

SECTION A - CONTINUATION OF SF 1449 BLOCKS**A.1 PRICE SCHEDULE OF SERVICES: BLOCK 19 AND BLOCK 20**

<u>Base Year:</u> Date of award through 90 Days					
CLIN No.	<u>Description:</u> <u>Grounds Maintenance Services</u>	<u>Est. Qty</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Est. Total Cost</u>
001	Realign, raise/lower, level, and backfill upright marble headstones in Section H.	600	EA		
002	Clean upright marble headstones in Section H.	600	EA		
003	Level topsoil surface, renovate and re-establish turf grass stand in Section H.	70,300	SF		
			Total Estimated Cost:		

B.3 PRE-PROPOSAL CONFERENCE / SITE VISIT

A Pre-Proposal Conference and Site Visit will be held at Fort Lyon National Cemetery, 15700 County Road HH, Las Animas, CO 81054.

- a. Pre-Proposal Site Visit will be held at the Cemetery on Wednesday, March 13th, 2013 at 12:00 pm Mountain Time (MT).
- b. Offerors are encouraged to notify the Contracting Officer of their plan to attend. Notification should include: Company Name, Address, Names of Attendees, and Phone No. Attendance Notification should be received by the Contracting Officer via e-mail derek.reed@va.gov or by Fax 303-914-5705 no later than [REDACTED] at [REDACTED] CST.
- c. Questions regarding the solicitation should be submitted via e-mail to the Contracting Officer two days prior to site visit so that the Government may have adequate time to prepare responses for discussion during the Pre-Proposal Conference.
- d. If you plan to conduct a site visit / inspection of the Fort Lyon National Cemetery other than on the day stated above, YOU MUST CONTACT one of the following personnel to make arrangements:

Joseph Turnbach, Cemetery Director,	
Fort Logan and Fort Lyon National Cemeteries	(303) 761-0117
Fernando Vasquez, Contracting Officer's Representative,	
Fort Logan and Fort Lyon National Cemeteries	(303) 761-0117
Facsimile #	(303) 781-9378

B.7 STATEMENT OF WORK

A. SCOPE:

The Contractor shall furnish labor, supervision, quality control, transportation, parts, materials, equipment, supplies, necessary or incidental to raise, lower, realign, level, reset, backfill, clean cemetery upright headstones and turf renovation services at the Fort Lyon National Cemetery, Fort Lyon, CO, and hereafter referred to as “Fort Lyon National Cemetery” or “Cemetery” as required by Section A1, “PRICE SCHEDULE OF SERVICES.”

- i. All contract work shall be completed as required under the terms of this contract in each Burial Section as defined in the Work Statement (designated on the contract drawings and provided to the Contractor by the Contracting Officer and/or COR) **AND** accepted by the COR **PRIOR** to any work beginning in the **NEXT** Burial Section, unless otherwise approved by the Contracting Officer/COR.

B. THE NATIONAL CEMETERY ADMINISTRATION MISSION:

The National Cemetery Administration honors veterans with a final resting place and lasting memorial that commemorate their service to our Nation. National Cemeteries are National Shrines. Therefore, the standards for management, maintenance, appearance and operational procedures performed by the Contractor have been established by the National Cemetery Administration to reflect this Nations’ concern and respect for those interred there. For this reason, the Contractor’s strict adherence to the Performance Work Statement, Performance Work Requirements Summary and Guidance Specifications shall be required and shall be essential.

C. BACKGROUND:

- i. In 1999 Congress passed legislation requiring VA to ensure that National Cemeteries serve as a dignified and respectful setting. Each Cemetery is to be an expression of appreciation and respect of a grateful Nation for the service and sacrifice of her veterans.
- ii. Further, each National Cemetery is to be maintained as a National Shrine. A National Shrine is defined as a place of honor and memory that declares to the visitor/family who views it as a majestic setting, offering a sense of serenity, historic sacrifice and nobility of purpose. The National Cemetery is a beautiful and awe-inspiring tribute to those who gave much to preserve our Nation’s freedom and way of life.

D. INTRODUCTION:

This contract for Fort Lyon National Cemetery is for upright headstone raise, lower, realignment, reset, backfill, and cleaning, and turfgrass renovation. The Fort Lyon National Cemetery is located at 15700 County Road HH, Las Animas, CO 81054.

E. STATEMENT OF BID ITEMS:

The Contractor shall furnish all personnel, supervision, professional expertise, vehicles, tools, materials, services, equipment and quality control necessary to raise, lower, realign, reset, backfill, and clean upright headstones and turfgrass removal and restoration at the Cemetery in a manner that will meet or exceed the requirements to present a clean, neat, professional, and aesthetic headstone appearance throughout the Cemetery in accordance with Contract Specifications. Services include, but are not limited to work consisting of extracting, resetting, aligning, backfilling, and compacting upright headstones that are already in place which have shifted out of vertical and/or horizontal alignment and plumb, as well as inventorying and assuring accurate placement on each gravesite, killing and removing existing turfgrass, rototilling the existing topsoil, adding or removing topsoil to establish a new finish grade, installing new turfgrass sod, and establishing new turfgrass sod, preservation of existing cemetery features (lawns, paving, roads, stones, and markers), restoration of cemetery features disturbed or removed as a result of performing new work, as well as, repairing, replacing, or reinstalling any damaged cemetery property, such that at the end of the day the condition is as good as before commencement of work. Scheduling of services shall be coordinated with the Contracting Officer's Representative (COR) to avoid disruption of ongoing cemetery operations. All work will be done during normal Federal workdays during cemetery workday hours. No work will be allowed during special weekend, or Federal Holiday, activities.

F. PROJECT REQUIREMENTS:

- i. The Contractor shall be responsible for full management of the facility's upright headstone raise and realignment and turf renovation services described herein. The Government's requirements are described in the National Cemetery Administration's (NCA's) "Operational Standards and Measures" http://vawww.nca.va.gov/business_imp/bus_stdmeasure.asp (provided by the Contracting Officer upon request), this Statement of Work (SOW), the Contract Specification (Attachment and other requirements identified herein, as they are applicable to the services required in the Pricing Schedule.
- ii. The Contractor shall be responsible for:
 - 1) Headstone Installation including Upright Headstone Setting, Raising, and Realignment in accordance with the contract requirements;
 - 2) Cleaning Upright Headstones;

- 3) Turfgrass Renovation;
 - 4) Layout of the work and for all measurements in connection with the layout;
 - 5) Utilizing existing burial section grid monumentation for all headstone row layout work;
 - 6) Executing the work to the lines and grades needed to accomplish the work and to ensure that headstones and flat markers are correctly and accurately located on their associated gravesites;
 - 7) Debris and trash removal;
 - 8) Maintaining a safe presentable working environment for Contractor, cemetery staff, and the general public.
 - 9) Preventing any disruption to the cemetery operations, including funerals, visitor privacy, internal traffic, and utilities;
 - 10) Preserving the environment and following applicable regulations;
 - 11) Preserving existing cemetery features (lawns, paving, roads, stones, and markers);
 - 12) Restoring cemetery features disturbed or removed as a result of performing new work;
 - 13) Ensuring all work conforms to the NCA's established National Standards; and
 - 14) Timely submission of required reports and documentation.
- iii. To ensure the accuracy of upright headstone and marker placement during raise and realignment (R&R) activities, the following procedures shall be followed by the Contractor, cemetery personnel and COR before the Raise and Realignment (R&R) process begins:
- 1) The Memorial Service Network (MSN) will provide each Cemetery with the correct Gravesite Layout Map(s) prior to beginning the R&R project. The COR or Cemetery Director/designee shall conduct an initial gravesite verification survey prior to the R&R of any headstone or marker in the Cemetery. The COR will obtain a copy of the Burial Register Report from the Burial Operation Support System (BOSS) and current gravesite layout map(s)

obtained from the MSN for the verification survey. The Burial Register Report and gravesite layout map(s) will be used to verify the section, row, grave number, first and last name of each decedent and the condition of the headstone/marker included in the Scope of Work. All inconsistencies will be researched, discussed and resolved with the MSN Director prior to the R&R of any headstone or marker. Upon completion of the verification survey and corrective actions as necessary, the COR shall certify the survey by signing the Headstone/Marker Raise & Realign Verification Survey sheet (see Attachment 4). A copy of the signed Headstone/Marker Raise & Realign Verification Survey sheet shall be forwarded to the Contracting Officer (CO) which will be incorporated into the contract files and provided to the Contractor prior to R&R; a copy of the survey will be maintained by the Cemetery. Additional copies of the survey will be retained by the COR for the official contract files. The CO will give the approval to begin R&R process.

- 2) The Contractor shall complete and submit DAILY, prior to the completion of each work day during which R&R activities take place, a Daily Headstone/Marker Raise & Realign Verification Survey for all headstones and markers raised & realigned (see Attachment 5). The COR/Cemetery Director/designee will verify the accuracy of the placement of headstones or markers on the correct gravesite using the same Burial Register Report and gravesite layout map(s) that were used for the initial headstone/marker verification survey. DAILY, the COR will inform the Contractor Supervisor of all identified inconsistencies and ensure corrective actions are completed that day. The Daily Headstone/Marker Raise & Realign Verification Survey will be maintained by the COR for certifying payments for completed work, tracking project progress and other administrative needs.
- 3) When site conditions are restrictive and it is not possible to safely operate equipment while keeping the headstones/markers on the gravesite, the Contractor shall prepare these sites by hand. At no time may headstones/markers be removed from the gravesites.
- 4) The Contractor is responsible to protect headstones and markers during the raise and realignment, and turf renovation process from damage or being discolored from contact with dirt, soil or other contaminants.
- 5) **HEADSTONES AND/OR MARKERS SHALL NOT BE PHYSICALLY REMOVED FROM THE GRAVESITE DURING THE RAISE AND REALIGNMENT OR TURF RENOVATION PROJECTS.**

G. CONTRACT OBJECTIVES:

- i. To complete the upright headstone raise and realignment and turf renovation project at the Fort Lyon National Cemetery, following the technical approach in this Statement of Work in order to maintain the high standards of appearance as a National Shrine, in accordance with best commercial practices and the requirements identified in the solicitation.
- ii. The performance period of the contract is planned for 90 days, dependent on the availability of funds.

H. STANDARDS OF EMPLOYEE CONDUCT:

Contractor personnel shall be required to adhere to the following standards of dress and conduct, as briefly mentioned here, while performing work in the National Cemetery. These standards and regulations are enforceable under Title 38, U.S.C., Part I, Chapter 9, Section 5901.

- i. Clothing shall be presentable and suitable to the work while maintaining proper appearance and decorum indicative for a National Shrine. Uniform shirts and hats are preferred. Clothing shall be clean and cleanliness and personal hygiene are imperative. T-shirts and/or tank tops as outer garments are prohibited. Protective/safety clothing and shoes shall meet or exceed OSHA and state requirements.
- ii. Behavior and language must be appropriate, reverent, and respectful at all times.
- iii. Eating and drinking (except water) is prohibited in the work areas and within sight of a committal shelter during a service.
- iv. Use of intoxicating beverages, any tobacco products, and illegal drugs on the Cemetery premises is strictly prohibited.
- v. Contractor personnel shall not lean, sit, or stand on or against headstones or monuments. No tools, equipment or other items will be placed or leaned on headstones or monuments.

I. PARKING AND VA REGULATIONS:

Contractor employees may park privately owned vehicles in the area designated for parking by the COR. It is the responsibility of the Contractor to ensure his employees park in the appropriate designated parking areas. The Cemetery will not validate or make reimbursement for parking violations of the Contractor's employees under any conditions. Smoking is prohibited inside any buildings at the Cemetery. Possession of weapons is prohibited. Enclosed containers, including tool kits, shall be subject to search. Violations of

VA regulations may result in citation/summons answerable in the United States (Federal) District Court, or other appropriate jurisdiction/agency.

J. USE OF CEMETERY FACILITIES:

- i. The Government shall not be responsible for any loss, damage, or theft of Contractor items. Contractor shall be responsible for acceptable standards of housekeeping and custodial maintenance of cemetery facilities used by Contractor's employees.
- ii. The Government will not furnish a storage building at the Cemetery site for use by the Contractor to store supplies and equipment. However, the Government will provide an area designated for the Contractor's use. The Contractor can establish facilities to include but not limited to office site, covered storage, portable toilet facilities etc. on or in the designated area after such facilities are approved by the COR and Contracting Officer (CO). All utilities to this area are the responsibility of the Contractor. The Government will not be responsible for any damage to or loss of the Contractor's equipment and supplies stored on the Government's premises. The Contractor shall be responsible for maintaining fire extinguishers and other safety equipment.
- iii. The Contractor will be responsible for safely storing any chemicals, pesticides, herbicides, cleaning solutions, etc. in accordance with manufacturers recommendations. An MSDS (Material Safety Data Sheet) is required for all chemicals, pesticides, herbicides and cleaning solutions.
- iv. Electricity and phone service will NOT be furnished by the Government for the Contractor's work area. (Utilities are addressed in the Specifications, paragraph XII)

K. SUPERVISION AND TRAINING:

- i. The Contractor shall provide a supervisor who speaks and writes fluent English on site, and at all times when Contractor personnel are on the premises.
- ii. The Contractor shall be responsible for maintaining satisfactory standards of personnel conduct and work performance and shall administer disciplinary action as required. The Contractor is expected to remove any employees from the Cemetery for cause, to include, but not limited to, safety violations, other misconduct in performance of duty under these specifications and/or conduct contrary to the best interests of the Government. If the Contractor fails to act in this regard, or the reason for a removal is immediately required to protect the interests of the Government, the COR may direct the removal of an employee from the premises. Contractor objections to any such action will be referred to the Contracting Officer (CO) for final resolution; however, the Contractor will first immediately comply with COR direction pending any CO final resolution at a

later time or date. The Contractor will not be due any type of compensation for their costs incurred as a result of an employee being removed for cause; unless the removal is directed by the COR, and is later found invalid and/or unreasonable by the Contracting Officer.

- iii. The Contractor shall also be responsible for training and safety precautions for Contractor employees performing work under these specifications. OSHA standards shall be observed by the Contractor in all work performed. Contractor shall ensure that appropriate safety equipment is used by Contractor personnel and shall be used as prescribed by OSHA standards, including hard hats, safety shoes, safety glasses, and hearing protection devices. The following OSHA and NFPA standards and codes are to be adhered to:
 - 1) National Fire Protection Association (NFPA): 10-1998 Standard for Portable Fire Extinguishers
 - 2) Occupational Safety and Health Administration (OSHA) 29 CFR 1910 Safety and Health Regulations for Personal Protection, Safety Color Codes, Portable Power Tools, Electrical Safety and Portable Electric Equipment.
 - 3) Site and Building Access: Maintain free and unobstructed access to facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.

L. INSPECTION AND CLEANING OF CEMETERY FACILITIES:

- i. The Contractor will perform a weekly inspection. During this inspection the appearance of the Cemetery will be observed, and any deficiencies from the contract will be noted. Deficiencies shall be corrected as soon as practicable. Items that need correcting outside the scope of the contract will be reported to the COR or his/her representative.
- ii. The Contractor will be required to submit inspection reports and work accomplished to the COR weekly. The COR is located at Fort Logan National Cemetery. The inspection forms will be provided to the Contractor. (See “Work Summary and Progress Report”, Attachment 2).

M. INSTALLATION DURING CEMETERY FUNCTIONS:

Contractor personnel shall not operate motorized equipment or conduct other commercial activities within the designated area during interment services. The COR will identify the designated area. The COR or his/her representative shall furnish the Contractor with a schedule of all interments and/or ceremonies no later than the close of business of the day prior to the scheduled interment, and a minimum of three (3) days before any ceremonial events.

N. PERFORMANCE EVALUATION MEETING:

- i. The issuance of a Contract Discrepancy Report (CDR), found at Attachment 3, may be cause for the scheduling of a meeting among the Contractor, Contracting Officer, and the COR. A mutual effort will be made to resolve all problems identified. The Government will prepare written minutes of the meeting. The Contractor, Contracting Officer, and the COR will sign minutes of the meeting(s).
- ii. Should the Contractor not concur with the minutes, they will so state their objections in writing to the Contracting Officer, within ten calendar days, and also explain the reasons for non-concurrence. The Contracting Officer will review and consider the reasons submitted for the Contractor's non-concurrence and make a decision to revise or uphold the comments as written. The Contracting Officer will notify the Contractor of the decision in writing within ten calendar days of submission of any objections.

O. CONTRACTOR'S QUALITY CONTROL PLAN (QCP):

The Contractor shall establish and maintain a complete QCP to assure the requirements of this contract are provided as specified. This QCP will be forwarded to the Contracting Officer along with the requested initial proposal and may be revised as necessary during the life of the contract, with concurrence of the COR and Contracting Officer. The Contracting Officer will review the QCP and list any needed clarifications, and return to Contractor for response, if necessary. The Contractor's QCP shall include the following or have incorporated into during performance of contract, at a minimum:

- i. An inspection plan covering all services required by this contract. The inspection plan must specify the areas to be inspected on either a scheduled or unscheduled basis, how often inspections will be accomplished and documented, and the title of the individual(s) who will perform the inspections.
- ii. On-site records of all inspections conducted by the Contractor noting necessary corrective action taken. The Government reserves the right to request copies of any and/or each inspection.
- iii. Incorporation of either active or established internal policy and procedures for updating equipment and procedures that may affect performance of contract.
- iv. The methods for identifying and preventing deficiencies in the quality of service performed, before the level of performance becomes unacceptable; and the organizational functions, intermediate supervisory responsibilities, and overall management responsibilities for ensuring total acceptable performance.
- v. On-site records identifying the character, physical capabilities, certifications and ongoing training of each employee performing services under this contract.

- vi. A log to account for all requests for immediate service. The log shall indicate the date and time of services, and description of results and completion of these services.
- vii. On-site records of any complaints or problems, with procedures taken to allow for corrections and/or elimination before effects caused interruption of performance of contract.

P. QUALITY ASSURANCE:

- i. The COR will evaluate the Contractor's performance. The COR will evaluate the Contractor's performance through on-site inspections, evaluation of the Contractor's quality control program and receipt of complaints from cemetery personnel.
- ii. The COR may inspect each task as completed or increase the number of quality control inspections if called for by repeated failures discovered during inspections or repeated customer complaints. Likewise, the COR may decrease the number of quality control inspections if performance dictates.
- iii. The COR will also receive and investigate complaints from various customers visiting the Cemetery. The Contractor shall be responsible for initialing validated visitor complaints. The COR shall make final determination of the validity of visitor complaint(s).

Q. ACTIONS:

- i. Normally, the COR will verbally advise or give a written inspection report to the Contractor of discrepancies the first time they occur and ask the Contractor to correct the problem. A notation will be made on the COR checklist of the date and the time the deficiency was discovered and the date and time the Contractor was notified.
- ii. If the Government created any of the discrepancies, these will not be counted against the Contractor's performance. When the Government has caused the Contractor to perform in an unsatisfactory manner, the COR will forward a written notice to the responsible organizational element requesting corrective action be taken.
- iii. When the Contractor is not meeting the acceptable limits of satisfactory performance, a CDR will be issued to the Contractor. The seriousness of the failures should govern whether to issue CDR at the end of the period, or as soon as the limits of satisfactory performance are exceeded.

- iv. When a CDR is issued for a service, the Contracting Officer and/or the COR may exercise any contractual remedy available for non-performance, in accordance with FAR 52.212-4, "Inspection and Acceptance".
- v. If the Contractor does not achieve satisfactory performance by the end of the next period or agreed suspense date, further actions may be considered, to include a determination on whether continued performance by the contractor is feasible.

R. HISTORIC PRESERVATION:

When the Contractor or any of the Contractor's employees, prior to, or during the service work, are advised of or discover any possible archeological, historical and/or cultural resources, the Contractor shall immediately notify the COR verbally, and then with a written follow up.

B.8 GENERAL CONDITIONS

A. WORK ENVIRONMENT AND WEATHER CONDITIONS

- i. All work under this service Contract will be performed primarily out-of-doors and personnel performing these services will be exposed to wind, heat, sun, cold, dampness, frost, fog and rain. These conditions, may, at times, be extreme. The Contractor shall take all necessary precautions to protect his/her employees from the elements to the maximum practicable extent. Weather will not be considered an excusable delay in meeting specifications or project schedule. The Contractor understands that it may be necessary to work throughout all weather conditions and to apply additional labor and equipment as necessary to meet deadlines, at no additional cost to the Government. If weather conditions are such the work performed on that day may cause more damage to the Cemetery grounds than good, the COR has the authority to stop work until conditions improve and the COR directs continuation of performance.
- ii. Due to the sensitive mission of the Cemetery, the work could occasionally involve contact with and/or exposure to grieving individuals. Contractor personnel shall exercise and Exhibit absolute decorum, composure and stability at all times and refer such individuals to cemetery staff.

B. SAFETY AND ENVIRONMENTAL PROTECTION

- i. The Contractor shall be responsible to ensure all work shall be done in a manner that safeguards all VA visitors, employees, and public. The Contractor shall be solely responsible for any and all actions initiated and/or completed by his/her employees. Furthermore, the Contractor and his/her employees shall have a clear understanding of, and be sensitive to, such environmental issues as ground water contamination, wetlands, etc., and be consistent and fully compliant with all applicable Federal, State, County and City laws, ordinances, Right-to-Know laws, EPA guidelines, and regulations.
- ii. Matters related to safety, and any actions of the Contractor shall meet all safety requirements, Department of Veterans Affairs, OSHA, and the State. It is incumbent upon the Contractor to be familiar with these requirements.
- iii. Adequate warning devices, barricades, guards, flagmen or other necessary precautions shall be provided by the Contractor at all work sites to eliminate hazards and for the protection, safety, and warning of all public visitors, pedestrians, cemetery employees, and vehicular traffic within the area. All open and unattended holes in the ground must be covered with plywood and/or barricaded for pedestrian safety.
- iv. Spill Prevention, Containment, and Clean-up: The Contractor shall contain, clean up, and report all spills on Government property in a manner that complies with

all applicable Federal, State, and Local laws and regulations or otherwise stated herein, and the installation spill control plan at no cost to the Government.

- v. Dust Control: Keep dust down at all times, including during nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming.

C. FIRE SAFETY

- i. Applicable Publications: Publications listed below form part of this Article to extent referenced. Publications are referenced in text by basic designations only.
 - 1. National Fire Protection Association (NFPA):
 - a) Standard for Portable Fire Extinguishers
 - b) Flammable and Combustible Liquids Code
 - 2. Occupational Safety and Health Administration (OSHA)
 - a) 29 CFR 1926, Safety and Health Regulations for Construction
- ii. Fire Safety Plan: Establish and maintain a fire protection program in accordance with 29 CFR 1926.
- iii. Means of Egress: Do not block exits for occupied buildings, including paths from exits to roads. Site and Building Access: Maintain free and unobstructed access to facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.
- iv. Situate temporary facilities, such as trailers, storage sheds, and dumpsters, away from existing buildings and new construction by distances in accordance with NFPA 241. For small facilities with less than 6 m (20 feet) exposing overall length, separate by 3m (10 feet).
- v. Fire Extinguishers: Provide and maintain extinguishers in construction areas and temporary storage areas in accordance with 29 CFR 1926, NFPA 241 and NFPA 10.
- vi. Flammable and Combustible Liquids: Store, dispense and use liquids in accordance with 29 CFR 1926, NFPA 241 and NFPA 30.
- vii. Smoking: Smoking is prohibited except in designated smoking rest areas approved by the COR.

D. OPERATIONS AND STORAGE AREAS

- i. Working space and space available for storing materials will only be available at the approval of the COR or Contracting Officer. If approved, the location is to be

where approved by the COR or where shown on drawings as the “Contractor Staging Area”. It is understood the VA will not be held responsible for any damage to the Contractor’s equipment, materials, supplies or the like which may result from vandalism, theft etc. while on site. Contractor shall base operations out of this staging area, using it for materials and equipment storage, administration, employee toilets, trash dumpster area, employee parking, employee lunch/break area, etc.

- ii. “Contractor Staging Area” fencing: Before work operations begin, Contractor shall provide a chain link fence, six (6) feet minimum height, around the “Contractor Staging Area”. Provide gates as required for access with necessary hardware, including hasps and padlocks. Fasten fence fabric to terminal posts with tension bands and to line posts and top and bottom rails with tie wires spaced at maximum 15 inches. Bottom of fences shall extend to one inch above grade. After completion of project work, Contractor shall remove fencing and restore area back to original condition.
- iii. “Contractor Staging Area” facilities: Temporary buildings (e.g., storage sheds, shops, offices) may be erected by the Contractor within the approved “Contractor Staging Area” with the approval of the COR or Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work.
- iv. The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the COR or Contracting Officer. Do not store materials and equipment in other than approved areas. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.
- v. The Contractor shall, under regulations prescribed by the Contracting Officer or COR, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the COR or Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.
- vi. Execute work in such a manner as to interfere as little as possible with work being done by others. To minimize contract activity interference with flow of cemetery traffic, keep roads, walks and entrances to grounds, parking and occupied areas of buildings clear of materials, debris and standing equipment/vehicles at all times. At least one lane must be open to traffic at all times.

- vii. Coordination of work with COR or authorized designee: The burial activities at a National Cemetery will take precedence over contract activities. The Contractor shall cooperate and coordinate with the COR or authorized designee, in arranging schedule to cause the least possible interference with cemetery activities in actual burial areas. Work noise during the interment services shall not disturb the service. Trucks and workmen shall not pass through the service area during this period.

E. TEMPORARY TOILETS

The contractor shall provide portable chemical toilets for use by workmen as necessary to comply with applicable OSHA requirements. These portable toilet facilities shall be kept clean and free of excessive odors, insects, etc. Locate portable toilet facilities in the COR approved "Contractor Staging Area" only. It will not be permissible to locate portable toilet facilities in any other locations throughout the Cemetery. Use of the permanent cemetery toilet facilities by workmen is strictly prohibited throughout the duration of this contract. All connections and appliances connected therewith shall be removed prior to completion of contract, and premises left perfectly clean.

F. DISPOSAL AND RETENTION

- i. Contractors shall be responsible for cleaning cemetery structures, headstones/flat makers, monuments, and roadways that are soiled or stained as a result of Contractor's performance. The Contractor shall wash-down with water all soiled or stained structures headstones/flat markers, and monuments at the end of each workday. Roadways shall be cleaned with a street sweeper each day as needed to keep the existing roads free from dirt and mud resulting from Contractor operations. No hazardous chemicals are to be used at anytime on Government property with the exception of herbicide treatments. The Contractor shall bear all costs associated with washing and cleaning. Any such washing/cleaning shall be brought to the immediate attention of the COR prior to washing/cleaning.
- ii. At the end of each day the Contractor shall remove all debris from the Cemetery site resulting from the work. The Contractor shall ensure at all times that rubbish and trash generated by the Contractor is kept clear of vehicular and pedestrian traffic throughout the site.
- iii. The Government will not provide receptacle(s) for disposal of debris related to this contract. The Contractor shall provide his/her own REFUSE FACILITIES, and these shall only be located in the COR approved "Contractor Staging Area". Do not place dumpsters or refuse facilities in any other location at the Cemetery other than the approved "Contractor Staging Area". The contractor shall dispose of all debris and other waste materials generated by his/her work at a licensed off-site landfill unless otherwise directed by the COR.

- iv. The Contractor shall dispose of all hazardous waste in accordance with the Resource Conservation and Recovery Act (RCRA) and all other applicable Federal, State, and Local law and regulations. On-installation storage or disposal of hazardous waste is NOT allowed.

G. PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS

- i. Damage to Government property: The Contractor (including his or her employees, subcontractors, consultants or the like) shall be responsible for repair or replacement of any contractor damaged cemetery structure, to include: turf, curb, road pavement, headstones or markers, valve boxes, grid monument control markers, trees, plant beds, etc., which are chipped, marred, damaged and/or ruined at the fault of the Contractor. The Contractor shall bear all costs associated with replacement and reinstallation. Any such damage shall be brought to the immediate attention of the COR prior to repair, replacement, or installation.
- ii. The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site that are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so by the COR, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and remove and properly dispose of from the site as defined herein.
- iii. The Contractor shall protect from damage all existing improvements and utilities at or near the work site and on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall immediately notify the COR of any such occurrence and repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.
- iv. Protection of Existing Utilities: Contractor shall be responsible for damages to utilities, above and below ground.
- v. Refer to paragraphs, "Operations and Storage Areas", "Alterations", and "Restoration" for additional instructions concerning repair of damage to structures and site improvements.

H. RESTORATION

- i. Contractor shall remove, cut, alter, replace, patch and repair existing work as necessary. Except as otherwise shown or specified, do not disturb any water, steam, gas, or electric services without prior approval of the COR or Contracting Officer. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to the COR before it is disturbed. Materials and workmanship used in restoring work shall conform in type and quality to that of original construction, except as otherwise shown or specified.
- ii. Upon completion of Contract, Contractor shall deliver work complete and undamaged. Existing cemetery features (lawns, paving, roads, and walks) disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled, or replaced with new work, and refinished and left in as good condition as existed before commencing work. All restoration work shall be accomplished without undue delay.
- iii. At Contractor's own expense, Contractor shall immediately restore to service and repair any damage caused by Contractor's workmen/subcontractors to existing cemetery infrastructure.

I. USE OF ROADWAYS

For hauling, Contractor shall use only established public roads and roads on cemetery property and, when authorized by the COR, such temporary roads which are necessary in the performance of Contract work. Temporary roads shall be constructed by the Contractor at Contractor's expense. When necessary to cross curbing, sidewalks, or similar construction, they must be protected by well-constructed bridges.

J. AVAILABILITY AND USE OF UTILITY SERVICES

- i. **WATER:** Water will only be made available via Contractor connection to existing cemetery water system in existing locations where connection is available, and for purposes of this Contract only. The water system at Fort Lyon National Cemetery shall only be available for the Contractor's use from April 1st to November 1st. The Contractor at Contractor's expense and in a workmanlike manner satisfactory to the COR shall be responsible for installing and maintaining temporary connections to the cemetery water supply in accordance with regulations. Contractor shall not obstruct normal traffic flow on adjacent roads while water is being obtained. In locations where cemetery water system is not readily available, the Contractor shall provide and utilize portable water tanks and/or water trucks as necessary to transport water to areas where needed in order to complete the work required by this Contract.

- ii. **ELECTRICITY:** In case the Contractor requires electricity while in performance of this Contract, the Contractor shall provide and utilize portable generators as necessary to complete the work.

K. WORK PERFORMED BY OTHERS ON SITE

The Government may undertake or award other contracts for additional work at or near the site of work for this contract. The Contractor shall fully cooperate with any other contractors and with Government employees and shall carefully adapt scheduling and performance of work, and needing any direction, it shall be provided by the COR. The Contractor Supervisor shall be responsible for reporting to the COR any problems or questions that may arise with any other personnel on site during the period of performance of this contract. The Contractor Supervisor shall not take it upon him or herself to resolve any problems or issues with other on-site contractors or employees, but rather will leave it to the COR to resolve the issue.

L. REPORTING AND RECORD KEEPING

- i. The Contractor Supervisor shall report on a daily basis to the COR at the main office of the Cemetery and log in. This DAILY check-in is mandatory and shall be at a time agreed upon by the COR and the Contractor Supervisor within the requirements of paragraph “b” below.
- ii. The purpose of the DAILY meeting is to coordinate and establish the daily work schedule to ensure that no work is being performed at the immediate site of a scheduled interment or ceremony, and to submit the required written reports to the COR. These Daily meetings are for the Contractor Supervisor to ask questions and ensure he/she understands the off-limit areas, which may vary depending on the event. The Contractor Supervisor can thus assign tasks accordingly throughout the rest of the Cemetery so that productive use of labor and equipment is assured, and downtime is avoided. If the Contractor Supervisor fails to re-direct employees away from an event in a timely fashion, the COR may then assist in doing so.

The Contractor Supervisor or his designee shall provide the COR the following documentation:

- iii. The Contractor Supervisor shall provide WEEKLY and DAILY work schedules to the COR. The contractor is required to schedule all required services and is further required to comply with his schedule except for delays beyond his control. Such delays shall be coordinated through the COR. The work schedule shall include deficient work identified by contractor's quality control inspections and not yet corrected.
- iv. The Contractor shall submit the WEEKLY schedule every Friday by 3:00 P.M. indicating the work to be performed during the following week and the DAILY

schedule shall be submitted on a daily basis by 8:00 A.M. indicating work being performed on that day.

- v. The Contractor Supervisor shall provide weekly an accurate written report identifying all work that took place within the previous seven calendar days. The contractor shall document services performed, indicate the location where work was to be performed, and provide information to the COR as required.
- vi. A list of scheduled ceremonies will be provided to the Contractor Supervisor the week prior to the scheduled events, and a list of scheduled funerals will be provided daily. The Contractor Supervisor shall be solely responsible for ensuring that no contract work causes any funeral, ceremony, procession or visitation to be delayed, altered, or otherwise impacted in such a way that the dignity or security of the event is compromised. The Contractor shall be solely responsible for staying abreast of all such upcoming events and when in doubt, he/she must ask the COR.
- vii. The Memorial Service Network will provide each Cemetery with the correct Gravesite Layout Map(s) prior to beginning the raise and realignment (R&R) process. The COR or Cemetery Director/designee shall conduct an initial gravesite verification survey prior to the R&R of any headstone or marker in the Cemetery. The COR will obtain a copy of the Burial Register Report from the Burial Operation Support System (BOSS) and current gravesite layout map(s) obtained from the Memorial Service Network (MSN) for the verification survey. The Burial Register Report and gravesite layout map(s) will be used to verify the section, row, grave number, first and last name of each decedent and the condition of the headstone/marker included in the contract services. All inconsistencies will be researched, discussed and resolved with the MSN Director prior to the R&R of any headstone or marker. Upon completion of the verification survey and corrective actions as necessary, the COR shall certify the survey by signing the Headstone/Marker Raise & Realign Verification Survey sheet (see Attachment 4). A copy of the signed Headstone/Marker Raise & Realign Verification Survey sheet shall be forwarded to the Contracting Officer (CO) which will be incorporated into the contract files and provided to the Contractor prior to R&R; a copy of the survey will be maintained by the Cemetery. Additional copies of the survey will be retained by the COR for the official contract files. The CO will give the approval to begin the R&R process.
- viii. The Contractor shall complete and submit DAILY, prior to the completion of each work day during which R&R activities take place, a Daily Headstone/Marker Raise & Realign Verification Survey for all headstones and markers raised & realigned (see Attachment 5). The COR/Cemetery Director/designee will verify the accuracy of the placement of headstones or markers on the correct gravesite using the same Burial Register Report and gravesite layout map(s) that were used for the initial headstone/marker verification survey. DAILY, the COR will inform the Contractor Supervisor of all identified inconsistencies and ensure

corrective actions are completed that day. The Daily Headstone/Marker Raise & Realign Verification Survey will be maintained by the COR for certifying payments for completed work, tracking project progress and other administrative needs.

- ix. The Contractor's performance and progress on this contract shall be measured weekly based on how timely, accurately, and adequately he/she accomplishes and completes the weekly work scheduled and as needed to systematically accomplish the contract work over the duration of the project. In instances where the COR determines that the work is behind schedule, he will notify the Contracting Officer and the Contractor shall increase workforce and/or hours of operation at no additional cost to the Government in order to achieve completion of the contract work within the specified timeframe.
- x. SUBMITTALS - The Contractor shall submit the following documents or information in accordance with the table below.

Submittal	Frequency	Submittal Schedule
Work Plan/Staffing Plan	As Revised	With Proposal
Fire Safety Plan	As Revised	Prior to Beginning Work
Emergency Contacts	As Revised	Prior to Beginning Work
Licenses, Permits, Insurance on Vehicles, Liability, Workman's Compensation Insurance, etc	As Revised	Prior to Beginning Work
Material Safety Data Sheets (See FAR Clause 52.223-3)	As Needed	Prior to Chemical Use
Work Schedule	Daily	Daily
Headstone/Marker Raise & Realign Verification Survey	Daily	During R&R process
Weekly Report and Rework List	Weekly	Weekly

M. SUPERVISION:

- i. Contractor Supervisor: A competent and experienced English-speaking Contractor Supervisor shall be provided by the Contractor whenever work is being performed - other than trash and debris pick-up. The Contractor Supervisor must have not less than five (5) years of experience as a direct supervisor of grounds maintenance operations that included mowing, trimming, edging, and cleanup in industrial, commercial or public sites. The Contractor Supervisor shall ensure all specifications are being met, ensure contract work does not conflict with ceremonies and funerals, and ensure employees are adequately supervised and proper conduct is maintained.
- ii. In the absence of the Supervisor, the Contractor shall appoint an English-speaking crew foreman or an employee who shall be responsible to insure that the work is

being accomplished in an expeditious manner, is performed in accordance with the contract specifications and that the work will progress without undue delay.

N. EMPLOYEE REQUIREMENTS

- i. The Contractor shall be responsible to ensure Contractor employees providing work on this contract are fully trained and completely competent to perform the required work.
- ii. Labor Force and Equipment: The Contractor shall be aware of the intensive labor and equipment requirements needed to meet contract specifications. Contractor shall be responsible to provide all labor and equipment as necessary to meet deadlines. The Contractor will provide all necessary resources to complete the efforts assigned under the scope of this contract.
- iii. Employee Listing: The Contractor shall maintain and provide the COR a current list of all employees on site including subcontractor personnel. The list shall include the employee's name, job title, and driver's license number.
- iv. Employee Identification: The Contractor's employees shall wear visible identification at all times while on the premises of the Cemetery.
- v. Contractor personnel shall park only in the COR approved "Contractor Staging Area" identified for this project. Workers are not allowed to park throughout the cemetery grounds, and violation of this requirement shall form the basis for immediate contract enforcement action, to include immediate removal from the Cemetery.
- vi. The Contractor shall be responsible to ensure that his/her employees (including contractor's consultants, subcontractors, etc.) are aware of all the terms and conditions regarding their performance and conduct during the performance period of this contract.
- vii. Possession of weapons is prohibited. Enclosed containers, including tool kits, shall be subject to search. Violations of VA regulations may result in citation/summons answerable in the United States (Federal) District Court, or other appropriate agency/jurisdiction.
- viii. Contractor personnel are subject to rules of the Cemetery applicable to their conduct.

O. ORIENTATION FOR CONTRACTOR EMPLOYEES: The contractor shall be responsible to ensure that contractor employees coming to the work site will receive complete information on each of these subjects:

- Safety, Environmental Protection, and Fire Safety.

- Project Work Schedule, Rules Pertaining To Employee Requirements and Conduct, General Parameter Job Related Issues.
- Disaster procedures.
- All technical requirements and work procedures of the contract.

P. WORK HOURS

- i. Work may be performed between the hours of 8:00 a.m. to 4:30 p.m. local time, Monday through Friday except observed Federal Holidays or unless otherwise directed by the COR. At Contractor request and with the written permission of the COR, work may also be permitted to be scheduled during weekends and/or Holidays. When situations prohibit work completion during the normal work week, (such as weather-related or contractor-caused delays), then the Contractor will make arrangements with the COR to work on weekends, as needed, in order to meet the requirements of performance within the period specified. The Government will not compensate the Contractor for any alternate work schedules needed for the Contractor to complete all contract work within the specified period of performance.

After Normal Hours/On-Call/Emergency Situations

- ii. The Contractor shall establish and maintain a point-of-contact to receive emergency calls from the COR(s). The point-of-contact shall be available on a 24-hour basis including during weekends, Federal Holidays and after normal hours of operation. The Contractor shall provide phone, pager and cell phone numbers for emergency and/or after hour's situations. Repairs shall be made as expeditiously as circumstances allow or within (24) hours upon initial emergency call.
 - iii. Contractor shall provide name/telephone number(s) for Project Manager (Home Office), Supervisor, and Foreman, including normal and after hours contact numbers, cell and fax numbers.
 - iv. If work is authorized to be performed after hours or on weekends/holidays and an emergency should occur, the Contractor shall contact the COR and the Cemetery Director. In the absence of the COR and the Cemetery Director, the Contractor shall contact the local police.
 - v. Federal Holidays. The Federal Government observes the following holidays: New Year's Day, Martin Luther King Jr.'s Birthday, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day. In addition, no work will be permitted during Memorial Day weekend activities.
- a. **PERMITS AND LICENSES:** The Contractor shall be responsible for obtaining all necessary and current licenses, permits, vehicular insurance and registration, Workman's

Compensatory Liability Insurance, property liability insurance etc., prior to the commencement of work. The contractor shall provide the Contracting Officer copies of these required documents with his/her proposal or as other times where the COR deems necessary during the duration of the project.

Q. CONTRACTOR-FURNISHED ITEMS

- i. The Contractor shall be responsible for supplying all equipment, personnel, tools, supplies and materials necessary to perform the services required by this contract. Contractor-furnished items necessary to perform work as required under this contract shall be furnished, maintained and operated by the contractor and shall be consistent and fully compliant with all applicable OSHA, Federal, State, County, City laws, ordinances and regulations.
- ii. The Contractor shall be responsible for the supply, maintenance and repair of all contractor-owned equipment. This includes, minor maintenance/repair and minor operating parts for equipment such as lubrication, oil changes, spark plugs, gaskets, cotter pins/keys, electric extension cords, etc., to keep all equipment in good operational condition throughout the period of performance of this contract. No contractor equipment maintenance repairs of any kind can be done on cemetery property without the COR(s) approval.
- iii. The Contractor shall be responsible for ensuring that all of his/her motor vehicles and equipment meet State inspection, safety, licensing, registration, and insurance requirements.
- iv. Only Contractor equipment and supplies (property) required to perform work under this contract shall be stored at the Contractor's designated storage area at the end of each workday. No personal property, equipment, or vehicles shall be stored on the cemetery premises.

R. THE GOVERNMENT'S RESPONSIBILITIES

- i. Upon award of the contract, the Government will inform the Contractor prior to commencing the work, of any known damages to the cemetery grounds, headstones/markers or any other areas that the Contractor is unaware of and not responsible for. In addition, upon award of the contract, a walk-through of the cemetery grounds will be scheduled by mutual agreement of the Government and Contractor, and will be attended by the COR, appropriate contractor personnel (to include the Supervisor/Project Manager). The Contracting Officer is an optional attendee.
- ii. The Government will not provide the Contractor with any furnishings, fuel storage, equipment, materials, restrooms, or telephones. Utilities will be provided as defined in "AVAILABILITY AND USE OF UTILITY SERVICES".

- iii. Notification of Non-Compliance: The COR will notify the Contractor of any detected non-compliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order ceasing all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such cessation direction shall be made the subject of claim for extension of time for excess costs or damages by the Contractor.

B.9 SPECIFICATIONS

UPRIGHT HEADSTONE RAISE AND REALIGNMENT WITH TURF RENOVATION

1. UPRIGHT HEADSTONE RAISE, LOWER, REALIGN, LEVEL, BACKFILL

1.1. WORK OVERVIEW

- 1.1.1. This section outlines upright headstone raise, lower, realignment, reset, and backfill services, defined as work consisting of extracting, resetting, aligning, backfilling, and compacting upright headstones that are already in place which have shifted out of vertical and/or horizontal alignment and plumb, as well as inventorying and assuring accurate placement on each gravesite at the Cemetery. The contractor shall provide all supervision, professional advice/guidance, labor, parts, materials, equipment, and personnel, to provide the services defined herein.
- 1.1.2. The COR will determine the beginning point and ending points in each gravesite section.
- 1.1.3. Upright headstone descriptions:
 - 1.1.3.a. Standard upright marble headstones are approximately 42 inches long, 13 inches wide, 4 inches thick, and weigh approximately 230 pounds.
 - 1.1.3.b. Civil War type (older) upright marble headstones are typically around 35 to 39 inches long, 9-1/2 to 12 inches wide, 3 to 4 inches thick, and weigh approximately 130 to 160 pounds.
 - 1.1.3.c. Other headstone types may exist and are not included in the contract scope of work unless otherwise specified.
- 1.1.4. All in-ground vases, temporary markers, floral, commemorative, or other types of decorations (arrangements) causing interference with the raise and realignment of upright headstone operation shall be carefully, and in an orderly manner, moved from and after completion of the work, moved back to all gravesites by the Contractor. Prior to removal, the contractor shall verify the numbering sequence and location of the headstone and associated decorations or vases.
- 1.1.5. Headstones shall be removed from their sockets using wooden and/or metal clamps. If metal clamps are used, the area that contacts the headstone must be protected with a rigid fabric that will prevent damage to and marking of the headstone. Clamps may be attached to a skid steer loader (i.e. Bobcat[®]) or similar machine to extract the headstone from the socket. **WHEN HEADSTONES ARE REMOVED FROM THEIR SOCKETS, THEY SHALL BE CAREFULLY STORED ON EACH ASSOCIATED GRAVESITE.** When headstones are removed from their sockets, they shall be carefully stored on each associated gravesite. Use care not to scratch or damage headstones in any manner. Contractor shall be responsible for replacing

damaged headstones and restoring all damages caused to turf during performance of this work.

1.1.6. Crushed Rock Base Material Specifications:

- 1.1.6.a. Crushed Rock shall be composed of limestone, granite, dolomite, or any other hard, sound rock that is produced by blasting and then crushing.
- 1.1.6.b. Crushed Rock shall be clean, hard, tough, and durable fragments (excluding) schist, shale or slate) of uniform quality throughout and free of any detrimental quantities of soft, friable, thin, elongated or laminated pieces, disintegrated material, dirt, organic matter, oil, alkali, or other deleterious substance.
- 1.1.6.c. Crushed Rock shall consist of hard durable fragments of particles of rock, free of stripping dirt, vegetation, and other foreign substances. Hardness: Resistant to breaking, crushing or crumbling
- 1.1.6.d. Shape: Sharp and angular (Do not use rounded pea gravel.)
- 1.1.6.e. Gravel or Crushed Gravel mixed with filler, sand, crushed rock, or crushed stone is **NOT** an acceptable substitutes.
- 1.1.6.f. Crushed Rock shall consist of the product obtained by crushing rock or stone so that is meets the following gradation requirements:

Sieve Size % Passing	
Particle Size	% of Passing
1/2 inch	100
3/8 inch	70 – 90
No. 4	50 – 72
No. 8	35 – 55
No. 40	14 – 32
No. 200	4.0- 10.0

- 1.1.6.g. The gradation of crushed rock shall comply with ASTM D-448. Sampling and sieve analysis shall be performed in accordance with ASTM D-75 and ASTM C-136.

1.1.7. Compaction of Crushed Rock Base Material:

- 1.1.7.a. The Crushed Rock Base Material shall be compacted in lifts not exceeding 1-1/2” in thickness. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. If the fines are dry at the time of compaction, use a very fine mist type hose and spray the Base Material sparingly. The moisture content of the material during placing operations shall be within $\pm 2\%$ of the optimum moisture content as determined by ASTM D 1557. Compact each layer to 90% to 95% relative density. Do not perform compaction operations on excessively wetted soils.

- 1.1.7.b. Tamping Tools: Shall be approved by COR prior to use. Tamping tools shall have sufficient impact area and weight to achieve 90% to 95% compaction of the Crushed Rock Base Material. ***Tamping tools made of wood or containing wood (such as wood handles) are not acceptable.***

1.2. UPRIGHT HEADSTONE SETTING

- 1.2.1. Headstones shall be removed from their sockets per paragraph 1.1.5. All headstone sockets shall be dug with a three (3) inch clearance at the front, back, sides and underneath the headstone. Headstone sockets shall be dug to the required depth to meet the height and alignment requirements as specified in paragraph 1.3. All headstone sockets shall be clean and free of loose dirt and debris prior to adding Crushed Rock Base Material. Moistened Crushed Rock Base Material shall be added and heavily tamped to 90% to 95% compaction in the bottom of the sockets to provide a minimum three (3) inch footing under the base of the headstone prior to the re-installation of the headstones. Moistened Crushed Rock Base Material shall be placed around all four sides of the headstones and compacted per the requirements of paragraph 1.1.7, providing for a minimum fourteen (14) inches depth of Crushed Rock Base Material along the sides of the headstone as measured from the bottom of the headstone. Typically there should be three (3) inches of space remaining from the top of the compacted Crushed Rock Base Material to the ground surface to allow tamped topsoil and grass seed to be applied. The actual measurement will vary depending on the how much the headstone was raised or lowered and shall be approved by the COR. See Exhibits (A) and (B).
- 1.2.2. Existing headstone sockets that exceed the correct depth requirements shall be filled with sufficient Moistened Crushed Rock Base Material and compacted per the requirements of paragraph 1.1.7 to achieve the correct final depth. All headstone sockets shall be clean and free of loose dirt and debris prior to adding Crushed Rock Base Material. After filling in the deep sockets in this manner, proceed with requirements in paragraph 1.3 for completing the headstone realignment.
- 1.2.3. In cases where headstone sockets need to be realigned/shifted, and/or re-dug, apply the following procedures:
 - 1.2.3.a. After removal of the headstone(s), backfill and compact the existing socket prior to digging the new socket. Backfill the existing socket with Moistened Crushed Rock Base Material. Thoroughly tamp to 90% to 95% compaction at each 1-1/2" inch vertical intervals (1-1/2" inch lifts), leaving the last 3 inches at the top to have tamped topsoil and grass seed applied.
 - 1.2.3.b. Contractor shall dig/excavate the new socket in accordance with the requirements in paragraph 1.2.1.
 - 1.2.3.c. All headstone sockets shall be clean and free of loose dirt and debris prior to adding Crushed Rock Base Material.

- 1.2.4. The completed raised and realigned headstones shall be anchored firmly in place such that the headstones are rigid with no give or play in any direction regardless of the soil and terrain conditions. All headstones shall be firmly set and anchored in place with no movement from forces subjected by the COR.
- 1.3. UPRIGHT HEADSTONE RAISE AND REALIGNMENT PROCESS:
- 1.3.1. Prior to starting work in each burial section, the location of the existing permanent gravesite control markers and the required gravesite row/gravesite spacing layout dimensions shall be verified and certified by a licensed surveyor and coordinated with the COR.
- 1.3.1.a. The Contractor shall use a licensed surveyor to validate and/or relocate any existing permanent control markers that do not conform to the section layout.
- 1.3.1.b. The Contractor shall use a licensed surveyor to install temporary control markers where any existing permanent control markers cannot be located or are missing.
- 1.3.1.c. The Contractor shall use a licensed surveyor to accurately and precisely install temporary control markers at the ends of each gravesite row.
- 1.3.2. Headstones shall be accurately adjusted and precisely reinstalled on the correct gravesites by utilizing temporary grave plotting maps, existing permanent gravesite control markers, temporary contractor installed gravesite control markers, and temporary contractor installed control markers at the ends of each gravesite row. All measurements, setting of string lines, and the layout of rows/columns shall be taken from existing or temporary gravesite control markers, and NOT from previously set headstones, unless otherwise directed by the COR.
- 1.3.3. The mean (or average) topsoil level shall be determined for the entire section to be aligned in all directions with assistance from a licensed surveyor and the COR, with approval by the COR. The Contractor shall use the mean (or average) topsoil level to allow all of the headstones in the section to be aligned vertically without having drastic changes in headstone heights (several inches) between the rows and columns of headstones in ALL directions. In irregular terrain where sloping and uneven ground conditions exist, all headstones and markers will be set at the proper height and overall level necessary to provide a smooth, flowing transition between ALL headstones in ALL directions through uneven terrain. The Contractor shall take the adjoining sections and/or terrain into consideration when determining the mean topsoil levels. IMPORTANT: To meet the requirement of a smooth, flowing transition, the Contractor may be required to set the headstones at a height other than at the required 25 inches above grade (or 20 inches for Civil War type headstones) with approval by the COR. See Exhibit (D).
- 1.3.4. Keystone Placement and Installation

- 1.3.4.a. The headstone realignment process starts by the selection of specific headstones throughout the gravesite section to be designated as “Key” stones (or “Keystones”) for use throughout the remainder of the realignment process. Keystones shall be chosen and utilized throughout the section at a maximum spacing of every 10th headstone or at a more frequent spacing as necessary in areas of sloped or rolling terrain in order to achieve a smooth, flowing transition between the rows and columns. See Exhibits (C) and (D).
 - 1.3.4.b. Each of the Keystones shall be permanently set in accordance with the requirements of paragraph **1.2** at the proper location and at the proper height using a licensed surveyor with the approval of the COR. The Keystones shall be laid out to the correct dimensions to match the required measurements for the section such that the rows and columns are evenly spaced. The vertical height of the Keystones shall be adjusted to accommodate the mean (average) topsoil levels throughout the entire section in order to achieve a smooth, flowing transition between all the rows and columns. See Exhibit (D).
 - 1.3.4.c. All Keystones shall be vertically plumbed and aligned by leveling the front, back, and sides while raising or lowering the headstone as necessary to achieve a height of 25 inches above the mean (average) topsoil level. **IMPORTANT:** To meet the requirement of a smooth, flowing transition, the Contractor may be required to set the Keystones at a height other than at the required 25 inches above grade (or 20 inches for Civil War type headstones) with approval by the COR.
 - 1.3.4.d. The COR shall approve of the quantity, location, height, and installation of the Keystones prior to the Contractor continuing with the realignment process.
- 1.3.5. The next step in the headstone realignment process is the Contractor selects a row and a column of headstones at the center or close to the center of the section to be realigned with approval from the COR. See Exhibit (C).
- 1.3.6. Install heavy string lines along the front, sides, tops, and transversely of all applicable Keystones. The string lines shall be laid out to the correct dimensions as determined by Keystones and the requirements of paragraph **1.3.2** such that the rows and columns are evenly spaced. All headstones shall be vertically plumbed and aligned by leveling the front, back, and sides while raising or lowering the headstone as required to achieve a height of 25 inches above the mean (average) topsoil level. **IMPORTANT:** To meet the requirement of a smooth, flowing transition, the Contractor may be required to set the headstone at a height other than at the required 25 inches above grade with approval by the COR. These measurements shall be adhered to as closely as possible and may be adjusted to suit unique site conditions with approval by the COR. See Exhibit (C).
- 1.3.7. At the start of work in each burial section, the first row of reset/realigned headstones in each burial section shall be inspected by COR for appearance, spacing, depth,

alignment, plumb, height, accuracy, and smoothness in grade transition. No further setting of headstones shall be done until this first row has been inspected and accepted by the COR. It is the Contractor's responsibility to notify the COR 24 hours in advance of when each of these inspections will be needed.

- 1.3.8. All remaining headstones in all rows, columns, and transverse directions are then aligned in accordance with paragraph **1.3.6**. The installation, adjusting, and setting of the remaining headstones shall meet the requirements of section **1.2**. See Exhibits (C) and (D).
- 1.3.9. A plus/minus (+/-) 1/8 inch maximum tolerance shall be maintained in the lateral and transverse directions in accordance with the dimensional requirements of paragraph **1.3.2**. The alignment of the headstones should be checked frequently during this process because the tamping of the headstones may move the headstone out of level or off the mark on the line.
- 1.3.10. Headstones shall be installed to within one degree of fully vertical when measured on front and sides using a digital level.
- 1.3.11. The measurements between rows or columns of headstones and between the headstones within each row or column may differ from one gravesite section to the next. This condition is to be discussed with COR where this is found to occur. Some variances may be allowed by the COR in order to keep a uniform appearance of headstones being aligned.
- 1.3.12. Any upright headstones broken or damaged by the Contractor shall be reported to the COR or the Cemetery Director by close of business each working day in order that the grave can be properly marked. The Contractor shall be responsible for the cost of the headstone replacement. The cost of the replacement headstones will be deducted from Contractor's invoice(s). All headstone replacements must be coordinated with the COR. Any existing permanent gravesite control markers, temporary contractor installed control markers, grid or sectional monuments that are disturbed, displaced, or broken shall be replaced and properly reset by a licensed surveyor at the Contractor's expense. Curbs, roads, walks, turf, trees, utilities, etc. existing above and below the ground that are damaged or disturbed by the Contractor during performance of contract work shall be repaired at the Contractor's expense. The requirements of this paragraph shall be completed by the Contractor within fourteen (14) workdays, unless otherwise agreed to by the COR.
- 1.3.13. In areas where smaller than standard size headstones occur (Civil War type), coordinate the measurements, dimensions, and layout of these headstones with COR. Typically the Civil War type headstones are set at 20 inches above grade and located by aligning the faces of the headstones along the rows and aligning the centerline of the headstones down the columns.

- 1.3.14. Government furnished headstones that are permanently removed from a grave for any purpose shall be transported by the Contractor to an approved location on cemetery grounds and destroyed in any convenient manner, ensuring that the replaced headstone cannot be used for private, personal, or commercial activities.
2. TOPSOIL SURFACE LEVELING, RENOVATION, AND RE-ESTABLISHMENT OF THE EXISTING TURFGRASS STAND
 - 2.1. WORK OVERVIEW
 - 2.1.1. This section outlines operational procedures to be followed in sections designated for topsoil surface leveling, renovation, and re-establishment of the existing turfgrass stand. Turf renovation generally includes curb-to-curb renovation unless otherwise directed by the COR. The contractor shall provide all supervision, professional advice/guidance, labor, parts, materials, equipment, and personnel, to provide the services defined herein.
 - 2.1.2. The COR will determine the beginning point and ending points in each gravesite section.
 - 2.2. TOPSOIL AND TURFGRASS RENOVATION PROCESS:
 - 2.2.1. The following renovation process shall begin with the approval of the COR and only when the existing turfgrass is actively growing and not in dormancy.
 - 2.2.2. Mow and trim target area several times removing grass clippings each time. Initial mowing in this sequence should be at normal maintenance height (i.e. 2.5 to 3 inches) and subsequent mowing 2 or 3 days apart should be at lowered height (i.e. 1.5 to 2 inches).
 - 2.2.3. After a minimum of two or more preparatory mowings and trimmings, the entire vegetated area should be treated with an application of an appropriate non-selective herbicide. Application rate should be the maximum label recommended rate for the complete elimination of perennial grass species and contaminant weeds. **IMPORTANT: Application must be made at a time when grass is actively growing for the herbicide to work.** Application to be made by a licensed pesticide applicator. Allow a minimum of 10 to 14 days to elapse for herbicide to fully translocate throughout all plant parts.
 - 2.2.4. The COR shall confirm and approve that all vegetation (turfgrass, weeds, etc.) in the treated area is completely dead prior to removal of the dead vegetation. If any vegetation within the treated area is still vital (alive) it shall not be removed. Re-treat the vegetated area in accordance with paragraph 2.2.3 until the vegetated area is completely dead.

- 2.2.5. Contractor shall inventory, remove, and store all irrigation heads and cap head risers within the limits of work. Provide a copy of the inventoried equipment and materials to the COR. Provide protection of any exposed components, risers, etc. that might be damaged by renovation equipment.
- 2.2.6. Contractor shall locate and inventory all irrigation components: (valve boxes, gate valves, quick couplers, etc.) within the limits of work and protect the location and component access throughout contract work. Provide a copy of the inventoried equipment and materials to the COR.
- 2.2.7. The Contractor shall be responsible for the replacement of irrigation heads and components at finish grade, ensuring all irrigation lines and heads are free of foreign matter and operating properly.
- 2.2.8. Removal of Existing Turf Stand:
 - 2.2.8.a. Power rake or verticut entire treated area to loosen and prepare the site for the removal of all residual plant debris including thatch.
 - 2.2.8.b. Remove all residual plant debris including thatch.
- 2.2.9. Topsoil Preparation:
 - 2.2.9.a. Provide and apply turf fertilizer that is commercial grade, free flowing, uniform in composition, and conforms to applicable state and federal regulations. Granular fertilizer shall bear the manufacturer's warranted statement of analysis. Granular fertilizer shall contain a minimum percentage by weight of 10 nitrogen (of which 50 percent shall be organic), 10 available phosphoric acid, and 10 potash. Spread at a rate recommended by the manufacturer evenly over entire area using any suitable broadcast application device.
 - 2.2.9.b. Rototill area to a minimum depth of 6 inches to uniformly mix fertilizer, amendments, and topsoil and to uniformly loosen top surface for re-grading and leveling.
- 2.2.10. Topsoil Leveling and Grading
 - 2.2.10.a. Grade and compact surface of site to achieve desired finished appearance, which is to be smooth and uniformly level down each row and between each row, free of all surface ripples, depressions, high spots, low areas, ridges. The finish grade for each gravesite section shall be smooth and uniformly level with adjacent gravesite sections and surrounding terrain. New surfaces shall be blended to existing areas.
 - 2.2.10.b. The prepared surface (finish grade) shall be a maximum 1 inch below the adjoining grade of any surfaced area. The prepared surface (finish grade) shall be a nominal 26 inches below the top of all upright headstones or by direction and approval of the COR. See Exhibits (A) and (B). In sections

with Civil War type (older) upright marble headstones or other non-standard types of headstones exist, coordinate the finish grade in these areas with the COR.

- 2.2.10.c. In locations where existing burial area surface has formed “ridges” between rows, these areas shall be knocked down by grading between high and low surfaces of the rows so that finished surface is uniformly flowing from row to row, and down each row. If this process does not achieve desired smooth and uniformly flowing finished grade due to numerous depressions and low or sunken areas in the existing surface grade, import, spread and compact additional high quality topsoil of similar characteristics and texture to the soil already present on site.
- 2.2.10.d. Topsoil shall be free of foreign matter, any objects bigger than 25 mm (1 inch) and weed seeds.
- 2.2.10.e. Apply and compact sufficient topsoil to eliminate all ripples, depressions, and sunken grave areas as needed to achieve the desired smooth and uniformly level finish grade and appearance.
- 2.2.10.f. Firm the topsoil by rolling with a standard turfgrass roller that is half-full of water. If more weight is required to adequately firm the surface, fill the roller with water and repeat rolling as necessary. Properly firmed soil will show a foot print when walked upon, but will not allow the walker’s foot to sink into the soil
- 2.2.10.g. Protect finished areas from damage by vehicular or pedestrian traffic.
- 2.2.10.h. Install and maintain erosion control material to meet local environmental regulations.
- 2.2.11. After finish grade has been established, raise all irrigation components and install sprinkler heads to finish grade. Adjust sprinkler heads to provide full coverage and best distribution uniformity.
- 2.2.12. Turfgrass Sod Transplanting and Installation:
 - 2.2.12.a. Provide certified sod as specified in Exhibit (E).
 - 2.2.12.b. Moistening the Soil: During periods of higher than optimal temperature for the species specified, and after all unevenness in the soil surface has been corrected, the soil shall be lightly moistened immediately prior to installation of the turfgrass sod.
 - 2.2.12.c. Starter Strip: The first row of turfgrass sod shall be laid in a straight line, with subsequent rows placed parallel to and tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to insure that the pieces are not stretched or overlapped and that all joints are butted tightly to prevent voids that would cause air drying of the roots.
 - 2.2.12.d. Sloping Surfaces: On 3:1 or greater slopes, traditional size (1 sq yd / 1 sq m) turfgrass sod shall be laid across the angle of the slope (perpendicular),

with staggered joints and secured by tamping, pegging, stapling or other approved methods of temporarily securing each piece. Large-roll turfgrass sod shall be laid in the direction of the slope, with temporary securing being at the discretion of the installation contractor.

- 2.2.12.e. Swales and Intermittent Waterways: The installation of turfgrass sod within drainways or intermittent waterways shall be determined after considering maximum channel velocities for storms of a designated intensity. Traditional size turfgrass sod shall be laid perpendicular to the direction of flow and pegged to resist washout during the establishment period, while large-roll pieces shall be laid in the direction of the flow, with temporary securing being at the discretion of the installation contractor.
 - 2.2.12.f. Watering and Rolling: The installation contractor shall water the turfgrass sod immediately after transplanting to prevent drying. As sod placement is completed in any one section, the entire area shall be lightly rolled. It shall then be thoroughly watered to a depth sufficient to ensure the underside of the new sod pad and soil immediately below the pad are thoroughly wet. The Contractor shall be responsible for having adequate water available at the site prior to and during installation.
 - 2.2.12.g. All turfgrass sod shall be uniform in color, leaf texture and shoot density and shall be reasonably free of weeds, diseases and other visible imperfections at acceptance.
- 2.2.13. Turfgrass Sod Establishment:
- 2.2.13.a. The establishment period for turf shall begin immediately after installation, with the approval of the COR. All turf established by the Contractor shall be irrigated and fully maintained by the Contractor until final acceptance is made by the Government. The Governments reserves the right to increase or decrease frequency of watering as deemed necessary.
 - 2.2.13.b. Watering: Irrigate area routinely and as required to ensure complete and satisfactory sod establishment. Apply water at a moderate rate so as not to flood the plants and turf. Soil on sod pads shall be kept moist at all times to maintain moist soil to a depth of at least 4 inches. Sod shall be watered daily for the first 10 to 14 days to avoid dry out. Then, water sod routinely as needed to prevent visual wilt (blue/gray hue). In all cases, Contractor shall coordinate irrigation schedules with the COR.
 - 2.2.13.c. Eradicate all weeds. Water, fertilize, over-seed, and perform any other operation necessary to promote the growth of grass. Replant areas void of turf 0.1 m² (one square foot) and larger in area. Mow the new lawn at least three times, prior to the final inspection. Begin mowing when grass is three and one-half (3-1/2) inches high. Mow to a three (3) inch height

per each of the three mowings prior to final inspection. String trim/stick trim the turf around the headstones/ flat markers at least three times, maintaining the same surrounding height of the mowed turf prior to the final inspection. Begin trimming when grass is three and one-half (3-1/2) inches high.

- 2.2.13.d. Mowing: Mowing shall be performed in accordance with the requirements of paragraph 2.3. The first mowing shall not be attempted until the turfgrass sod is firmly rooted and securely in place. Begin mowing sod when plant height reaches three and one-half (3-1/2) inches to four (4) inches or as otherwise directed by the COR.
 - 2.2.13.e. Continue mowing and irrigation until sod is 100% established. After the sod has been established the Contractor shall request a Final Inspection in writing to the Contracting Officer and COR.
 - 2.2.13.f. Germinated weeds must be eliminated by spraying with a typical three-way broadleaf herbicide combination product or with DriveTM or an approved equal post emergence herbicide for control of crabgrass or both if necessary to achieve 100% turfgrass cover. The seedling turfgrass shall be mowed at least three times before any herbicide treatment is applied.
- 2.2.14. In areas where turf work has been completed, clear the area of all debris. Any areas damaged during establishment operations must be restored to their original condition. Headstones shall be cleaned per the requirements of section 3.0.
- 2.3. MOWING PROCEDURES AND EQUIPMENT FOR TURFGRASS SOD ESTABLISHMENT
- 2.3.1. The Contractor shall use rear-discharge mowers or mowers with mulching decks only. At no time is freshly mowed grass to be blown onto headstones. Riding mowers may be used if they are not operated within two (2) inches of headstones, flat markers, monuments, tree trunks or other vertical surfaces.
 - 2.3.2. Commercial grade power trimmers and power edgers shall be used to trim grass from around headstones, monuments, markers, etc. The Contractor shall use trimmers with a plastic blade attachment to cleanly trim edges around all flat markers. Care must be taken not to chip flat markers with blades.
 - 2.3.3. All mowing equipment shall be cleaned before mowing at the Cemetery to reduce the risk of introducing contaminant weed seeds into the cemetery turf. No equipment will be cleaned on cemetery property.
 - 2.3.4. Cutting blades on mowing and trimming equipment must be kept sharp so that grass tips are cleanly cut and not torn or damaged.
 - 2.3.5. Turfgrass Heights: Turf shall be maintained at a height within one (1) inch of the range as specified in Exhibit (E) or as directed by the COR. The height of grass is what is measured to get the correct cutting height. The cutting height of all mowing

equipment shall be set to maintain the specified height. At no time will more than one-third (1/3) of leaf blade be removed during any single mowing.

- 2.3.6. Trimming: The base of headstones, trees, monuments, markers, buildings walls, fences, signs and other vertical surfaces shall be trimmed to keep the grass within one (1) inch above the range as specified in Exhibit (E) or as directed by the COR. Trimming operations will be considered a part of mowing and accomplished concurrently with mowing operations. A mowing cycle will not be considered complete until all trimming operations are accomplished. Areas will be mowed first, followed by the trimming operation.
- 2.3.7. Mowing and trimming will be accomplished free of scalping, rutting, bruising, and uneven and rough cutting. Use of cutting equipment that is out of adjustment, thereby causing streaks or irregularities, uneven cutting, plowing, or gouging of the soil is not permitted. After cutting, grass will have a uniform height.
- 2.3.8. Contractor shall be familiar with and utilize different mowing patterns. Changing direction and patterns reduces turf wear, prevents wheel rutting, and provides a neater appearance. All mowing around trees will be accomplished in a manner that prevents a “ringing pattern” around the tree and associated damage to turf.
- 2.3.9. Mowing, trimming and edging operations will not damage headstones, markers, floral or commemorative items, structures, survey monuments, irrigation equipment, etc.

2.4. TRASH, DEBRIS & LEAF REMOVAL

- 2.4.1. Debris and Trash: Any item, material, or foreign object not permanently attached to or planted within the cemetery grounds and boundaries. Items include, but are not limited to, fallen twigs and branches that are under ten (10) inches (25.40 cm) in diameter, paper products, cigarette butts, gum, glass and metal products, plastic and any other synthetic items, loose rock and stone over three (3) inches (7.62 cm) in diameter that are not the apparent result of an interment. Also included is the material found within the trash receptacles located throughout the cemetery grounds.
- 2.4.2. Contractor shall collect and dispose of all debris and trash before and after each mowing and trimming event within the Cemetery.
- 2.4.3. Any clippings deposited on headstones, flat markers, monuments, roadways, walkways (inside and out), flagpole bases, or other non-turf grass areas, shall be mechanically blown onto nearby turf areas when possible, or collected and disposed of on the same day as the mowing and trimming event that produced them. Any clippings deposited on sidewalks or at public visitor areas including at the Committal Shelter areas shall be swept or removed using mechanical blowers at same time mowing work is occurring. Clearly visible windrows of clippings, as a result of infrequent mowing, will be removed and disposed of at no extra cost to the Government.

3. HEADSTONE CLEANING

3.1. WORK OVERVIEW

3.1.1. This section outlines headstone cleaning services. The Contractor shall provide all supervision, professional advice/guidance, labor, parts, materials, equipment, and personnel, to provide the services defined herein.

3.1.2. The COR will determine the beginning point and ending points in each gravesite section.

3.1.3. DEFINITIONS:

3.1.3.a. “Clean” under this contract means the headstones and flat markers shall contain NO discoloration, environmental deposits, mold, mildew, moss, algae, lichen, dirt/mud, grass clippings, grass marks, bird droppings, etc.

3.2. All equipment and supplies maintained and operated by the Contractor shall be consistent and fully compliant with all applicable Federal, State, and County laws, ordinances and regulations and meet State inspection, safety, licensing, registration, and insurance requirements.

3.2.1. All in-ground vases, temporary markers, floral, commemorative, or other types of decorations (arrangements) causing interference with the headstone cleaning operation shall be carefully, and in an orderly manner, moved from and after completion of the work, moved back to all gravesites by the Contractor. Prior to removal, the contractor shall verify the numbering sequence and location of the headstone and associated decorations or vases.

3.2.2. Use care not to scratch or damage headstones or flat markers in any manner. Contractor shall be responsible for replacing damaged headstones or flat markers and restoring all damages caused to turf during performance of this work. Any headstones or flat markers that are chipped, marred, broken, or damaged by the Contractor shall be reported to the COR or the Cemetery Director by close of business each working day in order that the grave can be properly marked. The Contractor shall be responsible for the cost of the headstone replacement. The cost of the replacement headstones will be deducted from Contractor’s invoice(s). All headstone replacements must be coordinated with the COR. Any existing permanent gravesite control markers, temporary contractor installed control markers, grid or sectional monuments that are disturbed, displaced, or broken shall be replaced and properly reset by a licensed surveyor at the Contractor’s expense. Curbs, roads, walks, turf, trees, utilities, etc. existing above and below the ground that are damaged or disturbed by the Contractor during performance of contract work shall be repaired at the Contractor’s expense. The requirements of this paragraph shall be completed

by the Contractor within fourteen (14) workdays, unless otherwise agreed to by the COR.

3.3. HEADSTONE CLEANING PROCESS

- 3.3.1. All in-ground vases, temporary markers, floral, commemorative, or other types of decorations (arrangements) causing interference with the cleaning of the headstones or flat markers operation shall be carefully, and in an orderly manner, moved from and after completion of the work, moved back to all gravesites by the Contractor. Prior to removal, the contractor shall verify the numbering sequence and location of the headstone and associated decorations or vases.
- 3.3.2. Cleaning techniques shall demonstrate a clear understanding of, and the sensitivity to, such environmental issues as ground water contamination, wetlands, etc., and shall be consistent and fully compliant with all applicable Federal, State, and County laws, ordinances and regulations.
- 3.3.3. Clean water shall be used to clean headstones and flat markers. Cleaning techniques with water shall include high pressure spraying, hand scrubbing, and rinsing. When water under pressure is used, such pressure shall not be greater than 600 PSI. Excessive staining and/or discoloration may be removed with pressurized water and a stiff nylon brush (no wire brushes, bleach, or abrasive cleaners shall be permitted) followed by rinsing with clear water.
- 3.3.4. If water used in cleaning should soften the soil around the base of the headstone or flat marker so that the headstone or flat marker is loosened, care shall be taken not to tip the headstone or flat marker out of plumb or alignment. Headstones and flat markers shall be set and anchored firmly in place with no movement from forces subjected by the COR or inspector after cleaning has been completed.
- 3.3.5. Care shall be taken to protect the turf area from damage. Any turf damaged by the Contractor shall be restored at Contractor's expense.
- 3.3.6. **UPRIGHT MARBLE HEADSTONES ONLY:** After cleaning upright marble headstones, apply a final undiluted spray application of "D/2 Biological Solution" cleaner (or approved equal) per manufacturer's recommendations to all sides of the headstone: Apply to WET stone surface using a sprayer; gently agitate with a soft bristle brush, and RINSE thoroughly with water. Contractor shall submit the required Material Safety Data Sheets (MSDS) to the COR prior to use of any chemicals including but not limited to D/2 Biological Solution. **DO NOT USE D/2 BIOLOGICAL SOLUTION ON UPRIGHT GRANITE, FLAT GRANITE, OR BRONZE MARKERS.**
- 3.3.7. Headstones and flat markers that have been cleaned but become marked, discolored, dirt covered, or muddied due to subsequent contract work including but not limited to turf reestablishment issues shall be re-cleaned at no additional cost to the government.

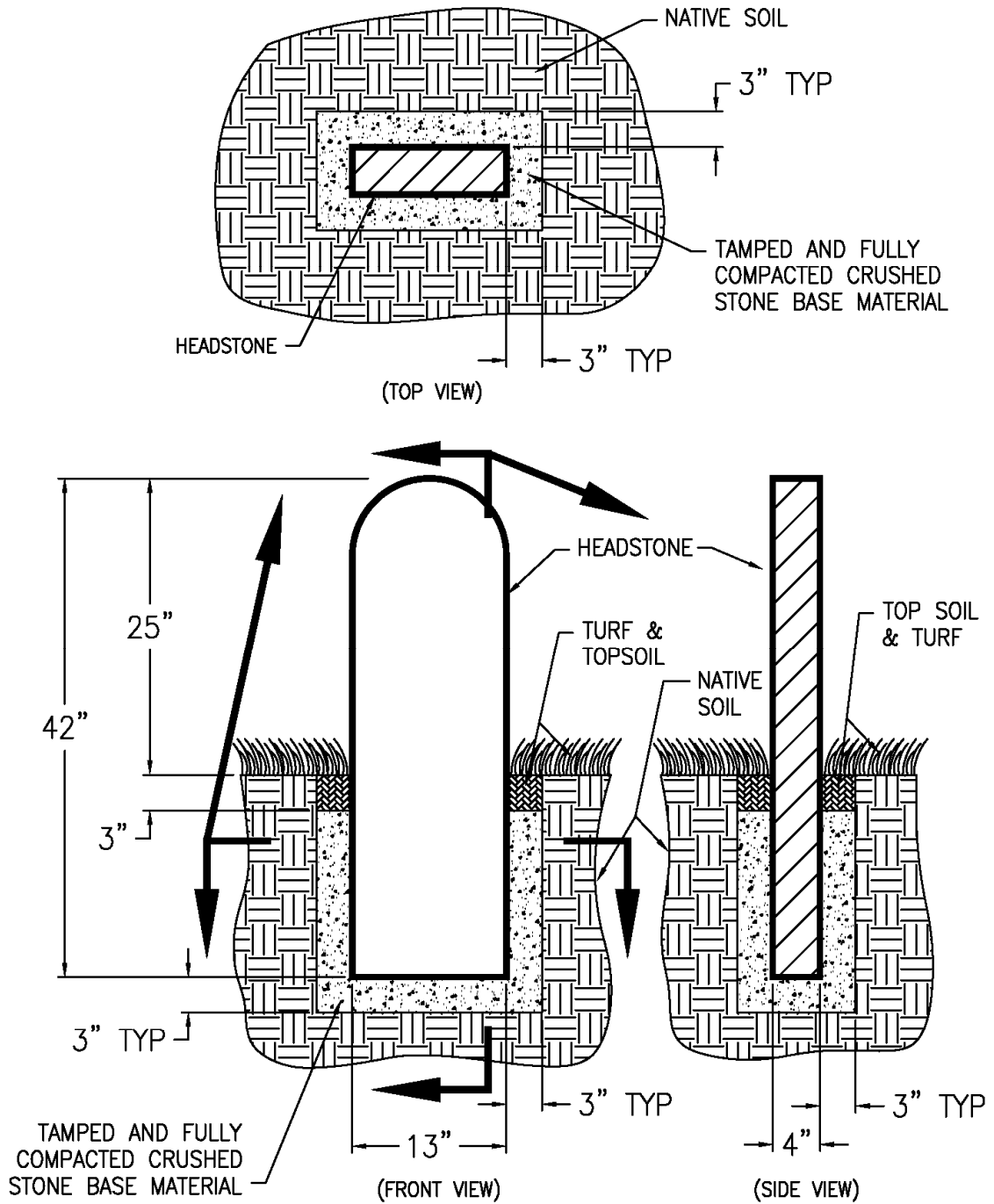
Headstones and flat markers that become discolored, dirt covered, or muddied, etc. after initial cleaning has been completed, but prior to overall project completion, shall be re-cleaned at no additional cost to the government. All headstones and flat markers are to be clean at the time of the project Final Inspection.

- 3.3.8. The end result of this service is that the Contractor shall provide the Government “CLEAN” headstones. The definition of “CLEAN” is listed above in Paragraph **3.13**.

SPECIFICATION EXHIBITS

EXHIBIT NUMBER	EXHIBIT TITLE
A	Upright Headstone Installation Details
B	Upright Headstone (Civil War Type) Installation Details
C	Plan View – Upright Headstone Burial Section Layout and Realignment
D	Elevation View – Upright Headstone Burial Section Vertical Alignment
E	Turfgrass Specifications and Mowing Requirements

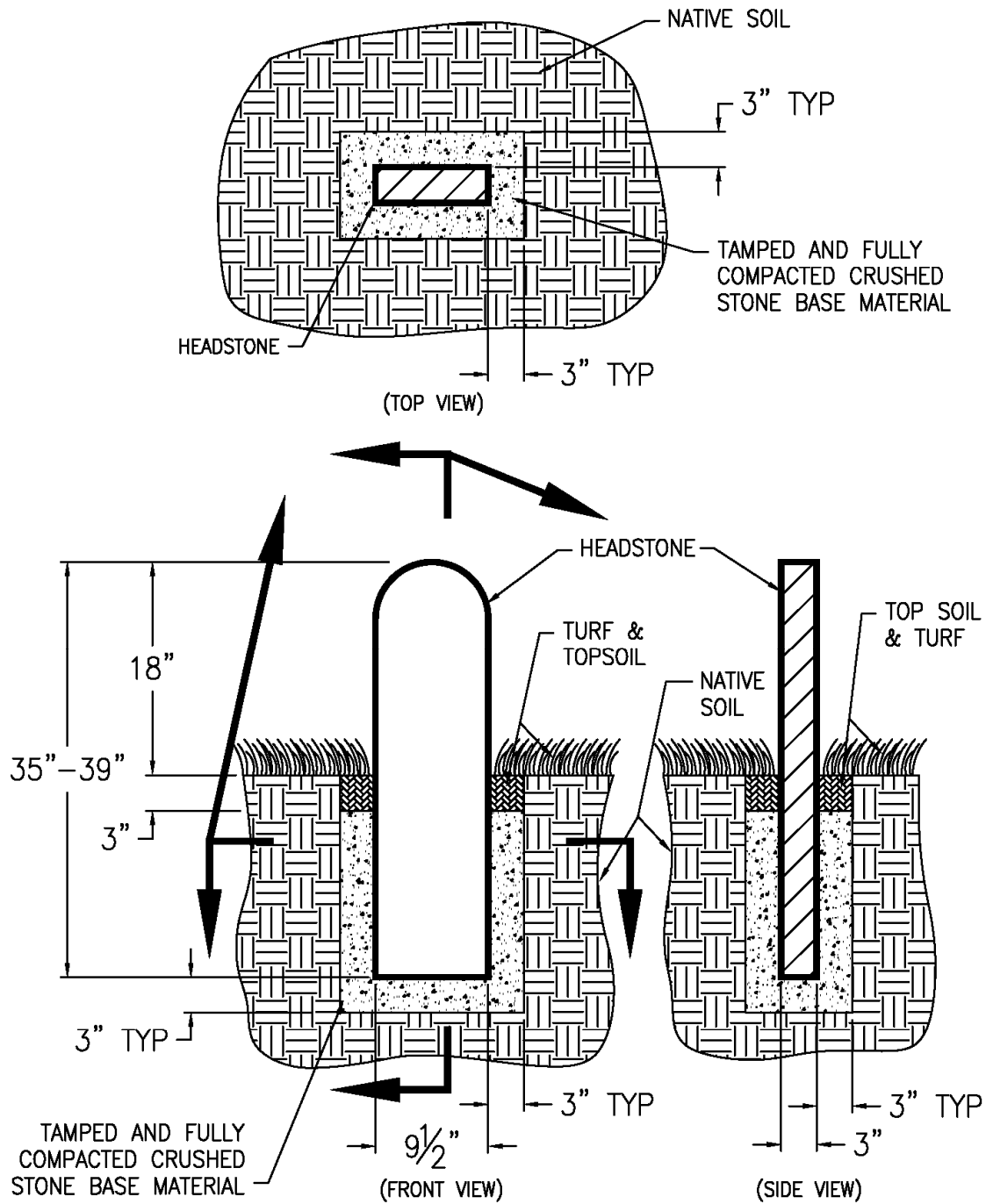
SPECIFICATION EXHIBIT A



INSTALLATION DETAILS

UPRIGHT HEADSTONE

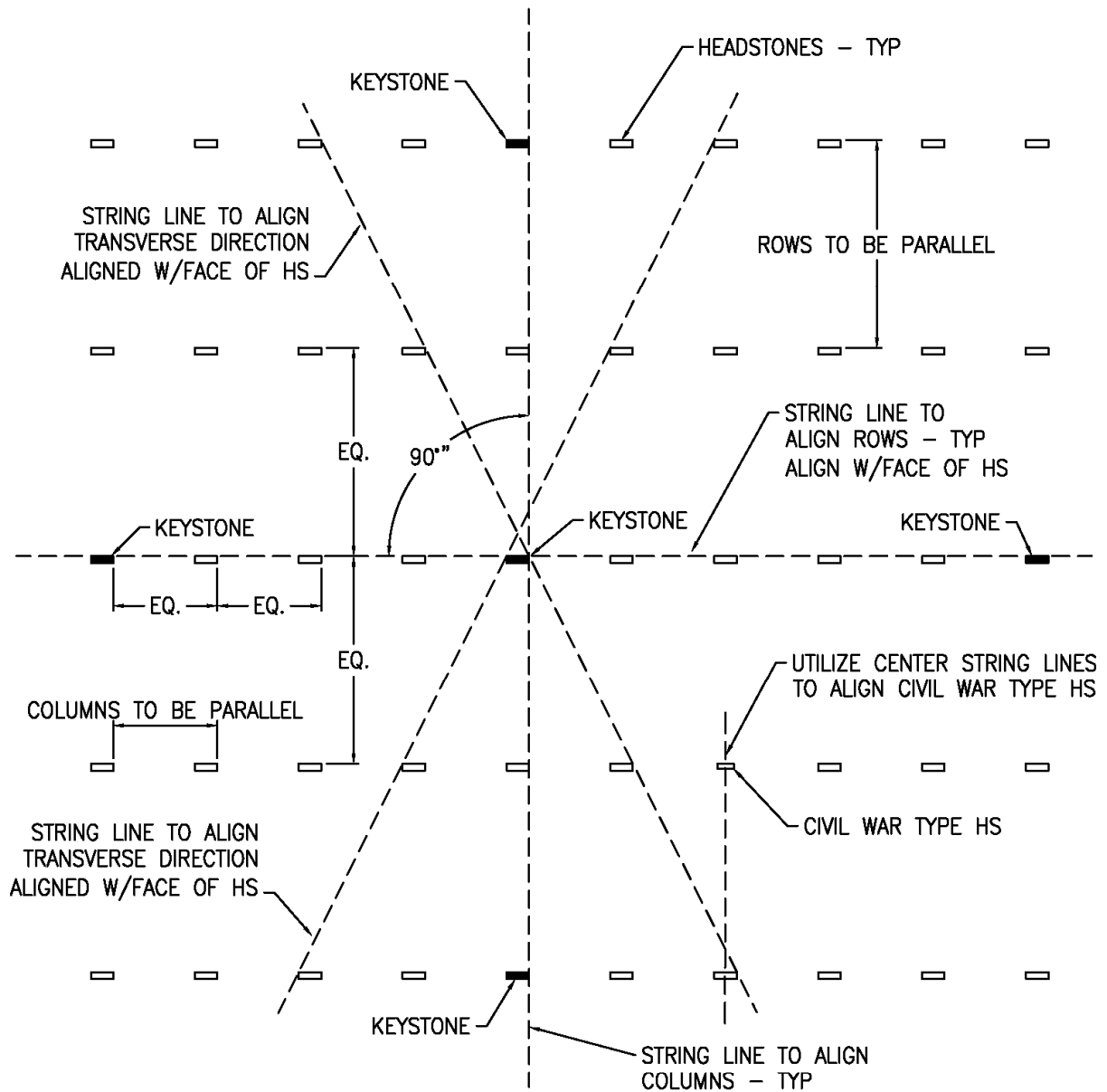
SPECIFICATION EXHIBIT B



INSTALLATION DETAILS

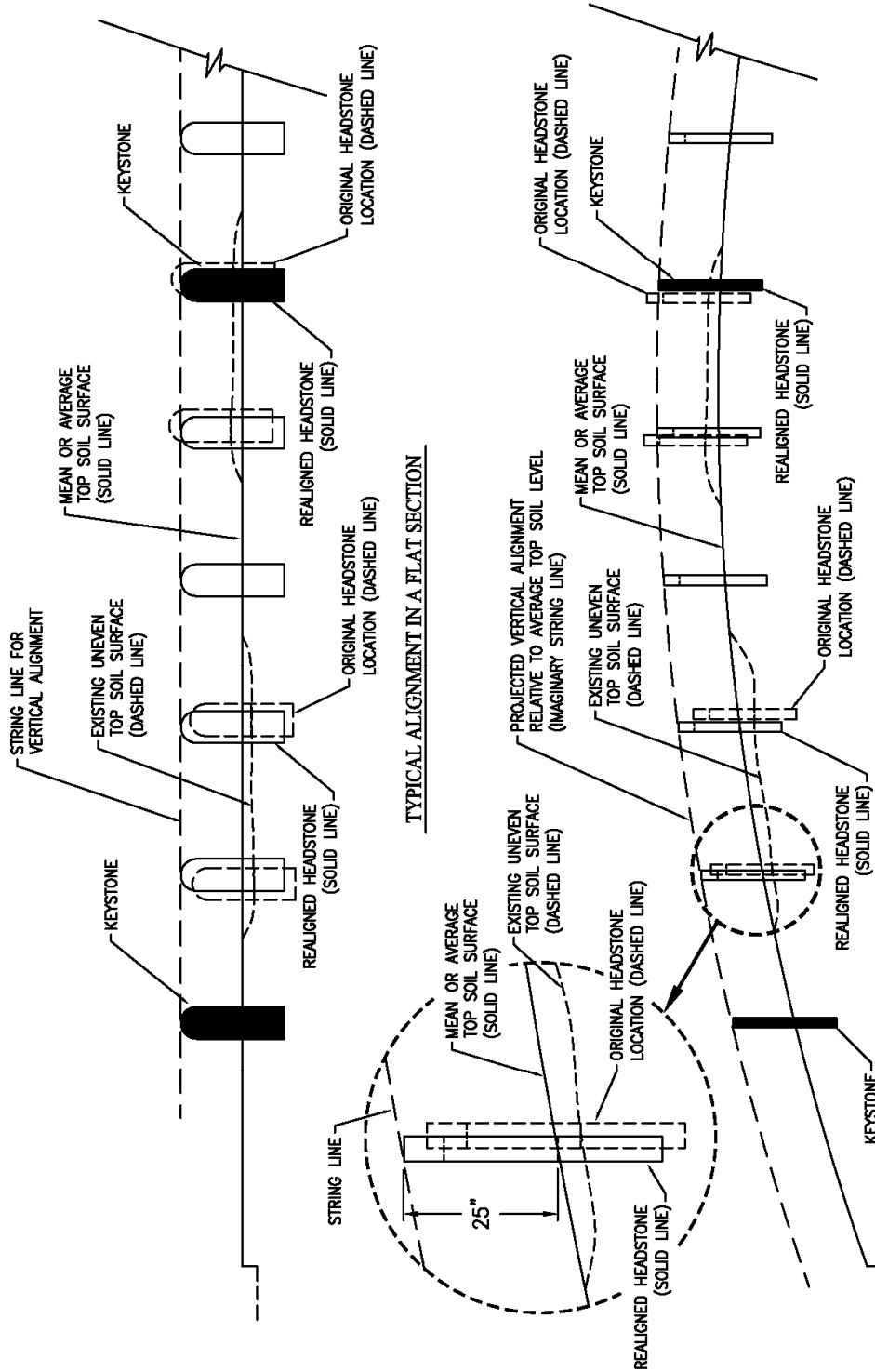
UPRIGHT HEADSTONE
CIVIL WAR TYPE

SPECIFICATION EXHIBIT C



PLAN VIEW
UPRIGHT HEADSTONE
BURIAL SECTION LAYOUT AND REALIGNMENT

SPECIFICATION EXHIBIT D



TYPICAL ALIGNMENT IN A SLOPED SECTION

ELEVATION VIEW
 UPRIGHT HEADSTONE
 BURIAL SECTION LAYOUT AND REALIGNMENT

SPECIFICATION EXHIBIT E

TURFGRASS SPECIFICATIONS AND MOWING HEIGHT REQUIREMENTS

TURFGRASS SPECIFICATIONS			
<p>1. Provide Certified Turfgrass Sod, Premium Grade of the variety/type/blend/mixture as indicated in the Table below.</p> <p>2. Thickness of Cut: Turfgrass sod shall be machine cut at a uniform soil thickness of 0.60 inch (15 mm), plus or minus 0.25 inch (6 mm), at the time of cutting. Measurement for thickness shall exclude top growth and thatch.</p> <p>3. Pad Size: Individual pieces, pads, or rolls of turfgrass sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 0.5 inch (15 mm) on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.</p> <p>4. Strength of Turf Sod Sections: Standard size sections of turfgrass sod shall be strong enough that it can be picked up and handled without damage.</p> <p>5. Moisture Content: Turfgrass sod shall not be harvested or transplanted when its moisture content (excessively dry or wet) may adversely affect its survival.</p> <p>6. Mowing Height: Before harvesting, the turfgrass shall be mowed uniformly at a height of 1 to 2.5 inches (25 to 60 mm) on cool season grasses (i.e., bluegrass, bentgrass, rye and fescue), and 0.75 to 1.50 inches (20 to 40 mm) on warm season grasses (i.e., zoysiagrass, bermudagrass, St. Augustinegrass, etc.).</p> <p>7. Time Limitations: Turfgrass sod shall be harvested, delivered and installed/transplanted within a period of 24 hours, unless a suitable preservation method is approved prior to delivery. Turfgrass sod not transplanted within this period shall be inspected and approved by the inspecting officer or his representative prior to its installation.</p> <p>8. Thatch: Turfgrass sod shall be relatively free of thatch, up to 0.5-inch (15 mm) allowable (uncompressed).</p> <p>9. Diseases, Nematodes and Insects: Turfgrass sod shall be free of diseases, nematodes and soil-borne insects.</p> <p>10. Weeds: Certified, Premium grade turfgrass sod shall be free of objectionable grassy and broad leaf weeds. Certified, Premium grade turfgrass sod shall be considered free of such weeds if the sod contains no more than 2 weeds per 50 square yards of area.</p> <p>11. Delivery and Off-Loading: Turfgrass sod shall be delivered to the site and off-loaded using equipment furnished by the turfgrass sod supply contractor.</p>			
TURFGRASS VARIETY AND MOWING HEIGHT REQUIREMENTS			
Cemetery	Turfgrass Variety	Mowing Height Range	Optimal Mowing Height
Fort Lyon	Bermuda (hybrid) - regionally adaptive	2 to 3 inches	2.5 inches

SECTION D - CONTRACT DOCUMENTS, EXHIBITS, OR ATTACHMENTS

Attachment 1 through Attachment 8

Attachment 1 Cemetery Map

Attachment 2 Work Summary & Progress Report (template)

Attachment 3 Contract Discrepancy Report (CDR) (form)

Attachment 4 Initial Headstone/Marker Raise and Realign Survey (form)

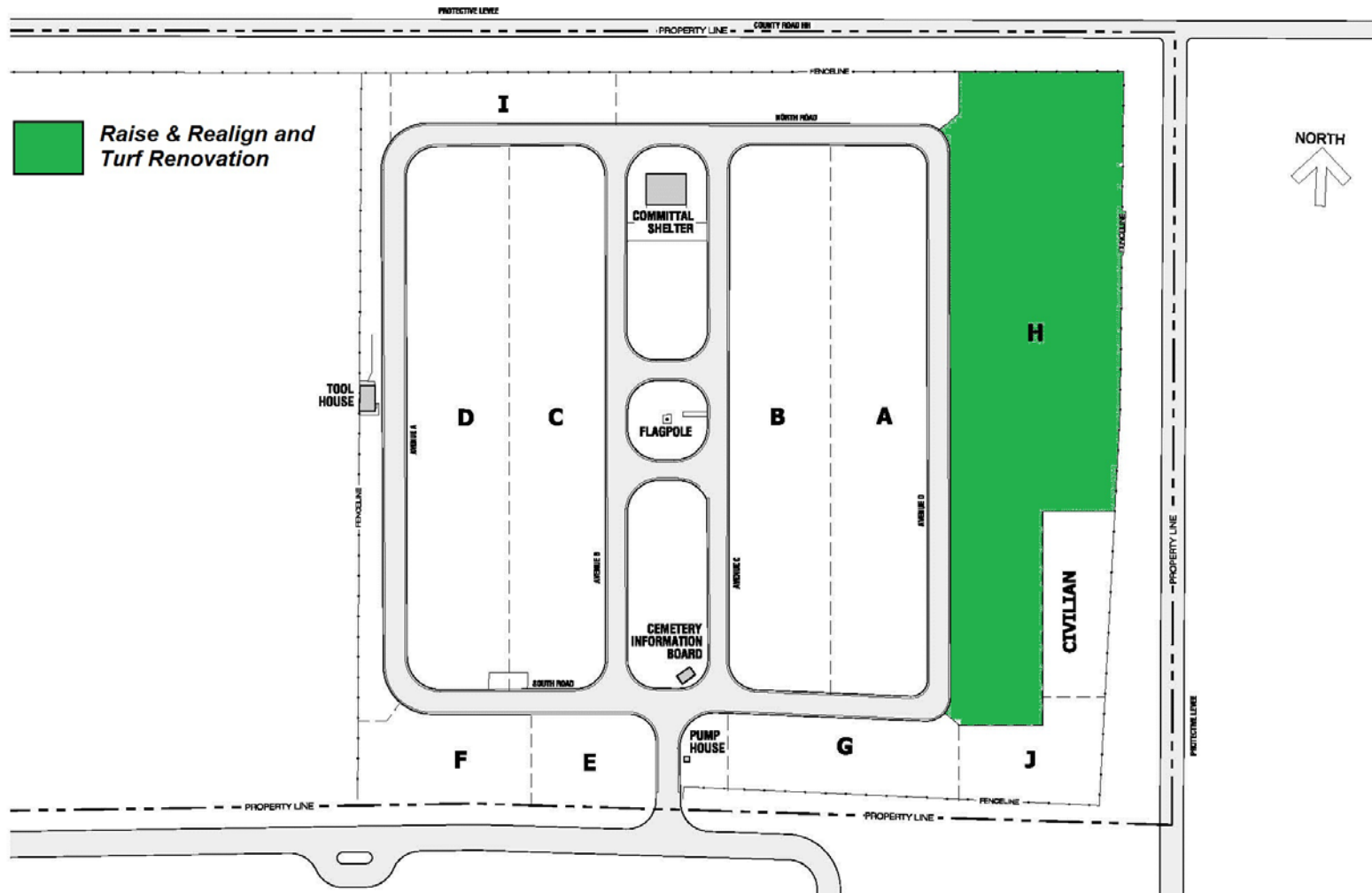
Attachment 5 Daily Headstone/Marker Raise & Realign Verification Survey (form)

Attachment 6 List of References (template)

Attachment 7 Wage Determination No.

Attachment 8 Work Assignment

ATTACHMENT 1 CEMETERY MAP
MAP OF THE
FORT LYON NATIONAL CEMETERY
FORT LYON, COLORADO 80138



ATTACHMENT 2 WORK SUMMARY & PROGRESS REPORT

ATTACHMENT 2A

WORK SUMMARY & PROGRESS REPORT		Period Covered:	From:	To:
Cemetery Location: Fort Lyon National Cemetery		Contractor Information: <hr/> <hr/> <hr/>		
Project Title: Upright Headstone Raise and Realignment				
Contract No:				
<p>Inspection / Acceptance: The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test some or all of the services that have been tendered for acceptance. The Government may require re-performance of nonconforming services at no increase in contract price. The Government shall exercise its post-acceptance rights:</p> <ol style="list-style-type: none"> 1. Within a reasonable time after the defect was discovered or should have been discovered; and 2. Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item. 				
WORK COMPLETED & SUBMITTED FOR ACCEPTANCE (This form is not to be used as an Invoice)				
1	Section keystones have been properly chosen with the approval of the COR in order to achieve a smooth, flowing transition between the rows and columns. Keystones have been set in accordance with the requirements using a licensed surveyor.	No. of Keystones & Section #'s:		
		Date Completed:		
2	Upright headstone sockets are dug with a 3" minimum clearance on all four sides and the bottom of the headstone to meet the height and alignment requirements. Sockets are clean and free of loose dirt and debris. The crushed stone base material has been added to the correct level and fully compacted.	Quantity & Section #'s:		
		Date Completed:		
3	Upright headstones in burial sections are uniform in height (25") above ground (20" for older/smaller headstones), horizontally and vertically plumb, with inscriptions visible, and installed to ensure a pleasing top line while compensating for irregular terrain (sloping and uneven ground). Transverse and lateral alignment is within the maximum allowable tolerance of 1/8" and vertical alignment is within one degree of fully vertical when measured on front and sides using a digital level. COR has randomly sampled the headstones to verify height and alignment.	Quantity & Section #'s:		
		Date Completed:		
4	Completed raised and realigned headstones in all soil and terrain conditions are firmly set in place so that the headstones are rigid with no give or play. COR has randomly checked to assure headstones are firmly set in place.	Section Numbers:		
		Date Completed:		
5	Headstones otherwise present a neat overall appearance in a line vertically, laterally & transversely and provide a uniformly flowing transition throughout the Section and with adjoining Sections.	Section Numbers:		
		Date Completed:		
6	Headstones have been cleaned in accordance with the contract requirements.	Quantity & Section #'s:		
		Date Completed:		

Report below any circumstances which may have adversely affected work progress such as weather, strikes, delays by the Government, etc.			
<hr/> <hr/> <hr/> <hr/>			
Signature of Contractor:	Date Signed	Signature of Cemetery Director / COR	Date Signed
<i>Note: Contractor shall sign confirming that services indicated have been completed. Government shall also sign in acknowledgment of receipt of the Progress Report.</i>			

Duplicate Form as Necessary

ATTACHMENT 2B

WORK SUMMARY & PROGRESS REPORT	Period Covered:	From:	To:
Cemetery Location: Fort Lyon National Cemetery	Contractor Information: _____ _____ _____		
Project Title: Turf Renovation			
Contract No:			

Inspection / Acceptance: The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test some or all of the services that have been tendered for acceptance. The Government may require re-performance of nonconforming services at no increase in contract price. The Government shall exercise its post-acceptance rights:

1. Within a reasonable time after the defect was discovered or should have been discovered; and
2. Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

WORK COMPLETED & SUBMITTED FOR ACCEPTANCE

(This form is not to be used as an Invoice)

1	Contractor shall inventory, remove, and store all irrigation heads and cap head risers within the limits of work with a copy of the inventoried equipment and materials provided to the COR. Exposed components, risers, valve boxes, quick couplers, etc. have been protected.	Quantity & Section #'s:	
		Date Completed:	
2	The entire vegetated area has been treated with an application of a non-selective herbicide by a licensed pesticide applicator. A minimum of 10 to 14 days has elapsed for the herbicide to fully translocate throughout all plant parts. The COR confirms that all vegetation in the treated area is completely dead.	Quantity & Section #'s:	
		Date Completed:	
3	The entire treated area has been power raked or verti-cut and all residual plant debris including thatch has been removed.	Quantity & Section #'s:	
		Date Completed:	
4	Turfgrass fertilizer has been applied and roto-tilled to a minimum depth of 6 inches to uniformly mix fertilizer with the topsoil and to loosen top surface for re-grading and leveling.	Quantity & Section #'s:	
		Date Completed:	
5	Topsoil has been graded, leveled, and compacted to achieve a finished appearance that is smooth, uniformly level, and free of all surface ripples, depressions, high spots, low areas, and ridges. The finish grade is a maximum of 1 inch below the adjoining grade of any surfaced area and is nominally 26 inches below the top of all upright headstones unless otherwise approved by the COR.	Quantity & Section #'s:	
		Date Completed:	
6	All irrigation components and sprinkler heads have been re-installed to finish grade and adjusted to provide full coverage with the best distribution uniformity.	Quantity & Section #'s:	
		Date Completed:	
7	All turfgrass sod has been installed using certified sod as specified. Sod pieces are not stretched or overlapped and that all joints are butted tightly to prevent voids that would cause air drying of the roots and to prevent weed growth.	Quantity & Section #'s:	
		Date Completed:	
8	All turfgrass is completely established and ready for final acceptance. All turfgrass is uniform in color, leaf texture, and shoot density. Turfgrass is reasonably free of weeds, diseases and other visible imperfections. The turfgrass has been mowed at least three times. Areas void of turfgrass greater than one square foot and larger have been replanted and re-established.	Quantity & Section #'s:	
		Date Completed:	

Report below any circumstances which may have adversely affected work progress such as weather, strikes, delays by the Government, etc.			
<hr/> <hr/>			
Signature of Contractor:	Date Signed	Signature of Cemetery Director / COR	Date Signed
<i>Note: Contractor shall sign confirming that services indicated have been completed. Government shall also sign in acknowledgment of receipt of the Progress Report.</i>			

Duplicate Form as Necessary

ATTACHMENT 3 CONTRACT DISCREPANCY REPORT (CDR)

CONTRACT DISCREPANCY REPORT				
Contract Number:		Report No. for this Discrepancy:		
To: (Contractor/Manager's Name)		From: (Name of COR)		
5. Dates				
5a. Prepared:	5b. Returned by Contractor:	5c. Action Complete:		
Discrepancy or Problem: (Describe in detail. Include reference to PWS Directive; attach additional sheet if necessary.) _____ _____ _____ _____				
Signature of Contracting Officer or COR:				
8a. To: (Contracting Officer and/or COR)		8b. From: (Contractor)		
9. Contractor Response as to Cause, Corrective Action and Actions to Prevent Recurrence: (attach additional sheet if necessary.) _____ _____ _____				
10a. Signature of Contractor Representative:			10b. Date:	
11. Government Evaluation: (Acceptance, partial acceptance, reflection; attach additional sheet if necessary.) _____ _____ _____				
12. Government Actions: (Reduced payment, cure notice, show cause, other) _____ _____ _____				
13. Close Out				
	Name	Title	Signature	Date
Contractor Notified				
b. COR				
c. CO				

ATTACHMENT 4 INITIAL HEADSTONE/MARKER RAISE & REALIGN SURVEY

Station Number: _____ Date: _____

Cemetery: _____ Cemetery Director: _____

Contracting Officers Representative: _____

Instructions: The Contracting Officer's Representative (COR) /Cemetery Director/Cemetery Foreman/ Work Leader/designee MUST conduct an initial survey of ALL headstones/markers included in the scope of work (SOW) before any work is performed. The COR/Cemetery Director/Cemetery Foreman/Cemetery Work Leader/designee will use the Burial Register Report and the Gravesite Layout Map(s) for the initial survey.

Discrepancy/Issue Identified: Y/N _____ Date: _____

All discrepancies/issues resolved Y/N _____ Date: _____

I certify that the Initial Headstone/Marker verification survey was completed by the COR/Cemetery Director/Foreman or Work Leader/designee. The Burial Register Report and the Gravesite Layout Map for the Cemetery and sections listed in the SOW were used to complete the survey.

COR/Director/Foreman/Work Leader/designee Signature: _____

Date: _____

Prior to the completion of the workday, a Daily Headstone/Marker R&R Verification Survey MUST be completed by the COR/Cemetery Director/Cemetery Foreman/Work Leader/designee utilizing the same Burial Register Report and Gravesite Layout Map as used in the initial survey for ALL completed work.

**ATTACHMENT 5 DAILY HEADSTONE/MARKER RAISE & REALIGN
VERIFICATION SURVEY**

Station Number: _____

Date: _____

Cemetery: _____

Cemetery Director: _____

COR: _____

Instructions: Prior to the completion of the workday, the Cemetery Director/COR/Foreman/Work Leader/designee MUST perform a re-verification survey for ALL completed work of headstones/markers included in the scope of work. The Cemetery Director/COR/Foreman/Work Leader/designee will use the original Burial Register Report and Gravesite Layout Map used for the Initial Verification Survey.

List Sections and Headstones/Markers R&R: _____

List discrepancy/issue: _____

All discrepancies/issues resolved: Y/N _____

Cemetery Director/COR/Foreman/ Work Leader/designee informed MSN Director and Contracting Officer of all unresolved discrepancies/issues: Y/N _____

By signing below, I certify the Headstone/Marker re-verification survey was completed.

Daily Headstone Verification:

Date: _____

Time Completed: _____

COR/Director/Foreman/Work Leader/designee Signature: _____

ATTACHMENT 6 LIST OF REFERENCES

EXPERIENCE – LIST OF REFERENCES: List below references for which you performed like or similar services. (Performed services at like dollar values, degree of work, amount of area serviced, type of grounds maintenance service).

Contract Title & Number: _____
Installation _____ /Address: _____

Dollar Amount: \$ _____
Point of Contact: _____
POC Title: _____ Phone: _____
E-mail: _____

=====
Contract Title & Number: _____
Installation _____ /Address: _____

Dollar Amount: \$ _____
Point of Contact: _____
POC Title: _____ Phone: _____
E-mail: _____

=====
Contract Title & Number: _____
Installation _____ /Address: _____

Dollar Amount: \$ _____
Point of Contact: _____
POC Title: _____ Phone: _____
E-mail: _____

=====
Contract Title & Number: _____
Installation _____ /Address: _____

Dollar Amount: \$ _____
Point of Contact: _____
POC Title: _____ Phone: _____
E-mail: _____

=====
List any company employees who had experience on above jobs planned to be involved on this contract and list the extent of their involvement.

Describe how and to what extent that your previous experience benefits the requirements of this contract. Be specific and address all the major work requirements of the contract.

ATTACHMENT 7 WAGE DETERMINATION NO.

ATTACHMENT 8 WORK ASSIGNMENT

FORT LYON NATIONAL CEMETERY

CONTRACT NUMBER: _____ TASK ORDER NUMBER: _____

Date of Assignment: _____

Contractor: _____

PERIOD OF PERFORMANCE: From: _____ To: _____

CONTRACT LINE ITEM NUMBER (CLIN)(s):

CLIN: _____

Description/Section: _____

Quantity: _____

CLIN: _____

Description/Section: _____

Estimated Quantity: _____

CLIN: _____

Description/Section: _____

Estimated Quantity: _____

Contracting Officer's Representative

Date

Contractors Authorizing Official

Date

After Work Assignment is signed, forward a copy to the Contracting Officer for recording purposes. The Work Assignment is considered in-scope technical direction against the contract and Task Order shown above. The Work Assignment does not alter the terms of the contract or Task Order. The COR has verified the anticipated value of the assigned efforts is available on the applicable task order.