

# **OLD DOMINION UNIVERSITY STANDARD CONTRACT**

Contract No.: **26-ODU-14-CCC**

This contract entered into by and between Brightview Landscape Services, Inc. hereinafter called the "Contractor" and Old Dominion University, called the "University".

**I. WITNESSETH** that the Contractor and the University, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

## **II. PERIOD OF PERFORMANCE:**

(1) The contract period shall commence on upon final contract acceptance and execution, as evidenced by the latest execution date on the contract signature page and will be in effect through October 31, 2026. Where contract commencement date is in conflict with final execution date, final execution date shall prevail.

(2) Upon mutual agreement between both the Contractor and the University, this contract and subsequent period(s) of performance may be renewed for up to four (4) additional one (1) year periods.

(3) The Contractor agrees that as part of this agreement, Contractor's response to the University's IFB #26-ODU-14-CCC, including any and all associated terms and conditions, scope of service, and related pricing for same shall remain in effect throughout any and all "periods of performance", unless otherwise modified in writing.

## **III. CONTRACT AGREEMENT:**

The contract agreement shall consist of the following documents:

- (1) This signed form;
- (2) The University's Irrigation Design Standards, as specified in Exhibit A;
- (3) Contractor's "Pricing Schedule", as specified in section IX;
- (4) Any associated purchase order issued as award acceptance for specific services per project request; and,
- (5) Where this Agreement is silent, the University's original Invitation for Bid and all associated exhibits and addenda shall control.

**IV. SCOPE OF SERVICES:** As required by the University, the Contractor shall provide and furnish all labor, materials, equipment, and supplies to the University for the services of Irrigation services that will include irrigation system maintenance, repair, and new installation as needed throughout the campus of the University and other 'as needed' off-campus locations as determined by Facilities Management, Old Dominion University.

### **A. GENERAL**

Resulting contracts will be used for new installations, alterations, maintenance, and emergency repair projects totaling no more than \$500,000 per project. However, the University may, at its discretion, bid out any project(s) separately. Additionally, Contractors would be required to meet any/all license requirements stated within the contract at such time the University has a project(s) need to be fulfilled. Although resulting contracts may be assigned under the Contract Administration of the Director of Facilities Management or his designee, other University departments shall have the authority to utilize any resulting contracts, i.e., Auxiliary Services, Athletics, Medical Campus, etc.

### **B. PERSONNEL QUALIFICATIONS**

Personnel used for the performance of this shall be properly trained and qualified for work of this type. The University reserves the right to refuse or accept services from any personnel deemed by the university to be unqualified, disorderly, or otherwise unable to perform assigned work. The University requires that all contract personnel be properly attired and identifiable (badges with employee's picture and organization) and that all persons working under the contract abide by the Commonwealth of Virginias Standard of Conduct and Performance.

### **C. QUALITY OF WORKMANSHIP:**

All work shall be quality work performed according to the standards of the industry, and to the complete satisfaction of Old Dominion University.

### **D. SPECIFICS:**

1. Upon receipt of a telephone, written, or electronic notification request from the Contract Administrator or their designees, the contractor shall visit the site of the proposed work to acquire a full understanding of the nature and scope of the project to be accomplished. The contractor shall furnish the University a formal written proposal\* of the costs to be billed at the contracted prices, a

listing and description of the major items of material, parts, and equipment, the total cost of materials, parts, supplies and equipment, and a target date for completion, expressed either as a definite date or the number of days after receipt of the purchase order. In addition, the proposal must be sent to the Contract Administrator via email transmission only to include a date, and company letterhead, branding, and/or business identifier. Upon approval by the University, a purchase order will be issued to the contractor, as authority to proceed with the work, which will incorporate the contractor's proposal and the terms and conditions of the basic contract. The University reserves the right to furnish any or all materials, parts, supplies and equipment required to complete a project.

\*If during the performance of the work, the contractor finds that the project will exceed the cost proposal, the contractor shall notify the University in writing of the new proposed cost and the reasons why a change order is needed to complete the project. The University shall respond in writing, either by approving the change order or by modifying the project to keep costs within the original cost proposal.

2. Prior to payment, the Contractor shall submit, with his/her invoice, a copy of the invoice of materials used on the specified project, and an itemized breakdown of the costs (i.e. number of hours at the contracted rate, and any miscellaneous items such as rentals for equipment such as backhoes, special tools, cost and name of any minorities sub-contractor(s) used, etc.) to the person/department with whom the project was contracted.
3. The contractor shall begin the work as stated on its proposal. If no starting time is stated, the work shall begin within fifteen (15) working days of receipt of the purchase order or as scheduled by the University's representative. The typical work schedule shall be performed during the period of 7:00 am until 3:30 PM, Monday through Friday, unless otherwise approved by the Assistant Director of Grounds & Landscapes of Old Dominion University or his designee.
4. The appropriate University's representative will outline and describe the Scope of Work to be provided by the contractor and establish working hours and completion dates. Overtime not specifically approved at the initial job scope meeting shall be approved by the University's representative prior to any work being started. The overtime rate shall not exceed the rate as allowed within the contract.
5. Rapid response to emergency calls is of the utmost importance in this service contract. The contractor shall have qualified service personnel on the job site within four (4) hours from the time the emergency call for service is placed. This service shall be available 24 hours a day, 7 days a week, whenever necessary. Any instance where the contract vendor cannot provide the required services within the acceptable time frame, the University shall reserve the right to purchase these items on the open market.
6. At all times, the Contractor shall follow 'best management' practices for Irrigation Services. In addition, the Contractor shall be responsible for the work activities of their employees.
7. The Contractor's employees shall arrive on the site properly attired in clean clothes (or uniforms) and have identification (badges or patches) of themselves and the company for whom they work.
8. The University shall not reimburse the Contractor for time or mileage to and from the job site. This includes going to and from the supply houses.
9. Parts and materials shall be provided by the Contractor as needed. The University shall reimburse the Contractor "**at cost**", with no add ons. The Contractor shall submit a copy of the original parts/materials invoice to the University's representative for approval prior to submitting an invoice to Accounts Payable.

E. SPECIFIC SERVICE DELIVERY AREAS:

1. IRRIGATION SYSTEM MAINTENANCE AND INSTALLATION:  
Contractor shall furnish and provide preventive maintenance on the University's irrigation system, all new/refurnished installation shall be in accordance with the University's Design Standard (see **Exhibit A**), service shall include, be not limited to the following:
  - a. Copies of invoices on all materials will be required prior to payment by the University. Contractor shall provide to the University their invoices within three (3) days of the completed work. Contractor must be able to furnish all proposals, invoices and other form of paperwork through an electronic mailing system. The contract administrator or his/her designee shall be copied on all electronic invoice submissions made to University's accounts payable.

- b. All work and materials shall be in strict compliance with specifications of the existing system. The contractor must be engaged in landscape/turf irrigation contracting type work on a regular basis. Contractor must be Certified Landscape Auditor (CLIA), Intelli-Sense certified, must be a WaterSense partner.
- c. The contractor shall be responsible for a scheduled "spring start-up" (approximately March 15) of systems that will be included but not be limited to:
  - a) Inspection and repair of pump station and adjoining valves and electronics.
  - b) Inspection, adjustment and repair of all sprinkler heads in the entire system.
  - c) Inspection and repair of main electrical panel and control clocks.
- d. The contractor shall be responsible for "on demand" service work to be coordinated with the University representative and contractor. The contractor will be required to be on site within 24 hours of notification.
- e. Contract Price: Contract price shall be in the form of a firm hourly price for on-site time only (no driving time).
  - a) Contractor shall provide a firm hourly rate for Irrigation Technician.
  - b) Contractor shall provide a firm hourly rate for Technician Helper or Assistant.
  - c) Contractor shall provide a firm hourly rate for any specialized equipment required, (Compressors, ditch witch, backhoe etc...)
  - d) Contractor will provide the University with copy of the original parts/materials invoice to the University's representative all irrigation parts and accessories used on that job. The reimburse to the Contractor shall be "**at cost**", with no add ons. In addition, the University reserves the right to provide and furnish compatible irrigation parts and accessories from the University's inventory warehouse.
- f. The Contract Administrator will notify the contractor when scheduled work is required. The contractor must schedule work within 48 hours of notification and have work completed within 5 days unless otherwise instructed by the University representative.
- g. Work Schedule: Work performed under this contract shall be performed during the period of 7:00 am until 3:30 PM, Monday through Friday, (except for emergency or storm damage situations), unless otherwise approved by Assistant Director of Grounds & Landscapes of Old Dominion University or his designee.
  - a) Contractor is responsible to coordinate with Miss Utilities before digging on campus grounds.
- h. Grass, sod or planting materials disturbed during a project shall be returned to their original state at the conclusion of the project.
- i. Contractor/Subcontractor License Requirement: Contractor shall maintain with their contract the State's Contractor Business License, certifying that the Contractor's firm/individual and subcontractor is properly licensed for providing the goods/services for the Classification/Specialty as specified herein. The Contractor quoter shall be licensed in Virginia as a Class A Contractor and shall hold throughout the term of the contract , the Landscape Irrigation Contracting (ISC) or Landscape Service Contracting (LSC) license classification,
- j. Contractor must be an authorized to install WeatherTRAK equipment as requested by the University's Contract Administrator.
- k. Repair Parts: In the event that the performance of maintenance services under the contract results in a need to replace defective parts, such items may only be replaced by new parts. In no instance shall the contractor be permitted to replace defective items with refurbished, remanufactured, or surplus items without prior written authorization of the University.
- l. Minimum Requirements:
  - a) Certified Landscape Auditor (CLIA);
  - b) Intelli-Sense certified installer;
  - c) WaterSense partner certification;
  - d) WeatherTRAK certified installer.

**V. REPORTING AND DELIVERY REQUIREMENTS:** UTILIZATION OF SMALL BUSINESSES AND BUSINESSES OWNED BY WOMEN AND MINORITIES: The following reports shall be submitted as indicated:

A. PERIODIC PROGRESS REPORTS/INVOICES: The Contractor shall provide a report on involvement of small businesses and businesses owned by women and minorities on a quarterly basis to the Contract Officer. This report will specify the actual dollars contracted to be spent to date with such businesses, actual dollars expended to date with such businesses, and the total dollars planned to be contracted with such businesses on this contract. This information shall be provided separately for small businesses, women-owned businesses and minority businesses.

## VI. TERMS AND CONDITIONS:

- A. **ADVERTISING:** Contractor agrees that during the entire term of this contract no indication of such sales or services to the University will be used in product literature or advertising.
- B. **APPLICABLE LAWS AND COURTS:** This contract shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the Commonwealth. The University and the Contractor are encouraged to resolve any issues in controversy arising from the award of the contract or any contractual dispute using Alternative Dispute Resolution (ADR) procedures (*Code of Virginia*, § 23-38.90). The Contractor shall comply with all applicable federal, state and local laws, rules and regulations and policies of the University.
- C. **APPLICABLE LEGISLATION AND MANUAL:** This contract is subject to the provisions of the Commonwealth of Virginia, specifically § 23-38.90 of the Code of Virginia and its associated Rules Governing the Procurement of Goods, Services, Insurance and Construction (“the Rules”) and the Purchasing Manual for Universities of Higher Education and their Contractors and any revisions thereto, which are hereby incorporated into this contract in their entirety. A copy of the manual is accessible on the Internet at [www.odu.edu/procurement](http://www.odu.edu/procurement) under “Information for Contractors”.
- D. **ASSIGNMENT OF CONTRACT:** This contract shall not be assignable in whole or in part without the written consent of the University.
- E. **AVAILABILITY OF FUNDS:** The University shall be bound hereunder only to the extent of the funds available or which may hereafter become available during each subsequent fiscal year and/or contract term, as applicable, and any requirement by Contractor for any total or partial compensation or payment by the University of unpaid fees, whether current or future, for lost profit and/or as liquidated damages in the event of early termination of the then current term if for other than breach by the University is prohibitive.
- F. **AUDIT:** Contractor agrees that they shall retain all books, records, and other documents relative to this contract for five (5) years after final payment, or until audited by the Commonwealth of Virginia, whichever is sooner. The University, its authorized agents, and/or state auditors shall have full access to and the right to examine any of said materials during said period.
- G. **CHANGES TO THE CONTRACT:** During the term of this contract, including any and all applicable extensions and/or renewals, changes may be made to the contract in any of the following ways:
1. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written contract to modify the scope of the contract.
  2. The University may request and issue change orders within the general scope of the contract at any time by written notice to the Contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The Contractor shall comply with the notice upon receipt. The Contractor shall be compensated for any additional costs incurred as the result of such order and shall give the University a credit for any savings. Said compensation shall be determined by one of the following methods:
    - a. By mutual agreement between the parties in writing; or
    - b. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the Contractor accounts for the number of units of work performed, subject to the University’s right to audit the Contractor’s records and/or to determine the correct number of units independently; or
    - c. By ordering the Contractor to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The Contractor shall present the University with all vouchers and records of expenses incurred and savings realized. The University shall have the right to audit the records of the Contractor as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to the University within thirty (30) days from the date of receipt of the written order from the University. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or, if there is none, in accordance with the disputes provisions of the Commonwealth of Virginia *Purchasing Manual for Universities of Higher Education and their*

*Contractors.* Neither the existence of a claim nor a dispute resolution process, litigation or any other provision of this contract shall excuse the Contractor from promptly complying with the changes ordered by the University or with the performance of the contract generally.

H. **DEFAULT:** In case of failure to deliver goods or services in accordance with the contract terms and conditions, the University, after due oral or written notice, may procure them from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the University may have.

At day 7 of the 15-day period, the contract needs to be 50% complete. Therefore, should the University find the Contractor falling behind in the scheduled time frame. The University may call another contractor to complete their work and hold the awarded contractor responsible for any additional cost to complete said work.

I. **DISCOUNTS:**

1. **Prompt Payment Discounts:** The University will pay within 30 days after acceptance. A prompt payment discount offered for prompt payment of ( 20 ) calendar days or longer will be calculated.

2. **Special Educational Or Promotional Discounts:** The Contractor shall extend any special educational or promotional sale prices or discounts immediately to the University during the term of the contract. Such notice shall also advise the duration of the specific sale or discount price.

J. **DRUG-FREE WORKPLACE:** (*the Rules §11.*)

During the performance of this contract, the Contractor agrees to (i) provide a drug-free workplace for the Contractor's 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 violations of 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 over \$10,000, so that the provisions will be binding upon each subcontractor or Contractor.

For the purposes of this section, "*drug-free workplace*" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of who are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

K. **EMPLOYMENT DISCRIMINATION:** (*the Rules §10.*)

During the performance of any resulting contract, the Contractor agrees that:

1. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause, including the names of all contracting agencies with which the contractor has contracts of over \$10,000.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that such contractor is an equal opportunity employer. However, notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this chapter.
3. 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.
4. The contractor shall include the provisions of subdivisions 1, 2, and 3 in every subcontract or purchase order of over \$10,000, so that such provisions shall be binding upon each subcontractor or vendor.

L. **ENVIRONMENTAL LIABILITY:** Any costs or expenses associated with environmentally related violations of the law, the creation or maintenance of a nuisance, or releases of hazardous substances, including, but not limited to, the costs of any cleanup activities, removals, remediations, responses, damages, fines, administrative or civil penalties or charges imposed on the Contractor, whether because of actions or suits by any governmental or regulatory agency or by any private party, as a result of the storage, accumulation, or release of any hazardous substances, or any noncompliance with or failure to meet any federal, state or local standards, requirements, laws, statutes, regulations or the law of nuisance by Contractor (or by its agents, officers, employees, subcontractors, consultants, sub consultants, or any

other persons, corporations or legal entities employed, utilized, or retained by Contractor) in the performance of this Contract or related activities, shall be paid by Contractor. This paragraph shall survive the termination, cancellation or expiration of this Contract.

M. **EXCLUSIVITY:** The University reserves the right to procure goods or services covered under this contract from a third party when, in the University's sole discretion, it is deemed to be in the University's best interest.

N. **EXTRA CHARGES NOT ALLOWED:** The contract price shall be for complete installation ready for the University's use, and shall include all applicable freight and installation charges; extra charges will not be allowed.

O. **FINAL INSPECTION:** At the conclusion of the work, the Contractor shall demonstrate to the authorized University's Contract Administrator that the work is fully COMPLETE and in compliance with contract specifications and codes. Any deficiencies shall be promptly and permanently corrected by the Contractor at the Contractor's sole expense prior to final acceptance of the work.

P. **FORCE MAJEURE:** Neither party will be responsible for any losses resulting from delay or failure in performance resulting from any cause, event, or occurrence beyond the control and without the negligence of the parties. Such events, occurrences, or causes include, without limitation: war, strikes or labor disputes, civil disturbances, government orders, pandemics, fires, natural disasters, and acts of God.

Q. **GUARANTEE OF WORK:**

1. Except as otherwise specified, all work shall be guaranteed by the Contractor against defects resulting from the use of inferior materials, equipment, or workmanship for one (1) year from the date of final acceptance of the entire project by the University in writing. Equipment and facilities, which have seasonal limitations on their operation, shall be guaranteed for one (1) full year from the date of seasonally appropriate tests and acceptance, in writing, by the University.
2. If, within the guarantee period, defects are noticed by the University which require repairs or changes in connection with the guaranteed work, those repairs or changes being in the opinion of the University rendered necessary as the result of the use of materials, equipment or workmanship, which are defective, or inferior or not in accordance with the terms of the contract, then the Contractor shall, promptly upon receipt of notice from the University, such notice being given not more than two weeks after the guarantee period expires, and without expense to the University:
  - i. Place in satisfactory condition in every particular all of such guaranteed work and correct all defects therein;
  - ii. Make good all damage to the structure, site, equipment, or contents thereof, which is the result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the contracts; and
  - iii. Make good any work, materials, equipment, contents of structures, and/or disturbance of the site in fulfilling any such guarantee.
3. In any case, where in fulfilling the requirements of the contract or any guarantee embraced in or required thereby, the Contractor disturbs any work guaranteed under contract, he shall restore such work to a condition satisfactory to the University and guarantee such restored work to the same extent as it was guaranteed under such other contract.
4. If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee, the University may have the defects corrected and the Contractor and his surety shall be liable for all expense incurred.
5. All special guarantees applicable to definite parts of the work that may be stipulated in the specifications or other papers forming a part of the contract shall be subject to the term of this section during the first year of the life of such special guarantee.
6. Nothing contained in this section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the contract documents. This paragraph relates only to the specific obligation of the Contractor contained in this section to correct the work and does not limit the time within which his obligation to comply with the contract documents may be sought to be enforced, nor of the time within which proceedings may be commenced to establish the Contractor's liability with respect to his other obligations under this contract.
7. In the event the work of the Contractor is to be modified by another Contractor, either before or after the final inspection, the first Contractor shall remain responsible in all respects under the guarantee of work and under any other warranties provided in the contract or by law. However,

the Contractor shall not be responsible for any defects in material or workmanship introduced by the Contractor modifying its work. Both the first Contractor and the Contractor making the modifications shall each be responsible solely for the work done by each. The Contractor modifying the earlier work shall be responsible for any damage to or defect introduced into the work which he is modifying. If any Contractor shall claim that another Contractor has introduced defects of materials and/or workmanship into the work of the first, it shall be the burden of the Contractor making the claim to clearly demonstrate the nature and extent of such introduced defects and the responsibility of the other Contractor. Any Contractor modifying the work of another shall have the same burden if he asserts defects to have been caused by the Contractor whose work he is modifying.

R. INDEMNIFICATION: Contractor agrees to indemnify, defend and hold harmless the University, its officers, agents, and employees from any claims, damages and actions of any kind or nature, whether at law or in equity, arising from or caused by the use of any materials, goods, or equipment of any kind or nature furnished by the Contractor/any services of any kind or nature furnished by the Contractor, provided that such liability is not attributable to the sole negligence of the University or to failure of the University to use the materials, goods, or equipment in the manner already and permanently described by the Contractor on the materials, goods or equipment delivered.

S. PAYMENT PROVISIONS:

1. By the University:

a. Prompt Payment: (the Rules §42.)

i. The University shall promptly pay for the completely delivered goods or services by the required payment date.

ii. Payment shall be deemed to have been made when offset proceedings have been instituted, as authorized under the Virginia Debt Collection Act (§ 2.2-4800 et seq.) of the Code of Virginia.

iii. Separate payment dates may be specified for contracts under which goods or services are provided in a series of partial deliveries or executions to the extent that such contract provides for separate payment for such partial delivery or execution.

b. Defect Or Impropriety In The Invoice Or Goods And/Or Services Received: (the Rules §43.)

In instances where there is a defect or impropriety in an invoice or in the goods or services received, the University shall notify the Contractor of the defect or impropriety, if the defect or impropriety would prevent payment by the payment date. The notice shall be sent within 15 days after receipt of the invoice or the goods or services.

c. Date Of Postmark Deemed To Be Date Payment Is Made: (the Rules §44.)

In those cases where payment is made by mail, the date of postmark shall be deemed to be the date payment is made for purposes of these Rules.

d. Interest Penalty; Exceptions: (the Rules §44.)

i. Interest shall accrue, at the rate determined pursuant to subsection ii., on all amounts owed by the University to a Contractor that remain unpaid after seven days following the payment date. However, nothing in this section shall affect any contract providing for a different rate of interest, or for the payment of interest in a different manner.

ii. The rate of interest charged the University pursuant to subsection i. shall be the base rate on corporate loans (prime rate) at large United States money center commercial banks as reported daily in the publication entitled The Wall Street Journal. Whenever a split prime rate is published, the lower of the two rates shall be used. However, in no event shall the rate of interest charged exceed the rate of interest established pursuant to § 58.1-1812 of the Code of Virginia.

iii. Notwithstanding subsection i., no interest penalty shall be charged when payment is delayed because of disagreement between the University and a Contractor regarding the quantity, quality or time of delivery of goods or services or the accuracy of any invoice received for the goods or services. The exception from the interest penalty provided by this subsection shall apply only to that portion of a delayed payment that is actually the subject of the disagreement and shall apply only for the duration of the disagreement.

iv. This section shall not apply to retainae on construction contracts that provides for progress payments, during the period of time prior to the date the final payment is due. Nothing contained herein shall prevent a Contractor from receiving interest on such funds under an approved escrow agreement.

v. Notwithstanding subsection i., no interest penalty shall be paid to any debtor on any payment, or portion thereof, withheld pursuant to the Comptroller's Debt Setoff Program, as authorized by the Virginia Debt Collection Act (§ 2.2-4800 et seq.) of the Code of Virginia, commencing with the date the payment is withheld. If, as a result of an error, a payment or portion thereof is withheld, and it is determined that at the time of setoff no debt was owed to the Commonwealth, then interest shall accrue at the rate determined pursuant to subsection 2. on amounts withheld that remains unpaid after seven days following the payment date.

2. To Contractor:

Under this contract, Contractor is hereby obligated:

- i. To submit all invoices for goods/services ordered, delivered and accepted directly to:
    - a) Old Dominion University  
Accounts Payable  
Rollins Hall, Room 2005  
Norfolk, Virginia 23529; or
    - b) [invoice@odu.edu](mailto:invoice@odu.edu)
  - ii. All invoices shall include:
    - a) Contractor Name, 'Remit To' Address, FEIN, or Social Security Number (Individual Contractor);
    - b) Invoice Number, Invoice Date, Payment Terms and Discounts, and Payment Due Date;
    - c) Purchase Order Number;
    - d) University Contact;
    - e) Description of provided goods/services;
    - f) Quantity Delivered per line item;
    - g) Unit and Extended Cost per line item; and
    - h) Total Amount Due
  - iii. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
  - iv. All goods or services provided shall be billed by the Contractor at the agreed to contract price.
  - v. **Unreasonable Charges.** Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, Contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the University shall promptly notify the Contractor, in writing, as to those charges which it considers unreasonable and the basis for the determination. A Contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification. The provisions of this section do not relieve the University of its prompt payment obligations with respect to those charges which are not in dispute.
  - vi. When applicable, Contractor shall deliver to the University, on or before request for final payment, evidence and certification of compliance (subject only to insubstantial shortfalls and to shortfalls arising from subcontractor default) with the SWAM procurement plan. Final payment under the contract in question may be withheld until such certification is delivered and, if necessary, confirmed by the University, or other appropriate penalties may be assessed in lieu of withholding such payment.
3. To Subcontractors: (*the Rules §45.*)  
Under this contract, Contractor shall be obligated:
- i. To pay the subcontractor(s) within seven (7) days of the Contractor's receipt of payment from the University for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or
  - ii. To notify the University and the subcontractor(s), in writing, of the Contractor's intention to withhold payment and the reason.
  - iii. To pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the Contractor that remain unpaid seven (7) days following receipt of payment from the University, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier Contractor performing under the primary contract. A Contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the University.

T. **SEVERABILITY:** The provisions of this contract shall be deemed to be severable, and should any or more of such provisions be declared or adjudged to be invalid or unenforceable, the remaining provisions shall be unaffected thereby and shall remain in full force and effect.

U. **TERMINATION WITH CAUSE:**

1. In the event that the Contractor shall for any reason or through any cause be in default of the terms of the contract, the University may give the Contractor written notice of such default by certified mail/return receipt requested.

2. Prior to termination of the contract, the University shall give the Contractor and its surety ten (10) calendar day's written notice, during which the Contractor and/or his surety may rectify the cause of the termination. If rectified to the satisfaction of the University within said ten (10) days, the University may rescind the notice of termination. If Contractor does not, the termination for cause shall become effective at the end of the ten-day (10) notice period.

3. In the alternative, the University may postpone the effective date of the termination notice, at its sole discretion, if it should receive reassurances from the Contractor and/or its surety that the causes of termination will be remedied in a time and manner which the University finds acceptable. If at any time more than ten (10) days after the notice of termination, the University determines that Contractor and/or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the University may immediately terminate the contract for cause by giving written notice to the Contractor and its surety. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.

4. Notice of terminations, whether initial or given after a period of postponement, may be served upon the Contractor and the surety by mail or any other means at their last known places of business in Virginia or elsewhere, by delivery to any officer or management/supervisory employee of either wherever they may be found, or, if no such officer, employee or place of business is known or can be found by reasonable inquiry within three (3) days, by posting the notice at the job site. Failure to accept or pick up registered or certified mail addressed to the last known address shall be deemed to be delivery.

5. Upon termination, the Contractor shall withdraw its personnel and equipment, cease performance of any further work under the contract, and turn over to the University any work in process for which payment has been made.

6. The University shall take possession of the premises and of all materials, tools, and appliances thereon and finish the work by whatever method it may deem expedient. In such case the Contractor shall not be entitled to receive any further payment. If the expense of finishing the work, including compensation for additional managerial and administrative services shall exceed the unpaid balance of the contract price, the Contractor shall pay the difference to the University, together with any other expenses of terminating the contract and having it completed by others.

7. In the event of violations of law, safety or health standards and regulations, the contract may be immediately cancelled and terminated by the University and provisions herein with respect to opportunity to cure default shall not be applicable.

V. **TERMINATION BY UNIVERSITY FOR CONVENIENCE:**

1. The University may terminate any resulting contract at any time for convenience, in whole or in part, upon giving the Contractor notice of such termination. Upon such termination, the Contractor shall immediately cease work and remove from the project site all of its labor forces and materials that the University elects not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as University may require to assign to the University the Contractor's interest in all subcontracts and purchase orders designated by University. After all such steps have been taken to University's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:

- i. All amounts due for work performed subsequent to the latest Request for Payment through the date of termination;
- ii. Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination;
- iii. The Contractor shall not be entitled to any compensation for lost profits or for any other type of contractual compensation or damage other than those provided by the preceding sentence; and
- iv. Upon payment of the forgoing, University shall have no further obligations to the Contractor of any nature.

2. In no event shall termination for the convenience of the University terminate the obligations of the Contractor's surety on its payment and performance bonds.

W. **TESTING AND INSPECTION:** The University reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.

X. **WAIVER:** No failure of the University to exercise any right or power given to it by law or by any resulting contract, or to insist upon strict compliance by Contractor with any of the provisions of any resulting contract, and no custom or practice of the parties at variance with the terms hereof, shall constitute a waiver of the University's right to demand strict compliance with the terms of any resulting contract.

## **VII. SPECIAL TERMS AND CONDITIONS:**

A. **ACCESS TO WORK:** The University, the University's inspectors and other testing personnel, and inspectors from the Department of Labor and Industry shall have access to the work at all times. The Contractor shall provide proper facilities for access and inspection.

B. **AS BUILT DRAWINGS:** The contractor may be required to provide the University a clean set of reproducible "as built" drawings and wiring diagrams, marked to record all changes made during installation or construction. The contractor shall also provide the University with maintenance manuals, parts lists and a copy of all warranties for all equipment. All "as built" drawings and wiring diagrams, maintenance manuals, parts lists and warranties shall be delivered to the University upon completion of the work and prior to final payment.

C. **AUTHORIZED CONTRACT PARTICIPATION:** In accordance with the University's Rules Governing Procurement of Goods, Services, Insurance and Construction ("Rules Document"), specifically §6, Cooperative Procurement, it is the intent of this contract to allow any public body, public or private health or educational University's, or the University's affiliated agencies and/or corporations, access and use of any subsequent contract(s), as authorized by the Contractor(s).

Participation in this cooperative procurement is strictly voluntary. If authorized by the Contractor(s), any resultant contract(s) may be extended to the entities as indicated above to purchase at contract prices in accordance with contract terms and conditions. The Contractor(s) shall notify the University in writing of any entities accessing the contract. No modification of this contract or execution of a separate contract is required to participate. The Contractor(s) will provide semi-annual usage reports for all entities accessing the contract(s). Participating entities shall place their own orders directly with the Contractor(s), and shall fully and independently administer their use of the contract(s), including contractual disputes, invoicing and payments, without direct administration from the University. The University shall not be held liable for any costs or damages incurred by any other participating entity as a result of any authorization by the Contractor(s) to extend participation and use of the contract(s). It is understood and agreed that the University is not responsible for the acts or omissions of any entity, and will not be considered in default of the contract(s) no matter the circumstances.

Use of this contract does not preclude any participating entity from using other contracts or competitive processes as the need may be.

D. **AVAILABILITY OF MATERIALS:** If material specified is not available on the present market, alternate materials may be proposed by the Contractor for approval by the University.

E. **BACKGROUND CHECKS:** Contractor is responsible for conducting criminal background checks for any and all personnel proposed to work on the University's campus and must provide copies of same to the University's Contract Administrator.

F. **CONTRACT AND RENEWAL TERM:**

1. The initial term of any resulting contract shall be for a one (1) year period, commencing from the date of acceptance and expiring on **October 31, 2026**;
2. Any resulting contract may be renewed by the University for four (4) successive one-year periods under the terms and conditions of the original contract except as stated in 2.a. and 2.b. below. Cost considerations may be negotiated only at the time of renewal. Written notice of the University's intention to renew shall be given approximately 90 days prior to the expiration date of each contract period.
  - a. If the University elects to exercise the option to renew the contract for an additional one-year period **after the initial term**, the contract price(s) for the additional one year shall not exceed the contract price(s) of the initial contract term by the lesser of (1) the percentage increase/decrease of the Consumer Price Index (CPI) for All Urban Wage Earner and Clerical Workers (CPI-W), All U.S. Items, for base period 1982-84=100, for the previous twelve (12) month period, or (2) not to exceed 5%.
  - b. If during any subsequent renewal periods, the University elects to exercise the option to renew the contract, the contract price(s) for the subsequent renewal period shall not exceed the contract price(s) of the previous renewal period by the lesser of (1) the percentage increase/decrease of the Consumer Price Index (CPI) for All Urban Wage Earner and Clerical Workers (CPI-W), All U.S. Items, for base period 1982-84=100, for the previous twelve (12) month period, or (2) not to exceed 5%.

G. **COMPANY PERSONNEL STANDARDS:**

1. Contractor shall provide trained personnel who shall be qualified to properly maintain/perform/test for services specified herein. If any of the Contractor's personnel are not satisfactory in the performance of services to be furnished hereunder in a proper manner and satisfactory to the

University, the Contractor shall remove any such personnel and replace them with satisfactory personnel.

2. Contractor shall use all reasonable care, consistent with its rights to manage and control its operations, not to employ any persons or use any labor or have any equipment or permit any condition to exist which shall or may cause or be conducive to pose any liability to the general public as well as any activity to be construed as a nuisance. The University retains the right to require the Contractor to halt all work activities until such conditions are resolved.
- H. **CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT:** If the work should be stopped under any order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or of anyone employed by him, or if the owner should fail to pay to the contractor within thirty (30) days when no dispute exists as to the sum, then the contractor may, upon ten (10) calendar days written notice to the owner, stop work or terminate the contract and recover from the owner payment for the cost of the work actually performed, together with overhead and profit thereon, but profit shall be recovered only to the extent that the contractor can demonstrate that he would have had profit on the entire contract if he had completed the work. The contractor may not receive profit or any other type of compensation for parts of the work not performed. The contractor may recover the cost of physically closing down the job site, but no other costs of termination. The owner may offset any claims it may have against the contractor against the amounts due to the contractor.
- I. **CONTRACTOR'S TITLE TO MATERIALS:** No materials or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sales or other agreement by which an interest is retained by the seller. The Contractor warrants that he has clear title to all materials and supplies for which he invoices for payment.
- J. **DELIVERY AND STORAGE:** It shall be the responsibility of the Contractor to make all arrangements for delivery, unloading, receiving and storing materials in the building during installation. The University will not assume any responsibility for receiving these shipments. Contractor shall check with the University and make necessary arrangements for security and storage space in the building during installation.
- K. **E-VERIFY REQUIREMENT OF ANY CONTRACTOR:** Pursuant to Code of Virginia, § 2.2-4308.2, any employer with more than an average of 50 employees for the previous 12 months entering into a contract in excess of \$50,000 with the University to perform work or provide services pursuant to such contract shall register and participate in the E-Verify program to verify information and work authorization of its newly hired employees performing work pursuant to such contract. Any such employer who fails to comply with these provisions may be debarred from contracting with the University and any agency of the Commonwealth for a period up to one year. Such debarment may cease upon the employer's registration and participation in the E-Verify program. If requested, the employer shall present a copy of their Maintain Company page from E-Verify to prove that they are enrolled in E-Verify.
- L. **INSPECTION OF JOB SITE:** Contractor certifies that they have inspected the job site and are aware of the conditions under which the work must be accomplished. Claims, as a result of failure to inspect the job site, will not be considered by the University.
- M. **INSURANCE:** By signing this contract the Contractor certifies it will have the following insurance coverage at the time the contract is awarded and through the term of each contract renewal period. For construction contracts, if any subcontractors are involved, the subcontractor will have workers' compensation insurance in accordance with §§ 2.2-4332 and 65.2-800 et seq. of the *Code of Virginia*. The Contractor further certifies that the Contractor and any subcontractors will maintain these insurance coverage's during the entire term of the contract and that all insurance coverage's will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission.

**MINIMUM INSURANCE COVERAGES AND LIMITS REQUIRED FOR MOST CONTRACTS:**

1. Workers' Compensation - Statutory requirements and benefits. Coverage is compulsory for employers of three or more employees, to include the employer. Contractors who fail to notify the Commonwealth of increases in the number of employees that change their workers' compensation requirements under the *Code of Virginia* during the course of the contract shall be in noncompliance with the contract.
2. Employer's Liability - \$100,000.
3. Commercial General Liability - \$1,000,000 per occurrence. Commercial General Liability is to include bodily injury and property damage, personal injury and advertising injury, products and completed operations coverage. The University must be named as an additional insured and so endorsed on the policy.
4. Automobile Liability - \$1,000,000 per occurrence. (Only used if motor vehicle is to be used in the contract.)
5. **The Contractor's Certificate of Insurance must (i) specify the specific University project,**

**(ii) name both the Commonwealth of Virginia and Old Dominion University as “additional insureds”, and (iii) mark/notate in the ‘addl insd’ column for each type of insurance coverage listed EXCEPT WORKERS COMPENSATION and PROFESSIONAL LIABILITY INSURANCE.**

- N. LABELING OF HAZARDOUS SUBSTANCES: If the items or products requested by this Contract are “Hazardous Substances” as defined by § 1261 of Title 15 of the United States Code (U.S.C.) or “Pesticides” as defined in § 136 of Title 7 of the United States Code, then the Contractor, by submitting his quote, certifies and warrants that the items or products to be delivered under this contract shall be properly labeled as required by the foregoing sections and that by delivering the items or products the Contractor does not violate any of the prohibitions of Title 15 U.S.C. § 1263 or Title 7 U.S.C. § 136.
- O. MATERIAL SAFETY DATA SHEETS (MSDS): When applicable, Contractor shall at the time of each delivery, provide to the University appropriate MSDS for each chemical and/or compound ordered. Payment will not be made on any chemical and/or compound received until the using agency receives current MSDS.
- P. MISS UTILITIES:  
Contractor shall contact Miss Utilities a minimum of forty-eight (48) hours prior to excavation to have all existing underground utilities located, and shall be responsible for any damage to underground utilities during the performance of this contract.
- Q. PRIME CONTRACTOR RESPONSIBILITIES: The Contractor shall be responsible for completely supervising and directing the work under this contract and all subcontractors that he may utilize, using his best skill and attention. Subcontractors who perform work under this contract shall be responsible to the prime Contractor. The Contractor agrees that he is as fully responsible for the acts and omissions of his subcontractors and of persons employed by them as he is for the acts and omissions of his own employees.
- R. PRODUCT SUBSTITUTION: During the term of any resulting contract, the Contractor is not authorized to substitute any item for that product identified in this contract without the prior written consent of the contracting officer, or their designee.
- S. PROTECTION OF PERSONS AND PROPERTY:
1. The Contractor expressly undertakes, both directly and through its subcontractor(s), to take every precaution at all times for the protection of persons and property which may come on the building site or be affected by the Contractor’s operation in connection with the work.
  2. The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work.
  3. The provisions of all rules and regulations governing safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia, issued by the Department of Labor and Industry under Title 40.1 of the *Code of Virginia* shall apply to all work under this contract.
  4. The Contractor shall continuously maintain adequate protection of all its work from damage and shall protect the University’s property from injury or loss arising in connection with this contract. Contractor shall make good any such damage, injury, or loss, except such as may be directly due to errors in the contract documents or caused by agents or employees of the University, and shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by the University. Contractor shall provide and maintain all passageways, guard fences, lights, and other facilities for protection required by public authority, local conditions, any of the contract documents or erected for the fulfillment of his obligations for the protection of persons and property.
  5. In an emergency affecting the safety or life of persons or of the work, or of the adjoining property, the Contractor, without special instruction or authorization from the University, shall act, at his discretion, to prevent such threatened loss or injury. Also, should he, to prevent threatened loss or injury, be instructed or authorized to act by the University, he shall so act immediately, without appeal. Any additional compensation or extension of time claimed by the Contractor on account of any emergency work shall be determined as provided by paragraph G., of the General Terms and Conditions.
- T. QUALIFIED REPAIR PERSONNEL: All warranty or maintenance services to be performed on the items specified in this contract shall be performed by qualified technicians properly authorized by the manufacturer to perform such services. The University reserves the right to require proof of certification prior to award and at any time during the term of the contract.

- U. **SIGNS, TRAFFIC CONTROL AND HIGHWAY PERMIT:**  
Unless otherwise specified, Contractor shall be responsible for providing any and all signing and traffic control as required by the University when working in the University's rights-of-way, including any and all traffic control plans, and associated permits.
- V. **SUBCONTRACTS:** No portion of the work shall be subcontracted without prior written consent of the University. In the event that the Contractor desires to subcontract some part of the work specified herein, the Contractor shall furnish the University the names, qualifications and experience of their proposed subcontractors. The Contractor shall, however, remain fully liable and responsible for the work to be done by its subcontractor(s) and shall assure compliance with all requirements of the contract.
- W. **SUPERINTENDENCE BY CONTRACTOR:**
1. The Contractor shall have a competent foreman or superintendent, satisfactory to the University, on the job site at all times during the progress of the work. The Contractor shall be responsible for all construction means, methods, techniques, sequences, and procedures for coordinating all portions of the work under the contract except where otherwise specified in the contract documents, and for all safety and worker health programs and practices. The Contractor shall notify the University, in writing, of any proposed change in superintendent including the reason therefore prior to making such change.
  2. The Contractor shall, at all times, enforce strict discipline and good order among the workers on the project, and shall not employ on the work any unfit person, anyone not skilled in the work assigned to him, or anyone who will not work in harmony with those employed by the Contractor, the subcontractors, the University or the University's separate Contractors and their subcontractors.
  3. The University may, in writing, require the Contractor to remove from the work any employee the University deems to be incompetent, careless, not working in harmony with others on the site, or otherwise objectionable.
- X. **TRAINING, OPERATION, AND MAINTENANCE OF EQUIPMENT:**
1. The Contractor, in conjunction with his subcontractors and suppliers, shall provide the University's operations and maintenance personnel with instruction and training in the proper operation and maintenance of the equipment and related controls provided or altered in the work.
  2. The Contractor shall provide the University with a minimum of two (2) copies of operating, maintenance and parts manuals for all equipment provided in the project. Further specific requirements may be indicated in the specifications.
- Y. **USE OF PREMISES AND REMOVAL OF DEBRIS:**
1. The Contractor shall:
    - a. Perform his contract in such a manner as not to interrupt or interfere with the operation of any existing activity on the premises or with the work of any Contractor;
    - b. Store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other Contractor; and
    - c. Place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work.
  2. The Contractor expressly undertakes, either directly or through his subcontractor(s), to affect all cutting, filling, or patching of his work required to make the same conform to the drawings and specifications, and, except with the consent of the University, not to cut or otherwise alter the work of any other Contractor. The Contractor shall not damage or endanger any portion of the work or premises, including existing improvements, unless called for by the contract.
  3. The Contractor expressly undertakes, either directly or through his subcontractor(s), to clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly, and workmanlike appearance. No such refuse, rubbish, scrap material, and debris shall be left within the completed work nor buried on the building site, but shall be removed from the site and properly disposed of in a licensed landfill or otherwise as required by law.
  4. The Contractor shall not operate or disturb the setting of any valves, switches or electrical equipment on the service lines to the building except by proper previous arrangement with the University. The Contractor shall give ample advance notice of the need for cut offs which will be scheduled at the convenience of the University. The Contractor expressly undertakes, either directly or through his subcontractor(s), before final payment, to remove all surplus material, false work, temporary structures, including foundations thereof, plants of any description and debris of every nature resulting from his operations and to put the site in a neat, orderly condition; to

thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the contract; and to thoroughly clean all glass installed under the contract including the removal of all paint and mortar splatters and other defacements. If a Contractor fails to clean up at the completion of the work, the University may do so and charge for costs thereof to the Contractor.

5. The Contractor shall not operate or disturb the setting of any valves, switches or electrical equipment on the service lines to the building except by proper previous arrangement with the University. The Contractor shall give ample advance notice of the need for cut offs which will be scheduled at the convenience of the University.
- Z. **WARRANTY:** All materials and equipment shall be fully guaranteed against defects in material and workmanship for a period of one (1) year following date of delivery. Should any defect be noted by the University, the University will notify the Contractor of such defect or non-conformance. Notification will state either (1) that the Contractor shall replace or correct, or (2) the University does not require replacement or correction, but an equitable adjustment to the contract price will be negotiated. If the Contractor is required to correct or replace, it shall be at no cost to the University and shall be subject to all provisions of this clause to the same extent as materials initially delivered. If the Contractor fails or refuses to replace or correct the deficiency, the office issuing the purchase order may have the materials corrected or replaced with similar items and charge the Contractor the costs occasioned thereby or obtain an equitable adjustment in the contract price.
- AA. **WORK SITE DAMAGES:** Any damage to existing utilities, equipment or finished surfaces resulting from the performance of this contract shall be repaired to the University's satisfaction at the Contractor's expense.
- BB. **WORK ESTIMATES (TIME AND MATERIAL CONTRACTS):** Under this time and material contract, the Contractor shall furnish the University with a non-binding written estimate of the total costs to complete the work required. The estimate must include the labor category(ies), the Contractor's hourly rates specified in the contract, and the total material cost. Material costs shall be billed at Contractor's actual invoice costs (Contractor shall furnish copies of all invoices for materials) or discount off the list price, whichever is specified in the contract. If the University determines that the estimated price is not fair and reasonable, the University has the right to ask the Contractor to reevaluate the estimate. If the revised estimate is determined to be not fair and reasonable, the University reserves the right to obtain additional quotes from other Contractors. A work order will be issued to the Contractor, as the authority to proceed with the work, which will incorporate the Contractor's estimate and the terms and conditions of the contract. The Contractor and his/her personnel shall log in with the designated contract administrator each day before and after work to confirm labor hours.

## VIII. PAYMENT METHOD:

- A. The University shall issue eVA 'Purchase Orders' for required performance and delivery against any resulting contract.
- B. The Contractor shall be paid when (i) requested work is completed, (ii) the requested work is approved and accepted by the University, and (iii) Contractor has submitted to the Office of Finance/Accounts Payable a proper invoice for the approved, accepted and completed work.
- C. The Contractor shall not receive payment for work found by the University to be unsatisfactory, or performed in violation of federal, state, or local laws, codes, ordinances, rules or regulations.
- D. Progress Payments:  
If requested in writing by the Contractor and approved in writing by the University, progress payments may be made under the following circumstances:
  1. When total contract cost for all materials and services exceed \$25,000;
  2. When project completion time is anticipated to exceed sixty (60) days;
  3. Payments will only be made for:
    - a) Purchased materials and/or equipment related to the project that has been delivered on site and/or stored off-site;
    - b) Those same materials and/or equipment that has a total value of at least 10% of the project cost, not to exceed 75%; and
    - c) Materials and/or equipment that have satisfied i. and ii. above, and that have all proper invoicing and required documentation, as approved by the University's Contract Administrator or appropriate Project Manager.
    - d) Regardless of completion time frame and/or amount of expense outlay incurred by the Contractor, shall not be paid more than once every 30 days.

**Note:** *It shall be the responsibility of the Contractor to safeguard those materials and/or equipment that have been “prepaid” by the University, and shall also certify at the completion of the project that same was either (i) used during the performance and completion of the project, or (ii) turned over as property to the University.*

E. Charge Cards Payments:

1. In an effort to increase administrative efficiency and streamline the invoice and payment process, the University may elect to process those contracted goods/services less than \$5,000, as applicable, via use of the University’s Small Purchase Charge Card (“PCARD”).
2. In those instances deemed to be in “its best interest”, the University may elect to process transactions via its ‘Gold’ PCARD, not to exceed transactions up to \$50,000 per order, or monthly transactions up to \$250,000 accumulative, unless otherwise approved and/or stipulated.

**IX. PRICING SCHEDULE:**

**PRICING SCHEDULE** - The contractor agrees to provide the services in compliance with the scope of work for each specific service at a firm fixed rate for the period of this agreement as follows:

- : Time and Materials - The Contractor shall furnish the University with a non-binding written estimate of the total costs to complete the work required. The estimate must include the labor category(ies), the Contractor's hourly rates specified in the Contract Pricing below (that includes profit and overhead), and the total material cost.
- : In any instance where the contractor cannot provide the required services within an acceptable time frame, the University reserves the right to purchase these services on the open market;
- : The quantities shown below are annual estimated quantities used for evaluation purpose only. The University reserve the right to purchase those services actually needed and in quantities as required by the University, regardless of whether such total quantities are more or less than those shown.
- : All costs associated with rates (i.e., insurance, salaries, overhead, profit, etc.) shall be included in the rates of the 'contract pricing' sheet.

**A. CONTRACT PRICING:**

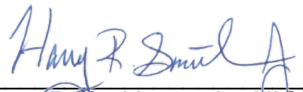
ITEM	HOURS/ UNITS	CATEGORIES	RATE, HOURLY	TOTAL
1	390	Irrigation Technician	\$75.00/HR.	\$29,250.00
	10	Irrigation Technician, (OVERTIME)	\$94.00/HR.	\$940.00
2	390	Technician Helper / Assistant	\$35.00/HR.	\$13,650.00
	10	Technician Helper / Assistant, (OVERTIME)	\$44.00/HR.	\$440.00
3	30	Specialized Equipment, Backhoe	\$120.00/HR.	\$3,600.00
4	20	Specialized Equipment, Ditchwitch	\$80.00/HR.	\$1,600.00
		Specialized Equipment, Other (PLEASE SPECIFY):	-	-
		Skid Steer	\$120.00/HR.	
5		Irrigation Parts / Supplies at Contractor's cost	-	-
<b>NET TOTAL AWARD AMOUNT:</b>				<b>\$49,480.00</b>

- : All prices contained in the above sections shall be used to arrive at a total cost for each project request. Unit price remain firm throughout the contract period.
- : The University reserve the right to purchase those services as actually needed and in project sizes as needed by the University. Therefore, the University further reserves the right and shall not be bound to the number of projects or size of the projects requested based on the estimated hours/units as shown above.

IN WITNESS WHEREOF, the University has caused this contract to be duly executed intending to be bound thereby.

**UNIVERSITY:** Old Dominion University

**Date:** 01/13/2026

  
 Harry R. Smithson, Jr., NIGP-CPPP  
 Asst. Director, Procurement

## **Section 1.2.1 Irrigation Specifications**

### **IRRIGATION PART 1 – GENERAL**

#### **1. Scope of Work**

A. Provide all materials, labor, equipment and services necessary to complete the detailed design and installation of the irrigation work as indicated on the Irrigation Performance Plan. Work shall include, but is not limited to:

- 1) Predesign Meeting with ODU Project Manager and Landscape Design Superintendent to review project limits and procedures.
- 2) Coordinating location and type of meters, controllers, water tap and backflow preventers with Owner.
- 3) Complete irrigation system design and installation within the "Limits of Irrigation" shown on the drawings.
- 4) Verify underground utility locations per ODU procedure.
- 5) The Contractor shall coordinate work of this section with work of all related trades and subcontractors to assure smooth progression of work.
- 6) Protection and/or restoration of all existing improvements., including trees and root zones.
- 7) Trenching and backfilling for all pipes, valves and drain pits.
- 8) Furnishing and installing all mains, laterals, risers and fittings, sprinkler heads, quick-coupling valves, gate valves, control valves, controllers, electric wire, controls, etc., and all necessary specialties and accessories.
- 9) Furnishing and installing all sleeves beneath walkways, roads, and driveways where required.
- 10) Testing of irrigation system in presence of ODU Landscape Design Superintendent and Grounds Maintenance Supervisor.
- 11) Regulating and adjusting all sprinkler heads, time sequence control devices and section valves.
- 12) Furnishing and installing water meters and reduced pressure backflow preventers and heated enclosures on water system for irrigation water supply.
- 13) Preparation of full reproducible and digital as-built record plans for submittal to the Owner.

B. Based on this performance specification and the Irrigation Performance Plan, provide 3 sets of plans, details and calculations for review and approval by the Owner's representative. The plans/ details of the irrigation system, including but not limited to, piping, valves, sprinkler heads, wiring, meters, backflow preventers, etc. shall be designed by an individual certified a Certified Landscape Architect, or Certified Irrigation Association Designer.

2. Irrigation Documents
  - A. Other documents included or related to this contract:
    - 1) Landscape Plan and Details
    - 2) Building and Civil Plans
2. Related Work
  - A. Electrical stubout for irrigation controller.
  - B. The irrigation system point of connection shall be coordinated with the mechanical/plumbing system. Pressure and flow information shall be field verified.
  - C. Planting, seeding and sodding.
3. Quality Assurance
  - A. The irrigation system shall be designed and the drawings sealed by a Certified Landscape Architect, or Certified Irrigation Association Designer.
  - B. Installer's Qualifications: Upon request, Contractor must provide the following, to include name of contact, name of project, address of project, and phone number of contact. If this criterion cannot be met, then the contractor will be disqualified:
    - 1) Virginia Class A Contractor's License showing a specialty in irrigation.
    - 2) General liability insurance to \$1,000,000.
    - 3) Five verifiable prior projects with references to attest to the Contractor's ability to install.
    - 4) Projects shall be of the size and complexity of this project
  - C. Design Drawings: The Irrigation Plan must include a layout of the areas indicated on the Irrigation Performance Plan. The Irrigation Plan must be drawn to a minimum scale of 1"=25'-0". The Irrigation Plan must contain and clearly define the following data as listed below.
    - 1) Static pressure (psi) and gallons per minute (GPM) upon which the design is based.
    - 2) Complete layout indicating placement of all system components.
    - 3) Specify all pipe sizes, material (polyethylene, PVC, etc.) and class rating (Class 200, Schedule 40, etc.)
    - 4) Specify manufacturer and model number (size if applicable) of all irrigation system components.
    - 5) Size, material, schedule and placement of all sleeves.
    - 6) Electric valve locations including size, type and station designation and flow per zone.
    - 7) Design calculations for each zone, including pressure and friction loss.
    - 8) Specify for all spray heads - nozzle, spray pattern, radius, gallons per minute, operating psi.

- 9) Zones. The Irrigation plans shall be drawn as an overlay to the planting plans for the project. For clarity sake, shrub and perennial symbols within beds may be turned off, but all trees and large shrubs within turf areas shall be shown, and all bed edges shall be clearly visible. Turf Zones shall be irrigated on separate valves than Shrub Zones. The planting plans will be provided to the contractor in AutoCAD 2004 digital format or pdf file.
  - 10) Installation details must be provided for all irrigation system components.
  - 11) Operating schedule must be provided for all irrigation system and submitted with the design.
- D. Requirements of Regulatory Agencies
- 1) All work and materials shall be in full accordance with the latest rules and regulations of safety orders of Division of Industrial Safety; the Uniform Building Code, National Electric Code, National Sanitation Foundation, Underwriters Laboratory and other applicable laws or regulations, including any local Plumbing Codes.
  - 2) Should the Contract documents be at variance with the aforementioned rules and regulations, notify the Owner for instructions before proceeding with work affected.
- E. Testing
- 1) Preliminary review of completed installation will be made prior to backfilling of trenches and then again during hydrostatic testing.
  - 2) Final review shall be made in conjunction with the final review of lawn, shrub and tree planting.
  - 3) The review and testing shall be scheduled with the Landscape Design Supervisor and Grounds Maintenance Supervisor at least 48 hours prior to testing.
- F. Permits and Inspections
- 1) Any permits for the installation or construction of any work included under this contract, which are required by any of the legally constituted authorities having jurisdiction, shall be obtained and paid for by the Contractor, each at the proper time.
  - 2) The Contractor shall also arrange for and pay all costs in connection with any inspection and examination required by these authorities.
4. Submittals
- A. Contractor shall furnish three (3) sets of plans, details and specifications to the Owner's construction representative for review and approval.
  - B. Contractor shall furnish two (2) Manufacturer's service manual each to the Owner and the Owner's Construction Representative. Manuals may be loose-leaf and shall contain complete drawings of all equipment installed

showing components and catalog numbers together with the manufacturer's name and address.

- C. The Contractor shall furnish two (2) copies of the Annual Maintenance Manual with annual maintenance procedures recommended by the irrigation designer, the irrigation system component manufacturers and the irrigation contractor.
- D. Loose Equipment to Furnish
  - 1) Loose irrigation equipment, operating keys and spare parts will be furnished by the Irrigation Contractor in quantities as shown below.
    - a) Two (2) valve keys for gate valves.
    - b) Two (2) keys for each controller.
    - c) Two (2) sets of special tools required for removing, disassembling and adjusting each type of sprinkler and valve supplied on this project.

E. Record Drawings

- 1) The Contractor shall maintain one record set of blueline prints of the irrigation system in good condition at the site and mark on them the exact "Record" location of all components. The Contractor shall make a daily record of all work installed during each day. Plans shall indicate the exact location of check valves, gate valves, wire locations, head layout, automatic valves, quick couplers, all irrigation and drainage piping, etc., shall be shown on the prints. Locations should be shown by the triangular system for measurements from easily identified permanent features, such as buildings, curbs, fences, walks, etc.. Drawings shall show approved substitutions, if any, of material including Manufacturer's name and catalogue number. Drawings shall be to scale and all information shall be recorded in a neat, orderly way.
- 2) At the time of the irrigation mainline test, the Contractor shall provide a preliminary set of "Record" drawings to the Owner's Construction Representative. Final digital as-built drawings shall be by the Owner's A & E firm.

5. Job Conditions

A. Examination of Site

- 1) The bidder acknowledges that he has examined the site, plans and specifications and the submission of a quotation shall be considered evidence that examinations have been made.

B. Field Conditions

- 1) The Contractor shall verify drawing dimensions with actual field conditions and inspect related work and adjacent surfaces. The contractor shall report to the Owner's Construction Representative all conditions which prevent proper execution of his work.

- C. The exact location of all existing utilities, structures and underground utilities, which may not be indicated on the drawings, shall be determined by the Contractor and he shall conduct his work so as to prevent interruption of service or damage to them. The Contractor shall protect existing structures and utility services and be responsible for their replacement if damaged by him.
  - D. The Contractor shall verify the correctness of all finish grades within the work area to insure the proper soil coverage of the irrigation system pipes.
6. Materials Storage and Clean-Up
- A. The Contractor shall keep the premises free from rubbish and all debris at all times and shall arrange his material storage so as not to interfere with the operation of the project. All unused materials, rubbish and debris shall be removed from the site.
7. Completion and Acceptance
- A. The completion of the contract will be accepted and Notice of Completion recorded only when the entire contract is completed to the satisfaction of the Owner's Construction Representation.
  - B. Within ten (10) days of the Contractor's notification that the installation is complete, the Owner's Construction Representative will inspect the installation and, if final acceptance is not given, will prepare a "punch list."
  - C. Final Acceptance -- Work under this Section will be accepted by the Owner's Construction Representative upon satisfactory completion of all work including "punch list" items.
8. Warranty
- A. The entire irrigation system shall be unconditionally guaranteed by the contractor as to material and workmanship, including settling of backfilled areas below grade for the following periods:
    - 1) One year guarantee on parts and labor, underground piping and fittings.
    - 2) Two year guarantee on sprinkler heads against rotary failure
  - B. It shall be the Irrigation Contractor's responsibility to insure complete coverage as specified herein of the areas to be irrigated. During the warranty period the Irrigation Contractor shall make any adjustments as necessary to maintain proper coverage.
  - C. If, within one (1) year from the date of completion, settlement occurs, and adjustments in pipes, valves and sprinkler heads, lawn areas or paving are necessary to bring the system, grade or paving to the proper level of permanent grades, the Contractor, as part of the work under his Contract, shall make all adjustments without extra cost to the Owner, including the restoration of all damaged planting, paving or other improvements of any kind.
  - D. Should any operational difficulties in connection with the irrigation system develop within the specified guarantee period, which in the opinion of the

- Owner may be due to inferior material and/or workmanship, corrections shall be undertaken within 48 hours of notice to Contractor. Corrections shall be to the satisfaction of the Tenant at no additional cost to the Owner, including any and all other damages caused by such defects.
- E. If the Contractor fails to make repairs, the owner will make the repairs at the expense of the Contractor.
9. Operation and Maintenance – Irrigation System
- A. The entire irrigation system shall be under fully automatic operation for a period of three (3) days prior to any planting.
- B. Operation of the irrigation system shall be confined to hours as specified by ODU's Grounds Maintenance Supervisor.
- C. Important: It is the Landscape Contractor's responsibility to determine water application rates and timer cycling. The Irrigation Contractor will instruct the Landscape Contractor on the operation and programming of the controller and will assist the Landscape Contractor as necessary in such operations throughout the one (1) year maintenance period. Any adjustments, repairs, etc., other than programming are the total responsibility of the Irrigation Contractor.
- D. The Irrigation Contractor shall maintain the irrigation system for a period of not less than 30 days commencing from the time the installation is complete to the satisfaction of the Owner's Construction Representative.
- E. The Irrigation Contractor shall maintain the irrigation system at his expense until accepted by the Owner.

## IRRIGATION PART 2 - MATERIALS

1. All materials to be incorporated in this system shall be new and without flaws or defects and of quality and performance as specified and meeting the requirements of this system.
2. Water Supply
  - A. A tap from potable water system has been provided and installed for irrigation use.
3. Backflow Preventer
  - A. Backflow preventer shall be a reduced pressure model as manufactured by Febco, Wilkins, Zurn or Watts or approved equal. The backflow preventer may be installed in an interior mechanical room or designated exterior location. Exterior installations shall be protected from freezing. The backflow preventer shall be installed at least one foot higher than the highest sprinkler head or discharge, as required by local code.
4. Pipe
  - A. All piping shall be from virgin parent material. The pipe shall be homogeneous throughout and free from visible cracks, holes, foreign materials, blisters, deleterious wrinkles and dents. All pipe shall be National Sanitation Foundation (NSF) approved.
    - 1) Piping on pressure side of irrigation control valves:
      - a) Shall be Polyvinyl Chloride (PVC) 1120 with a minimum class rating of 200, sized to maintain a flow velocity of less than five (5) feet per second (FPS).
      - b) Type I, Grade I, Pressure Rated Pipe.
      - c) Materials shall meet the requirements set forth in ASTM D-1784-60T.
      - d) Outside diameter of pipe shall be the same size as iron pipe.
      - e) Pipe shall be marked at intervals (not to exceed 5 feet) with the following information: Manufacturer's name or trademark, nominal pipe size, schedule, PVC type and grade (i.e. PVC 1120), SDR rating class, working pressure at 73 degrees F, and (NSF) approval.
      - f) PVC Type I shall not be threaded.
      - g) Caution should be utilized in handling Type I pipe due to the possibility of cracking or splitting when dropped or handled improperly.
      - h) When connection is plastic to metal, male adapters shall be used. The male adapter shall be hand tightened, plus one turn with a strap wrench.
    - 2) Piping on non-pressure side of irrigation control valves shall meet the following requirements.

- a) Polyvinyl Chloride (PVC) 1120 with a minimum class rating of 200 psi, NFS approved, sized to maintain a flow velocity of less than five (5) feet per second (FPS).
- 3) Piping for Sleeving shall meet the following requirements.
  - a) High impact type pipe, polyvinyl chloride (PVC) 1120, minimum Schedule 40.
5. Solvent for PVC Pipe
  - A. Solvent for PVC pipe shall be #705 Gray NFS approved, or as recommended and documented by the pipe and fitting manufacturer.
6. Fittings
  - A. Fittings for solvent-weld PVC pipe.
    - 1) Schedule 40 or 80, polyvinyl chloride (PVC), Type I, to meet ASTM D2466-73 and D2467-73 NSF approved.
    - 2) Threaded PVC nipples shall be Schedule 80.
7. Gate Valves
  - A. Gate valves up to three (3) inch size; 125 pound bronze construction, non-rising stem type, sized to line.
8. Quick Coupling Valves
  - A. Valve and key shall be "Rainbird", #33RC, Toro #470, single lug brass with 1" inlet.
  - B. Furnish a 1" valve key and 1"x 3/4" swivel hose ells for each key.
  - C. All quick coupling valve keys and hose swivels shall be of the same manufacturer as the quick couplers.
9. Valve Boxes
  - A. Valve boxes to be injection-moulded of polyesters and fibrous inorganic temperature resistant components. Box and lid to be green, manufactured by Armor Access Boxes (formerly Ametek), Sheboygan, Wisconsin 800-882-6652 or Carson Industries, Inc. LaVerne, California (818) 332-6225.
    - 1) Remote control valve box shall be rectangular in shape and sized to provide adequate clearance to operate and service valve.
    - 2) Shut off Valve and Quick Coupler Valve boxes shall be round, approximately nine (9) inches inside diameter by ten (10) inches.
    - 3) Six (6) inch or seven (7) inch economy valve boxes are not acceptable.
10. Manual Drain Valve
  - A. Manual drain valve shall be manual angle valve and shall be installed as required to adequately drain the system.

#### 10. Sprinkler Head

- A. All sprinkler heads shall be pop up type heads. Acceptable manufacturers are
- 1) Toro, Riverside, California (714) 688-9221
  - 2) Rain Bird Sales, Inc. 970 W. Sierra Madre Avenue, Azusa, CA 91702, Phone (818) 963 - 9311 Fax (818) 812-3411
  - 3) Hunter, San Marcos, California San Marcos, California (760) 744 - 5240 . Fax (760)744-7461. Technical Service (800) 733 – 2823 www.hunterindustries.com.
- B. All rotors within turf areas shall have a minimum pop-up stroke of three (3) to four (4) inches, and all spray heads within turf shall have a pop-up height of four (4) inches. All rotors and spray heads within in planted areas to have a minimum pop-up height of twelve (12) inches.

#### 11. Spray Nozzles for Sprinkler Heads

- A. Spray nozzles for sprinkler heads, if required, shall be of the same manufacturer as the sprinkler head. Rotors and Spray heads to have interchangeable nozzles to allow for matched precipitation rates within a zone. Nozzles shall be pressure compensating to ensure efficient operation at various pressures.

#### 12. Automatic Controller

A fully automatic controller manufactured by Hydrompoint, Controller must be **Weather-Trak ET Pro2 Internet Management smart controllers.**

The WeatherTRAK ET Pro<sup>2</sup> Smart Water Manager Central with Internet-based management, reporting and remote control.

- A. [http://hydrompoint.com/pdfs/specs/WeatherTRAK\\_ET\\_plus\\_Tec\\_%20Sheet.pdf](http://hydrompoint.com/pdfs/specs/WeatherTRAK_ET_plus_Tec_%20Sheet.pdf)
- B. Installer must be Certified Landscape Auditor (CLIA), Intelli-Sense certified, must be a Water Sence partner, must posses a City of Norfolk Backflow Installation and Testing Certificate.

#### 13. Electric Conduit and Fittings

- A. Underground plastic conduit shall be Class III, FS W-C1094.

#### 14. Control Wire

- A. Wire shall be solid copper wire, U>L. Approved for direct burial in ground. Minimum gauge: #14 UF. (#12 UF for runs over 2,000 LF.) Common ground wire shall be white. Control wires shall be red. Spare wires shall be blue or a separate color.
- B. Spare wires: Furnish and install two spare conductors rom the controller to the most distant electric control valve on each mainline section. Loop the spares into each passed valve box and label as "SPARE" in each passed valve box.

**15. Splicing Materials**

- A. Splicing Materials shall be 3M Direct Bury (DBY) splice kits by 3M Corporation, Austin, Texas (512) 984-5657 or "Snip-Snap" connector by Imperial, Lenexa, Kansas (913) 469-5700.

**16. Remote Control Valves**

- A. Remote control valves shall be electric type valves, with optional pressure regulation. Acceptable models and manufacturers listed below:
  - 1) Rainbird
  - 2) Toro
  - 3) Hunter
  - 4) Irritrol

## IRRIGATION PART 3 - EXECUTION

### 1. General

- A. The Irrigation Contractor shall carefully schedule his work with the Landscape Contractor and all other site developments.
- B. Sleeves are required wherever piping or electrical wires are placed under paved surfaces. Install sleeves prior to commencement of paving. Install sleeving as required under all existing hardscape via boring. Sleeves may be installed by trenching where hardscape features are not in place.
- C. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to layout as required to achieve full coverage of irrigated areas at no additional cost to the Owner. Major changes will require review and acceptance in writing from the Owner's Representative.
- D. It shall be the Contractor's responsibility to establish the location of all sprinkler heads in order to assure proper coverage of all areas. In no case shall spacing of sprinkler heads exceed distances as recommended by the manufacturer. All pipe damaged or rejected because of defects shall be removed from the site at the time of said rejection.
- E. Install irrigation system after completion of site grading. The irrigation system shall be installed and completely operational three days prior to the installation of any planting operations.
- F. Examine the site for the conditions under which the work is to be performed. Communicate the existence of any unsatisfactory site conditions to the Owner's Representative prior to the commencement of installation. Start of installation means contractor accepts existing site conditions.
- G. Contractor's on-site field supervisor must have thorough knowledge of the irrigation design. Owner's representative must have a means of communication with field supervisor through pager or mobile phone for emergency purposes.
- H. Protect all hardscape and planted areas from damage due to system installation. Preserve all existing tree roots over 1.5" by avoiding trenching route through drip line of existing trees, or hand trenching these areas.

### 2. Trenching

- A. Perform all excavations as required for installation of work included under this Section, including shoring of earth banks, if necessary. Restore all surfaces, existing underground installation, etc., damaged or cut as a result of the excavations, to their original condition.
- B. Locate and mark all underground utilities. These may include, but are not limited to gas, water, cable television, telecommunication and electric lines. Any damage to underground utilities caused by the contractor shall be repaired at the contractor's expense.

- C. Trenches shall be open, vertical sided construction, wide enough to provide free working space around work installed and to provide ample space for backfilling and compacting.
  - D. When two (2) pipes are to be placed in the same trench, a two (2) inch space is to be maintained between the pipes. The Contractor shall not install two pipes with one directly above the other.
  - E. Trenches located under paving shall be backfilled with sand (a layer six (6) inches below the pipe and three (3) inches above the pipe) and compacted in layers of 95% compaction. Depth of trenches shall be 12 inches over all pipes.
  - F. The Contractor shall cut trenches for pipe to required grade lines and compact trench bottom to provide accurate grade and uniform bearing for the full length of the line.
  - G. All laterals and mainline shall be sufficiently sloped to provide positive drainage through drain valves.
  - H. The Contractor shall be held responsible for any damages caused by these operations and shall immediately repair or replace damaged parts.
3. Water Supply and Backflow Prevention Device
- A. Water supply from water well or potable system and backflow prevention device shall be installed per local requirements.
4. Pipe Line Assembly
- A. General
    - 1) Install pipes and fittings in accordance with manufacturers latest printed instructions.
    - 2) Clean all pipes and fittings of dirt, scales and moisture before assembly.
    - 3) All pipe, fittings and valves, etc., shall be carefully placed in the trenches. Interior of pipes shall be kept free from dirt and debris and when pipe laying is not in progress, open ends of pipe shall be closed by approved means.
    - 4) All lateral connections to the main line as well as all other connections shall be made to the side of the main line pipe. No connections to the top of the line shall be allowed.
  - B. Solvent-Weld Joints for PVC Pipes
    - 1) Use solvents and methods recommended by pipe and solvent manufacturers.
    - 2) Cure joint a minimum of one hour before applying any external stress on the piping and at least twenty four (24) hours before placing the joint under water pressure, unless otherwise specified by manufacturer.
  - C. Threaded Joints for PVC Pipes
    - 1) Use Teflon tape on all threaded PVC fittings.
    - 2) Use strap-type friction wrench only. Do not use metal-jawed wrench.

- 3) When connection is plastic to metal, male adapters shall be used. The male adapter shall be hand tightened, plus one turn with a strap wrench.
- D. Laying of Pipe
- 1) Pipes shall be bedded in at least two (2) inches of finely divided material with no rocks or clods over one (1) inch diameter to provide a uniform bearing.
  - 2) Pipe shall be snaked from side to side of trench bottom to allow for expansion and contraction. One (1) additional foot per 100 feet of pipe is the minimum allowance for snaking.
  - 3) Do not lay PVC pipe when there is water in the trench.
  - 4) Plastic pipe shall be cut with PVC pipe cutters or hacksaw, or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.
  - 5) All plastic to plastic joints will be solvent-weld joints or slip seal joints. All plastic pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.
- E. PVC Sleeves and Electrical Conduit
- 1) All PVC sleeves shall be minimum of twice (2X) the diameter of the pipe to be sleeved.
  - 2) All PVC control wire conduit shall be of sufficient size to hold the required quantity of control and common wires. Electrical wires are not to be placed in the same sleeve with water pipes.
  - 3) Sleeves shall be placed under all walks, drives and other hard surface paving and shall be provided for water lines and wiring. Electrical conduit is not required for wiring under lawns and planting beds.
- F. Thrust Blocks.
- 1) For Mainlines 2.5" and larger. concrete thrust blocks must be provided on the thrust side of the mainline pipe wherever the pipe line:
    - a) Changes direction, as at tees or bends.
    - b) Dead ends.
    - c) Any other spot where thrust is to be expected.
5. Shuff Off Valves
- A. Shut off valves shall be located in the following locations:
- 1) After backflow preventer and prior to main supply loop.
  - 2) Place shut off valves within planting and lawn areas, in valve boxes.
6. Irrigation Control Valves

- A. Install control valves in valve boxes grouping together where practical. Place no closer than twelve (12) inches to walk edges, buildings and walls.
  - B. Pressure regulating remote control valves shall be adjusted so that the most remote sprinkler heads operate at the pressure specified.
  - C. Valves shall be installed as shown in details and in accordance with manufacturer's instructions and the specifications.
7. Quick Coupling Valves
- A. Quick coupling valves shall be set a minimum of twelve (12) inches from walks, curbs, or paved areas where applicable or otherwise noted. Quick coupling valves shall be housed in valve boxes.
  - B. Valves shall be installed on a three (3) elbow PVC Schedule 80 swing joint assembly as detailed on the drawings.
8. Valve Boxes
- A. Valve boxes shall be set flush with finish grade in lawn areas and one half (1/2) inch above finish grade in ground cover and shrub bed areas.
9. Sprinkler Heads
- A. All sprinkler heads within a zone shall have matched precipitation rates.
  - B. All heads operating on one valve (zone) shall do so at the same pressure.
  - C. All heads shall be pop-up type heads. Permanent shrub risers are not permitted.
  - D. Do not mix different type heads within a zone.
  - E. Shrub beds and lawn areas are to be on separate valves (zones).
  - F. Place part circle pop up sprinkler heads six (6) inches from edge of adjacent walks, curbs and mowing bands, or paved areas at time of installation.
  - G. All sprinkler nozzles shall be adjusted for the proper radius and direction of spray pattern. Make adjustments where possible to prevent over-spraying onto walks, pavement or buildings.
  - H. Sprinkler heads and quick coupling valves shall be set perpendicular to finished grade.
  - I. Sprinkler heads shall be installed according to recommendations of the manufacturer.
10. Drain Valves
- A. All laterals shall be provided with manual drain valves to be installed as required to completely drain the system.
  - B. The main line shall be drained with manual drain valves to be installed as required to completely drain the system.
  - C. Drain valves are to be provided at sufficient intervals to provide complete drainage of all piping.

11. Automatic Controller

- A. The automatic controller shall be installed at the approximate location shown on the plan. Controller shall be wall mounted in a locking box. Suitable power supply will be supplied by other trades to electrical panel in equipment room. Irrigation contractor shall be responsible for electrical supply from panel to controllers and system.
- B. All local and other applicable codes shall take precedence in connecting the 110 volt electrical service to the controller.
- C. Install per local code, manufacturer's latest printed instructions, and as detailed.
- D. Connect remote control valves to controller in sequence to correspond with station setting beginning with Stations 1, 2, 3, etc.
- E. Affix controller name (i.e. "Controller A") on inside of controller cabinet door with letters minimum of one (1) inch high. Affix a non-fading copy of irrigation diagram to cabinet door below controller name. Irrigation diagram to be sealed between two (2) sheets of 20 mil (minimum) plastic. Irrigation diagram shall be reduced copy of the "As Built" drawing and shall show clearly all valves operated by the Controller, showing station number, valve size and type of planting irrigated.

## 12. Control Wiring

- A. All electric equipment and wiring shall comply with local and state codes and be installed by those skilled and licensed in the trade.
- B. Wiring shall occupy the same trench and shall be installed along the same route as pressure supply or lateral lines wherever possible, and shall have a minimum of eighteen (18) inch cover.
- C. Control wires shall be installed to the side of the main line whenever possible. Placement over pipes is not permitted.
- D. Where more than one (1) wire is placed in a trench, the wiring shall be taped together at intervals of ten (10) feet.
- E. An expansion curl shall be provided within three (3) feet of each wire connection and at least every one hundred (100) feet of wire length on runs of more than one hundred (100) feet in length. Expansion curls shall be formed by wrapping at least five (5) turns of wire around a one (1) inch diameter pipe, then withdrawing pipe.
- F. Control wire splices at remote control valves to be crimped and sealed with specified splicing materials. Line splices will be allowed only on runs of more than five hundred (500) feet and they must be located in ten (10) inch round splice boxes which are green in color. The connector shall be 3 MD BY splice kit by 3M Corporation, or "Snip-Snap" connector by Imperial. Use one (1) splice per connector sealing packs.

## 13. Closing of Pipe and Flushing of Lines

- A. All testing shall be done under the supervision of the Owner's Construction Representative. Submit written requests for inspections to the Owner's Construction Representative at least three (3) days prior to anticipated inspection date.

- 1) Thoroughly flush out all water lines under a full head of water before installing heads, valves, quick coupler assemblies, etc. Maintain flushing for a minimum of three (3) minutes at the valve located furthest from water supply.
- 2) After flushing, cap or plug all openings to prevent entrance of materials that would obstruct the pipe or clog heads. Leave in place until removal is necessary for completion of installation.
- 3) Test as specified below.
- 4) Upon completion of testing, complete assembly and adjust sprinkler heads for proper distribution. All sprinkler heads and quick coupling valves shall be set perpendicular to finished grades. Sprinkler heads adjacent to existing walls, curbs and other paved areas, shall be set to grade. Sprinkler heads which are to be installed in lawn areas where the turf has not yet been established shall be set one (1) inch above the proposed finish grade. Heads installed in this manner will be lowered to grade when the turf is sufficiently established to allow walking on it without appreciable destruction. Such lowering of heads shall be done by this Contractor as part of the original contract with no additional cost to the Owner.

#### 14. Testing

- A. Make hydrostatic test showing welded PVC joints have cured as per manufacturer's instructions.
  1. Pressurized Mains
    - a) Completely install mains, isolation valves and control valves. Do not install laterals.
    - b) Open all isolation valves.
    - c) Fill all lines with water and shut off at meter.
    - d) Pressurize the main with air or water to 70 psi. Monitor gauge for pressure loss for four (4) hours.
    - e) Leave lines and fittings exposed throughout testing period.
    - f) Leaks resulting from tests shall be repaired and test repeated until the system passes.
    - g) Test all isolation valves for leakage.
  - 2) Non Pressure Laterals
    - a) Test piping, as above, after laterals and risers are installed and system is fully operational. Leave trenches open to detect possible leaks.

#### 15. Inspection

- A. The Contractor shall maintain proper facilities and provide safe access for inspection to all parts of the work.
- B. Irrigation inspection shall consist of a minimum of:
  1. Main line pressure test

2. Coverage test
  3. Final irrigation inspection
- C. The Contractor shall give the Owner's Representative two (2) days notice of its readiness for inspection.
  - D. The Contractor shall be solely responsible for notifying Owner's Construction Representative where and when such work is in readiness for testing.
  - E. If any work should be covered up without approval of the Owner's Construction Representative, it must be uncovered, if required, for examination at Contractor's expense.
  - F. No inspection will commence without "Record" drawings and without completing previously noted corrections, or without preparing the system for inspection.
16. Backfill and Compacting
- A. After system is operating and required tests and inspections have been made, backfill excavations and trenches.
  - B. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to minimum 95 percent density under pavements 85 percent under planted areas.
  - C. Backfill material shall be approved soil. Unsuitable material, including clods and rocks over two (2) inches in size shall be removed from the site.
  - D. A fine granular material shall be placed initially on all lines, with a minimum of three (3) inches cover. No foreign matter larger than one half (1/2) inch in size shall be permitted in the initial backfill.
  - E. Trenches located under paving shall be backfilled with sand (a layer six (6) inches below the pipe and three (3) inches above the pipe) and compacted in layers of 95 percent compaction.
  - F. Compact trenches in areas to be planted, by thoroughly flooding the backfill.
  - G. Within all planting and lawn areas the existing four (4) inch layer of topsoil shall be restored to its original condition and finish grade.
  - H. The Contractor shall dispose of surplus earth remaining after backfilling offsite.