



ARLINGTON COUNTY, VIRGINIA  
OFFICE OF THE PURCHASING AGENT  
2100 CLARENDON BOULEVARD, SUITE 500  
ARLINGTON, VIRGINIA 22201

**CONTRACT AWARD COVERPAGE**

<b>TO:</b> TRAFFIC SYSTEMS, LLC	<b>DATE ISSUED:</b> 2/6/2023
7390 MERRITT PARK DRIVE, STE 160	<b>CONTRACT NO:</b> 23-DES-ITB-457
MANASSAS, VIRGINIA 20109	<b>CONTRACT TITLE:</b> TRAFFIC SIGNAL POLES

---

**THIS IS A NOTICE OF AWARD OF CONTRACT AND NOT AN ORDER. NO WORK IS AUTHORIZED UNTIL THE VENDOR RECEIVES A VALID COUNTY PURCHASE ORDER ENCUMBERING CONTRACT FUNDS.**

The contract documents consist of the terms and conditions of AGREEMENT No. 23-DES-ITB-457 including any attachments or amendments thereto.

**EFFECTIVE DATE:** 2/6/2023

**EXPIRES:** 1/31/2024

**RENEWALS:** 4 RENEWALS REMAINING

**LIVING WAGE:** N

**EMPLOYEES NOT TO BENEFIT:**

**NO COUNTY EMPLOYEE SHALL RECEIVE ANY SHARE OR BENEFIT OF THIS CONTRACT NOT AVAILABLE TO THE GENERAL PUBLIC.**

---

**VENDOR CONTACT:** RANDALL W. DOMINICK

**VENDOR TEL. NO.:** (703) 530-9655

**EMAIL ADDRESS:** [RANDY@TRAFFICSYSTEM.US](mailto:RANDY@TRAFFICSYSTEM.US)

**COUNTY CONTACT:** JUSTIN MCCARTHY (DES-T)

**COUNTY TEL. NO.:** (703) 228-3734

**COUNTY CONTACT EMAIL:** [JMCCARTHY@ARLINGTONVA.US](mailto:JMCCARTHY@ARLINGTONVA.US)

---

**PURCHASING DIVISION AUTHORIZATION**

Lucas Alexander

Procurement Officer

2/6/2023

Title

Date



**ARLINGTON COUNTY, VIRGINIA  
OFFICE OF THE PURCHASING AGENT  
SUITE 500, 2100 CLARENDON BOULEVARD  
ARLINGTON, VA 22201**

**AGREEMENT NO. 23-DES-ITB-457**

THIS AGREEMENT is made, on the date of execution by the County, between Traffic Systems, LLC, 7390 Merritt Park Drive, Suite 160, Manassas, Virginia 20109, a limited liability company authorized to do business in the Commonwealth of Virginia, and the County Board of Arlington County, Virginia ("County"). The County and the Contractor, for the consideration hereinafter specified, agree as follows:

**1. CONTRACT DOCUMENTS**

The "Contract Documents" consist of this Agreement, bid of the successful Bidder (hereinafter "Contractor") and Arlington County (hereinafter "County") Invitation to Bid No. 23-DES-ITB-457.

The Contract Documents set forth the entire agreement between the County and the Contractor. The County and the Contractor agree that no representative or agent of either party has made any representation or promise with respect to the parties' agreement that is not contained in the Contract Documents. The Contract Documents may be referred to below as the "Contract" or the "Agreement".

**2. SCOPE OF WORK**

The Contractor agrees to perform the services described in the Contract Documents (the "Work"), more particularly described in the Scope of Services included with the Invitation to Bid. The primary purpose of the Work is to provide traffic signal poles, mast arms, appurtenances, and specification design services. The Contract Documents set forth the minimum work estimated by the County and the Contractor to be necessary to complete the Work. It will be the Contractor's responsibility, at its sole cost, to provide the services set forth in the Contract Documents and sufficient services to fulfill the purposes of the Work. Nothing in the Contract Documents limits the Contractor's responsibility to manage the details and execution of the Work.

**3. PROJECT OFFICER**

The performance of the Contractor is subject to the review and approval of the County Project Officer, who will be appointed by the Director of the Arlington County department or agency requesting the Work under this Contract.

**4. CONTRACT TERM**

Time is of the essence. The Work will commence on the date of execution by the County and must be completed no later than January 31, 2024 ("Initial Contract Term"), subject to any modifications provided in the Contract Documents. Upon satisfactory performance by the Contractor the County may, through issuance of a bilateral Notice of Renewal, authorize continuation of the Agreement under the same

contract prices for not more than three additional 12-month periods, from February 1, 2024, to January 31, 2028 (each a "Subsequent Contract Term"). The Initial Contract Term and any Subsequent Contract Term(s) are together the "Contract Term".

#### **5. CONTRACT PRICING**

Unless otherwise provided in the Contract Documents, the Contractor shall provide the goods and services covered in the County's Invitation to Bid No. 23-DES-ITB-457 at the prices provided in the bid of the Contractor.

#### **6. CONTRACT PRICING WITH OPTIONAL PRICE ADJUSTMENTS**

The Contract Amount/unit price(s) will remain firm until July 31, 2023 ("Price Adjustment Date"). To request a price adjustment, the Contractor or the County must submit a written request to the other party not less than 60 days before the Price Adjustment Date. Adjustments to the Contract Amount/unit price(s) will not exceed the percentage of change in the US Bureau of Labor Statistics Table 9 Producer Price Indexes (PPI) for commodity and service groupings, and individual items, not seasonally adjusted, located [here](#).

Any Contract Amount/unit price(s) that result from this provision will become effective the day after the Price Adjustment Date and will be binding for 6 months. The new Price Adjustment Date will be 6 months after the price adjustment.

If the Contractor and the County have not agreed on a requested adjustment by 30 days before the Price Adjustment Date, the County may not renew the Contract, whether or not the County has previously elected to renew the Contract's term.

#### **7. PAYMENT TERMS**

The Contractor must submit invoices to the County's Project Officer, who will either approve the invoice or require corrections. The County will pay the Contractor within 45 days after receipt of an invoice for completed work that is reasonable and allocable to the Contract and that has been performed to the satisfaction of the Project Officer. The number of the County Purchase Order pursuant to which goods or services have been delivered or performed must appear on all invoices.

If the County makes a partial payment, it may retain 5% of the estimate upon which the partial payment is based until completion and final acceptance of the Work.

#### **8. PAYMENT OF SUBCONTRACTORS**

The Contractor is obligated to take one of the two following actions within seven days after receipt of payment by the County for work performed by any subcontractor under this Contract:

- a. Pay the subcontractor for the proportionate share of the total payment received from the County attributable to the work performed by the subcontractor under this Contract; or
- b. Notify the County and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's payment, with the reason for nonpayment.

The Contractor is obligated to pay interest to the subcontractor on all amounts owed by the Contractor to the subcontractor that remain unpaid after seven days following receipt by the Contractor of payment from the County for work performed by the subcontractor under this Contract, except for amounts

withheld as allowed in subsection b., above. Unless otherwise provided under the terms of this Contract, interest will accrue at the rate of 1% per month.

The Contractor must include in each of its subcontracts, if any are permitted, a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

The Contractor's obligation to pay an interest charge to a subcontractor pursuant to this section may not be construed to be an obligation of the County. A Contract modification may not be made for the purpose of providing reimbursement for such interest charge. A cost reimbursement claim may not include any amount for reimbursement for such interest charge.

**9. NO WAIVER OF RIGHTS**

The County's approval or acceptance of or payment for any goods or services under this Contract will not waive any rights or causes of action arising out of the Contract.

**10. NON-APPROPRIATION**

All payments by the County to the Contractor pursuant to this Contract are subject to the availability of an annual appropriation for this purpose by the County Board of Arlington County, Virginia ("Board"). In the event that the Board does not appropriate funds for the goods or services provided under this Contract, the County will terminate the Contract, without termination charge or other liability to the County, on the last day of the fiscal year or when the previous appropriation has been spent, whichever event occurs first.

**11. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR**

This Contract does not obligate the County to purchase a specific quantity of items or services during the Contract Term. Any quantities that are included in the Contract Documents are the present expectations of the County for the period of the Contract; and the County is under no obligation to buy that or any amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods and/or services than the estimated annual quantities, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates in the Contract.

The County does not guarantee that the Contractor will be the exclusive provider of the goods or services covered by this Contract. The items or services covered by this Contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items or services through those contract(s).

**12. COUNTY PURCHASE ORDER REQUIREMENT**

County purchases are authorized only if the County issues a Purchase Order in advance of the transaction, indicating that the ordering County agency has sufficient funds available to pay for the purchase. If the Contractor provides goods or services without a signed County Purchase Order, it does so at its own risk and expense. The County will not be liable for payment for any purchases made by its employees that are not authorized by the County Purchasing Agent.

**13. DELIVERY**

All goods are purchased F.O.B. destination in Arlington County as described in the specifications. Transportation, handling and all related charges are included in the unit prices or discounts that the Contractor submitted with its bid.

**14. WARRANTY**

The Contractor guarantees against and will correct at its expense factory defects that occur during the manufacturer's standard warranty period. The Contractor will provide all manufacturers' warranties at the time of delivery.

All work is guaranteed by the Contractor against defects resulting from the use of inferior or faulty materials or workmanship for one (1) year from the date of final acceptance of the work by the County. No date other than the date of final acceptance shall govern the effective date of the Guaranty, unless that date is agreed upon by the County and the Contractor in advance and in a signed writing.

**15. INSPECTION, ACCEPTANCE, TITLE, AND RISK OF LOSS**

The County will inspect all materials at the delivery location within ten days of delivery and may test the goods at its see fit before accepting them.

The Contractor warrants that it has good title to and will require all subcontractors to warrant that they have good title to, all delivered goods.

The Contractor bears title and risk of loss or damage to all delivered goods until the County accepts them.

Neither the Contractor nor any subcontractor may retain any interest in the goods after the County accepts them.

**16. DAMAGE TO PROPERTY**

Any damage, as determined by the Project Officer, to the real or personal property, whether owned by the County or others, resulting from the Work performed under this Contract shall be timely repaired or replaced to the County's satisfaction at the Contractor's expense. The County will perform the repairs unless the County agrees that such repairs will be made by the Contractor. Any such Contractor repairs will be made within ten (10) days of the date of damage to the satisfaction of the County. All costs of the repair performed by the County shall be deducted from the Contractor's final payment.

**17. CLEANING UP**

The Contractor shall remove, as frequently as necessary, all refuse, rubbish, scrap materials and debris from any and all work sites to the extent that the trash is the result of the Contractor's operations, to the end that any and all work sites shall present a neat, orderly, and workmanlike appearance at all times. At completion of the Work, but before final acceptance, the Contractor shall remove all surplus material, falsework, temporary structures including foundations thereof, and debris of every nature resulting from the Contractor's operations or resulting from any activity on the site related to the Contractor's operations and put the site in a neat, orderly condition; if the Contractor fails to do so, the County shall have the right to remove the surplus material, falsework, temporary structures including foundations thereof, and debris, put the site in a neat, orderly condition, and charge the cost to the Contractor. The County shall be entitled to offset such cost against any sums owed by the County to the Contractor under this Contract.

**18. DISPOSAL OF PACKING MATERIALS, TRASH AND DEBRIS**

The Contractor must, at its expense and without using any County waste containers, immediately remove and legally dispose of off-site all packing materials, trash and debris ("Waste"). Otherwise, the County will contract a third party to dispose of the Waste and will deduct the expense from the final payment to the Contractor.

The County will deduct from the final payment the expense to repair any damage to County-owned or-controlled property that the Contractor or its agents cause, unless the County agrees that the Contractor can make the repairs, in which case the Contractor must make the repairs at its expense within ten days of the damage and to the satisfaction of the County.

**19. OSHA REQUIREMENTS**

The Contractor certifies that all material supplied or used under this Contract meets all federal and state Occupational Safety and Health Administration ("OSHA") requirements. If the material does not meet the OSHA requirements, the Contractor will bear all costs necessary to bring the material into compliance.

**20. HAZARDOUS MATERIALS**

The Contractor must comply with all federal, state, and local laws governing the storage, transportation, and use of toxic and hazardous materials. The County is subject to the Hazard Communication Standard, 29 CFR § 1910.1200 ("Standard"). The Contractor will provide, no later than delivery or first use of the materials, Material Safety Data Sheets ("MSDS") for all hazardous materials supplied to the County or used in the performance of the Work. The Contractor will also ensure that all shipping and internal containers bear labels that meets the requirements of the Standard. The County may refuse shipments of hazardous materials that are not appropriately labeled or for which the Contractor has not timely provided MSDS. The Contractor must pay any expenses that it or the County incurs as a result of the County's refusal of goods under this section or rejection of MSDS.

**21. HAZARDOUS WASTE GENERATOR/HAZARDOUS WASTE DISPOSAL**

The County and the Contractor shall be listed as co-generators. The Contractor assumes all duties pertaining to the waste generator, including signing the Waste Shipment Record ("WSR") and manifest. The Contractor shall supply the County Project Officer with the executed original Owner's Copy of the WSR, as required by applicable regulatory agencies within thirty-five (35) days from the time the waste was accepted by the initial waste transporter, and prior to request for final payment. A separate WSR shall be submitted for each shipment to the disposal site.

**Delayed Waste Shipment Records:** The Contractor shall report in writing to the EPA Region III office within forty-five (45) days if an executed copy of the WSR is not received from the operator of the disposal site. The report to the EPA regional office shall include a copy of the original WSR and a cover letter signed by the Contractor stating the efforts taken to locate the hazardous waste shipment and the results of those efforts.

**Temporary Hazardous Waste Storage Prohibited:** The Contractor shall not temporarily store hazardous waste unless pre-approved by the County. If so approved, hazardous waste stored off-site in a temporary facility shall be monitored and records shall be kept on the number of containers, size, and weight. The Contractor shall inform the County when the hazardous waste is to be transported to the final disposal site. The County has the right to inspect the temporary site at any time. The Contractor shall submit copies of all relevant manifests, WSRs, and landfill receipts to the County Project Officer prior to the request for final payment. All paperwork shall be signed by the Contractor and disposal site operator as required.

## **22. SAFETY**

The Contractor shall comply with, and ensure that the Contractor's employees and subcontractors comply with, all current applicable local, state and federal policies, regulations and standards relating to safety and health, including, by way of illustration and not limitation, the standards of the Virginia Occupational Safety and Health program of the Department of Labor and Industry for General Industry and for the Construction Industry, the Federal Environmental Protection Agency standards and the applicable standards of the Virginia Department of Environmental Quality.

The Contractor shall provide, or cause to be provided, all technical expertise, qualified personnel, equipment, tools and material to safely accomplish the work specified to be performed by the Contractor and subcontractor(s).

The Contractor shall identify to the County Project Officer at least one on-site person who is the Contractor's competent, qualified, and authorized person on the worksite and who is, by training or experience, familiar with and trained in policies, regulations and standards applicable to the work being performed. The competent, qualified and authorized person must be capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, shall be capable of ensuring that applicable safety regulations are complied with, and shall have the authority and responsibility to take prompt corrective measures, which may include removal of the Contractor's personnel from the work site.

The Contractor shall provide to the County, at the County's request, a copy of the Contractor's written safety policies and safety procedures applicable to the scope of work. Failure to provide this information within seven (7) days of the County's request may result in cancellation of the contract.

## **23. COVID-19 VACCINATION POLICY FOR CONTRACTORS**

Due to the ongoing COVID-19 pandemic, the County has taken various steps to protect the welfare, health, safety, and comfort of the workforce and public at large. As part of these steps, the County has implemented various requirements with respect to health and safety including policies with respect to social distancing, the use of face-coverings and vaccine mandates. To protect the County's workforce and the public at large, all employees and subcontractors of the Contractor who are assigned to this Contract, should be fully vaccinated against COVID-19. Any contractor employee or subcontractor who is not fully vaccinated should be following a weekly testing protocol as established by the Contractor, unless exempt pursuant to a valid reasonable accommodation under state or federal law.

## **24. FAILURE TO DELIVER**

If the Contractor fails to deliver goods or services in accordance with the Contract terms and conditions, the County, after notice to the Contractor, may procure the goods or services from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. The County shall be entitled to offset such costs against any sums owed by the County to the Contractor. However, if public necessity requires the use of nonconforming materials or supplies, they may be accepted at a reduction in price to be determined solely by the County.

## **25. UNSATISFACTORY WORK**

The Contractor must within 15 days of written notice from the County remove and replace, at its expense, any goods that the County rejects as unsatisfactory. Otherwise, the County may choose to remove or replace the rejected goods at the Contractor's expense. The County may offset the costs against any amounts that it owes the Contractor. The County may also decide not to remove or replace the

unsatisfactory goods and instead to adjust the Contract Amount to account for the unsatisfactory performance. This paragraph applies throughout the Contract Term and any warranty or guarantee period.

**26. PROJECT STAFF**

The County has the right to reasonably reject staff or subcontractors whom the Contractor assigns to the Project. The Contractor must then provide replacement staff or subcontractors satisfactory to the County in a timely manner and at no additional cost to the County. The day-to-day supervision and control of the Contractor's employees and its subcontractors is the sole responsibility of the Contractor.

**27. SUPERVISION BY CONTRACTOR**

The Contractor shall at all times enforce strict discipline and good order among the employees and subcontractors performing under this Contract and shall not employ on the Work any person not reasonably proficient in the work assigned.

**28. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED**

During the performance of its work pursuant to this Contract:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability or on any other basis prohibited by state law. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation will be deemed sufficient for meeting the requirements of this section.
- C. The Contractor will state in all solicitations or advertisements for employees that it places or causes to be placed that such Contractor is an Equal Opportunity Employer.
- D. The Contractor will comply with the provisions of the Americans with Disabilities Act of 1990 ("ADA"), which prohibits discrimination against individuals with disabilities in employment and mandates that disabled individuals be provided access to publicly and privately provided services and activities.
- E. The Contractor must include the provisions of the foregoing paragraphs in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

**29. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED**

In accordance with §2.2-4311.1 of the Code of Virginia, as amended, the Contractor must not during the performance of this Contract knowingly employ an unauthorized alien, as that term is defined in the federal Immigration Reform and Control Act of 1986.

**30. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR**

During the performance of this Contract, the Contractor must: (i) provide a drug-free workplace for its employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation,



possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violating such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "workplace" means the site(s) for the performance of the work required by this Contract.

### **31. SEXUAL HARASSMENT POLICY**

If the Contractor employs more than five employees, the Contractor shall (i) provide annual training on the Contractor's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post the Contractor's sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that the Contractor owns or leases for business purposes and (b) the Contractor's employee handbook.

### **32. TERMINATION**

The County may terminate this Contract at any time as follows: (1) for cause, if, as determined by the County, the Contractor is in breach or default or has failed to perform the Work satisfactorily; or (2) for the convenience of the County.

Upon receipt of a notice of termination, the Contractor must not place any further orders or subcontracts for materials, services or facilities; must terminate all vendors and subcontracts, except as are necessary for the completion of any portion of the Work that the County did not terminate; and must immediately deliver all documents related to the terminated Work to the County.

Any purchases that the Contractor makes after the notice of termination will be the sole responsibility of the Contractor, unless the County has approved the purchases in writing as necessary for completion of any portion of the Work that the County did not terminate.

If any court of competent jurisdiction finds a termination for cause by the County to be improper, then the termination will be deemed a termination for convenience.

#### **A. TERMINATION FOR CAUSE, INCLUDING BREACH AND DEFAULT; CURE**

1. Termination for Unsatisfactory Performance. If the County determines that the Contractor has failed to perform satisfactorily, then the County will give the Contractor written notice of such failure(s) and the opportunity to cure them within 15 days or any other period specified by the County ("Cure Period"). If the Contractor fails to cure within the Cure Period, the County may terminate the Contract for failure to provide satisfactory performance by providing written notice with a termination date. The Contractor must submit any request for termination costs, with all supporting documentation, to the County Project Officer within 30 days after the expiration of the Cure Period. The County may accept or reject the request for termination costs, in whole or in part, and may notify the Contractor of its decision within a reasonable time.

In the event of termination by the County for failure to perform satisfactorily, the Contractor must continue to provide its services as previously scheduled through the termination date, and the County must continue to pay all fees and charges incurred through the termination date.

2. Termination for Breach or Default. If the County terminates the Contract for default or breach of any Contract provision or condition, then the termination will be immediate after notice of termination to the Contractor (unless the County provides for an opportunity to cure), and the Contractor will not be permitted to seek termination costs.

Upon any termination pursuant to this section, the Contractor will be liable to the County for costs that the County must expend to complete the Work, including costs resulting from any related delays and from unsatisfactory or non-compliant work performed by the Contractor or its subcontractors. The County will deduct such costs from any amount due to the Contractor; or if the County does not owe the Contractor, the Contractor must promptly pay the costs within 15 days of a demand by the County. This section does not limit the County's recovery of any other damages to which it is entitled by law.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt the notice of the termination.

**B. TERMINATION FOR THE CONVENIENCE OF THE COUNTY**

The County may terminate this Contract in whole or in part whenever the Purchasing Agent determines that termination is in the County's best interest. The County will give the Contractor at least 15 days' notice in writing. The notice must specify the extent to which the Contract is terminated and the effective termination date. The Contractor will be entitled to termination costs plus any other reasonable amounts that the parties might negotiate; but no amount will be allowed for anticipatory profits.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt of the notice of the termination.

**33. INDEMNIFICATION**

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless and indemnify the County and all of its elected and appointed officials, officers, current and former employees, agents, departments, agencies, boards and commissions (collectively the "County Indemnitees") from and against any and all claims made by third parties for any and all losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability, demands or exposure resulting from, arising out of or in any way connected with the Contractor's acts or omissions, including the acts or omissions of its employees and/or subcontractors, in performance or nonperformance of the Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

#### **34. INTELLECTUAL PROPERTY INDEMNIFICATION**

The Contractor warrants and guarantees that in providing services under this Contract neither the Contractor nor any subcontractor is infringing on the intellectual property rights (including, but not limited to, copyright, patent, mask and trademark) of third parties.

If the Contractor or any of its employees or subcontractors uses any design, device, work or material that is covered by patent or copyright, it is understood that the Contract Amount includes all royalties, licensing fees, and any other costs arising from such use in connection with the Work under this Contract.

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless, and indemnify the County Indemnitees, as defined above, from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability or exposure for infringement of or on account of any trademark, copyright, patented or unpatented invention, process or article manufactured or used in the performance of this Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

#### **35. COPYRIGHT**

By this Contract, the Contractor irrevocably transfers, assigns, sets over and conveys to the County all rights, title and interest, including the sole exclusive and complete copyright interest, in any and all copyrightable works created pursuant to this Contract. The Contractor will execute any documents that the County requests to formalize such transfer or assignment.

The rights granted to the County by this section are irrevocable and may not be rescinded or modified, including in connection with or as a result of the termination of or a dispute concerning this Contract.

The Contractor may not use subcontractors or third parties to develop or provide input into any copyrightable materials produced pursuant to this Contract without the County's advance written approval and unless the Contractor includes this Copyright provision in any contract or agreement with such subcontractors or third parties related to this Contract.

#### **36. OWNERSHIP AND RETURN OF RECORDS**

This Contract does not confer on the Contractor any ownership rights or rights to use or disclose the County's data or inputs.

All drawings, specifications, blueprints, data, information, findings, memoranda, correspondence, documents or records of any type, whether written, oral or electronic, and all documents generated by the Contractor or its subcontractors as a result of this Contract (collectively "Records") are the exclusive property of the County and must be provided or returned to the County upon completion, termination, or cancellation of this Contract. The Contractor will not use or willingly cause or allow such materials to be used for any purpose other than performance of this Contract without the written consent of the County.

The Records are confidential, and the Contractor will neither release the Records nor share their contents. The Contractor will refer all inquiries regarding the status of any Record to the Project Officer or to his or

her designee. At the County's request, the Contractor will deliver all Records, including hard copies of electronic records, to the Project Officer and will destroy all electronic Records.

The Contractor agrees to include the provisions of this section as part of any contract or agreement related to this Contract into which it enters with subcontractors or other third parties.

The provisions of this section will survive any termination or cancellation of this Contract.

**37. CONFIDENTIAL INFORMATION**

The Contractor and its employees, agents and subcontractors will hold as confidential all County information obtained under this Contract. Confidential information includes, but is not limited to, nonpublic personal information; personal health information (PHI); social security numbers; addresses; dates of birth; other contact information or medical information about a person; and information pertaining to products, operations, systems, customers, prospective customers, techniques, intentions, processes, plans and expertise. The Contractor must take reasonable measures to ensure that all of its employees, agents and subcontractors are informed of and abide by this requirement.

**38. ETHICS IN PUBLIC CONTRACTING**

This Contract incorporates by reference Article 9 of the Arlington County Purchasing Resolution, as well as all state and federal laws related to ethics, conflicts of interest or bribery, including the State and Local Government Conflict of Interests Act (Code of Virginia § 2.2-3100 et seq.), the Virginia Governmental Frauds Act (Code of Virginia § 18.2-498.1 et seq.) and Articles 2 and 3 of Chapter 10 of Title 18.2 of the Code of Virginia, as amended (§ 18.2-438 et seq.). The Contractor certifies that its bid was made without collusion or fraud; that it has not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor; and that it has not conferred on any public employee having official responsibility for this procurement any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

**39. COUNTY EMPLOYEES**

No Arlington County employee may share in any part of this Contract or receive any benefit from the Contract that is not available to the general public.

**40. FORCE MAJEURE**

Neither party will be held responsible for failure to perform the duties and responsibilities imposed by this Contract if such failure is due to a fire, riot, rebellion, natural disaster, war, act of terrorism or act of God that is beyond the control of the party and that makes performance impossible or illegal, unless otherwise specified in the Contract, provided that the affected party gives notice to the other party as soon as practicable after the force majeure event, including reasonable detail and the expected duration of the event's effect on the party.

**41. AUTHORITY TO TRANSACT BUSINESS**

The Contractor must, pursuant to Code of Virginia § 2.2-4311.2, be and remain authorized to transact business in the Commonwealth of Virginia during the entire term of this Contract. Otherwise, the Contract is voidable at the sole option of and with no expense to the County.

**42. RELATION TO COUNTY**

The Contractor is an independent contractor, and neither the Contractor nor its employees or subcontractors will be considered employees, servants or agents of the County. The County will not be responsible for any negligence or other wrongdoing by the Contractor or its employees, servants or agents. The County will not withhold payments to the Contractor for any federal or state unemployment taxes, federal or state income taxes or Social Security tax or for any other benefits. The County will not provide to the Contractor any insurance coverage or other benefits, including workers' compensation.

**43. ANTITRUST**

The Contractor conveys, sells, assigns and transfers to the County all rights, title and interest in and to all causes of action under state or federal antitrust laws that the Contractor may have relating to this Contract.

**44. AUDIT**

The Contractor must retain all books, records and other documents related to this Contract for at least five years, or such period of time required by the County's funding partner(s), if any, whichever is greater, after the final payment and must allow the County or its authorized agents to examine the documents during this period and during the Contract Term. The Contractor must provide any requested documents to the County for examination within 15 days of the request, at the Contractor's expense. Should the County's examination reveal any overcharging by the Contractor, the Contractor must, within 30 days of County's request, reimburse the County for the overcharges and for the reasonable costs of the County's examination, including, but not limited to, the services of external audit firm and attorney's fees; or the County may deduct the overcharges and examination costs from any amount that the County owes to the Contractor. If the Contractor wishes to destroy or dispose of any records related to this Contract (including confidential records to which the County does not have ready access) within five years after the final payment, or such period of time required by the County's funding partner(s), if any, whichever is greater, the Contractor must give the County at least 30 days' notice and must not dispose of the documents if the County objects.

The Purchasing Agent may require the Contractor to demonstrate that it has the necessary facilities, ability, and financial resources to comply with the Contract and furnish the service, material or goods specified herein in a satisfactory manner at any time during the term of this Contract.

**45. ASSIGNMENT**

The Contractor may not assign, transfer, convey or otherwise dispose of any award or any of its rights, obligations or interests under this Contract without the prior written consent of the County.

**46. AMENDMENTS**

This Contract may not be modified except by written amendment executed by persons duly authorized to bind the Contractor and the County.

**47. ARLINGTON COUNTY PURCHASING RESOLUTION AND COUNTY POLICIES**

Nothing in this Contract waives any provision of the Arlington County Purchasing Resolution, which is incorporated herein by reference, or any applicable County policy.

**48. DISPUTE RESOLUTION**

All disputes arising under this Agreement or concerning its interpretation, whether involving law or fact and including but not limited to claims for additional work, compensation or time, and all claims for

alleged breach of contract must be submitted in writing to the Project Officer as soon as the basis for the claim arises. In accordance with the Arlington County Purchasing Resolution, claims denied by the Project Officer may be submitted to the County Manager in writing no later than 60 days after the final payment. The time limit for a final written decision by the County Manager is 30 days. Procedures concerning contractual claims, disputes, administrative appeals and protests are contained in the Arlington County Purchasing Resolution. The Contractor must continue to work as scheduled pending a decision of the Project Officer, County Manager, County Board or a court of law

**49. APPLICABLE LAW, FORUM, VENUE AND JURISDICTION**

This Contract is governed in all respects by the laws of the Commonwealth of Virginia; and the jurisdiction, forum and venue for any litigation concerning the Contract or the Work is in the Circuit Court for Arlington County, Virginia, and in no other court.

**50. ARBITRATION**

No claim arising under or related to this Contract may be subject to arbitration.

**51. NONEXCLUSIVITY OF REMEDIES**

All remedies available to the County under this Contract are cumulative, and no remedy will be exclusive of any other at law or in equity.

**52. NO WAIVER**

The failure to exercise a right provided for in this Contract will not be a subsequent waiver of the same right or of any other right.

**53. SEVERABILITY**

The sections, paragraphs, clauses, sentences, and phrases of this Contract are severable; and if any section, paragraph, clause, sentence or phrase of this Contract is declared invalid by a court of competent jurisdiction, the rest of the Contract will remain in effect.

**54. NO WAIVER OF SOVEREIGN IMMUNITY**

Notwithstanding any other provision of this Contract, nothing in this Contract or any action taken by the County pursuant to this Contract shall constitute or be construed as a waiver of either the sovereign or governmental immunity of the County. The parties intend for this provision to be read as broadly as possible.

**55. ATTORNEY'S FEES**

In the event that the County prevails in any legal action or proceeding brought by the County to enforce any provision of this Contract, the Contractor will pay the County's reasonable attorney's fees and expenses.

**56. SURVIVAL OF TERMS**

In addition to any statement that a specific term or paragraph survives the expiration or termination of this Contract, the following sections also survive: INDEMNIFICATION; INTELLECTUAL PROPERTY INDEMNIFICATION; RELATION TO COUNTY; OWNERSHIP AND RETURN OF RECORDS; AUDIT; COPYRIGHT; WARRANTY; DISPUTE RESOLUTION; APPLICABLE LAW AND JURISDICTION; ATTORNEY'S FEES, AND CONFIDENTIAL INFORMATION.

**57. HEADINGS**

The section headings in this Contract are inserted only for convenience and do not affect the substance of the Contract or limit the sections' scope.

**58. AMBIGUITIES**

The parties and their counsel have participated fully in the drafting of this Agreement; and any rule that ambiguities are to be resolved against the drafting party does not apply. The language in this Agreement is to be interpreted as to its plain meaning and not strictly for or against any party.

**59. NOTICES**

Unless otherwise provided in writing, all legal notices and other communications required by this Contract are deemed to have been given when either (a) delivered in person; (b) delivered by an agent, such as a delivery service; or (c) deposited in the United States mail, postage prepaid, certified or registered and addressed as follows:

**TO THE CONTRACTOR:**

Randall W. Dominick, President  
Traffic Systems, LLC  
7390 Merritt Park Drive, Suite 160  
Manassas, Virginia 20109  
Phone: (703) 530-9655  
Email: [randy@trafficsystem.us](mailto:randy@trafficsystem.us)

**TO THE COUNTY:**

Justin McCarthy, Project Officer  
Arlington County Government  
2100 Clarendon Boulevard, suite 800  
Arlington, Virginia 22201  
Phone: (703) 228-3734  
Email: [jmccarthy@arlingtonva.us](mailto:jmccarthy@arlingtonva.us)

**AND**

Dr. Sharon T. Lewis, LL.M, MPS, VCO, CPPB  
Purchasing Agent  
Arlington County, Virginia  
2100 Clarendon Boulevard, Suite 500  
Arlington, Virginia 22201  
Phone: (703) 228-3294  
Email: [slewis1@arlingtonva.us](mailto:slewis1@arlingtonva.us)

**TO COUNTY MANAGER'S OFFICE (FOR PROJECT CLAIMS):**

Mark Schwartz, County Manager  
Arlington County, Virginia  
2100 Clarendon Boulevard, Suite 318  
Arlington, Virginia 22201

**60. ARLINGTON COUNTY BUSINESS LICENSES**

The Contractor must comply with the provisions of Chapter 11 ("Licenses") of the Arlington County Code, if applicable. For information on the provisions of that Chapter and its applicability to this Contract, the Contractor must contact the Arlington County Business License Division, Office of the Commissioner of the Revenue, 2100 Clarendon Blvd., Suite 200, Arlington, Virginia, 22201, telephone number (703) 228-3060, or e-mail [business@arlingtonva.us](mailto:business@arlingtonva.us).

**61. NON-DISCRIMINATION NOTICE**

Arlington County does not discriminate against faith-based organizations.

**62. LIMITED ENGLISH PROFICIENCY**

The Contractor must comply with Executive Order 13166, Title VI of the Civil Rights Act of 1964 and make reasonable efforts to ensure that as part of the services that it provides, adequate communication services, including interpretation and translation, are available to persons who have limited English proficiency. If such services are not included in the Contract's scope of services and pricing, the Contractor will use a County-contracted service provider, and the County will pay the fees.

**63. INSURANCE REQUIREMENTS**

Before beginning work under the Contract or any extension, the Contractor must provide to the County Purchasing Agent a Certificate of Insurance indicating that the Contractor has in force at a minimum the coverage below. The Contractor must maintain this coverage until the completion of the Contract or as otherwise stated in the Contract Documents. All required insurance coverage must be acquired from insurers that are authorized to do business in the Commonwealth of Virginia, with a rating of "A-" or better and a financial size of "Class VII" or better in the latest edition of the A.M. Best Co. Guides.

- a. Workers Compensation - Virginia statutory workers compensation (W/C) coverage, including Virginia benefits and employer's liability with limits of \$500,000/500,000/500,000. The County will not accept W/C coverage issued by the Injured Worker's Insurance Fund, Towson, MD.
- b. Commercial General Liability - \$1,000,000 per occurrence, with \$1,000,000 annual aggregate covering all premises and operations and including personal injury, completed operations, contractual liability, independent contractors, and products liability. The general aggregate limit must apply to this Contract. Evidence of contractual liability coverage must be typed on the certificate.
- c. Business Automobile Liability - \$1,000,000 combined single-limit (owned, non-owned and hired).
- d. Additional Insured – The County and its officers, elected and appointed officials, employees and agents must be listed as additional insureds on all policies except workers compensation and automotive and professional liability; and the additional insured endorsement must be typed on the certificate.
- e. Cancellation - If there is a material change or reduction in or cancellation of any of the above coverages during the Contract Term, the Contractor must notify the Purchasing Agent immediately and must, with no lapse in coverage, obtain replacement coverage that is consistent with the terms of this Contract. Not having the required insurance throughout the Contract Term is grounds for termination of the Contract.



- f. Claims-Made Coverage - Any “claims made” policy must remain in force, or the Contractor must obtain an extended reporting endorsement, until the applicable statute of limitations for any claims has expired.
- g. Contract Identification - All insurance certificates must state this Contract's number and title.

The Contractor must disclose to the County the amount of any deductible or self-insurance component of any of the required policies. With the County's approval, the Contractor may satisfy its obligations under this section by self-insurance for all or any part of the insurance required, provided that the Contractor can demonstrate sufficient financial capacity. In order to do so, the Contractor must provide the County with its most recent actuarial report and a copy of its self-insurance resolution.

The County may request additional information to determine if the Contractor has the financial capacity to meet its obligations under a deductible and may require a lower deductible; that funds equal to the deductible be placed in escrow; a certificate of self-insurance; collateral; or another mechanism to guarantee the amount of the deductible and ensure protection for the County.

The County's acceptance or approval of any insurance will not relieve the Contractor from any liability or obligation imposed by the Contract Documents.

The Contractor is responsible for the Work and for all materials, tools, equipment, appliances and property used in connection with the Work. The Contractor assumes all risks for direct and indirect damage or injury to the property used or persons employed in connection with the Work and for of all damage or injury to any person or property, wherever located, resulting from any action, omission, commission or operation under the Contract or in connection in any way whatsoever with the Work. The Contractor's insurance shall be the primary non-contributory insurance for any work performed under this Contract.

The Contractor is as fully responsible to the County for the acts and omissions of its subcontractors and of persons employed by them as it is for acts and omissions of persons whom the Contractor employs directly.

#### **64. MATERIAL CHANGES**

The Contractor shall notify Purchasing Agent within seven days of any material changes in its operation that relate to any matter attested regarding certifications on its bid form.

#### **65. CONTRACTOR PERFORMANCE EVALUATION**

Arlington County will perform written evaluations of the Contractor's performance at various intervals throughout the term of this Contract. The evaluations will address, at a minimum, the Contractor's work/performance, quality, cost controls, schedule, timeliness and sub-contractor management. The Project Officer shall be responsible for completing the evaluations and providing a copy to the Contractor and County Procurement Officer.

#### **66. COUNTERPARTS**

This Agreement may be executed in one or more counterparts and all of such counterparts shall together constitute one and the same instrument. Original signatures transmitted and received via facsimile or other electronic transmission (e.g., PDF or similar format) are true and valid signatures for all purposes hereunder and shall be effective as delivery of a manually executed original counterpart.

**67. NORTHERN VIRGINIA TRANSPORTATION AUTHORITY**

This work is funded in part by grants from the Northern Virginia Transportation Authority (NVTa). The Contractor is responsible for ensuring its compliance with all applicable NVTa requirements including the following:

The Contractor shall name NVTa and its Bond Trustee as an additional insured on any insurance policy issued for work to be performed for the project and present NVTa with satisfactory evidence thereof before any work on the Project commences or continues.

WITNESS these signatures:

THE COUNTY BOARD OF ARLINGTON  
COUNTY, VIRGINIA

DocuSigned by:  
AUTHORIZED  
SIGNATURE: Lucas Alexander  
5D2342428F9D4B4...  
NAME: Lucas Alexander  
TITLE: Procurement Officer  
DATE: 2/6/2023

TRAFFIC SYSTEMS, LLC

DocuSigned by:  
AUTHORIZED  
SIGNATURE: Randy Dominick  
DE10507460C74EA...  
NAME: Randy Dominick  
TITLE: President  
DATE: 2/3/2023

# ARLINGTON COUNTY GOVERNMENT

## EXHIBIT A - PRICE SCHEDULE

NAME OF OFFEROR OR CONTRACTOR		SOLICITATION OR CONTRACT NUMBER			PAGE
Traffic Systems, LLC dba Traffic Systems & Technology		23-DES-ITB-457			1 of 1
SCOPE OF WORK					
The listed quantities are for the entirety of the Contract. For each order, the Contractor shall provide mast arm poles/arms and all necessary hardware for the installation including nut covers, handhole covers, screws, bolts, nuts, anchor bolts, tensioning gage, template, etc.					
ITEM NO.	SUPPLIES/SERVICES	EST QTY	UNIT	UNIT PRICE	AMOUNT
SECTION I - Non-Ornamental Mast Arm Poles					
1.0 POLE SHAFTS					
1.1	COMPACT SINGLE ARM POLE SHAFT FOR 20' LENGTH (NO luminaire)	10	EA	\$ 8,166.00	\$81,660.00
1.2	SINGLE ARM POLE SHAFT FOR 20' to 40' LENGTH (with luminaire)	8	EA	\$ 10,189.54	\$81,516.32
1.3	SINGLE ARM POLE SHAFT FOR 42' to 48' LENGTH (with luminaire)	8	EA	\$ 11,090.17	\$88,721.36
1.4	SINGLE ARM POLE SHAFT FOR 50' to 60' LENGTH (with luminaire)	8	EA	\$ 18,303.51	\$146,428.08
1.5	SINGLE ARM POLE SHAFT FOR 62' to 66' LENGTH (with luminaire)	4	EA	\$ 19,254.89	\$77,019.56
1.6	DUAL ARM POLE SHAFT FOR 20' to 40' LENGTH (with luminaire)	8	EA	\$ 10,430.08	\$83,440.64
1.7	DUAL ARM POLE SHAFT FOR 42' to 48' LENGTH (with luminaire)	8	EA	\$ 10,598.11	\$84,784.88
1.8	DUAL ARM POLE SHAFT FOR 50' to 60' LENGTH (with luminaire)	8	EA	\$ 15,884.75	\$127,078.00
1.9	DUAL ARM POLE SHAFT FOR 62' to 66' LENGTH (with luminaire)	4	EA	\$ 17,607.72	\$70,430.88
2.0 MAST ARMS					
2.1	20' Compact Mast Arm	10	EA	\$ 3,740.01	\$37,400.10
2.2	20' to 30' Mast Arms	24	EA	\$ 4,248.00	\$101,952.00
2.3	32' to 40' Mast Arms	24	EA	\$ 4,274.26	\$102,582.24
2.4	42' to 48' Mast Arms	24	EA	\$ 5,377.56	\$129,061.44
2.5	50' to 60' Mast Arms	24	EA	\$ 7,977.10	\$191,450.40
2.6	62' to 66' Mast Arms	12	EA	\$ 8,462.37	\$101,548.44
3.0 Miscellaneous and Replacement Parts					
3.1	6"x10" Handhole Cover (inc. hardware)	40	EA	\$ 112.10	\$4,484.00
3.2	4"x6.5" Handhole Cover (inc. hardware)	40	EA	\$ 100.30	\$4,012.00
3.3	4"x8" Handhole Cover (inc. hardware)	10	EA	\$ 112.10	\$1,121.00
3.4	3"x5" Handhole Cover (inc. hardware)	10	EA	\$ 97.94	\$979.40
3.5	Endcap	40	EA	\$ 200.60	\$8,024.00
3.6	Nut cover	140	EA	\$ 94.40	\$13,216.00
3.7	6' Luminaire Arm	40	EA	\$ 635.43	\$25,417.20
SUB-TOTAL					\$1,562,327.94
SECTION II - Foundation Design					
4.0 Design Services					
4.1	Standard Foundation Design Development	1	EA	\$ 472.00	\$472.00
SUB-TOTAL					\$472.00
SECTION III - Optional Services					
5.0 Design Services					
5.1	Special Design Poles and Mast Arms	100	HR	\$ 23.60	\$2,360.00
5.2	Special Design Foundation	5	EA	\$ 472.00	\$2,360.00
SUB-TOTAL					\$4,720.00
GRAND TOTAL					\$1,567,519.94
NOTES:					
BASIS OF AWARD: Line item unit prices proposed above are for a definite quantity and will be fixed for the duration of this contract and serve as the determination for award. Award will be based on the lowest conforming, responsible offer for the total bid price. If tthere is an error in extension, the Unit Price governs.					

NAME OF OFFEROR OR CONTRACTOR		SOLICITATION OR CONTRACT NUMBER		PAGE	
Traffic Systems, LLC dba Traffic Systems & Technology		23-DES-ITB-457		1 of 1	
SCOPE OF WORK					
The listed quantities are for the entirety of the Contract. For each order, the Contractor shall provide mast arm poles/arms and all necessary hardware for the installation including nut covers, handhole covers, screws, bolts, nuts, anchor bolts, tensioning gage, template, etc.					
ITEM NO.	SUPPLIES/SERVICES	EST QTY	UNIT	UNIT PRICE	AMOUNT
<b>COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK:</b> The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives Notice to Proceed; (b) prosecute the work diligently; and (c) complete all work ready for use not later than the number of days specified in the contract.					
<b>NOTE:</b> Prices include delivery, <b>FOB at destination (County site)</b>					

**EXHIBIT B**  
**SPECIFICATIONS**

**SECTION I - NON-ORNAMENTAL MAST ARM POLES**

**Current Standards:      62-01 Non-Ornamental Pole**

**1. GENERAL**

- 1.1. This section describes minimum acceptable design and installation standards for poles and arms for traffic signals.
- 1.2. The Contractor/Manufacturer shall provide to Arlington County a written warranty against any defects in materials and workmanship for a period of one year from the time of delivery to the Arlington County.
- 1.3. For warranty repairs, all costs of labor, parts and transportation to and from the Contractor/Manufacturer shall be borne by the Contractor/Manufacturer.

**2. DESIGN**

- 2.1. Design shall be in accordance with "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals, 6th Edition (LTS-6), 2013 with 2015 Interims" and the VDOT Instructional and Informational Memorandum S&B 90.2.

All welding shall be in accordance with Sections 1 through 8 of the American Welding Society (AWS) D1.1 Structural Welding Code. Tackers and welders shall be qualified in accordance with the code.

- 2.2. Design and calculations shall include mast arm, luminaire arm, pole, baseplate, and anchor bolt analysis. Maximum arm and pole loads, stresses and combined stress ratios shall be provided for each group load, as well as maximum pole dead load rotation.

For anchor bolt forces, pole forces shall be positioned in such a manner to maximize the force on any individual bolt regardless of the actual bolt orientation with the pole. The design of anchor bolts shall result in a ductile steel failure prior to any sudden brittle failure of the concrete.

Calculations shall be sealed by a professional engineer licensed in the Commonwealth of Virginia. Include shop drawings detailing the poles as designed. Shop drawings shall contain all component drawings necessary to fabricate the structure. Drawings shall at a minimum specify the pole height, arm length(s), pole and arm diameters at the base and tip, splice locations, bolt circle diameter, bolt diameters, and detailed drawings showing the hand hole cover assemblies. The drawings shall also show the width, depth, length and thickness of all material and list pertinent ASTM specification designations together with the tensile strength of metallic members.

**Design Loading Requirements:**

- 2.2.1. Structure components and their connections shall be designed to resist the worst-case loading, upon evaluation of all applicable cases acting separately.
- 2.2.2. Design Attachment Loading:

**2.2.2.1. Attachment Data:**

ATTACHMENT	SURFACE AREA (SF)	DEAD LOAD (LBS)
ALUMINUM 3-SECTION HEAD*	8	68
ALUMINUM 4 SECTION HEAD*	11	89
8'x2' STREET NAME SIGN	16	48
10'x2' STREET NAME SIGN	20	60
30"x36" REGULATORY SIGN	7.5	22.5
36"x36" REGULATORY SIGN	9	27
CCTV CAMERA	1	22
VIDEO DETECTION CAMERA	1	22
OPTICOM DEVICE	1	22
LUMINAIRE	2	40
LED BLANK-OUT SIGN (only included on arm lengths above 40')	10	50
*All Signal Heads shall include High Visibility Signal Backplates (HVSB)		

**2.2.2.2. 20' Compact Pole Mast Arm Length:**

- (2) Aluminum 3-section heads spaced every 8.5'
- (1) 8'x2' street name sign mounted between pole upright and 3-section head
- (1) 30"x36" regulatory sign halfway on the arm
- (1) 30"x36" regulatory sign 1' from the end of the arm

**2.2.2.3. 20' to 40' Mast Arm Lengths:**

- (3) Aluminum 3-section heads spaced every 10'
- (1) Aluminum 4-section head at the end of the arm (1' in from the end)
- (1) 10'x2' street name sign mounted between the inside two signals
- (1) 30"x36" regulatory sign (next to the middle signal head)
- (1) 36"x36" regulatory sign (next to the last signal head)
- (1) CCTV camera halfway on the arm
- (1) Video detection camera over the outside lane
- (1) Opticom device located 2' in from the end of the arm

2.2.2.4. 42' to 48' Mast Arm Lengths:

- (4) Aluminum 3-section heads spaced every 10'
- (1) Aluminum 4-section head at the end of the arm (1' in from the end)
- (1) 10'x2' street name sign mounted between the inside two signals
- (2) 30"x36" regulatory signs (next to the middle two signal heads)
- (1) 36"x36" regulatory sign (next to the last signal head)
- (1) CCTV camera halfway on the arm
- (1) Video detection camera over the outside lane
- (1) Opticom device located 2' in from the end of the arm
- (1) LED Blankout sign 8' from the end of the arm

2.2.2.5. 50' to 60' Mast Arm Lengths:

- (4) Aluminum 3-section heads spaced every 10'
- (2) Aluminum 4-section head at the end of the arm (1' and 5' in from the end)
- (1) 10'x2' street name sign mounted between the inside two signals
- (3) 30"x36" regulatory signs (next to the inner three signal heads)
- (1) 36"x36" regulatory sign (next to the last signal head)
- (1) CCTV camera halfway on the arm
- (2) Video detection camera (over the outside lane, and over the middle of the remaining length)
- (1) Opticom device located 2' in from the end of the arm
- (1) LED Blankout sign 8' from the end of the arm

2.2.2.6. 62' to 66' Mast Arm Lengths:

- (5) Aluminum 3-section heads spaced every 10'
- (2) Aluminum 4-section head at the end of the arm (1' and 5' in from the end)
- (1) 10'x2' street name sign mounted between the inside two signals
- (4) 30"x36" regulatory signs (next to the inner four signal heads)
- (1) 36"x36" regulatory sign (next to the last signal head)
- (1) CCTV camera halfway on the arm
- (2) Video detection camera (over the outside lane, and over the middle of the remaining length)
- (1) LED Blankout sign 8' from the end of the arm
- (1) Opticom device located 2' in from the end of the arm

- 2.2.2.7. All poles shall also be designed for (1) 12' luminaire arm and (1) luminaire at the end of the luminaire arm. This allows for longer luminaire arms to be installed in the future.

**2.2.3. Wind Loading:**

The entire assembly shall be designed to meet the wind loading requirements of VDOT IIM-S&B-90.2.

**2.2.4. Fatigue Loading:**

The entire assembly shall be designed to meet the fatigue loading requirements of VDOT IIM-S&B-90.2.

**2.2.5. Special Designs:**

Mast arm signal pole systems with a larger loading than specified above shall require a special design. Special designs shall be submitted to the County with sealed shop drawings and a letter from a Professional Engineer in the Commonwealth of Virginia certifying that the design meets the requirements of this specification.

Design shall include mast arm(s), luminaire arm, pole, baseplate, and anchor bolt analysis. Maximum arm and pole loads, stresses and combined stress ratios shall be provided for each group load, as well as maximum pole dead load rotation.

For anchor bolt forces, pole forces shall be positioned in such a manner to maximize the force on any individual bolt regardless of the actual bolt orientation with the pole. The design of anchor bolts shall result in a ductile steel failure prior to any sudden brittle failure of the concrete.

Provide to the County, shop drawings detailing the poles as designed. Shop drawings shall contain all component drawings necessary to fabricate the structure. Drawings shall at a minimum specify the pole height, arm length(s), pole and arm diameters at the base and tip, splice locations, bolt circle diameter, bolt diameters, and detailed drawings showing the hand hole cover assemblies. The drawings shall also show the width, depth, length and thickness of all material and list pertinent ASTM specification designations together with the tensile strength of metallic members.



### 3. **MATERIALS**

3.1. The materials used for construction shall meet the following requirements:

COMPONENT	ASTM DESIGNATION	MINIMUM YIELD (KSI)
POLE SHAFT	A595 or A572	55
POLE BASE	A36	36
GALVANIZING-STRUCTURE	A123	
GALVANIZING-HARDWARE	A153	
ARM SHAFT	A595 or A572	55
ARM CONNECTION	A36	36
ARM CONNECTION BOLTS	F3125 GALVD. TO A153	
DTI WASHERS	ASTM F959	
LUMINAIRE ARM SHAFT	PER MANUFACTURER	35
LUMINAIRE ARM CASTING	A27GR.65-35	35
LUMINAIRE ARM CONNECTION BOLTS	SAE GR.5 or ASTM F3125	
PLATE AND CHANNEL	A36	36
ANCHOR BOLTS	F1554	55

3.2. The manufacturer shall provide mill certifications for steel materials.

3.3. All poles, arms, transformer bases, and hardware shall be galvanized with powder coating or painted as specified on the plans or by the ENGINEER prior to installation.

3.4. Non-Ornamental poles shall have a rust resistant coating applied to the inside of the pole. The color of the outside of the pole will be specified at time of order. All poles, arms, ornamental bases, and hardware shall use one of the following coating systems:

**3.4.1. Option 1:**

Primer = Dupont 25P Primer

Top Coat = Dupont 333 Imron

**3.4.2. Option 2:**

Triglycidyl Isocyanurate (TGIC) polyester powder at a minimum thickness of 2.0 mils

#### 4. POLE SHAFTS

4.1. There shall be five size categories of single arm mast arm poles:

- 20 ft Compact
- 20-40 ft
- 42-48 ft
- 50-60 ft
- 62-66 ft

To achieve interchangeability between poles and foundations, all the poles in a size category shall have the same base plate size and bolt pattern.

4.2. There shall be four size categories of twin arm mast arm poles:

- 20-40 ft
- 42-48 ft
- 50-60 ft
- 62-66 ft

The lengths listed are the longest arm. To achieve interchangeability between poles and foundations, all the poles in a size category shall have the same base plate size and bolt pattern.

4.3. All base plates shall be circular.

4.4. Mast arm poles shall be 30 feet tall. The mast arm connection shall be located 20 feet above the base of the pole. The luminaire arm connection shall be located 29'-6" above the base of the pole

4.3.1 Truncated pole shafts (poles without extra height for luminaires) shall be 2' taller than the top of the connection plate. The design of the pole should assume conditions for a pole with luminaire arm.

4.3.2 Pole shafts for a "20 ft Compact" mast arm shall be 2' taller than the top of the connection plate. A luminaire arm and luminaire are not expected for this specific pole design.

4.5. Mast arm poles shall be round. Multi-sided pole shafts are unacceptable. The shaft shall be one piece and contain no circumferential weld butt splices. The shaft shall have a constant linear taper of 0.14in/ft. The minimum thickness of steel shall be 7 gauge.

- 4.6. Pole diameters at the connection to the base plate shall not exceed the diameters listed below.

Pole Design Shaft Diameter			
Single Mast Arm Poles		Dual Mast Arm Poles	
Arm Length (ft)	Max Dia (in)	Arm Length (largest)(ft)	Max Dia. (in)
20 Compact	11	<50	20
<40	18	50+	26
40-48	20		
50+	25		

4.7. **Identification Tag**

- 4.7.1. Provide an identification tag affixed to the pole with the following information:

Arlington County, VA  
 Manufacturer  
 Date of Manufacture (MM/YY)  
 Pole Height and Gage  
 Arm Length and Gage  
 Anchor Bolt Diameter and Length  
 Bolt Circle Diameter (on center of bolts)  
 Serial Number

The tag shall be attached between 4'-5' above the base of the pole.

4.8. **Hand holes**

- 4.8.1. An access hole and J-hook shall be provided on the opposite side of the pole shaft from the mast arm at the same elevation as the center of the mast arm. The access hole at the mast arm height shall have an outside dimension of 4" x 6.5" exclusive of reinforcement. The hand hole cover shall be attached to the inside of the pole with a chain to prevent dropping the hand hole cover.

A second access hole shall be provided 2'-0" above the pole base to the bottom of the access hole. The lower access hole shall be provided on the opposite side from the attachment of the longest mast arm. The lower access hole shall have an outside dimension of 6" x 10" exclusive of reinforcement. Provide a grounding L-clip welded directly opposite the access hole on the inside wall of the pole. The hand hole cover shall be attached to the inside of the pole with a chain to prevent dropping the hand hole cover.

Access holes for a "20 ft Compact" pole shall include the same details as described above except for the hand hole sizes. The hand hole opposite of the pole shaft shall be 3" x 5" and the hand hole 2'-0" above the pole base shall be 4" x 8".

All hand holes shall have a neoprene rubber gasket that is permanently secured to the hand hole frame to insure weather-tight protection. Hand holes shall be provided with a bolt-on galvanized steel cover painted to match the pole. The hand hole cover shall be removable from the frame.

4.9. **Connection Plate**

- 4.9.1. The mast arm connection plate shall be located 20 feet above the base of the pole. The connection plate shall have an upward angle 3 degrees from the horizontal plane.

4.10. **Pole Top**

- 4.10.1. Each pole shall be provided with an end cap secured in place with set screws.

4.11. **Luminaire Arm**

- 4.11.1. Each pole shall be provided with a luminaire arm where specified. The orientation will vary based on the plan. Refer to County Traffic Signal Specifications and Standards.

**5. MAST ARMS**

- 5.1. There shall be **five size categories of mast arms**:

- 20 ft Compact
- 20-40 ft
- 42-48 ft
- 50-60 ft
- 62-66 ft

To achieve interchangeability between arms and poles, all of the arms in a size category shall have the same connection plate size and bolt pattern.

- 5.2. Mast arms shall be round. Multi-sided and fluted mast arms are unacceptable. Mast arms shall have a constant linear taper of 0.14in/ft. The minimum thickness of steel shall be 7 gauge.
- 5.3. Mast arms up to 50 feet in length shall be manufactured and shipped in one piece. Mast arms 50 feet and greater in length shall be manufactured and shipped in two pieces with no piece having a length greater than 40 feet. Circumferential welded tube butt splices and laminated tubes are not permitted.
- 5.4. Wire entrance holes 1-3/8 inches in diameter shall be drilled into the bottom of the arm every 11 feet starting at a point approximately 9 inches from the free end of the arm. Rubber grommets shall be installed in all wire entrance holes.
- 5.5. Mast Arm Cap
- 5.5.1 Each mast arm shall be provided with an end cap secured in place with set screws.

**6. ANCHOR BOLTS**

- 6.1. A minimum of six (6) fully galvanized anchor bolts shall be supplied for all single arm mast arm poles; however, Compact Poles shall have a minimum of four (4) anchor bolts. There shall be two steel templates provided per pole. All templates shall be fully galvanized.

A minimum of eight (8) fully galvanized anchor bolts shall be supplied for all dual arm mast arm poles. There shall be two steel templates provided per pole. All templates shall be fully galvanized.

- 6.2. Provide galvanized nuts compatible with the anchor bolts as needed to complete the installation. Nut covers shall be provided for all nuts.
- 6.3. Furnish 2 flat washers with each bolt/nut/washer assembly. Furnish galvanized direct tension indicating (DTI) washers. Use the size, number, type, and configuration of hardened flat washers the DTI manufacturer recommends for the anchor bolt diameter.
- 6.4. The following notes shall be included on all plans and/or shop drawings in reference to anchor bolts:

*Pre-tensioning of all anchor bolts is required and shall be accomplished with the use of DTI washers. Nuts shall be tightened until proper pre-tensioning is indicated by the DTI washer.*

*The maximum clearance between the bottom of the leveling nuts and the top of the concrete is critical and shall not exceed the amount specified on the drawing.*

**7. HIGH STRENGTH BOLTS**

- 7.1. Provide galvanized high strength bolts for connections. Provide galvanized nuts compatible with the bolts as needed to complete the installation.
- 7.2. Furnish 2 flat washers with each bolt/nut/washer assembly. Furnish galvanized direct tension indicating (DTI) washers. Use the size, number, type, and configuration of hardened flat washers the DTI manufacturer recommends for the bolt diameter.

**8. MEASUREMENT AND PAYMENT**

- 8.1. Signal Pole Shafts shall be measured and paid for at the contract unit price per each. This shall include flange plates, anchor plates, bolts, bases, nut covers, access hole covers, pole tops, painting, welding, labor, and all other associated equipment and hardware required for installation.

- 8.1.1. There shall be no additional charge for dual mast arm poles with differing arm lengths (one arm shorter than the other). The flanges shall fit the size tube as specified in the order. For shorter arms, the flange shall be designed to accommodate the smaller tube size at the shaft rather than cutting a longer arm down to size.**

- 8.2. Mast arms shall be measured and paid for at the contract unit price per each. This shall include the arm, end cap, bolts, and any other equipment required for installation
- 8.3. Replacement hand hole covers shall be measured and paid for at the contract unit price per each and shall include hardware for installation.
- 8.4. Replacement endcaps shall be measured and paid for at the contract unit price per each.

- 8.5. Replacement nut covers shall be measured and paid for at the contract unit price per each.
- 8.6. Replacement luminaire arms shall be measured and paid for at the contract unit price per each. This shall include mounting hardware required for installation.

## **SECTION II – STANDARD FOUNDATION DESIGN DEVELOPMENT**

### **1. GENERAL**

- 1.1. The Contractor/Manufacturer shall develop a set of standard foundation drawings for the pole designs supplied in the pricing schedule. All mast arm poles shall have a standard foundation design developed. The Contractor may utilize foundation designs for ranges of poles sizes such as those foundation designs included in the previous County standards.
- 1.2. Typical soil conditions will be provided by the County to utilize for standard drawing development.
- 1.3. The foundation designs shall minimize diameter while still providing an overall feasible design.
- 1.4. The drawings shall specify the requirements for all materials used in the foundation such as reinforcing steel and concrete. The arrangement of the reinforcing and spacing of the bars shall be detailed in the standard designs.
- 1.5. The drawings shall also list any specific installation guidelines required for structural integrity which are beyond those found in the County specifications for foundation installation.

### **2. DELIVERABLE**

- 2.1. The foundation detailed drawings shall be provided in both PDF and AutoCAD format. The PDF drawings shall be stamped by a PE licensed in the State of Virginia. The soil assumptions shall be listed for each type of foundation design.
- 2.2. The design calculations used to develop the designs shall be provided to the County and sealed by a professional engineer licensed in the State of Virginia.

### **3. PAYMENT**

- 3.1. Payment shall be measured and paid for on a lump sum basis. A one-time lump sum payment will be made upon receipt of all required designs. No partial payment will be made for this line item.

## I. STATEMENT OF WORK

### 1) General

- a) The Contractor shall supply Arlington County (County) with traffic signal poles, mast arms, and appurtenances. Additionally, the County's existing traffic signal pole designs need to be updated to incorporate the latest AASHTO and VDOT specifications. **The new poles should resemble the appearance and style of the County's existing standards included in Attachment C as closely as possible while complying with the updated design requirements included in Attachment A.** The Contractor shall develop new standard designs to replace the County's existing signal pole standards and shall provide pricing to manufacture and deliver the newly designed poles and mast arms per the attached pricing schedule.

### 2) Design Drawings

#### a) Drawing Requirements

- i) The apparent low bidder shall submit, within 14 business days of notification from the County, standard drawings in AutoCAD and PDF format. Drawings must verify that each item is compliant with specifications listed in this solicitation. The drawings shall notate:
  - (1) The designs comply with the design specifications (AASHTO, VDOT, etc.)
  - (2) The designs comply with the assumed loadings provided in the specifications
- ii) These drawings will be reviewed by the County to verify compliance with the intent of the requirements and for conformance with the existing pole styles and aesthetics.
- iii) The PDF versions of the drawings shall be sealed by a licensed Professional Engineer in Virginia.
- iv) The County's previous standard drawings are included as **Attachment C** of this ITB as an example for the level of effort required and the expected contents.

### 3) Delivery

- a) The bid prices shall include all charges for delivery and unloading of the equipment and materials. Shipments shall be delivered to the County's Transportation Engineering and Operations Bureau Trades Center.
  - i) The County's Trades Center is located at:
    - Transportation Engineering and Operations
    - Traffic Signal Section
    - 4300 29<sup>th</sup> Street South
    - Arlington, VA 22206
- b) The Contractor shall notify the County Project Officer of all deliveries at least three (3) business days in advance of the delivery. The notification shall consist of an email notification and phone confirmation.
  - i) Arlington County reserves the right to refuse an entire shipment if the advance notice is not received.
- c) Delivery time shall not be included in the required lead time.

#### 4) Lead Time

- a) The lead time for materials with standard designs shall be **no more than 75 (seventy-five) calendar days** from the placement of the order. Standard pole designs shall require no shop drawing submittals or additional design work. Upon shipment of the materials, written shipping notification shall be provided to the County Project Officer. This shipment notification shall serve as the completion date for the lead time.
- b) The Contractor shall provide submittals (shop drawings sealed by a PE licensed in Virginia) for orders which require additional/special design. The Contractor shall provide the submittals within 2 weeks of receipt of the order. Upon approval of the submittal by the County and placement of the order, the Contractor shall supply the materials within 75 (seventy-five) calendar days.
- c) The Contractor may request a variance to the required lead time by notifying the project officer prior to placing an order. With written (e-mail) approval from the project officer, the lead time may be adjusted for individual orders.

#### 5) Miscellaneous and Replacement Parts

- a) The lead time for replacement and miscellaneous parts shall be no more than 45 (**forty-five**) **calendar days** from the placement of the order.
- b) Replacement parts shall be fully compatible with those shipped with the poles and mast arms listed in the specifications. The colors and materials shall also match.
- c) Replacement parts shall be shipped with all required hardware for installation.

#### 6) Optional Services

##### a) Special Design Pole or Mast Arm

- (1) On a case by case basis, the County may request that the Contractor design a mast arm pole with different loading, geometric, or aesthetic requirements from those listed in the specifications included in this invitation.
- (2) The County will provide the Contractor with all required parameters for the development of the design.
- (3) Examples of work that may be performed under this task include but are not limited to design of Variable Message Sign poles, light pole design, modification of a standard design for situations such as overhead utility conflicts, etc.
- (4) The Contractor will supply PE sealed PDFs of the design drawings for the County's records along with the design calculations. The PDF drawings shall be stamped by a PE licensed in the State of Virginia.
- (5) The Contractor shall also provide the pricing to accompany the designs.
- (6) The special design services will be paid for on an hourly basis. The hourly rate should reflect that of a professional engineer.



**b) Special Design Foundation**

- (1) The County may request the design of foundations using parameters different from those outlined in the standard specifications.
- (2) Examples of this work may include but are not limited to the development of spread foundations, foundation designs for special design mast arm poles, atypical soil conditions, etc.
- (3) Design contents shall follow that outlined in section 5a above.
- (4) The foundation detailed drawings shall be provided in both PDF and AutoCAD format. The PDF drawings shall be stamped by a PE licensed in the State of Virginia.
- (5) The design calculations used to develop the designs shall be provided to the County and also sealed by a professional engineer licensed in the State of Virginia.
- (6) Payment shall be measured and paid for per each foundation design.

4

3

2

1

QTY	UMIC DESIGN NUMBER	MAST ARM DATA						MAST ARM FLANGE CONNECTION DATA (in)												QTY GROMMETS	POLE TUBE SIZE	POLE BASE CONNECTION DATA (in)							
		MAX SPAN	TUBE SIZE	JOINT LENGTH	MTG HEIGHT	RISE ANGLE	ORIENT	BOLT SIZE	X	Y1	Y2	W	H	APL	PPL	G	ØCA	WELD TYPE	BC			S	ØCB	F	P	T	WELD TYPE	ANCHOR BOLT SIZE	
	50700-B1991-Y1	40'-0"	3E-9.50x3.90x40'-0"	-	20'-0"	3°	180°	1 1/2	8 1/2	15	-	13	19 1/2	2	1 1/2	1/4	-	SOCKET	4	3E-13.00x8.80x30'-0"	19	21	-	9 1/2	9	2	SOCKET	1 1/2 x 70	
	50700-B1991-Y2	40'-0"	3E-9.50x3.90x40'-0"	-	20'-0"	3°	180°	1 1/2	8 1/2	15	-	13	19 1/2	2	1 1/2	1/4	-	SOCKET	4	0E-13.50x9.30x30'-0"	19	21	-	9 1/2	9	2	SOCKET	1 1/2 x 70	
		40'-0"	3E-9.50x3.90x40'-0"	-	20'-0"	3°	270°	1 1/2	8 1/2	15	-	13	19 1/2	2	1 1/2	1/4	-	SOCKET	4										
	50700-B1991-Y3	48'-0"	3E-11.75x9.37x17'-0" 7E-10.01x5.43x32'-9"	1'-9"	20'-0"	3°	180°	1 1/2	11	17 1/2	-	16	22	2	1 1/2	1/4	-	SOCKET	5	3E-15.00x10.80x30'-0"	20	22	-	10	9	2	SOCKET	1 1/2 x 70	
	50700-B1991-Y4	48'-0"	3E-11.75x9.37x17'-0" 7E-10.01x5.43x32'-9"	1'-9"	20'-0"	3°	180°	1 1/2	11	17 1/2	-	16	22	2	1 1/2	1/4	-	SOCKET	5	0E-16.00x11.80x30'-0"	22	24 1/2	-	11	10	2	SOCKET	1 3/4 x 70	
		48'-0"	3E-11.75x9.37x17'-0" 7E-10.01x5.43x32'-9"	1'-9"	20'-0"	3°	270°	1 1/2	11	17 1/2	-	16	22	2	1 1/2	1/4	-	SOCKET	5										
	50700-B1991-Y5	60'-0"	0E-14.75x10.41x31'-0" 7E-11.09x6.75x31'-0"	2'-0"	20'-0"	3°	180°	1 1/2	14	15	4	20	28	2 1/2	1 3/4	5/16	8	FULL PEN	6	3E-19.50x15.30x30'-0"	25	27 1/2	16 1/2	12 1/2	10	2	FULL PEN	1 3/4 x 70	
	50700-B1991-Y6	60'-0"	0E-14.75x10.41x31'-0" 7E-11.09x6.75x31'-0"	2'-0"	20'-0"	3°	180°	1 1/2	14	15	4	20	28	2 1/2	1 3/4	5/16	8	FULL PEN	6	0E-21.00x16.80x30'-0"	27	29 1/2	15 1/2	13 1/2	11	2	FULL PEN	2 x 70	
		60'-0"	0E-14.75x10.41x31'-0" 7E-11.09x6.75x31'-0"	2'-0"	20'-0"	3°	270°	1 1/2	14	15	4	20	28	2 1/2	1 3/4	5/16	8	FULL PEN	6										
	50700-B1991-Y7	66'-0"	0E-16.00x11.66x31'-0" 3E-12.48x7.30x37'-0"	2'-0"	20'-0"	3°	180°	1 1/2	17 1/2	16	4	23	29	2 1/2	1 3/4	5/16	8	FULL PEN	7	3E-22.00x17.80x30'-0"	27 1/2	30	18	13 3/4	11	2	FULL PEN	2 x 70	
	50700-B1991-Y8	66'-0"	0E-16.00x11.66x31'-0" 3E-12.48x7.30x37'-0"	2'-0"	20'-0"	3°	180°	1 1/2	17 1/2	16	4	23	29	2 1/2	1 3/4	5/16	8	FULL PEN	7	0E-23.00x18.80x30'-0"	29	32	18 1/2	14 1/2	12 1/4	2 1/4	FULL PEN	2 1/4 x 70	
		66'-0"	0E-16.00x11.66x31'-0" 3E-12.48x7.30x37'-0"	2'-0"	20'-0"	3°	270°	1 1/2	17 1/2	16	4	23	29	2 1/2	1 3/4	5/16	8	FULL PEN	7										

7 GA = 0.179" WALL THICKNESS  
3 GA = 0.250" WALL THICKNESS  
0 GA = 0.313" WALL THICKNESS  
E = ROUND TAPERED STEEL TUBE @ 0.14 in/ft TAPER

DESIGN CRITERIA:

- DESIGNED IN ACCORDANCE WITH 2013 AASHTO (APPENDIX C) "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 6TH EDITION (LTS-6), 2013 WITH 2015 INTERIMS" FOR 80 MPH WIND ZONE.
- DESIGNS Y1 THRU Y4 DO NOT REQUIRE FATIGUE STRESS CALCULATION FACTOR.
- FOR POLES WITHOUT LUMINAIRE, THE HEIGHT OF POLE SHALL BE 2'-0" ABOVE THE TOP OF THE ARM CONNECTON PLATE.
- ANCHOR BOLTS ANALYZED FOR STEEL STRENGTH ONLY. THE ANCHOR BOLT EMBEDMENT LENGTH SHOWN ON THIS DRAWING SHALL BE VERIFIED BY THE FOUNDATION ENGINEER.
- THE EXPOSED LENGTH OF THE ANCHOR BOLT BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT SHOULD NOT EXCEED ONE BOLT DIAMETER.
- ALL WELDING SHALL BE IN ACCORDANCE WITH SECTIONS 1 THRU 8 OF THE AMERICAN WELDING SOCIETY (AWS) D1.1 STRUCTURAL WELDING CODE.
- ASTM F959 GALVANIZED DTI WASHERS SHALL BE FURNISHED WITH HIGH STRENGTH BOLTS FOR MAST ARM CONNECTIONS. ASTM F2437 GALVANIZED DTI WASHERS SHALL BE FURNISHED WITH ANCHOR BOLTS FOR POLE BASE CONNECTIONS. CONTRACTOR TO PROVIDE PROPER DTI FEELER GAGES.
- VIBRATION IS MORE LIKELY TO OCCUR WHEN STRUCTURES ARE INSTALLED WITHOUT ATTACHING THE SIGNALS AND OR SIGNS. THEREFORE, THE INTENDED EQUIPMENT OR DAMPENING DEVICES MUST BE INSTALLED AT THE TIME OF ERECTION. BECAUSE VIBRATION IS GENERALLY UNPREDICTABLE, A MAINTENANCE PROGRAM SHOULD INCLUDE INSPECTION FOR INDICATIONS OF EXCESSIVE VIBRATION OR FATIGUE AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING.

9. CUSTOMER TO CONFIRM ALL DIMENSIONS & ORIENTATIONS BEFORE RELEASING ORDER FOR MANUFACTURING.

MATERIAL SPECIFICATIONS	
TAPERED TUBE	ASTM A595 GR A
PLATE	ASTM A36
BAR HANDHOLE FRAME	ASTM A529 GR 50 or ASTM A572 GR 50 or ASTM A500 GR B
HANDHOLE COVER	ASTM A1011 or A36
ANCHOR BOLTS	ASTM F1554 GR 55
ANCHOR BOLT NUTS	ASTM A563 GR A
FLAT WASHERS	ASTM F436
DTI WASHERS (ARM CONNECTION)	ASTM F959
DTI WASHERS (POLE CONNECTION)	ASTM F2437
CAN COVERS	ASTM B26 (319F or 356.0F)
ARM CONN. BOLTS	ASTM F3125 GRADE A325
ARM JOINT STUD	ASTM A36
"ANCO" LOCK NUTS	ASTM A563 GR DH
POLE TOP/ARM END CAP	ASTM B26 (356.0F) or A1011
PIPE	ASTM A500 GR B or A53 GR B
S.S. HARDWARE	AISI-300 SERIES (18-8)
STRUCTURE FINISH	H.D. GALV TO ASTM A123 & POWDER COAT BLACK
HARDWARE FINISH	H.D. GALV TO ASTM A153

STATE: VA		REQ# / SO# : VA-60218-1-D		REV	DESCRIPTION		DATE	REV BY	CHK BY
PROJECT NAME: ARLINGOTN COUNTY STANDARDS (NON-ORNAMENTAL)				REVISIONS					
ROUND TAPERED STEEL TRAFFIC CONTROL STRUCTURES ARLIGNTON COUNTY, VIRGINIA									
UNION METAL INDUSTRIES CORPORATION	This document and the contents herein are proprietary and the property of Union Metal Industries. This document is not to be, copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Industries. Furthermore Union Metal Industries reserves the right to recall this document and all copies at any time for any reason.			DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF	
				JEF	JWW	1/9/17	NTS	50700-SERIES	
	A regular and periodic system of inspections and maintenance must be performed by qualified technicians to ensure ongoing safety for all UMI pole structures.			50700-B1991		REVISION	SHEET		
					R2	1 OF 4			

4

3

2

1

STATE: VA		REQ# / SO# : VA-60218-1-D		REV	DESCRIPTION		DATE	REV BY	CHK BY
PROJECT NAME: ARLINGOTN COUNTY STANDARDS (NON-ORNAMENTAL)				REVISIONS					
<p style="text-align: center;">ROUND TAPERED STEEL TRAFFIC CONTROL STRUCTURES ARLINGTON COUNTY, VIRGINIA</p>									
UNION METAL INDUSTRIES CORPORATION	This document and the contents herein are proprietary and the property of Union Metal Industries. This document is not to be, copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Industries. Furthermore Union Metal Industries reserves the right to recall this document and all copies at any time for any reason.			DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF	
	A regular and periodic system of inspections and maintenance must be performed by qualified technicians to ensure ongoing safety for all UMI pole structures.			JEF	<i>RAW</i>	1/9/17	NTS	50700-SERIES	
				50700-B1991			REVISION	SHEET	
							R2	2 OF 4	

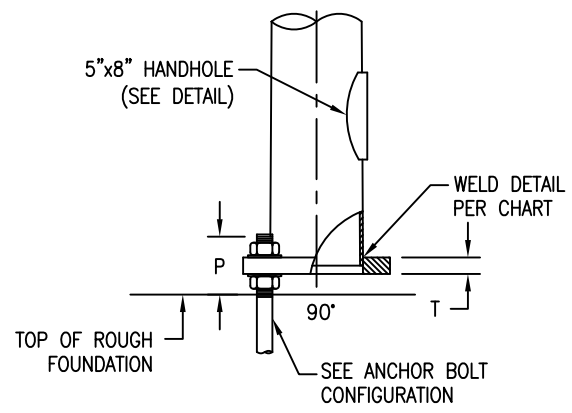
Hardcopies of this document are considered uncontrolled and are to be used for reference only. Those using this document for reference must take all precautions available to ensure that this document matches the current revision maintained in digital format. Within but a single source and protected by edit restrictions.

4

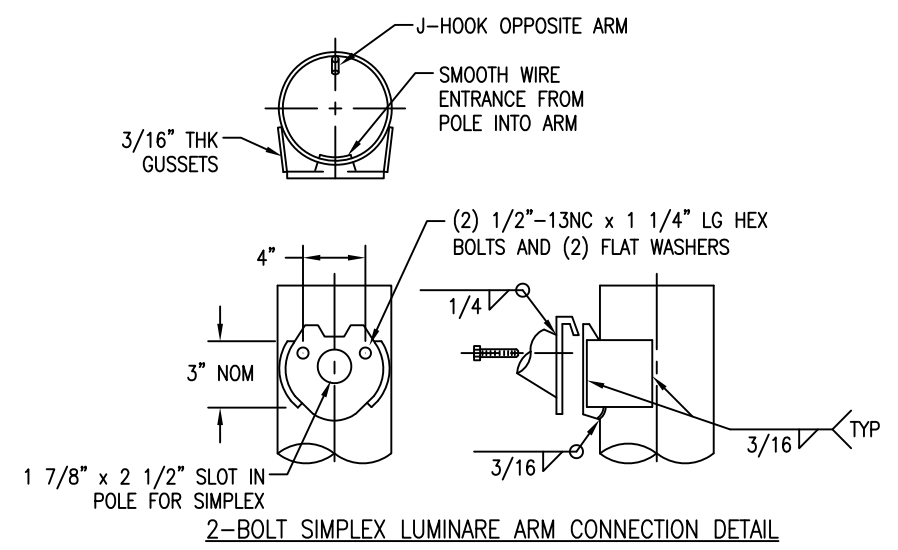
3

2

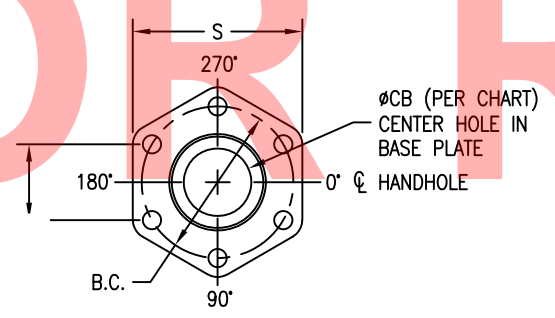
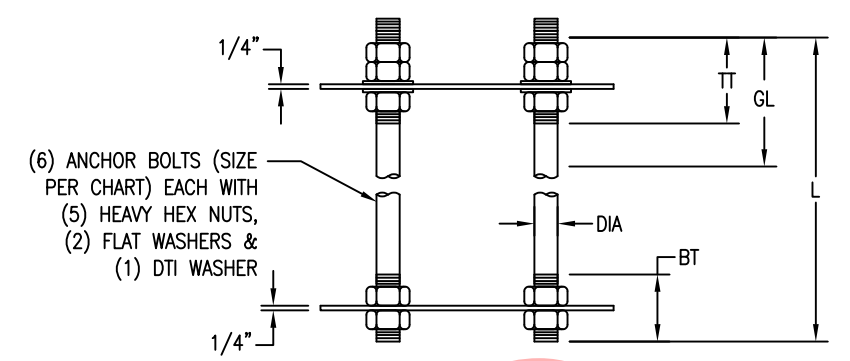
1



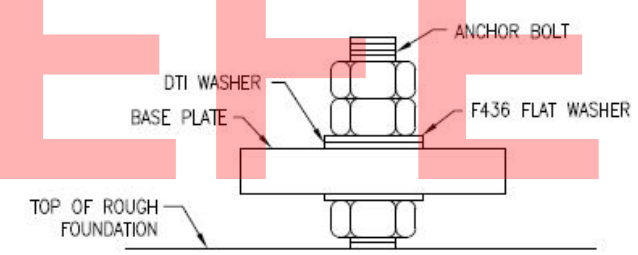
BASE CONNECTION DETAIL



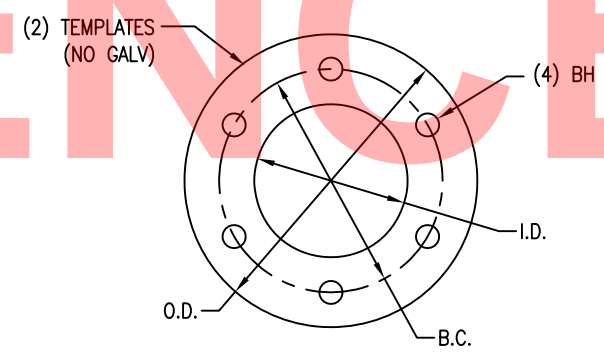
2-BOLT SIMPLEX LUMINAIRE ARM CONNECTION DETAIL



BASE PLATE DETAIL

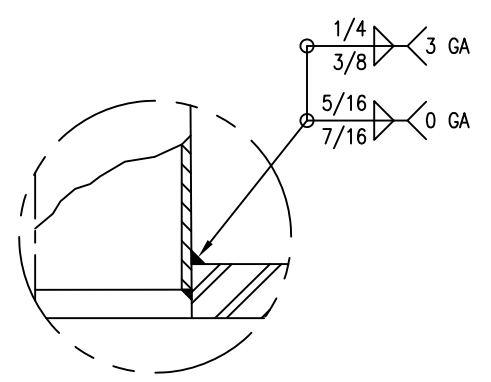


PLACEMENT OF F2437 DTI WASHER AT POLE BASE CONNECTIONS

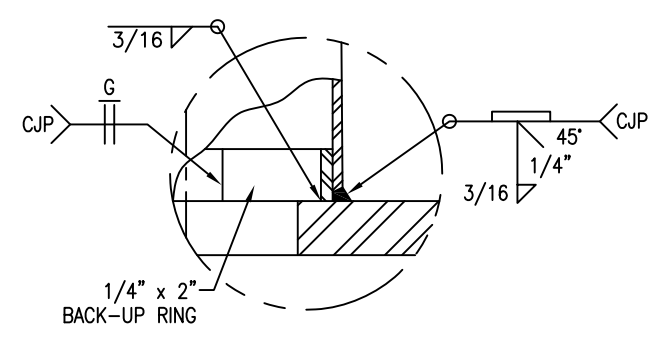


ANCHOR BOLT CONFIGURATION (SHIPPED UNASSEMBLED)

ANCHOR BOLT & TEMPLATE DATA									
DESIGN	DIA	L	TT	BT	GL	B.C.	I.D.	O.D.	BH
Y1 & Y2	1 1/2	70	10	5	FULL	19	16	22	1 9/16
Y3	1 1/2	70	10	5	FULL	20	17	23	1 9/16
Y4	1 3/4	70	11	5	FULL	22	18 1/2	25 1/2	1 13/16
Y5	1 3/4	70	11	5	FULL	25	21 1/2	28 1/2	1 13/16
Y6	2	70	12	6	FULL	27	23	31	2 1/16
Y7	2	70	12	6	FULL	27 1/2	23 1/2	31 1/2	2 1/16
Y8	2 1/4	70	14	6	FULL	29	24 1/2	33 1/2	2 5/16



POLE BASE SOCKET WELD DETAIL (PER CHART)



POLE BASE & ARM FLANGE FULL PEN WELD DETAIL (PER CHART)

STATE: VA		REQ# / SO# : VA-60218-1-D		REV	DESCRIPTION		DATE	REV BY	CHK BY
PROJECT NAME: ARLINGOTN COUNTY STANDARDS (NON-ORNAMENTAL)				REVISIONS					
ROUND TAPERED STEEL TRAFFIC CONTROL STRUCTURES ARLINGTON COUNTY, VIRGINIA									
UNION METAL INDUSTRIES CORPORATION	This document and the contents herein are proprietary and the property of Union Metal Industries. This document is not to be, copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Industries. Furthermore Union Metal Industries reserves the right to recall this document and all copies at any time for any reason.			DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF	
				JEF	JMW	1/9/17	NTS	50700-SERIES	
	A regular and periodic system of inspections and maintenance must be performed by qualified technicians to ensure ongoing safety for all UMI pole structures.			50700-B1991			REVISION	SHEET	
						R2	3 OF 4		

4

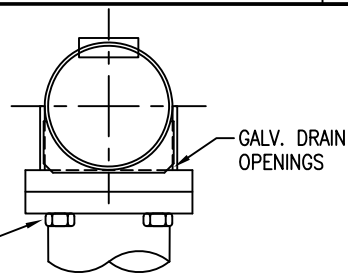
3

2

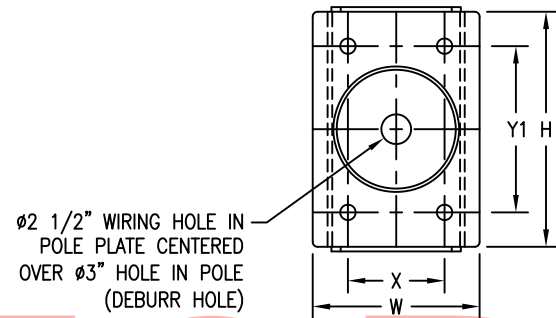
1

Hardcopies of this document are considered uncontrolled and are to be used for reference only. Those using this document for reference must take all precautions available to ensure that this document matches the current revision maintained in digital format, within but a single source and protected by edit restrictions.

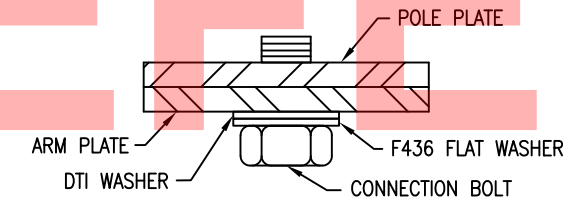
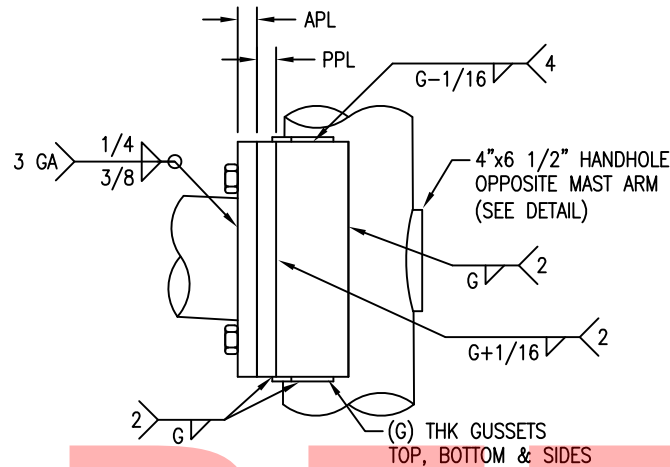
FOR REFERENCE ONLY



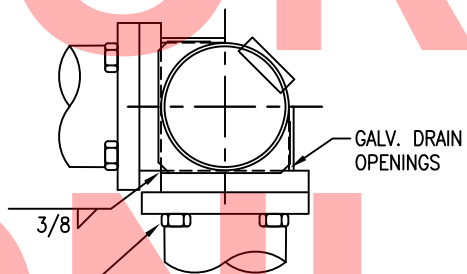
(4) HEX HD CONNECTION  
BOLTS (SIZE PER CHART)  
EACH W/ (1) FLAT WASHER  
& (1) DTI WASHER



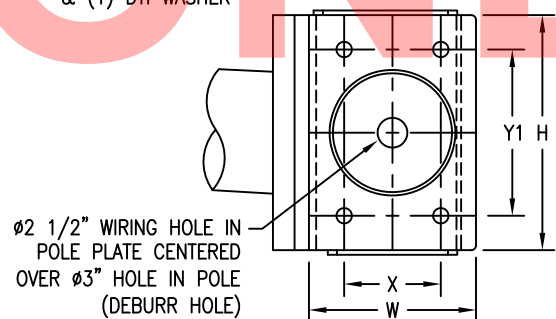
SINGLE MAST ARM CONNECTION DETAIL (4-BOLT)  
(Y1 & Y3 ONLY)



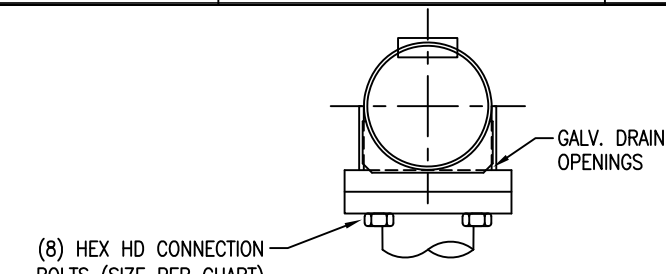
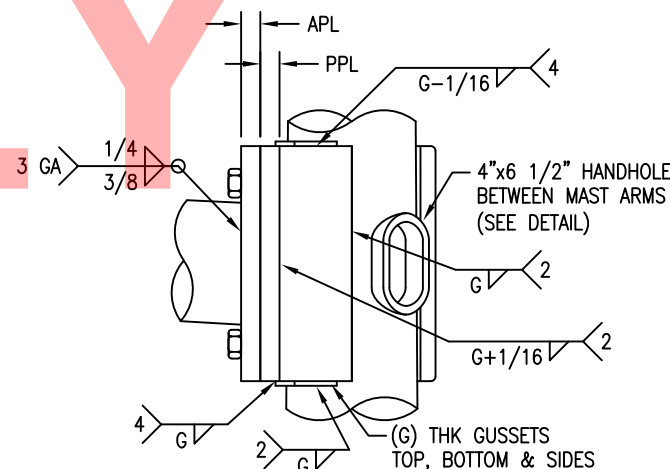
PLACEMENT OF F959 DTI WASHER



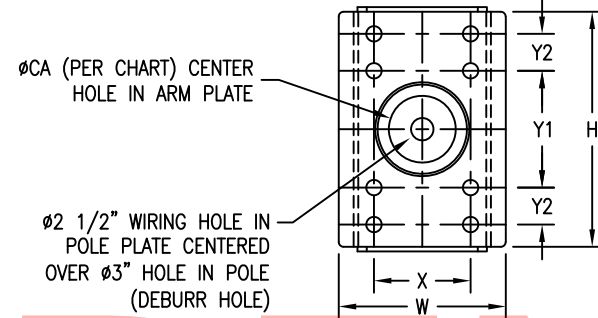
(8) HEX HD CONNECTION  
BOLTS (SIZE PER CHART)  
EACH W/ (1) FLAT WASHER  
& (1) DTI WASHER



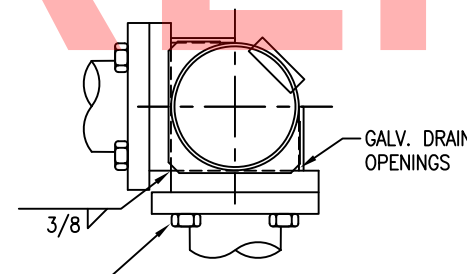
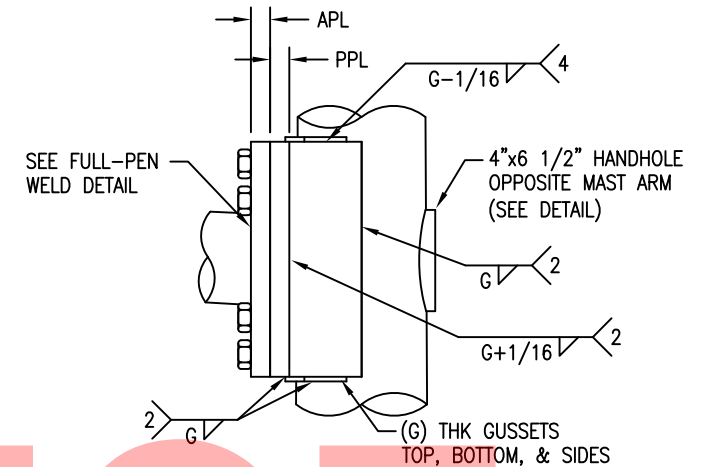
DUAL MAST ARM CONNECTION DETAIL (4-BOLT)  
(Y2 & Y4 ONLY)



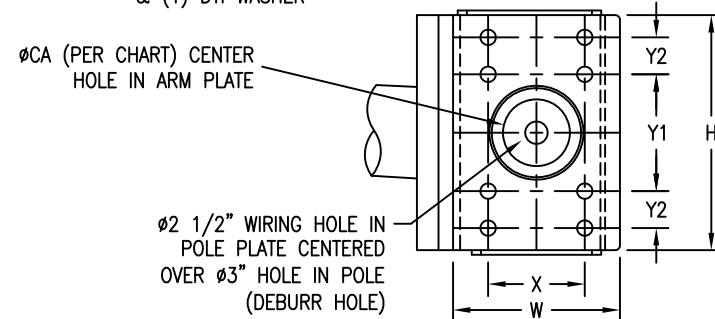
(8) HEX HD CONNECTION  
BOLTS (SIZE PER CHART)  
EACH W/ (1) FLAT WASHER  
& (1) DTI WASHER



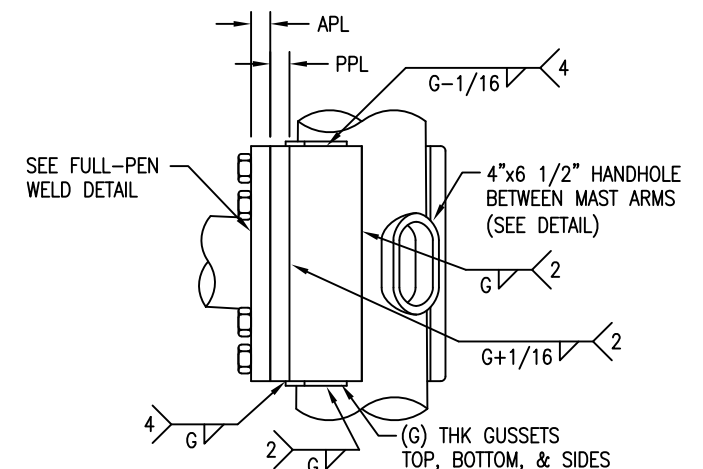
SINGLE MAST ARM CONNECTION DETAIL (8-BOLT)  
(Y5 & Y7 ONLY)



(16) HEX HD CONNECTION  
BOLTS (SIZE PER CHART)  
EACH W/ (1) FLAT WASHER  
& (1) DTI WASHER



DUAL MAST ARM CONNECTION DETAIL (8-BOLT)  
(Y6 & Y8 ONLY)



STATE: VA		REQ# / SO# : VA-60218-1-D		REV	DESCRIPTION		DATE	REV BY	CHK BY
PROJECT NAME: ARLINGOTN COUNTY STANDARDS (NON-ORNAMENTAL)				REVISIONS					
ROUND TAPERED STEEL TRAFFIC CONTROL STRUCTURES ARLINGTON COUNTY, VIRGINIA									
UNION METAL INDUSTRIES CORPORATION	This document and the contents herein are proprietary and the property of Union Metal Industries. This document is not to be, copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Industries. Furthermore Union Metal Industries reserves the right to recall this document and all copies at any time for any reason.			DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF	
				JEF	JMW	1/9/17	NTS	50700-SERIES	
	A regular and periodic system of inspections and maintenance must be performed by qualified technicians to ensure ongoing safety for all UMI pole structures.			50700-B1991			REVISION R2	SHEET 4 OF 4	





