLC Cable Splitter (4' length)	50	EA					
391	BTN-PLC-CABLE - 2 Wire Cable/ One End Has a Connector That Plugs into the Button PLC Location on the Front of an iCCU-S2, and the Other End Connects to the PLC terminals on the iN2-ICB	10	EA					
392	iN-DGL iNavigator Bluetooth Dongle	20	EA					
393	Polara 800H-84 Option T- MUTCD R10-3e sign 9" x 15" Right/Left Arrow	80	EA					
394	Polara 800H-99 Option T- MUTCD R10-3e sign 9"x15" Bi Directional Arrow	20	EA					
<b>AUTOSCOPE IMAGE DETECTION SYSTEM</b>								
395	Econolite Autoscope Solo Mini Hub TS-2 NO SUBSTITUTIONS	10	EA					
396	Econolite Autoscope Solo Terra Interface Panel (TIP) NO SUBSTITUTIONS	10	EA					
397	Econolite Autoscope Solo Terra Access Point (TAP) NO SUBSTITUTIONS	10	EA					
398	Econolite Autoscope Rack Vision Terra Machine Vision Processor (MVP) NO SUBSTITUTIONS	10	EA					
399	Econolite Autoscope Vision Comm Manager Interface Panel/ NO SUBSTITUTIONS	20	EA					
400	Econolite Vision Camera NO SUBSTITUTIONS	20	EA					
401	Econolite Autoscope Encore Camera Branch Cable, 1000ft. / NO SUBSTITUTIONS	10	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
402	Econolite Autoscope Vision Camera Branch Cable, 1000ft./ NO SUBSTITUTIONS	10	EA					
403	Econolite Hub Enclosure for TAP / NO SUBSTITUTIONS	25	EA					
404	Econolite Power Supply for TAP Hub Enclosure / NO SUBSTITUTIONS	50	EA					
405	Sky Bracket Camera Mounting Hardware with 3ft. Vert. extention for Vision Camera	20	EA					
406	Econolite Terra Interface Panel (TIP) for Encore Camera / NO SUBSTITUTIONS	25	EA					
407	Econolite Terra Access Point (TAP) for Encore Camera / NO SUBSTITUTIONS	25	EA					
408	Econolite Encore Terra I / O Cable Set (TIP-to-TAP Cable & TS-1 Input / Output Harn.) NO SUBSTITUTIONS	50	EA					
409	Complete Econolite Vision Video Detection System (4) way approach/ NO SUBSTITUTIONS	20	EA					
410	Complete Econolite Vision Video Detection System (2) way approach/ NO SUBSTITUTIONS	20	EA					
411	Wavetronix SmartSensor Matrix NO SUBSTITUTIONS	20	EA					
412	Sensor Mounting Bracket for Wavetronix Smart Sensor Matrix Part number SS611 NO SUBSTITUTIONS	20	EA					
413	60 ft Drop Cable with connector for Wavetronix Smartsensor Matrix Part # SS704-60ft NO SUBSTITUTIONS	20	EA					
414	Sensor Branch Cable (250ft Each) for Wavetronix Smartsensor Matrix Part number SS750-250 NO SUBSTITUTIONS	20	EA					
415	4' SDLC Y Cable Wavetronics Smartsensor Matrix SDLCY 310041	20	EA					
416	4' SDLC Cable for Wavetronic Smartsensor Matrix Part number 310-0411	20	EA					
417	Wavetronix Smartsensor Matrix Radar Presence Detector (RPD) Complete System for (2) Way Approach	10	EA					
418	Wavetronix Intersection Preassembled Backplate - AC NO SUBSTITUTIONS	8	EA					
419	SR-Series Fixed-Site Thermal Security Cameras	5	EA					
420	TSL Throat Seal, Liquid #206-994, Half Pint Size	2	BTL					



Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
421	Manual Lighted Crosswalk System LaneLight 18 Light Complete	5	EA					
422	Manual Lighted Crosswalk System LaneLight 22 Light Complete	4	EA					
423	LaneLight Controller	4	EA					
424	LaneLight Water Block Control Cable	5,000	LF					
425	LaneLight MLK150 Light with Amber LED	100	EA					
426	Serial GPS Time Sync for Econolite Cobalt / ASC3 /ASC2M Traffic Controller / No Substitutions 1711369502 GPS with 16x w / DB25 Cable	30	EA					
427	Econolite "Cobalt" Fully Actuated Traffic Controller	30	EA					
428	Skybracket Signal Mast Arm Kits for (3) Section Signals SB29-46	50	EA					
429	Skybracket Signal Mast Arm Mounting Kits for (4) Section Signals	50	EA					
430	Skybracket Signal Mast Arm Mounting Kits for (5) Section Signals	50	EA					
431	Skybracket Signal Mast Arm Mounting Kits for (3) Section 3M Pv Optical Signals	50	EA					
432	Skybracket Signal Mast Arm Mounting Kits for Standard Cluster Assembly SB29SCB-37	50	EA					
433	Skybracket Adjustable Camera Mount Kit / SB29-ACM-29 with 60" Tube / 29" banding	50	EA					
434	NWA-7-3X 3" Conduit Stand Off with 20-24" crossbar	50	EA					
<b>#14 LOOP DETECTOR WIRE, #14-2 COND. SHIELD LOOP LEAD-IN WIRE &amp; CABLES</b>								
435	#14 Loop Detector Wire per NJDOT 2007 Spec. 918.02.02 Traffic Parts #543, or Equal	500	LF					
436	#14-2 Cond Shield Loop Lead-in Wire per NJDOT 2007 Spec. 918.02.02 Traffic Parts #539, or Equal	500	LF					
437	Advanced Traffic Sensor Composite Cable	1,500	LF					
438	½" Foam Dielectric Coaxial Cable	1,000	LF					
<b>CONDUIT &amp; FITTINGS</b>								
439	½" Recessed Pipe Plug	10	EA					
440	½" Close Nipple	40	EA					
441	¾" Rigid Conduit	100	LF					
442	¾" Rigid Coupling	20	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
443	¾" 90 Degree Sweep	30	EA					
444	¾" LB with Cover & Gasket	30	EA					
445	¾" Pipe Tee (Plumbing Type)	20	EA					
446	¾" x ½" Reducer Bushing	10	EA					
447	¾" Recessed Pipe Plug	10	EA					
448	¾" 1-Hole Conduit Strap	100	EA					
449	¾" Lock Nut	150	EA					
450	¾" Plastic Bushing	20	EA					
451	¾" Grounding Bushing	50	EA					
452	¾" Offset Nipple	50	EA					
453	¾" x 3" Nipple	30	EA					
454	¾" x 4" Nipple	30	EA					
455	¾" x 5" Nipple	30	EA					
456	¾" x Short Nipple	30	EA					
457	¾" Close Nipple	30	EA					
458	¾" Threaded Entrance Head	30	EA					
459	1" Close Nipple	30	EA					
460	1" Recessed Pipe Plug	30	EA					
461	1" Short Nipple	30	EA					
462	1" Ground Bushing	30	EA					
463	1" Plastic Bushing	100	EA					
464	1" Locknut	150	EA					
465	1" x ¾" Reducer Bushing	30	EA					
466	1" x 3" Nipple	30	EA					
467	1 ½" 1 Hole Rigid Pipe Strap	100	EA					
468	1 ½" Rigid Conduit Coupling	20	EA					
469	1 ½" Threadless Coupling (Compression Type)	20	EA					
470	1 ½" Close Nipple	20	EA					
471	1 ½" Rigid Conduit	100	LF					
472	1 1/2" Rigid Locknut	200	EA					
473	1 ½" Short Nipple	30	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
474	1 ½" x ¾" Reducer Bushing	30	EA					
475	1 ½" x 4" Nipple	30	EA					
476	1 ½" x 6" Nipple	30	EA					
477	1 ½" x 8" Nipple	30	EA					
478	1 ½" x 10" Nipple	30	EA					
479	1 ½" 90 Degree Sweep	50	EA					
480	1 ½" Pipe Tee (Plumbing Type)	20	EA					
481	1 ½" Recessed Pipe Plug	20	EA					
482	1 ½" Plastic Push Penny	20	EA					
483	1 ½" Threadless Grounding Bushing	20	EA					
484	1 ½" Threaded Grounding Bushing	30	EA					
485	1 1/2 Threaded Plastic Bushing for Rigid Conduit	100	EA					
486	1 ½" 90 Degree Liquid-Tite Connector	20	EA					
487	1 ½" Straight Liquid-Tite Connector	20	EA					
488	1 ½" P.V.C. Conduit	100	LF					
489	1 ½" P.V.C. Coupling	20	EA					
490	1 ½" P.V.C. Entrance Head	20	EA					
491	1 ½" P.V.C. Male Adapter	20	EA					
492	1 ½" lb. with Cover & Gasket	50	EA					
493	1 ½" Liquid-Tite Conduit	50	FT					
494	2" Rigid Metallic Conduit	100	LF					
495	2" Rigid Coupling	30	EA					
496	2" Threadless Coupling (Compression Type)	20	EA					
497	2" x Close Nipple	30	EA					
498	2" x 4" Nipple	30	EA					
499	2" x 6" Nipple	30	EA					
500	2" x 8" Nipple	30	EA					
501	2" x 10" Nipple	30	EA					
502	2" Grounding Bushing	100	EA					
503	2" Threadless Grounding Bushing	20	EA					
504	2" Plastic Bushing	20	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
505	2" x 1 ½" Reducer Bushing	20	EA					
506	2" x ¾" Reducer Bushing	20	EA					
507	2" 1-Hole Rigid Pipe Strap	150	EA					
508	2" 90 Degree Rigid Sweep	30	EA					
509	2" Pipe Tee (Plumbing Type)	20	EA					
510	2" L Box with Gasket & Cover	20	EA					
511	2" Lock Nut	50	EA					
512	2" Threaded Entrance Head	20	EA					
513	2" Liquid-Tite Flexible Conduit	50	LF					
514	2" 90 Degree Liquid-Tite Connector	30	EA					
515	2" Straight Liquid-Tite Connector	30	EA					
516	2" Recessed Pipe Plug	20	EA					
517	2" P.V.C. Male Adapter	20	EA					
518	2" P.V.C. Conduit	100	LF					
519	2" P.V.C. Coupling	20	EA					
520	2" P.V.C. Entrance Head	20	EA					
521	2" Plastic Push Penny	20	EA					
522	2" P.V.C. Sweep, 90 Degrees	20	EA					
523	2" P.V.C. lb. with Gasket & Cover	20	EA					
524	3" P.V.C. Conduit	100	LF					
525	3" Rigid Conduit	1,000	LF					
526	3" Rigid Conduit Coupling	100	EA					
527	3" Threadless Coupling (Compression Type)	20	EA					
528	3" Close Nipple	30	EA					
529	3" x 4" Nipple	30	EA					
530	3" x 6" Nipple	30	EA					
531	3" x 8" Nipple	30	EA					
532	3" x 10" Nipple	30	EA					
533	3" x 12" Nipple	30	EA					
534	3" 90 Degree Sweep	100	EA					
535	3" 45 Degree Sweep	60	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
536	3" 22 ½ Degree Sweep	30	EA					
537	3" Recessed Pipe Plug	20	EA					
538	3" Plastic Push Penny	20	EA					
539	3" Grounding Bushing	200	EA					
540	3" Threadless Grounding Bushing	40	EA					
541	3" x 2" Threaded Reducer Bushing	40	EA					
542	Pole Plate, 1 ¼" Bottom Hole, Traffic Parts #1176, or Equal	20	EA					
543	Pole Plate, No Hole, Traffic Parts #1177, or Equal	20	EA					
544	Balance Adjuster with SS Bushing, Traffic Parts #4368, or Equal	30	EA					
545	Indoor Load Center, Siemens E0408ML1125F, or Equal	15	EA					
546	Preformed Conduit Strap Pelco SP-6049-3-PNC	40	EA					
547	Conduit Stand - Off Bracket with Adjustable Stand Off and H Bar Pelco SP-6042-18-PNC	20	EA					
<b>OTHER</b>								
548	Aerosol Rust Remover per Case Please Indicate #/Case and Size oz. in Comments	3	CASE					
549	WD40 Aerosol per Case Please Indicate #/Case and Size oz. in Comments	4	CASE					
550	PX1001C DeTour for Rodents, 12 - 10oz. Tubes per Case, or Equal	4	CASE					
551	6" Copper Mesh, 400' Roll	5	ROLL					
552	18" Split Sub Base Skirt for "P" Cabinet with Adjustable Shelves	80	EA					
553	18" Split Sub base Skirt for "P" Cabinet with Adjustable Shelves, Black Epoxy Powder Coat Finish	80	EA					
554	Polara Aluminum Push Button Cup "Powder Coat Yellow"	50	EA					
555	Universal Battery UB12100-S 12V 10ah Rechargeable Battery	100	EA					
556	Universal Battery UB12150 12V 15ah Rechargeable Battery	50	EA					
557	Cyclon 2V 25.0 AH BC Cell Rechargeable Battery	100	EA					
558	Sealed Lead Acid Battery # UN12220	10	EA					

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	No Bid	Delivery, A.R.O.	Comments
559	Panel Mount Flashers Model 25DF 60-135VAC 25 amps	20	EA					
560	"Hybrid" Power Relay 418 Series 120VAC 75 amps	20	EA					
561	RR2 PU Power Relay 8 pin AC12V	20	EA					
562	Opticom 3100 GPS Radio Unit Containing a GPS Receiver with Antenna and a 2.4 GHZ Spread Spectrum Transceiver with Antenna	50	EA					
563	Holophane Mongoose Medium LED # MGLEDM P1 40K MVOLT FT VH GRSD	20	EA					
564	Tee, Serrated, 1 1/2" NPS, Alum SE-0458-PNC	20	EA					

**SCOPE OF WORK****SUPPLEMENTARY SPECIFICATIONS****SECTION 101-GENERAL INFORMATION****Subsection 101.01 Introduction**

The following is added to this Subsection of the Standard Specifications:

Whenever any Section, Subsection, Subpart or Subheading is amended by such terms as changed to, deleted or added, it is construed to mean that it amends that Section Subsection, Subpart or Subheading of the 2007 Standard Specification.

Whenever any reference to page number is made, it is construed to refer to the 2007 Standard Specifications.

**Subsection 101.03 Terms**

All references to “Department” or “State” shall be interpreted to mean “County”. All references to “Engineer” or R.E. shall be interpreted to mean “County Engineer”.

The following terms and their meanings are added to this Subsection of the Standard Specifications:

County business day, a calendar day, exclusive of Saturdays, Sundays, State recognized holidays, and such other holidays or County office closings as declared by the Board of Commissioners.

**SECTION 102-BIDDING REQUIREMENTS AND CONDITIONS****Subsection 102.10 Submission of Bids**

The second paragraph of this Subsection of the Standard Specifications is amended to read as follows:

Enclosed in the sealed envelope with the Proposal shall be submitted the following documents:

- An Acknowledgment of Receipt of Addenda or Revision (if issued).
- An Ownership Certificate in accordance with the following paragraph.
- A Copy of Bidder’s New Jersey Business Registration Certificate.

Every corporation and/or partnership submitting a bid, shall accompanying said bid, submit a statement setting forth the names and addresses of all stockholders in the corporation, or partners in the partnership, who own 10% or more of its stock, of any class, or of all individual partners in the partnership who own a 10% or greater interest therein, as the case maybe. If one or more such stockholder, or partner, is itself a corporation, or partnership, the stockholders holding 10% or more of that corporation’s stock, or the individual partners owning 10% or greater interest in the partnership, as the case may be, shall also be listed. This disclosure shall be continued until the names and addresses of every non-corporate stockholder, and individual partner, exceeding the 10% ownership criteria established by this Notice, shall have been listed.

The third paragraph of this Subsection of the Standard Specification is hereby deleted.

SECTION 102-BIDDING REQUIREMENTS AND CONDITIONS (Cont'd)Subsection 102.15 Irregular Bids

The following is added to this subsection of the standard specifications.

If the proposal does not contain a unit price for each pay item listed or a total contract price. In the case of alternate items or alternate groups of items, the bidder shall provide prices as stated in Subsection 102.07 and the proposal.

If the Proposal is not accompanied by an Ownership Certificate as specified in Subsection 102.10 of these Supplemental Specifications.

SECTION 103-Award and Execution of ContractSubsection 103.01 Award of Contract

The first paragraph of this Subsection of the Standard Specifications is changed to read as follows:

The Award of Contract, if it be awarded, will be to the lowest responsible bidder whose Proposal conforms in all respects to the requirements set forth in the Contract Documents. The County will award the Contract or reject all bids within 60 days after the bids are received. When the County cannot make an unconditional award, this time limit may be extended by mutual agreement for one 30-day interval. Each item listed is a separate bid for which a separate award will be made.

SECTION 107-LEGAL RELATIONS107.01.01 Applicable Law

The following is added to this Subsection of the Standard Specifications:

Attention of the Contractor is called to the following State laws and regulations:

Chapter 162, of the Laws of 1962, as amended by Chapter 185, of the Laws of 1962, (N.J.S.A. 45:5A-1, et seq) which provides that the installation, erection, repair or alteration or electrical equipment for the generation, transmission or utilization of electrical energy must be performed by an electrical contractor duly approved and licensed by the New Jersey Board of Examiners of Electrical Contractors.

SECTION 702-TRAFFIC SIGNALS702.02.01 Materials

Delete in its entirety and add the following:

Materials:

All signal equipment and parts must have a current N.J.D.O.T. approved number, except as follows:

- A. LED (Light Emitting Diode) Hand/Man Retro-Kit shall be Full Field LED Hand/Full Field LED Man Retro-Kit Model No. LEDP-HMM-001 as manufactured by U.S. Traffic Corporation, or approved equal.
- B. LED (Light Emitting Diode) Hand/Man Retro-Kit with countdown shall be Full Field LED Hand/Full Field LED Man Retro-Kit with countdown Model No. LEDP-HMC-001 as manufactured by U.S. Traffic Corporation, or approved equal.
- C. LED (Light Emitting Diode) Full Field Hand/Man Pedestrian Signal Head, 1 section shall be Full Field LED Hand/Full Field LED Manas manufactured by U.S. Traffic Corporation, or approved equal.
- D. LED (Light Emitting Diode) Full Field Hand/Man Pedestrian Signal Head with countdown, 1 section shall be Full Field LED Hand/Full Field LED Man with countdown as manufactured by U.S. Traffic Corporation, or approved equal.



**L.E.D. TRAFFIC SIGNALS AND COMPONENTS**

**General:** The Design shall permit the user to interchange all of the components in the 12 inch aluminum signal head with all of the components in the 12 inch polycarbonate signal head. Included in the design is the same capability to interchange 8 inch aluminum signal heads with 8 inch polycarbonate signal heads. Signals shall be 3-sections (red, yellow & green)

**Housing:** Polycarbonate injection molded in one piece. To provide strength and positive locking when using the self-locking fittings, each housing is molded with a 5 inch serrated boss and reinforcing ribs top and bottom. Also on top and bottom an opening to accept standard 1 ½ inch zinc pipe hardware. Polycarbonate housings will have four additional knockout locations to allow use of four 10-32 x 1 ½ inch zinc plated machine screws as an additional means of coupling sections. All housings will have a cast boss provided for mounting a 5 position terminal strip. The words red, amber, green, are cast next to each boss to identify socket lead wire attachment. The modular design permits coupling of various 8 and 12 inch signal configurations.

**Door and Mounting:** Polycarbonate injection molded with two integrated hinge lugs mounted to the housing with two stainless steel hinge pins. Positive latching is achieved with stainless steel eyebolts and wingnut assemblies. A moisture proof and dust tight seal is assured with an E.P.D.M. rubber gasket fitted into the gasket channel cast in the perimeter of the door. On polycarbonate signal doors four metal threaded inserts are molded in for added strength to the visor attachment screws.

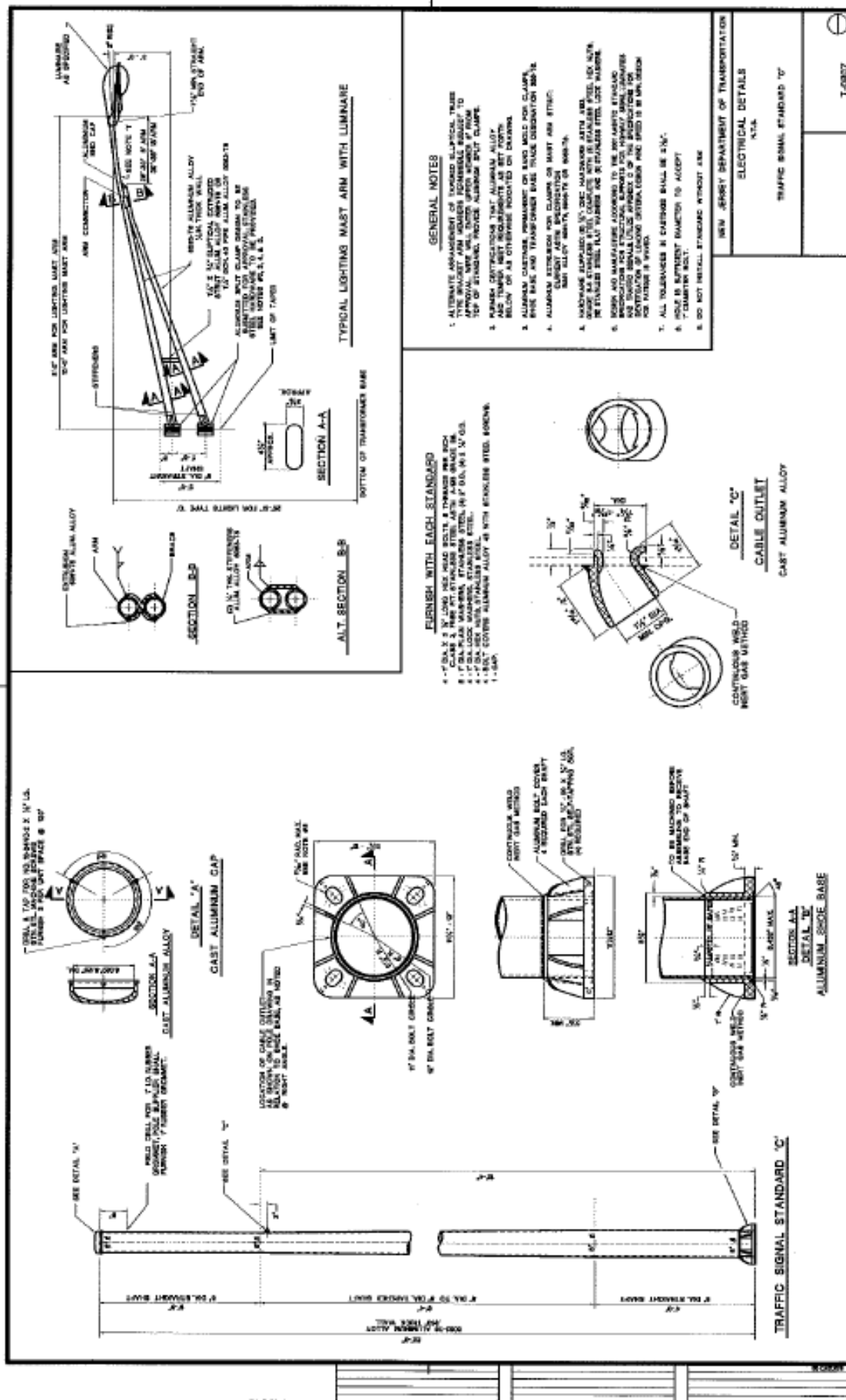
**Lens** Standard L.E.D.s, (red, amber, green) shall meet the latest ITE Requirements. Lenses fit into specially extruded E.P.D.M. gaskets which are placed into the door with four aluminum lens clips and stainless steel screws, to create a moisture and dust proof seal.

**Optical:** The entire design permits a positive contact of the door, lens, and assemblies which create a moisture and dust tight atmosphere.

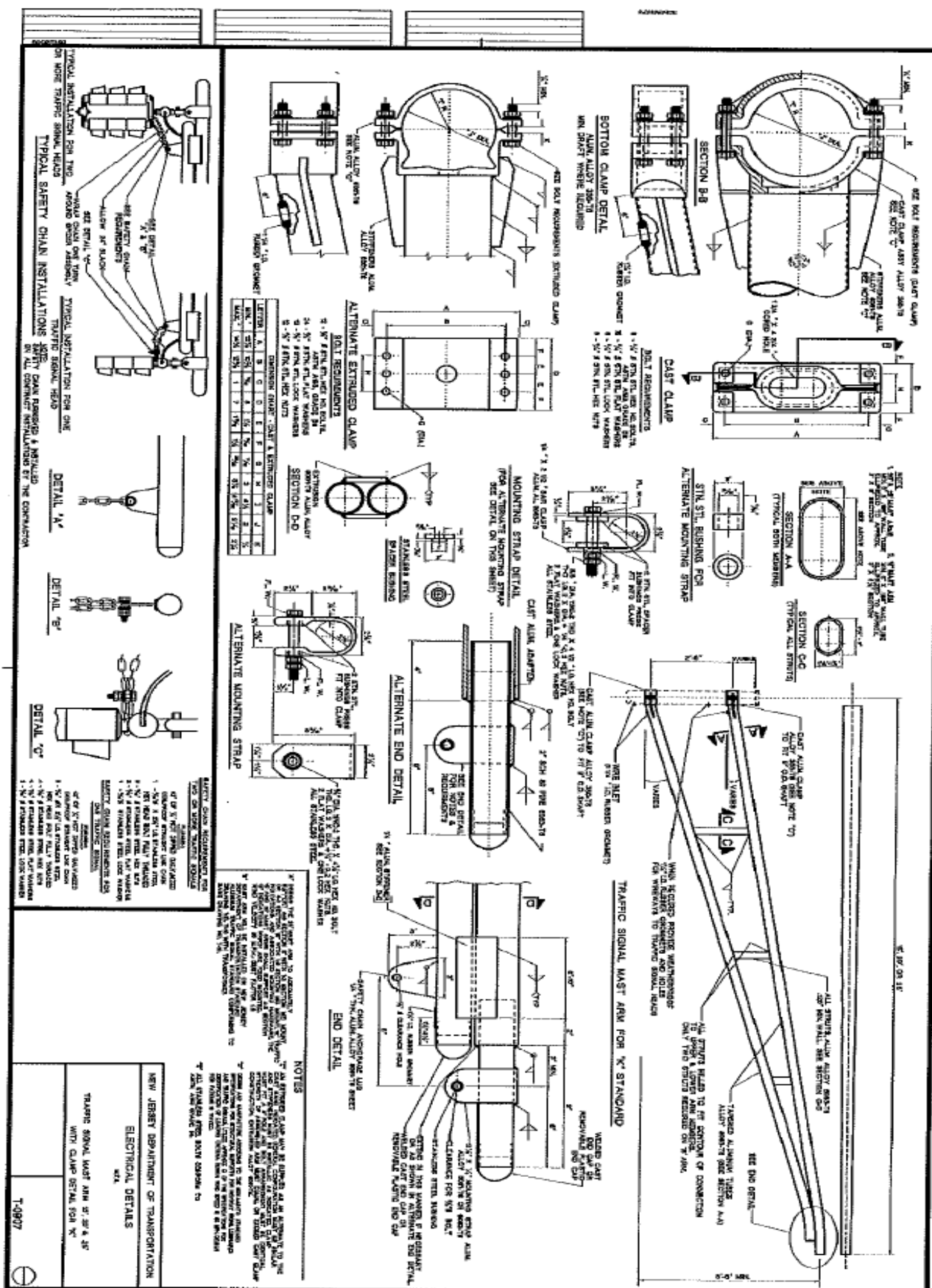
**Terminal Block:** Each signal is provided with a 5 section ten terminal barrier strip; one side with a quick disconnect terminal for socket leads. The opposite with a screw clamp terminal for field wiring.

**Visors:** Visors mount with 4 stainless steel screws to the face of the door. "Twist on type" full circle, tunnel, angle, or cap visors as specified at time of purchase order. Polycarbonate visors shall be one piece molded and shall have twist-on attaching ears to match aluminum visors.

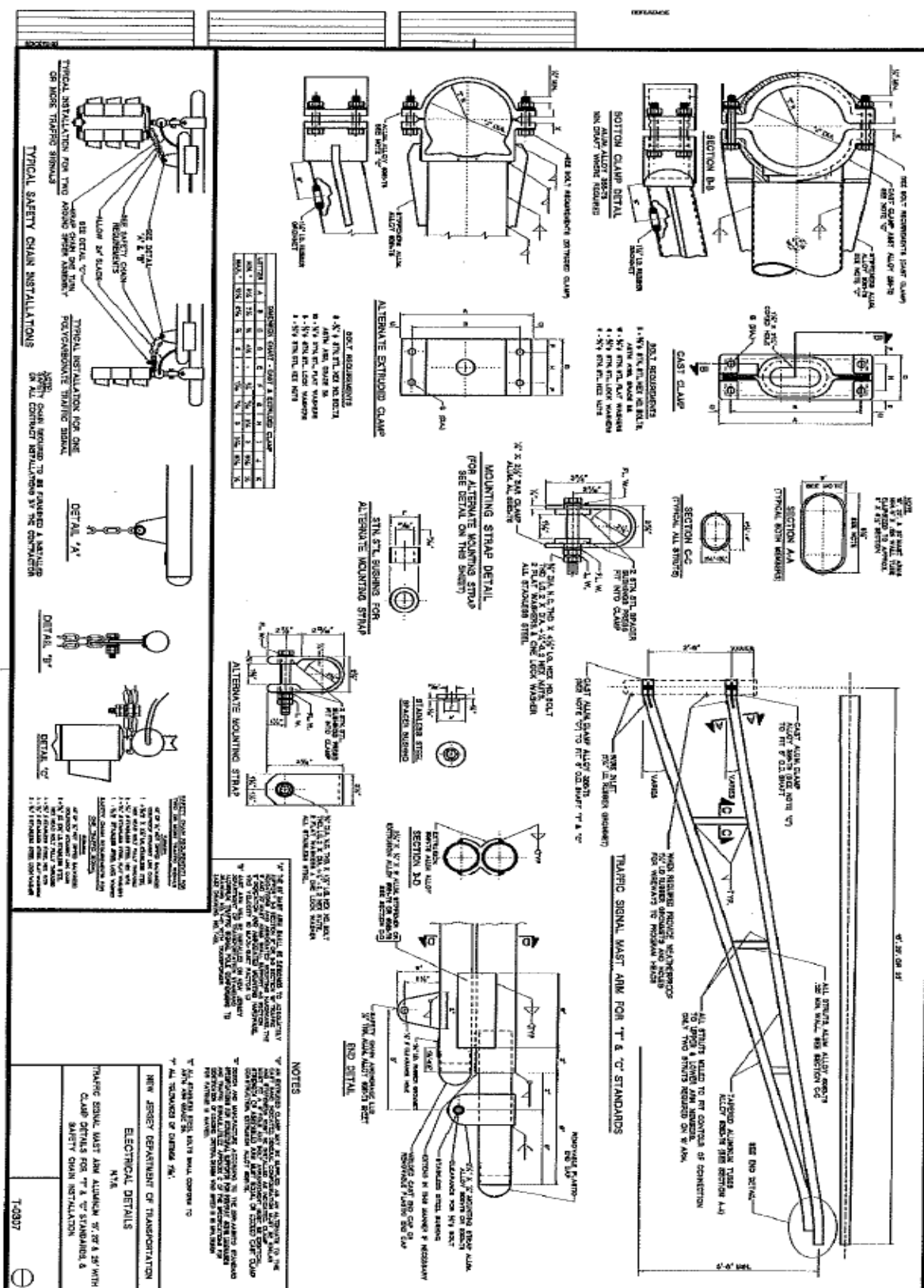
### ITEM #1 – ALUMINUM “C” POLE



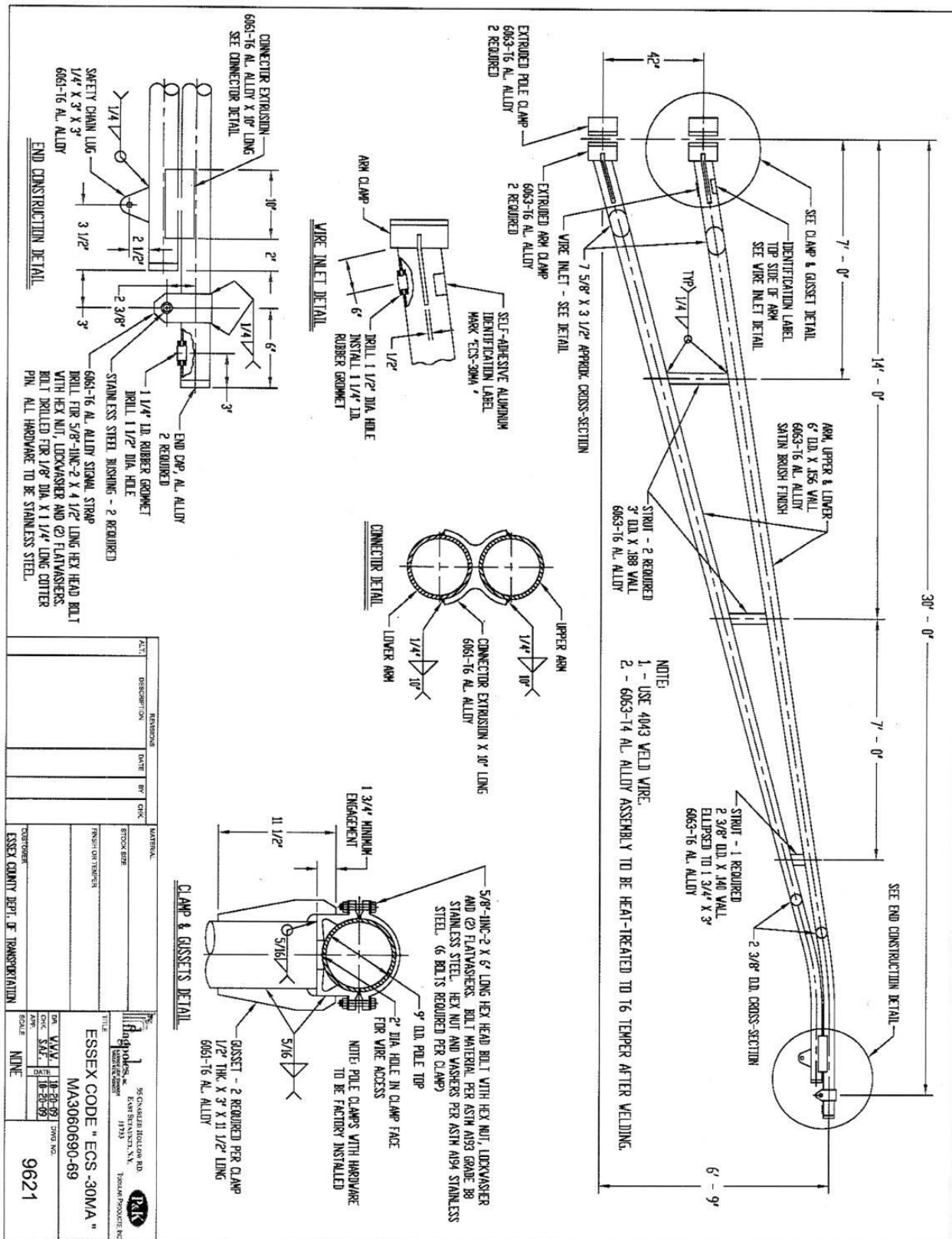
**ITEM #'S 5, 7, AND 9: 15', 20' AND 25' K MAST ARMS**

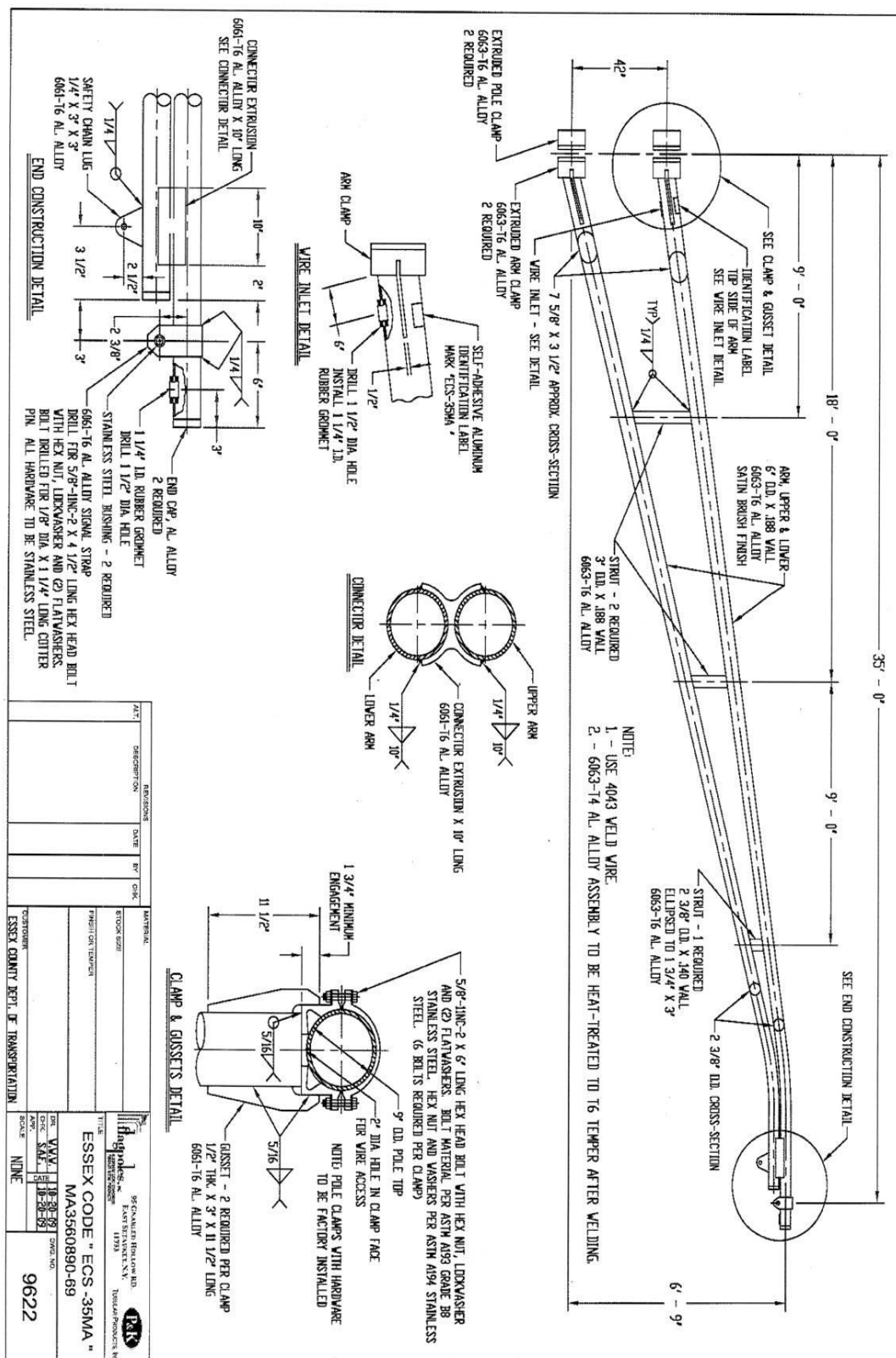


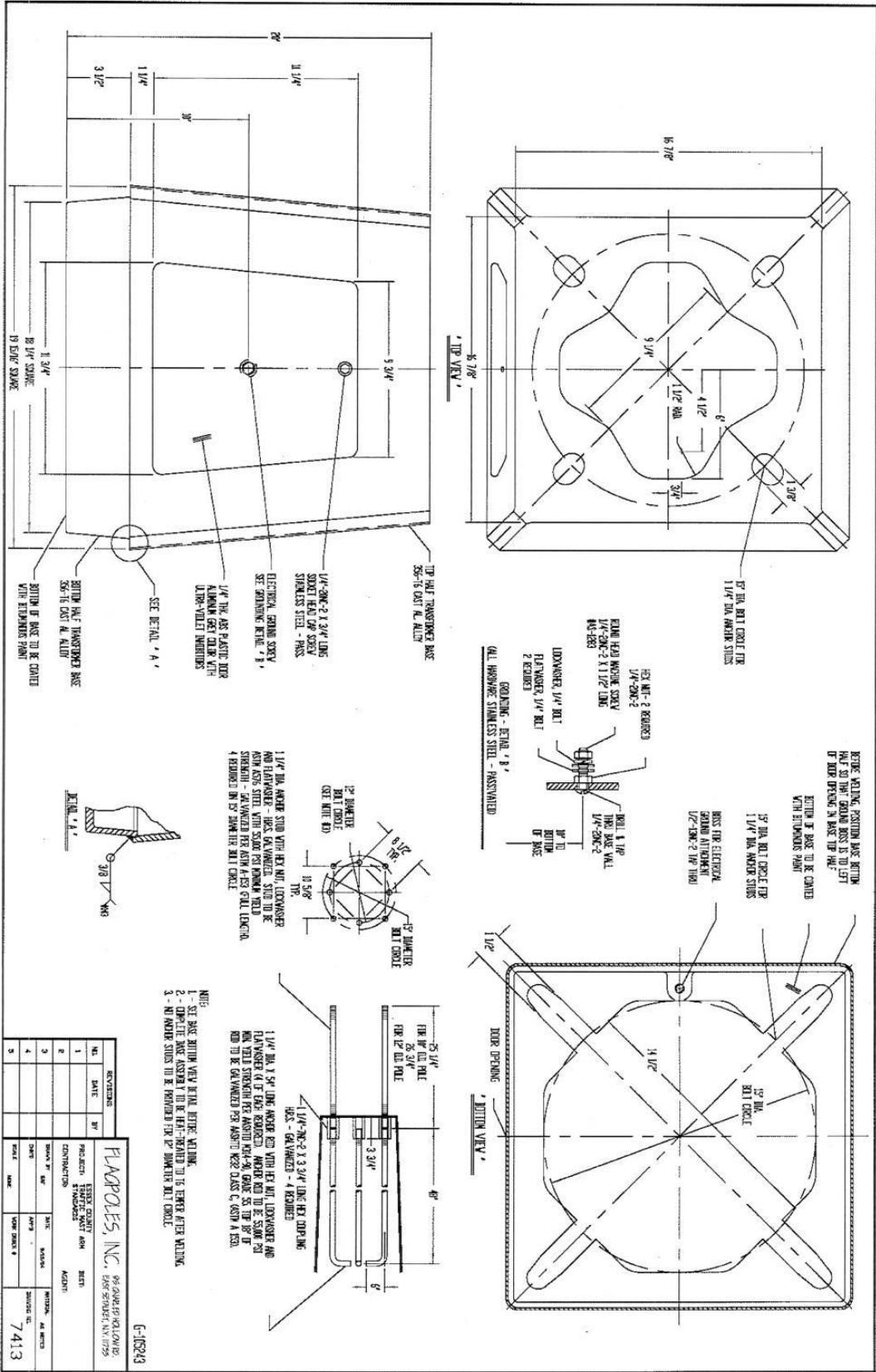
### ITEM #'S 13, 15, AND 17: 15', 20' AND 25' T MAST ARMS

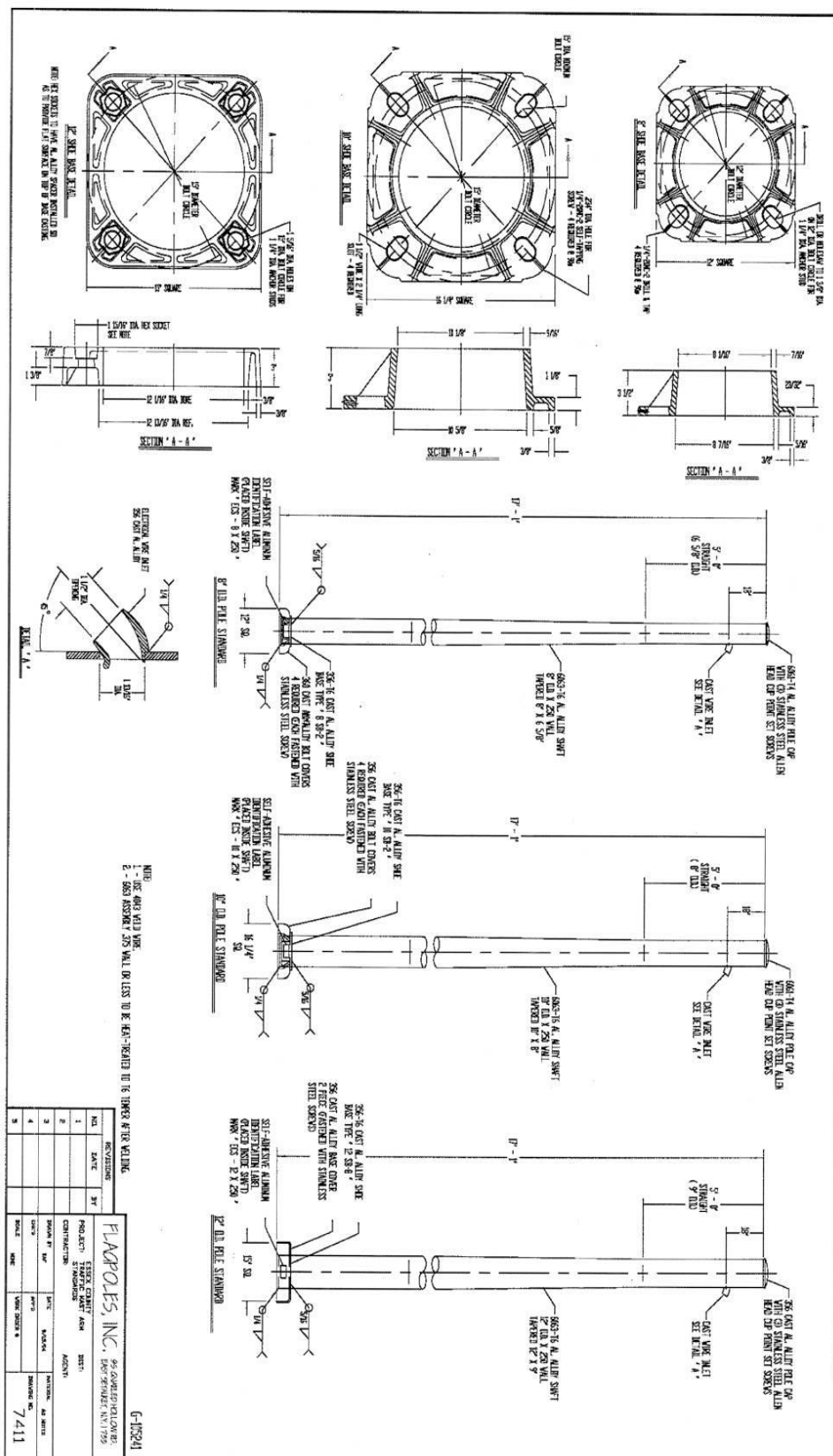


**ITEM #20-ECS-30 MA ALUMINUM ARM**

**ITEM #21-ECS-35 MA ALUMINUM ARM**









**ITEM #'S 373, 374 & 375 – POLARA ENGINEERING NAVIGATOR APS SYSTEMS, OR EQUAL****MECHANICAL**

- Pole Unit Speaker: 8 $\Omega$ , 15W, weatherproof.
- Pole Unit Temperature Range: -40°F to 165°F (-40°C to 60°C).
- Pole Unit Frame: Cast aluminum, powder coated.
- LED Operation: The LED lights when the button is pushed and remains lit until the next walk phase.
- LED Luminous Intensity: Greater than 1200 mcd, sunlight visible, ultra-bright red, viewing angle 160°.
- Operating and Storage: -34°C to 60° 0-100% Humidity.
- Face Plate: Aluminum, powder coated, ink marking.
- Pole Unit Push Button: ADA compliant, Cast aluminum, nickel plated, powder coated.

**CONTROL/ELECTRICAL**

- General Environmental: Operating and Storage: -34°C to 74°C 0-100% Humidity Non-Condensing.
- Line Power: 25W-75W Typical, 120W Peak with eight Push Button Stations.
- Ped Walk/Don't Walk Inputs: Optically Isolated 36 Volts AC/DC Peak.
- General Purpose Outputs & Ped Outputs: Optically Isolated 36 Volts AC/DC Peak, .3A Solid State Fused Contact Closure.
- Fault Output: Normally Open and Closed Relay Contacts 125 Volts AC/DC 1A Max.
- A, B, C, D, PBS Power Outputs: Nominal 22 Volts DC, Short Circuit Protected - Auto Recovering.
- General Purpose Inputs: 10-36 Volts AC/DC Peak, 10mA Max.

**AUDIO**

- Audio Amplifier Power Output: 10W RMS into 8 $\Omega$ .
- Volume Control Automatic Adjustment Range: 60dB MAX.
- Microphone for Ambient Noise: Approximate frequency range: 170Hz to 2.3 kHz.
- Button Tone: A brief "tick" confirms each button push.

**Audible Locating Tone**

880Hz plus harmonic, 0.1 second duration, 1 second interval. Operates during pedestrian clearance and don't walk.

**Audible Chirp Sounds**

From 2700Hz to 1700Hz. 2 second duration, 1 second interval, on only during walk intervals.

**Audible Cuckoo Sound**

1250Hz and 1000 Hz. 6 second duration, 1.8 second interval, on only during walk intervals.

**ITEM #411 – WAVETRONIX SMARTSENSOR MATRIX RADAR PRESENCE DETECTOR COMPLETE SYSTEM****Radar Presence Detector (RPD) Specification****General**

This item shall govern the specifications of aboveground radar presence detector (RPD) RPD detects vehicles by transmitting electromagnetic radar signals through the air. The signals bounce off vehicles in their paths and part of the signal is returned to the RPD. The returned signals are then processed to determine traffic parameters. RPDs are not affected by normal weather and environmental conditions such as rain, wind, snow, dust, etc. They also do not require cleaning and can maintain performance over a wide range of ambient temperatures. RPDs provide a non-intrusive means of detecting traffic.

**Sensor Outputs**

The RPD shall present real-time presence data in 10 lanes. The RPD shall support a minimum of 16 zones. The RPD shall support a minimum of 16 channels. The RPD shall support user-selectable zone to channel mapping. The RPD shall use AND logic to trigger channels when all selected zones are active. The RPD shall use OR logic to combine multiple zones to a channel output, and shall have channel output extend and delay functionality. The RPD algorithms shall mitigate detections from wrong way or cross traffic. The RPD system shall have fail-safe mode capabilities for contact closure outputs if communication is lost.

**Detectable Area**

**Detection Range:** The RPD shall be able to detect and report presence in lanes with boundaries as close as 6 ft. (1.8 m) from the base of the pole on which the RPD is mounted. The RPD shall be able to detect and report presence in lanes located within the 140 ft. (42.7 m) arc from the base of the pole on which the RPD is mounted.

**Field of View:** The RPD shall be able to detect and report presence for vehicles within a 90 degree field of view.

**Lane Configuration:** The RPD shall be able to detect and report presence in up to 10 lanes. The RPD shall be able to detect and report presence in curved lanes and areas with islands and medians.

**System Hardware**

For each approach to be detected, one RPD corner radar shall be used.

**Connectivity and Surge:** Each RPD shall be used with a preassembled backplate or a cabinet interface device. If a traffic cabinet preassembled backplate, it shall have the following: • AC/DC power conversion • Surge protection • Terminal blocks for cable landing • Communication connection points • The preassembled backplate for the RPD shall be a cabinet side mount or rack mount If a cabinet interface device, it shall be a single device that performs the following functions: • Provide DC power to up to four connected sensors • Provide surge protection for those sensors • Communicate between the device and a connected computer • Communicate with contact closure devices and/or a traffic controller

**Contact Closure Input File Cards:** The RPD may use contact closure input file cards with 2 or 4 channel capabilities. The contact closure input file cards for the RPD shall be compatible with industry standard detector racks.

**Maintenance**

The RPD shall not require cleaning or adjustment to maintain performance. The RPD shall not rely on battery backup to store configuration information, thus eliminating any need for battery replacement. Once the RPD is calibrated, it shall not require recalibration to maintain performance unless the roadway configuration changes. The mean time between failures shall be 10 years, which is estimated based on manufacturing techniques.

**ITEM #411 – WAVETRONIX SMARTSENSOR MATRIX RADAR PRESENCE DETECTOR COMPLETE SYSTEM (CONT'D)****Physical Properties**

The RPD shall not exceed 4.2 lbs. (1.9 kg) in weight. The RPD shall not exceed 13.2 in. by 10.6 in. by 3.3 in. (33.5 cm x 26.9 cm x 8.4 cm) in its physical dimensions. All external parts of the RPD shall be ultraviolet-resistant, corrosion-resistant, and protected from fungus growth and moisture deterioration.

**Enclosure:** The RPD shall be enclosed in a Lexan EXL polycarbonate. The enclosure shall be classified "f1" outdoor weather ability in accordance with UL 746C. The RPD shall be classified as watertight according to the NEMA 250 standard. The RPD enclosure shall conform to test criteria set forth in the NEMA 250 standard for type 4X enclosures. Test results shall be provided for each of the following type 4X criteria: • External icing (NEMA 250 clause 5.6) • Hose-down (NEMA 250 clause 5.7) • 4X corrosion protection (NEMA 250 clause 5.10) • Gasket (NEMA 250 clause 5.14) The RPD shall be able to withstand a drop of up to 5 ft. (1.5 m) without compromising its functional and structural integrity. The RPD enclosure shall include a connector that meets the MIL-C-26482 specification. The MIL-C-26482 connector shall provide contacts for all data and power connections.

**Electrical**

The RPD shall consume less than 10 W. The RPD shall operate with a DC input between 10 VDC and 28 VDC. The RPD shall have onboard surge protection.

**Communication Ports**

The RPD shall have two communication ports, and both ports shall communicate independently and simultaneously. Two independent communication ports allow one port to be used for configuration, verification and traffic monitoring without interrupting communications on the dedicated data port. The RPD shall support the upload of new firmware into the RPD's non-volatile memory over either communication port. The RPD shall support the user configuration of the following:  
Response delay • Push port the communication ports shall support a 9600 bps baud rate.

**Radar Design**

The RPD shall be designed with a matrix of 16 radars. The matrix of 16 radars enables the sensor to provide detection over a large area and to discriminate lanes.

**Frequency Stability:** The circuitry shall be void of any manual tuning elements that could lead to human error and degraded performance over time. All transmit modulated signals shall be generated by means of digital circuitry, such as a direct digital synthesizer, that is referenced to a frequency source that is at least 50 parts per million (ppm) stable over the specified temperature range, and ages less than 6 ppm per year. Any up conversion of a digitally generated modulated signal shall preserve the phase stability and frequency stability inherent in the digitally generated signal. This specification ensures that, during operation, the RPD strictly conforms to FCC requirements and that the radar signal quality is maintained for precise algorithmic quality. Analog and microwave components within an RPD have characteristics that change with temperature variations and age. If the output transmit signal is not referenced to a stable frequency source, then the RPD is likely to experience unacceptable frequency variations which may cause it to transmit out of its FCC allocated band and thus will be non-compliant with FCC regulations. The RPD shall not rely on temperature compensation circuitry to maintain transmit frequency stability. Temperature-based compensation techniques have been shown to be insufficient to ensure transmit frequency stability. One reason this type of technique is not sufficient is that it does not compensate for frequency variations due to component aging. The bandwidth of the transmit signal of the RPD shall not vary by more than 1% under all specified operating conditions and over the expected life of the RPD. The bandwidth of an RPD directly affects the measured range of a vehicle.

**ITEM #411 – WAVETRONIX SMARTSENSOR MATRIX RADAR PRESENCE DETECTOR COMPLETE SYSTEM (CONT'D)****Radar Design (Cont'd)**

A change in bandwidth causes a direct error in the measured range, i.e., a 5% change in bandwidth would cause a range error of 10 ft. (3 m) for a vehicle at 200 ft. (61 m). If the bandwidth changes by more than 1% due to seasonal temperature variations and component aging, then the RPD will need to be frequently reconfigured to maintain the specified accuracy.

**Antenna Design:** The RPD antennas shall be designed on printed circuit boards. Printed circuit board antennas eliminate the need for RF connectors and cabling that result in decreased reliability. Printed circuit antennas are less prone to physical damage due to their extremely low mass. The vertical beam width of the RPD at the 6 dB points of the two-way pattern shall be 65 degrees or greater. The antennas shall cover a 90 degree horizontal field of view. The side lobes in the RPD two-way antenna pattern shall be -40 dB or less. Low side lobes ensure that the performance from the antenna beam widths is fully achieved.

**Resolution:** The RPD shall transmit a signal with a bandwidth of at least 245 MHz. The bandwidth of the transmit signal translates directly into radar resolution, which contributes directly to detection performance. For example, an RPD that transmits at a low bandwidth will have low radar resolution, which could cause it to count a single vehicle as two vehicles in adjacent lanes. As another example of the adverse effects of low radar resolution, the response from a sign or other radar target in the roadway may spill over into the lanes of travel and desensitize the radar. In order to achieve the specified detection accuracy in a variety of conditions, the unwinded radar resolution cannot be larger than 2 ft. (0.6 m) at the half-power level, which requires a bandwidth of 240 MHz. The high radar resolution reduces the problem of vehicle responses getting drowned out by brighter vehicles in adjacent lanes and improves performance for moving and stopped vehicles near roadway targets.

**RF Channels:** The RPD shall provide at least 8 RF channels so that multiple units can be mounted in the same vicinity without causing interference between them.

**Verification:** The RPD shall have a self-test that is used to verify correct hardware functionality. The RPD shall have a diagnostics mode to verify correct system functionality.

**Configuration**

**Auto-configuration:** The RPD shall have a method for automatically defining traffic lanes, stop bars and zones without requiring user intervention. This auto-configuration process shall execute on a processor internal to the RPD and shall not require an external PC or other processor. The auto-configuration process shall work under normal intersection operation and may require several cycles to complete.

**Manual Configuration:** The auto-configuration method shall not prohibit the ability of the user to manually adjust the RPD configuration. The RPD shall support the configuring of lanes, stop bars and detection zones in 1-ft. (0.3-m) increments. When lanes have variable widths or have variable spacing (e.g. gore between lanes), precise resolution is necessary.

**Windows® Mobile-based Software:** The RPD shall include graphical user interface software that displays all configured lanes and the current traffic pattern using a graphical traffic representation. A visual representation of traffic patterns allows an installer to quickly associate specific detections with corresponding vehicles, and it facilitates verification of RPD performance. The RPD shall include the ability to do counting and pulsed channels. The graphical interface shall operate on Windows Mobile, Windows XP, Windows Vista, Windows 7, Windows 8, and Windows 10 in the .NET framework. The software shall support the following functionality:

- Operate over a TCP/IP connection
- Give the operator the ability to save/back up the RPD configuration to a file or load/restore the RPD configuration from a file
- Allow the backed-up sensor configurations to be viewed and edited
- Provide zone and channel actuation display
- Provide a virtual connection option so that the software can be used without connecting to an actual sensor
- Local or remote sensor firmware upgradability.

**ITEM #411 – WAVETRONIX SMARTSENSOR MATRIX RADAR PRESENCE DETECTOR COMPLETE SYSTEM (CONT'D)****Operating Conditions**

The RPD shall maintain accurate performance in all weather conditions, including rain, freezing rain, snow, wind, dust, fog and changes in temperature and light, including direct light on sensor at dawn and dusk. RPD operation shall continue in rain up to 1 in. (2.5 cm) per hour. The RPD shall be capable of continuous operation over an ambient temperature range of -40°F to 165.2°F (- 400C to 74°C). The RPD shall be capable of continuous operation over a relative humidity range of 5% to 95% (non-condensing).

**Testing**

**FCC:** Each RPD shall be certified by the Federal Communications Commission (FCC) under CFR 47, part 15, section 15.249 as an intentional radiator. The FCC certification shall be displayed on an external label on each RPD according to the rules set forth by the FCC. The RPD shall comply with FCC regulations under all specified operating conditions and over the expected life of the RPD. 12.2 NEMA TS 2-2003 Testing. The RPD shall comply with the applicable standards stated in the NEMA TS 2-2003 standard.

Third party test results shall be made available for each of the following tests: • Shock pulses of 10 g, 11 MS half sine wave • Vibration of 0.5 g up to 30 Hz • 300 V positive/negative pulses applied at one pulse per second at minimum and maximum DC supply voltage • Cold temperature storage at -49°F (-45°C) for 24 hours • High temperature storage at 185°F (85°C) for 24 hours • Low temp, low DC supply voltage at -29.2°F (-34°C) and 10.8 VDC • Low temp, high DC supply voltage at -29.2°F (-34°C) and 26.5 VDC • High temp, high DC supply voltage at 165.2°F (74°C) and 26.5 VDC • High temp, low DC supply voltage at 165.2°F (74°C) and 10.8 VDC

**Manufacturing**

The RPD shall be manufactured and assembled in the USA. The internal electronics of the RPD shall utilize automation for surface mount assembly, and shall comply with the requirements set forth in IPC-A-610C Class 2, Acceptability of Electronic Assemblies. The RPD shall undergo a rigorous sequence of operational testing to ensure product functionality and reliability. Testing shall include the following: • Functionality testing of all internal sub-assemblies • Unit level burn-in testing of 48 hours' duration or greater • Final unit functionality testing prior to shipment Test results and all associated data for the above testing shall be provided for each purchased RPD by serial number, upon request.

**Documentation**

RPD documentation shall include an instructional training guide and a comprehensive user guide as well as an installer quick-reference guide and a user quick-reference guide. The RPD manufacturer shall supply the following documentation and test results at the time of the delivery: • FCC CFR 47 certification (frequency compliance) • CE certification • IED 6100-4-5 class 4 test report (surge)

**Warranty**

The RPD shall be warranted free from material and workmanship defects for a period of two years from date of acceptance of delivery by the County.

**Cable Specification****General**

This item shall govern the specifications of a traffic sensor-to-traffic cabinet cable 6-conductor cable.

**ITEM #411 – WAVETRONIX SMARTSENSOR MATRIX RADAR PRESENCE DETECTOR COMPLETE SYSTEM (CONT'D)****Cable Specification (Cont'd)****Cable**

The cable shall be the Orion Wire Combo-2204-2002-PVCGY or an equivalent cable that conforms to the following specifications: • The RS-485 conductors shall be 2 twisted pairs. • The RS-485 conductors shall have nominal capacitance conductor to conductor of less than 40 pF/ft. at 1 kHz. • The RS-485 conductors shall have nominal conductor DC resistance of less than 16.7 ohms/1000 ft. at 20°C. • The power Conductors shall be a twisted pair. • The power conductors shall have nominal conductor DC resistance of less than 11 ohms/1000 ft. at 20°C. • The entire cable shall be shielded with an aluminum/polyester shield with a drain wire. • The cable jacket shall be made of gray PVC that is 0.053 in. (1.3 mm) thick. • The cable shall have a diameter of 0.41in. (1.04 cm). • The power wires in the cable shall be 20 AWG; the communications wires shall be 22 AWG. • The cable shall be RoHS compliant. • The cable shall have a UL/cull type CMG safety approval. • The cable shall be cable of operating at temperatures up to 221°F (105°C) while dry and 167°F (75°C) while wet. • The cable shall have an FT4 flammability rating. • The cable shall be UV resistant, as per the UL 720 Hour Sunlight Resistance Test. • the cable shall support 600 Volts per AWM style 2587.

**Connector**

The cable end connector shall meet the MIL-C-26482 specification and shall be designed to interface with the appropriate MIL-C-26482 connector. The connector back shell shall be an environmentally sealed shell that offers excellent immersion capability. All conductors that interface with the connector shall be encased in a single jacket, and the outer diameter of this jacket shall be within the back shell's cable O.D. range to ensure proper sealing. The back shell shall have a strain relief with enough strength to support the cable slack under extreme weather conditions. Recommended connectors are Cannon's KPT series, and recommended back shells are Glen air Series 37 cable sealing back shells.

**Mounting Bracket Specification****General**

This item shall govern the specifications of the Radar traffic sensor mounting assembly.

**Mounting**

The mounting assembly shall provide at least two axes of rotation to ensure proper installation. The mounting assembly shall be able to support at least a 20-lb. (9.1-kg) load. The mounting assembly shall feature a symmetric hole pattern that mates with fixed and rotational Smart Sensor back plates. The mounting assembly shall have two contact points with the pole. The mounting assembly shall be slotted for 3/4-in. (1.9-cm) banding.

**Construction**

The mounting assembly shall be constructed of 0.1875 in. (0.48 cm) thick or thicker aluminum with 316 stainless steel hardware. The mounting assembly shall be powder coated for oxidation resistance. The mounting assembly shall weigh 3 lbs. (1.36 kg)

**Cabinet Interface Device (CID) Specification****General**

This item shall govern the specifications of a cabinet interface device. Test results and other documentation demonstrating performance and capabilities shall be provided at time of delivery.

**Product Description**

The CID shall be a module that provides power and surge protection and that communicates with contact closure devices, Ethernet and controllers through SDLC. The CID shall be shipped with the AC power cord, jumper cables and terminal blocks necessary for wiring it, as well as with an extra fuse.

**ITEM #411 – WAVETRONIX SMARTSENSOR MATRIX RADAR PRESENCE DETECTOR COMPLETE SYSTEM (CONT'D)****Physical**

The CID shall not exceed 5 lbs. (2.25 kg) in weight. The CID shall not exceed 7.8 in. x 10.3 in. x 3.9 in. (19.8 cm x 26.2 cm x 9.9 cm) in its physical dimensions. The CID shall operate in the temperature range of -29°F to 165°F (-34°C to 74°C) and in humidity up to 95% RH.

**Mounting**

The CID shall be shelf-mounted. It shall be capable of being mounted on the side of the traffic cabinet with the aid of U-channel mounting brackets.

**Power**

The power supply voltage of the CID shall be 90 to 260 VAC. Its AC frequency shall be 50-60 Hz and the maximum power shall be 75 Wat 80QC. The CID's sensor connectors shall output 24 VDC.

**Connections and Communication**

Power: The CID shall include the following connections for power and

Communication: The CID shall have an IEC AC input.

Terminal Block Connectors: The CID shall have four terminal block connectors for connecting to sensors. These connectors shall be for terminating cables that carry power and RS-485 communications to and from the sensors.

Data RJ-11 Connectors: The CID shall have four RJ-11 jacks for sending detection data from sensors to contact closure devices such as rack cards via jumper cables. This data shall be sent via RS-485. These jacks shall make up the physical interface of a dedicated data bus.

Control Connectors: The CID shall have four other communication ports. These ports shall make up the physical interface of a dedicated control bus and shall allow users to connect to the sensors and configure them. • DB-9 port for communicating via RS-232 • Two RJ-11 jacks for communicating via RS- 485 • USB mini-B connector • T-bus port for connecting to a T-bus

Ethernet Connector: The CID shall have an RJ-45 10/100 Ethernet port to allow connection to a local network.

SDLC Port: The CID shall have an SDLC port for direct connection to a traffic controller.

**Other Features**

LEDs: The CID shall have four multicolored LEDs with activity-indicating functions: • An LED that indicates when the device has power • An LED that indicates if the device has been disabled by surges • An LED that indicates when data is being transmitted on the control bus • An LED that indicates when data is being received on the control bus.

Data RJ-11 Jack Features: The four jacks that make up the physical interface of the data bus (and that each correspond to one sensor) shall have a switch for turning their corresponding sensor off and an LED that indicates when that sensor has power.

Power Switch: The CID shall have a switch for turning power *off* for the entire device.

OLED Panel with Keypad: The CID shall have an OLED panel on the device with a keypad for device configuration.

Web Interface: The CID shall have a web interface for device configuration, accessible through a web browser from a network-connected device.

Configuration: The CID configuration shall support up to 64 detector channels.

**ITEM #411 – WAVETRONIX SMARTSENSOR MATRIX RADAR PRESENCE DETECTOR COMPLETE SYSTEM (CONT'D)****Testing**

**NEMA TS2-2003 Testing:** The CID shall comply with the applicable standards stated in the NEMA TS2-2003 Standard. Test results shall be made available for each of the following tests: • Shock pulses of 10g, 11 MS half sine wave • Vibration of 0.5 Grms up to 30 Hz • 300 V positive/negative pulses applied at one pulse per second at minimum and maximum DC supply voltage • Cold temperature storage at -49°F (-45°C) for 24 hours • High temperature storage at 185°F (85°C) for 24 hours • Low temp, low DC supply voltage at -29.2°F (-34°C) and 10.8 VDC • Low temp, high DC supply voltage at -29.2°F (-34°C) and 26.5 VDC • High temp, high DC supply voltage at 165.2°F (74°C) and 26.5 VDC • High temp, low DC supply voltage at 165.2°F (74°C) and 10.8 VDC

**FCC Testing:** The CID shall be FCC-compliant.

**Testing:** Before shipping, each CID shall have passed a manufacturer's test.

**Warranty**

The CID shall be warranted to be free from material and workmanship defects for a period of two years from date of acceptance of delivery by the County.

**System Inclusions (Item 390)**

One Matrix Above-Ground Radar Presence Detector (4) approach Complete System consists of following:

- Four (4) Matrix Sensor Part number 55225
- Four (4) Sensor Mounting Bracket Part number 55611
- Four (4) 60 ft. Drop Cable w connector Part# 55704-60ft
- Four (4) Sensor branch Cable (250ft each) Part Number 55705-250
- One (1) Click 650 Cabinet interface Device Part Number Click 650/102-0416
- One (1) SDLC Interface to Controller Cable Part Number SDLCable/310-0411
- One (1) Smartsensor Manager Matrix Software Part Number 550-0004

**Note: The Two-Approach Complete System (Item 391) shall include the appropriate amount of parts required.**



