



*Barbara Jo Crea, Director
Gary Quinn, Deputy Director
Virginia E. Haines, Commissioner
John P. Kelly, Commissioner
Frank Sadeghi, 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 ENGINEERING DEPARTMENT -
TRAFFIC DIVISION***

2024

***ADVERTISEMENT DATE: January 3, 2024
OPENING: January 23, 2024, 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 ENGINEERING DEPARTMENT - TRAFFIC DIVISION** for the County of Ocean, will be received by the Purchasing Agent of the County of Ocean on **Tuesday, January 23, 2024 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:

BARBARA JO CREA, 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

Buyer

Email: ocpurchasing@co.ocean.nj.us

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

Department:

Engineering

Timeline

Advertising Date	January 3, 2024
Bid Opening Date	January 23, 2024, 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, January 23, 2024.

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>

New Jersey Business Registration Requirements

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

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

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

During the course of contract performance:

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

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

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

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

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

Pay to Play Requirements

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

Statement of Ownership

The provisions of N.J.S.A. 52:25-24.2 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.

Certification of Non-Involvement in Prohibited Activities in Iran

Certification of Non-Involvement in Prohibited Activities in Iran. Pursuant to N.J.S.A. 52:32-58, the proposer must certify that neither the proposer, nor one of its parents, subsidiaries, and/or affiliates (as defined in N.J.S.A. 52:32-56(e)(3)), is listed on the Department of the Treasury's List of Persons or Entities Engaging in Prohibited Investment Activities in Iran and that neither is involved in any of the investment activities set forth in N.J.S.A. 52:32-56(f). If the proposer is unable to so certify, the proposer shall provide a detailed and precise description of such activities. Prior to contract award or authorization, the contractor shall provide the Contracting Agency with a completed Certification on Non-Involvement in Prohibited Activities in Iran.

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

Pursuant to N.J.S.A. 52:32-60.1, the “person or entity” (as defined in N.J.S.A. 52:32-60.1, et seq) seeking to enter into or renew a contract for the provision of goods or services or the purchase of bonds or other obligations shall certify that it is not “engaging in prohibited activities in Russia or Belarus” (as such term is defined in as defined in N.J.S.A. 52:32-60.1, et seq. If the person or entity is unable to certify, the person or entity shall provide a detailed and precise description of such activities. The N.J.S.A. 52:32-60.1 certification form must be completed prior to contract award and is provided in the specification documents (DocuSign).

Vendors may view the Precluded Entities List Here:

<https://www.nj.gov/treasury/administration/pdf/RussiaBelarusEntityList.pdf>

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.

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.

Mandatory Equal Employment Opportunity

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

N.J.A.C. 17:27

GOODS, PROFESSIONAL SERVICE AND GENERAL SERVICE CONTRACTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

Intent

CONTRACT TERMS

The contract shall be for 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.

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.

Specifications and Scope of Work

SCOPE OF WORK

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

Vendor Questionnaire

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

BID 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)**
- Prohibited Russia-Belarus Activities & Iran Investment Activities

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

Copy of Bidder's Certificate of Employee Information Report

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

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

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

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

If yes, please upload a photocopy of such approval.

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

If yes, please upload a photocopy of such certificate.

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

**Documents (doc, docx, rtf, txt, xls, xlsx, pdf)
Images (jpg, png, bmp, tif)**

Copy of Bidder's New Jersey Business Registration Certificate

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

Use this link to verify your company's BRC:

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

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

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

**Documents (doc, docx, rtf, txt, xls, xlsx, pdf)
Images (jpg, png, bmp, tif)**

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 VENDOR DOCUMENTATION

Please submit any additional information you wish to be considered as part of your bid package.

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

**Documents (doc, docx, rtf, txt, xls, xlsx, pdf)
Images (jpg, png, bmp, tif)**

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 ENGINEERING DEPARTMENT - TRAFFIC DIVISION

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	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				
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				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
29	16' Aluminum Ped Pole	10	EA				
30	16' Aluminum Ped Pole, Black Epoxy Powder Coat Finish	10	EA				
31	6' Aluminum Ped Pole with Transition Base and Pole Cap	50	EA				
32	6' Aluminum Ped Pole with Transition Base and Pole Cap, Black Epoxy Powder Coat Finish	10	EA				
33	Square D B-100 1" Raintight HUB	10	EA				
34	Square D B-150 1 1/2" Raintight HUB	10	EA				
35	Square D Electrical Held Lighting Contactor 8903LG40	10	EA				
36	14' Aluminum Ped Pole with Transition Base	20	EA				
37	12' Aluminum Ped Pole with Transition Base and Pole Cap Color: Black Epoxy Powder Coat	20	EA				
38	16' Aluminum Ped Pole with Transition Base and Pole Cap Color: Black Epoxy Powder Coat	20	EA				
39	¾" Pedestal Pole Anchorage	80	SET				
40	12' K Pole Aluminum	2	EA				
41	12' K Pole Aluminum, Black Epoxy Powder Coat Finish	10	EA				
42	18' K Pole Aluminum	20	EA				
43	18' K Pole Aluminum, Black Epoxy Powder Coat Finish	10	EA				
44	SFK Base with Anchorage (Foundation Type K) NJDOT Approved	30	EA				
45	SFK Base with Anchorage (Foundation Type K) NJDOT Approved, Black Epoxy Powder Coat Finish	10	EA				
46	Pole & Base Collar Assembly, Alum Squarer Base , PB-5325 - PNC	50	EA				
47	8 Phase Controller "P" Cabinet per NJDOT Spec. EBTSC8CL/ with Econolite Cobalt Traffic Controller	10	EA				
48	8 Phase Controller "P" Cabinet per NJDOT Spec. EBTSC8CL/ with Econolite Cobalt Traffic Controller, Black Epoxy Powder Coat Finish	10	EA				
49	4 Phase Controller "K" Size Enclosure Cabinet with Pole Mound Bracket and Hardware with Econolite Cobalt Traffic Controller	10	EA				
50	4 Phase Controller "K" Size Enclosure Cabinet, "Base Mount" with 18" skirt	5	EA				
51	4 Phase Controller "K" Size Enclosure Cabinet, "Base Mount" with 18" Skirt with Econolite Cobalt Traffic Controller	10	EA				
52	GTT Opticom Model 764 Multimode Phase Selector 4 Channel, NO SUBSTITUTIONS	50	EA				
53	GTT Opticom Model 768 Auxiliary Interface Panel, NO SUBSTITUTIONS	50	EA				
54	GTT Opticom Model 1070 Cable (1000ft), NO SUBSTITUTIONS	10	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
55	GTT Opticom Model 760 Card Rack, NO SUBSTITUTIONS	10	EA				
56	18" Aluminum Skirt ONLY for K Size Cabinet	5	EA				
57	18" Aluminum Skirt ONLY for K Size Cabinet, Black Epoxy Powder Coat Finish	10	EA				
58	NEMA Flashers with Cabinets	10	EA				
59	Flasher Cabinet with Time Clock (Chronomex Time Switch) (1 Year Clock)	10	EA				
60	Fire Signal Flasher Cabinet with 115 V.A.C. Relay & Timer 0-5 Mins.	10	EA				
61	Tall Meter Cabinet 50"	20	EA				
62	Tall Meter Cabinet 50", Black Epoxy Powder Coat Finish	10	EA				
63	Mast Arm Back Plates for T Mast Arm	40	PR				
64	Aluminum T Pole	15	EA				
65	Aluminum T Pole, Black Epoxy Powder Coat Finish	10	EA				
66	2-Way Bracket 12" Signals with Bottoms	200	EA				
67	3-Way Bracket 12" Signals with Bottoms	20	EA				
68	Pelco Aluminum Span Wire Signal Mountings, 1-½" Horizontal Span Wire Assembly, Part No. AB-0127	50	EA				
69	Pole Clamp with 12" Nipples, 6"-8" per NJDOT Drawing T-0607	100	EA				
70	Pole Clamp with 12" Nipples, 8"-10" per NJDOT Drawing T-0607	100	EA				
71	Pole Clamp with 12" Nipples, 10"-12" per NJDOT Drawing T-0607	100	EA				
72	Astro Bracket (Mid-Mast Mount) Pelco - 2C Lamps	50	EA				
73	3M Astro Brackets - Pelco - 2C Lamps	30	EA				
74	Cluster Assembly, Cluster Band Mount with Cast Uppers 17" CTC, Pelco Astro-Brac #AB-0167-42, 42" Band Length	20	EA				
75	74" Astro Bracket Tube - Pelco	50	EA				
76	12" 3 Section Aluminum Back Plates with 2" Yellow Reflective Tape, McCain Signals, NO SUBSTITUTIONS	100	EA				
77	12" 3 Section Aluminum Back Plates with 2" Yellow Reflective Tape, Econolite	100	EA				
78	12" 4 Section Aluminum Back Plate with 2" Yellow Reflective Tape, Econolite	100	EA				
79	12" 4 Section Aluminum Back Plate with 2" Yellow Reflective Tape, McCain Signals	40	EA				
80	12" 3 section Aluminum Back Plate with 2" Yellow Reflective Tape, Chapel Hill	100	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
81	12" 4 section Aluminum Back Plate with 2" Yellow Reflective Tape, Chapel Hill	100	EA				
82	3 section (HAWK) Cluster Back Plate, Aluminum with 2" Reflective Tape	30	EA				
83	5 section (Doghouse) Cluster Backplate, Aluminum with 2" Reflective Tape	30	EA				
84	12" 3 Section Aluminum Back Plates with 2" Yellow Reflective Tape - Eagle	100	EA				
85	12" 4 Section Aluminum Back Plates with 2" Yellow Refelctive Tape - Eagle	25	EA				
86	8" Poly Signal Heads, As Specified	100	EA				
87	12" Aluminum Signal Heads with LED Color: Black or Yellow	40	EA				
88	12" Poly Signal Heads, As Specified	200	EA				
89	Programmable 12" signal head with LEDs, McCain	20	EA				
90	LED Full Field Hand/Man Pedestrian with Countdown and Housing U.S. Traffic #LEDP-HMC-001, or Equal	150	EA				
91	LED Hand/Man Pedestrian with Countdown Retro Kit	300	EA				
92	Vandal Resistant Push Button with LED, Momentary Bull Dog Polara # BDSP-14	200	EA				
93	12" Pelco GPL Louver #GL-1010-07	200	EA				
94	12" Standard Aluminum Louver Insert - Black Finish	60	EA				
95	4 ½" 1-Way Slipfitter	20	EA				
96	4 ½" Slipfitter 4-Way with Closures	20	EA				
97	Wire Entrance Fittings with Universal (DOT T-0401)	100	EA				
98	1 ½" Band-it Hubs	60	EA				
99	7/16" Span Wire Hander (S.S. Hardware)	30	EA				
100	3-Bolt Clamp (7/16" Span Wire)	40	EA				
101	7/16" Dead End	40	EA				
102	7/16" Strand Vise	40	EA				
103	⅝" x 12" Thimble-Eye Bolt	30	EA				
104	⅝" x 14" Thimble-Eye Bolt	30	EA				
105	⅝" Thimble-Eye Nut	60	EA				
106	⅝" Angle Thimble Eyelets	20	EA				
107	⅝" Forged Oval Eye Nut	20	EA				
108	⅝" Square Nut	40	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
109	5/8" Square Pole Washer	40	EA				
110	14" Swamp Screw Anchor	10	EA				
111	7/16" Guy Guard	20	EA				
112	7/16" 20,000 lb. Test Span Wire, 1,000' Roll	5	ROLL				
113	1/4" 4500 lb. Test Span Wire, 1,000' Roll	20	ROLL				
114	3-Bolt clamp (1/4" Span Wire)	20	EA				
115	1/4" Dead Ends	20	EA				
116	1/4" Strand Vise	20	EA				
117	1/4" Span Wire Splice	20	EA				
118	35' Class 5 Wood Pole	12	EA				
119	1/4" x 4' Safety Chain	100	EA				
120	5/8" x 10' Copper Clad Ground Rod	50	EA				
121	5/8" Bronze Ground Rod Clamp (WB 5/8)	50	EA				
122	4" Square Box Surface Mount 1/2" KO	5	EA				
123	15 Amp. Single Pole Switch	5	EA				
124	4" Cover 1 Switch - 1 GFI Receptacle	5	EA				
125	20 Amp. GFI Receptacle	20	EA				
126	4" Blank Cover	10	EA				
127	100 Amp. Meter Socket with 1" Hub	10	EA				
128	70 Amp. Surface Mount Disconnect Q02-4L705	20	EA				
129	70 Amp. Rain Proof Disconnect Q02-4L70RB	20	EA				
130	15 Amp. Circuit Breaker (S.D. Q0115)	10	EA				
131	20 Amp. Circuit Breaker (S.D. Q0120)	10	EA				
132	30 Amp. Circuit Breaker (S.D. Q0130)	20	EA				
133	50 Amp. Circuit Breaker (S.D. Q0150)	20	EA				
134	70 Amp. Circuit Breaker (S.D. Q0170)	30	EA				
135	AGC 1/2 Amp. Fuse 125 V.A.C.	40	EA				
136	AGC 1 Amp. Fuse 125 V.A.C.	40	EA				
137	AGC 1 1/2 Amp. Fuse 125 V.A.C.	40	EA				
138	AGC 2 Amp. Fuse 125 V.A.C.	40	EA				
139	AGC 5 Amp. Fuse 125 V.A.C.	40	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
140	½ Amp. Fuse 125 V.A.C. SLO-BLO	40	EA				
141	1 Amp. Fuse 125 V.A.C. SLO-BLO	40	EA				
142	1 ½ Amp. Fuse 125 V.A.C. SLO-BLO	40	EA				
143	10 Amp. Fuse 125 V.A.C. SLO-BLO	40	EA				
144	200 Amp 5 Terminal Commercial Lever Bypass Meter Pan with closure	30	EA				
145	200 Amp 5 Terminal Commercial Lever Bypass Meter Pan with 1" HUB	20	EA				
146	200 Amp 5 Terminal Commercial Lever Bypass Meter Pan with 1 1/2" HUB	25	EA				
147	1 1/2 " HUB for 200 Amp Meter Pan.	25	EA				
148	Closure plate for HUB Opening in 200 Amp. Meter Pan.	25	EA				
149	Cable Tie Base (T&B TC 5828)	200	EA				
150	Cable Tie Base (T&B TC 5344A)	200	EA				
151	Identification Cable Ties (T&B TY 5512M)	1,500	EA				
152	Plastic Cable Ties, 10 x 4"	2,000	EA				
153	Plastic Cable Ties, 10 x 8"	50	EA				
154	Sunlight Resistant Cable Ties, 30 x 15"	5,000	EA				
155	Duct Seal 1 lb.	200	EA				
156	Never-Seize, Brush Top Can	30	EA				
157	Scotchkote Sealer, 15 oz. Can	20	EA				
158	Scotch 7730 Splice Kits, 10/Box	5	BX				
159	Scotch 33+ Tape ¾" x 66' Black, 10/Box	250	BX				
160	Scotch 33+ Tape ¾" x 66' Blue, 10/Box	10	BX				
161	Scotch 33+ Tape ¾" x 66' Green, 10/Box	10	BX				
162	Scotch 33+ Tape ¾" x 66' Orange, 10/Box	10	BX				
163	Scotch 33+ Tape ¾" x 66' Red, 10/Box	10	BX				
164	Scotch 33+ Tape ¾" x 66' Yellow, 10/Box	10	BX				
165	Scotch 33+ Tape ¾" x 66' White, 10/Box	45	BX				
166	12/2 Romex Staples, 100/Box	5	BX				
167	#8 Armored Ground Wire Staples, 100/Box	5	BX				
168	3 Wire Male Connector Body (Hubbell 5266C)	20	EA				
169	3 Wire Female Connector Body (Hubbell 5269C)	20	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
170	Split Bolt Connector #8 Wire (S-8)	50	EA				
171	Copper Wire Lugs #121 Wire (SLU-35)	100	EA				
172	Copper Wire Lugs #2 Wire (BTC-208)	100	EA				
173	½" Romex Box Connectors	100	EA				
174	¾" Romex Box Connectors	100	EA				
175	Blue Wire Nuts MMBBG	300	EA				
176	Red Wire Nuts (GB10006)	1,000	EA				
177	Yellow Wire nuts (GB10004)	5,000	EA				
178	Waterproof Wire Nuts 8-22 Gauge	2,000	EA				
179	Street Lighting Mast Arm, 8' per NJDOT Drawing T-0807	16	EA				
180	Street Lighting Mast Arm, 15' - per NJDOT Drawing T-0807	16	EA				
181	Over Head Vertical Roadway Lighting, 150w HPS Bulb, per NJDOT Drawing L-0107	16	EA				
182	Over Head Cobrahead Roadway Lighting, 150w HPS Bulb, per NJDOT Drawing L-0107	16	EA				
183	Pedestal Pole Base Base Type TS-1000 Transition Base	30	EA				
184	Intuicom Communicator II Wireless Data Transceiver, NO SUBSTITUTIONS	10	EA				
185	Intuicom DIO Wireless Transceiver, NO SUBSTITUTIONS	10	EA				
186	Array Pedestal Control Battery Cabinets ONLY Qty (2) For Type G/ K Cab on Meter, Reference Drawing 1-050-002115	50	EA				
187	RR2P-U 8 Pin AC120 V IDEC relay	15	EA				
188	SRP2P-06 IDEC Socket for 8 Pin relay	15	EA				
189	Model SE481616 - Alpha Technologies Complete UPS Stand Alone Nema 3R Aluminum Enclosure/Locking Door (48"x16"x16"), NO SUBSTITUTIONS	50	EA				
190	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				
191	8" Riser Subbase for SE481616	10	EA				
192	8" Riser Subbase for SE481616, Black Epoxy Powder Coat Finish	10	EA				
193	12" Riser Subbase for SE481616	10	EA				
194	12" Riser Subbase for SE481616, Black Epoxy Powder Coat Finish	10	EA				
195	18" Riser Subbase for SE481616	30	EA				
196	18" Riser Subbase for SE481616, Black Epoxy Powder Coat Finish	10	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
197	FXM-HP2000 Rugged UPS Module Alpha Technologies 120 VAC Input /Output 48V dc Battery Bus, NO SUBSTITUTIONS	50	EA				
198	FXM-HP1100---Rugged UPS Module Alpha Technologies 120 VAC Input /Output 48V dc Battery Bus, NO SUBSTITUTIONS	100	EA				
199	FXM-HP650-24--Rugged UPS Module Alpha Technologies 120 VAC Input /Output 24V dc Battery Bus, NO SUBSTITUTIONS	20	EA				
200	FXM-HP650-48--Rugged UPS Module Alpha Technologies 120 VAC Input /Output 48V dc Battery Bus, NO SUBSTITUTIONS	20	EA				
201	Alpha Technologies Battery Cable Harness 24 Volt Battery Buss	20	EA				
202	Alpha Technologies 150XTV Battery 80 ah for use with Alpha FXM1100 Series UPS, NO SUBSTITUTIONS	100	EA				
203	Alpha Technologies 240XTV Battery 112 ah for use with Alpha FXM1100 Series UPS, NO SUBSTITUTIONS	100	EA				
204	Dialight 556-3505-304F 125V AC/ 1 inch Round Red Pael Mount Indicator Lamp/ Dome	300	EA				
205	U Bolt Security Hook with Mounting Hardware	300	EA				
206	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				
207	Model SE481616 Cabinet Alpha Technologies NO SUBSTITUTIONS	10	EA				
208	Model SE481616 Cabinet Alpha Technologies NO SUBSTITUTIONS, Black Epoxy Powder Coat Finish	10	EA				
209	Complete Single Free Swinging Cluster Assembly/Doghouse 12" Traffic Signal with LEDS	6	EA				
210	Complete 2-way Free Swinging Cluster Assembly/Doghouse 12" Traffic Signal with LEDS	16	EA				
NON INSULATED CRIMP STYLE SPADE TERMINALS							
211	12-10 Wire No. 6 Stud	1,000	EA				
212	12-10 Wire No. 8 Stud	1,000	EA				
213	12-10 Wire No. 10 Stud	1,000	EA				
214	12-10 Wire ¼" Stud	1,000	EA				
215	14-16 Wire No. 6 Stud	1,000	EA				
216	14-16 Wire No. 8 Stud	1,000	EA				
217	14-16 Wire No. 10 Stud	1,000	EA				
218	14-16 Wire ¼" Stud	1,000	EA				
219	18-20 Wire No. 4 Stud	1,500	EA				
220	18-20 Wire No. 6 Stud	1,000	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
221	18-14 Wire No. 8 Stud	1,000	EA				
222	#8 Wire ¼" Stud Ring Terminal	1,000	EA				
223	#6 Wire ¼" Stud Ring Terminal	1,000	EA				
INSULATED CRIMP STYLE QUICK SLIDE DISCONNECT							
224	14-16 Wire ¼" Tab Female	2,000	EA				
225	14-16 Wire ¼" Tab Male	5,000	EA				
CRIMP STYLE BUTT SPLICES							
226	10-12 Wire Insulated	1,500	EA				
227	14-16 Wire Insulated	1,500	EA				
228	18-20 Wire Insulated	1,500	EA				
229	Nylon Insulated Crimp Joints (T&B RC55), or Equal	1,500	EA				
230	Amphenol #31-219RFX Female Coaxial Union	50	EA				
231	Amphenol #31-71032 Coaxial Crimp Connectors	100	EA				
MISCELLANEOUS SIGNAL PARTS							
232	4 Channel Detector Cards (NJDOT) 724DB, or Equal	100	EA				
233	4 Pos Channel Detector Rack with Power Supply (NJDOT) 201, or Equal	100	EA				
234	12 Channel Conflict Monitor (NEMA) with LCD Display and Logging/Reporting Capabilities	200	EA				
235	Econolite "D" Panel NO SUBSTITUTIONS	50	EA				
236	Econolite AS2M Master NO SUBSTITUTIONS	5	EA				
237	12" Econolite Poly Signal Head Complete with Tunnel Visor and LEDs. Color: Yellow & Black NO SUBSTITUTIONS	100	EA				
238	12 " Eagle Poly Signal Head Complete with Tunnel Visors and LEDs. Color: Yellow & Black, NO SUBSTITUTIONS	100	EA				
239	12 " Chapel Hill Poly Signal Head Complete with Tunnel Visors and LEDs. Color: Yellow & Black, NO SUBSTITUTIONS	100	EA				
240	NEMA Flasher (NJDOT Approved)	200	EA				
241	NEMA Load Switch (NJDOT approved) Two LED Indicators per Circuit to Provide Confirmation of Input and Output States	200	EA				
242	NEMA L5-30R, 30A 125V 3 wire Connector Hubbell HBL2613	40	EA				
243	NEMA L5-30P, 30A 125V 3 wire Connector Hubbell HBL2611	40	EA				
244	IN4004 Diode	50	EA				
245	5AMP Bridge Diode	50	EA				
246	W21ACPx2 Flash Transfer Relay, or Equal	50	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
247	KRPA-14AG Relay (AMF)	20	EA				
248	KRPA-14DG Relay (AMF)	20	EA				
249	KRPA-11 AG Relay (AMF)	20	EA				
250	KUP-11A15 Relay (AMF)	20	EA				
251	KUP-11D15 Relay (AMF)	20	EA				
252	KUP-14A55 Relay (AMF)	20	EA				
253	27E121 Relay Socket	30	EA				
254	LED 2-Color Turn Arrow (EBTS-3) (Double Arrow)	50	EA				
255	Peek Unitrak Image Detector Card	10	EA				
256	Auto Scope 4 Channel Detector Card	30	EA				
257	UPS Battery Backup for P Cabinet / NJDOT Approved / Alpha Technologies FXM1100/ NO SUBSTITUTIONS	300	EA				
258	UPS Automatic Transfer Switch / NJDOT Approved / Alpha Technologies / NO SUBSTITUTIONS Complete with Mounting Bracket and Wiring Harness	300	EA				
259	UPS Automatic Generator Transfer Switch / NJDOT Approved / Alpha Technologies / NO SUBSTITUTIONS Complete with Mounting Bracket and Wiring Harness	300	EA				
260	Alpha Technologies 195 XTV Battery For use with Alpha FXM1100 UPS/ NO SUBSTITUTIONS	1,200	EA				
261	Alpha Technologies Battery Cable harness / 48 Volt Battery Buss / NO SUBSTITUTIONS	300	EA				
262	Aluminum Enclosure with 30A Generator Input Receptacle / Wiring Harness / Locking Door Mounting Plate Template / Gasket / Mounting Hardware / Field Installable	300	EA				
263	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				
264	8" Red L.E.D. Retro Kits	25	EA				
265	8" Yellow L.E.D. Retro Kits	25	EA				
266	8" Green L.E.D. Retro Kits	50	EA				
267	12" Red L.E.D. Retro Kits	100	EA				
268	12" Yellow L.E.D. Retro Kits	100	EA				
269	12" Green L.E.D. Retro Kits	100	EA				
270	12" Red L.E.D. Arrow	50	EA				
271	12" Yellow L.E.D. Arrow	50	EA				
272	12" Green L.E.D. Arrow	50	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
273	8" Poly-Tunnel Visor	50	EA				
274	12" Poly-Tunnel Visor	500	EA				
275	1 1/2" Aluminum Serrated Elbows with Set Screws	25	EA				
276	1 1/2" x 10' Aluminum Pipe	20	EA				
277	Mark-Out Paint (Electric), Red, Upside Down Spray	200	EA				
278	Band-It 5/8" S.S. Strapping (C-205), 100 Ft./Roll	5	ROLL				
279	Band-It 5/8" S.S. Buckles (C-255), 100/Box	3	BX				
280	Band-It 5/8" Brackets (D-004)	150	EA				
281	DR3-RTFB-01A Red LED for 3M-Signal	30	EA				
282	DR3-YTFB-01A Yellow LED for 3M-Signal	30	EA				
283	DR3-GTFB-01 Green LED for 3M-Signal	30	EA				
284	Red Signal Ahead Sign, per NJDOT Drawing T-1407	6	EA				
285	No Right Turn Lighted Sign, per NJDOT Drawing T-1407	6	EA				
286	Photo Control 105-285 V twist lock cell (PTL-8)	20	EA				
287	Photo Control Receptacle with Bracket (K122)	20	EA				
288	JSF Technologies AB-7412 Dual 12", vertical pole mounting assemblies Color: Black, NO SUBSTITUTIONS	20	EA				
289	JSF Technologies AB-4400 Pedestrian Activated Pole Top Transmitter Color: Black, NO SUBSTITUTIONS	20	EA				
290	VAL Valet LED #VAL-E02-LED-E-U-WQ-AP-WM	4	EA				
291	Holphane Mongoose Medium LED # MGLEDM P2 40K MVOLT FT UN GRSD	20	EA				
292	Push Button Switch Cord for police panel manual controls	30	EA				
293	Transformer Door, Plastic (T) PB-0522-0506-PNC	30	EA				
294	Transformer Door, Plastic (K) PB-0522-19-PNC	30	EA				
295	Transformer Door, Plastic (T w/latch) PB-0522-08-PNC	30	EA				
296	Shim 1/8" x 2" x 2", Steel, Galv PB-0603-GLV	100	EA				
297	Shim 1/16" x 2" x 2", Steel, Galv PB-0602-GLV	10	EA				
298	Hardware Kit, Transformer Base/Pole (Set of 4) DOT Drawing #T-0107	30	EA				
299	Industrial DIN Rail Hardened Power Supply PS-AMR1-12	20	EA				
300	1 Port Ethernet over UTP Extender (Hardened) #CLFE1EOU	20	EA				
301	Direct Burial UTP CAT5 cable	2,000	LF				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
3-M OPTICOM PRE-EMPTIONS ONLY - NO SUBSTITUTIONS							
302	138 Detector Head Lead-in Wire	3,000	LF				
303	722 Detector Head	100	EA				
304	754 Phase Selector	20	EA				
305	760 Card Rack	50	EA				
306	711 Detector, single Channel, One Direction	20	EA				
307	762 Phase Selector/ 2 Channel/ IR Only	30	EA				
308	2100 GPS Vehicle Kit (High Priority)	3	EA				
309	794H IR LED Vehicle Unit Emitter (High Priority)	2	EA				
310	1070 GPS Detector Cable, 250 Ft roll	20	ROLL				
MISCELLANEOUS SUPPLIES							
311	TEKS Self-Drilling Screws ¼ - 14 x ¾"	250	EA				
312	TEKS Self-Drilling Screws ¼ - 14x1"	250	EA				
313	TEKS Self-Drilling Screws ¼ - 14 x 1 ½"	250	EA				
314	Portland Cement, 90 lb. Bag	100	BAG				
315	3M-5000 Loop Sealant, 5 Gallon Can	10	CAN				
316	#6 XLP Stranded Wire-Black	10,000	LF				
317	#8 XLP Stranded Wire-Black	4,000	LF				
318	#8 XLP Stranded Wire - Green	10,000	LF				
319	#6 Stranded Wire-Bare	1,000	LF				
320	#8 Stranded Wire-Bare	2,000	LF				
321	14/3 SJ Cord	500	LF				
322	Adhesive Remover, Citrus Base, 5 Gallon Solvent Free Can	10	CAN				
323	Bondo 606V Epoxy, 1 Gallon Container	30	CONT				
324	3M High Gel Re-enterable Encapulant 8882, 750 Gram Container	20	CONT				
325	10/2 Romex Cable	500	LF				
326	10/2 UF Cable	500	LF				
327	10/3 Romex Cable	500	LF				
328	14/2 P.V.C. Jacket Cable (IMSA 19-1)	10,000	LF				
329	14/4 P.V.C. Jacket Cable (IMSA 19-1) (Black, Red, Green, White)	10,000	LF				
330	14/5 P.V.C. Jacket Cable (IMSA 19-1) (Red, Green, White, Black, Orange)	20,000	LF				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
331	14/7 P.V.C. Jacket Cable (IMSA 19-1)	20,000	LF				
332	18/2 PVC Jacket Cable	500	LF				
333	14/10 PVC Jacket Cable (IMSA 19-1)	8,000	LF				
334	24 Hour Solar Flashing Beacon, 8" Red JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	5	EA				
335	24 Hour Solar Flashing Beacon, 8" Yellow JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	5	EA				
336	24 Hour Solar Flashing Beacon, 12" Red JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	24	EA				
337	24 Hour Solar Flashing Beacon, 12" Yellow JSF Technologies FL-1400-24 Hour with U Channel Post Base, or Equal	20	EA				
338	Solar Ped-X Wireless Cross Walk System, 2 Pole System with Buttons	6	EA				
339	Solar Ped-X Wireless Cross Walk System, 3 Pole System with Buttons	6	EA				
340	4 Way Signal Head Brackets, per NJDOT drawing T-0507 with Bottom	30	EA				
341	Astro- Brac Stellar Assy, 1-way for OPS Band Mount , Tri Bolt Pelco # AS-0103-3-48-SS-PNC	20	EA				
342	Astro- Brac Stellar Assy, 1-way for OPS Band Mount , Tri Bolt Pelco # AS-0103-4-48-SS-PNC	20	EA				
343	Astro- Brac Stellar Assy, 1-way for OPS Band Mount , Tri Bolt Pelco # AS-0103-5-48-SS-PNC	20	EA				
344	Astro-Brac Stellar Assy, 5 Sec Cluster for OPS Signals Band Mount Pelco # AS-0191- 48-SS-PNC	20	EA				
345	Astro-Brac Stellar Assy, 5-Sec Cluster Band Mount Pelco #AS-0109-48-PNC	20	EA				
346	Clamp Screw Kit, 7/16"-14, Stainless Pelco# AB-204-SS	50	EA				
347	V Bolt Kit, 5/16"-18 Stainless Pelco# AB-0256-SS	100	EA				
348	Slip Fitter Assy,1 Way Offset for 4-1/2" OD pole Pelco # SE-3310-PNC	30	EA				
349	Pelco# SM-200-BRS Long Key, Type 1 Cabinet Lock, 2-5/8"	50	EA				
350	Signal Closure Kit, Plastic Pelco # SE-3054-P01	100	EA				
351	1- Way Kit, 8-1/2" CTC, Alum Pelco # AB-4005-PNC	50	EA				
352	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				
353	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				
354	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				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
355	Astro-Brac, Stellar Series Clamp Kit, Band Mount Pelco# AS-3004-48-SS-PNC	20	EA				
356	Astro-Brac, Stellar Series Clamp Kit, Tenon Mount Pelco # AS-3010-PNC	20	EA				
357	Hubbell Weatherproof Boot HBL6031	40	EA				
358	Hubbell Weatherproof Boot HBL6032	40	EA				
359	2 Way Standar H Bar Pelco SP-6025-18-PNC	20	EA				
360	Preformed Conduit Strap Pelco SP-6049-3-PNC	10	EA				
361	Conduit Stand - Off Bracket with Adjustable Stand Off and H Bar Pelco SP-6042-18-PNC	10	EA				
362	Bluewave Guardian Yagi Antennas	10	EA				
363	Tenergy 12.8 V 15Ah Battery Pack with PCB (DGR-A)	20	EA				
364	1 Section Signal Head Cover	20	EA				
365	Pedestrian Crossing Signal Head Cover	32	EA				
366	3 Section Signal Head Cover	50	EA				
367	4 Section Signal Head Cover	20	EA				
POLARA ENGINEERING NAVIGATOR APS SYSTEMS, NO SUBSTITUTIONS							
368	2 Button with Control and Programmer	15	EA				
369	4 Button with Control	15	EA				
370	6 Button with Control	15	EA				
371	752 Phase Selector	40	EA				
372	721 Detector Head	100	EA				
373	iNS23TN0-X** 9x15 iNS2/ 2 Wire APS Push Button Station (Black Or Yellow Color)	10	EA				
374	iDS23RN0-X** 9x15 iNS2/2 wire APS Push Button Station with iDetect Feature & Sign (-Black, -Yellow Color)	10	EA				
375	iNs Complete 2 Button System	10	EA				
376	iNs Complete 4 Button System	10	EA				
377	iNs Complete 8 Button System	10	EA				
378	iDs Complete 2 Button System	10	EA				
379	iDs Complete 4 Button System	10	EA				
380	iDs Complete 8 Button System	10	EA				
381	iCCU-S2 , iCCU Shelf Model, includes BIU Capability	10	EA				
382	ACCP - Any Cabinet Cable Package (includes CABLE-A, CABLE-C,iN2-ICB)	10	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
383	iN2-ICB - Interconnect Board for iCCU-S/iCCU-S2	10	EA				
384	iN2-SDLC-CABLE - SDLC Cable (6' length)	50	EA				
385	iN2-SDLC-YCABLE - SDLC Cable Splitter (4' length)	50	EA				
386	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				
387	iN-DGL iNavigator Bluetooth Dongle	20	EA				
388	Polara 800H-84 Option T- MUTCD R10-3e sign 9" x 15" Right/Left Arrow	80	EA				
389	Polara 800H-99 Option T- MUTCD R10-3e sign 9"x15" Bi Directional Arrow	20	EA				
AUTOSCOPE IMAGE DETECTION SYSTEM							
390	Econolite Autoscope Solo Mini Hub TS-2 NO SUBSTITUTIONS	10	EA				
391	Econolite Autoscope Solo Terra Interface Panel (TIP) NO SUBSTITUTIONS	10	EA				
392	Econolite Autoscope Solo Terra Access Point (TAP) NO SUBSTITUTIONS	10	EA				
393	Econolite Autoscope Rack Vision Terra Machine Vision Processor (MVP) NO SUBSTITUTIONS	10	EA				
394	Econolite Autoscope Vision Comm Manager Interface Panel/ NO SUBSTITUTIONS	20	EA				
395	Econolite Vision Camera NO SUBSTITUTIONS	20	EA				
396	Econolite Autoscope Encore Camera Branch Cable, 1000ft. / NO SUBSTITUTIONS	10	EA				
397	Econolite Autoscope Vision Camera Branch Cable, 1000ft./ NO SUBSTITUTIONS	10	EA				
398	Econolite Hub Enclosure for TAP / NO SUBSTITUTIONS	25	EA				
399	Econolite Power Supply for TAP Hub Enclosure / NO SUBSTITUTIONS	50	EA				
400	Sky Bracket Camera Mounting Hardware with 3ft. Vert. extension for Vision Camera	20	EA				
401	Econolite Terra Interface Panel (TIP) for Encore Camera / NO SUBSTITUTIONS	25	EA				
402	Econolite Terra Access Point (TAP) for Encore Camera / NO SUBSTITUTIONS	25	EA				
403	Econolite Encore Terra I/ O Cable Set (TIP-to-TAP Cable & TS-1 Input / Output Harm.) NO SUBSTITUTIONS	50	EA				
404	Complete Econolite Vision Video Detection System (4) way approach/ NO SUBSTITUTIONS	20	EA				
405	Complete Econolite Vision Video Detection System (2) way approach/ NO SUBSTITUTIONS	20	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
406	Wavetronix SmartSensor Matrix NO SUBSTITUTIONS	20	EA				
407	Sensor Mounting Bracket for Wavetronix Smart Sensor Matrix Part number SS611 NO SUBSTITUTIONS	20	EA				
408	60 ft Drop Cable with connector for Wavetronix Smartsensor Matrix Part # SS704-60ft NO SUBSTITUTIONS	20	EA				
409	Sensor Branch Cable (250ft Each) for Wavetronix Smartsensor Matrix Part number SS750-250 NO SUBSTITUTIONS	20	EA				
410	4' SDLC Y Cable Wavetronics Smartsensor Matrix SDLCY 310041	20	EA				
411	4' SDLC Cable for Wavetronic Smartsensor Matrix Part number 310-0411	20	EA				
412	Wavetronix Smartsensor Matrix Radar Presence Detector (RPD) Complete System for (2) Way Approach	10	EA				
413	Wavetronix Intersection Preassembled Backplate - AC NO SUBSTITUTIONS	8	EA				
414	SR-Series Fixed-Site Thermal Security Cameras	5	EA				
415	TSL Throat Seal, Liquid #206-994, Half Pint Size	2	BTL				
416	Manual Lighted Crosswalk System LaneLight 18 Light Complete	5	EA				
417	Manual Lighted Crosswalk System LaneLight 22 Light Complete	4	EA				
418	LaneLight Controller	4	EA				
419	LaneLight Water Block Control Cable	5,000	LF				
420	LaneLight MLK150 Light with Amber LED	100	EA				
421	Serial GPS Time Sync for Econolite Cobalt / ASC3 /ASC2M Traffic Controller / No Substitutions 1711369502 GPS with 16x w / DB25 Cable	30	EA				
422	Econolite "Cobalt" Fully Actuated Traffic Controller	30	EA				
423	Skybracket Signal Mast Arm Kits for (3) Section Signals SB29-46	50	EA				
424	Skybracket Signal Mast Arm Mounting Kits for (4) Section Signals	50	EA				
425	Skybracket Signal Mast Arm Mounting Kits for (5) Section Signals	50	EA				
426	Skybracket Signal Mast Arm Mounting Kits for (3) Section 3M Pv Optical Signals	50	EA				
427	Skybracket Signal Mast Arm Mounting Kits for Standard Cluster Assembly SB29SCB-37	50	EA				
428	Skybracket Adjustable Camera Mount Kit / SB29-ACM-29 with 60" Tube / 29" banding	50	EA				
429	NWA-7-3X 3" Conduit Stand Off with 20-24" crossbar	50	EA				
#14 LOOP DETECTOR WIRE, #14-2 COND. SHIELD LOOP LEAD-IN WIRE & CABLES							
430	#14 Loop Detector Wire per NJDOT 2007 Spec. 918.02.02 Traffic Parts #543, or Equal	500	LF				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
431	#14-2 Cond Shield Loop Lead-in Wire per NJDOT 2007 Spec. 918.02.02 Traffic Parts #539, or Equal	500	LF				
432	Advanced Traffic Sensor Composite Cable	1,500	LF				
433	½" Foam Dielectric Coaxial Cable	1,000	LF				
CONDUIT & FITTINGS							
434	½" Recessed Pipe Plug	10	EA				
435	½" Close Nipple	40	EA				
436	¾" Rigid Conduit	100	LF				
437	¾" Rigid Coupling	20	EA				
438	¾" 90 Degree Sweep	30	EA				
439	¾" LB with Cover & Gasket	30	EA				
440	¾" Pipe Tee (Plumbing Type)	20	EA				
441	¾" x ½" Reducer Bushing	10	EA				
442	¾" Recessed Pipe Plug	10	EA				
443	¾" 1-Hole Conduit Strap	100	EA				
444	¾" Lock Nut	150	EA				
445	¾" Plastic Bushing	20	EA				
446	¾" Grounding Bushing	50	EA				
447	¾" Offset Nipple	50	EA				
448	¾" x 3" Nipple	30	EA				
449	¾" x 4" Nipple	30	EA				
450	¾" x 5" Nipple	30	EA				
451	¾" x Short Nipple	30	EA				
452	¾" Close Nipple	30	EA				
453	¾" Threaded Entrance Head	30	EA				
454	1" Close Nipple	30	EA				
455	1" Recessed Pipe Plug	30	EA				
456	1" Short Nipple	30	EA				
457	1" Ground Bushing	30	EA				
458	1" Plastic Bushing	100	EA				
459	1" Locknut	150	EA				
460	1" x ¾" Reducer Bushing	30	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
461	1" x 3" Nipple	30	EA				
462	1 ½" 1 Hole Rigid Pipe Strap	100	EA				
463	1 ½" Rigid Conduit Coupling	20	EA				
464	1 ½" Threadless Coupling (Compression Type)	20	EA				
465	1 ½" Close Nipple	20	EA				
466	1 ½" Rigid Conduit	100	LF				
467	1 1/2" Rigid Locknut	200	EA				
468	1 ½" Short Nipple	30	EA				
469	1 ½" x ¾" Reducer Bushing	30	EA				
470	1 ½" x 4" Nipple	30	EA				
471	1 ½" x 6" Nipple	30	EA				
472	1 ½" x 8" Nipple	30	EA				
473	1 ½" x 10" Nipple	30	EA				
474	1 ½" 90 Degree Sweep	50	EA				
475	1 ½" Pipe Tee (Plumbing Type)	20	EA				
476	1 ½" Recessed Pipe Plug	20	EA				
477	1 ½" Plastic Push Penny	20	EA				
478	1 ½" Threadless Grounding Bushing	20	EA				
479	1 ½" Threaded Grounding Bushing	30	EA				
480	1 1/2 Threaded Plastic Bushing for Rigid Conduit	100	EA				
481	1 ½" 90 Degree Liquid-Tite Connector	20	EA				
482	1 ½" Straight Liquid-Tite Connector	20	EA				
483	1 ½" P.V.C. Conduit	100	LF				
484	1 ½" P.V.C. Coupling	20	EA				
485	1 ½" P.V.C. Entrance Head	20	EA				
486	1 ½" P.V.C. Male Adapter	20	EA				
487	1 ½" lb. with Cover & Gasket	50	EA				
488	1 ½" Liquid-Tite Conduit	50	FT				
489	2" Rigid Metallic Conduit	100	LF				
490	2" Rigid Coupling	30	EA				
491	2" Threadless Coupling (Compression Type)	20	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
492	2" x Close Nipple	30	EA				
493	2" x 4" Nipple	30	EA				
494	2" x 6" Nipple	30	EA				
495	2" x 8" Nipple	30	EA				
496	2" x 10" Nipple	30	EA				
497	2" Grounding Bushing	100	EA				
498	2" Threadless Grounding Bushing	20	EA				
499	2" Plastic Bushing	20	EA				
500	2" x 1 1/2" Reducer Bushing	20	EA				
501	2" x 3/4" Reducer Bushing	20	EA				
502	2" 1-Hole Rigid Pipe Strap	150	EA				
503	2" 90 Degree Rigid Sweep	30	EA				
504	2" Pipe Tee (Plumbing Type)	20	EA				
505	2" L Box with Gasket & Cover	20	EA				
506	2" Lock Nut	50	EA				
507	2" Threaded Entrance Head	20	EA				
508	2" Liquid-Tite Flexible Conduit	50	LF				
509	2" 90 Degree Liquid-Tite Connector	30	EA				
510	2" Straight Liquid-Tite Connector	30	EA				
511	2" Recessed Pipe Plug	20	EA				
512	2" P.V.C. Male Adapter	20	EA				
513	2" P.V.C. Conduit	100	LF				
514	2" P.V.C. Coupling	20	EA				
515	2" P.V.C. Entrance Head	20	EA				
516	2" Plastic Push Penny	20	EA				
517	2" P.V.C. Sweep, 90 Degrees	20	EA				
518	2" P.V.C. lb. with Gasket & Cover	20	EA				
519	3" Rigid Conduit	1,000	LF				
520	3" Rigid Conduit Coupling	100	EA				
521	3" Threadless Coupling (Compression Type)	20	EA				
522	3" Close Nipple	30	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
523	3" x 4" Nipple	30	EA				
524	3" x 6" Nipple	30	EA				
525	3" x 8" Nipple	30	EA				
526	3" x 10" Nipple	30	EA				
527	3" x 12" Nipple	30	EA				
528	3" 90 Degree Sweep	100	EA				
529	3" 45 Degree Sweep	60	EA				
530	3" 22 ½ Degree Sweep	30	EA				
531	3" Recessed Pipe Plug	20	EA				
532	3" Plastic Push Penny	20	EA				
533	3" Grounding Bushing	200	EA				
534	3" Threadless Grounding Bushing	40	EA				
535	3" x 2" Threaded Reducer Bushing	40	EA				
536	Pole Plate, 1 ¼" Bottom Hole, Traffic Parts #1176, or Equal	20	EA				
537	Pole Plate, No Hole, Traffic Parts #1177, or Equal	20	EA				
538	Balance Adjuster with SS Bushing, Traffic Parts #4368, or Equal	30	EA				
539	Indoor Load Center, Siemens E0408ML1125F, or Equal	15	EA				
540	Preformed Conduit Strap Pelco SP-6049-3-PNC	40	EA				
541	Conduit Stand - Off Bracket with Adjustable Stand Off and H Bar Pelco SP-6042-18-PNC	20	EA				
OTHER							
542	Aerosol Rust Remover per Case Please Indicate #/Case and Size oz. in Comments	3	CASE				
543	WD40 Aerosol per Case Please Indicate #/Case and Size oz. in Comments	4	CASE				
544	PX1001C DeTour for Rodents, 12 - 10oz. Tubes per Case, or Equal	4	CASE				
545	6" Copper Mesh, 400' Roll	5	ROLL				
546	18" Split Sub Base Skirt for "P" Cabinet with Adjustable Shelves	80	EA				
547	18" Split Sub base Skirt for "P" Cabinet with Adjustable Shelves, Black Epoxy Powder Coat Finish	80	EA				
548	Polara Aluminum Push Button Cup "Powder Coat Yellow"	50	EA				
549	Universal Battery UB12100-S 12V 10ah Rechargeable Battery	100	EA				
550	Universal Battery UB12150 12V 15ah Rechargeable Battery	50	EA				

Line Item	Description	Est. Qty.	Unit of Meas.	Unit Price	Total Price	Delivery, A.R.O.	Comments
551	Cyclon 2V 25.0 AH BC Cell Rechargeable Battery	100	EA				
552	Sealed Lead Acid Battery # UN12220	10	EA				
553	Panel Mount Flashers Model 25DF 60-135VAC 25 amps	20	EA				
554	"Hybrid" Power Relay 418 Series 120VAC 75 amps	20	EA				
555	RR2 PU Power Relay 8 pin AC12V	20	EA				
556	Opticom 3100 GPS Radio Unit Containing a GPS Receiver with Antenna and a 2.4 GHZ Spread Spectrum Transceiver with Antenna	50	EA				

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION
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 Contract

Subsection 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 RELATIONS

107.01.01 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 SIGNALS

702.02.01 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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

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.

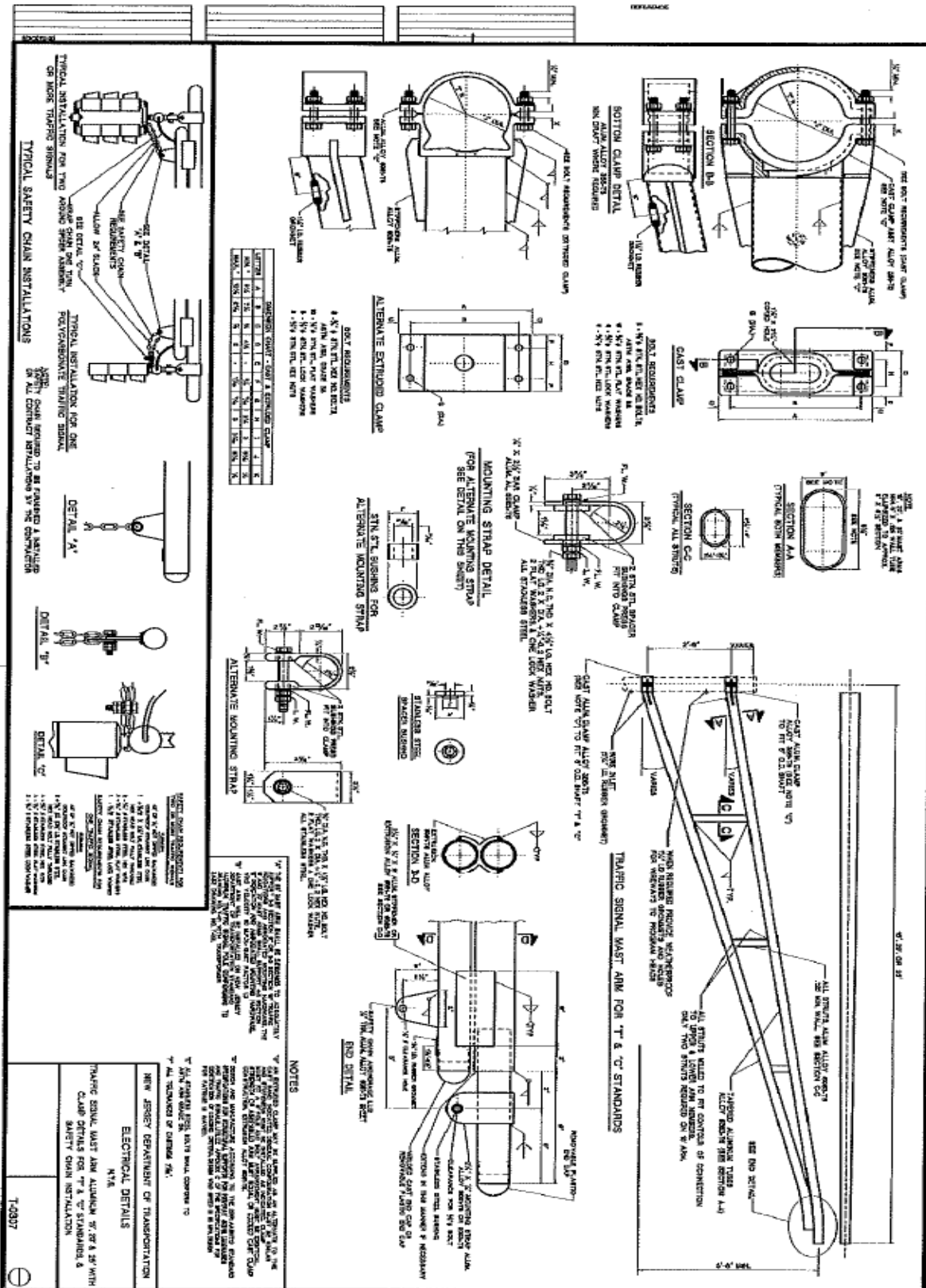
Optical: The entire design permits a positive contact of the door, lens, and assemblies which create a moisture and dust tight atmosphere.

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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT - TRAFFIC DIVISION

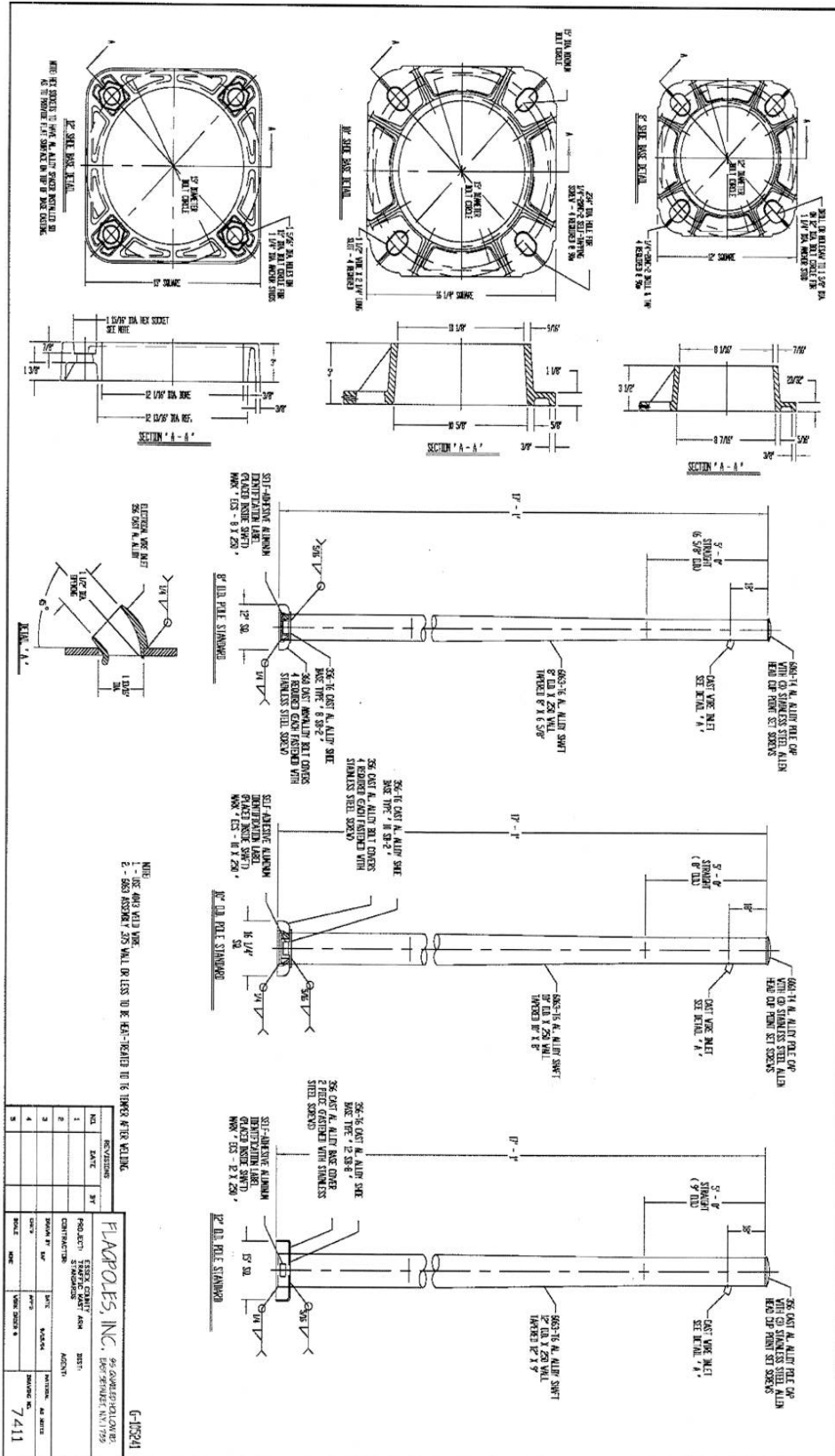
ITEM #'S 13, 15, AND 17: 15', 20' AND 25' T MAST ARMS



T-0307

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #27-12' PEDESTAL POLE ALUMINUM



ITEM #'S 368, 369 & 370 – POLARA ENGINEERING NAVIGATOR APS SYSTEMS, OR EQUAL**MECHANICAL**

- Pole Unit Speaker: 8 Ω , 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 Ω .
- 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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #412 – 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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #412 – 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 "fl" 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 baudrate.

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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #412 – 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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

**ITEM #412 – 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 (- 40°C 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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #412 – 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 0.41 in. (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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #412 – 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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #412 – 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)

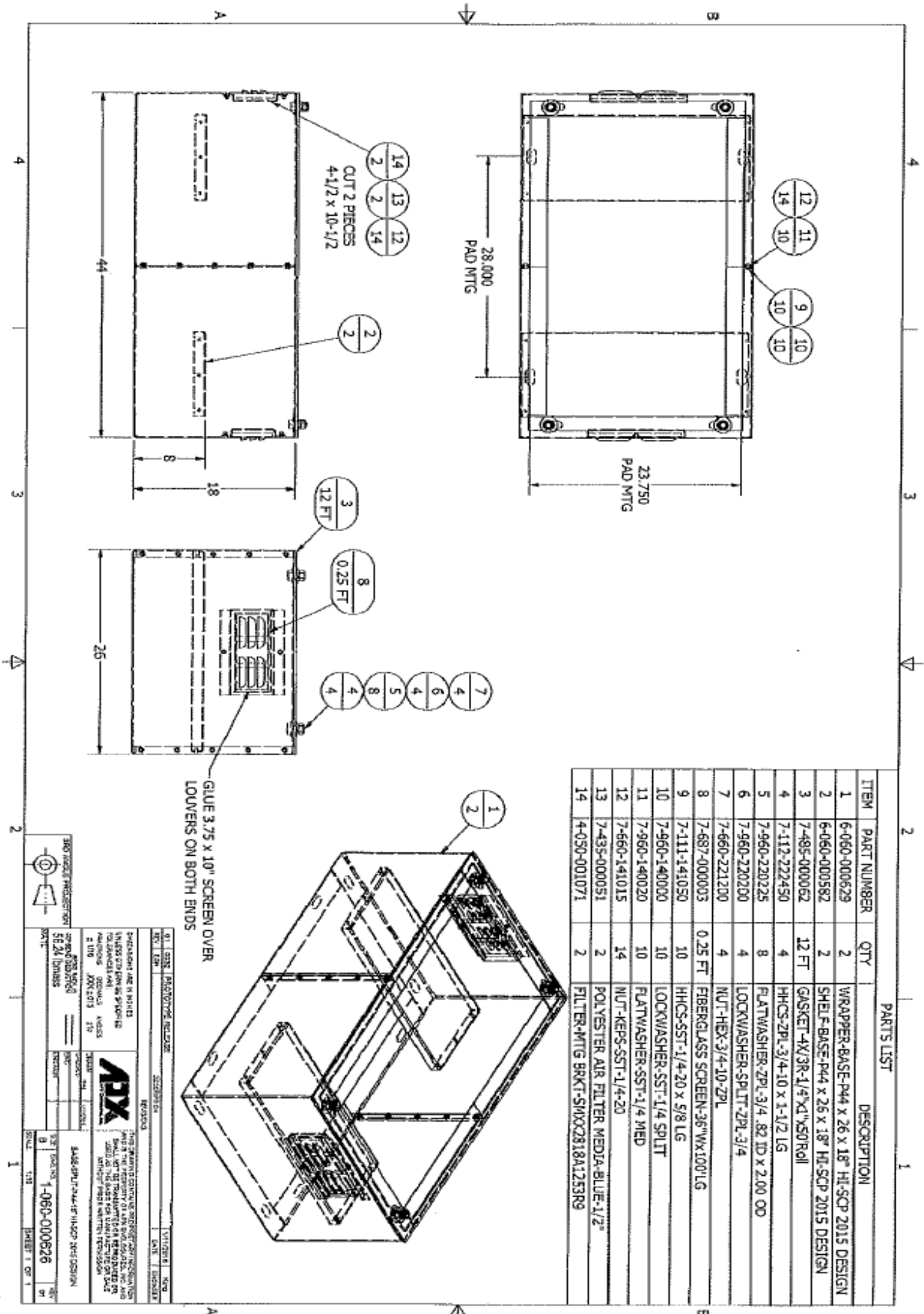
One Matrix Above-Ground Radar Presence Detector (4) approach Complete System consists of following:

- 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.

SCOPE OF WORK - VARIOUS EQUIPMENT FOR THE ENGINEERING DEPARTMENT – TRAFFIC DIVISION

ITEM #546 - SPLIT BASE 18" SKIRT FOR "P" CABINETS



ITEM	PART NUMBER	QTY	DESCRIPTION
1	6-060-000629	2	WRAPPER-BASE-P44 X 26 X 18" HI.SCP 2015 DESIGN
2	6-060-000582	2	SHELL-BASE-P44 X 26 X 18" HI.SCP 2015 DESIGN
3	7-485-000062	12 FT	GASKET-4X3/8-1/4"X1/4"X50'Roll
4	7-112-222450	4	HHC5-ZPL-3/4-10 X 1-1/2 LG
5	7-960-220225	8	FLATWASHER-ZPL-3/4 .82 ID X 2.00 OD
6	7-960-220200	4	LOCKWASHER-SPLIT-ZPL-3/4
7	7-660-221200	4	NUT-HEX-3/4-10-ZPL
8	7-687-000003	0.25 FT	FIBERGLASS SCREEN-36"Wx100'Lg
9	7-111-141050	10	HHC5-SST-1/4-20 X 5/8 LG
10	7-960-140000	10	LOCKWASHER-SST-1/4 SPLIT
11	7-960-140020	10	FLATWASHER-SST-1/4 MED
12	7-660-141015	14	NUT-KEPS-SST-1/4-20
13	7-435-000051	2	POLYESTER AIR FILTER MEDIA-BLUE-1/2"
14	4-050-001071	2	FILTER-MTG BRKT-SMXX2818A125R9

APX

APX INDUSTRIES, INC. 1-800-451-1111

1000 W. 14th Street, Suite 100, Orem, UT 84057

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