ST PETERSBURG VA REGIONAL OFFICE 9500 BAY PINES BLVD ST PETERSBURG, FL

STATEMENT OF WORK (SOW)

Bathroom Renovation St Petersburg VA Regional Office 12/14/2016

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1.1 INTRODUCTION

The St Petersburg VA Regional Office (VARO) intends to award a Firm Fixed-Priced Contract for the required bathroom piping replacement and repair as stated in the Statement of Work (SOW).

1.2 BACKGROUND

The St. Petersburg VA Regional Office has experienced on-going plumbing issues. The toilets on the East side of the building have consistently backed up and over flowed. The local plumbing maintenance department has snaked the waste lines numerous times correcting the problem only temporarily. In addition the maintenance department has conducted a video camera waste line inspection in an effort to identify any blockage in the sanitary waste line. No obvious blockage was discovered. It is therefore believed the horizontal carrier line in the wall may not be at the correct pitch.

1.3 SCOPE

Contractor will remove privacy partitions as well as toilet fixtures ensuring all partitions and plumbing fixtures are not damaged as they will be reinstalled. The contractor is responsible for storing all bathroom material and fixtures. A sufficient portion of the ceramic wall must be removed in order to expose the existing carrier line. The carrier line is to be removed and replaced with a new carrier line at the correct pitch ensuring waste is removed efficiently. Once the carrier line has been replaced the ceramic wall will be replaced to original design and all plumbing fixtures as well as privacy partitions will be replaced to original, like new condition. All plumbing fixtures will installed / replaced with new automatic, hands free flushing devices. New mirrors and automatic soap dispensers will be installed. All damaged tile will be replaced. All bathrooms will be returned to original / like new condition.

1.3.1 GENERAL - COMMON WORK RESULTS FOR PLUMBING

1.3.1.1 Applicable Publications

A. The publications listed below shall form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society of Mechanical Engineers (ASME):

ASME Boiler and Pressure Vessel Code -

BPVC Section IX-2013 Welding, Brazing, and Fusing Qualifications

B31.1-2012 Power Piping

C. American Society for Testing and Materials (ASTM):

A36/A36M-2012 Standard Specification for Carbon Structural Steel

A575-96(R2013)e1 Standard Specification for Steel Bars, Carbon, Merchant Quality, M-Grades

E84-2013a Standard Test Method for Surface Burning Characteristics of Building Materials

E119-2012a Standard Test Methods for Fire Tests of Building Construction and Materials

F1760-01(R2011) Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content

D. International Code Council, (ICC):

IBC-2012 International Building Code

IPC-2012 International Plumbing Code

E. Manufacturers Standardization Society (MSS) of the Valve and Fittings Industry, Inc.:

SP-58-2009 Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application and Installation

SP-69-2003 Pipe Hangers and Supports - Selection and Application

F. Military Specifications (MIL):

P-21035B Paint High Zinc Dust Content, Galvanizing Repair (Metric)

G. National Electrical Manufacturers Association (NEMA):

MG 1-2011 Motors and Generators

H. National Fire Protection Association (NFPA):

51B-2014 Standard for Fire Prevention During Welding, Cutting and Other Hot Work

54-2012 National Fuel Gas Code

70-2014 National Electrical Code (NEC)

I. NSF International (NSF):

5-2012 Water Heaters, Hot Water Supply Boilers, and Heat Recovery Equipment

14-2012 Plastic Piping System Components and Related Materials

61-2012 Drinking Water System Components Health Effects

372-2011 Drinking Water System Components Lead Content

J. Department of Veterans Affairs (VA):

PG-18-10 Plumbing Design Manual

PG-18-13-2011 Barrier Free Design Guide

1.3.1.2 Submittals

Refer to Articles titled SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FAR 52.236-21) and, SPECIAL NOTES (VAAR 852.236-91), in GENERAL CONDITIONS.

For the purposes of this contract, samples, test reports, certificates, and manufacturers' literature and data shall also be subject to the previously referenced requirements. The following text refers to all items collectively as SUBMITTALS.

Submit for approval, all of the items specifically mentioned under the separate sections of the specification, with information sufficient to evidence full compliance with contract requirements. Materials, fabricated articles and the like to be installed in permanent work shall equal those of approved submittals. After an item has been approved, no change in brand or make will be permitted unless:

A. Satisfactory written evidence is presented to, and approved by Contracting Officer, that manufacturer cannot make scheduled delivery of approved item or;

B. Item delivered has been rejected and substitution of a suitable item is an urgent necessity or;

C. Other conditions become apparent which indicates approval of such substitute item to be in best interest of the Government.

Forward submittals in sufficient time to permit proper consideration and approval action by Government. Time submission to assure adequate lead time for procurement of contract - required items. Delays attributable to untimely and rejected submittals will not serve as a basis for extending contract time for completion.

Submittals will be reviewed for compliance with contract requirements by the COR, and action thereon will be taken by Resident Engineer (TBD) on behalf of the Contracting Officer.

Upon receipt of submittals, COR will assign a file number thereto. Contractor, in any subsequent correspondence, shall refer to this file and identification number to expedite replies relative to previously approved or disapproved submittals.

The Government reserves the right to require additional submittals, whether or not particularly mentioned in this contract. If additional submittals beyond those required by the contract are furnished pursuant to request therefor by Contracting Officer, adjustment in contract price and time will be made in accordance with Articles titled CHANGES (FAR 52.243-4) and CHANGES - SUPPLEMENT (VAAR 852.236-88) of the GENERAL CONDITIONS.

Schedules called for in specifications and shown on shop drawings shall be submitted for use and information of Department of Veterans Affairs. However, the Contractor shall assume responsibility for coordinating and verifying schedules. The Contracting Officer and COR assumes no responsibility for checking schedules or layout drawings for exact sizes, exact numbers and detailed positioning of items.

Submittals must be submitted by Contractor only via e-mail or shipped prepaid. Contracting Officer assumes no responsibility for checking quantities or exact numbers included in such submittals.

A. Submit samples required by Paragraph 1.3.1 COMMON WORK RESULTS FOR PLUMBING", in duplicate; other samples in single units unless otherwise specified. Submit shop drawings, schedules, manufacturers' literature and data, and certificates in duplicate.

B. Submittals will receive consideration only when covered by a transmittal letter signed by Contractor. Letter shall be sent via e-mail to the COR/ccCO and shall contain the list of items, name of St Petersburg VA Regional Office,9500 Bay Pines Blvd, St Petersburg, FL 33708, name of Contractor, contract number, applicable specification paragraph numbers, applicable drawing numbers (and other information required for exact identification of location for each item), manufacturer and brand, ASTM or Federal Specification Number (if any) and such additional information as may be required by specifications for particular item being furnished. In addition, catalogs shall be marked to indicate specific items submitted for approval.

1. A copy of letter must be enclosed with items, and any items received without identification letter will be considered "unclaimed goods" and held for a limited time only.

2. Each sample, certificate, manufacturers' literature and data shall be labeled to indicate the name and location of the St Petersburg VA Regional Office, 9500 Bay Pines Blvd, St Petersburg, FL 33708, name of Contractor, manufacturer, brand, contract number and ASTM or Federal Specification Number as applicable and location(s) on project.

3. Required certificates shall be signed by an authorized representative of manufacturer or supplier of material, and by Contractor.

D. If submittal samples have been disapproved, resubmit new samples as soon as possible after notification of disapproval. Such new samples shall be marked "Resubmitted Sample" in addition to containing other previously specified information required on label and in transmittal letter.

E. Approved samples will be kept on file at the site until completion of contract, at which time such samples will be delivered to Contractor as Contractor's property. Where noted in technical sections of specifications, approved samples in good condition may be used in their proper locations in contract work. At completion of contract, samples that are not approved will be returned to Contractor only upon request and at Contractor's expense. Such request should be made prior to completion of the contract. Disapproved samples that are not requested for return by Contractor will be discarded after completion of contract.

F. Submittal drawings (shop, erection or setting drawings) and schedules, required for work of various trades, shall be checked before submission by technically qualified employees of Contractor for accuracy, completeness and compliance with contract requirements. These drawings and schedules shall be stamped and signed by Contractor certifying to such check.

1. For each drawing required, submit one legible photographic paper or vellum reproducible along with one AUTOCAD (2014) file.

2. Reproducible shall be full size.

3. Each drawing shall have marked thereon, proper descriptive title, including St Petersburg VA Regional Office, 9500 Bay Pines Blvd, St Petersburg, FL 33708, project number VB3210, manufacturer's number, reference to contract drawing number, detail Section Number, and Specification Section Number.

4. A space 120 mm by 125 mm (4-3/4 by 5 inches) shall be reserved on each drawing to accommodate approval or disapproval stamp.

5. Submit drawings, ROLLED WITHIN A MAILING TUBE, fully protected for shipment.

6. One reproducible print of approved or disapproved shop drawings will be forwarded to Contractor.

7. One AUTOCAD 14 version of each shop drawing will be provided to the COR

8. When work is directly related and involves more than one trade, shop drawings shall be submitted to Architect-Engineer under one cover.

1.3.1.4.10. Samples, shop drawings, test reports, certificates and manufacturers' literature and data, shall be submitted for approval to:

St Petersburg VA Regional Office

ATTN: SSD, COR Project VB3210

9500 Bay Pines Blvd

St. Petersburg, FL 33708

1.3.1.3 Shop Drawings

A. Contractor shall make all necessary field measurements and investigations to assure that the equipment and assemblies will meet contract requirements and will fit the space available.

B. If equipment is submitted which differs in arrangement from that shown, provide drawings that show the rearrangement of all associated systems. Approval will be given only if all features of the equipment and associated systems, including accessibility, are equivalent to that required by the contract.

C. Prior to submitting shop drawings for approval, contractor shall certify in writing that manufacturers of all major items of equipment have each reviewed drawings and specifications, and have jointly coordinated and properly integrated their equipment and controls to provide a complete and efficient installation.

D. Installing Contractor shall provide lists of previous installations for selected items of equipment. Contact persons who will serve as references, with telephone numbers and e-mail addresses shall be submitted with the references.

E. Submittals and shop drawings for interdependent items, containing applicable descriptive information, shall be furnished together and complete in a group. Coordinate and properly integrate materials and equipment in each group to provide a completely compatible and efficient installation. Final review and approvals will be made only by groups.

F. Coordination Drawings: Complete consolidated and coordinated layout drawings shall be submitted for all new systems, and for existing systems that are in the same areas. The drawings shall include plan views, elevations and sections of all systems and shall be on a scale of not less than 1:32 (3/8 inch equal to one foot). Clearly identify and dimension the proposed locations of the principal items of equipment. The drawings shall clearly show the proposed location and adequate clearance for all equipment, controls, piping, pumps, valves and other items. All valves, trap primer valves, water hammer arrestors, strainers, and equipment requiring service shall be provided with an access door sized for the complete removal of plumbing device, component, or equipment. Equipment foundations shall not be installed until equipment or piping layout drawings have been approved. Detailed layout drawings shall be provided for all piping systems. In addition, details of the following shall be provided.

- 1. Mechanical equipment rooms.
- 2. Interstitial space.
- 3. Hangers, inserts, supports, and bracing.
- 4. Pipe sleeves.

5. Equipment penetrations of floors, walls, ceilings, or roofs.

6. O&M Manuals shall be submitted for content review as part of closeout documents.

1.3.1.4 Quality Assurance

A. Products Criteria:

1. Standard Products: Material and equipment shall be the standard products of a manufacturer regularly engaged in the manufacture, supply and servicing of the specified products for at least 5 years. However, digital electronics devices, software and systems such as controls, instruments, computer work station, shall be the current generation of technology and basic design that has a proven satisfactory service record of at least 5 years.

2. Equipment Service: If applicable there shall be permanent service organizations, authorized and trained by manufacturers of the equipment supplied, located within 160 km (100 miles) of the project. These organizations shall come to the site and provide acceptable service to restore operations within four hours of receipt of notification by phone, e-mail or fax in event of an emergency, such as the shut-down of equipment; or within 24 hours in a non-emergency. Names, mail and e-mail addresses and phone numbers of service organizations providing service under these conditions for (as applicable to the project): pumps, compressors, water heaters, critical instrumentation, computer workstation and programming shall be submitted for project record and inserted into the operations and maintenance manual.

3. All items furnished shall be free from defects that would adversely affect the performance, maintainability and appearance of individual components and overall assembly.

4. The products and execution of work specified in Division 22, Plumbing, VA Master Specifications (PG-18-1) shall conform to the referenced codes and standards as required by the specifications. Local codes and amendments enforced by the local code official shall be enforced, if required by local authorities such as the natural gas supplier. If the local codes are more stringent, then the local code shall apply. Any conflicts shall be brought to the attention of the Contracting Officers Representative (COR).

5. Multiple Units: When two or more units of materials or equipment of the same type or class are required, these units shall be products of one manufacturer.

6. Assembled Units: Manufacturers of equipment assemblies, which use components made by others, assume complete responsibility for the final assembled product.

7. Nameplates: Nameplate bearing manufacturer's name or identifiable trademark shall be securely affixed in a conspicuous place on equipment, or name or trademark cast integrally with equipment, stamped or otherwise permanently marked on each item of equipment.

8. Asbestos products or equipment or materials containing asbestos shall not be used.

9. Bio-Based Materials: For products designated by the USDAs Bio-Preferred Program, provide products that meet or exceed USDA recommendations for biobased content, so long as products meet all performance requirements in this

specifications section. For more information regarding the product categories covered by the Bio-Preferred Program, visit <u>http://www.biopreferred.gov</u>.

B. Welding: Before any welding is performed, contractor shall submit a certificate certifying that welders comply with the following requirements:

1. Qualify welding processes and operators for piping according to ASME "Boiler and Pressure Vessel Code", Section IX, "Welding and Brazing Qualifications".

2. Comply with provisions of ASME B31 series "Code for Pressure Piping".

3. Certify that each welder and welding operator has passed American Welding Society (AWS) qualification tests for the welding processes involved, and that certification is current.

4. All welds shall be stamped according to the provisions of the American Welding Society.

C. Manufacturer's Recommendations: Where installation procedures or any part thereof are required to be in accordance with the recommendations of the manufacturer of the material being installed, printed copies of these recommendations shall be furnished to the COR prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

D. Execution (Installation, Construction) Quality:

1. All items shall be applied and installed in accordance with manufacturer's written instructions. Conflicts between the manufacturer's instructions and the contract documents shall be referred to the COR for resolution. Printed copies or electronic files of manufacturers installation instructions shall be provided to the COR at least 10 working days prior to commencing installation of any item.

2. All items that require access, such as for operating, cleaning, servicing, maintenance, and calibration, shall be easily and safely accessible by persons standing at floor level, or standing on permanent platforms, without the use of portable ladders. Examples of these items include, but are not limited to: all types of valves, filters and strainers, transmitters, and control devices. Prior to commencing installation work, refer conflicts between this requirement and contract documents to COR for resolution.

SPEC WRITER NOTE: Copy Paragraph "3 below onto the "PL or PP schedule sheet contract drawings.

3. Complete layout drawings shall be required by Paragraph, SUBMITTALS. Construction work shall not start on any system until the layout drawings have been approved by VA.

4. Installer Qualifications: Installer shall be licensed and shall provide evidence of the successful completion of recent and relevant projects of equal or greater size and complexity. Provide tradesmen skilled in the appropriate trade.

5. If an installation does not meet the specifications as described in the SOW, the Contractor shall correct the installation at no additional cost or additional time to the Government.

E. Guaranty: Warranty of Construction, FAR clause 52.246-21.

F. Plumbing Systems: IPC, International Plumbing Code. Unless otherwise required herein, perform plumbing work in accordance with the latest version of the IPC. For IPC codes referenced in the contract documents, advisory provisions shall be considered mandatory, the word "should/shall be interpreted as "shall. Reference to the "code official or "owner shall be interpreted to mean the COR.

G. Cleanliness of Piping and Equipment Systems:

1. Care shall be exercised in the storage and handling of equipment and piping material to be incorporated in the work. Debris arising from cutting, threading and welding of piping shall be removed.

2. Piping systems shall be flushed, blown or pigged as necessary to deliver clean systems.

3. The interior of all tanks shall be cleaned prior to delivery and beneficial use by the Government. All piping shall be tested in accordance with the specifications and the International Plumbing Code (IPC). All filters, strainers, fixture faucets shall be flushed of debris prior to final acceptance.

4. Contractor shall be fully responsible for all costs, damage, and delay arising from failure to provide clean systems.

1.3.1.5 Delivery, Storage and Handling

A. Protection of Equipment:

1. Equipment and material placed on the job site shall remain in the custody of the Contractor until phased acceptance, whether or not the Government has reimbursed the Contractor for the equipment and material. The Contractor is

solely responsible for the protection of such equipment and material against any damage.

2. Damaged equipment shall be replaced with an identical unit as determined and directed by the COR. Such replacement shall be at no additional cost or additional time to the Government.

3. Interiors of new equipment and piping systems shall be protected against entry of foreign matter. Both inside and outside shall be cleaned before painting or placing equipment in operation.

4. Existing equipment and piping being worked on by the Contractor shall be under the custody and responsibility of the Contractor and shall be protected as required for new work.

1.3.1.6 As-Build Documentation

A. Submit manufacturers literature and data updated to include submittal review comments and any equipment substitutions. O& M manuals shall be submitted for content review as part of the close-out documents.

B. Submit operation and maintenance data updated to include submittal review comments, substitutions and construction revisions shall be inserted into a three ring binder. All aspects of system operation and maintenance procedures, including piping isometrics, wiring diagrams of all circuits, a written description of system design, control logic, and sequence of operation shall be included in the operation and maintenance manual. The operations and maintenance manual shall include troubleshooting techniques and procedures for emergency situations. Notes on all special systems or devices such as damper and door closure interlocks shall be included. A List of recommended spare parts (manufacturer, model number, and quantity) shall be furnished. Information explaining any special knowledge or tools the owner will be required to employ shall be inserted into the As-Built documentation.

C. The installing contractor shall maintain as-built drawings of each completed phase for verification; and, shall provide the complete set at the time of final systems certification testing. As-built drawings are to be provided, and a copy of them on Auto-Cad version 2014 provided on compact disk or DVD. Should the installing contractor engage the testing company to provide as-built or any portion thereof, it shall not be deemed a conflict of interest or breach of the third party testing company requirement.

D. Certification documentation shall be provided prior to submitting the request for final inspection. The documentation shall include all test results, the names of individuals performing work for the testing agency on this project, detailed procedures followed for all tests, and a certification that all results of tests were within limits specified.

1.3.2 PRODUCTS

1.3.2.1 Materials for various services

A. Steel pipe shall contain a minimum of 25 percent recycled content.

B. Solder or flux containing lead shall not be used with copper pipe.

C. Material or equipment containing a weighted average of greater than 0.25 percent lead shall not be used in any potable water system intended for human consumption, and shall be certified in accordance with NSF 61 or NSF 372.

D. In-line devices such as water meters, building valves, check valves, stops, valves, fittings, tanks and backflow preventers shall comply with NSF 61 and NSF 372.

E. End point devices such as drinking fountains, lavatory faucets, kitchen and bar faucets, ice makers supply stops, and end-point control valves used to dispense drinking water must meet requirements of NSF 61 and NSF 372.

1.3.2.2 Factory-assembled products

A. Standardization of components shall be maximized to reduce spare part requirements.

B. Manufacturers of equipment assemblies that include components made by others shall assume complete responsibility for final assembled unit.

1. All components of an assembled unit need not be products of same manufacturer.

2. Constituent parts that are alike shall be products of a single manufacturer.

3. Components shall be compatible with each other and with the total assembly for intended service.

4. Contractor shall guarantee performance of assemblies of components, and shall repair or replace elements of the assemblies as required to deliver specified performance of the complete assembly at no additional cost or time to the Government.

C. Components of equipment shall bear manufacturer's name and trademark, model number, serial number and performance data on a name plate securely affixed in a conspicuous place, or cast integral with, stamped or otherwise permanently marked upon the components of the equipment.

D. Major items of equipment, which serve the same function, shall be the same make and model.

1.3.2.3 Compatibility of related equipment

A. Equipment and materials installed shall be compatible in all respects with other items being furnished and with existing items so that the result will be a complete and fully operational system that conforms to contract requirements.

B. Valve Tags and Lists:

1. Plumbing: All valves shall be provided with valve tags and listed on a valve list (Fixture stops not included).

2. Valve tags: Engraved black filled numbers and letters not less than 15 mm (1/2 inch) high for number designation, and not less than 8 mm (1/4 inch) for service designation on 19 gage, 40 mm (1-1/2 inches) round brass disc, attached with brass "S" hook or brass chain.

3. Valve lists: Valve lists shall be created using a word processing program and printed on plastic coated cards. The plastic coated valve list card(s), sized 215 mm (8-1/2 inches) by 275 mm (11 inches) shall show valve tag number, valve function and area of control for each service or system. The valve list shall be in a punched 3-ring binder notebook. An additional copy of the valve list shall be mounted in picture frames for mounting to a wall. COR shall instruct contractor where frames shall be mounted.

4. A detailed plan for each floor of the building indicating the location and valve number for each valve shall be provided in the 3-ring binder notebook. Each valve location shall be identified with a color coded sticker or thumb tack in ceiling or access door.

1.3.2.4 Fire stopping

Section 07 84 00, FIRESTOPPING specifies an effective barrier against the spread of fire, smoke and gases where penetrations occur for piping. Refer to Section 22 07 11, PLUMBING INSULATION, for pipe insulation.

1.3.2.5 Galvanized repair compound

A. Mil. Spec. DOD-P-21035B, paint.

1.3.2.6 Pipe restraints

A. In lieu of the paragraph which follows, suspended equipment support and restraints may be designed and installed in accordance with the International Building Code (IBC)// and Section 13 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.// Submittals based on the International Building Code (IBC)// and Section 13 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS// requirements, or the following paragraphs of this Section shall be stamped and signed by a professional engineer registered in the state of Florida. The Support system of suspended equipment over 227 kg (500 pounds) shall be submitted for approval of the COR in all cases. See the above specifications for lateral force design requirements.

B. Type Numbers Specified: For materials, design, manufacture, selection, application, and installation refer to MSS SP-58. For selection and application refer to MSS SP-69.

C. For Attachment to Concrete Construction:

1. Concrete insert: Type 18, MSS SP-58.

2. Self-drilling expansion shields and machine bolt expansion anchors: Permitted in concrete not less than 100 mm (4 inches) thick when approved by the COR for each job condition.

3. Power-driven fasteners: Permitted in existing concrete or masonry not less than 100 mm (4 inches) thick when approved by the COR for each job condition.

D. For Attachment to Steel Construction: MSS SP-58.

1. Welded attachment: Type 22.

2. Beam clamps: Types 20, 21, 28 or 29. Type 23 C-clamp may be used for individual copper tubing up to 23 mm (7/8 inch) outside diameter.

E. Hanger Rods: Hot-rolled steel, ASTM A36/A36M or ASTM A575 for allowable load listed in MSS SP-58. For piping, provide adjustment means for controlling level or slope. Types 13 or 15 turn-buckles shall provide 40 mm (1-1/2 inches) minimum of adjustment and incorporate locknuts. All-thread rods are acceptable.

F. Multiple (Trapeze) Hangers: Galvanized, cold formed, lipped steel channel horizontal member, not less than 43 mm by 43 mm (1-5/8 inches by 1-5/8 inches), 2.7 mm (No. 12 gage), designed to accept special spring held, hardened steel nuts.

1. Allowable hanger load: Manufacturers rating less 91kg (200 pounds).

2. Guide individual pipes on the horizontal member of every other trapeze hanger with 8 mm (1/4 inch) U-bolt fabricated from steel rod. Provide Type 40 insulation shield, secured by two 15 mm (1/2 inch) galvanized steel bands, or insulated calcium silicate shield for insulated piping at each hanger.

G. Pipe Hangers and Supports: (MSS SP-58), use hangers sized to encircle insulation on insulated piping. Refer to Section 22 07 11, PLUMBING INSULATION for insulation thickness. To protect insulation, provide Type 39 saddles for roller type supports or insulated calcium silicate shields. Provide Type 40 insulation shield or insulated calcium silicate shield at all other types of supports and hangers including those for insulated piping.

1. General Types (MSS SP-58):

a. Standard clevis hanger: Type 1; provide locknut.

- b. Riser clamps: Type 8.
- c. Wall brackets: Types 31, 32 or 33.
- d. Roller supports: Type 41, 43, 44 and 46.
- e. Saddle support: Type 36, 37 or 38.
- f. Turnbuckle: Types 13 or 15.
- g. U-bolt clamp: Type 24.
- h. Copper Tube:

1) Hangers, clamps and other support material in contact with tubing shall be painted with copper colored epoxy paint, copper-coated, plastic coated or taped with isolation tape to prevent electrolysis.

2) For vertical runs use epoxy painted, copper-coated or plastic coated riser clamps.

3) For supporting tube to strut: Provide epoxy painted pipe straps for copper tube or plastic inserted vibration isolation clamps.

4) Insulated Lines: Provide pre-insulated calcium silicate shields sized for copper tube.

i. Supports for plastic or glass piping: As recommended by the pipe manufacturer with black rubber tape extending one inch beyond steel support or clamp. //Spring Supports (Expansion and contraction of vertical piping):

1) Movement up to 20 mm (3/4 inch): Type 51 or 52 variable spring unit with integral turn buckle and load indicator.

2) Movement more than 20 mm (3/4 inch): Type 54 or 55 constant support unit with integral adjusting nut, turn buckle and travel position indicator. //

j. Spring hangers are required on all plumbing system pumps one horsepower and greater.

2. Plumbing Piping (Other Than General Types):

a. Horizontal piping: Type 1, 5, 7, 9, and 10.

b. Chrome plated piping: Chrome plated supports.

c. Hangers and supports in pipe chase: Prefabricated system ABS selfextinguishing material, not subject to electrolytic action, to hold piping, prevent vibration and compensate for all static and operational conditions.

d. Blocking, stays and bracing: Angle iron or preformed metal channel shapes, 1.3 mm (18 gage) minimum.

J. Pre-insulated Calcium Silicate Shields:

1. Provide 360 degree water resistant high density 965 kPa (140 psig) compressive strength calcium silicate shields encased in galvanized metal.

2. Pre-insulated calcium silicate shields to be installed at the point of support during erection.

3. Shield thickness shall match the pipe insulation.

4. The type of shield is selected by the temperature of the pipe, the load it must carry, and the type of support it will be used with.

a. Shields for supporting cold water shall have insulation that extends a minimum of 25 mm (1 inch) past the sheet metal.

b. The insulated calcium silicate shield shall support the maximum allowable water filled span as indicated in MSS SP-69. To support the load, the shields shall have one or more of the following features: structural inserts 4138 kPa (600 psig) compressive strength, an extra bottom metal shield, or formed structural steel (ASTM A36/A36M) wear plates welded to the bottom sheet metal jacket.

5. Shields may be used on steel clevis hanger type supports, trapeze hangers, roller supports or flat surfaces.

H. Seismic Restraint of Piping: Refer to Section 13 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

1.3.2.7 Pipe Penetrations

A. Pipe penetration sleeves shall be installed for all pipe other than rectangular blocked out floor openings for risers in mechanical bays.

B. Pipe penetration sleeve materials shall comply with all fire stopping requirements for each penetration.

C. To prevent accidental liquid spills from passing to a lower level, provide the following:

1. For sleeves: Extend sleeve 25 mm (1 inch) above finished floor and provide sealant for watertight joint.

2. For blocked out floor openings: Provide 40 mm (1-1/2 inch) angle set in silicone adhesive around opening.

3. For drilled penetrations: Provide 40 mm (1-1/2 inch) angle ring or square set in silicone adhesive around penetration.

D. Penetrations are not allowed through beams or ribs, but may be installed in concrete beam flanges, with structural engineer prior approval. Any deviation from these requirements must receive prior approval of COR.

E. Sheet metal, plastic, or moisture resistant fiber sleeves shall be provided for pipe passing through floors, interior walls, and partitions, unless brass or steel pipe sleeves are specifically called for below.

F. Cast iron or zinc coated pipe sleeves shall be provided for pipe passing through exterior walls below grade. The space between the sleeve and pipe shall be made

watertight with a modular or link rubber seal. The link seal shall be applied at both ends of the sleeve.

G. Galvanized steel or an alternate black iron pipe with asphalt coating sleeves shall be for pipe passing through concrete beam flanges, except where brass pipe sleeves are called for. A galvanized steel sleeve shall be provided for pipe passing through floor of mechanical rooms, laundry work rooms, and animal rooms above basement. Except in mechanical rooms, sleeves shall be connected with a floor plate.

H. Brass Pipe Sleeves shall be provided for pipe passing through quarry tile, terrazzo or ceramic tile floors. The sleeve shall be connected with a floor plate.

I. Sleeve clearance through floors, walls, partitions, and beam flanges shall be 25 mm (1 inch) greater in diameter than external diameter of pipe. Sleeve for pipe with insulation shall be large enough to accommodate the insulation plus 25 mm (1 inch) in diameter. Interior openings shall be caulked tight with fire stopping material and sealant to prevent the spread of fire, smoke, water and gases.

J. Sealant and Adhesives: Shall be as specified in Section 07 92 00, JOINT SEALANTS. Bio-based materials shall be utilized when possible.

K. Pipe passing through roof shall be installed through a 4.9 kg per square meter copper flashing with an integral skirt or flange. Skirt or flange shall extend not less than 200 mm (8 inches) from the pipe and set in a solid coating of bituminous cement. Extend flashing a minimum of 250 mm (10 inches) up the pipe. Pipe passing through a waterproofing membrane shall be provided with a clamping flange. The annular space between the sleeve and pipe shall be sealed watertight.

1.3.2.8 Tools and lubricants

A. Furnish, and turn over to the COR, special tools not readily available commercially, that are required for disassembly or adjustment of equipment and machinery furnished.

B. Grease Guns with Attachments for Applicable Fittings: One for each type of grease required for each motor or other equipment.

C. Tool Containers: metal, permanently identified for intended service and mounted, or located, where directed by the COR.

D. Lubricants: A minimum of 0.95 L (1 quart) of oil, and 0.45 kg (1 pound) of grease, of equipment manufacturer's recommended grade and type, in unopened containers and

properly identified as to use for each different application. Bio-based materials shall be utilized when possible.

1.3.2.9 Wall, floor and ceiling plates

A. Material and Type: Chrome plated brass or chrome plated steel, one piece or split type with concealed hinge, with set screw for fastening to pipe, or sleeve. Use plates that fit tight around pipes, cover openings around pipes and cover the entire pipe sleeve projection.

B. Thickness: Not less than 2.4 mm (3/32 inch) for floor plates. For wall and ceiling plates, not less than 0.64 mm (0.025 inch) for up to 75 mm (3 inch) pipe, 0.89 mm (0.035 inch) for larger pipe.

C. Locations: Use where pipe penetrates floors, walls and ceilings in exposed locations, in finished areas only. Wall plates shall be used where insulation ends on exposed water supply pipe drop from overhead. A watertight joint shall be provided in spaces where brass or steel pipe sleeves are specified.

1.3.2.10 Asbestos

A. Materials containing asbestos are not permitted.

1.3.3 EXECUTION

1.3.3.1 ARRANGEMENT AND INSTALLATION OF EQUIPMENT AND PIPING

A. Location of piping, sleeves, inserts, hangers, and equipment, access provisions shall be coordinated with the work of all trades. Piping, sleeves, inserts, hangers, and equipment shall be located clear of windows, doors, openings, light outlets, and other services and utilities. Equipment layout drawings shall be prepared to coordinate proper location and personnel access of all facilities. The drawings shall be submitted for review.

B. Manufacturer's published recommendations shall be followed for installation methods not otherwise specified.

C. Operating Personnel Access and Observation Provisions: All equipment and systems shall be arranged to provide clear view and easy access, without use of portable ladders, for maintenance, testing and operation of all devices including, but not limited to: all equipment items, valves, backflow preventers, filters, strainers, transmitters, sensors, meters and control devices. All gages and indicators shall be clearly visible by personnel standing on the floor or on permanent platforms.

Maintenance and operating space and access provisions that are shown on the drawings shall not be changed nor reduced.

D. Structural systems necessary for pipe and equipment support shall be coordinated to permit proper installation.

E. Location of pipe sleeves, trenches and chases shall be accurately coordinated with equipment and piping locations.

F. Cutting Holes:

1. Holes shall be located to avoid interference with structural members such as beams or grade beams. Holes shall be laid out in advance and drilling done only after approval by COR. If the Contractor considers it necessary to drill through structural members, this matter shall be referred to COR for approval.

2. Waterproof membrane shall not be penetrated. Pipe floor penetration block outs shall be provided outside the extents of the waterproof membrane.

3. Holes through concrete and masonry shall be cut by rotary core drill. Pneumatic hammer, impact electric, and hand or manual hammer type drill will not be allowed, except as permitted by COR where working area space is limited.

G. Minor Piping: Generally, small diameter pipe runs from drips and drains, water cooling, and other services are not shown but must be provided.

H. Protection and Cleaning:

1. Equipment and materials shall be carefully handled, properly stored, and adequately protected to prevent damage before and during installation, in accordance with the manufacturer's recommendations and as approved by the COR. Damaged or defective items in the opinion of the COR, shall be replaced at no additional cost or time to the Government.

2. Protect all finished parts of equipment, such as shafts and bearings where accessible, from rust prior to operation by means of protective grease coating and wrapping. Close pipe openings with caps or plugs during installation. Pipe openings, equipment, and plumbing fixtures shall be tightly covered against dirt or mechanical injury. At completion of all work thoroughly clean fixtures, exposed materials and equipment.

I. Concrete and Grout: Concrete and shrink compensating grout 25 MPa (3000 psig) minimum, specified in Section 03 30 00, CAST-IN-PLACE CONCRETE, shall be used for all pad or floor mounted equipment.

J. Gages, thermometers, valves and other devices shall be installed with due regard for ease in reading or operating and maintaining said devices. Thermometers and gages shall be located and positioned to be easily read by operator or staff standing on floor or walkway provided. Servicing shall not require dismantling adjacent equipment or pipe work.

K. Interconnection of Controls and Instruments: Electrical interconnection is generally not shown but shall be provided. This includes interconnections of sensors, transmitters, transducers, control devices, control and instrumentation panels, alarms, instruments and computer workstations. Comply with NFPA 70.

L. Many plumbing systems interface with the HVAC control system. See the HVAC control points list and Section 23 09 23, DIRECT DIGITAL CONTROL SYSTEM FOR HVAC.

M. Work in Existing Building:

1. Perform as specified in Article, OPERATIONS AND STORAGE AREAS, Article, ALTERATIONS, and Article, RESTORATION of the Section 01 00 00, GENERAL REQUIREMENTS for relocation of existing equipment, alterations and restoration of existing building(s).

2. As specified in Section 01 00 00, GENERAL REQUIREMENTS, Article, OPERATIONS AND STORAGE AREAS, make alterations to existing service piping at times that will cause the least interfere with normal operation of the facility.

N. Work in Animal Research Areas: Seal all pipe penetrations with silicone sealant to prevent entrance of insects.

O. Work in bathrooms, restrooms, housekeeping closets: All pipe penetrations behind escutcheons shall be sealed with plumbers putty.

P. Switchgear Drip Protection: Every effort shall be made to eliminate the installation of pipe above data equipment, and electrical and telephone switchgear. If this is not possible, encase pipe in a second pipe with a minimum of joints. Drain valve shall be provided in low point of casement pipe.

Q. Inaccessible Equipment:

1. Where the Government determines that the Contractor has installed equipment not conveniently accessible for operation and maintenance, equipment shall be removed and reinstalled or remedial action performed as directed at no additional cost or additional time to the Government.

2. The term "conveniently accessible" is defined as capable of being reached without the use of ladders, or without climbing or crawling under or over obstacles such as electrical conduit, motors, fans, pumps, belt guards, transformers, high voltage lines, piping, and ductwork.

1.3.3.2 TEMPORARY PIPING AND EQUIPMENT

A. Continuity of operation of existing facilities may require temporary installation or relocation of equipment and piping. Temporary equipment or pipe installation or relocation shall be provided to maintain continuity of operation of existing facilities.

B. The Contractor shall provide all required facilities in accordance with the requirements of phased construction and maintenance of service. All piping and equipment shall be properly supported, sloped to drain, operate without excessive stress, and shall be insulated where injury can occur to personnel by contact with operating facilities. The requirements of paragraph 3.1 shall apply.

C. Temporary facilities and piping shall be completely removed back to the nearest active distribution branch or main pipe line and any openings in structures sealed. Dead legs are not allowed in potable water systems. Necessary blind flanges and caps shall be provided to seal open piping remaining in service.

1.3.3.3 RIGGING

A. Openings in building structures shall be planned to accommodate design scheme.

B. Alternative methods of equipment delivery may be offered and will be considered by Government under specified restrictions of phasing and service requirements as well as structural integrity of the building.

C. All openings in the building shall be closed when not required for rigging operations to maintain proper environment in the facility for Government operation and maintenance of service.

D. Contractor shall provide all facilities required to deliver specified equipment and place on foundations. Attachments to structures for rigging purposes and support of equipment on structures shall be Contractor's full responsibility.

E. Contractor shall check all clearances, weight limitations and shall provide a rigging plan designed by a Registered Professional Engineer. All modifications to structures, including reinforcement thereof, shall be at Contractor's cost, time and responsibility.

F. Rigging plan and methods shall be referred to COR for evaluation prior to actual work.

1.3.3.4 PIPE AND EQUIPMENT SUPPORTS

A. Where hanger spacing does not correspond with joist or rib spacing, use structural steel channels secured directly to joist and rib structure that will correspond to the required hanger spacing, and then suspend the equipment and piping from the channels. Holes shall be drilled or burned in structural steel ONLY with the prior written approval of the COR.

B. The use of chain pipe supports, wire or strap hangers; wood for blocking, stays and bracing, or hangers suspended from piping above shall not be permitted. Rusty products shall be replaced.

C. Hanger rods shall be used that are straight and vertical. Turnbuckles for vertical adjustments may be omitted where limited space prevents use. A minimum of 15 mm (1/2 inch) clearance between pipe or piping covering and adjacent work shall be provided.

D. For horizontal and vertical plumbing pipe supports, refer to the International Plumbing Code (IPC) and these specifications.

E. Overhead Supports:

1. The basic structural system of the building is designed to sustain the loads imposed by equipment and piping to be supported overhead.

2. Provide steel structural members, in addition to those shown, of adequate capability to support the imposed loads, located in accordance with the final approved layout of equipment and piping.

3. Tubing and capillary systems shall be supported in channel troughs.

F. Floor Supports:

1. Provide concrete bases, concrete anchor blocks and pedestals, and structural steel systems for support of equipment and piping. Concrete bases and structural systems shall be anchored and doweled to resist forces under operating and

seismic conditions (if applicable) without excessive displacement or structural failure.

2. Bases and supports shall not be located and installed until equipment mounted thereon has been approved. Bases shall be sized to match equipment mounted thereon plus 50 mm (2 inch) excess on all edges. Structural drawings shall be reviewed for additional requirements. Bases shall be neatly finished and smoothed, shall have chamfered edges at the top, and shall be suitable for painting.

3. All equipment shall be shimmed, leveled, firmly anchored, and grouted with epoxy grout. Anchor bolts shall be placed in sleeves, anchored to the bases. Fill the annular space between sleeves and bolts with a grout material to permit alignment and realignment.

4. For seismic anchoring, refer to Section 13 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

1.3.3.5 LUBRICATION

A. All equipment and devices requiring lubrication shall be lubricated prior to initial operation. All devices and equipment shall be field checked for proper lubrication.

B. All devices and equipment shall be equipped with required lubrication fittings. A minimum of one liter (one quart) of oil and 0.45 kg (1 pound) of grease of manufacturer's recommended grade and type for each different application shall be provided. All materials shall be delivered to COR in unopened containers that are properly identified as to application.

C. A separate grease gun with attachments for applicable fittings shall be provided for each type of grease applied.

D. All lubrication points shall be accessible without disassembling equipment, except to remove access plates.

E. All lubrication points shall be extended to one side of the equipment.

1.3.3.6 PLUMBING SYSTEMS DEMOLITION

A. Rigging access, other than indicated on the drawings, shall be provided after approval for structural integrity by the COR. Such access shall be provided without additional cost or time to the Government. Where work is in an operating plant, approved protection from dust and debris shall be provided at all times for the safety of plant personnel and maintenance of plant operation and environment of the plant.

B. In an operating plant, cleanliness and safety shall be maintained. The plant shall be kept in an operating condition. Government personnel will be carrying on their normal duties of operating, cleaning and maintaining equipment and plant operation. Work shall be confined to the immediate area concerned; maintain cleanliness and wet down demolished materials to eliminate dust. Dust and debris shall not be permitted to accumulate in the area to the detriment of plant operation. All flame cutting shall be performed to maintain the fire safety integrity of this plant. Adequate fire extinguishing facilities shall be available at all times. All work shall be performed in accordance with recognized fire protection standards including NFPA 51B. Inspections will be made by personnel of the VA Medical Center, and the Contractor shall follow all directives of the COR with regard to rigging, safety, fire safety, and maintenance of operations.

C. Unless specified otherwise, all piping, wiring, conduit, and other devices associated with the equipment not re-used in the new work shall be completely removed from Government property per Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT. This includes all concrete equipment pads, pipe, valves, fittings, insulation, and all hangers including the top connection and any fastenings to building structural systems. All openings shall be sealed after removal of equipment, pipes, ducts, and other penetrations in roof, walls, floors, in an approved manner and in accordance with plans and specifications where specifically covered. Structural integrity of the building system shall be maintained. Reference shall also be made to the drawings and specifications of the other disciplines in the project for additional facilities to be demolished or handled.

D. All valves including gate, globe, ball, butterfly and check, all pressure gages and thermometers with wells shall remain Government property and shall be removed and delivered to COR and stored as directed. The Contractor shall remove all other material and equipment, devices and demolition debris under these plans and specifications. Such material shall be removed from Government property expeditiously and shall not be allowed to accumulate. Coordinate with the COR and Infection Control.

1.3.3.7 CLEANING AND PAINTING

A. Prior to final inspection and acceptance of the bathrooms for beneficial use by the Government, the bathrooms shall be thoroughly cleaned and painted.

B. In addition, the following special conditions apply:

1. Cleaning shall be thorough. Solvents, cleaning materials and methods recommended by the manufacturers shall be used for the specific tasks. All rust

shall be removed prior to painting and from surfaces to remain unpainted. Scratches, scuffs, and abrasions shall be repaired prior to applying prime and finish coats.

2. The following Material and Equipment shall NOT be painted:

a. Motors, controllers, control switches, and safety switches.

b. Control and interlock devices.

c. Regulators.

d. Pressure reducing valves.

e. Control valves and thermostatic elements.

f. Lubrication devices and grease fittings.

g. Copper, brass, aluminum, stainless steel and bronze surfaces.

h. Valve stems and rotating shafts.

i. Pressure gages and thermometers.

j. Glass.

k. Name plates.

3. Control and instrument panels shall be cleaned and damaged surfaces repaired. Touch-up painting shall be made with matching paint type and color obtained from manufacturer or computer matched.

4. Pumps, motors, steel and cast iron bases, and coupling guards shall be cleaned, and shall be touched-up with the same paint type and color as utilized by the pump manufacturer.

5. The final result shall be a smooth, even-colored, even-textured factory finish on all items. The entire piece of equipment shall be repainted, if necessary, to achieve this. Lead based paints shall not be used.

1.3.3.8 IDENTIFICATION SIGNS

A. Laminated plastic signs, with engraved lettering not less than 7 mm (3/16 inch) high, shall be provided that designates equipment function, for all equipment, switches, motor controllers, relays, meters, control devices, including automatic control valves. Nomenclature and identification symbols shall correspond to that used

in maintenance manual, and in diagrams specified elsewhere. Attach by chain, adhesive, or screws.

B. Factory Built Equipment: Metal plate, securely attached, with name and address of manufacturer, serial number, model number, size, and performance data shall be placed on factory built equipment.

1.3.3.9 OPERATION AND MAINTENANCE MANUALS

A. All new and temporary equipment and all elements of each assembly shall be included.

B. Data sheet on each device listing model, size, capacity, pressure, speed, horsepower, impeller size, and other information shall be included.

C. Manufacturers installation, maintenance, repair, and operation instructions for each device shall be included. Assembly drawings and parts lists shall also be included. A summary of operating precautions and reasons for precautions shall be included in the Operations and Maintenance Manual.

D. Lubrication instructions, type and quantity of lubricant shall be included.

E. Schematic diagrams and wiring diagrams of all control systems corrected to include all field modifications shall be included.

F. Set points of all interlock devices shall be listed.

G. Trouble-shooting guide for the control system troubleshooting shall be inserted into the Operations and Maintenance Manual.

H. The control system sequence of operation corrected with submittal review comments shall be inserted into the Operations and Maintenance Manual.

1.3.4 TOILET COMPARTMENTS

1.3.4.1 General

This section specifies solid phenolic toilet partitions, urinal screens, and entrance screens.

1.3.4.2 Products

A. Use of ceiling hung toilet partitions and entrance screens is required at not more than 2400 mm (8 ft) ceiling height to provide stability and resistance to lateral force.

B. Use of other support methods, for floor and overhead bracing will be permitted only with written permission. Do not use cantilevered or wall hung assemblies.

1.3.4.3 Toilet Partitions

A. Solid phenolic: water resistant; graffiti resistant; non-absorbent; contain a minimum 30 percent post-consumer recycled plastic; Class C flame spread rating.

- B. Conform to Fed. CID A-A-60003, except as modified herein.
- C. Fabricate to dimensions shown or specified.
- D. Toilet Enclosures:
 - 1. Type 1, Style A Floor supported).(overhead braced)
 - 2. Reinforce panels shown to receive toilet tissue holders or grab bars.
 - 3. Upper pivots and lower hinges adjustable to hold doors open 30 degrees.

4. Latching devices and hinges for handicap compartments shall comply with ADA requirements.

- 5. Keeper:
 - a. U-slot to engage bar of throw latch.
 - b. Combined with rubber bumper stop.
- 6. Wheelchair Toilets:
 - a. Upper pivots and lower hinges to hold out swinging doors in closed position.

b. Provide U-type doors pulls, approximately 100 mm (four inches) long on pull side.

7. Finish:

a. Finish 1 (baked enamel) on steel doors, pilasters, and enclosure panels except those adjacent to urinals and as specified.

E. Urinal Screens:

1. Type III, Style E (wall hung), finish 2 or 3.

a. With integral flanges and continuous, full height wall anchor plate.

b. Option: Full height U-Type bracket.

c. Wall anchor plate drilled for 4 anchors on both sides of screen.

2. Screen 600 mm (24 inches) wide and 1060 mm (42 inches high).

F. Room Entrance Screens:

1. Type II, Style E (Floor-to-ceiling Post Supported).

2. Self-closing doors swinging into the toilet room.

3. Provide door pull on pull side and flat stainless steel push plate 250 mm by 70 mm (10 inches by 2-3/4 inches) with beveled ground edges, locate 1200 mm (four feet) above floor.

4. Provide door stop with rubber bumper on pilaster opposite pull.

5. Where doors open against wall, provide rubber tipped bumpers having a three inch projection, at point of contact of top edge of door.

6. Finish the same as toilet enclosures.

G. Toilet Partition products shall comply with following standards for biobased materials:

Material Type	Percent by Weight
Phenolic Partition bio-based material	55 percent

The minimum-content standards are based on the weight (not the volume) of the material in the insulating core only.

1.3.4.6 Fasteners - Toilet Partitions

A. Partition Fasteners: CID A-A-60003.

B. Use expansion bolts, CID A-A-60003, for anchoring to solid masonry or concrete.

C. Use toggle bolts, CID A-A-60003, for anchoring to hollow masonry or stud framed walls.

D. Use steel bolts FS-B-575, for anchoring pilasters to overhead steel supports.

1.3.5 Installation - Toilet partitions

A. General:

1. Install in rigid manner, straight, plumb and with all horizontal lines level.

2. Conceal evidence of drilling, cutting and fitting in finish work.

3. Use hex-bolts for through-bolting.

4. Adjust hardware and leave in freely working order.

5. Clean finished surfaces and leave free of imperfections.

B. Panels and Pilasters:

1. Support panels, except urinal screens, and pilaster abutting building walls near top and bottom by stirrup supports secured to partitions with through-bolts.

2. Secure stirrups to walls with two suitable anchoring devices for each stirrup.

3. Secure panels to faces of pilaster near top and bottom with stirrup supports, through-bolted to panels and machine screwed to each pilaster.

4. Secure edges of panels to edges of pilasters near top and bottom with "U" shaped brackets.

5. Where overhead braced, secure pilasters to building walls by headrails clamped on or set into top of each pilaster.

a. Secure clamps to pilasters with two through-bolts to each clamp.

b. When headrails are set into pilasters, through-bolt them to the pilasters.

c. Support headrails on wall flange fittings secured to building walls with minimum of two anchor bolts to each flange fitting. //

C. Urinal Screens:

1. Anchor urinal screen flange to walls with minimum of four bolts both side of panel.

2. Space anchors at top and bottom and equally in between.

1.3.6 BATHROOM PRODUCTS

The following subparagraphs pertain to the installation of bathroom mirrors, paper towel dispensers, soap dispensers, bathroom mirrors, etc.

1.3.6.1 Metal Framed Mirrors

A. Fed. Spec. A-A-3002 metal frame; stainless steel.

B. Mirror Glass:

- 1. Minimum 6 mm (1/4 inch) thick.
- 2. Set mirror in a protective vinyl glazing tape.
- C. Frames:

1. Channel or angle shaped section with face of frame minimum 9 mm (3/8 inch) wide. Fabricate with square corners.

2. Metal Thickness 0.9 mm (0.035 inch).

3. Filler:

a. Where mirrors are mounted on walls having ceramic tile wainscots not flush with wall above, provide fillers contoured to conceal void between back of mirror and wall surface.

b. Fabricate fillers from same material and finish as mirror frame.

4. Attached Shelf for Mirrors:

a. Fabricate shelf of same material and finish as mirror frame.

b. Make shelf maximum 150 mm (6 inches) in depth, and extend full width of mirror.

c. Close ends and front edge of shelf to same thickness as mirror frame width.

d. Form shelf for aluminum framed mirror as integral part of bottom frame member.

e. Form stainless steel shelf with concealed brackets to attach to mirror frame.

D. Back Plate:

1. Fabricate backplate for concealed wall hanging from zinc-coated, or cadmium plated 0.9 mm (0.036 inch) thick sheet steel, die cut to fit face of mirror frame.

2. Provide set screw type theft resistant concealed fastening system for mounting mirrors.

E. Mounting Bracket:

1. Designed to support mirror tight to wall.

2. Designed to retain mirror with concealed set screw fastenings.

1.3.6.2 Paper Towel Dispensers

A. Contractor will replace existing paper towel dispensers as well as install one automatic electric hand dryer

- B. Combination paper towel dispense and disposal units
 - 1. Recessed and semi-recessed type.
 - 2. Dispensing capacity for 400 sheets of any type of paper toweling.
 - 3. Fabricate of stainless steel.
 - 4. Form face frames, from one piece.

5. Provide each door with continuous stainless steel piano hinge and tumbler lock, keyed alike.

6. Provide removable waste receptacle approximately 40 L (10.5 gal.) capacity, fabricated of 0.45 mm (0.02 inch) thick stainless steel.

- C. Electric Hand Dryer
 - 1. Automatic, high-speed, energy-efficient
 - 2. Advertised dry time of 10 seconds or less
 - 3. Noise Reduction Nozzle and HEPA Filtration Available
 - 4. Adjustable Speed and Sound Control
 - 5. Variable Heat: High, Medium, Low, Off
 - 6. Made in USA Certified
 - 7. Cover Finish: Brushed Stainless Steel
 - 8. No larger than $12"W \ge 13"H \ge 7"D$

1.3.6.3 Grab bars

A. Fed. Spec. WW-P-541/8B, Type IV, bars, surface mounted, Class 2, grab bars and complying with ASTM F446.

B. Fabricate from stainless steel or nylon coated steel, use one type throughout project:

1. Stainless steel: Grab bars, flanges, mounting plates, supports, screws, bolts, and exposed nuts and washers.

2. Nylon Coated Steel: Grab bars and flanges complete with mounting plates and fasteners.

C. Mounting:

1. Floor Mounted Grab Bars: Exposed type.

2. Swing Up Grab Bars: Exposed type.

3. Metal Partitions Mounted Grab Bars: Exposed type.

D. Bars:

1. Fabricate to 38 mm (1-1/2 inch) outside diameter.

a. Stainless steel, minimum 1.2 mm (0.05 inch) thick.

b. Nylon coated bars, minimum 1.5 mm (0.06 inch) thick.

2. Fabricate in one continuous piece with ends turned toward walls.

a. Swing up grab bars and grab bars continuous around three sides of showers may be fabricated in two sections, with concealed slip joint between.

3. Continuously weld intermediate support to grab bar.

4. Swing Up Bars: Manually operated; designed to prevent bar from falling when in raised position.

E. Flange for Concealed Mounting:

1. Minimum 2.65 mm (0.1 inch) thick, maximum 79 mm (3-1/8 inch) diameter by 13 mm (1/2 inch) deep, with minimum three set screws for securing flange to back plate.

2. Insert grab bar through center of flange and continuously weld perimeter of grab bar flush to back side of flange.

3. In lieu of providing flange for concealed mounting, and back plate as specified, grab bar may be welded to back plate covered with flange.

F. Flange for Exposed Mounting:

1. Minimum 5 mm (3/16 inch) thick, maximum 79 mm (3-1/8 inch) diameter.

2. Insert grab bar through flange and continuously weld perimeter of grab bar flush to backside of flange.

3. Where mounted on partitions, provide three equally spaced, countersunk holes, sized to accommodate 5 mm (3/16 inch) diameter bolts.

4. Where mounted on floor, provide four equally spaced holes, sized to accommodate 5 mm (3/8 inch) diameter bolts, maximum 5 mm (3/8 inch) from edge of flange.

G. Back Plates:

1. Minimum 2.65 mm (0.1046 inch) thick metal.

2. Fabricate in one piece, maximum 6 mm (1/4 inch) deep, with diameter sized to fit flange. Provide slotted holes to accommodate anchor bolts.

3. Provide spreaders, through bolt fasteners, and cap nuts, where grab bars are mounted on partitions.

1.3.6.4 Soap Dispenser

Contractor will remove existing soap dispensers from current mirrors and replace with automatic soap dispensers IAW manufactures instructions.

2 GENERAL REQUIREMENTS

This section describes the general requirements for this effort. The following sub-sections provide details of various considerations on this effort.

2.1 Non-Personal Services

The Government shall neither supervise contractor employees nor control the method by which the contractor performs the required tasks. Under no circumstances shall the Government assign tasks to, or prepare work schedules for, individual contractor employees. It shall be the responsibility of the contractor to manage its employees and to guard against any actions that are of the nature of personal services, or give the perception of personal services. If the contractor believes that any actions constitute, or are perceived to constitute personal services, it shall be the contractor's responsibility to notify the Contracting Officer (CO) immediately.

2.2 Business Relations

The contractor shall successfully integrate and coordinate all activity needed to execute the requirement. The contractor shall manage the timeliness, completeness, and quality of problem identification. The contractor shall provide corrective action plans, proposal submittals, timely identification of issues, and effective management of subcontractors. The contractor shall seek to ensure customer satisfaction and professional and ethical behavior of all contractor personnel.

2.3 Contract Administration and Management

The following subsections specify requirements for contract, management, and personnel administration.

2.4 Subcontract Management

The contractor shall be responsible for any subcontract management necessary to integrate work performed on this requirement and shall be responsible and accountable for subcontractor performance on this requirement. The prime contractor will manage work distribution to ensure there are no Organizational Conflict of Interest (OCI) considerations. Contractors may add subcontractors to their team after notification to the Contracting Officer (CO) or Contracting Officer Representative (COR).

2.6 Location and Hours of Work

Accomplishment of the results contained in this SOW requires work at the St Petersburg VA Regional Office, 9500 Bay Pines Blvd. ,St Petersburg, FL 33708. Normal workdays will be Monday through Friday except US Federal Holidays from 6:00pm until 6:00 am. The contractor may work on Saturday and/or Sunday's with prior coordination with the Contracting Officer Representative (COR). The contractor will provide the COR a Work Breakdown Structure showing the work schedule within 10 days of the NTP. The preferred format for the WBS is MS Project. Period of Performance (POP) for this project is 120 days.

3 PERFORMANCE REQUIREMENTS

The following section specifies the Performance Objectives and Performance Elements for the contract.

3.1 PHASE I - PRE-CONSTRUCTION ACTIVITIES.

Phase I - Pre construction phase includes all activities that must be completed prior beginning work inside the RO. These activities include but are not limited to completing all TMS training, OSHA training, Security badge requirements, Risk assessments and all other deliverables as identified in the SOW

Performance Standards

a) Standard: Please see standards in the subparagraphs listed below

AQL: Please see AQL's identified in subparagraphs listed below

3.1.1 Site Survey

Offerors or quoters are urged and expected to inspect the site where services are to be performed and to satisfy themselves regarding all general and local conditions that may affect the cost of contract performance, to the extent that the information is reasonably obtainable. In no event shall failure to inspect the site constitute grounds for a claim after contract award.

<u>Performance Standards</u> a) Standard: Contractor attends site survey

AQL: Maximum participation encouraged

3.1.2 Complete mandatory TMS training

Prior entering the building to begin construction the Contractor will provide the COR a list of employee names to include sub-contractor employees to include e-mail addresses. Every contractor employee to include sub-contractor employees must complete the mandatory HIPAA and Information Security Awareness training. See paragraph 4 for more detail on mandatory training.

Performance Standards

a) Standard: Completes all TMS training and deliverables as identified in paragraph 4 of this SOW

AQL: 100% all contractor and subcontractors compliant with requirement identified in paragraph 4 of this SOW

Deliverables

A003 Information Security and Awareness Training A004 Health Insurance Portability and Accountability Act A005 Certification of Veteran Status and Veteran Relatives - VA Form 0344 A006 10hr OSHA Safety Training A007 OSHA 30hr Safety Training Course - Supervisor

A008 VA Form 0711 _ Request for Personal Identity Verification Card

3.1.3 Prepare work schedule

Ten (10) days prior construction the Contractor will provide the COR a detailed work schedule or work breakdown structure (WBS) outlining when each bathroom will be renovated. This will be a phased project and at no time will the contractor close all bathrooms on any one floor. The WBS will be submitted as a formal submittal and require VBA approval.

Performance Standards

a) Standard: Addresses all tasks and subtasks

AQL: WBS submitted in either MS Project or Excel format

<u>Deliverables</u> A001 Work Breakdown Structure (WBS)

3.1.4 Submit AHA / Risk Assessment

Prior beginning construction the Contractor will provide the COR a copy of the Activity Hazards Analysis and/or risk assessment for this project. The AHA / Risk Assessment will be submitted IAW attachment 1 of this SOW and will be submitted as a formal submittal requiring VBA approval. See paragraph 4 for additional Safety requirements.

Performance Standards

a) Standard: Identifies risks and implements mitigating measures to reduce risk(s) to acceptable level

AQL: 100% risks identified prior beginning work and risk monitored thereon

<u>Deliverables</u> A002 Activity Hazards Analysis

3.1.5 Training and Certification .

Contractor will provide the following training certifications:

Site supervisor(s) - 30hr OSHA Safety Course Certificate

All employees - 10hr OSHA Safety Course Certificate

Welders (to include plumbers that will be welding) - Welding and Brazing Certificate

Performance Standards

a) Standard: Compliant with applicable standards

AQL: IAW ASME "Boiler and Pressure Vessel Code", Section IX, "Welding and Brazing Qualifications"

<u>Deliverables</u> A006 10hr OSHA Safety Training A007 OSHA 30hr Safety Training Course - Supervisor A015 Welding and Brazing Qualifications

3.2 PHASE II - CONSTRUCTION ACTIVITIES.

See subparagraphs below for specific description of required tasks.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.1 Bathroom's Room 311(Women's) and 312 (Men's).

See sub paragraphs for scope

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.1.1 Remove stalls and toilet fixtures .

Contractor will remove toilet stalls, toilets and urinals from bathrooms 311 (women's) and 312 (men's) and retain for future reinstallation. Contractor will ensure not to gouge, scratch, mark, scuff, or cause any damage to the toilets, urinals and stalls as these items are to be replaced after plumbing has been repaired. There is a total of 7 standard toilets/stalls, 2 ADA toilets/stalls, and 2 urinals.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.1.2 Replace lateral and vertical plumbing lines as outlined in attachment #2

Contractor will remove sufficient tile wall in both bathrooms (311 and 312) to allow for removal and replacement of lateral drain line. Contractor will install new 4" galvanized steel drain line at appropriate pitch to allow for proper waste removal / flow. Contractor will also install plumbing line for adding an internal (inside wall cavity) automatic waste line flush assist device. This device will be programed to periodically send sufficient amounts of water to clear the waste line ensuring waste moves down the later waste line.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

<u>Deliverables</u>

A009 Submittal_Automatic In Wall Waste Line Flush Assist

3.2.1.3 Replace tile wall. .

Upon completion of installation of new carrier waste line contractor will install new water and mold resistant drywall and backer board. New ceramic tile will be installed and will match existing tile, grout lines, color, texture, etc. Upon completion there will be no exposed or open gaps visible in the tile. Contractor will also remove and replace any/all tile inside the bathroom that has exposed holes and holes with unused visible wall anchors.

Performance Standards

a) Standard:

Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20-06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014)

AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes

3.2.1.4 Replace toilet fixtures .

Contractor will replace all toilet fixtures ensuring local, state, and federal plumbing codes are adhered too. All fixtures, toilets and urinals are to have automatic flush devices installed. All fixtures in handicap stalls will adhere to the most current ADA standards / building codes.

<u>Performance Standards</u> a) Standard:

Compliant with applicable standards to include: A112.6.1M-1997 (R2012) Supports for Offthe-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures

AQL: All toilet fixtures are installed and function IAW manufactures specifications.

<u>Deliverables</u> A010 Submittals on automatic flush device

3.2.1.5 Replace stalls.

Contractor will replace all stalls, both standard and handicap stalls ensuring all panels and doors are not scratched, gouged, scrapped, or marked up ensuring the stalls are returned to original condition. Stall panels will be installed IAW manufactures specifications ensuring they are level, smooth, and all doors function as designed.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom stalls

AQL: AQL as defined in section 1.3.4, Toilet Compartments

3.2.1.6 Install mirrors, soap dispensers, hand dryers.

Contractor will remove old mirrors, and soap dispensers and replace with new mirrors of same size and new 'automatic' soap dispensers. Contractor will remove one paper towel dispenser and replace with electric hand dryer. All Electric work will be conducted within local, state, and federal electric code as well as installation of bathroom fixture in accordance with ADA code.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom mirrors and bathroom products

AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors

3.2.2 Bathroom's Room 219 (Men's) and 221 (Women's).

See sub paragraphs for scope

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.2.1 Remove stalls and toilet fixtures.

Contractor will remove toilet stalls, toilets and urinals from bathrooms 311 (women's) and 312 (men's) and retain for future reinstallation. Contractor will ensure not to gouge, scratch, mark, scuff, or cause any damage to the toilets, urinals and stalls as these items are to be reused after plumbing has been repaired. There is a total of 7 standard toilets/stalls, 2 ADA toilets/stalls, and 2 urinals.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.2.2 Replace lateral and vertical plumbing lines as outlined in attachment #2

Contractor will remove sufficient tile wall in both bathrooms (311 and 312) to allow for removal and replacement of lateral drain line. Contractor will install new 4" galvanized steel drain line at appropriate pitch to allow for proper waste removal / flow. Contractor will also install plumbing line for adding an internal (inside wall cavity) automatic waste line flush assist device. This device will be programed to periodically send sufficient amounts of water to clear the waste line ensuring waste moves down the later waste line.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

Deliverables

A009 Submittal_Automatic In Wall Waste Line Flush Assist

3.2.2.3 Replace tile wall. .

Upon completion of installation of new carrier waste line contractor will install new water and mold resistant drywall and backer board. New ceramic tile will be installed and will match existing tile, grout lines, color, texture, etc. Upon completion there will be no exposed or open gaps visible in the tile. Contractor will also remove and replace any/all tile inside the bathroom that has exposed holes and holes with unused visible wall anchors.

Performance Standards a) Standard:

Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20-06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014)

AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes

3.2.2.4 Replace toilet fixtures.

Contractor will replace all toilet fixtures ensuring local, state, and federal plumbing codes are adhered too. All fixtures, toilets and urinals are to have automatic flush devices installed. All fixtures in handicap stalls will adhere to the most current ADA standards / building codes.

Performance Standards

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a) Standard:
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Compliant with applicable standards to include: A112.6.1M-1997 (R2012) Supports for Offthe-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures

AQL: All toilet fixtures are installed and function IAW manufactures specifications.

Deliverables

A010 Submittals on automatic flush device

3.2.2.5 Reinstall stalls.

Contractor will replace all previously removed stalls, both standard and handicap stalls ensuring all panels and doors are not scratched, gouged, scrapped, or marked up ensuring the stalls are returned to original condition. Stall panels will be installed IAW manufactures specifications ensuring they are level, smooth, and all doors function as designed.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom stalls

AQL: AQL as defined in section 1.3.4, Toilet Compartments

3.2.2.6 Install mirrors, soap dispensers, hand dryers. .

Contractor will remove old mirrors, and soap dispensers and replace with new mirrors of same size and new 'automatic' soap dispensers. Contractor will remove one paper towel dispenser and replace with electric hand dryer. All Electric work will be conducted within local, state, and federal electric code as well as installation of bathroom fixture in accordance with ADA code.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom mirrors and bathroom products

AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors

3.2.3 Men's Bathroom Room 302.

See paragraphs below for scope

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.3.1 Replace urinal waste line .

Contractor will remove the partition separating the two urinals in room 302 ensuring not to scratch, gouge, or mark up the panel; remove the two urinals; demo the tile wall behind the urinals; and replace the existing copper waste line with galvanized steel pipe. All plumbing will be performed IAW local, state, and federal plumbing code.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

Deliverables

A010 Submittals on automatic flush device

3.2.3.2 Replace tile wall and replace urinal.

Contractor will install new 5/8" green (water and mold resistant) backer board and re tile (ceramic) the wall behind the urinals. Ceramic tile and grout will match existing ceramic tile and grout and once the urinals are replace there will be no visible gaps or holes surrounding plumbing fixtures. All grout will be sealed. Contractor will replace the partition between the urinals. Contractor will also remove and replace any/all tile inside the bathroom that has exposed holes and holes with unused visible wall anchors.

Performance Standards a) Standard:

Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20-06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014)

AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes

<u>Deliverables</u> A011 Submittal on tile

3.2.3.3 Install automatic flush device .

Contractor will install automatic / hands-free flush device on all toilets and urinals. There are two standard toilets, one ADA / handicap toilet, and two urinals in bathroom (men's) 302. Contractor will ensure all automatic flush devices will perform IAW manufactures specifications.

<u>Performance Standards</u> a) Standard:

Compliant with applicable standards to include: A112.6.1M-1997 (R2012) Supports for Offthe-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures

AQL: All toilet fixtures are installed and function IAW manufactures specifications.

<u>Deliverables</u> A010 Submittals on automatic flush device

3.2.3.4 Install mirrors, soap dispensers, hand dryers. .

Contractor will remove old mirrors, and soap dispensers and replace with new mirrors of same size and new 'automatic' soap dispensers. Contractor will remove one paper towel dispenser and replace with electric hand dryer. All Electric work will be conducted within local, state, and federal electric code as well as installation of bathroom fixture in accordance with ADA code.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom mirrors and bathroom products

AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors

3.2.4 Woman's bathroom room 303.

See paragraphs below for scope

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.4.1 Install automatic flush device.

Contractor will install automatic flush device on all toilets and urinals. There are two standard toilets, one ADA / handicap toilet, and two urinals in bathroom (men's) 302. Contractor will ensure all automatic flush devices will perform IAW manufactures specifications.

<u>Performance Standards</u> a) Standard:

Compliant with applicable standards to include: A112.6.1M-1997 (R2012) Supports for Offthe-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures

AQL: All toilet fixtures are installed and function IAW manufactures specifications.

<u>Deliverables</u> A010 Submittals on automatic flush device

3.2.4.2 Install mirrors, soap dispensers, hand dryers. .

Contractor will remove old mirrors, and soap dispensers and replace with new mirrors of same size and new 'automatic' soap dispensers. Contractor will remove one paper towel dispenser and replace with electric hand dryer. All Electric work will be conducted within local, state, and federal electric code as well as installation of bathroom fixture in accordance with ADA code.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom mirrors and bathroom products

AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors

3.2.5 Men's Bathroom Room 202.

See paragraphs below for scope

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.5.1 Replace urinal waste line.

Contractor will remove the partition separating the two urinals in room 202 ensuring not to scratch, gouge, or mark up the panel; remove the two urinals; demo the tile wall behind the urinals; and replace the existing copper waste line with galvanized steel pipe. All plumbing will be performed IAW local, state, and federal plumbing code.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

Deliverables

A010 Submittals on automatic flush device

3.2.5.2 Replace tile wall and replace urinal.

Contractor will install new 5/8" green (water and mold resistant) backer board and re tile (ceramic) the wall behind the urinals. Ceramic tile and grout will match existing ceramic tile and grout and once the urinals are replace there will be no visible gaps or holes surrounding plumbing fixtures. All grout will be sealed. Contractor will replace the partition between the urinals. Contractor will also remove and replace any/all tile inside the bathroom that has exposed holes and holes with unused visible wall anchors.

Performance Standards

a) Standard:

Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20-06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014)

AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes

<u>Deliverables</u> A011 Submittal on tile

3.2.5.3 Install automatic flush device.

Contractor will install automatic flush device on all toilets and urinals. There are two standard toilets, one ADA / handicap toilet, and two urinals in bathroom (men's) 202. Contractor will ensure all automatic flush devices will perform IAW manufactures specifications.

<u>Performance Standards</u> a) Standard:

Compliant with applicable standards to include: A112.6.1M-1997 (R2012) Supports for Offthe-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures

AQL: All toilet fixtures are installed and function IAW manufactures specifications.

<u>Deliverables</u> A010 Submittals on automatic flush device

3.2.5.4 Install mirrors, soap dispensers, hand dryers. .

Contractor will remove old mirrors, and soap dispensers and replace with new mirrors of same size and new 'automatic' soap dispensers. Contractor will remove one paper towel dispenser and replace with electric hand dryer. All Electric work will be conducted within local, state, and federal electric code as well as installation of bathroom fixture in accordance with ADA code.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom mirrors and bathroom products

AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors

3.2.6 Woman's bathroom room 201.

See paragraphs below for scope

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

3.2.6.1 Install automatic flush device.

Contractor will install automatic flush device on all toilets. There are five standard toilets, one ADA / handicap toilet in bathroom (women's) 201. Contractor will ensure all automatic flush devices will perform IAW manufactures specifications.

Performance Standards

a) Standard: Work is performed IAW all local, state, federal, and VA building/plumbing code.

AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual

Deliverables

A010 Submittals on automatic flush device

3.2.6.2 Install mirrors, soap dispensers, hand dryers. .

Contractor will remove old mirrors, and soap dispensers and replace with new mirrors of same size and new 'automatic' soap dispensers. Contractor will remove one paper towel dispenser and replace with electric hand dryer. All Electric work will be conducted within local, state, and federal electric code as well as installation of bathroom fixture in accordance with ADA code.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom mirrors and bathroom products

AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors

3.2.7 Bathrooms 244 (Women's) and 245 (Men's).

Contractor will install automatic flush devices on toilets and urinals in bathrooms 244 (Women's) and 245 (Men's). Contractor will ensure all automatic flush devices are installed and perform IAW manufactures specifications.

Performance Standards

a) Standard:

Compliant with applicable standards to include: A112.6.1M-1997 (R2012) Supports for Offthe-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures

AQL: All toilet fixtures are installed and function IAW manufactures specifications.

<u>Deliverables</u> A010 Submittals on automatic flush device

3.2.7.1 Install mirrors, soap dispensers, hand dryers. .

Contractor will remove old mirrors, and soap dispensers and replace with new mirrors of same size and new 'automatic' soap dispensers. Contractor will remove one paper towel dispenser and replace with electric hand dryer. All Electric work will be conducted within local, state, and federal electric code as well as installation of bathroom fixture in accordance with ADA code.

Performance Standards

a) Standard: See section 1.3 Scope for specific install of bathroom mirrors and bathroom products

AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors

3.3 PHASE III - POST CONSTRUCTION ACTIVITIES.

Contractor will perform all Post Construction activities as outlined below

Performance Standards

a) Standard: Addresses all errors and inadequacies

AQL: 100% of all items outlined below performed IAW specified AQL(s)

<u>Deliverables</u> A012 Complete Contractor punch list

3.3.1 Conduct Contractor Punch List .

Contractor will conduct walkthrough of construction area and correct all deficiencies prior conducting the Contractor / COR joint walkthrough. Intent is to assure minimal outstanding items identified on Contractor / COR joint punch list.

Performance Standards

a) Standard: Addresses all errors and inadequacies

AQL: Contractor conducts preliminary walkthrough and corrects all deficiencies

3.3.2 Conduct joint Contractor and COR walkthrough.

Upon completion of Contractor walkthrough to correct deficiencies the Contractor and COR will conduct a joint walkthrough and prepare a joint punch list. The intent is the contractor will have corrected all obvious deficiencies prior this joint walk through and the joint punch list will have minimal identified deficiencies.

<u>Performance Standards</u> a) Standard: Addresses all errors and inadequacies

AQL: All deficiencies are corrected on Contractor / COR punch list

<u>Deliverables</u> A013 Finalized punch list

3.3.3 Final acceptance.

Prior to final acceptance contractor will return all government owned equipment as applicable to include non-PIV security badges.

Performance Standards a) Standard: Complete

AQL: All punch list deficiencies corrected and all government owned equipment / property returned. 100% of non-PIV badges accounted for.

<u>Deliverables</u> A014 non-PIV Badges

4 Special Requirements

This section describes the special requirements for this effort. The following sub-sections provide details of various considerations on this effort.

4.1 Security

A. Contractor is required to enter and exit the St Petersburg VARO through the front entrance. Entering or exiting the building through any other door will require VARO approval and an escort will be required. Upon entering the building the contractor and/or contractor employees will be required to show proof of identity (must have a valid photo ID) as well as pass through a security screening. Due to the sensitivity and personal information processed at the VARO the Contractor as well as the Contractors employees will be required to complete VA Privacy and Health Insurance Portability and Accountability Act (HIPAA) training. Certification of completion of training will be submitted to the COR within 10 working days from the contractor, contractor employees, and sub-contractors and original copies turned in to the COR prior beginning construction

4.1.1 Badging and Identification

A. Homeland Security Presidential Directive (HSPD) -12 directs all federal agencies and departments to issue identity credentials to provide government workers, contractors, and affiliates with a credential that provides the attributes of security, authentication, trust, and privacy and can be used to verify identities in order to enter federal buildings or gain access to federal computer networks.

B. All contractors to include their direct employees, subcontractors and subcontractor employees entering the St Petersburg VARO are required to have an individual Non-PIV badge prior beginning work inside the VARO. Therefore it is essential the contractor complete section I of VA Form 0711 (attached) for all employees to included sub-contractors employees who will be working inside the building and provided the completed form to the COR within 5 days of being awarded the contract. Once the COR receives the VA Form 0711 it will take approximately 2 Federal working days before a Non-PIV card can be prepared. The contractor will be notified by the COR when each employee is to report to room 238, PIV Office for photographs and issuance of a Non-PIV badge. The employee must bring TWO (2) forms of identification when they report to room 238. The contractor is responsible for the cost of fingerprinting and background investigations (if required). The contractor should also include the time necessary to process Non-PIV badges in his/her schedule.

4.2 Safety

A. Equipment - The Contractor shall provide all safety equipment/devices, MSDS, personal protective equipment and clothing as required for its employees. Copies of all MSDS shall be provided to the COR.

B. OSHA - Prior to commencing work the Contractor shall provide proof that an OSHA designated "competent person (CP)(29 CFR 1926.20(b)(2) will maintain a presence at the work site whenever the general or subcontractors are not present. The Contractor as well as the on-site supervisor will have completed no less than 30 hours of OSHA approved safety training. All other Contractor employees will have no less than 10 hours of OSHA approved safety training.

C. Safety Plan Contractor will provide a site specific safety plan as well as an Activity Hazards Analysis. An example of a VA approved AHA can be found at http://www.usace.army.mil/Portals/2/docs/AHA2.pdf

D. Compliance - The Contractor shall comply with all applicable Federal, State and local legal requirements regarding workers health and safety. The requirements include but are not limited to, those found in Federal and State Occupational Safety and Health Act (OSHA) statutes and regulations, such as applicable provisions of Title 29, Code of Federal Regulations (CFR) Parts 1910 and 1926. Contractor is solely responsible for determining the legal requirements that apply to activities, and shall ensure safe and healthful working conditions for its employees.

4.2.2 Mishaps

A. Mishap Notification and Investigation: The contractor and its subcontractors (if applicable) shall promptly report pertinent facts regarding mishaps involving Government property damage or injury to Government personnel and to cooperate in any resulting safety investigation. The contractor shall notify (via telephone) the cognizant contracting officer, the contracting officers representative, and/or other applicable members within four (4) hours of all mishaps or incidents. The Government person notified by the contractor will in-turn notify the Safety office. Contractor notifications made after duty hours shall be reported to the appropriate installation Command Post. If requested by the cognizant program manager, the contractor shall immediately secure the mishap scene/damaged property and impound pertinent maintenance and training records until released by the investigating safety office. If the Government investigates the mishap, the contractor and the subcontractors shall cooperate fully and assist the Government personnel until the investigation is completed.

4.3 Government Furnished Materials

A. The government shall provide at no cost parking space and access to the VARO loading docks as necessary.

B. Government will provide access to electrical outlets necessary to perform this project.

4.4 Environmental Requirements

A. Non-Hazardous waste disposal

1. Demolition - The Construction Contractor shall provide all demolition, removal and legal disposal of materials. The Construction Contractor shall ensure that facilities used for recycling, reuse and disposal shall be permitted for the intended use to the extent required by local, state, federal regulations.

2. Disposal vendors - The Whole Building Design Guide website <u>http://www.cwm.wbdg.org</u> provides a Construction Waste Management Database that contains information on companies that haul, collect, and process recyclable debris from construction projects.

B. Hazardous waste disposal

1. Abatement - In order to provide for abatement and control of all environmentally hazardous materials arising from demolition and/or construction activities, the Construction Contractor shall comply with all applicable environmentally hazardous material control and abatement and all applicable provisions of the Corps of Engineers Manual EM 385-1-1, "General Safety Requirements as well as the specific requirements stated elsewhere in the Contract Documents. EM 385-1-1 can be found at http://federalconstruction.phslegal.com/uploads/file/EM-385-1-1 2008.pdf.

2. Manifesto - The Construction Contractor shall provide a waste manifesto for all hazardous waste disposals.

3. The contractor shall comply with all documents listed below as mandatory and referenced under paragraph 3.0, Performance Requirements. Compliance with documents listed as non mandatory is the contractors' option.

C. Mandatory compliance

29 CFR 1926

Corps of Engineers Manual EM 385-1-1, "General Safety Requirements as well as the specific requirements stated elsewhere in the Contract Documents. EM 385-1-1 can be found at <u>http://federalconstruction.phslegal.com/uploads/file/EM-385-1-1 2008.pdf</u>.

29 CFR 1926.20

D. Non Mandatory document

4.5 Applicable Directives

A. The contractor shall comply with all documents listed below as mandatory and referenced under paragraph 3.0, Performance Requirements. Compliance with documents listed as non-mandatory is the contractors' option.

B. Mandatory compliance (list)

Corps of Engineers Manual EM 385-1-1, "General Safety Requirements as well as the specific requirements stated elsewhere in the Contract Documents. EM 385-1-1 can be found at <u>http://federalconstruction.phslegal.com/uploads/file/EM-385-1-1 2008.pdf</u>.

Code of Federal Regulations:

29 CFR 1926.20

40 CFR 247 Comprehensive Procurement Guidelines for Products Containing Recovered Materials

Federal Specifications (Fed.Spec.):

FF-B-575C Bolt, Hexagon and Square

Commercial Item Descriptions (CID):

A-A-1925 Shield, Expansion (Nail Anchors) A-A-60003 Partitions, Toilet, Complete

Risk Assessment:

Activity Hazards Analysis - AHA example found at <u>http://www.usace.army.mil/Portals/2/docs/AHA2.pdf</u> Non-Mandatory document (list)

4.6 Quality

This section describes the Quality Control components for this effort. The following subsections provide details of various considerations on this effort.

4.6.1 Quality Control

A. The Contractor shall develop a Quality Control Plan (QCP) and maintain an effective quality control program to ensure services are performed in accordance with this SOW. The Contractor shall develop and implement procedures to identify, prevent, and ensure non-recurrence of defective services. The Contractors QCP is the means by which he assures himself that his work complies with the requirement of the contract.

B. The finalized QCP will be accepted by the Government within 10 days from the time of the award of the Task/Delivery Order. The Contracting Officer may notify the Contractor of required modifications to the plan during the period of performance. The Contractor then shall coordinate suggested modifications and obtain acceptance of the plan by the Contracting Officer. Any modifications to the program during the period of performance shall be provided to the Contracting Officer for review no later than 10 working days prior to effective date of the change. The QCP shall be subject to the Governments review and approval. The Government may find the QCP "unacceptable" whenever the Contractors procedures do not accomplish quality control objective(s). The Contractor shall revise the QCP within 10 working days from receipt of notice that QCP is found "unacceptable."

4.6.2 Quality Assurance Surveillance Plan (QASP)

The Government shall monitor the Contractors performance in accordance with the Governments QASP.

4.6.3 Construction Warranty

A. Warranty of Construction (Mar 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the

work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractors expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractors expense any damage to Government-owned or controlled real or personal property, when that damage is the result of

(1) The Contractors failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractors warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractors expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractors warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractors, manufacturers, or suppliers warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of

any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Governments rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

5 Deliverables

The contractor shall provide deliverables as described in subsequent task orders. Deliverables shall be specified by the government. Format and delivery schedule for deliverables shall be outlined in CDRLs and/or other means TBD.

Number	Name	Frequency	Quantity
A001	Work Breakdown Structure (WBS)	Once / as needed	1
	WBS will be phased and include all tasks and subtasks accordingly		
A002	Activity Hazards Analysis	Continuous	1
	Contractor will conduct an initial AHA and update as work conditions change		
A003	Information Security and Awareness Training	Once	1
	Information Security and Awareness Training conducted via TMS. See paragraph 4 for specific instructions. Due 10 days from contract award date		
A004	Health Insurance Portability and Accountability Act HIPAA training conducted via TMS and	Once	1
	required to be completed 10d from date of contract award. See paragraph 4 for specific instructions		

A005	Certification of Veteran Status and Veteran Relatives - VA Form 0344	Once	1
	This form used to identify contractor		
	employees who have family members		
	(veterans) receiving service at this RO. See		
	section 4 for specific instructions		
A006	10hr OSHA Safety Training	Once	1
	Certification of completion of training will		
	be submitted to the COR within 10		
	working days from the contract award		
	date for all employees. See section 4 for		
	specific instructions		
A007	OSHA 30hr Safety Training Course -	Once	1
	Supervisor		
	The Contractor as well as the on-site		
	supervisor will have completed no less		
	than 30 hours of OSHA approved safety		
	training. See section 4 for specific		
	instructions		
A008	VA Form 0711 _ Request for Personal	Once	1
	Identity Verification Card		
	Contractor employees to include		
	subcontractor employees will submit VA		
	Form 0711 to the COR within 5 days of		
	being awarded the contract.		
A009	Submittal_Automatic In Wall Waste Line	Once	1
	Flush Assist		
	Contractor will submit the submittal on		
	flush assist device		
A010	Submittals on automatic flush device	Once	1
	Contractor will provide submittal for		
	approval for automatic (hands free) flush		

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Statement of Work (SOW)

device on toilets and urinals.

	device on tonets and urmais.			
A011	Submittal on tile	Once	2	
	Manufacture information on replacement tile.			
A012	Complete Contractor punch list	Once	1	
	Contractor will conduct punch list prior conducting final walkthrough with COR			
A013	Finalized punch list	Once	1	
	Contractor will provide finalized punch list identifying fault corrections.			
A014	non-PIV Badges	Once	1	
	100% of all non-PIV employee badges returned to the COR/Government			
A015	Welding and Brazing Qualifications	Once	1 per indiviual	
	IAW ASME "Boiler and Pressure Vessel Code", Section IX, "Welding and Brazing Qualifications"			
6 Related Documents				
6 Related L	Documents			
	Documents ng Documents are related to this project			
The followin		<u>default.aspx</u>		

VA Handbook 6500.6, Appendix D, Contractor Rules of Behavior http://www.va.gov/vapubs/viewPublication.asp?Pub ID=471&FType=2

ASCE 7-02 Minimum Design Loads for Buildings and Other Structures, Second Edition

Found at https://law.resource.org/pub/us/cfr/ibr/003/asce.7.2002.pdf

Florida Building Codes

Found at http://floridabuilding.org/bc/bc_default.aspx

VHA Directive 2011-036, Safety and Health During Construction

Found at http://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=2448

VA Handbook 6500.6, Appendix D, Contractor Rules of Behavior

Found at http://www.va.gov/vapubs/viewPublication.asp?Pub_ID=471&FType=2

29 CFR 1926.20 - Application of the multi-employer policy to particular construction standards.

Found at

https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=INTERPRETATIO NS&p_toc_level=3&p_keyvalue=1926.20&p_status=CURRENT

Performance Requirement Summary (PRS)

Stater	nents	Standards/AQLs	Incentive/Remedy
3.1	PHASE I - PRE- CONSTRUCTION ACTIVITIES .	a) Please see standards in the subparagraphs listed below AQL: Please see AQL's identified in subparagraphs listed below	
3.1.1	Not used	Not used	Not used
3.1.2	Complete mandatory TMS training	a) Completes all TMS training and deliverables as identified in paragraph 4 of this SOW AQL: 100% all contractor and subcontractors compliant with requirement identified in paragraph 4 of this SOW	Contractor / Subcontractor Employees shall not be allowed to enter site to commence work. Delays caused by a failure to provide TMS trained employees is not a cause for a time extension.
3.1.3	Prepare work schedule	a) Addresses all tasks and subtasks AQL: WBS submitted in either MS Project or Excel format within 10 Business days after the NTP. Resubmittals and corrections Submitted within 2 work days	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.1.4	Submit AHA / Risk Assessment	a) Identifies risks and implements mitigating measures to reduce risk(s) to acceptable level AQL: 100% risks mitigated prior beginning work and risk monitored thereon	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.1.5	Training and Certification .	a) Compliant with applicable standards AQL: IAW ASME "Boiler and	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by

		Drocours Vaccol Code" Costion IV	a failung to parformed
		Pressure Vessel Code", Section IX, "Welding and Brazing Qualifications"	a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2	PHASE II - CONSTRUCTION ACTIVITIES .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.1	Bathroom's Room 311(Women's) and 312 (Men's) .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.1.1	Remove stalls and toilet fixtures .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.1.2	Replace lateral and vertical plumbing lines as outlined in attachment #2	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA

		are to be corrected within 3 work days of discovery.	building/plumbing code is not a cause for a time extension.
3.2.1.3	Replace tile wall	a) Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20- 06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014) AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.1.4	Replace toilet fixtures .	.a) Compliant with applicable standards to include: A112.6.1M- 1997 (R2012) Supports for Off- the-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures AQL: All toilet fixtures are installed and function IAW	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

		manufactures specifications.	
3.2.1.5	Replace stalls .	a) See section 1.3 Scope for specific install of bathroom stalls AQL: AQL as defined in section 1.3.4, Toilet Compartments. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.1.6	Install mirrors, soap dispensers, hand dryers	a) See section 1.3 Scope for specific install of bathroom mirrors and bathroom products AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.2	Bathroom's Room 219 (Men's) and 221 (Women's) .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.2.1	Remove stalls and toilet fixtures .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

3.2.2.2	Replace lateral and vertical plumbing lines as outlined in attachment #2	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.2.3	Replace tile wall	a) Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20- 06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014) AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.2.4	Replace toilet fixtures .	a) Compliant with applicable standards to include: A112.6.1M- 1997 (R2012) Supports for Off- the-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time

		Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures AQL: All toilet fixtures are installed and function IAW manufactures specifications. All deficiencies are to be corrected within 3 work days of discovery.	extension.
3.2.2.5	Replace stalls .	a) See section 1.3 Scope for specific install of bathroom stalls AQL: AQL as defined in section 1.3.4, Toilet Compartments. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.2.6	Install mirrors, soap dispensers, hand dryers	a) See section 1.3 Scope for specific install of bathroom mirrors and bathroom products AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.3	Men's Bathroom Room 302 .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.3.1	Replace urinal waste line .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by

		AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.3.2	Replace tile wall and replace urinal .	a) Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20- 06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014) AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.3.3	Install automatic flush device .	a) Compliant with applicable standards to include: A112.6.1M- 1997 (R2012) Supports for Off- the-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures AQL: All toilet fixtures are installed and function IAW	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

		manufactures specifications. All deficiencies are to be corrected within 3 work days of discovery.	
3.2.3.4	Install mirrors, soap dispensers, hand dryers	a) See section 1.3 Scope for specific install of bathroom mirrors and bathroom products AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.4	Woman's bathroom room 303 .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.4.1	Install automatic flush device .	a) Compliant with applicable standards to include: A112.6.1M- 1997 (R2012) Supports for Off- the-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures AQL: All toilet fixtures are installed and function IAW manufactures specifications. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

3.2.4.2	Install mirrors, soap dispensers, hand dryers	a) See section 1.3 Scope for specific install of bathroom mirrors and bathroom products AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.5	Men's Bathroom Room 202 .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.5.1	Replace urinal waste line .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.5.2	Replace tile wall and replace urinal .	a) Compliant with applicable standards to include ANSI A108/A118/A136-14 Installation of Ceramic Tile; ANSI A10.20- 06(R2011), Safe Operating Practices for Tile, Terrazzo and Marble Work; ANSI A108.1A-14 Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar; Tile Council of North America, Inc. (TCNA); Handbook for Ceramic Tile Installation (2014)	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

		AQL: Ceramic tile will match existing tile, be straight/level, grouted and sealed, and present a professional appearance with no visible gaps or holes. All deficiencies are to be corrected within 3 work days of discovery.	
3.2.5.3	Install automatic flush device .	a) Compliant with applicable standards to include: A112.6.1M- 1997 (R2012) Supports for Off- the-Floor Plumbing Fixtures for Public Use; A112.19.1-2013 Enameled Cast Iron and Enameled Steel Plumbing Fixtures; A112.19.2-2013 Ceramic Plumbing Fixtures; A112.19.3-2008 Stainless Steel Plumbing Fixtures AQL: All toilet fixtures are installed and function IAW manufactures specifications. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.5.4	Install mirrors, soap dispensers, hand dryers	a) See section 1.3 Scope for specific install of bathroom mirrors and bathroom products AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.6	Woman's bathroom room 201 .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012,	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed

3.2.6.1	Install automatic flush device .	 IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery. a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies 	IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension. Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state,
3.2.6.2	Install mirrors,	are to be corrected within 3 work days of discovery. a) See section 1.3 Scope for	federal, and VA building/plumbing code is not a cause for a time extension. Failure to correct all
5.2.0.2	soap dispensers, hand dryers	specific install of bathroom mirrors and bathroom products AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors. All deficiencies are to be corrected within 3 work days of discovery.	deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.7	Bathrooms 244 (Women's) and 245 (Men's) .	a) Work is performed IAW all local, state, federal, and VA building/plumbing code. AQL: 100% work IAW IBC-2012, IPC-2012, and VA Plumbing Design Manual. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.7.1	Install mirrors, soap dispensers, hand dryers	a) See section 1.3 Scope for specific install of bathroom mirrors and bathroom products AQL: AQL as defined in section 1.3.6.1, Metal Framed Mirrors., All deficiencies are to be corrected within 3 work days of	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time

		discovery.	extension.
3.3	PHASE III - POST CONSTRUCTION ACTIVITIES .	a) Addresses all errors and inadequacies AQL: 100% of all items outlined below performed IAW specified AQL(s)	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.3.1	Conduct Contractor Punch List .	a) Addresses all errors and inadequacies AQL: Contractor conducts preliminary walkthrough and corrects all deficiencies. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.3.2	Conduct joint Contractor and COR walkthrough .	a) Addresses all errors and inadequacies AQL: All deficiencies are corrected on Contractor / COR punch list. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.3.3	Final acceptance .	a) Complete AQL: All punch list deficiencies corrected and all government owned equipment / property returned. 100% of non-PIV badges accounted for. All deficiencies are to be corrected within 3 work days of discovery.	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.