April 18, 2017

National Operations & Maintenance Specification

SOLICITATION NUMBER: GS-07-P-17-JU-D-0012

SERVICE: OPERATIONS AND MAINTENANCE AND RELATED SERVICES

LOCATION(S):

White Federal Building, 700 East San Antonio Avenue, El Paso, TX TX0272ZZ
U S Courthouse, 511 East San Antonio Avenue, El Paso, TX TX0069ZZ
Armendariz Courthouse, 525 Magoffin Avenue, El Paso, TX TX0319ZZ
BOTA Port of Entry, 3600 East Paisano Drive, El Paso, TX 07020817
PDN Port of Entry, 1000 South El Paso Street, El Paso, TX 07020828
Ysleta Port of Entry, 797 South Zaragoza Road, El Paso, TX 07020832
DCL Port of Entry, 1090 Mesa, El Paso, TX TX2356ES
Fort Hancock Port of Entry, Termination of FM 1088, Fort Hancock, TX 07020857
T&G Port of Entry, FM 1109 at New Bridge, Tornillo, TX 07020866
Santa Teresa Port of Entry, 104 Santa Teresa, Santa Teresa, NM 07020848
Columbus Port of Entry, Palomas and 2nd Street, Columbus, NM 07020859
Border Patrol Sector Headquarters, 300 West Madrid Street, Marfa, TX 07020826

PERIOD OF PERFORMANCE: January 1, 2018 – December 31, 2022

SOLICITATION ISSUE DATE: June 12, 2017

OFFER RECEIPT DATE/TIME: July 21, 2017

TABLE OF CONTENTS

A. SOLICITATION/CONTRACT FORM

A.1. Standard Forms

SOLICITATION, OFFER AND AWARD

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	RATING	PAGE	OF	PAGES
		1		1

2. CONTRACT NUMBER	3. SOLICITATION NUMBER	4. TYPE OF SOLICITATION	5. DATE ISSUED	6. REQUISITION/PURCHASE NUMBER
	GS-07-P-17-JU-D-0012	☐ SEALED BID (IFB) ☒ NEGOTIATED (RFP)	6/12/2017	

7. ISSUED BY	CODE	8. ADDRESS OFFER TO *(If other than item 7)*
ACQUISITION MANAGEMENT DIVISION ACQUISITION SERVICES BRANCH 819 TAYLOR ST 12B01 FORT WORTH, TX 76102	7PQB	

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and 1 copies for furnishings the supplies or services in the Schedule will be received at the place specified in item 8, or if hand carried, in the depository located in _____ until 2:00 PM *(Hour)* local time 7/21/2017 *(Date)*

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE *(NO COLLECT CALLS)*			C. E-MAIL ADDRESS
		AREA CODE	NUMBER	EXTENSION	
	Amy Powell	817	8505545		amy.powell@gsa.gov

11. TABLE OF CONTENTS

(X)	SEC.	DESCRIPTION	PAGE(S)	(X)	SEC.	DESCRIPTION	PAGE(S)
		PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES	
☐	A	SOLICITATION/CONTRACT FORM		☐	I	CONTRACT CLAUSES	
☐	B	SUPPLIES OR SERVICES AND PRICES/COSTS				PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.	
☐	C	DESCRIPTION/SPECS./WORK STATEMENT		☐	J	LIST OF ATTACHMENTS	
☐	D	PACKAGING AND MARKING				PART IV - REPRESENTATIONS AND INSTRUCTIONS	
☐	E	INSPECTION AND ACCEPTANCE		☐	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	
☐	F	DELIVERIES OR PERFORMANCE					
☐	G	CONTRACT ADMINISTRATION DATA		☐	L	INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS	
☐	H	SPECIAL CONTRACT REQUIREMENTS		☐	M	EVALUATION FACTORS FOR AWARD	

OFFER *(Must be fully completed by offeror)*

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days *(60 calendar days unless a different period is inserted by the offeror)* from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT *(See Section I, Clause No. 52.232-8)*	10 CALENDAR DAYS (%)	20 CALENDAR DAYS (%)	30 CALENDAR DAYS (%)	CALENDAR DAYS(%)

14. ACKNOWLEDGMENT OF AMENDMENTS *(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):*	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFER-OR	CODE	FACILITY	16. NAME AND THE TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*
, ,			

15B. TELEPHONE NUMBER			15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE	18. OFFER DATE
AREA CODE	NUMBER	EXTENSION	☐		

AWARD *(To be completed by Government)*

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION

22. AUTHORITY FOR USING OTHER THAN FULL OPEN COMPETITION: ☐ 10 U.S.C. 2304 (c) ☐ 41 U.S.C. 3304(a) ( )	23. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise specified)*	ITEM

24. ADMINISTERED BY *(If other than Item 7)*	25. PAYMENT WILL BE MADE BY	CODE

26. NAME OF CONTRACTING OFFICER *(Type or print)*	27. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

B. SERVICES, ORDERING AND PRICES

B.1. PRICING OF SERVICES. Figure B-3, Pricing of Services, must be completed by the contractor and submitted to the Contracting Officer (CO) as part of the Price Proposal. The Contracting Officer will fill-in Sections B.1.1 through B.1.2 at time of award for base and option periods.

B.1.1. Basic Services:

Initial Period:

Monthly Operations and Maintenance	Annual Total Maintenance

Option I:

Monthly Operations and Maintenance	Annual Total Maintenance

Option II:

Monthly Operations and Maintenance	Annual Total Maintenance

Option III:

Monthly Operations and Maintenance	Annual Total Maintenance

Option IV:

Monthly Operations and Maintenance	Annual Total Maintenance

B.1.2. Markup Coefficient

Markup coefficient includes all material handling fees, including General and Administrative (G&A) fees, and profit. No additional markup coefficient is allowable under this contract. The markup coefficient rate is fixed and applies to supplies, materials, and equipment only on reimbursable repairs above the $2,500 threshold has been met or when additional services are ordered. The markup coefficient does not apply to labor.

The Contracting Officer will fill in the Contractor's markup coefficient at the time of award for the base and option periods. The Contractor's Markup Coefficient is:

Period	Markup Coefficient (maximum of 10%)
Initial Period	10%

Option I	10%
Option II	10%
Option III	10%
Option IV	10%

B.2. CONTRACTOR STAFFING DECLARATION

Figure B-1, Contractor Staffing Declaration, must be completed by the contractor and submitted to the Contracting Officer (CO) **21** calendar days prior to the contract start date. This form must also be submitted to the CO when any modifications to the contract by GSA result in changes in staffing. A blank Figure B-1 is included as part of the solicitation.

B.3. WAGE ADJUSTMENTS

Wage adjustments will be considered at the beginning of each renewal option period, if exercised, in accordance with FAR 52.222-43 Fair Labor Standards Act and Service Contract Act – Price Adjustment (Multi-year and Option Year).

Figure B-2, SCA DOL/CBA Combination Wage Adjustment Spreadsheet is a sample worksheet to illustrate how wage adjustments will be calculated as a result of changes in wages that result from Department of Labor Wage Determinations or Collective Bargaining Agreements. A blank Figure B-2 is included as part of the solicitation.

B.4. ADDITION/REMOVAL OF BUILDINGS

GSA may add or remove buildings from this contract at any time. For a building to be added to the contract, GSA will provide the building information to the Contractor and request a price proposal from the Contractor for the requested services in line with the current pricing. At this time, there is no anticipation to add or delete any additional buildings to this contract. However, if there are any buildings added, they will not exceed **25%** of the total contract dollar value, including options.

B.5. REDUCTION OF STAFFING

Staffing levels proposed and accepted at the time of award shall not be reduced through the life of the contract. At the end of each contract year, and at the request of the contractor, GSA will consider a request from the contractor for a reduction in staffing, and will be based on contractor performance.

C. DESCRIPTION/SPECIFICATION/STATEMENT OF WORK

Introduction

This is a Performance Based Service Contract and the success of the Contract depends on the satisfaction of the requirements, but also the satisfaction of our shared customer. Rather than a mere list of activities, this is a written expression of the GSA's expectation of the service to be performed by the Contractor. A higher level of effective communication between the Government and Contractor is essential for partnering and for the performance based service contract to succeed. The success of this Contract is shared between the Government and the Contractor.

More emphasis is placed on the Contractor's self-management of quality, not the usual external inspection by Government Inspectors, although that is a part of this Contract as well. All parties should act proactively to reduce service cost, therein providing an incentive for the Contractor.

The Contractor, through innovation, technology, or other means, shall perform the required maintenance of these facilities by following the Guiding Principles for Sustainable Existing Buildings:

I. Employ Integrated Assessment, Operation and Management Principles

a. Ensure incorporation of GSA's performance goals for energy, water, material use and recycling, and indoor environmental quality goals throughout the life of this Contract.
b. Ensure that operating decisions are carried out with regard to sustainable operations.
c. Meet ASHRAE standards as noted throughout the SOW for thermal comfort and indoor air quality.
d. Use low emitting materials Volatile organic compounds (VOC) or other for maintenance. In particular, use products that have low pollutant emissions, adhesives, sealants, and solvents.
e. Use products meeting or exceeding EPA's recycled content recommendations for building maintenance. For other products such as ceiling tiles, use materials with recycled content. For more information, see EPA's Comprehensive Procurement Guideline website.
f. Use materials with the highest content level per USDA's bio-based content recommendations for maintenance of or use in the building.
g. Use environmentally sustainable products that have a lesser or reduced effect on human health and the environment. See the Green Products Compilation.
h. Provide salvage, reuse and recycling services for waste generated from building operations, maintenance, and repair and discarded equipment.
i. Eliminate the use of ozone depleting compounds where alternative environmentally sustainable products are available consistent with the Clean Air Act.

II. Optimize Energy Performance – GSA is in the process of optimizing energy performance through advance metering and monthly reporting. Operate all equipment to optimize efficiency to reduce energy use and otherwise seek operating costs reductions wherever possible.

III. Protect and Conserve Water where possible inside and outside. Metering systems may be already installed or will be installed in government buildings to aid in reducing consumption. Where available, use EPA's Water Sense-labeled products or other water conserving products.

IV. Be aware that the building(s) and management involved with this Contract may be in the process of establishing new initiatives, instituting plans, and operational procedures to meet energy efficiency goals either through receiving an ENERGY STAR rating, Smart Building/ GSA link technology, or comparable programs. The Contractor will play an integral part of obtaining these goals and shall actively participate in the programs and processes.

V. The purpose of partnering is to adopt procedures wherein the Scope of Work where the Contractor and Government can work together in achieving Contract objectives. Partnering involves the development of a cooperative management team that seeks to identify common goals and objectives.

VI. This is a fixed-price Contract and while working with the Government in obtaining goals the Contractor is motivated to find improved methods of performance in order to increase its profits. Results of an effective partnership should reflect a "mutual win" situation.

C.1. SCOPE OF WORK

C.1.1 **Contractor Responsibility for Equipment and Systems**. The Contractor shall provide management, supervision, labor, materials, equipment, and supplies and is responsible for the efficient, effective, economical, and satisfactory operation, scheduled and unscheduled maintenance, and repair of equipment and systems located within the property line of the following building(s):

Services will be provided at the following locations:

White Federal Building, 700 East San Antonio Avenue, El Paso, TX TX0272ZZ
U S Courthouse, 511 East San Antonio Avenue, El Paso, TX TX0069ZZ
Armendariz Courthouse, 525 Magoffin Avenue, El Paso, TX TX0319ZZ
BOTA Port of Entry, 3600 East Paisano Drive, El Paso, TX 07020817
PDN Port of Entry, 1000 South El Paso Street, El Paso, TX 07020828
Ysleta Port of Entry, 797 South Zaragoza Road, El Paso, TX 07020832
DCL Port of Entry, 1090 Mesa, El Paso, TX TX2356ES
Fort Hancock Port of Entry, Termination of FM 1088, Fort Hancock, TX 07020857
T&G Port of Entry, FM 1109 at New Bridge, Tornillo, TX 07020866
Santa Teresa Port of Entry, 104 Santa Teresa, Santa Teresa, NM 07020848
Columbus Port of Entry, Palomas and 2nd Street, Columbus, NM 07020859
Border Patrol Sector Headquarters, 300 West Madrid Street, Marfa, TX 07020826

a. Electrical systems and equipment.
b. Mechanical, plumbing, Building Automation System (BAS) where applicable (where BAS/ ECMS systems are connected to the GSA network, the Contractor's employees will need to obtain a GSA ENT account to access systems) and heating, ventilation, exhaust systems and air conditioning (HVAC) systems and equipment.
c. Fire protection and life safety systems and equipment.

d. All control systems that are within the scope of this Contract. All Building Automation Systems (BAS), Niagra Tridium Jace controls/system, Public Address Systems, and Computerized Lighting Systems that are within the scope of this Contract.
e. Architectural and structural systems, fixtures, and equipment within the site (to the property line). Limited to $200/3 hrs service call threshold. Refer to C.2.7
f. Service request desk operations as identified in Section C.8.4 to include record keeping using a computerized maintenance management system (CMMS) or by other means as well as other administrative functions.
g. Maintenance of landscape irrigation systems**.**
h. Locks, keys, keycard systems, vehicle barrier systems and static and dynamic bollard systems.
i. Lighting, dock levelers and bumpers and roll-up and sliding garage doors.
j. Storm drainage systems – reduce storm water pollution by minimizing discharges and runoff to the storm sewer system and environment.
k. The Contractor shall complete roofing system investigations and repairs.
l. The Contractor shall maintain and repair U.S. flag pole, lighting and pulley system.
m. The Contractor shall maintain kitchen/concessions area drains.
n. **Reserved**
o. The Contractor is **not** responsible for the costs of software, firmware updates, and licensing for the BAS and Tridium Niagra systems. However, the Contractor is responsible for the labor to update/install software/firmware, when necessary, to latest revision and update software licenses for BAS controls only. The Contractor is responsible for letting Region 7 FMSP office know when updates are required. The Contractor is responsible for keeping the systems operating properly.
p. Sanitary sewage equipment and systems, including kennel waste interceptors.
q. Domestic water filtration/pumping and fire supply tank systems

C.1.2 Contractor Responsibilities for Management and Communication.

The Contractor Shall:

a. Be responsible to make the management and operational decisions to meet the quality standards required under this contract.
b. Use innovation, technology and other means and methods to develop and perform the most efficient services for the building.
c. Implement an effective Quality Control Plan (QCP). GSA R7 no longer requires quarterly corporate Quality Control visits.
d. Implement an effective service call system, as specified under the Special Requirements section of this contract that results in prompt, professional, and courteous resolution of tenant concerns.
e. Keep the Contracting Officer (CO) or designee informed of current status of the work being performed, provide work schedules, provide a major equipment and critical system break down or impairment form, and provide other pertinent information needed by the CO or designee.
f. Reduce the environmental impacts of work performed under this contract by using, to the maximum extent, environmentally sound practices, processes, and products.
g. Provide training to their employees that will stress stewardship in maintenance practices i.e., the proper use, disposal, recycling of chemicals, dispensing equipment and packaging. Provide documentation that their employees are completing training in the core competences and participating in continual educational training according to the Federal Building Personnel Training Act. Ensure that their employees are properly

licensed and/or certified to operate necessary building systems or equipment for which licensed and/or certified personnel are required by federal, state or local law, codes or ordinances (H.15. Personnel Qualifications).

h. Federal Requirements: The Contractor shall comply with all applicable Federal, state and local laws, regulations and codes, including any supplements or revisions. The Contractor shall obtain all applicable licenses training, and permits. If a change in law or regulation requires the Contractor to implement an action that will result in an increase or decrease in Contract price, the Contractor shall implement the required action and within 30 calendar days submit to the CO or their designee a price proposal for such change. If the CO or their designee determines an equitable adjustment is substantiated a modification to the Contract will be issued.

C.1.3 Excluded from this scope are:

a. Security systems (exclusion does not include mechanical components of the door, closers, keepers, hinges, etc.)
b. Telecommunication systems.
c. Equipment owned and operated by tenant agencies.
d. Furnishings (not installed as fixtures).
e. Paper, soap, and hand-sanitizer dispensing equipment in restrooms.
f. Kitchen appliances and equipment (but ductwork above the ceiling, grease traps with associated piping, and any fire suppression or fire alarm equipment are included in the scope).
g. Equipment owned by servicing public utilities.
h. See paragraph C.1.1.r for exclusions on the BAS system.
i. Fitness center equipment.

C.2. Definitions

C.2.1 Acceptance

"Acceptance" means an authorized representative of the Government has inspected and agreed that the work meets all requirements of this contract, to include documentation requirements.

C.2.2 Acts of God

These are unanticipated grave natural disasters or other natural phenomenon of an exceptional, inevitable, and irresistible character; the effects of which could not have been prevented or avoided by the exercise of due care or foresight.

C.2.3 Additional Services

"Additional services" are services that the Contractor will provide at an additional cost to the Government. Additional services are specifically identified as being outside the provisions of the basic services. The CO or their designee will issue a separate delivery order before work may proceed.

C.2.4 Advanced Meters

Advanced meters are those that have the capability to measure and record interval data (at least hourly for electricity), and communicate the data to a remote location in a format that can be easily integrated into an advanced metering system.

C.2.5 Advanced Metering Systems
A system that collects time-differentiated energy usage data from advanced meters via a network system on either an on-request or defined schedule basis. The system is capable of providing usage information on at least a daily basis and can support desired features and functionality related to energy use management, procurement, and operations, U.S. Department of Energy, EERE: Guidance for Electric Metering in Federal Buildings, (February 3, 2006).

C.2.6 Approval
"Approval" means the Government has reviewed submittals, deliverables, and administrative documents (e.g., insurance certificates, installation schedules, planned utility interruptions, etc.) and has determined the documents conform to contract requirements.

C.2.7 Architectural and Structural Systems
"Architectural and structural" systems include all building structure, envelope, building improvements and finishes, and site improvements (e.g., paving, walkways, asphalt, etc.) to the property line, walls, floors, windows, and all items that are part of or otherwise associated with them (including toilet paper dispensers, paper towel dispensers, and soap dispensers.

C.2.8 Basic Services
The Basic Services of the contract consist of the recurring contract requirements for which the Contractor is paid as a base price, i.e., the requirements established by the contract statement of work and related general and administrative requirements that do not contain provisions for separate reimbursement. Indefinite Quantity requirements (Additional Services and Reimbursable Repairs) are requirements outside of Basic Services, for which payment is made on a case-by-case basis.

C.2.9 Building Automation System (BAS)
The "building automation system" is a system controlling and monitoring building HVAC, and possibly other systems, to include all device, field, and global controllers, instrumentation, networking infrastructure, computers and peripherals, software, programming, database files, and licenses.

C.2.10 GSA Link
The GSA Link initiative is one of GSA's strategic projects. The purpose of this initiative is to leverage automated building analytics technology to measure and substantially lower operational expenses in the existing owned building portfolio. GSA Link is a hardware and software solution to capture real-time building systems point data, apply rules-based analytics software to the data, and spot trends and deficiencies while reporting actionable events to building operators, O&M contractors, and GSA Service Center property managers.

C.2.11 Building Operating Plan
The "building operating plan" is a mandatory plan that the Contractor prepares for Government approval that describes the Contractor's program for operating and maintaining the building, to include both normal circumstances and contingencies.

C.2.12 Commissioning
A practice used to optimize and verify performance of fundamental building systems.

C.2.13 Ongoing Commissioning

The practice of optimizing system performance by continuing to fine-tune equipment so will result in actively preventing problems for the lifetime of the building. GSA's Ongoing Commissioning efforts will focus on maintaining the facility in the optimized state resulting from TBC and Re/Retro Commissioning efforts. GSA will achieve this through its relationship with its service providers (Operations and Maintenance/Custodial/Repair and Alterations/IT/Utilities) and the use of technology (networked systems/Advanced Meters/Smart Buildings).

C.2.14 Computerized Maintenance Management System (CMMS)

A "computerized maintenance management system" is a database and application software package that automates the O&M and repairs record keeping requirements. A CMMS is designed to enhance efficiency and effectiveness of maintenance activities. Typical features include planning, scheduling and monitoring of work orders and maintenance needs.

The National CMMS (N-CMMS) is a central repository (Database) for all maintainable GSA Assets. The N-CMMS provides a mandatory, Agency-Wide means and method for processing and reporting all maintenance work done for GSA regardless of Region or Contractor.

C.2.15 Consumable Parts

"Consumable parts" or components are parts or components that customarily require regular replacement rather than repair in a maintenance program and shall be disposed of properly. Examples include, but are not limited to: oil, grease, belts, filters, ballasts, lamps, etc.

The Contractor is responsible for any consumables used during day-to-day operations. If the operation of the generator is caused by Contractor negligence, the Contractor shall be liable for the full cost of refueling, any other provisions notwithstanding. The contractor shall not allow the fuel level to drop below 75%. The contractor shall provide fuel up to $3,300 (Three Thousand Three Hundred dollars per contract year. The contractor shall submit a running log containing the amount of fuel used with associated costs the first Monday of each month to the COR. GSA will pay for all fuel after the $3,300 (Three Thousand Three Hundred Dollar) limit is reached each year the contract is in effect.

C.2.16 Contracting Officer (CO)

Contracting Officer (CO) has the overall responsibility for the administration of this contract. The CO alone, without delegation, is authorized to take actions on behalf of the Government to amend, modify or deviate from the contract terms, conditions, requirements, specifications, details and/or delivery schedules. However, the CO may delegate certain other responsibilities to authorized Government representatives.

C.2.17 Contracting Officer's Representative (COR) or Designee

Contracting Officer's Representatives (COR) or their designee shall be appointed by letter from the CO. CORs or designees will be the primary Government representatives for the administration of Contract, shall have proper training and experience in inspecting contracts, but will not have the authority to modify the contract.

C.2.18 Contractor

"Contractor" as used in this document refers to the company or firm awarded this contract.

C.2.19 Contractor's Other Than Normal Working/Duty Hours

Hours other than those identified as Normal Working Hours.

C.2.20 Controls and Control System

A "control system" is any low-voltage control, communication and monitoring system, including but not limited to stand alone devices, field and global controllers; instrumentation; networking infrastructure; computers and peripherals; software; programming; database files; and licenses. Examples are the BAS, Advance Metering System (AMS), and lighting control systems. Fire protection systems and security systems are excluded from this definition for purposes of this contract and are defined separately. Gateway devices and mapping software and files for data interchange between a control system and a fire protection or security system are considered part of the control system. Government-furnished Equipment (GFE) is any required computer or server hardware (i.e. PC, laptop) and peripherals (i.e. mouse, keyboard, monitor) and/or routing and switching equipment, used to provide GSA network connectivity, must be government-furnished and must be provided by the GSA.

C.2.21 Defective Service

A unit of service that does not conform with specified contract requirements.

C.2.22 Emergency

The term "Emergency" includes bombings, and bomb threats, civil disturbances, fires, explosions, electrical failure, loss of water pressure, building flooding, sanitary and sewer line stoppage, chemical and gas leaks, medical emergencies, hurricanes, tornadoes, floods, and earthquakes. The term does not apply to civil defense matters such as potential or actual enemy attacks.

C.2.23 Emergency Callback

An "emergency callback" is a service request or other request for service placed outside of normal working hours and of such a nature that response cannot wait for the resumption of the next day's normal working hours.

C.2.24 Environmentally Sustainable

Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, products and chemicals, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service. Attributes of environmentally sustainable products include those that are energy efficient, water-efficient, biodegradable, environmentally preferable, non-ozone depleting, contain recycle content, non or less toxic, EPA-designated and biobased.

C.2.25 Existing Deficiency List Report

The "existing deficiency list report" or "existing deficiency list" is a list of deficiencies that may exist in the equipment and systems covered by this performance work statement, as well as the Contractor's itemized price (including, but not limited to, labor, materials, overhead, and profit) for correcting each deficiency.

C.2.26 Exterior

This includes entrances; landings; steps; sidewalks; parking areas; arcades; courts; planters; lawns; irrigation systems; fountains; security bollards; gates; fences; flagpoles; building-mounted, pole, and ground lighting; etc. located adjacent to the facility extending to the legal property line.

C.2.27 Federal Holidays

"Federal holidays" for the purposes of this contract are New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. When Federal holidays fall on weekends, a weekday is typically designated as the holiday. Holidays that fall on Saturday are observed on the previous Friday and holidays that fall on a Sunday are observed on the following Monday. Veterans' Day is always on the 11th of November and Thanksgiving is always the 3rd Thursday of November.

C.2.28 Federal Executive Holidays, Unanticipated

Unanticipated holidays declared by the president will count as Federal holidays. As long as the Contractor pays employees as if it were an anticipated Federal holiday, the Contractor will be paid for the unanticipated holiday as if it were a normal Federal Holiday.

C.2.29 Fire Protection and Life Safety Systems

"Fire protection and life safety systems " are systems and equipment installed in the building to (1) detect fire and products of combustion, (2) notify building occupants and emergency responders, (3) initiate smoke control systems (4) initiate fire suppression systems, (5) control or suppress fires and (6) facilitate or enhance emergency egress. These systems also may communicate with other major building systems for fire and smoke control, elevator recall, and utilities control. Life safety systems and equipment includes emergency lighting, exit signage, special egress door locking arrangements, and exit stair markings.

C.2.30 Guiding Principles for Sustainable Existing Buildings

A practice of using processes that is environmentally responsible and resource-efficient throughout a building's life-cycle. The goal is to minimize and offset consumption of energy, water, and other resources and to eliminate all waste and pollution in building operations and activities. The result is to reduce the environmental impact of the Federal government, which will expand and complement the building design economy, utility, durability, and comfort. The common objective is to reduce the overall impact of the building environment on human health and the natural environment by:

a. Improving energy efficiency and reductions in greenhouse gas emissions.
b. Reducing water consumption intensity.
c. Acquiring green products and services.
d. Implementing pollution prevention measure, including reduction or elimination of the use of toxic and hazardous chemicals and materials.
e. Implementing cost-effective waste prevention and recycling programs.
f. Increasing diversion of solid waste.

C.2.31 GSA Green Purchasing Program (GPP)

The GPP specifies requirements to promote the purchase of environmentally sustainable products and services.

C.2.32 Indefinite Quantity

"Indefinite quantity" provisions permit the Government to order work, in addition to the basic services, and upon acceptance permit additional payment to the Contractor.

C.2.33 Maintenance Repair

Work required preventing a breakdown of a piece of equipment or system, or put equipment or systems back in service after a breakdown or failure.

C.2.34 Miscellaneous Work

"Miscellaneous work" is additional labor that is performed at the request of the agency at no additional cost to the Government (i.e., they are part of basic services). The Contractor may also have to provide consumable materials to complete the request. Miscellaneous work is treated as a Service Call and is included in the Basic Operations and Maintenance price quoted per month on the bid sheet. During normal duty hours minor tasks related to routine, day-to-day operational requirements requested by the which will consist of, but not be limited to: hanging pictures, maps and bulletin boards; trimming door bases; and other similar functions as directed. Miscellaneous work shall be accomplished in the same time frame as routine service calls unless otherwise directed by the CO or designee. The Contractor will be paid at the hourly rate quoted for after normal duty hours only if authorized by the CO or their designee in advance for specific activities.

C.2.35 Modification of Contract

Modification is a bilateral or unilateral change in the terms of a contract.

C.2.36 Negligence

"Negligence" is the failure to use due care under the circumstances. It is the doing of some act which a person of ordinary prudence would not have done under similar circumstances or failure to do what a person of ordinary prudence would have done under similar circumstances.

C.2.37 Non-Reimbursable Repair

A "non-reimbursable repair" is a repair that is the Contractor's responsibility with no additional reimbursement from the Government.

C.2.38 Normal Working Hours

"Normal working hours" is the hours of building operations under most circumstances when all services shall be provided to all occupants.

C.2.39 Occupant Emergency Plan (OEP)

The lead agency in each building is responsible for development and enforcement of the building's "Occupant Emergency Plan" (OEP). The OEP details what the building tenants shall do in case of an emergency. The plan identifies floor wardens, shelter in place locations etc.

C.2.40 Open Systems

An "open systems" solution is based on industry standard open protocols. This environment and solution is typically designed, procured, installed and maintained in a manner that provides the building owner with as many competitive configuration options as possible while maintaining the integrity of the supported manufacture system. The solution must be procured and installed so that the result delivers device level interoperability amongst different manufactures residing on a common network. In addition, the solution must be maintained with no future need for the original (installing) contractor. Additions, modifications, and retrofits can easily, without significant additional cost, be made to the system without dependence on the original installing contractor nor require substantial engineering or other technical development. Contractors shall specify Open Systems solutions where feasible and reasonably possible.

C.2.41 Operations

"Operations" is the continual process of using building equipment systems to accomplish their function, optimize building performance, and improve energy efficiency. Operations includes analysis of requirements and systems capabilities, operating controls and control systems, responding to service requests, touring and observing equipment performance and condition, adjusting equipment, identifying needed maintenance and repairs to equipment, and maintaining lubrication and chemical treatments, etc.

C.2.42 Performance Based Service Contracting

The procurement strategy that seeks to issue technical requirements that set forth outcomes for performance instead of specific requirements on how to perform the service. This strategy shifts the risk of performance to the Contractor by allowing the Contractor to design the methods of achieving desired results as defined by the performance quality standards established by the Government.

C.2.43 Performance Work Statement (PWS)

The Performance Work Statement details the work requirement and can be referred to as the specification.

C.2.44 Predictive Maintenance

"Predictive maintenance" is a program of maintenance activities in which scheduling of maintenance derives from monitoring the operating condition, or changes in the operating condition, of equipment being maintained.

C.2.45 Preventive Maintenance (Scheduled and Unscheduled)

"Scheduled preventive maintenance" is a program of maintenance activities performed based on a fixed schedule or on equipment runtimes. "Unscheduled preventive maintenance" is all work performed including adjustments and procedures necessary to sustain the proper operation of all building equipment and systems pending a scheduled procedure.

C.2.46 Product Preference (See Exhibit 4 Summary of Environmentally Sustainable Product Attributes)

Use of "environmentally sustainable" products is mandatory for performance of this contract. As such, products identified as "environmentally sustainable" will be selected over those which do not carry such designations. The following factors should be considered when selecting products: environmental performance, cost performance, bio-based, recycled content, biodegradability, technical performance, and availability.

C.2.47 Quality Assurance Surveillance Plan (QASP)

The QASP is the Government's surveillance method of monitoring and evaluating the Contractor's performance under a Performance Based Statement of Work (PBSOW).

C.2.48 Quality Control Plan

The "quality control plan" (QCP), is the Contractor's complete written system for identifying and correcting deficiencies in the quality of services before the level of performance becomes unacceptable. Preparation of this document is the responsibility of the Contractor.

C.2.49 Repair

A “repair” is an act of restoring inoperable, dysfunctional or deteriorated equipment, systems, or material to a fully functional, non-deteriorated state. Repairs usually involve some combination of labor and replacement parts, components or materials.

C.2.50 Reimbursable Repair

A “reimbursable repair” is a repair that is reimbursable to the Contractor, in whole or in part, in accordance with the provisions in this document.

C.2.51 Sequence of Operations

A “sequence of operations” is the control logic used to operate a system normally put into effect through a control program.

C.2.52 Service Request

A “service request” is a response to a GSA, tenant, or agency request or a response to an observation that some equipment, system or material covered by the contract is inoperable, dysfunctional, deteriorated, or not within normal operating parameters, or that performance standard of the contract is not being met. Service request response involves analysis of the problem and adjustment of operating or monitoring controls or other immediate corrective action. A requirement to perform a repair may result from the analysis stage of a service request. Service requests may be generated automatically from interfaces to BAS or diagnostic software.

C.2.53 Standard Services

Standard services are defined as all services that are included in the monthly price or as defined in the Contract document. Prices are to include all applicable labor, materials, supplies, training/certifications, equipment (except as otherwise provided), supervision, and management.

C.2.54 Stewardship

The act of stewardship is to take the responsibility for managing, conducting or supervising the quality, state or condition of a commercial building. A Stewardship program in addition to caring for the building, its occupants and visitors includes among other things a sense of shared responsibility, occupant participation and communications amongst building management, O&M personnel, cleaning personnel, occupants, contractors and others who have an impact on/in the building.

C.2.55 Supervisor, On-site

The term “on-site supervisor” means a person designated in writing by the Contractor who has authority to act for the contract on a day-to-day basis at the work site.

C.2.56 Tour

A “tour” is generally a scheduled walkthrough of equipment rooms and installations including computer rooms, restrooms, etc. by Contractor operating personnel for the purpose of ensuring that equipment is running properly, ensuring that equipment rooms are in good order and without safety hazards, and making any necessary adjustments to operating controls or to lubricate equipment. A tour may also involve a combination of such physical visits in addition to using automated systems for the monitoring of equipment and systems. Equipment log sheets are a part of the tour plan/program. All tours are "inspection" work orders in the CMMS and will comply with all work order requirements.

C.2.57 Vertical Transportation Systems
"Vertical transportation systems" include elevators, escalators, dumbwaiters, lifts, etc.

C.2.58 RESERVED

C.3 References (Contained in a separate reference document)

CM.4 Existing Deficiency and Contract Closeout Inspections and Lists
The outgoing Contractor, incoming Contractor, and the CO or their designee shall make a complete and systematic initial inspection together during the startup or transition phase of the contract. The purpose of this inspection shall be to discover and list all deficiencies that may exist in the equipment and systems.

CM.4.1 ***Existing Deficiency Inspection***
The incoming Contractor shall prepare the existing deficiency list. Deficient items that can be corrected by service call, preventive or predictive maintenance or repairs below the repair threshold shall **NOT** be placed on the existing deficiency list. Contract Closeout deficiency items that can be corrected by service call, preventive or predictive maintenance or repairs below the repair threshold will be corrected by the outgoing contractor prior to expiration of the contract. Any equipment that is currently operational shall **NOT** be placed on the existing deficiency list regardless of age. Any contract closeout deficient items not completed prior to contract expiration will result in the withholding of monies from the final payment. Any dispute between the Government and the Contractor as to classification of initial deficiency list items will be resolved under the Disputes Clause in this document.

The incoming Contractor shall also include an itemized price list (including, but not limited to labor, materials, overhead, and profit) for correcting each deficiency. These estimates shall remain in effect for 180 days. These lists shall be submitted to the COR 30 days prior to the start date. The Government may elect to have all or any part of this work performed by the outgoing contractor (at no additional cost) prior to contract expiration or the incoming Contractor (at the price or prices quoted), by Government employees, or by other Contractors.

Deficiencies discovered after the submission of the existing deficiency list will not be considered pre-existing for purposes of this Contract, unless equipment is operational and cannot be secured and inspected. Any piece of equipment or system that cannot be inspected shall be highlighted at the beginning of the existing deficiency list stating why it cannot be secured and inspected. An estimate of when the Contractor reasonably expects to be able to inspect the piece of equipment shall be provided. When an existing deficiency is corrected, the Contractor shall assume full responsibility for the subsequent repair of the item as covered under the terms of this Contract. Nothing in the existing deficiency list shall be construed as diminishing the obligations imposed by this Contract upon the Contractor to operate any deficient item (to the extent operable) or to adjust or maintain any such item.

CM.4.2 Closeout Inspection
GSA shall prepare the closeout inspection list not later than 30 days prior to the contract completion date. GSA shall enter deficiencies into the CMMS for correction by the outgoing

contractor. The contractor has until the contract expiration date to correct these deficiencies. Money shall be withheld from the final payment if these deficiencies are not corrected by the contract expiration date.

C.5. Startup Phase/Transition Phase

C.5.1 Transition Phase Startup

The Contractor shall provide **60 days** of transition startup services, prior to the Contract start date, to assist transitioning between Contractors**.** The purpose of this phase is to permit a transition that is seamless to the tenants and to assess the condition of the building and incomplete maintenance work at the time of Contractor transition. During this period the Contractor shall:

a. Review and update existing BOP with the CO or their designee by the end of the startup phase.
b. Inspect the condition of all equipment and systems for which the Contractor will assume responsibility.
c. Review work order history and equipment inventory information.
d. Complete the government-furnished CMMS training.
e. Update the preventive maintenance schedule, if needed. The new periodic maintenance schedule shall be based off of the last time PMs were performed.
f. Develop and submit to the CO or their designee **45 days before the end of the startup phase** the initial deficiency/closeout list report, including an itemized estimate for correcting each deficiency as described in Section C.4., Existing Deficiency Inspection /Initial Deficiency List. The Government may use this list and any other lists developed by the Government and/or a third party contractor hired by the Government that will make up the final deficiency/closeout list.

C.5.2 RESERVED

C.5.3 Adjustments and Corrections The Contractor shall be responsible for making immediate adjustments or corrections that fall within the scope of routine preventive maintenance required by this Contract at no additional cost to the Government. This includes, but is not limited to: making adjustments to controls; adjusting the BAS software, e.g., correcting set points; reloading programs; restoring equipment being operated manually to automatic operation (this does not include changing established sequences of operation or programming sequences); applying lubricants; cleaning fan housings, fans, coils, dampers, air handling unit (AHU) Sections, and equipment rooms; and replacing consumable parts or components. The Contractor shall identify for the Government all alarm points with originating point identification information (device ID, point number, description), so that the Government, at its discretion, may arrange for automatic generation of work orders from alarm conditions.

C.6. Phase-out Transition Period

When the Contract ends, the Contractor shall cooperate with the incoming Contractor during a phase-out period. For planning purposes, the Contractor shall assume a phase-out period of **60 days**.

During this phase-out period, the Contractor shall:

a. Assist the CO or their designee and incoming Contractor for a seamless transition in operations and maintenance with no adverse effect on the building tenants;
b. Provide GSA and the successor Contractor with access to all records and official documentation (both hard copies and electronic as applicable) required by this Contract;
c. Provide training to the successor Contractor on methods of accessing and programming the building automation system (BAS) and other control systems; and
d. Show the successor Contractor where all archived programs and systems literature are maintained. On the last performance day of the Contract, the Contractor shall turn over to the CO or their designee all keys and identification badges or cards.
e. Coordinate and complete disposal, cleanup, and transfer of all materials according to applicable laws.
f. Provide all data records (database files, spreadsheets, etc.) relating to building systems, assets, work orders, permits, work activities, etc. to GSA. GSA owns all data compiled under this Contract or ancillary to this Contract.

C.7. Deficiency/contract close out List Completion and Withholding Of Final Payment

The Government may create a deficiency/close out list of unmet Contractual requirements at or near the time of termination of the Contract. The Government may employ the services of another Contractor in the development of the list and upon completion provide the Contractor with a copy of work not completed, to include the monetary value the Government has assigned for each item. The Government retains sole discretion over whether to charge the Contractor for the monetary value of the list in whole or in part or to request corrections by the Contractor. If the Government elects to request corrections by the Contractor, the Contractor shall have until the end of the Contract period to perform such corrections and may invoice for funds withheld on acceptance of the corrections by the Government. Nothing in this Section shall be construed to limit the Contractor's liability or restrict the Government from reporting unsatisfactory or problematic performance by the Contactor.

C.8. General and Administrative Requirements

C.8.1 **Minimum staffing and ability to contact and communicate with the CO or designee**

The Contractor shall:

Provide qualified staff and onsite technicians to ensure services are continued without disruption to the tenant. The Contractor must be able to respond immediately to a variety of service requests involving multiple trades, including the operation of building control and energy management systems. Technicians shall be certified and properly licensed to work on buildings systems, where applicable, in accordance with Federal, State, or Local laws, codes, or ordinances. See paragraph H.15 Personnel Qualifications for additional information.

(1) Full Time Onsite Project Manager - The onsite project manager is a person, designated in writing by the Contractor, who has complete authority to act for the Contractor in every detail during the term of the Contract. The onsite Project Manager shall have the authority to accept notices of deductions, inspection reports and all other correspondence on behalf of the Contractor. The Project Manager's physical location and availability shall be approved by the CO or designee.

(2) Full Time Onsite Supervisor - The onsite supervisor is a person, designated in writing by the Contractor, who has complete authority to act for the Contractor on a day-to-day basis at the work site, in the absence of the Full Time Onsite Project Manager the onsite supervisors (all have the authority to direct the workforce and the work to be accomplished under this Contract on behalf of the Contractor. The onsite supervisor's physical location shall be at the work site. When multiple shifts are required, the Contractor shall designate a minimum of one onsite supervisor for each shift. These individuals may be classed as working supervisor if so desired by the Contractor and may perform the functions of mechanic and supervisor concurrently.

The onsite Project Manager **and/or** onsite Supervisor must maintain communication with the Government during normal duty hours and after hours for emergencies. Three examples of critical communication requirements are listed below:

1. Immediately notify the CO or their designee of any recognized safety hazard that might severely affect the building occupants.
2. Develop and submit to the CO or their designee within 21 calendar days of Contract award a list of key personnel and emergency contact information (which may include subcontractor contacts, as applicable).
3. Shall have all Contract employees, including subcontractor employees, sign in and out, upon entering or exiting the building using a log established at each building for security and Contract administration purposes.

C.8.2 Communication Equipment

The Contractor shall provide key operational personnel (managers, supervisors, and duty mechanics) with a cell phone to communicate with GSA for service requests, emergencies, status of projects, etc. The phone shall be compatible with the BAS Alarm reporting notification and GSA emails.

C.8.3 Onsite Records

The Contractor shall ensure that all records required by the Contract, or produced in performance of work under the Contract, are maintained in an organized manner onsite in electronic format and are made available to the Government when requested. The Contractor shall receive, maintain and gather data, as well as other materials including records and manuals, related to the support and operation of Government facilities. The Government retains ownership of all databases, information, and other materials received or developed by the Contractor in support of this Contract at all times.

C.8.4 Service Request and Administrative Support

The Contractor shall operate a service request and administrative support function during normal working hours, to act as a central point of contact for the Government and building occupants to take service requests, and track and maintain service request records in the CMMS. This includes service requests for work not under the scope of this Contract (i.e., performing a central service request desk function for the facility, regardless of who is responsible for responding to the service request).

C.8.5 Use of CMMS

GSA's goal is to use government-furnished CMMS systems in all locations as practicable. The Contractor shall use the Government-furnished CMMS to include validating and updating the equipment inventory database, including all data fields specified by the CO or designee. The Contractor shall attend the CMMS training provided by the government. Where not previously established, the Contractor shall construct the inventory database. The Contractor shall use the CMMS to identify, control, track, and schedule preventive maintenance work, service requests, and equipment inventory. The Contractor shall track historical maintenance and repair activities for each work order received during the performance of the Contract. All work done by the Contractor shall be accomplished under a CMMS work order. The Contractor shall provide reports to the CO or designee as requested and in a format and media as requested.

C.8.6 Quality Control Program

A Quality Control Plan (QCP) shall be developed and submitted for approval to the CO or their designee prior to issuance of the Notice to Proceed. Upon approval, the Contractor shall implement the QCP to ensure Contract compliance, and to ensure that potential problems with building equipment and systems are identified, documented in a CMMS if applicable, and resolved prior to failure. The system of checklists, inspection methodology, and frequencies shall be documented by the Contractor. The Contractor shall maintain a Local file of all quality control inspections conducted by the Contractor, including the corrective actions taken. All documentation shall be made available to the Government upon request during the term of the Contract.

C.8.7 Government Quality Assurance Surveillance Program

The Government may inspect the Contractor using a quality assurance program through random inspections, scheduled inspections, or any other method of inspection that the Government determines reflects the actual successful performance of this Contract. As part of the Government's quality assurance program, the Government may:

a. Review and, if warranted, reject any reports or other submittals required from the Contractor.
b. Review performance and service records, including, if applicable, but not limited to, BAS data, CMMS data, Advance Metering System, (AMS) data and any computerized or hardcopy records maintained by the Contractor documenting performance under this Contract, and require correction of any unsatisfactory conditions noted.
c. Determine the adequacy of the Contractor's quality control program and documentation and the overall success of this program. The Government may order improvements if it determines the programs are insufficient or ineffective.
d. Obtain tenant satisfaction survey information and require improvements in service on the basis of such information to the extent such results correlate with deficiencies in Contract requirements.
e. Conduct random and routine physical inspections of facility equipment and systems, to include programs and files maintained on computers and Contractor onsite offices and work areas, and require correction of deficiencies noted.
f. Perform inspections with Government personnel or independent third party inspectors.

C.8.7.1 Contract Performance

Contractor performance will be evaluated on the basis of the performance success or deficiencies, success or failure in meeting other Contract requirements, and the Contractor's record of correcting deficiencies when noted. While corrective actions will be noted, a record of significant

performance deficiencies may lead to a performance evaluation that is less than satisfactory even if the Contractor takes corrective action.

C.8.7.2 Methods

The use or nonuse of any quality assurance methods (e.g., a measurement and verification (M&V) program) by the Government will not constitute a waiver of or excuse from Contract requirements. The Government may implement or change quality assurance measures at any time during the term of the Contract.

C.8.7.3 Records and Files

All records and files that this Contract requires the Contractor to maintain shall be made readily accessible to Government representatives, including third party Contract inspectors, on request. All records and files utilized or generated during the course of the Contract by the Contractor, including all standard operating procedures and building operating plans, shall become the property of the Government (this excludes employee personnel files and company financial information).

C.8.7.4 Cooperation – Inspections

The Contractor shall instruct all onsite personnel to cooperate with the Government or third party Contract inspector requests for records access and information. This includes answering honestly and comprehensively all questions related to performance of work. The Contractor shall provide personnel to enable inspectors, including third party Contract inspectors, to perform inspections of equipment. The Contractor shall notify the CO or their designee at least 2 weeks in advance when equipment is to be opened and available for inspection by the Government. The Contractor shall open and operate the equipment for observation by all inspectors at no additional cost to the Government provided the Government requests the service at least 48 hours in advance. Most inspections will be performed during normal working hours. However, the Contractor shall provide personnel to enable access for inspectors who need to conduct observation and testing after normal hours to avoid possible disruption to tenants.

C.8.7.5 Contractor Performance Systems (CPARS)

GSA uses the CPARS or similar performance measuring system to formally evaluate the Contractors performance. Evaluations are generally conducted annually or more frequently on or about the anniversary date of the Contract and also at the end of the Contract period.

C.9. Building Operating Plan

C.9.1 Purpose of Building Operating Plan (For additional info refer to References)

The building operating plan may be based on, or derived from, the existing building operating plan and other existing documents. However, all components shall be reviewed and updated. Deficiencies in the existing plan do not excuse deficiencies in the new plan. GSA will provide template and Contractor will meet within 60 days after contract start date with GSA Property Management staff to fill out. GSA will maintain this plan, however it’s a shared responsibility to keep it updated. If contractor knows of a change that’s needed, the contractor will notify GSA Property Management Staff to have them update. A copy will be kept with GSA and a copy in the Contractors onsite office.

C.9.2 Components of the Building Operating Plan (BOP) (Refer to references doc)

C.10. Equipment Inventory
The Contractor shall:

a. Maintain and update the building equipment inventory and equipment labeling.
b. Maintain equipment inventory and maintenance records in a CMMS.
c. Maintain the same asset identification system currently used for new and replacement equipment unless a national asset identification standard is provided. Some asset identification systems include bar-coding, Radio Frequency identification (RFID), or other equipment tagging.
d. Collect and maintain an inventory of: (1) all equipment of types that require maintenance or certifications pursuant to the PBS Maintenance Standards or applicable code requirements, (2) equipment which is operated through a sequence of operations, (3) electronic controllers and network devices, (4) sensors, (5) Agency owned sensors , if applicable.
e. Collect and maintain the following equipment data: Equipment ID, Equipment Type, Equipment Description, Asset Identification Code, Manufacturer, Model Number, Serial Number, Equipment Status, Building Number, and Location (Exhibit J. 15).
    1) The Contractor shall provide all data to GSA in a format approved by the CO or designee with certification that the inventory is complete and accurate. For facilities where the GSA provides a CMMS, the government-provided CMMS is the required format for providing inventory data.
    2) The Contractor shall annually certify that the Maintained Building Equipment Inventory is up-to-date and submit the certified inventory to the CO or designee.
    3) The Contractor shall update equipment data when equipment is added, removed, or retrofitted as part of a project, or discovered by GSA or the Contractor.
    4) The Contractor shall review and update equipment records including asset information, maintenance records and preventive maintenance records any time maintenance is performed on a piece of equipment.
    5) The Contractor shall report to the CO or their designee changes to the asset inventory and preventative maintenance schedule within five working days of collecting and gathering equipment information.

Omissions on existing inventory do not relieve the Contractor from the responsibility for the maintenance of the equipment. If the inventory data does not meet Contract requirements, action to withhold payments will take place. The Contractor may request equitable adjustment pertaining to physical changes in building equipment and submit to the CO or designee for consideration.

CM.10. Equipment Inventory
The Contractor shall:

a. Maintain and update the building equipment inventory and equipment labeling.
b. Maintain equipment inventory and maintenance records in a CMMS.
c. Maintain the same asset identification system currently used for new and replacement equipment unless a national asset identification standard is provided. Some asset identification systems include bar-coding, Radio Frequency identification (RFID), or other equipment tagging.
d. Collect and maintain an inventory of: (1) all equipment of types that require maintenance or certifications pursuant to the PBS Maintenance Standards or applicable code

requirements, (2) equipment which is operated through a sequence of operations, (3) electronic controllers and network devices, (4) sensors, (5) Agency owned sensors , if applicable.

e. Collect and maintain the following equipment data: Equipment ID, Equipment Type, Equipment Description, Asset Identification Code, Manufacturer, Model Number, Serial Number, Equipment Status, Building Number, and Location (Exhibit J. 15).
    1) The Contractor shall provide all data to GSA in a format approved by the CO or designee with certification that the inventory is complete and accurate. For facilities where the GSA provides a CMMS, the government-provided CMMS is the required format for providing inventory data.
    2) The Contractor shall annually certify that the Maintained Building Equipment Inventory is up-to-date and submit the certified inventory to the CO or designee.
    3) The Contractor shall update equipment data when equipment is added, removed, or retrofitted as part of a project, or discovered by GSA or the Contractor.
    4) The Contractor shall review and update equipment records including asset information, maintenance records and preventive maintenance records any time maintenance is performed on a piece of equipment.
    5) The Contractor shall report to the CO or their designee changes to the asset inventory and preventative maintenance schedule within five working days of collecting and gathering equipment information.

Omissions on existing inventory do not relieve the Contractor from the responsibility for the maintenance of the equipment. If the inventory data does not meet Contract requirements, action to withhold payments will take place. The Contractor may request equitable adjustment pertaining to physical changes in building equipment and submit to the CO or designee for consideration. Equitable adjustable will not be allowed for any equipment that is on site, but not in the CMMS, at the beginning of this contract

C.11. Weekly Progress Meetings

Weekly progress meetings will be conducted to discuss contractor performance during the previous week. The following will be included in the discussions each week:

a. Explanation of any equipment, designed to be controlled by the BAS, operating in manual mode, and of any other overrides to sequences of operations in effect.
b. Operating schedule changes (manual or programmed)

Description of any lost time accidents or other safety problems, including incidents involving hazardous materials that occurred.

c. Copies of quality control inspections performed.
d. Miscellaneous work provided
e. Copy of arrival and departure reports
f. Contractor’s weekly water treatment test results and the monthly water treatment test results from the Contractor’s subcontractor
g. Recalibration documentation of advanced metering equipment.
h. When testing is performed, the Contractor shall discuss results.
i. Refrigerant controls/usage logs.
j. The Contractor shall discuss fuel levels and purchases.
k. Contractor after hours/overtime usage
l. **RESERVED**

m. Work Order status of all types of maintenance, repairs, service calls (highlight overdue and tenant complaints), to include deferred, completed, and active (include estimated completion date), by type of work (i.e., reimbursable, repair, and work orders resulting from testing and inspections, and any equipment out of service.

C.12. Performance Review Meetings

The Contractor shall meet with the CO or their designee and other Government representatives, at the discretion of the CO or designee, to review Contract performance.

C.13. Equipment Condition Assessment

During the performance of the requirements of this Contract the Contractor shall note the condition and efficiency of building equipment and systems on an ongoing basis in the CMMS. Any equipment or systems that the Contractor determines are reaching the end of their life cycle shall be brought to the attention of the CO or their designee. When requested, the Contractor shall complete and submit to the CO or their designee an itemized equipment condition assessment with their recommendation for equipment or system upgrades or replacements (that has reached end of their life cycle), including a text description of each recommended upgrade or replacement and their life cycle cost analysis that shall include estimated project cost. The equipment condition assessment reports shall be produced in Word, Excel, or PDF format and submitted electronically as an email attachment to the CO or their designee.

Major Equipment and Critical System Breakdowns

The Contractor shall report to the COR the status of any major equipment or systems not operating, or that become non-operational during the workday, within 30 minutes of discovery. The Contractor shall, on a daily basis, report the status of any system or equipment, including elevators, not operational by the official start time of the building occupants to the COR by 8:00 AM, with a written report to follow as directed by the COR.

Security and fire alarm system malfunctions must be reported immediately to the COR.

The Contractor or his/her on-site representative shall immediately notify the COR or his/her designee if a building system fails, and the Contractor's personnel cannot correct the problem. If the failure occurs *outside of normal working hours,"* ***the Contractor or his/her on-site representative shall immediately contact the appropriate GSA personnel in accordance with instructions and telephone numbers furnished by the COR. If the failure involves fire alarm, fire system monitoring, fire detection, or fire suppression systems/equipment,*** *THE CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO INSTALL PERSONNEL, AS MAY BE NECESSARY, TO CONDUCT AN APPROPRIATE FIRE WATCH* ***until the emergency condition can be resolved in accordance with the requirements of this Exhibit***

C.14. RESERVED

C.15. Reference Library

The Contractor shall maintain a comprehensive reference library that includes building design or record documents, renovation or equipment retrofit design or record documents, maintenance reference documents, applicable NFPA codes and standards, fire protection system as-built

drawings, fire protection system operations and maintenance manuals with copies of approved submittals, fire protection system parts list, fire protection system zoning scheme, fire protection system sequence of operation matrix, HVAC Operations Manual (if one has been developed), building operating plan, energy and other building technical studies, hazardous materials surveys, and other documents necessary to document the design, function, and condition of the building. The Contractor shall safeguard this information in accordance with the provisions of Section H.6., Sensitive but Unclassified Building Information (SBU).

C.16. Review of Design Documents

Utilizing the most qualified onsite personnel familiar with the operations of the facilities covered under the scope of this Contract, the Contractor shall review design and construction project documents as requested by the CO or designee. The purpose of this review is to allow the Contractor to comment on any negative impact the proposed project may have on their ability to efficiently operate the building equipment or systems. When requested to perform these services, the Contractor will be compensated for the actual time required spent. The Contractor should also be allowed to provide input or propose ideas that may improve the operations and provide value engineering.

C.17. Building Management Support Services

The Contractor shall provide reasonable and competent assistance during normal working hours to GSA personnel or other GSA Contractors performing energy studies, engineering studies, building condition evaluations, fire protection facility surveys, project designs within the building, and other access needs at no additional cost to the Government. Such assistance shall include escorting investigatory personnel through spaces in the building in accordance with building security requirements, explaining the operation and condition of equipment and systems to investigatory personnel, and providing access to trend data, maintenance records, reference library materials, and other pertinent building technical data to investigatory personnel. The CO or their designee shall inform the Contractor as far in advance as possible of the actual date and time these services are needed. The contractor shall not be compensated for escorting their own personnel or subcontractors. When requested to perform these services after normal working hours the Contractor will be compensated for the actual time required to escort the GSA personnel or Contractor at the following hourly rate:

INITIAL:	$ 43.17 PER PRODUCTIVE HOUR
OPTION I:	$ 44.03 PER PRODUCTIVE HOUR
OPTION II:	$ 44.91 PER PRODUCTIVE HOUR
OPTION III:	$ 45.80 PER PRODUCTIVE HOUR
OPTION IV	$ 46.71 PER PRODUCTIVE HOUR

C.18. Inspection Assistance for Space Build Outs

When tenant improvement or space alteration work is completed in the building, the CO or their designee may request that the Contractor inspect the space to verify that all offices have appropriately zoned air supply and return ductwork and diffusers, appropriately zoned lighting circuits, and all zone HVAC/lighting controls have been adjusted appropriately and labeling of break ers in electrical panels and outlet cover circuit designations are complete. Obvious problems or conditions that may potentially affect the efficient operation of the building or create a negative impact on the tenant shall be immediately reported to the CO or their designee.

C.19. RESERVED

C.20. Labeling of Electrical Circuits

The labeling of the electrical circuits shall be maintained up to date. When another Contractor (not the O&M Contractor) adds or modifies electric circuits the O&M Contractor shall inform the CO or their designee the compliance of annotating the changes to the panel and the update to the single line diagrams using the original electronic file format.

C.21. Operational Requirements

C.21.1 General

The Contractor shall provide building operations services for all systems covered by this Contract, so as to maintain uninterrupted utilities services, and environmental conditioning to tenants during normal working hours, and at other times as described in this document, so as to preserve the asset value of the facility and its systems and to otherwise minimize operating costs to the Government without compromising other Contract objectives or requirements. The Contractor shall be briefed by the property manager on GSA's policy regarding overtime utilities to better understand what is considered standard and above standard services.

C.21.2 RESERVED

C.21.3 Continuity of Operations (COOP)

The Contractor shall operate the facility and participate in emergency operations in support Occupant Emergency Plan (OEP) as specified in Section H.21.

C.21.4 Emergency Operations Plan

The Contractor shall be responsible for developing an emergency operations plan within the building operating plan and shall become thoroughly familiar with the Government's occupant emergency plan and other regional plans as applicable. The Contractor's plan shall include the following information: position and contact phone number of each Contractor person, what each position is responsible for in each emergency, general administrative support the Contractor will provide during emergencies and any subcontractor support and contact information.

C.21.5 Tenant Environment

Lighting levels shall be adjusted under the guidance of the CO or their designee where they can be adjusted without changing fixtures (e.g., tuning dimmable ballasts, de-lamping). The Contractor should note that while the PBS P100 establishes target lighting levels, light quality, specific tenant requirements, energy conservation, and other individual factors also have an impact on requirements. In compliance with the FMR sections; 1002-74.185 and 102-74.195, respectively the contractor shall meet ASHRAE Standard 55-2004, Thermal Environmental Conditions for Human Occupancy and ASHRAE 62.1-2007, Ventilation for Acceptable Indoor Air. The Contractor shall maintain these standards throughout the normal working hours. Equipment start up shall occur efficiently in order to fully attain environmental conditions at the

beginning of normal working hours. The contractor shall comply with the ASHREA Standard 55 – 2004 to achieve temperature settings between 74°F and 78°F in the summer months and between 68°F and 72°F in the winter months. These recommended temperature settings apply to the entire building not individual offices. The Contractor shall report significant changes in the operating conditions to the CO or their designee. If the standards (ASHRAE Standards 55 and 62) cannot be achieve the Contractor shall submit a written deviation to the CO or their designee for approval.

C.21.6 **RESERVED**

C.22. System Performance Standards or Procedures

C.22.1 Control Systems

The Contractor shall maintain control systems and sequences that emphasizes efficient operations. Region 7 GSA considers the control systems Operator to be the most important position in the contract since they are operating the most important system we own. It is important to have qualified staff operate the systems. All efficient operations are dependent on and can only happen through a competent Operator and a well maintained system.

The BAS is accessed through the Tridium Niagra control system. It is important that the Contractor's operator is familiar with this system as well. While GSA will maintain the software, firmware updates, and the licenses for the Tridium Niagra system, it is the contractor's responsibility to operate, maintain and repair it. R7 GSA cannot stress enough the importance of these control systems, and the qualifications of the Operator. A large amount of success with this contract hinges on these two items.

C.22.2 Smart Buildings

The Government is taking proactive steps to converge a building's monitoring and control systems on common GSA-supported network infrastructure to enable access to real-time controls systems performance data (i.e. data points). If the facilities' building systems network was installed and maintained by GSA CIO, then this building has Government-furnished (GFE) network equipment and Smart Technologies deployed. This also means that the Contractor will potentially need to coordinate troubleshooting and support with building system Contractors (HVAC, Lighting, etc.) and GSA CIO to help identify and resolve issues.

Integrated Building Systems

Assist the Government by ensuring that all relevant equipment vendors, with equipment installed in facility, maintain their respective systems (i.e. HVAC, BAS, Lighting, Advanced Metering, etc.) in accordance with GSA Smart and Sustainable Buildings intended objectives (i.e. open systems running on a single GSA Building Systems data network)

The Contractor shall act as a liaison and facilitate efforts between their respective building-specific monitoring and control system subcontractors and work through the CO or their designee GSA with the Information Technology Office (PBS CIO) on issues related to O&M operations.

The Contractor shall make recommendations to the government (as applicable), on improvements to sequences of operations. Communications for alarms set up for remote notification shall be tested on a recurring basis.

The contractor shall be responsible for keeping manufacturer and/or O&M building system software (BAS, BMS software) functioning. This includes, but is not limited to, no–cost updates and/or re-installing manufacturer's building system software on GFE computers and manufacturer's building system controllers as necessary to keep current with manufacturer recommended release levels and to keep in compliance with all applicable GSA IT support policies and procedures. GSA will be responsible for any manufacturer-related update costs.

C.23. Service Requests

C.23.1 General

The Contractor shall respond to service requests and initiate corrective actions and identify any repair requirements during normal working hours. The Contractor shall respond to emergency service requests (during normal working hours) and callback (after hours) work requests at all times. The Government (or, where applicable, the tenant Agency) may transmit work orders to the Contractor for service request or emergency service request and callback orally, by email, by creation of a work order by a Government employee or representative, or by generating an automated work order. The Contractor shall respond according to specified service response times.

C.23.2 Emergency Service Request

Emergency service requests are service requests where the work consists of correcting failures that constitute an immediate danger to personnel or property, including but not limited to: broken water pipes, stalled elevators with trapped passengers electrical power outages, electrical problems that may cause fire or shock, gas or oil leaks, major air conditioning or heating problems, etc., or any work considered by the CO or their designee to be of an emergency nature. The Contractor shall respond to emergency service request immediately (within the shortest possible time consistent with the mechanic's location) during normal working hours. The Contractor shall remain on the job until the emergency situation has been secured and adequate temporary repairs have been made. Permanent repair shall be governed by the repairs provisions in this document.

C.23.3 Emergency Call Back (after hours)

Emergency call back requests are service requests where the work consists of correcting failures that constitute an immediate danger to personnel or property, including, but not limited to: broken water pipes, stalled elevators with trapped passengers**,** electrical power outages, electrical problems that may cause fire or shock, gas or oil leaks, major air conditioning , heating problems or fire alarm malfunctions, fire watches, etc., or any work considered by the CO or their designee to be of an emergency nature. The Contractor shall respond to emergency call back service request immediately (within the shortest possible time consistent with the mechanic's location) after working hours within 1 hour. The Contractor shall remain on the job until the emergency situation has been secured and adequate temporary repairs have been made. Permanent repair shall be governed by the repairs provisions in this document. The Contractor shall provide a written accounting of any emergency call back, to include costs incurred and plan for permanent correction of the problem, to the CO or their designee the

morning of the next working day. If the emergency call back is expected to take more than 2 hours to resolve the Contractor must get approval from the CO or designee. The contractor shall provide emergency call back (after hours) requests up to **675 hours per contract year**. Emergency Call Back (after hours) that is the result of negligence by the contractor will not be considered in the **675 hours** limit per contract year. Emergency Call Back (after hours) that is due to contractor negligence shall be corrected at no additional cost to the Government. The contractor shall submit a running log containing the number of hours used monthly (first Monday of the following month) to the COR. After the **675 hours** limit has been reached each contract year GSA will reimburse the Contractor for Emergency Call Backs (after hours) at the loaded wage rate (hourly rate plus fringe benefits) times 1.5 for overtime.

C.23.4 Urgent Service Request Response

Urgent service requests are those service requests where the work consists of correcting failures that interrupt or otherwise adversely impact either GSA operations or building occupant operations, but do not pose immediate danger. Examples of these types of service requests include, but are not limited to, inoperative electrical circuits, temperature complaints, inoperative lighting above a work station, flush valve stuck open, any malfunctions to equipment that affect the operations of building occupants, or any work considered by the CO or their designee to be of an urgent nature. The Contractor shall respond to urgent work requests within 1 hour during normal working hours. The Contractor shall remain on the job until the urgent repairs have been made. Permanent repair shall be governed by the repairs provisions within this document.

C.23.5 Routine Service Request Response

The Contractor shall respond promptly to routine work requests (i.e. plumbing & lighting issues) and complete the required work within 72 hours (continuous time, includes after hours and weekends) of notification. The Contractor shall immediately notify the CO or their designee with a written extension when the routine service call cannot be completed within the specified timeframe.

C.24. Tours

C.24.1 RESERVED

C.24.2 Operating Logs (Boilers and Water Cooled Chillers)

Operating logs for boilers and water cooled chillers shall be completed minimally once per day during normal duty hours.

C.24.3 RESERVED

C.24.4 Condensate Drip Pans

All drip pans shall be treated with an appropriate biocide to control the growth of algae, etc. If any condensate pans are inaccessible, the Contractor shall notify the CO or their designee immediately.

C.24.5 RESERVED

C.25. Demand Response Programs

The Government may participate in any of the available demand response programs or critical peak pricing tariffs administered by utilities, State agencies, or third-party administrators. If the Government participates in such a program and advises the Contractor of the requirements of the program, the Contractor shall cooperate fully in the implementation of the program.

C.26. RESERVED

C.27. BAS Alarm Response

The Contractor shall maintain all BAS systems using qualified employees. BAS alarms shall be treated as service requests and responded to accordingly. Any major adjustments to set points to accommodate tenant comfort shall be approved in advance by the CO or designee. Communications for alarms set up for remote notification shall be tested on a recurring basis.

C.28 Advanced Metering Program

GSA's purpose for installing these meters is to monitor, identify, and implement opportunities to reduce energy usage at the building(s) and, in some cases, to verify that the utility companies are billing correctly. In many cases, the AMS will be connected to the BAS. It shall be the Contractor's responsibility to partner with GSA to fully utilize the AMS to develop and implement strategies that will result in overall energy reductions.

C.28.1 RESERVED

C.29. Protection and Damage

The Contractor shall make reasonable efforts to assist the Government to prevent hazardous conditions and property damage and to maintain security. The Contractor shall promptly report such conditions or activities to the CO or their designee or Federal Protective Service (FPS) personnel. The Contractor shall protect Government property, buildings, materials, equipment, supplies, records, and data within the Contractor's control against unauthorized access, loss, or damage and excessive energy consumption. The Contractor shall establish a system for onsite work force personnel to report potentially hazardous conditions in the building to the CO or designee. The Contractor and Contractor's employees and subcontractors shall comply with the GSA's Rules and Regulations Governing Public Buildings and Grounds (as posted in the building) and shall promptly report violations by employees, or as otherwise observed, to the CO or their designee or security personnel. The Contractor shall provide reasonable assistance to security or emergency response personnel as needed.

C.30. Negligence

The Contractor shall provide all labor, materials and equipment necessary for the protection of Government personnel, equipment, furnishings, buildings, and facility accessories (such as parking lots, fences, etc.) from damage caused by Contractor's negligence. Any items damaged due to work performed by the Contractor or subcontractor working for the Contractor shall be repaired or replaced to its original condition and finish at no additional cost to the Government. If equipment shall be operated beyond normal conditions to prevent damage to equipment, the Contractor will be responsible to pay for additional energy used as a result of negligence.

C.31. Key Control

The Contractor shall follow the building's key control program. Keys issued to the Contractor or the Contractor's personnel or subcontractors shall be signed for and not transferred to other personnel unless recorded in the key control log. The Contractor is financially liable for the cost of rekeying if keys are lost or not recovered from terminated employees or subcontractors.

The contractor shall be responsible for the key control program and furnish locksmith services and key blanks for routine installation and removal of lock-sets and tumblers, costs associated with re-keying due to the loss of a Master, duplication of keys; repair of defective lock-sets; and opening doors in the event of lost keys.

All new locks shall fit existing Grand Master key system.

C.32. Disruptive or Hazardous Tools

The CO or their designee shall approve use of impact tools and power-actuated tools during normal working hours. Burning or welding equipment may be used only with written permission from the property management office or CO or designee. A Welding and Burning Permit (GSA Form 1755 or equivalent) shall be issued in advance for each day welding or burning is performed.

C.33. Scheduled Disruption to Utilities, Lighting, Fire Protection & Life Safety Systems, or Space Conditioning

Any work that will disrupt utilities, fire protection and life safety systems, lighting or space conditioning for building tenants shall be scheduled and approved in advance with the CO or their designee and is generally required to be performed outside of normal working hours.

C.34. Plumbing and Restrooms

Plumbing systems shall be maintained, repaired, and kept functional to the point of service delivery as defined by the utility company. The Contractor shall ensure all system drains, including storm drainage and roof drains, remain clear and unobstructed. The Contractor shall take any necessary steps to prevent odors emitting from drains or other plumbing systems into occupied space, to include keeping water in traps appropriately maintained. The Contractor shall clear toilet and sink blockages, as necessary. Such requests will be transmitted to the Contractor by the CO or their designee through service request procedures.
When replacing plumbing fixtures, use the most reduced water usage device as approved by the CO or designee. (For additional information see: http://www.epa.gov/watersense/)

C.35. Maintenance Program

C.35.1 General

The Contractor shall establish an effective system for scheduling and performing scheduled preventive maintenance on all building equipment and systems requiring a preventive maintenance procedure covered under the scope of this Contract. The Contractor shall submit this system to the CO or designee, including the list of items receiving a preventive maintenance

procedure as well as the specific maintenance standard or guide describing the preventive maintenance procedure and frequency (see Section C.35.2, Maintenance Standard, below), for approval 10 days prior to Contract start date. NOTE: Air filters shall be replaced when necessary and not on a set schedule as described in the current GSA R7 CMMS. 1 year infrared testing shall be performed and not the 3 year electrical testing (PM Guide numbers E-25, E-26, E-27, E-28, E-30, and E-57) as described in the current GSA R7 CMMS. The infrared test shall be performed by a journeyman level or above licensed electrician with at least 1 year experience performing this test. Results shall be submitted to the COR 2 weeks after the infrared test is performed.

C.35.2 Maintenance Standard

As part of the Contractor's established system for scheduling and performing scheduled preventive maintenance (See C.35.1, General, above), the Contractor shall propose to the CO or designee, preventive or predictive maintenance standards or guides for each piece of equipment where the manufacturer/designer recommends preventive maintenance. Minimally, the preventive or predictive maintenance standards or guides proposed by the Contractor shall be based on; manufacturer's recommended maintenance or the most current Public Buildings Service Operations and Maintenance Standards 2012 (PM Guide) or guides proposed by Contractor. If the Contractor uses the most current version of the PM Guides then the Contractor assumes responsibility that the PM guides all inclusive of all the required preventive maintenance requirements for equipment and systems in the building. The preventive or predictive maintenance standards proposed by the Contractor may be based on a combination of equipment manufacturer's recommendations, the PBS O&M Standards, (PM Guide), sensor technology, diagnostic software, Contractor's experience and other sources. The equipment requiring Contractor proposed preventive or predictive maintenance standards or guides shall include all of the building equipment when any of the following equipment characteristics apply:

a. The equipment normally requires periodic replacement of consumable components.
b. The equipment normally requires periodic or occasional cleaning.
c. The equipment has moving parts.
d. The equipment is prone to failure before overall obsolescence of the system it serves.
e. The equipment is of a type itemized in the NETA, Maintenance Testing Specifications.
f. The equipment requires inspection, testing, and maintenance in accordance with NFPA codes and standards.
g. The equipment requires maintenance in accordance with any other provision of this Contract.

The contractor shall schedule preventive maintenance on new equipment in the CMMS system when the extended maintenance service is completed by the installer and ensure that all pertinent warranty information and proposed maintenance plans are sufficient to uphold our obligations under the warranties.

The Contractor shall not use any Contractor-proposed preventive or predictive maintenance standards or guides or any of the Public Buildings Service Operations and Maintenance Standards guides to perform inspections, testing, and preventive maintenance on fire protection and life safety systems and equipment. The Contractor shall be required to use the NFPA Codes and Standards specified in this document to perform inspections, testing, and preventive maintenance of fire protection and life safety systems and equipment. In addition, the Contractor shall be required to follow the specific testing and inspection frequencies and methods specified in such NFPA Codes and Standards. The Contractor shall record such inspection and testing services on the appropriate NFPA inspection and testing forms.

C.35.3 Application of Diagnostic Software

GSA is fielding diagnostic and optimization software to detect problems and inefficiencies in equipment operation. The Contractor shall act on the recommendations of such diagnostic and optimization software reporting. This may include using the results of the diagnostic and optimization software to manually generate a service request, or to respond to a service request automatically generated by the diagnostic program application. The failure of the Government to implement such diagnostic programs does not relieve the Contractor of responsibility for detecting, diagnosing, and correcting deficiencies and inefficiencies.

C.35.4 BAS Control Systems

Control systems shall be maintained as designed. The Contractor is responsible for all system hardware; for keeping software functioning and for reloading software in computers or controllers (application specific controllers -ASC) as necessary; for making set point adjustments as necessary and appropriate; for other than reloading programs and for making operator level changes such as set point adjustments. The Contractor is also responsible for periodic backups when the Regional Office FMSP does not provide this function. The Contractor is responsible for updating software. Refer to paragraph C.1.1.r. The Government may upgrade or change control system software or reprogram control systems during the performance period of the Contract. If the Government provides operator level training and operator level documentation for the Contractor's use, the Contractor shall not claim additional payment for changing to the new or upgraded software or control programs. The Contractor shall not modify sequences of operation or control programs or run systems manually without prior approval of the CO or their designee and regional subject matter expert (SME).

C.35.4.1 BAS Operating Standards All computers networked with building monitoring and control systems located inside GSA facilities, or which provide storage of and/or access to GSA data, which includes data related to energy usage, industrial systems controls, physical access controls, lighting controls are required to be hosted exclusively on GSA's physical network and system infrastructure, unless otherwise excepted. The contractor shall maintain the following minimum standards: ***Connecting to the GSA Network – Federal IT regulations regarding Trusted Internet Connection (TIC) in conjunction with PBS and GSA and GSA CIO's IT Policies require all PBS systems needing network connectivity to reside on the GSA network.*** The Contractor is responsible for ensuring their employees have BAS training. **The Contractor's staff shall be trained in the proper use and operation of the buildings' BAS and controls sequences. This controls training does not qualify the contractor's employee(s) to program or maintain the buildings' BAS.** See paragraph H.15.1.3 for training requirements.

C.35.4.1.1 GSA-hosted Systems Requirements

a.) All building monitoring and control systems, applications and devices will be implemented as designated in the P100 (2011 or newer) and the PBS Building Technology Policy. Additionally, all government IT systems are required to meet FISMA standards for IT security.

b.) All building systems software, server and workstations based, will be hosted on Government furnished equipment (GFE)

c.) All IP traffic is managed by GSA, and IP addresses as well as all routing and switching equipment will only be furnished exclusively by GSA.

d.) All vendors provided software that has an End User License Agreement must be presented to and approved by GSA Office of the General Counsel before that software is purchased.

e.) Operations and Maintenance contractors will be responsible for supporting all cabled path ways to include copper and fiber cabling, necessary to enable IP network communication among system devices and network components, to include all break/fix requirements. All new cabling, to include break fix, should be done in accordance with PBS Telecommunications Distribution and Design Guide.

f.) GSA is responsible for the licenses, firmware, and software updates and upgrades of the Tridium Niagra Jace control systems; however, the contractor is responsible for the maintenance and repair of them.

g.) Operations and Maintenance contract staff must receive preliminary favorable and ultimately completely favorable adjudication of their National Agency Check with Inquiries clearance in accordance with the HSPD-12 directive to obtain a GSA ENT user credential, which is required for all system access.

h.) At no time should a GSA hosted building monitoring and control systems be made accessible to the public internet or via any 3rd party network connection. No modems allowed without approval from Co or designee.

i.) Contractor must maintain a BAS log book next to the BAS front end. The contractor will document problems with the BAS as they are discovered. This log book will be used by the contractors BAS subcontractor, or qualified in house staff as a work list that needs to be fixed at their next scheduled visit.

C.35.4.1.2 RESERVED

C.35.4.2 Reporting The Contractor is responsible for notifying the Government if a sequence of operations or its implementation as a control program is not producing the desired results or is resulting in unnecessary energy use. The Contractor is responsible for notifying the CO or their designee if any systems are running out of sequence or manually. All instances shall be reported to the CO or their designee immediately. The Contractor is responsible for retaining an adequate level of expertise to manage the control systems. If the Contractor does not have a manufacturer trained or equivalent BAS operator onsite, who is also able to repair and or reprogram the system, other than just operating it, the Contractor shall enter into a subcontract, including regular scheduled support (not merely support on a contingency basis), or remote access; with a firm that has these skills.

C.35.5 RESERVED

C.35.6 RESERVED

C.36. Water Treatment

C.36.1 General

The Contractor shall provide equipment, chemicals, and services (including application) required to control corrosion, scale, algae, and bacterial growth in all HVAC equipment and systems throughout the building. The Contractor shall be responsible for conformity with all pertinent Local sanitation district regulations, air quality district regulations, and other environmental regulations. Water treatment shall be performed and safety equipment (e.g., emergency eyewash stations) maintained in accordance with OSHA standards.

C.36.2 Tolerances

Water shall be kept within tolerance bands in accordance with Exhibit 9 Water Treatment.

C.36.3 Initial Report and Development of Program

The Contractor shall perform a comprehensive initial water treatment analysis (laboratory analysis) within the first month of the Contract to assist in developing the water treatment plan. The Contractor shall propose a water treatment plan to be approved by the CO or designee.

C.36.4 Cooling Tower Water Management Plan

The Contractor shall perform a comprehensive water treatment per the appendix in Exhibit J.9. This exhibit establishes mandatory standards for water in HVAC and domestic water systems in GSA facilities, along with information related to the intent of the standards and guidelines that in most circumstances can be used to construct a water treatment program.

C.36.5 Corrosion Monitoring

The Contractor shall install coupon racks, or an equivalent electronic monitoring system for corrosion, in condenser water loops, heating hot water loops, and the building main chilled water loop, if not already present, not later than 30 calendar days after submission of the water treatment plan (For the primary condenser water system, the installation of the water treatment monitoring system described elsewhere in this document meets this requirement). The Contractor shall propose the type and manufacturer of the proposed coupon racks to be installed to the CO or their designee for final approval before installation. If coupon racks are present the Contractor may use such existing equipment, but is responsible for bringing it into conformity with all requirements in this document. The minimum quantity of coupons and frequency of inspections shall be described in the water treatment plan. Laboratory analysis of coupons shall be no less frequent than quarterly for major systems (e.g., primary building condenser and chilled water loops, as opposed to specialized systems serving limited areas), and annually for other systems. At a minimum, two coupon racks shall be installed for each loop, and used to monitor mild steel and copper. Coupon racks will be the property of the Government upon installation. The Contractor shall have responsibility for maintaining (and if necessary replacing) the coupon racks for the duration of the Contract. The liability threshold for repairs does not apply to this equipment; the Contractor has full responsibility. Acceptable corrosion rates are established in the most current Public Buildings Service Operations and Maintenance Standards. Molybdenum shall not be used in GSA buildings.

See Section C.42.3 Water-Based Fire Protection Systems, which references NFPA 25 for information regarding evaluating corrosion of water-based fire protection systems. Contractors

during their inspection of water-based fire protection systems shall verify such systems are free from corrosion.

C.36.6 Monthly Testing

The Contractor shall provide a qualified independent water treatment specialist to draw a set of water samples monthly. Tests shall be performed as described in the water treatment plan. Samples shall be analyzed and a monthly report containing all pertinent information, relative to the conditions found when testing is performed, shall be submitted in the CMMS as an attachment to the work order. The results shall also be made available to the CO or designee at the weekly performance meeting.

C.37. Oil Analysis and Oil Changes

C.37.1 Periodic Oil Analysis

The Contractor shall establish and implement an oil analysis program incorporating the manufacturer's recommendations. Documentation shall include periodic oil analysis tests to be performed at least annually, diagnostic standards, and thresholds for oil changes. Oil analysis shall be conducted to maintain a consistent methodology for data collection, analysis, and historical trending. Periodic oil analysis shall include, but is not limited to, chillers of 50 tons or greater cooling capacity, and Diesel Generators 10 KVA and Higher. Periodic oil analysis shall be performed prior to annual maintenance requirements so that results may be considered in performing maintenance. When testing is performed, the Contractor shall submit the report in the CMMS as an attachment to the work order. Where oil analysis indicates a need for corrective action, an appropriate work order shall be created in the CMMS and the appropriate corrective action taken by the Contractor.

C.37.2 Oil and Refrigerant Additives

Oil and refrigerant additives shall not be used.

C.38. Lamps and Ballasts

The Contractor shall replace failed lamps, to include appropriate ballasts if required, with the most efficient products available in accordance with existing building standards defined by the P100 or CO or designee. In lieu of such standards, lamps shall be replaced with the most efficient products available matching type and color temperature. The Contractor shall establish and implement a lamping and ballasts recycling program for fluorescent tubes and light bulbs in accordance with Environmental Protection Agency (EPA) and GSA standards.

The use of bulb crushers is strictly prohibited.

All handling, storage, labeling and disposal of mercury containing tubes and bulbs shall be in compliance with Universal Waste Rule guidelines (http://www.epa.gov/osw/hazard/wastetypes/universal/index.htm). The Contractor shall maintain the mercury content of all mercury-containing lamps below 75 pictograms per lumen hour, on weighted average, for all mercury-containing lamps acquired for the existing building and associated grounds. Screw-based compact fluorescent lamps may be excluded from this calculation if they meet the voluntary standards by NEMA. If the Contractor cannot find replacement lamps to meet this requirement while maintaining building standard lighting, the Contractor shall immediately bring this to the attention of the CO or designee. The Contractor

shall maintain documentation of all purchases of mercury-containing lamps and provide the information within the monthly progress report to the CO or designee.

C.39. Architectural and Structural Systems Maintenance

C.39.1 General

The Contractor shall maintain, repair, replace, modify, and restore all of the architectural and structural components of the building. The Contractor shall conduct routine inspection and minor maintenance and repair of interior and exterior architectural and structural systems components. Region 7 GSA sets the threshold of these type repairs at $200/3 hours of labor. We are not expecting you to replace the facade of a building, but if a piece has come off, we would expect you to repair it if it is under the service call threshold of $200/3hours.

C.39.2 Maintenance and Repair

The Contractor shall perform all architectural and structural maintenance and repairs or replacements to all equipment, electrical and mechanical systems, structures, architectural finishes, and utilities, located on, within, or beneath, this facility's interior and exterior extending to the legal property line**.** The Contractor shall ensure the building is free of missing components or defects that could affect the safety, appearance, or intended use of the facility or could prevent any electrical, mechanical, fire protection and life safety, plumbing or structural system from functioning in accordance with its design intent.

C.39.3 Repair and Replacement Work

Repair and replacement work shall be complete, including touch-up painting and operational checks. The quality of the work shall ensure that repaired areas are fully compatible with and match adjacent surfaces or equipment. All replacement items shall be consistent with design documents and match existing equipment in quality, dimension, and material, quality of workmanship, finish, and color.

C.39.4 Painting

Painting is considered "touch-up," for purposes of this Contract, when it is to repair a specific damaged area of paint. Painting should extend to logical break points such as the floor ceiling corner, doorway etc. to avoid a patched look.

Repainting to correct for normal wear and tear to painted surfaces over time is not required. Restriping of parking areas, driveways, roads, and vehicle inspection areas is required where striping is damaged or worn in a specific location, but not for general wear and tear of a large area over time. Repairs to pavement are required where a specific location is damaged but not where an extensive area is degraded. Painting in mechanical areas needed for OSHA compliance, consistent equipment appearance, or other safety reasons is required. If the Contractor must disturb materials he suspects may contain lead-based paint, the Contractor must immediately report the condition to the CO or designee. The machinery rooms including floors and the equipment located within the machinery rooms shall be painted as necessary to maintain the appearance of the room and equipment. When painting, the contractor must comply with the ANSI color coding system outlined in the ASNI A13.1, Scheme for the Identification of Piping Systems, and maintain the identity (identification number) of the equipment.

C. 39.5 Interior Signage and Directories

The Contractor shall maintain and update building directories, to include electronic directories and tenant common corridor signage but not electronic directories that belong to our building tenants. The Contractor shall repair damaged interior or exterior signage in accordance with the repairs provisions in this document. Other changes to interior or exterior signage may be ordered from the Contractor as reimbursable items under the additional services provisions in this document.

C. 39.6 Finishes Maintenance

The Contractor shall ensure finishes are maintained to the manufacturer's specifications and levels that preserve a professional appearance and the integrity of the protected surface.

C. 39.7 Historic Building Preservation

The Contractor shall provide services that protect and preserve the historical integrity of the building. The Contractor shall consider any building 50 years old as historically significant, regardless of National Register status. The Contractor shall ensure any alteration of the building performed by the Contractor or their subcontractor protects the architectural integrity and compatibility with existing building structural accoutrements. The Contractor shall consult with the CO or their designee and obtain a copy, if available, of the building Historic Building Preservation Plan (HBPP) or Historic Structure Report (HSR) prior to any renovation work performed under this Contract on a building 50 years old or older. It may be possible that an HBPP has not been developed for the buildings at the time of this Contract award. In addition to the HBPP or HSR, the Contractor shall obtain a copy of The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. These documents shall be followed for Government purposes in the preservation of buildings. The Contractor and CO or their designee shall examine the requirements of any applicable documents for maintenance recommendations and specifications. If a conflict exists between applicable documents and Contract requirements, the Contractor shall not proceed until directed to do so by the CO or designee. The Contractor shall protect any work of art (painting, sculpture, carving, etc.) in the project area or close vicinity from possible damage during any renovation to the structure.

C.39.8 Vertical Transportation and Associated Equipment

The Contractor will be responsible for maintaining light fixtures, ballasts, and lamps installed in elevator cars and within the ceilings of cars. The Contractor is not responsible for maintaining lighting within hoist ways.

The Contractor is responsible for maintaining fire protection equipment and systems and ventilation and exhaust systems within hoist ways, elevator lobbies, and elevator machine rooms. The Contractor shall provide assistance in performing elevator testing, including after normal work hour requirements.

The Contractor is responsible for maintaining lighting, electrical equipment not directly part of elevator systems, and HVAC systems associated with elevator machine rooms and systems**.**

C.39.9 RESERVED

C. 40. Repairs

C.40.1 General

The Contractor shall perform reimbursable and non-reimbursable repairs as described in this document. Repairs are handled on a shared liability basis (See shared liability math example in C.40.5 Repair Shared Liability Example). Relatively small value repairs (non-reimbursable repairs) are the responsibility of the Contractor in their entirety, and larger repairs (reimbursable repairs) shall be approved and funded by the Government for the cost amount above the Contractor threshold. If damage is caused by Contactor negligence, the Contractor shall be liable for the full cost of repair, any other provisions notwithstanding. The intent of this Contract is to ensure that most repairs will be accomplished by in-house Contractor personnel. However, the Government recognizes that occasionally there are certain specialized repairs that require specialized skills outside the skill sets of the in house O&M personnel. If the Contractor identifies a repair that they believe is of such a specialized nature that a specialized subcontractor is required to properly complete the repair, the Contractor shall provide written justification in advance, to the CO or designee, for approval of the need to use a subcontractor. The Contractor shall not use subcontractors to perform non-reimbursable repairs unnecessarily or with the intent of driving up the repair cost so the Government shall cover part of it. If approved, the cost of the subcontractor's labor and material will be treated as a repair part for the purposes of calculating the repair threshold. The subcontractor's cost shall be fair and reasonable and approved in advance by the CO or designee. All repairs shall use supplies, materials, and parts of the highest quality available that are appropriate for the repair of the given equipment or system. Any replacement parts used during the course of this Contract shall be of comparable or higher quality. Energy-consuming items shall be the most efficient in their class. The Contractor shall stock commonly used items and have a network of suppliers that will deliver ordered items without any delay. Any equipment components/systems that can no longer be repaired shall be replaced. These replacements shall be considered a repair and the shared liability will apply (paragraph CM.40.5). Any replacement equipment components/systems shall be of premium efficiency.

NOTE: The Contractor shall repair exterior water leaks underground up to 48" deep unless leaks are below pavement. Thresholds referenced in paragraphs CM.40.2, CM.40.3, and CM.40.5 shall apply. Exterior underground leaks that are below pavement the Contractor is responsible for identifying the specific location of the leak by using in-house staff or a leak location service. The contractor is responsible for interior leaks in accordance with CM.40.2, CM.40.3 and CM.40.5.

C.40.2 Non-reimbursable Repairs

A non-reimbursable repair is a repair requiring under $2,500 in cost for repair parts, materials only but no labor is cost included (including approved subcontracting costs). The cost of consumable parts and materials shall not be calculated as part of the Contractor's repair parts and material costs. Non-reimbursable repairs are entirely the Contractor's responsibility with no reimbursement from the Government.

Non-reimbursable repairs shall be completed within 72 hours (continuous time, includes after hours and weekends) of identification of the problem unless an extension is approved by the CO or designee. The work order shall be put into a status field in CMMS to indicate the nature of any delay, with appropriate remarks.

C.40.3 Reimbursable Repairs

Reimbursable repairs will be identified as single incident, not an accumulation of various repairs (bundling). If a repair exceeds the non-reimbursable repair cost threshold established above and has been approved and verified by the CO or designee, it becomes a reimbursable repair. Reimbursable repairs are reimbursable to the Contractor, once approved by the CO or designee, for the portion (shared liability) of the cost exceeding the non-reimbursable threshold of $2,500 (see repair shared liability example below). The completion date of reimbursable repairs will be mutually agreed upon by the CO or their designee and the Contractor.

C.40.3.1 Unsolicited Proposals

Upon identification of reimbursable repairs, the contractor shall prepare a proposal to execute the repair. Proposal shall comply with the requirement of Section H.18 of this contract. The proposal shall be forwarded to the CO and COR for evaluation. The proposal may be used by the CO and the COR as a basis for award, negotiation, planning, or budgeting purpose. The government reserves the right not to utilize the contractor to affect repairs, not execute the repair, or seek alternate means of repairs. The contractor shall not proceed with the repair without explicit approval of the CO.

C.40.4 Miscellaneous Work

The Contractor shall provide **20 hours and up to $50.00 for parts and supplies per calendar month** (hours and dollar amounts are not cumulative to succeeding months) when requested by the CO or designee, to accomplish discretionary work in the buildings covered by this Contract. No labor cost shall be included. The Contractor shall furnish the labor, tools and consumable materials as necessary to perform the work. Miscellaneous work may be required for work that makes use of any of the trades normally employed in performing operations and maintenance services under this Contract and does not include tasks associated with the performance of services covered under the scope of this Contract. The Contractor shall create and process CMMS work orders for all miscellaneous work, and accurately record hours of labor expended.

C.40.5 Repair Shared Liability Example:

In this example, the non-reimbursable repair threshold is $2,500. A repair is identified and estimated by the Contractor to cost $3,000.00 for repair parts and materials only. The CO or their designee will verify and approve both the need for the repair and the $3,000.00 estimated cost of repair parts and materials. In this example, the Contractor will pay the first $2,500 of the repair and GSA will pay the remaining $500.00.

a. Total estimated approved cost for repair parts and materials to complete repair	$3,000
b. Contractor's shared liability amount to be subtracted (same amount as the non-reimbursable threshold)	-$2,500
c. Total to be paid by GSA to the Contractor for the repair	$ 500

The required completion date for reimbursable repairs shall be established when the CO or their designee approves the work, as mutually agreed upon by the CO or their designee and the Contractor. The Contractor shall attempt to complete work as promptly as feasible. Immediately upon identification of a reimbursable repair, the Contractor shall create a work order in the CMMS and defer it by putting it in a "hold" status.

C.40.6 Approval of Work

When the Contractor determines that a repair is needed that exceeds the non-reimbursable repair threshold, the Contractor shall immediately notify the CO or designee. The CO or their designee shall issue a task order to the Contractor before the Contractor may proceed with the repair. The Contractor may defer performance of the reimbursable repair by placing the corresponding work order into a "waiting for funding" status from the time a valid proposal is given to the CO or their designee until the time an order is given to the Contractor. The time during which the work order is thus deferred will not count against the Contractor in calculating timeliness. The CO or their designee may prohibit the use of subcontractors if the CO or their designee determines the Contractor is unnecessarily driving up the cost of the work and the Contractor's own employees have the skills necessary to perform the work.

C.40.7 Invoicing

Reimbursable repairs authorized by task order may be invoiced separately upon completion and acceptance of work. Invoices shall also contain references to CMMS work order numbers. Payment for Reimbursable Repairs performed under the GPC shall be processed via credit card payment.

C.40.8 Ordering Repairs from Outside Source

The Government reserves the right to order repairs from an outside source. If the repair is a reimbursable repair, the Government will inform the Contractor of the outside source's price, and deduct $2,500, or the outside source's price, whichever is less, from the Contractor's payments.

C.40.9 Force Majeure (Uncontrollable events)

Deficiencies or breakdowns caused by vandalism, misuse, abuse, or acts of God including natural disasters are fully reimbursable. The Contractor will be reimbursed under the additional services provisions described in this document or the Government will have the work performed by other means at no cost to the Contractor.

C.40.10 Warranties

The Contractor shall contact installers or manufacturers, as appropriate, for work that is covered under a warranty and maintain records of warranty service. The Contractor shall avoid actions that would invalidate a warranty, unless authorized by the CO or designee. If an installer or manufacturer fails to comply with the terms of a warranty, the Contractor shall immediately notify the CO or designee.

C.40.11 Quality of Materials and Replacement Parts

Replacement components and materials shall be of similar or better quality than the components replaced, considering energy efficiency, operational characteristics, power quality, control and data acquisition, maintainability, and durability. The CO or their designee may require replacement of components with components from the same manufacturer to maintain consistency throughout the building. Materials and parts that are visible to building occupants shall be to building standard and maintain the same appearance as similar materials and parts in the occupied space. Components of control systems shall be replaced so as to maintain the tie-in to the control system with no degradation of data throughput, memory, point capacity, data acquisition, or programmability. Motors shall be replaced with premium efficiency motors as defined by the NEMA MG-1 standard or in compliance with Local utility guide demand-side management rebate guidelines old transformers shall be replaced with NEMA-rated class one efficiency transformers in accordance with the NEMA TP-1 standard. Replacement of variable

frequency drives shall be done in accordance with recommendations found in NEMA, Application Guide for AC Adjustable Speed Drive Systems. Energy Star-rated equipment shall be installed where available and when there is no engineering or operational reason not to select an Energy Star product.

C.41 Safety and Environmental Management

C.41.1 General

The Contractor shall use to the extent practicable, the safest and most environmentally friendly products and processes available. The Contractor shall be cognizant of and comply with all Federal, State, and Local laws and Regulations related to building management (permitting, inspection, testing and personnel safety; control of hazardous substances, certification) to include materials and associated systems used or removed in the performance of this contract. Contractor shall comply with all such requirements, including record keeping. The Contractor shall comply with all Federal, State, and Local environmental and safety laws and regulations that relate to the maintenance and operation of equipment and systems within the scope of this Contract. The Contractor will be responsible for any fines or penalties levied by any environmental or regulatory authority resulting from their action or inaction, (not actions or inactions from a third party or the government) and may be charged the cost as a performance deduction under the Adjusting Payments clause. The Contractor's maintenance, operations, materials and processes shall use green products and processes including, but not limited to products containing recycled content, environmentally sustainable products and services, bio-based products, and products and services that minimize the use of energy, water, and other resources.

C.41.2 Scheduling and Recordkeeping

The Contractor shall maintain copies of all tests, certifications, permits and other required records, and provide copies to the CO and designee. In addition, all required safety and environmental tests; certifications, permits, and other procedures required in this document shall be scheduled in the CMMS work order system and documented in the CMMS or by other means if a CMMS is not available.

C.41.3 Refrigerants

C.41.3.1 Control and Certification

The Contractor shall control refrigerants and maintain records in accordance with EPA, GSA**,** and air quality management district standards. The Contractor shall take appropriate immediate action and report leaks to the CO or designee. The Contractor shall maintain and test refrigerant monitors, alarms and purge ventilation systems as part of the maintenance program. Testing shall use appropriate media to test sensors as well as alarm circuitry. Refrigerant control logs shall be updated as required, and a copy sent to the CO or designee. The Contractor shall also maintain a set of logs onsite and make this set of logs available to government inspection.

C.41.3.2 Certified Handlers

Contractor employees who come into contact with refrigerants in the course of their duties shall be certified to handle such refrigerants (EPA Section 608 Technician Certification Program). If equipment containing chlorofluorocarbon (CFC) or hydro chlorofluorocarbon (HCFC) refrigerants is removed from operation under this Contract, the Contractor shall recover all refrigerant in the equipment, seal it in appropriate storage containers, reclaim and reuse it as directed by the CO or designee, or dispose of it within EPA guidelines. In the event of fines or

penalties levied by the EPA or an AQMD, the Contractor may be charged the cost as a performance deduction under the Adjusting Payments clause.

C.41.4 Local Air Quality Management Operating Permits

The Contractor shall be familiar with the requirements of the Local Air Quality Management District (AQMD), and shall ensure operating permits for boilers; generators and other emissions-producing equipment regulated by the district are up to date and have copies available to the CO or designee. In the event of fines or penalties levied by an AQMD, the Contractor may be charged the cost as a performance deduction under the Adjusting Payments clause.

C.41.5 Fuel Storage Tanks

The Contractor shall:

a. Comply with all Federal, State, ~~and~~ Local requirements, and manufacturers recommendations for underground and/or above ground storage tanks.
b. Comply with any additional responsibilities required by the facility's Spill Prevention, Control and Countermeasure (SPCC) Plan including, but not limited to inspections, training, and recordkeeping if the facility must comply with SPCC requirements. Contractor shall update the SPCC plan as required.
c. Validate the inventory of all tank systems. GSA assesses tanks for compliance with current environmental design and installation standards.
d. Notify the CO or their designee not later than the end of the Startup and beginning of the Transition Phase and record within the Existing Deficiency/Initial Inspection Deficiency/closeout list observed instances of non-compliance to include but not limited to required registration documentation and monitoring systems.
e. Record the fuel levels monthly and report at weekly performance review meeting at the end of the month.
f. Record monthly usage logs and follow all fuel unloading procedures**.**
g. Staff shall be trained on large and small spill response procedures, emergency spill response kits shall be located in close proximity to industrial areas susceptible to oil spills such as shop, fuel storage or chemical storage areas.

C.41.6 RESERVED

C.41.7 Polychlorinated Biphenyl (PCB) Control

The Contractor shall inspect all transformers containing polychlorinated biphenyls (PCBs) and maintain records of such inspections in accordance with State, Local, and EPA regulations. The CO or their designee shall be notified immediately if any such equipment is found to contain PCBs, or suspected to contain PCBs. Equipment verified to contain PCBs, except lighting ballasts, shall be labeled as containing PCBs. Any transformer leaks of PCBs shall be reported immediately to the CO or designee. The Contractor shall inspect all leaks in accordance with State, Local, and EPA regulations. The Contractor shall properly dispose of caulk that contains PCBs. The Contractor shall take immediate action to contain all leaks. There may be light ballasts containing PCBs in the buildings covered by this Contract. Replacement and proper disposal of all burned-out ballasts, including PCB ballasts, shall be the responsibility of the Contractor. Fluorescent lamps, batteries, and other items in any quantity subject to the Universal Waste Rules for Hazardous Waste Management and disposal shall be recycled or disposed of properly.

C.41.8 Facility Hazards
The Contractor shall assist in identifying facility health and safety hazards and report all hazards in writing to the CO or their designee. The Contractor shall take immediate action to control hazards that present an imminent danger.

C.41.9 Workplace Safety
The Contractor shall develop a site-specific occupational safety and health program specifically addressing applicable components of 29 CFR 1910 and 29 CFR 1926. The safety and health program shall be submitted to the CO or their designee for review and approval 30 days after award. By approving the program, GSA assumes no responsibility for the Contractor's occupational safety and health program.

C.41.10 Electrical Safety
The Contractor shall comply with National Fire Protection Association (NFPA) 70: National Electrical Code and NFPA 70E: Standard for Electrical Safety in the Workplace, when working on or around electrical equipment or systems or switchgear equipment. The Contractor shall ensure that any and all areas restricted to qualified personnel are secured and properly labeled.

C.41.11 Fall Protection
The Contractor shall develop specific fall protection procedures for work on roofs, equipment, and other areas at elevation. The Contractor shall ensure fall protection equipment is provided to their employees and that employees are adequately trained.

C.41.12 RESERVED

C.41.13 LockOut/TagOut
The Contractor shall develop a lockout/tag out program in accordance with 29 CFR 1910.147. The program shall include all anticipated energy sources, including but not limited to, electric City, steam, pressurized fluids, and mechanical energy. The Contractor shall communicate the Lockout/Tagout program to all other affected Contractors.

C.41.14 Confined Spaces
The Contractor shall identify and label all confined spaces in accordance with OSHA requirements. Contractor shall record all identified confined spaces in the CMMS as hazards. The Contractor shall develop a confined space entry permit system for all permit-required confined spaces within 60 calendar days of commencement of the Contract.

C.41.15 Asbestos Management
The Contractor shall be expected to occasionally perform Class III and Class IV asbestos work as defined in 29 CFR 1926.1101. The Contractor shall be prepared to deal with asbestos on a small-scale, short-duration basis to effect emergency repairs and to clean up small spills. The Contractor shall protect building tenants, visitors, and employees from asbestos exposure. The Contractor shall comply with applicable OSHA regulations and all applicable Federal, State, and Local asbestos regulations. The Contractor shall immediately become familiar with, comply with, and recommend any appropriate changes to the Government Asbestos Management Plan for the building. If the Contractor must disturb materials he suspects may contain ACM, the Contractor must immediately report the condition to the CO or designee. Contractor personnel who perform the abovementioned work shall have been appropriately trained in accordance with 40 CFR Part 763.

C.41.16 Hazardous Materials

C.41.16.1 SDS

The Contractor shall make material safety data sheets (SDS) available to their employees in accordance with 29 CFR 1910.1200. SDS shall also be made available to the CO or their designee on request. The Contractor shall prepare and submit a hazardous materials inventory as an appendix to the building operating plan. The inventory shall itemize all hazardous materials by specific type as sold with individual SDS and include information pertaining to approximate quantities of each type and exact locations where hazardous materials are to be stored on the premises.

C.41.16.2 Disposition of Hazardous Waste

Hazardous Wastes not subject to the Universal Wastes Rule shall be managed in accordance with 40 CFR 260. Universal Wastes (fluorescent lamps, certain batteries and pesticides) in any quantity subject to the Universal Waste Rules shall be recycled or disposed of as Hazardous Waste. Preference is given to recycling of intact items.

C.41.16.3 Environmental Reporting

The Contractor shall provide all necessary information required in this Section to comply with environmental and green purchasing reporting requirements, and agency sustainability goals in this specification. The Contractor shall submit to the CO or their designee the following reports.

(a) Waste Reports. The Contractor shall submit a quarterly report on waste handling activities to include disposal and recycling. The report shall contain shipping information for hazardous and non-hazardous waste and be submitted by the 15th of each month and upon request by the CO or their designee. Report shall include the waste type, name and final disposition destination. All Hazardous and Universal Waste shipping documentation shall be maintained for the life of the building. If the Contractor performs non-hazardous solid waste management for the entire building, they shall also report on these solid waste and recycling activities.

(b) The Contractor shall submit information on green purchasing practices specific to the performance of this contract. Records showing the monthly cost of green cleaning products and materials purchased shall be provided to the USDA and the CO or their designee by the Contractor so that this report can be submitted by the CO or their designee as required by the Resource Conservation and Recovery Act (RCRA), USDA, and EO 13514. Reportable information is provided in Section J, Exhibit 2 for Non-Bio-based products.

C41.16.4 Recycled Content Product Purchase Annual Reporting

The Contractor shall provide reports, estimating the percentage of total recovered material used in Contract performance, including, if applicable, the percentage of post-consumer material content, to the CO or their designee in compliance with the Contractor schedule.

C.41.16.5 Non-Bio-based Products

The Contractor shall submit a report of all non-bio-based products to include: Green Seal, Design for Environment (DfE), CPG, EcoLogo and Environmental Choice (low VOC, Non-Ozone Depleting), as well as non-green (Hazardous/Toxic products).

C.41.16.6 Bio-Based Products

For categories of items that are EPA-designated (e.g. Comprehensive Procurement Guidelines [CPG]) and USDA designated in the BioPreferred Program (visit http://www.biopreferred.gov/), and all other factors (such as price, performance, and availability) being equal, the contractor shall selected the CPG item. For other purchases, unless the contractor receives an exemption from the Contracting Officer, the contractor shall select USDA designated products over products with other sustainable attributes.

The Contractor shall report all USDA-designated bio-based products purchased October 1 - September 30, during the previous fiscal year. Information will include the types and dollars spent on these products. The reports shall be submitted to the https://www.sam.gov/ no later than October 31 of each year during Contract performance and at the end of Contract performance. In addition, the reports shall be submitted to the environmental point of contact (EPOC) as identified in FAR Clause 52.223.2, and a copy to the CO or their designee.

C. 41.17 Boiler/Pressure Vessel Operation and Inspection Standards

C.41.17.1 Boiler/Pressure Vessel Operation and Inspection Standards

At the beginning of the heating season, the Contractor shall conduct a Flue gas analysis (using certified flue gas equipment) on every operable fossil-fueled boiler and, based on the test results, adjust the burner and/or controls on each boiler to maximize combustion efficiency. A report of BEFORE and AFTER conditions for each test shall be submitted to the COR within **seven (7) calendar days** after completion of the test(s).

C.41.17.2 Inspections and Tests

Boiler inspections shall include internal and external (operating) inspections and tests described in Chapter 2, Inspection of Boiler and Pressure Vessels, of NBIC. The Contractor shall require the inspector to complete GSA Form 349 (Inspection Report of Boiler) or an equivalent approved form for each boiler inspected. The Contractor shall have unfired pressure vessels with design operating pressure in excess of 60 pounds per square inch (psi) and a capacity in excess of 15 gallons inspected annually. The Contractor shall complete GSA Form 350 (Inspection Report of Unfired Pressure Vessels) or an equivalent approved form for each unfired pressure vessel inspected. A GSA Form 1034 (Certificate of Inspection) or an equivalent approved form shall be completed and posted on or near the equipment. Inspections shall be made by inspectors certified by the National Board of Boiler and Pressure Vessel Inspectors, who shall be employed by an independent firm specializing in boiler and unfired pressure vessel inspections. These tests must be annotated in the NCMMS.

C. 41.17.3 Backflow Prevention Devices

The Contractor shall maintain all existing backflow prevention devices and certify them as prescribed by Federal, State, and Local laws, ordinances, and regulations. If no Local requirement exists, a certified inspector shall inspect all existing backflow prevention devices on an annual basis, record the inspection as a work order in the CMMS and provide certification of proper operation to the CO or designee. While the Government will generally pass on to the Contractor backflow testing notices received from Local water districts or other Local authorities, the Contractor is responsible for timely completion and submission of such test results regardless of

receipt of such notices. In addition to other requirements, backflow prevention devices used on water-based fire suppression systems shall be inspected, tested, and maintained in accordance with NFPA 25.

C.41.17.4 Potable Water Systems

The Contractor shall comply with The Safe Drinking Water Act, PL 99-339, as amended, and the Environmental Protection Agency Safe Drinking Water regulations (40 CFR 141.43, Sections A and D), which address the quantity of lead allowable in new installations or repairs to existing drinking water systems and or plumbing. Potable water systems that are repaired, modified, serviced, or breeched in any way shall be disinfected and flushed as needed prior to returning the system to service. Contractor is required to comply with all Federal, State, and Local codes in the operation, treatment, and testing of potable water systems.

C.41.18 Labeling and signage

The Contractor shall maintain the labeling of existing equipment, pipes, storage areas, containers, confined space, and workspaces as well as associated signage, in accordance with OSHA standards to ensure labels are visible and not obliterated. Any equipment, pipes, etc., newly installed by the Contractor require labeling and signage per OSHA standards shall be labeled immediately upon completion of the installation and maintained throughout the Contract period.

C.41.19 RESERVED

C.42. Fire Protection and Life Safety Equipment and Systems

C.42.1 General

Each of the requirements listed below shall apply to all of the paragraphs in Section C.42

a. The Contractor is responsible to utilize the latest edition of the applicable NFPA code or standard, in effect at the time of contract award, throughout the term of the contract.
b. The Contractor shall ensure all fire protection and life safety systems and equipment are kept operational at all times, except while being tested or repaired.
c. The Contractor shall ensure all maintenance and preplanned impairments of the fire protection and life safety systems and equipment have been authorized and approved by the CO or their designee prior to the Contractor performing any work.
d. The Contractor shall utilize technicians that meet the applicable requirements in Section H15.3.
e. The Government reserves the rights to have the Contractor remove any employee that poses a threat to the health, safety, or security of the building occupants.
f. The Government reserves the rights to conduct any test or inspection it deems necessary to ensure all contract performance requirements are being met.
g. The Contractor shall comply with all appropriate safety code requirements. If the Contractor encounters equipment that is in a condition that may endanger life or property, the Contractor shall immediately notify the CO or their designee of the condition requiring immediate action. Within 24 hours following the notification of the CO, the Contractor shall provide to the CO or their designee a written report of the hazardous condition and recommended corrective action.
h. The Contractor is responsible for meeting the inspection and testing frequencies, test methods, and documentation requirement for each fire protection and life safety system referenced in the applicable NFPA code or standard.

i. The Contractor is responsible for providing all tools, supplies, and equipment necessary to properly perform inspections, tests, and maintenance of the fire protection and life safety equipment and systems in accordance with applicable NFPA code or standard.
j. The Contractor shall be responsible to leave areas where they perform work neat, clean, and orderly.
k. The Contractor shall document all inspections, test results, and maintenance performed on the suggested inspection, testing, and maintenance forms referenced in the applicable NFPA code or standard. These completed forms shall be included with the Contractor's Monthly Progress Report.
l. Any deficiency identified by the Contractor during a required inspection shall be entered into CMMS as a work order; evidence of correcting such deficiency, unless funding is not available, shall be provided with the subsequent Contractor's Monthly Progress Report after correction action is completed.

C.42.2 Fire Alarm System Services

Services include, but are not limited to; the performance, inspection, testing, and preventive maintenance or repair of a variety of fire alarm and notification systems, equipment and components such as manual alarm devices, smoke and heat detectors, tamper switches, pressure switches, water flow switches, remote and graphic annunciations, main fire alarm panel and components, voice alarm systems, speakers, horns, and other audible and visual devices, wiring circuits and junctions, supervising station alarm system transmission equipment, emergency power supplies and all other ancillary devices that operate related equipment (e.g., HVAC shutdown, dampers, elevator recall, door closing devices and door unlocking devices.

All fire alarm system inspections, tests, maintenance, and repairs performed under this contract shall comply with the NFPA 72, National Fire Alarm and Signaling Code.

Fire alarm system testing, maintenance and repair shall be performed during normal business hours when it does not interfere with building operations. When such testing, maintenance or repair will interfere with building operations; it shall be performed after normal business hours without additional costs to the government, unless approved otherwise by the CO or designee. The Contractor shall provide a fire watch in areas left unprotected or if the system is out of service for more than 4-hours in a 24 hour timeframe. The fire watch shall remain in place until the fire alarm system is completely restored during the performance of routine service and testing procedures. If the system cannot be restored through no fault of the Contractor's, a fire watch shall still be provided until the system is restored. The Contractor shall be reimbursed for the fire watch performed after normal business hours with CO or designee approval. Fire watches performed after hours will be considered as Emergency Call Back (after hours) for consideration of reimbursement to the Contractor after the limit is reached. See paragraph C.23.3 for limit and reimbursement process.

It is essential that the Contractor carefully schedule with the property manager and CO or their designee all non-emergency shutdowns of the fire alarm system and that back up protection be provided by the Contractor (e.g., arrangement of additional personnel stationed in the areas affected and at the fire alarm system control panel) any time that the fire alarm system is out of service for more than 4 hours. The affected portion of the system shall be tested to ensure that the protection has been properly restored.

In no case shall the fire alarm system be left in a disabled condition without notifying the CO or their designee and providing a fire watch.

C.42.3 Water-Based Fire Suppression Systems

Services consist of, but are not limited to; the performance , inspection, testing, and preventive maintenance or repair services of all mechanical devices, including valves, sprinklers, couplings, piping, hose connections, water motor gongs and alerting devices, tamper switches, pressure switches, water flow switches, standpipes, backflow preventers, private fire service mains, water storage tanks, fire pumps, and test headers.

All water-based fire extinguishing system inspections, tests, maintenance, and repairs performed under this contract shall comply with the NFPA 25, Inspection, Testing, and Maintenance of Water-Based Fire Extinguishing Systems.

Water-based fire suppression system testing, maintenance and repair shall be performed during normal business hours when it does not interfere with building operations. When such testing, maintenance or repair will interfere with building operations; it shall be performed after normal business hours without additional costs to the government, unless approved otherwise by the CO or designee. The Contractor shall provide a fire watch in areas left unprotected or if the system is out of service for more than 4-hours in a 24 hour period. The fire watch shall remain in place until the water-based fire suppression system is completely restored to service during the performance of any routine service and testing procedures. If the Contractor believes they were not able to restore sprinkler service due to circumstance outside of their control, the Contractor may request reimbursement for that portion or the fire watch from the CO or designee.

It is essential that the Contractor carefully schedule with the property manager and CO or their designee all non-emergency shutdowns of the sprinkler system and that back up protection be provided by the Contractor any time the sprinkler system is out of service for more than 4 hours. The affected portion of the system shall be tested to ensure that the protection has been properly restored.

In no case shall any water based fire suppression system be left in a disabled condition without notifying the CO or their designee and providing a fire watch.

C.42.4 Fire-rated Door Assemblies

Services consist of, but are not limited to, the inspection, testing, and maintenance of all fire-rated door assemblies. All fire-rated door assemblies inspections, tests, and maintenance performed under this contract shall comply with the NFPA 80, Standard for Fire Doors and Other Opening Protectives. Please note that the inspection of fire-rated door assemblies shall also meet the requirements in NFPA 101, Life Safety Code.

C.42.5 Fire Damper and Combination Fire/Smoke Dampers

Services consist of but are not limited to, the inspection, testing, and maintenance of all fire dampers, radiation dampers, and combination fire/smoke dampers. All fire damper, radiation damper, and combination fire/smoke damper inspections, tests, and maintenance performed under this contract shall comply with the NFPA 80, Standard for Fire Doors and Other Opening Protectives. Please note that maintenance of combination fire/smoke dampers shall also meet the requirements contained in NFPA 105, Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives.

C.42.6 Smoke Doors Assemblies
Services consist of, but are not limited to; the inspection, testing, and maintenance of all smoke door assemblies. All smoke door assemblies inspections, tests, and maintenance performed under this contract shall comply with the NFPA 105, Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives.

C.42.7 Smoke Dampers
Services consist of, but are not limited to, the inspection, testing, and preventive maintenance of all smoke dampers. All smoke damper inspections, tests, maintenance, and repairs performed under this contract shall comply with the NFPA 105, Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives.

C.42.8 Portable Fire Extinguishers
Services consist of, but are not limited to; the inspection, testing, and preventive maintenance of all portable fire extinguishers. All portable fire extinguisher inspections, tests, and maintenance performed under this contract shall comply with the NFPA 10, Standard for Portable Fire Extinguishers.

C.42.9 Non-Water-Based Fire Extinguishing Systems
Services consist of, but are not limited to, the inspection, testing, and preventive maintenance of the following types of non-water-based fire extinguishing systems:

a. Carbon dioxide extinguishing systems, NFPA 12, Standard on Carbon Dioxide Extinguishing Systems.
b. Halogenated extinguishing systems, NFPA 12A, Standard on Halon 1301 Fire Extinguishing Systems.
c. Dry chemical extinguishing systems, NFPA 17, Standard for Dry Chemical Extinguishing Systems.
d. Wet chemical extinguishing systems, NFPA 17A, Standard for Wet Chemical Extinguishing Systems.
e. Fire extinguishing systems, NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.
f. Clean agent fire extinguishing systems, NFPA 2001, Standard for Clean Agent Fire Extinguishing Systems.

C.42.10 Smoke Control Systems
Services consist of, but are not limited to; the inspection, testing, and preventive maintenance of smoke control systems. All smoke control system inspections, tests, maintenance, and repairs performed under this contract shall comply with the NFPA 92, Standard for Smoke Control Systems.

C.42.11 Emergency and Standby Power Systems
Services consist of, but are not limited to; the inspection, testing, preventive maintenance, and exercising of equipment per the manufacturer's recommendations for the following types of emergency and standby power systems:

a. Emergency power supply systems, NFPA 110, Standard for Emergency and Standby Power Systems.

b. Stored electrical energy emergency and standby power systems, NFPA 111, Standard on Stored Electrical Energy Emergency and Standby Power Systems.

C.42.12 Emergency Lighting Systems and Exit Signage

Services consist of, but are not limited to; the inspection, testing, and preventive maintenance of emergency lighting systems, emergency lighting equipment, and exit signage. All emergency lighting systems, emergency lighting equipment, and exit signage inspections, tests, maintenance, and repairs performed under this contract shall comply with the NFPA 101, Life Safety Code.

C.42.13 Fire Alarm System Central Station Monitoring

The Contractor shall provide and maintain a UL-listed central station monitoring service (including 2 telephone lines for each fire alarm panel) to monitor all fire alarm transmitters and related equipment. The Contractor shall ensure all fire alarm systems are connected to the monitoring service. During any period when the central station monitoring is not operational, the Contractor shall maintain a fire watch. If the Contractor believes the central station monitoring failure was through no fault of his own, the Contractor shall request reimbursement for the fire watch from the CO or their designee.

C.43. RESERVED

C.44 RESERVED

C.45 Federal Requirements:

PUBLICATION	TITLE		PORTION
EPACT 05	Title I Energy Efficiency Title IX Research and Development		All Applicable Sections of these Titles
EISA 07	Title III Energy Savings Through Improved Standards for Appliances and Lighting. Title IV Energy Saving and Buildings Industry. Title V Energy Savings in Government and Public Institutions.		All Applicable Sections of these Titles
Executive Order 13423	Strengthening Federal Environmental, Energy, and Transportation Management and all implementing guidance documents. http://edocket.access.gpo.gov/2007/pdf/07-374.pdf		ALL
Executive Order 13514	Federal Leadership in		ALL

	Environmental, Energy, and ALL Executive Order 13514 Federal Leadership in Environmental, Energy, and Economic Performance http://edocket.access.gpo.gov/2009/pdf/E9-24518.pdf		
29 CFR Part 1910	OSHA General Industry Standards (http://www.access.gpo.gov/nara/cfr/waisidx_06/29cfr1910a_06.html)		ALL
40 CFR	Protection of the Environment https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFRl	All Applicable Sections of Chapter 1	
41 CFR Part 102-74, Subpart C. - FMR	Facility Management http://www.access.gpo.gov/nara/cfr/waisidx_06/41cfr102-74_06.html	ALL	
ANSI-IWCA.I-14.1	http://webstore.ansi.org/FindStandards.aspx?SearchString=ansi&SearchOption=1&PageNum=0&source=google&adgroup=ansi&keyword=ANSI%2F&gclid=CJnM65r-rqQCFUNM5QodRnhXyw	ALL	
ANSI/ASEE A-1264.2-2006	www.ANSI.org	ALL	
ANSI Z245.1	Mobil Refuse Collection and Compactor Equipment-Safety Requirements http://webstore.ansi.org/default.aspx	ALL	
ASTME 1971-05	http://www.astm.org/Standards/E1971.htm	ALL	
GSA Green Purchase Plan	http://insite.gsa.gov/portal/content/520186	ALL	
Guiding Principles for Sustainable Existing Buildings	http://www.wbdg.org/references/fhpsb_existing.php	Section 3-5	
Bio Based Products	http://www.dm.usda.gov/procure	ALL	

	ment/programs/biobased/biobaseditems.htm		
Comprehensive Procurement Guidelines (CPG)	https://search.epa.gov/epasearch/epasearch?querytext=+cpg+&typeofsearch=epa	ALL	
PBS P 5800.36A	GSA Property Management Business Practice Handbook http://insite.gsa.gov/portal/content/522198	ALL	
Green Products Compilation Database	sftool.gov	ALL	
Bio-based Products Certification and Procurement Clauses	https://www.biopreferred.gov/BioPreferred/faces/pages/AboutBioPreferred.xhtml	ALL	

D. PACKAGING & MARKING

Not Applicable

E. INSPECTION & ACCEPTANCE

Inspection of Services -- Fixed-Price (Aug. 1996)

(a) Definition: “Services,” as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the
Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.

(e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may --

(1) Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements; and

(2) Reduce the contract price to reflect the reduced value of the services performed.

(f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may --

(1) By contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service; or

(2) Terminate the contract for default.

F. DELIVERIES OR PERFORMANCE

F.1. FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: https://www.acquisition.gov/far

FAR 52.242-15 Stop Work Order AUG 1989
FAR 52.247-34 F.O.B. Destination NOV 1991

F.2. PLACE OF PERFORMANCE

The services to be provided by this contract shall be accomplished at the location(s) listed in Section C.

F.3. TERM OF CONTRACT

The term of this contract is from the contract start date through 1 year thereafter, with 4 options that may extend the period of performance for an additional 1 year for each option, if exercised.

F.4 CONTRACT DELIVERABLES REFERENCE

DELIVERABLE	REFERENCE	DELIVERABLE DUE	POINT OF CONTACT
Fuel Use Log	C.2.15	Monthly (first Monday of the following month)	COR
Existing deficiency inspection and List	C.4.1	30 days prior to contract start	COR
Contract closeout inspection and list	C.4.2	30 days prior to contract completion	COR
Itemized estimate to correct existing deficiencies	C.4.2	30 days after contract start	CO or designee
Transition phase. Complete NCMMS training during transition phase.	C.5.1	60 days prior to contract start.	CO or designee.
Phase out transition period	C.6	60 prior to end of contract. On the last performance day of the Contract, Contractor must turn over keys and identification badges or cards.	CO or designee.
List of key personnel and emergency contact information, which may include subcontractor contacts as	C.8.1	The Contractor must develop and submit to the CO within 21 days of award.	CO or designee.

DELIVERABLE	REFERENCE	DELIVERABLE DUE	POINT OF CONTACT
applicable.			
NCMMS Complete NCMMS audit	C.8.5	The Contractor shall use the Government-furnished NCMMS, to include validating and updating the equipment inventory database, including all data fields specified by the CO or designee. Complete yearly NCMMS audit	CO or designee
Quality control program.	C.8.6	Develop and submit for approval prior to issuance of Notice to Proceed.	CO or designee
Building operating plan.	C.9.1	Review and update with Property Management Staff within 60 days of start of contract.	CO or designee.
Radon mitigation program.	C.9.2.J.18	Program must be described in the building operating plan.	CO or designee.
Equipment inventory update.	C.10	The Contractor must update and verify the equipment inventory on an annual basis. The contractor should add or remove equipment as it changes throughout the contract. If equipment is on the list, but not on the property, or vice versa, then the contractor should update the inventory.	CO or designee.
Performance Review Meetings	C.12	Attendance at Performance Review Meetings	CO or designee
Equipment condition assessment.	C.13	On an ongoing basis during the performance of the Contract.	CO or designee.
Establish reference library	C.15	Ongoing	COR
Review of design documents.	C.16	Review as requested.	CO or designee.
Building management support services.	C.17	Assist as requested.	CO or designee.
Inspection assistance for space build-outs	C.18	Assist as requested	COR
Labeling electrical circuits	C.20	Ensure added or modified circuits are labeled	COR
Emergency service request or callback (after hours).	C.23.3	Written accounting of any emergency callback the morning of the next working day.	CO or designee.

DELIVERABLE	REFERENCE	DELIVERABLE DUE	POINT OF CONTACT
Emergency callback (after hours) log	C.23.3	Monthly log (submitted first Monday of the following month).	COR
Urgent service requests	C.23.4	Respond to urgent service requests within 1 hour.	COR
Routine service request - response extension request.	C.23.5	Contractor must immediately submit a written extension request if correction will take over 72 hours after initial notification.	CO or designee.
Preventative maintenance system.	C.35.1	10 work-days prior to Contract start date.	CO or designee
Infrared testing	C.35.1	Annually Infrared testing report is due 2 weeks after test is performed.	COR
Initial report and development of water treatment program.	C.36.3	Within the first month of the Contract.	CO or designee.
Water samples.	C.36.6	Water samples shall be analyzed and a monthly report submitted relative to conditions found and shall be submitted in the NCMMS as an attachment to the work order. The results will be made available at a weekly performance meeting.	CO or designee.
Periodic oil analysis.	C.37.1	At least annually, with results submitted and explained to CO or designee. It will then be entered in the NCMMS as an attachment to the chiller annual PM work order.	CO or designee.
Lamps and ballasts containing mercury record.	C.38	Document and report all purchases of mercury-containing lamps. monthly	CO or designee.
If the Contractor must disturb materials he suspects may contain lead-based paint.	C.39.4	The Contractor must immediately report the condition.	CO or designee.
Repairs using subcontractors.	C.40.1	Must provide justification for subcontract need in advance.	CO or designee.
Reimbursable repairs completion date.	C.40.3	Mutually agreed upon by the CO or their designee and the Contractor.	CO or designee.
Warranties not honored by	C.40.10	Contractor must immedi-	CO or designee.

DELIVERABLE	REFERENCE	DELIVERABLE DUE	POINT OF CONTACT
manufacturer.		ately notify if an installer or manufacturer fails to comply with the terms of a warranty.	
Scheduling and record-keeping of tests, certifications, permits, safety and environmental tests, and other records	C.41.2	Furnish copies.	CO or designee.
Refrigerant control and certification log.	C.41.3.1	Refrigerant control logs must be updated as required.	CO or designee.
AQMD operating permits.	C.41.4	Copies made available upon request.	CO or designee.
Polychlorinated biphenyl (PCB) control transformer leaks.	C.41.7	Immediate notification.	CO or designee.
Facility Hazards	C.41.8	Report in writing and take immediate action to correct hazards that present an imminent danger.	CO or designee
Workplace safety plan.	C.41.9	30 days after award.	CO or designee.
Electrical safety	C.41.10	Any and all areas restricted to qualified personnel are secured and properly labeled. (NFPA 70 AND NFPA 70E)	CO or designee.
Confined space entry permit system.	C.41.14	Develop a confined space entry permit system for all permit-required confined spaces within 60 calendar days of Contract start.	CO or designee.
If the Contractor must disturb materials he suspects may contain ACM.	C.41.15	The Contractor must immediately report the condition.	CO or designee.
Safety Data Sheets (SDS)	C.41.16.1	Available on request	CO or designee.
Hazardous material inventory	C.41.16.1	Submit as an appendix to the building operating plan.	CO or designee.
Environmental Reporting	C.41.16.3	Submit required reports	CO or designee.
Non-Bio-Based Products Reporting	C.41.16.5	October 31 of each year the contract is in effect.	CO or designee
Bio-Based Products Reporting	C.41.16.6	October 31 of each year the contract is in effect.	https://www.sam.gov/
Boiler Inspections and Tests	C.41.17.2	Boiler must be inspected annually and forms 349, 350 & 1034 completed as required. Must be annotated in the CMMS.	CO or designee
Backflow prevention devices – annual inspection certificate.	C.41.17.3	Annually. Certificates must be scanned in as an attachment to the Back flow PM work order in the	CO or designee.

DELIVERABLE	REFERENCE	DELIVERABLE DUE	POINT OF CONTACT
		CMMS	
Labeling and signage.	C.41.18	Labeling per OSHA standards shall be maintained throughout the Contract period.	CO or designee.
Fire protection systems on line at all times unless approval is given during maintenance periods.	C.42.1	Advance notification and approval per occurrence.	CO or designee.
Fire protection and life safety equipment or systems that are in a condition that may endanger life or property.	C.42.1	Immediate notification of the condition. A written report detailing the hazardous condition and recommended corrective action shall be provided within 24 hours.	CO or designee.
Fire alarm system Inspections, tests, maintenance, or repairs shall comply with NFPA 72.	C.42.2	Documentation of the results of all inspections, tests, maintenance or repairs must be recorded on the applicable Inspection and Testing Form from NFPA 72.	CO or designee.
Water-based fire suppression systems inspection, maintenance, and tests.	C.42.3	Documentation of the results of all inspections, tests, maintenance or repairs performed shall comply with NFPA 72.	CO or designee.
Inspection, testing, and maintenance of fire-rated door assemblies:	C.42.4	All inspections, tests, and maintenance shall comply with NFPA 80 and NFPA 101.	CO or designee.
Inspection, testing, and maintenance of fire damper and combination fire/smoke dampers.	C.42.5	All inspections, tests, and maintenance shall comply with NFPA 80 and NFPA 105.	CO or designee.
Inspection, testing, and maintenance of smoke door assemblies.	C.42.6	All inspections, tests, and maintenance shall comply with NFPA 105.	CO or designee
Inspection, testing, and maintenance of smoke dampers.	C.42.7	All inspections, tests, and maintenance shall comply with NFPA 105.	CO or designee.
Inspection, testing, and maintenance of portable fire extinguishers	C42.8	All inspections, tests, and maintenance shall comply with NFPA 10.	CO or designee.
Inspections, testing, and maintenance of non-water based fire extinguishing systems.	C.42.9	All inspections, tests, and maintenance shall comply with NFPA 12, NFPA 12A, NFPA 17, NFPA 17, NFPA 96, or NFPA 2001, depending on the type of extinguishing system.	CO or designee.
Inspections, testing, and	C.42.10	All inspections, tests,	CO or designee.

DELIVERABLE	REFERENCE	DELIVERABLE DUE	POINT OF CONTACT
maintenance, and repairs of smoke control systems.		maintenance, and repairs shall comply with NFPA 92.	
Inspections, testing, and maintenance, and exercising of equipment of emergency and standby power systems.	C.42.11	All inspections, tests, maintenance, and exercising of equipment shall comply with NFPA 110 or NFPA 111 depending on type of system.	CO or designee.
Inspections, testing, and preventive maintenance of emergency lighting systems, emergency lighting equipment, and exit signage.	C.42.12	All inspections, tests, maintenance, and exercising of equipment shall comply with NFPA 101.	CO or designee.
Fire alarm system central station monitoring	C.42.13	Provide and maintain UL-listed central station monitoring service. If central station monitoring is not operational, the contractor will provide a fire watch.	CO or designee
Qualification of employees (May 1989) paperwork.	H.1.3	As requested.	CO or designee.
Collection and submission of GSA Form 139, Recording Presence.	H.7	Submit as requested.	CO or designee.
Asbestos awareness training certification.	H.13	Training within 60 calendar days after start. Certify completion within 5 days of training.	CO or designee.
Submission of resumes for new employees.	H.15.4	The Contractor must submit resumes for all personnel prior to personnel beginning work.	CO or designee.
State licensing – if required.	H.15.5	Within 90 calendar days of beginning employment.	CO or designee.
Price proposal for additional services work.	H.18.2	Within 48 hours of the request.	CO or designee
Strike contingency plan (SCP) submission.	H.20	5 calendar days prior to Contract start date and updated annually.	CO or designee.

G. CONTRACT ADMINISTRATION DATA

G.1. POINTS OF CONTACT FOR CONTRACT ADMINISTRATION

In order to expedite administration of the contract, the Contractor will direct inquiries to the appropriate point of contacts.

(a) Contracting Officer, Paul Szymanski, paul.szymanksi@gsa.gov, 817-235-4529

(b) Contract Specialist, Amy Powell, amy.powell@gsa.gov, 817-850-5545

(c) Contracting Officer Representative, Silvia Terrazas, silvia.terrazas@gsa.gov, 915-534-6050

G.2. ADMINISTRATIVE FUNCTIONS AND LIMITATIONS

(a) The Contracting Officer will delegate the day-to-day administrative duties under this contract to the Contract Specialist; however, the Contracting Officer has the overall responsibility for the administration of this contract. Only the Contracting Officer can amend, modify, or deviate from the contract terms, conditions, requirements, specifications, and/or delivery schedules; make final decisions on disputed deductions from contract payments for nonperformance or unsatisfactory performance; terminate the contract for convenience or default; and/or issue final decisions regarding contract questions or matters under dispute.

(b) The Contracting Officer Representative (COR) will assist the Contracting Officer in certain delegated administrative duties under this contract. In accordance with Section E, the COR will accomplish inspection and acceptance of deliverables and monitor contractor performance under this contract. The COR does not have the authority to alter the Contractor's obligations or change the terms and conditions of the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or the statement of work, a modification must be issued in writing and signed by the Contracting Officer. Unless terminated sooner, this appointment is effective for the period of performance of this contract including any options, if exercised. No change in COR assignment shall be made without written notice by the Contracting Officer, who will modify the contract to reflect the change of COR assignment.

(c) The COR may delegate to Contract Inspectors the day-to-day inspection and monitoring of the Contractor's work. The responsibilities of the Contract Inspectors include, but are not limited to, inspecting the work to ensure compliance with the contract requirements; documenting through written inspection reports the results of all inspections conducted; following through to assure that all defects or omissions are corrected; recommending deductions from contract payment for nonperformance or unsatisfactory performance; conferring with representatives of the Contractor regarding any problems encountered in the performance of the work.

G.3. KEY CONTRACTOR PERSONNEL

(a) The Contractor agrees to assign to the contract tasks those persons whose resumes were approved by the COR and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.

(b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least thirty (30) days in advance (sixty (60) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the termination clause of the contract.

The Contractor will provide to the Contracting Officer the names, titles, e-mail addresses, and phone numbers of key personnel at time of award.

G.4. PAYMENT (GENERAL)

The GSA Finance Division (7BCP), P.O. Box 17181, Fort Worth, TX 76102-0181, is responsible for payments under this contract.

Payment for any service rendered will be due in accordance with the Prompt Payment clause in Section I. In the event the contract begins or ends prior to the last day of month, payments will be prorated based on the number of workdays in the respective month.

G.5 SUBMISSION OF INVOICES FOR RECURRING MONTHLY SERVICES

Payment for recurring monthly services will be made on the basis of a monthly invoice, in arrears. Invoices must be submitted to GSA's Office of Finance, either through electronic invoicing or by mail. A courtesy copy shall be provided to the CO upon submission to the GSA Office of Finance. The preferred means of submitting invoices is by electronic invoicing through the GSA web site. For further information regarding electronic invoicing, please contact the GSA Fort Worth Finance Center Customer Support Group at (817) 978-2408.

The mailing address for GSA’s Office of Finance for invoices is:

General Services Administration
Finance Division (7BCP)
P.O. Box 17181
Fort Worth, TX 76102-0181

G.6 SUSPENSION OF WORK

(a) Definitions—

Essential employees may be essential for conducting regular operations, and may even be required to report to work during hazardous weather conditions, but they are not necessarily excepted when those regular operations cease under a funding lapse.

Excepted employees must be performing specific functions allowed by law and defined in GSA Order ADM 4220.1F. Some functions would include protecting Federal lands, buildings, waterways, equipment, and other U.S. property, and supporting, providing services to, or otherwise enabling others to perform excepted functions.

(b) In the event services are not provided or required by the Government because the building(s) is/are closed due to inclement weather (not including essential personnel), under construction, unanticipated holidays declared by the President (see note), failure of the Congress to appropriate funds (not including excepted personnel or services per GSA Order ADM 4220.1F), etc., reductions will be computed as follows:

(1). The reduction rate in dollars per day will be equal to the per month contract price for the building(s), divided by the number of working days per month.

(2). The reduction rate in dollars per day multiplied by the number of days services were not provided or required. In the event services are provided for portions of day(s), appropriate adjustments will be made by the CO to assure the Contractor is compensated for services provided.

Note: Deductions will not be assessed for service requirements on those days in which services are not required by the Government because the building(s) is/are closed due to an unanticipated Federal Holiday declared by the President, **IF** contractor employees are paid for such day(s) off in accordance with the applicable wage determination and/or collective bargaining agreement.

In the event services are not provided or required by the Government because the building(s) is closed due to inclement weather, under construction, unanticipated holidays declared by the President, failure of the Congress to appropriate funds, etc., reductions will be computed as follows:

A. The reduction rate in dollars per day will be equal to the per month contract price for the building(s), divided by the number of working days per month.

B. The reduction rate in dollars per day multiplied by the number of days services were not provided or required. In the event services are provided for portions of days, appropriate adjustments will be made by the CO to assure the Contractor is compensated for services provided.

G.7 EVALUATING CONTRACTOR PERFORMANCE

Past performance information is relevant information, for future source selection purposes, regarding a contractor's actions under a previously awarded contracts. It includes, for example, the

contractor's record of conforming to contract requirements and to standards of good workmanship, the contractor's record of forecasting and controlling costs, the contractor's adherence to contract schedules, including the administrative aspects of performance, the contractor's history of reasonable and cooperative behavior and commitment to customer satisfaction, the contractor's reporting into databases, the contractor's record of integrity and business ethics, and generally, the contractor's business-like concern for the interest of the customer.

The General Services Administration (GSA), Public Buildings Service (PBS), will begin using the Contractor Performance Assessment Reporting System (CPARS) modules as the secure, confidential, information management tool to facilitate the performance evaluation process: http://www.cpars.csd.disa.mil/. CPARS enables a comprehensive evaluation by capturing comments from both GSA and the contractor.

GSA PBS will evaluate interim contractor performance on an annual basis and final contractor performance upon contract completion. Evaluations of contractor performance will be provided to the contractor as soon as practicable after completion of the evaluation. Contractors will be given a minimum of 30 days to submit comments, rebutting statements, or additional information. GSA PBS will provide for review at a level above the contracting officer to consider disagreements between the parties regarding the evaluation. The ultimate conclusion on the performance evaluation is a decision of the contracting agency. Copies of the evaluation, contractor response, and review comments, if any, shall be retained as part of the evaluation. These evaluations may be used to support future award decisions, and should therefore be marked "Source Selection Information."

The GSA PBS Contracting Officer will use the past performance point of contact listed on the contractors Central Contractor Registration (CCR) profile as the default past performance POC. This is the person that will receive CPARS email alerts.

Copies of the evaluations, contractor responses, and review comments, if any, will be retained as part of the contract file, and may be used by Federal Agencies to support future award decisions.

G.8. CRITERIA FOR DEDUCTIONS

G.8.1. General

It is the objective of the Government to obtain complete and satisfactory performance in accordance with the terms of the specifications and requirements in this contract. To this end, the Government is contracting for the complete performance of each task identified in the specifications. In the event that inadequate performance or nonperformance of a task occurs, the Government will make the determination to either

A. Reduce the monthly payment as stipulated in the Criteria for Deductions (paragraph G.8.4) or

B. Withhold payment until performance is acceptable or

C. Have the work performed by other means.

Should the Government have the work performed by other means; a deduction will be taken in the amount of the actual cost to the Government for having the work performed by other means.

A monetary reduction to the contract price for nonperformance of work under this contract, or for deficiencies in the performance of work, and administrative costs for time and material costs incurred by Government personnel to correct or respond to the unsatisfactory event, will be taken. Inadequate performance is just as undesirable as nonperformance, and the cost of correcting inadequate performance may equal or exceed the cost of initial performance. Therefore, the deduction criteria in this Section shall control in all cases, as distinguished from the Contractor's estimated cost to perform the work.

G.8.2. Withholding Monies for Non-Submission of Reports
If the contractor fails to prepare and/or submit acceptable reports (within the required time frame) as required in this contract, this may be construed to mean that the contract work has not been performed and the Government will withhold all payments until the required reports are satisfactorily completed and/or submitted to the COR.

G.8.3. Withholding Monies for Failure to Maintain and/or Provide Parts
If the Contractor fails to provide the parts specified in this contract, **within 24 hours** of establishment of the need for such parts, the Government will withhold all payments until the required parts are provided and are satisfactory to the COR.

G.8.4 Criteria for Deductions

CRITERIA FOR MECHANICAL DEDUCTIONS

CAUSE OF DEDUCTION	CALCULATION OF DEDUCTION
1. Failure of the Contractor to have adequate qualified personnel on-site as specified in Contractor's accepted technical proposal or CO approved revision.	1. An amount per man hour will be deducted for each hour, or portion thereof, that the Contractor fails to have adequate qualified personnel on-site. The man hour calculation shall be based on total number of personnel proposed minus the total number of personnel provided, this sum multiplied by the number of hours that full staffing was not provided. The amount of deduction per hour includes the wage rate of the position with unqualified or vacant personnel, health and welfare, pension (when applicable), workman's compensation, Social Security and Medicare. Rates will be determined by the DOL Wage Determination or Union Agreement that applies to these personnel.

H. SPECIAL CONTRACT REQUIREMENTS

H.1. Security

H.1.1 Security Requirements and Personal Identity Verification Procedures (Non-Classified Contract)

FAR 52.204-9 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (SEPT 2007)

a. The Contractor shall comply with Agency personal identity verification procedures identified in the Contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24 and Federal Information Processing Standards Publication (FIPS PUB) Number 201.

b. The Contractor shall insert this clause in all subcontracts when the subcontractor is required to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system.

H.1.2 GSAR 552.237-70 Qualification of Offerors (MAY 1989)

a. Offers will be considered only from responsible organizations or individuals now or recently engaged in the performance of building service Contracts comparable to those described in this solicitation. In order to determine an Offeror's qualifications, the Offeror may be requested to furnish a narrative statement listing comparable Contracts which it has performed; a general history of its operating organization; and its complete experience. An Offeror may also be required to furnish a statement of its financial resources; show that it has the ability to maintain a staff of regular employees adequate to ensure continuous performance of the work; and, demonstrate that its equipment and/or plant capacity for the work contemplated is sufficient, adequate, and suitable.

b. Competency in performing comparable building service Contracts, demonstration of acceptable financial resources, personnel staffing, plant, equipment, and supply sources will be considered in determining whether an Offeror is responsible.

c. Prospective Offerors are advised that in evaluating these areas involving any small business concern(s), any negative determinations are subject to the Certificate of Competency procedures set forth in the Federal Acquisition Regulation.

H.1.3. GSAR 552.237-71 Qualifications of Employees (MAY 1989)

a. The Contracting officer or a designated representative may require the Contractor to remove any employee(s) from GSA controlled buildings or other real property should it be determined that the individual(s) are either unsuitable for security reasons or otherwise unfit to work on GSA controlled property.

b. The Contractor shall fill out and cause each of its employees performing work on the Contract work to fill out, for submission to the Government, such forms as may be necessary for security or other reasons. These forms shall be completed electronically unless that would create a hardship for the individual. Upon request of the Contracting Officer, the Contractor and its employees shall be fingerprinted.

c. Each employee of the Contractor shall be a citizen of the United States of America, or an alien who has been lawfully admitted for permanent residence as evidenced by Alien

Registration Receipt Card Form I-151, or, who presents other evidence from the Immigration and Naturalization Service that employment will not affect his immigration status.

H.1.4. Suitability Determinations

a. All Contract employees requiring routine unescorted access to Federally-controlled facilities and/or information systems for more than 6 months (Regular Employees) will be required to undergo a suitability determination before a facility identification card is issued. Prior to the time that an identification card is issued, such Regular Employees will be required to comply with normal facility access control procedures, including sign-in, temporary badging, and escorted entry, as applicable.

b. Failure of a Regular Employee to receive a favorable suitability determination shall be cause for removal of the employee from the work site and from other work in connection with the Contract.

c. Contract employees working less than 6 months (Temporary Employees) may, at the Government's option, be required to undergo a lesser form of suitability determination. Prior to the time that an identification card is issued, if at all, such Temporary Employees will be required to comply with normal facility access control procedures, including sign-in, temporary badge, and escorted entry, as applicable.

d. Temporary Employees who have not received a favorable suitability determination shall be escorted by government employees at all times while in non-public space, as directed by the CO or their designee.

e. The Government, at its sole discretion, may grant temporary suitability determinations to Regular or Temporary Employees. However, the granting of a temporary suitability determination to any such employee shall not be considered as assurance that a favorable suitability determination will follow.

f. The CO or their designee shall provide the Contractor with required forms for obtaining necessary clearances. The Contractor shall be required to cause such forms to be returned to the Government for processing not later than 14 days following being provided by the Government.

g. The Contractor shall be responsible for planning and scheduling its work in such a manner as to account for facility access issues. Difficulties encountered by the Contractor in gaining access to facilities by its employees and subcontractors shall not be an excuse to any Contractor performance under the Contract.

H.1.5. Compliance with Security Requirements

a. The Contractor shall comply with all GSA and tenant Agency security requirements in the building(s) where work is being performed.

b. When a controlled personnel identification access system is used by a tenant Agency at a site where work is performed, the tenant Agency will be responsible for providing any required access credentials. Credentials shall be displayed at all times or as otherwise required by the tenant Agency.

The Contractor shall be responsible for maintaining satisfactory standards of employee competency, conduct, appearance, and integrity and shall be responsible for taking such disciplinary action with respect to its employees as may be necessary.

H.2. Identification Credential

a. Upon receipt of favorable suitability determination as indicated in this document, each employee of the Contractor will be issued an identification credential. At all times while working on the Contract, a Contract employee, including subcontractor employees, shall have in his or her possession the specific Government identification credential issued to him or her by the Government. The identification credential shall be displayed and be visible at all times while on Government property. The CO or designee, Government law enforcement, or security person shall periodically verify passes of Contractor employees with their personnel identification. Contractor employees shall comply with security verification procedures at all times.

b. The Contractor shall ensure that every Contract employee has a Government issued identification credential before the employee enters on duty. As required by the Government, the Contractor shall make his employees available for photo identification badges, on a schedule to be worked out with the CO or designee. The Government will make the identification credentials after a favorable security determination has been received for the Contractor's employees. Each identification credential shall have an expiration date and Contractor employees shall sign each badge at the time of photographing.

c. The Contractor shall be responsible for ensuring that all identification credentials are returned to the CO or their designee whenever his employees leave the Contract (when the Contract has been completed, employees leave the company, or employees are dismissed or terminated). The Contractor shall notify the CO or their designee whenever employee badges are lost.

d. The Contractor will be responsible for paying the Government for replacement credentials at the current cost per badge.

H.3. Escort Requirements

It may be necessary to escort temporary Contract employees who do not have favorable preliminary or final suitability determinations and shall work in federally controlled space. In those cases, all uncleared Contract employees shall be escorted in nonpublic space by a Government employee or another responsible cleared Contract employee who is approved by the CO or designee. Other Government agencies may have specific Agency security requirements for their own space that may only allow escort by Government employees or those designated by their Agency. Government employees or approved cleared Contract employees who provide escorts for uncleared Contract employees shall always be in close proximity and within eyesight of the uncleared Contract employee. The Contract government escort shall watch uncleared employees and remain with uncleared Contract employees for the entire time they are in the building and or federally controlled space. Uncleared employees cannot be left alone or out of eyesight at anytime they are in nonpublic space. A cleared and approved escort may not allow several uncleared Contract employees to be in Federally controlled space, that is not within close proximity and within eyesight at all times. A cleared and approved escort may not allow multiple uncleared employees in non-public space on different parts of one floor or different floors at the same time. Any security violation of escort requirements by a cleared and approved Contract

employee will result in the immediate removal from the Contract of all Contract employees involved, i.e., escorts and uncleared escorted Contract employees. Also, violations of escort requirements by Contract employees in accordance with security requirements may be grounds for termination of the Contract.

H.4. Standards of Conduct

The Contractor shall be responsible for maintaining satisfactory standards of employee competency, conduct, appearance, and integrity and shall be responsible for taking disciplinary action with respect to his employees as necessary. The Contractor is responsible for ensuring that his employees do not disturb papers on desks, open desk drawers or cabinets, or use Government telephones, except as authorized. Each employee is expected to adhere to standards of behavior that reflect favorably on his or her employer and the Federal Government. No smoking is allowed in the building.

H.5. Removal from Contract Work

a. As provided in the clause entitled "Qualifications of Employees," the Contracting officer or a designated representative may require the Contractor to remove any employee(s) from GSA controlled buildings or other real property should it be determined that the individual(s) is either unsuitable for security reasons or otherwise unfit to work on GSA controlled property. This shall include, but not be limited to, instances where an employee is determined, in the Government's sole discretion, to be incompetent, careless, insubordinate, unsuitable, or otherwise objectionable.

b. When the Government deems the employee’s continued employment to be contrary to the public interest, inconsistent with the best interests of security, or when the employee is identified as a potential threat to the health, safety, security, general well-being, or operational mission of the facility and its population.

c. The CO may also request the Contractor to immediately remove any employee from the work site if it is determined that individuals are being assigned to duty who have been disqualified for either suitability or security reasons or who are found to be unfit for performing duties during their tour of duty.

d. Contractor employees who are removed from Contract work shall be required to leave the work site immediately.

e. The Contractor shall comply with any removal request. For clarification, a determination to remove an employee will be made for, but is not limited to, incidents involving the most immediately identifiable types of misconduct or delinquency as set forth below:

    1. Failure to receive a suitability determination, temporary clearance, or clearance from GSA or a tenant Agency.

    2. Violation of Federal, State, or Local law.

    3. Violation of the Rules and Regulations Governing Public Buildings and Grounds, 41 CFR 101-20.3. This includes the carrying or possession of explosives or items intended to be used to fabricate an explosive or incendiary device.

    4. Neglect of duty, including sleeping while on duty, unreasonable delays, or failure to carry out assigned tasks, conducting personal affairs during official time or

refusing to render assistance, or to cooperate in upholding the integrity of the security program at the work site.

5. Falsification or unlawful concealment, removal, mutilation, or destruction of any official documents or records, or concealment of material facts by willful omissions from official documents or records.
6. Disorderly conduct, use of abusive or offensive language, quarreling, intimidation by words or actions, fighting, or participation in disruptive activities that interfere with the normal efficient operations of the Government.
7. Theft, vandalism, immoral conduct, or any other criminal actions.
8. Selling, consuming, or being under the influence of intoxicants, drugs, or substances that produce similar effects while in or on federally controlled property.
9. Improper use of Government identification.
10. Unauthorized use of communication equipment on Government property.
11. Violation of security procedures or regulations.
12. Violation of Title 18,U.S.C.,Section 930, which prohibits the knowing possession or the causing to be present of firearms or other dangerous weapons in Federal facilities and Court facilities.

f. The CO or their designee will make all determinations regarding the removal of any employee from work site, except under certain conditions. When a CO or their designee is not available, either during the day or after hours, or in situations where a delay would not be in the best interest of the Government or is identified as a potential threat to the health, safety, security, general well-being, or operational mission of the facility and its population, the CO or their designee will have the authority to immediately remove the Contract employee from the work site.

g. Law enforcement officers of the Department of Homeland Security/Immigration and Customs Enforcement/Federal Protective Service (DHS/ICE/FPS) will have the authority to immediately remove any Contract employee from the work site who is found to be in violation of any of the items mentioned above and where a delay in removal would not be in the best interest of the Government or security or is identified as a potential threat to the health, safety, security, general well-being, or operational mission of the facility and its population. The CO or their designee will be notified as soon after the incident as practical or at the beginning of the next business day if an action happened after hours. The CO or their designee will make all official notifications to the Contractor. In the event of a dispute, the CO or their designee will make a final determination. Specific reasons for removal of an employee will be provided to the Contractor in writing by the CO or designee.

h. The Contractor is responsible for providing replacement employees in cases where Contract employees are removed from working at the work site or on the Contract.

H.6. Sensitive but Unclassified (SBU) Building Information

a. GSA Contractors that do not have HSPD-12 compliant clearances cannot obtain Sensitive but Unclassified (SBU) information (Privacy Act data, building information, and financial information) through GSA's IT systems.

b. Contractors and prospective bidders with a need to know that do not have HSPD-12 clearances and access rights to GSA IT systems can be provided SBU building information, drawings, etc., in accordance with GSA Order 3490.1A, which provides for the dissemination of paper and electronic SBU building information for all Federally controlled space (owned, leased, and delegated).

c. SBU information includes, but is not limited to:

    1) Paper and or electronic documentation of the physical facility information.

    2) Building designs (such as floor plans).

    3) Construction and renovation or alteration plans and specifications.

    4) Equipment plans and locations.

    5) Building operating plans.

    6) Information used for building service Contracts and or Contract guard services.

d. For all GSA controlled facilities, any other information considered a security risk shall be considered covered under this category.

e. All SBU building information, either in electronic or paper format, shall have specific imprinting on each page to designate it as Government property and indicate the prohibition of copying, dissemination, and distribution.

f. Contractors authorized to receive SBU information shall provide the following identification:

    1) A copy of a valid business license.

    2) Verification of a valid DUNS Number.

    3) A valid IRS Tax ID Number.

    4) A valid State driver's license with photograph.

g. Contractors shall sign a Document Security Notice when they receive SBU information.

h. Contractors shall be responsible for safeguarding SBU information. At the completion of work, secondary and other Disseminators shall be required to turn over their Document Security Notice dissemination records to GSA to be kept with the permanent files.

i. Authorized Contract users shall destroy all SBU information and documents when no longer needed. Destruction shall be done by burning or shredding hardcopy, and or physically destroying CDs, deleting and removing files from the electronic recycling bins, and removing material from computer hard drives using a permanent erase utility or similar software.

j. All authorized Contract users of SBU building information shall notify the GSA Disseminator in writing that they have properly disposed of the SBU building information and documents.

k. The GSA Disseminator shall maintain all records of SBU building information disposal (along with the signed Document Security Notices) in accordance with the GSA system of keeping long-term records and plans. All Document Security Notices and Records of Disposal shall be kept with the permanent files.

H.7. Recording Presence

Each Contract employee shall sign in when reporting for duty and sign out when leaving at the end of the workday and follow card access requirements as directed by the CO or designee. The Contractor shall accumulate GSA Form 139 (Record of Time of Arrival and Departure from Building) or other designated form for use in recording presence each calendar week, certify in writing on each form that the information shown is true and correct and, and turn them over to the CO or designee when requested.

H.8. Government Forms

The various Government forms mentioned in this document such as personal history forms, sign-out forms, inspection forms, etc., may be obtained from the CO or designee.

H.9. Other Contractors

The Government may undertake or award other Contracts for additional work, and the Contractor shall fully cooperate with such other Contractors or Government employees. The Contractor shall carefully schedule his own work, in conjunction with the additional work, as may be directed by the CO or designee. In addition, the Contractor shall not commit or permit any act that will interfere with the performance of work by another Contractor or by Government employees.

H.10. Ordinances, Taxes, Permits, and Licenses

Without additional expense to the Government, the Contractor shall fully comply with all Local, City, State, and Federal laws, regulations, and ordinances. The Contractor will also be liable for all applicable Federal, State, and Local taxes and shall obtain and pay for all permits and licenses governing performance under the Contract.

H.11. Discrepancy in the Specifications

In any case of discrepancy in the specifications, the matter shall be immediately submitted to the CO. The decision of the CO as to the proper interpretation of the specifications shall be final in accordance with the Disputes Clause of this Contract.

H. 12. Affirmative Procurement Program (APP)

H.12.1 Standards

The Contractor shall use safe and environmentally friendly products as referenced throughout this specification. Green products and processes include, but are not limited to bio-based products, products containing recycled content, environmentally preferable products and services, and otherwise environmentally friendly products and services that minimize the use of energy, water, and

other resources. Chemical concentrates that require dilutions are preferable compared to ready-to-use products and should be used whenever possible. Dilution control equipment should be employed to ensure correct dilutions of concentrates and to protect workers from exposure to concentrated chemicals.

Products designated under federal sustainable product programs – USDA BioPreferred, EPA CPG, EPA Design for the Environment, EcoLogo and Department of Energy's EnergyStar and FEMP - can be found on www.sftool.gov. Sustainable products designated under third-party programs include but are not limited to Green Seal™ and Environmental Choice. For those categories of product not recognized by one of the aforementioned standard's, preference shall be given to products meeting the California Code of Regulations maximum allowable Volatile Organic Compounds (VOC) levels for the appropriate cleaning product category(California Air Resource Board/California Code of Regulations (CCR), Tile 17 CCR Section 94509 – (Topic cited; Standards for consumer products at www.calregs.com).

Products including, but not limited to, cleaners, adhesives, sealants, solvents, and replacement fixtures and equipment - if applicable, must meet the sustainability standards for products listed in the Green Products Compilation (sftool.gov) see Exhibit 4. With the exceptions listed below. The Green Products Compilation lists all of the products that Federal agencies are required by statute to purchase green:

a. Green Seal standard GS-34 shall apply to degreasers
b. Green Products Compilation (sftool.gov) shall apply to industrial and institutional cleaning products [this covers concentrate issue]. The California Code of Regulations maximum allowable VOC levels for the appropriate product category (California Air Resource Board/California Code of Regulations (CCR), Tile 17 CCR Section 94509 – (Topic cited; Standards for consumer products at www.calregs.com).

H.12.2 Reporting

Contractor shall track the following green purchasing elements and report on purchases as specified in the environmental reporting section and Exhibit 2 of this specification.

H.12.3 Recycle Content Certification

In accordance with the FAR 52.223-9, Certification and Estimate of Percentage of Recovered Material Content for EPA-Designated Items purchased for the performance of work with this Contract, the Contractor shall provide to the CO or their designee the required certification and estimate at Contract completion.

H.13. Asbestos Awareness Training

The Contractor shall ensure that all employees, including replacement workers, receive asbestos training and refresher training in accordance with CFR 40-763 and 29 CFR 1910. The Contractor shall follow all instructions for each asbestos class job as outlined in 29 CFR 1910. The training shall be conducted, at no additional expense to the Government, at least 60 calendar days after the start date of the Contract. The Contractor shall submit written certification to the CO or their designee within 5 days of the completion of training.

H.14. Uniforms

All trade workers shall wear a uniform with the Contractor's logo while working within the building.

H.15. Personnel Qualifications

H.15.1 Personnel Training

The Contractor shall establish training program to assure employees working in a Federal building have the knowledge, skills and abilities to perform the work required by this Contract. The Contractor shall provide training and/or document training that conforms to the core competencies of the Federal Buildings Personnel Training Act of 2010 and provide documentation to the CO or designee.

H.15.1.1 Re-Tuning Training

The Contractor must ensure that all Mechanical Engineers, Mechanical Supervisors, Operating Engineers, HVAC Mechanics, and Control Technician employees, including replacement workers, receive Building Re-Tuning Training, (http://retuningtraining.labworks.org/training/lms/), a 5-6 hour on line course and refresher training every two years in accordance with the Federal Buildings Personnel Training Act of 2010. The training must be conducted, at least 60 calendar days after the start date of the Contract. The Contractor must submit written certification to the CO or their designee within 5 days of the completion of training for each employee identified above.

H.15.1.2 Smart and Sustainable Buildings (SSB) Training

Mandatory Training (at least one staff member):

- One-hour "GSA Smart and Sustainable Buildings (SSB) Overview"
    - Module 1 - Includes GSA FMSP Smart and Sustainable Buildings Overview
    - Module 2 - Includes PBS CIO Support Procedures

H.15.1.3 Controls/HVAC Training

The contractor will be required to send a minimum of one technician to a one-week controls training class once per year for each year of the contract **at the contractor's expense**. The contractor should expect to spend a minimum of $4,000 per year for this training. The Technician and the class must be approved by R7 FMSP Operations Branch prior to scheduling the training. A copy of the completion certification will be provided to R7 FMSP after the successful completion of the class. If the individual does not complete the class successfully, the cost of the class will be reimbursed to the Federal Government. An advanced HVAC class may be substituted for the controls training class with the approval of R7 FMSP Operations Branch.

Note: if the person who received the training leaves the contract within 12 months after completion of the training, then the contractor will be expected to reimburse the Government for the full cost of the course and the travel up to $4000. Or the contractor may submit another name and course to be approved by Regional FMSP office and send that person to the training at no additional cost to Government. Failure to send a technician to this training will result in a reduction of contract cost in the amount of $4,000.

H.15.2 Qualifications of Onsite Project Manager and Onsite Supervisory Personnel

H.15.2.1 Reserved

H.15.2.2 Qualifications of Onsite Supervisor

The Onsite Supervisor shall also possess at least 5 years of recent (within the past 7 years) experience in directing operation and maintenance of equipment in a supervisory capacity for equipment of the approximate size, complexity, and other characteristics of the equipment to be operated and maintained under this Contract. A detailed resume containing the information specified in this document shall be submitted to the CO or their designee for approval prior to the assignment of any supervisor to the Contract. Both new and replacement onsite supervisors shall meet these qualification standards. Minimally the resume shall contain:

a. The full name of the proposed supervisor.
b. A detailed description of the previous 7 years' employment history of the proposed supervisor.
c. The names and addresses of the companies for whom the proposed supervisor worked for the past 7 years, along with the names and telephone numbers of the immediate supervisors.

H.15.3 Qualifications of Technicians

General Requirements

Technicians engaged in the work to be accomplished under this contract, except for general maintenance workers and laborers, must possess at least 5 years of recent (within the past 7 years) experience in the operation and maintenance of equipment and systems comparable in complexity to systems covered by this contract. All personnel or sub-contractor personnel must possess all required registrations, certifications and licenses required by State and local jurisdictions, and any specific requirements noted below. The Contractor shall provide to the CO or their designee documentation of the certificates of training, licenses, and permits for all new employees not later than 7 days prior to that person beginning work under the terms of this contract. The Contractor shall ensure that all certificates of training, licenses, permits, and bonds are current and valid. All offers must include documentation and proof of any required certifications (e.g., including certification number and expiration date) and qualifications for each employee.

H.15.3.1 Qualifications of Fire Alarm System Technicians

a. Technicians performing contract work involving the inspection, testing, and preventive maintenance or repair of fire alarm systems shall be certified by the National Institute for Certification in Engineering Technologies (NICET) and possess at least a NICET Level 2 (Associate Engineering Technician) in Fire Protection Engineering Technology, Fire Alarm Systems. The Contractor shall submit to the CO or their designee the NICET level certification number and expiration date for each field technician and inspector responsible for performing fire alarm system preventative maintenance and repair services required under the terms of this contract.
b. Technicians modifying the programming software of the fire alarm system shall also be factory trained and certified by the system manufacturer for the specific type and brand of fire alarm system being serviced. The Contractor shall submit to the CO or their designee the factory trained certification number and expiration date for each specific manufacturer's

equipment for each technician responsible for performing programming of the fire alarm system.

H.15.3.2 Qualifications of Water-Based Fire Suppression System Technicians

Technicians performing contract work involving the inspection, testing, and preventive maintenance or repair of water-based fire suppression systems shall be certified by the National Institute for Certification in Engineering Technologies (NICET) and possess at least a NICET Level 2 (Associate Engineering Technician) in Fire Protection Engineering Technology, Inspection, and Testing of Water-Based Systems. The Contractor shall submit to the CO or their designee the NICET level certification number and expiration date for each field technician and inspector responsible for performing water-based fire suppression system preventative maintenance and repair services required under the terms of this contract.

H.15.3.3 Qualifications of Dry Chemical and Wet Chemical Extinguishing System Technicians

Technicians performing contract work involving the inspection, testing, and preventive maintenance of dry chemical and wet chemical extinguishing systems shall be trained in the manufacturer requirements and have passed a test confirming the individual's knowledge and competence on these systems. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the manufacture or testing organization confirming the technician has been trained and passed a test, for each field technician and inspector responsible for performing dry chemical and wet chemical extinguishing system preventative maintenance and repair services required under the terms of this contract.

H.15.3.4 Qualifications of Clean Agent Fire Extinguisher System Technicians

Technicians performing contract work involving the inspection, testing, and maintenance of clean agent fire extinguisher systems shall be trained in all aspects of safety related to the systems and possess a current training certificate for inspecting, testing, and maintaining these components from a manufacturer or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, and maintenance of clean agent fire extinguisher systems required under the terms of this contract.

H.15.3.5 Qualifications of Halogenated Extinguishing System Technicians

Technicians performing contract work involving the inspection, testing, maintenance, decommissioning and removal of halogenated extinguishing systems shall be trained in all aspects of safety related to halon systems and possess a current training certificate for inspecting, testing, and maintaining these components from a manufacturer or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, maintenance, decommissioning and removal of halogenated extinguishing systems required under the terms of this contract.

H.15.3.6 Qualifications of Carbon Dioxide Extinguishing System Technicians

Technicians performing contract work involving the inspection, testing, maintenance of carbon dioxide extinguishing systems shall be trained all aspects of safety related to carbon dioxide

extinguishing systems, the operation and functions performed, and possess a current training certificate for inspecting, testing, and maintaining these components from an equipment manufacturer, installation company, or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the equipment manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, and maintenance of carbon dioxide extinguishing systems required under the terms of this contract.

H.15.3.7 Qualifications of Ventilation System Fire Extinguishing System Technicians
Technicians performing contract work involving the inspection, testing, maintenance of fire extinguishing systems shall be trained and possess a current training certificate for inspecting, testing, and maintaining ventilation systems from an equipment manufacturer. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the equipment manufacture confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, and maintenance of fire extinguishing systems required under the terms of this contract.

H.15.3.8 Qualifications of Smoke Control Technicians
Technicians performing contract work involving the inspection, testing, and maintenance of smoke control systems shall be trained and possess a current training certificate for inspecting, testing, and maintaining these components from a manufacturer or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, and maintenance of smoke control systems required under the terms of this contract.

H. 15.3.9 Qualification of Fire Damper, Smoke Damper, and Combination Fire/Smoke Damper Technicians
Technicians performing contract work involving the inspection, testing, and maintenance of fire dampers, smoke dampers, radiation dampers, and combination fire/smoke dampers shall be trained and possess a current training certificate for inspecting, testing, and maintaining these components from an equipment manufacturer or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the equipment manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, and maintenance of fire dampers, smoke dampers, radiation dampers, and combination fire/smoke dampers required under the terms of this contract.

H.15.3.10 Qualifications of Fire-rated and Smoke Door Assemblies Technicians
Technicians performing contract work involving the inspection, testing, and maintenance of fire-rated door assemblies and smoke door assemblies shall be trained and possess a current training certificate for inspecting, testing, and maintaining these components from an equipment manufacturer or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee he certification document and expiration date, issued by the equipment manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection,

testing, and maintenance of fire-rated door assemblies and smoke door assemblies required under the terms of this contract.

H.15.3.11 Qualifications of Portable Fire Extinguisher Technicians

Technicians performing contract work involving the preventive maintenance and recharging of portable fire extinguishers shall be trained and possess a current training certificate for the specific type and brand of portable fire extinguisher being services or possess a current training test certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the manufacture or testing organization confirming the technician has been trained and passed a test, for each field technician and inspector responsible for performing dry chemical and wet chemical extinguishing system preventative maintenance and repair services required under the terms of this contract. Please note that these requirements do not apply to persons performing 30-day (i.e., monthly) inspections to determine if the unit is in place, charged, and ready for use.

H.15.3.12 Qualification of Emergency and Standby Power System Technicians

Technicians performing contract work involving the inspection, testing, and maintenance of emergency and standby power systems shall be trained and possess a current training certificate for inspecting, testing, and maintaining these components from an equipment manufacturer or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the equipment manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, and maintenance of emergency and standby power systems required under the terms of this contract.

H.15.3.13 Qualifications of Emergency Lighting Equipment and Exit Signage Technicians

Technicians performing contract work involving the inspection, testing, and maintenance of emergency lighting equipment and exit signage shall be trained and possess a current training certificate for inspecting, testing, and maintaining these components from an equipment manufacturer or a certificate by an organization acceptable to the CO. The Contractor shall submit to the CO or their designee the certification document and expiration date, issued by the equipment manufacture or testing organization confirming the technician has been trained, for each field technician and inspector responsible for performing the inspection, testing, and maintenance of emergency lighting equipment and exit signage required under the terms of this contract.

H.15.3.14 Qualifications of HVAC Technicians

All HVAC personnel designated to work on, operate, maintain, and (or) repair HVAC equipment or systems shall maintain a minimum of 16 hours of continuing education annually from a NATE, HVAC Excellence, or UA Star recognized provider program. All HVAC personnel designated to work on, operate, maintain, and (or) repair HVAC equipment or systems shall possess one or more of the following certifications:

a. North American Technician Excellence (N.A.T.E.) HVACR Service Technician Certification
b. HVAC Excellence Professional Level Certification
c. UA Star HVACR Mastery Certification

H.15.3.15 Qualifications of BAS Technicians

All Contract personnel involved in the operation, adjustment, and maintenance of all BAS systems including energy management systems, modern converged technologies (Smart and Sustainable Building Technologies) must be trained and qualified. The Contractor shall provide to the CO or their designee documentation of the level of experience, including any certificates of training, for all employees who will be involved in this function. This includes, but is not limited to, skill sets involving Internet Protocol (IP) based Building Automation Systems (BAS), Information Technology (IT) Ethernet networks, and Building Management expertise to effectively understand and recommend troubleshooting procedures in the new converged technologies environment.

Contractors shall hire well-rounded resources capable of understanding converged technologies to better facilitate troubleshooting and building systems problem resolution.

The Contractor shall be proficient in applicable controls systems (e.g. JCI, Honeywell, Siemens, Delta, Automated Logic, Alerton, and Tridium Niagra). The Contractor shall be aware of building systems running on GSA IP Enterprise Network and capable of initiating trouble shooting if network communications is suspect. This means being familiar with procedure for logging GSA IT Help Desk ticket and following up to ensure ticket is being worked by assigned party. Some familiarization with the use of Integrated Control systems, GSA IP Addresses, function of network routers, function of network switches, networks communications, and BAS software will be necessary.

All BAS Technicians shall be certified in the building-specific integrated system controls certification (i.e. Tridium Niagara, JCI/Metasys, Siemens Apogee, etc.). GSA's intent is to align the correct BAS technician certification for the BAS installed in the building.

H.15.3.16 Qualifications of Electrical Technicians

Technicians performing Contract work involving the inspection, testing, and maintenance of the electrical switch gear must meet the qualification requirements of the American National Standards Institute/International Electrical Testing Association ETT-2000, Standard for Certification of Electrical Testing Technicians and hold at least a Level 3 or 4 (See Exhibit 13). The Contractor shall provide documentation to the CO or their designee on qualifications identified in this standard. Certification can be obtained through; the ANSI/NETA Certification program (http://www.netaworld.org/press-release/251) or Electrical Testing Technician Certification Institute (http://www.ettci.org/).

H.15.4 Submission of Resumes for New Employees

The Contractor shall submit to the CO or their designee the resumes of all personnel before they begin work during the performance periods of the Contract. The CO or their designee may deny permission to employ personnel if qualifications indicate a material degradation from the skill levels indicated in the Contractor's proposal for the Contract, or if skills or reliability concerns are such that the CO or their designee believes the protection of building equipment may be jeopardized.

H.15.5 State Licensing

All personnel shall be licensed and certified, or become licensed and certified within 90 calendar days of beginning employment, to perform work within their normal duties, where such licensing is required by the State for non-Federal locations. Contractor personnel shall also conform to all

other licensing and certification requirements as described elsewhere in this document or in the Public Buildings Service Operations and Maintenance Standards.

H.15.6 Compliance with Federal, State, and Local Codes

The Contractor shall comply with all applicable Federal, State and Local laws, regulations and codes. The Contractor is responsible for determining which requirements are applicable, and complying appropriately; the Contractor may ask advice of the CO or their designee in this regard. GSA also has a policy of voluntary conformity to certain State and Local code requirements even when permission or approvals from Local regulators are not required; the Contractor shall ask the advice of the CO or their designee when such issues arise.

H.16. Government-Furnished Materials

The following items are furnished by the Government:

a. Electrical power at existing outlets for the Contractor to operate equipment that is necessary in the conduct of its work.
b. Hot and cold water as necessary, limited to the normal supply provided in the building. No special heating or cooling of the water will be provided.
c. Space in the building, including locker rooms, if available. Any existing equipment within GSA space, such as lockers, tables, benches, chairs, etc., placed within the building by the Government may be used by the Contractor during the term of the Contract, provided authorization is received from the CO or designee. This space and equipment shall be kept neat and clean and returned to the Government at the expiration of the Contract in reasonably the same condition as at the time of entering into the Contract.
d. Space in the building for the storage of an inventory of supplies and equipment that will be used in the performance of work under the Contract. The Contractor shall maintain this space in a clean, neat, and orderly condition. Under no circumstances may the Contractor store flammable or explosive liquids (naphtha, gasoline, etc.) in the building. The Government will not be responsible in any way for damage or loss to the Contractor's stored supplies, materials, replacement parts, or equipment.
e. Space in the building, when available, and furniture and furnishings (to include telephones for restricted use) for a supervisor's office to be used for official business only in the performance of this Contract. If the Government supplies telephones, they shall only be used for communication related to the Contract. The Contractor or the Contractor’s employees shall not use Government property in any manner for any personal advantage, business gain, or other personal endeavor.
f. The Government will provide an email address for the contractor. This email address shall be used for all business related to this contract.

H.16.1 Requirements for Network Connection

Government-furnished network equipment and computer hardware must be used in all cases for PBS IT systems. Network equipment - includes any equipment that has IP routing and switching functionality.

- Computer hardware- includes, but is not limited to servers, PCs, laptops and their peripherals (monitors, mice and keyboards).
- Proprietary system hardware/software can be vendor provided, but is subject to network and system testing, review and approval for connection to GSA’s network and acceptance of the PBS CIO.

Government Furnished Equipment - PBS CIO will make every effort to provide one desktop and/or one laptop to newly integrated Building Automation Systems (to the GSA network) sites for the purposes of giving new GSA users access to the building monitoring and control systems. Please note: availability of hardware is depending on the availability of budgeted funds dedicated for this purpose, which may or may not be renewed on an annual basis. Existing GSA workstation refreshes will still be coordinated through regional local OCIO's office. No hardware (workstations, servers, switches) will be provided unless an approved network diagram is submitted.

Use of Government Information Technology
Contractor personnel requiring access to GSA's Network shall comply with all Federal Information Technology (IT) regulations regarding Trusted Internet Connection (TIC) in conjunction with PBS and GSA Chief Information Officer (CIO) IT policies, i.e., all PBS IT systems needing network connectivity must reside on the GSA network.

Reference documentation related to building monitoring and control systems (BMC) -
Please reference the Technology Policy for PBS-Owned Buildings Monitoring and Control Systems and Building Technologies Technical Reference Guide for guidance related to the technical integration of building monitoring and control systems (BMC) to the GSA network and within its GSA's information technology (IT) environment.

H.17. Contractor-Furnished Materials

a. The Contractor shall provide all labor, services, supplies, material, and equipment necessary to efficiently and effectively perform the requirements of this Contract, except as explicitly stated within this document.
b. RESERVED

H.18. Additional Services Indefinite Quantity Provisions

H.18.1 General
Only the CO may order additional services. Additional services may include any services related to O&M and repairs, systems upgrades, system operation, or tenant services within covered facilities but not covered within basic services (i.e., not already a requirement of the Contract).

H.18.2 Price Proposal for Additional Services Work
At the request of the CO or designee, the Contractor shall provide a price proposal to accomplish an additional services job within 48 hours of the request. The price proposal shall follow the pricing guidelines described in this document. Price proposals for additional services become firm fixed price on acceptance and order by the Government. Although price negotiation and determination of price reasonableness is made on the basis of labor, materials, and subcontract costs following the pricing guidelines described in this document, the price accepted is not adjusted after completion of work to actual man-hours or actual materials cost.

H.18.3 Pricing
The Contractor's price proposal for an Additional Services job shall follow the guidelines described below.

H.18.4 Parts and Materials
If parts or materials are required for a project, the Government may provide the parts or materials, or the Contractor may be asked to provide the parts and materials. Parts and materials shall be priced at estimated actual cost marked up by the standard coefficient in the price schedule, if stated. The CO may accept a different markup rate for parts and materials if the Contractor can demonstrate unusual costs or difficulties in obtaining the parts or materials.

H.18.5. Labor
If the contractor uses in-house labor resources during contractor employees' normal work hours no labor will be charged for additional services. If the work is being performed outside these hours the labor rate shall be the loaded wage rate (including health and welfare and any other fringe benefit) times 1.5 for overtime. If the work is subcontracted the cost proposal shall include labor hours, hourly rate, parts and materials listing with associated costs, and overhead and profit costs. Use of in-house contractor employees for overtime work must be approved by the COR in advance.

H.18.6 Subcontracts
If work is to be subcontracted, a cost proposal must be submitted to the CO. The cost proposal shall include the subcontractor's labor hours, hourly rate, a parts and materials listing with associated costs, and overhead and profit. The subcontracted part of the work is to be priced at actual cost to the Contractor, marked up by the standard coefficient in the price schedule on parts and materials only.

H.18.7 Cost Documentation
If the Contractor provides the parts and materials, or if work is subcontracted, the Contractor shall furnish on request copies of invoices, vendor quotes, or receipts, either with the Contractor's proposal or as substantiating documentation with the Contractor's invoice after completion of work.

H.18.8 Competitive Bids
If a single part or component, or a single type (line item) of parts, components, or materials for a project is anticipated to equal or exceed ***$2,500,*** the CO or their designee may require that the Contractor obtain three bids from suppliers and include documentation of these bids with his proposal. If subcontract work is anticipated to cost more than **$1,500** the CO or their designee may require that the Contractor obtain three bids from potential subcontractors and include documentation of these bids with his proposal.

H.18.9 Method of Ordering and Invoicing

H.18.9.1 Government Purchase Card
Reimbursable repairs for total cost to the government, after shared liability, of **$2,500** or less will be process via Government Purchase Card (GPC). Repairs shall not be split or ordered by stages or components to get under the **$2,500** threshold. The contractor shall establish the capability to accept credit card payments to facilitate this process. The order may be placed orally or via e-mail through an authorized Government Purchase Cardholder. Work performed under this provision will not count towards the Order Limitations established in 52.216-19.

H.18.9.1.1 Government Purchase Card Tenant Agencies
Additional services may be ordered by tenant agencies under the **$2,500** limit by an authorized Government Purchase Cardholder for that agency. The COR will coordinate and approve the

request from tenant agencies. The contractor shall invoice directly to the agency and accept the GPC for payment. Additional services over the **$2,500** threshold will be processed through the COR via GSA's Reimbursable Work Authorization process.

H.18.9.2 Task Orders
The CO will order work priced at more than **$2,500**. Normally, the CO will issue a written Task Order (GSA Form 300). However, the CO may order services orally during an emergency situation. If the CO issues an order orally, the government will confirm in writing and follow up with a Task Order as soon as practicable.

H.19. RESERVED

H.20. Strike Contingency Plan (SCP)
The Contractor shall prepare a Strike Contingency Plan (SCP) to be used in the event of a strike by his employees. The SCP shall be submitted to the CO or their designee 5 calendar days prior to Contract start date and updated annually. At a minimum, the SCP shall include the following information:

a. Support Personnel: The SCP shall describe in detail how the Contractor shall staff the building to provide the services defined in this document in the event of strikes by his employees. This includes HSPD-12.
b. License and Certifications: The SCP shall describe in detail how the Contractor will provide personnel that meet experience requirements, assuring the Government that all temporary or replacement employees (including subcontractor employees) shall meet the experience and license requirements defined in this document.

H.21. Occupancy Emergency Plan (OEP)
The Government's Occupant Emergency Plan (OEP) is used by the CO or their designee during building emergencies. Designated Contractor personnel, including, the onsite supervisors, shall be thoroughly familiar with the Government's OEP and shall be trained by the Contractor to fully understand their responsibilities relative to each emergency plan. The Contractor shall participate in fire and other emergency drills. The Contractor shall be required to perform the services required by the Contract and as identified by the CO or their designee to the extent allowed during all emergency situations, including, but not limited to fires, accident and rescue operations, Contractor personnel strikes, civil disturbances, natural disasters, and utility service outages.

H.22. Contractor Pandemic Plan
The Government is required by the National Strategy for Pandemic Influenza Preparedness and to have a plan that safeguards its employees and provides for continued operations in the event of an influenza pandemic. The Contractor shall also prepare a plan that outlines the steps that they must take to prevent and reduce the spread and mitigate the potential effect of an influenza pandemic on facilities operations. Given the unpredictable length and severity of a pandemic, the Contractor's plan shall link their planned actions to the periods and phases established the World Health Organization for a pandemic cycle. For information on the phases of a pandemic cycle see http://www.who.int/influenza/resources/documents/pandemic_guidance_04_2009/en. The plan shall be submitted to the CO or his/her designee within thirty (30) calendar days of the start of the

Contract. See components of Pandemic Planning at
http://www.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/basic.pdf

I. Contract Clauses

The following clauses are incorporated by reference:

52.202-1, Definitions
52.203-3, Gratuities
52.203-5, Covenant Against Contingent Fees
52.203-6, Restrictions on Subcontractor Sales to the Government
52.203-7, Anti-Kickback Procedures
52.203-8, Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity
52.203-10, Price or Fee Adjustment for Illegal or Improper Activity
52.203-11 Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions
52.203-12, Limitation on Payments to Influence Certain Federal Transactions
52.203-13, Contractor Code of Business Ethics and Conduct
52.203-14, Display of Hotline Poster(s)
52.204-2, Security Requirements
52.204-4, Printed of Copied Double Sided on Postconsumer Fiver Content Paper
52.204-5 Women-Owned Business (Other Than Small Business)
52.204-7, System for Award Management
52.204-9, Personal Identity Verification of Contractor Personnel
52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards
52.207-3, Right of First Refusal of Employment
52.209-2-Prohibition on Contracting with Inverted Domestic Corporations— Representation.
52.209-6, Protecting the Government's Interest When Subcontracting With Contracts Debarred
52.209-10, Prohibition on Contracting with Inverted Domestic Corporations
52.211-5, Materials Requirements
52.215-2, Audit and Records – Negotiation
52.215-8, Order of Precedence – Uniform Contract Format
52.215-14, Integrity of Unit Prices
52.215-21, Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data-Modifications
52.215-21, Alternate IV
52.219-8, Utilization of Small Business Concerns
52.219-14, Limitations of Subcontracting
52.219-27, Notice of Service-Disabled Veteran-Owned Small Business Set-Aside
52.219-28, Post-Award Small Business Program Re-representation
52.222-1, Notice to the Government of Labor Disputes
52.222-3, Convict Labor
52.222-4, Contract Work Hours and Safety Standards Act – Overtime
52.222-17, Non-displacement or Qualified Workers
52.222-19, Child Labor – Cooperation with Authorities and Remedies
52.222-20, Walsh-Healey Public Contracts Act
52.222-21, Prohibition of Segregated Facilities

52.222-26, Equal Opportunity
52.222-35, Equal Opportunity for Veterans
52.222-37, Employment Reports Veterans
52.222-38, Compliance with Veterans Employment Reporting Requirements
52.222-40, Notification of Employee Rights Under the National Labor
52.222-41, Service Contract Labor Standards
52.222-43, Fair Labor Standards Act and Service Contract Labor Standards – Price Adjustment (Multiple Year and Option Contracts)
52.222-50, Combating Trafficking in Persons
52.222-54, Employment Eligibility Verification
52.222-60, Paycheck Transparency
52.222-62, Paid Sick Leave for Federal Contractors
52.223-1, Biobased Product Certification
52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts
52.223-3, Hazardous Material Identification and Material Safety Data
52.223-4, Recovered Material Certification
52.223-5, Pollution Prevention and Right-To-Know Information
52.223-6, Drug-Free Workplace
52.223-7, Notice of Radioactive Materials
52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Items
52.223-10, Waste Reduction Program
52.223-11, Ozone-Depleting Substances
52.223-12, Refrigeration Equipment and Air Conditioners
52.223-15, Energy Efficiency in Energy-Consuming Products
52.223-16 IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products
52.223-17, Affirmative Procurement of EPA-designated Items in Service and Construction Contracts
52.223-18, Encouraging Contractor Policies to Ban Text Messaging While Driving
52.223-19, Compliance with Environmental Management Systems
52.224-1, Privacy Act Notification
52.224-2, Privacy Act
52.225-1, Buy American Act – Supplies
52.225-13, Restrictions on Certain Foreign Purchases
52.225-25, Prohibition on Engaging in Sanctioned Activities Relating to Iran-Certification
52.227-1, Authorization and Consent
52.227-2, Notice and Assistance Regarding Patent and Copyright Infringement
52.227-3, Patent Indemnity
52.227-14, Rights in Data – General
52.227-17, Rights in Data – Special Works
52.228-5, Insurance – Work on a Government Installation
52.229-3, Federal, State and Local Taxes
52.232-8, Discounts for Prompt Payment
52.232-9, Limitation on Withholding of Payments

52.232-11, Extras
52.232-17, Interest
52.232-23, Assignment of Claims
52.232-25, Prompt Payment Act
52.232-33, Payment by Electronic Funds Transfer-System for Award Management
52.232-40, Providing Accelerated Payments to Small Business Subcontractors
52.233-1, Disputes
52.233-3, Protest after Award
52.233-4, Applicable Law for Breach of Contract Claim
52.237-2, Protection of Government Buildings, Equipment, and Vegetation
52.237-3, Continuity of Services
52.237-7, Indemnification and Medical Liability Insurance
52.239-1, Privacy or Security Safeguards
52.242-1, Notice of Intent to Disallow Costs
52.242-13, Bankruptcy
52.243-1, Changes--Fixed Price Alternate II
52.243-4, Changes
52.243-5, Changes and Changed Conditions
52.243-7, Notification of Changes
52.244-2, Subcontracts. (See Note 1.)
52.244-5, Competition in Subcontracting
52.244-6, Subcontracts for Commercial Items
52.245-1 Government Property. Alternate II
52.245-9, Use and Charges
52.246-4, Inspection of Services – Fixed Price
52.246-20 Warranty of Services
52.246-25 Limitation of Liability
52.247-12 Supervision, Labor, or Materials
52.247-17, Charges
52.247-21, Contractor Liability for Personal Injury and/or Property Damage
52.247-5, Familiarization with Conditions
52.249-1, Termination for Convenience of the Government (Fixed-Price) (Short Form)
52.249-1, Termination for Convenience of the Government (Fixed-Price) (Short Form) Alternate I
52.249-2, Termination for Convenience of the Government (Fixed-Price)
52.249-2, Termination for Convenience of the Government (Fixed-Price). Alternate I
52.249-4, Termination for Convenience of the Government (Services) (Short Form)
52.249-8, Default (Fixed- Price Supply and Service)
52.249-8, Default (Fixed- Price Supply and Service). Alternate I
52.251-1, Government Supply Sources
52.253-1, Computer Generated Forms
52.217-7, Option for Increased Quantity-Separately Priced Line Item
52.219-28, Post-Award Small Business Program Re-representation
GSAR Clause 552.203-71, Restriction on Advertising
GSAR Clause 552.204-9, Personal Identity Verification Requirements

GSAR Clause 552.211-75, Preservation, Packaging and Packing
GSAR Clause 552.211-75, Alternate I
GSAR Clause 552.215-70, Examination of Records by GSA
GSAR Clause 552.223-70, Task-Order and Delivery Order Ombudsman
GSAR Clause 552.228-5, Government as Additional Insured
GSAR Clause 552.229-70, Federal, State, & Local Taxes
GSAR Clause 552.232-1, Payments (Deviation FAR 52.232-1)
GSAR Clause 552.232-72, Final Payment Under Building Services Contracts
GSAR Clause 552.236-75, Use of Premises
GSAR Clause 552.237-71, Qualifications of Employees
GSAR Clause 552.237-73, Restriction on Disclosure of Information
GSAR Clause 552.252-6, Authorized Deviations in Clauses (Deviation FAR 52.252-6)

The following clauses are incorporated by full text:

52.203-2 Certificate of Independent Price Determination

Certificate of Independent Price Determination (Apr 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to --

(i) Those prices;

(ii) The intention to submit an offer; or

(iii) The methods or factors used to calculate the prices offered.

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2)

(i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision _____ [insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) of this provision have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of Provision)

52.209-5 Certification Regarding Responsibility Matters

Certification Regarding Responsibility Matters (Oct 2015)

(a)

(1) The Offeror certifies, to the best of its knowledge and belief, that --

(i) The Offeror and/or any of its Principals --

(A) Are [_] are not [_] presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have [_] have not [_], within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property (if offeror checks “have”, the offeror shall also see 52.209-7, if included in this solicitation); and

(C) Are [_] are not [_] presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision; and

(D) Have [_], have not [_], within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds $3,500 for which the liability remains unsatisfied.

(1) Federal taxes are considered delinquent if both of the following criteria apply:

(i) The tax liability is finally determined. The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(ii) The taxpayer is delinquent in making payment. A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(2) Examples.

(i) The taxpayer has received a statutory notice of deficiency, under I.R.C. §6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(ii) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. §6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(iii) The taxpayer has entered into an installment agreement pursuant to I.R.C. §6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.

(iv) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. 362 (the Bankruptcy Code).

(ii) The Offeror has [[_] has not [_], within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) “Principal,” for the purposes of this certification, means an officer; director; owner; partner; or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror’s responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of Provision)

52.209-7 Information Regarding Responsibility Matters

Information Regarding Responsibility Matters (Jul 2013)

(a) Definitions. As used in this provision—

“Administrative proceeding” means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceeding at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

“Federal contracts and grants with total value greater than $10,000,000” means—

(1) The total value of all current, active contracts and grants, including all priced options; and

(2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

“Principal” means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

(b) The offeror [_] has [_] does not have current active Federal contracts and grants with total value greater than $10,000,000.

(c) If the offeror checked “has” in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

(i) In a criminal proceeding, a conviction.

(ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of $5,000 or more.

(iii) In an administrative proceeding, a finding of fault and liability that results in—

(A) The payment of a monetary fine or penalty of $5,000 or more; or

(B) The payment of a reimbursement, restitution, or damages in excess of $100,000.

(iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIIS as required through maintaining an active registration in the System for Award Management database via https://www.acquisition.gov (see 52.204-7).

(End of provision)

52.216-18 Ordering

Ordering (Oct 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from date of contract award through last date of final exercised option period.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

52.216-19 Order Limitations.

Order Limitations (Oct 1995)

(a) *Minimum order.* When the Government requires supplies or services covered by this contract in an amount of less than $2,500, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) *Maximum order*. The Contractor is not obligated to honor –

(1) Any order for a single item in excess of $125,000.00 ;

(2) Any order for a combination of items in excess of $500,000; or

(3) A series of orders from the same ordering office within 60 days that together call for quantities exceeding the limitation in subparagraph (b)(1) or (2) of this section.

(c) If this is a requirements contract (*i.e*., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) of this section.

(d) Notwithstanding paragraphs (b) and (c) of this section, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 15 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

52.216-22 Indefinite Quantity.

Indefinite Quantity (Oct 1995)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

(c) Except for any limitations on quantities in the Order Limitations clause or in the

Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after completion of the task order with the latest period of performance.

52.217-9 Option to Extend the Term of the Contract.

Option to Extend the Term of the Contract (Mar 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 days*;* provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 5 years.

52.219-1 Small Business Program Representation.

Small Business Program Representations (Oct 2014)

(a) Definitions. As used in this provision--

"Economically disadvantaged women-owned small business (EDWOSB) concern" means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business concern eligible under the WOSB Program.

"Service-disabled veteran-owned small business concern"--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) "Service-disabled veteran" means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (b) of this provision.

"Small disadvantaged business concern, consistent with 13 CFR 124.1002," means a small business concern under the size standard applicable to the acquisition, that--

(1) Is at least 51 percent unconditionally and directly owned (as defined at 13 CFR 124.105) by--

(i) One or more socially disadvantaged (as defined at 13 CFR 124.103) and economically disadvantaged (as defined at 13 CFR 124.104) individuals who are citizens of the United States, and
(ii) Each individual claiming economic disadvantage has a net worth not exceeding $750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and
(2) The management and daily business operations of which are controlled (as defined at 13 CFR 124.106) by individuals who meet the criteria in paragraphs (1)(i) and (ii) of this definition.
“Veteran-owned small business concern” means a small business concern--
(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
(2) The management and daily business operations of which are controlled by one or more veterans.
“Women-owned small business concern” means a small business concern--
(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
(2) Whose management and daily business operations are controlled by one or more women.
“Women-owned small business (WOSB) concern eligible under the WOSB Program (in accordance with 13 CFR part 127),” means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.
(b)
(1) The North American Industry Classification System (NAICS) code for this acquisition is 561210.
(2) The small business size standard is $38.5 Million.
(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.
(c) Representations.
(1) The offeror represents as part of its offer that it [_] is, [_] is not a small business concern.
(2) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it [_] is, [_] is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.
(3) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it [_] is, [_] is not a women-owned small business concern.
(4) Women-owned small business (WOSB) concern eligible under the WOSB Program. [Complete only if the offeror represented itself as a women-owned small business concern in paragraph (c)(3) of this provision.] The offeror represents as part of its offer that—
(i) It [_] is, [_] is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
(ii) It [_] is, [_] is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(4)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture: _____.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.
(5) Economically disadvantaged women-owned small business (EDWOSB) concern. [Complete only if the offeror represented itself as a women-owned small business concern eligible under the WOSB Program in (c)(4) of this provision.] The offeror represents as part of its offer that--
(i) It [_] is, [_] is not an EDWOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
(ii) It [_] is, [_] is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(5)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern and other small

businesses that are participating in the joint venture: _____.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.
(6) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it [_] is, [_] is not a veteran-owned small business concern.
(7) [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(6) of this provision.] The offeror represents as part of its offer that is [_] is, [_] is not a service-disabled veteran-owned small business concern.
(8) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that –
(i) It [_] is, [_] is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material changes in ownership and control, principal office, or HUBZone employee percentage have occurred since it was certified in accordance with 13 CFR part 126; and
(ii) It [_] is, [_] is not a HUBZone joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(8)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: _____.] Each HUBZone small business concern participating in the HUBZone joint venture shall submit a separate signed copy of the HUBZone representation.

(d) Notice.
(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.
(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm’s status as a business concern that is small, HUBZone small, small disadvantaged, service-disabled veteran-owned small, economically disadvantaged women-owned small, or women-owned small eligible under the WOSB Program in order to obtain a contract to be awarded under the preference programs established pursuant to section 8, 9, 15, 31, and 36 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall --
(i) Be punished by imposition of fine, imprisonment, or both;
(ii) Be subject to administrative remedies, including suspension and debarment; and
(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of Provision)

52.222-22 Previous Contracts and Compliance Reports.

Previous Contracts and Compliance Reports (Feb 1999)

The offeror represents that --
(a) It * has, * has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;
(b) It * has, * has not filed all required compliance reports; and
(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of Provision)

52.222-25 Affirmative Action Compliance

Affirmative Action Compliance (Apr 1984)

The offeror represents that --

(a) It * has developed and has on file, * has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2); or

(b) It * has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(End of Provision)

52.219-18 - Notification of Competition Limited to Eligible 8(a) Concerns Alternate I (Apr 2005)

(a) Offers are solicited only from small business concerns expressly certified by the Small Business Administration (SBA) for participation in the SBA's 8(a) Program and which meet the following criteria at the time of submission of offer –

(1) The Offeror is in conformance with the 8(a) support limitation set forth in its approved business plan; and

(2) The Offeror is in conformance with the Business Activity Targets set forth in its approved business plan or any remedial action directed by the SBA.

(b) By submission of its offer, the Offeror represents that it meets all of the criteria set forth in paragraph (a) of this clause.

(c) Any award resulting from this solicitation will be made to the Small Business Administration, which will subcontract performance to the successful 8(a) offeror selected through the evaluation criteria set forth in this solicitation.

(d)

(1) *Agreement*. A small business concern submitting an offer in its own name shall furnish, in performing the contract, only end items manufactured or produced by small business concerns in the United States or its outlying areas. If this procurement is processed under simplified acquisition procedures and the total amount of this contract does not exceed $25,000, a small business concern may furnish the product of any domestic firm. This paragraph does not apply in connection with construction or service contracts.

(2) The _____ will notify the GSA Contracting Officer in writing immediately upon entering an agreement (either oral or written) to transfer all or part of its stock or other ownership interest to any other party.

(3) The offeror's approved business plan is on the file and serviced by _____ *[Contracting Officer completes by inserting the appropriate SBA District and/or Regional Office(s) as identified by the SBA]*

(End of Clause)

52.225-2 Buy American Certificate

Buy American Certificate (May 2014)

(a) The offeror certifies that each end product, except those listed in paragraph (b) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall

list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product." The terms "commercially available off-the-shelf (COTS) item," "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American—Supplies."
(b) Foreign End Products:
Line Item No.:
Country of Origin:

[List as necessary]
(c) The Government will evaluate offers in accordance with the policies and procedures of Part 25 of the Federal Acquisition Regulation.

(End of Provision)

52.225-6 Trade Agreements Certificate

Trade Agreements Certificate (May 2014)

(a) The offeror certifies that each end product, except those listed in paragraph (b) of this provision is a U.S.-made or designated country end product, as defined in the clause of this solicitation entitled "Trade Agreements."
(b) The offeror shall list as other end products those supplies that are not U.S.-made or designated country end products.
Other End Products
Line Item No. Country of Origin:

[List as necessary]
(c) The Government will evaluate offers in accordance with the policies and procedures of Part 25 of the Federal Acquisition Regulation. For line items covered by the WTO GPA, the Government will evaluate offers of U.S.-made or designated country end products without regard to the restrictions of the Buy American statute. The Government will consider for award only offers of U.S.-made or designated country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for those products are insufficient to fulfill the requirements of this solicitation.

(End of Provision)

52.230-1 Cost Accounting Standards Notices and Certification

Cost Accounting Standards Notices and Certification (Oct 2015)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.
Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.
If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.
I. Disclosure Statement -- Cost Accounting Practices and Certification
(a) Any contract in excess of $750,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.
(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement

disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.
Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.
(c) Check the appropriate box below:
* (1) Certificate of Concurrent Submission of Disclosure Statement. The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:
(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and
(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)
Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____
The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.
* (2) Certificate of Previously Submitted Disclosure Statement. The offeror hereby certifies that the required Disclosure Statement was filed as follows:
Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____
The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.
* (3) Certificate of Monetary Exemption. The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling $50 million or more in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.
* (4) Certificate of Interim Exemption. The offeror hereby certifies that
(i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and
(ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement.
The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.
Caution: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of $50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.
II. Cost Accounting Standards -- Eligibility for Modified Contract Coverage
If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.
* The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than $50 million in awards of CAS-

covered prime contracts and subcontracts. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.
Caution: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of $50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of $50 million or more.
III. Additional Cost Accounting Standards Applicable to Existing Contracts
The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.
* yes * no

(End of Provision)

52.230-7 Proposal Disclosure--Cost Accounting Practice Changes

Proposal Disclosure—Cost Accounting Practice Changes (Apr 2005)

The offeror shall check "yes" below if the contract award will result in a required or unilateral change in cost accounting practice, including unilateral changes requested to be desirable changes.
[ ] Yes [ ] No
If the offeror checked "Yes" above, the offeror shall--
(1) Prepare the price proposal in response to the solicitation using the changed practice for the period of performance for which the practice will be used; and

(2) Submit a description of the changed cost accounting practice to the Contracting Officer and the Cognizant Federal Agency Official as pricing support for the proposal.

(End of provision)

52.232-19 Availability of Funds for the Next Fiscal Year.

Availability of Funds for the Next Fiscal Year (Apr 1984)

Funds are not presently available for performance under this contract beyond 30 September 2017. The Government's obligation for performance of this contract beyond that date is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond 30 September 2017, until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

GSAR 522.228-5 Government as Additional Insured

Government as Additional Insured (MAY 2009)

This clause supplements the requirements set forth in FAR clause 52.528-5, Insurance–Work on a Government Installation. Each insurance policy required under this contract, other than workers' compensation insurance, shall contain an endorsement naming the United States as an additional insured with respect to operations performed under this contract. The insurance carrier is required to waive all subrogation rights against any of the named insured.

J. List of Attachments
(List of documents, Exhibits and Other Attachments)

J.1	Quality Assurance Surveillance Plan (QASP)
J.2	Green Purchasing Report
J.3	Environmentally Sustainable Products and GSA Attribute Preferences
J.4	Building Operating Plan Template
J.5	Smart Buildings
J.6	Water Treatment
J.7	Qualifications of Electrical Testing Technicians (ETT)
J.8	Miscellaneous Best Practices (Shave Energy)
J.9	Preventive Maintenance Schedule
J.10	Figure B-1, Contractor Staffing Declaration
J.11	Figure B-2, DOL/CBA Combination Wage Adjustment Spreadsheet
J.12	Figure B-3, Pricing of Services
J.13	Figure L-1, Management Plan Worksheet
J.14	Figure L-2, Past Performance/Questionnaire

Exhibit J.1. Quality Assurance Surveillance Plan (QASP)

CONTRACT No. GS-07-P-17-JU-D-0012

Introduction

This Quality Assurance Surveillance Plan (QASP) is designed to provide the General Services Administration (GSA) with an effective surveillance method of monitoring and evaluating the Contractor's performance under a Performance-Based Statement of Work (PBSOW) for operation and maintenance services.

In accordance with Federal Acquisition Regulation (FAR) Part 37.601, performance-based Contracting methods are intended to ensure that the required performance quality levels are achieved and that the total payment is related to the degree that services performed or outcomes achieved meet Contract standards. GSA's role in quality assurance is to ensure that the Contractors are achieving the quality levels established in the operation and maintenance services Contracts and focuses on the Contractors' QCP. GSA periodically validates the execution of the Contractors' quality control programs by reviewing such areas as the Contractors' inspection forms, service request logs, tenant reports, tenant satisfaction surveys, and the timeliness of corrective actions.

A. PURPOSE OF THE QASP

The QASP is intended to accomplish the following:

- Define the roles and responsibilities of participating Government officials.
- Identify the performance objectives based upon the PBSOW in accordance with FAR Part 46.401(a) (1).
- Identify the performance quality level standards in accordance with FAR Part 37.601(a) (2).
- Describe the methods of surveillance for GSA to identify quality levels in accordance with FAR Part 46.401(a) (2).
- Establish a method to provide feedback to the Contractor regarding quality and timeliness of the service performance, i.e., copies of inspection forms, copies of tenant reports, data on tenant satisfaction

scores; and any other drivers or measures of performance that are required by the CO or designee

- Establish timeframes for communication and performance improvement if needed.

- Establish specified procedures for changes to the Contract price when services are not performed or do not meet Contract requirements in accordance to FAR Part 37.601(a) (3).

- Ensure the Contractor has developed and implemented a QCP establishing procedures and responsibilities for controlling the quality of work performed.

B. ROLES AND RESPONSIBILITIES OF GOVERNMENT OFFICIALS

The following Government officials will participate in assessing the quality of the Contractor's performance. Their roles and responsibilities are described as follows:

1. The COR is the person designated by the CO. The COR is responsible for monitoring, assessing, recording, and reporting on the performance of the Contractor. The CO or their designee shall have the primary responsibility for completing forms that will be used to evaluate the Contractor's performance. In addition, the COR or designee shall use the Contractor Performance System (CPS) to document the Contractor's performance.

2. The CO will have overall responsibility for overseeing the Contractor's performance. The CO shall be responsible for monitoring the Contractor's performance in the areas of Contract compliance and Contract administration. The CO will review the COR or designee's written inspections and assessments of the Contractor's performance and resolve any discrepancies that may arise between the Contractor and COR or their designee. In addition, the CO shall use the Contractor Performance System (CPS) to document the Contractor's performance.

C. TYPES OF WORK TO BE PERFORMED

1. The Contractor's performance in providing the following operation and maintenance services shall be evaluated by the Government:

a. Existing deficiency list
b. Building operating plan
c. Equipment inventory
e. Reference library
f. Building management support services

g. Operational requirements
h. Service requests
i. RESERVED
j. Maintenance program
k. Water treatment
l. Oil analysis
m. Lamp and ballast replacements
n. Repairs
o. Safety and environmental
p. Fire Protection and Life Safety equipment and systems
q. Other services as described in Section C

D. METHODS OF SURVEILLANCE

The method of surveillance is based on the performance criteria of the Contract terms and specifications. Each requirement will describe the tasks to be performed and the standard for successful performance. GSA intends to monitor and evaluate the Contractor's performance based on any or all of the following surveillance methods:

1. **Periodic Surveillance Inspections:** This method consists of selected surveillance tasks by the Government that do not require 100 percent inspection, or are performed on a random basis. The CO or their designee will evaluate the Contractor's reports, surveys, etc. on a weekly, biweekly, monthly, or quarterly basis.

2. **Tenant Interviews:** All tenant concerns received through the CO or their designee will be documented and evaluated on a planned schedule developed by the CO or designee. This method may help the CO or their designee focus on areas that may require further action from the CO.

3. **Service Request Documentation:** This method of surveillance will provide information to the CO or designee, such as identification of the types of service requests received the frequencies of service requests, corrective action taken, timeliness of completion, and any other pertinent data. At a minimum, this method shall be performed on a monthly basis.

4. **Tenant Satisfaction Surveys:** The Gallup Organization conducts surveys for one-third of GSA's tenants in Government-owned and leased buildings. These surveys gather important data in many areas, including specific categories pertaining to the operation and maintenance of GSA's buildings. The surveys provide the CO or their designee with satisfaction scores that can be further evaluated to determine if there are any weaknesses within the various programs. There are various measures that can be taken, such as reviewing the survey's comments, obtaining further feedback from the tenants, or sharing the scores with the Contractor to establish a plan of action.

E. QUALITY ASSURANCE FORMS AND REPORTS

Inspection Form: The GSA-3423 form, or as documented in the CMMS as an inspection type work order, will be used to document and evaluate the Contractor's performance. The COR will evaluate each event in accordance with the performance standards and performance requirements stated in this SOW. All tasks that are considered to have unacceptable performance shall be substantiated and documented on the GSA-3423 form, or as documented in the CMMS. The form, or the work orders will be completed and submitted to the Contractor within 24 hours. The Contractor shall return the GSA-3423 form, or complete the work order, identifying the corrective action taken within 14 days.

Inspection of Services Clause: The CO shall fill in applicable commercial or non-commercial clause as appropriate, i.e., FAR Part 52.246.4 paragraphs (e) and (f).

F. RESERVED

Monthly CO Report: At the end of each month the COR will summarize the overall results of the Contractor's performance for the previous month and send to the CO. If appropriate, the CO may investigate the event(s) further to determine if all the facts and circumstances surrounding the event(s) are accurate. The CO may discuss with the Contractor an event or trend that indicates unacceptable performance.

EXHIBIT J.2 Green Purchasing Report

Non Bio-based Purchase Reports						
Report Period Covered:	Date Report Prepared:					
Building:						
Contract Number:						
Contractor:						
	Attributes and Cost					
	CPG	DfE	Green Seal	Env Choice	Not Green	EcoLogo
Hand cleaners and sanitizers						
Mulch and Compost						
Odor Control / Neutralizer						
Mobile equipment hydraulic oil			$400.00 (sample entry)			
Stationary equipment hydraulic oil						
Diesel fuel additives				$200.00 (sample entry)		
2-cycle engine oil						
Penetrating lubricants						
Greases					$100.00 (sample entry)	
Sorbents						
Adhesives and mastics						
Towels						
General purpose de-icer						
Wood and concrete sealers	$3,500 (Sample Entry)					

Resources Guide: Green Seal http://www.greenseal.org/FindGreenSealProductsAndServices.aspx
Design for the Environment (DfE) http://www.epa.gov/dfe/
EPA-CPG https://www.epa.gov/smm/frequent-questions-about-comprehensive-procurement-guideline-cpg-program
SFtool Green Procurement - Cleaning Products - GSA Sustainable Facilities Tool sftool.gov

Green Purchase Report

Annual Contractor Reporting of Designated Biobased Purchases

Annual Contractor Reporting of Designated Bio-based Purchases

Section 9002 of the 'Farm Security and Rural Investment Act of 2002,' as amended by the 'Food, Conservation, and Energy Act of 2008, Pub. L. 110-246 (the Farm Bill)' requires Federal agencies to give a procurement preference to USDA-designated bio-based products and requires agency Contractors to report such purchases under service and construction contracts. The Federal Acquisition Regulation (FAR) Council subsequently published a bio-based final rule at 77 FR 23365, implementing the reporting requirement in FAR 52.223-2, 'Affirmative Procurement of Bio-based Products Under Service and Construction Contracts' with an effective date of May 18, 2012. To facilitate collection of report data, the FAR is amended based on final rule 78 FR 46794, which requires contractors to submit their biobased reports to https://www.sam.gov/.

To comply with the reporting provisions of the Act, the Contractor shall file an annual report on purchases of designated bio-based products used under the performance of this contract.

Where To Submit:

CY 2013 No later than October 31st in accordance with final rule 78 FR 46794 'Update to Biobased Reporting Requirement' the Contractor is responsible for submitting their annual biobased report using the following web sitehttps://www.sam.gov/.

Note: The US Department of Agriculture (USDA) bio-based products web site https://www.biopreferred.gov/BioPreferred/faces/catalog/Catalog.xhtml.

EXHIBIT J.3

Environmentally Sustainable Products and GSA Attribute Preferences

			Product Availability	
			Non-toxic Optional	Biobased Optional
Product Use	**Preferable Contents**	**Contents to Avoid**		
Adhesive – Aerosol	Rubber-based; low-VOC	SARA 313 chemicals (cyclohexane, hexane, methylene chloride); petroleum distillates; CFCs	ü	X
Adhesive – Epoxy	Non-toxic; low-VOC	Isopropyl alcohol; SARA 313 chemicals (toluene)	ü	X
Adhesive Remover	Soy-based mixture; citrus extract; low-VOC	Aerosol; petroleum distillates	ü	ü
Coil Cleaner	Non-acid cleaners with non-toxic, biobased contents; low-VOC; if acid must be used acetic or phosphoric acid are preferable	Sulfuric acid, hydrofluoric acid, or similar caustic chemicals. SARA 313 chemicals (trichloroethylene)	ü	ü
Concrete/Wood Sealer	Water-based, latex-based, or biobased sealers; low-VOC	Acrylonitrile; SARA 313 chemicals (n-methyl-2-pyrrolidone)	ü	ü
Degreaser	Water or biobased (soy) degreasers; non-toxic; non-aerosol; low-VOC	Aerosol; petroleum distillates	ü	ü
Deicer (Road and Windshield)	Biodegradable windshield deicer; salt-free ice melt; magnesium chloride or calcium chloride; calcium magnesium or magnesium acetate	SARA 313 chemicals (methanol, isopropyl alcohol, ethylene glycol); aerosol; sodium chloride	ü	ü
Descaler	Enzyme-based descaler; urea; trisodium phosphate; low-VOC	Hydrochloric (muriatic) acid or similar caustic compounds (oxatic or hydrofluoric acid); sodium hypochlorite	ü	ü
Fuel Additive	Biobased; non-toxic	Petroleum distillates	ü	ü
Graffiti Remover	Biobased content (soy/corn); low-VOC	SARA 313 chemicals (toluene, xylene); acetone; isopropyl alcohol	ü*	ü
Grease / Lubricant	Biodegradable/biobased content (soy or vegetable oil); non-toxic; re-refined lubricating oils; low-VOC	Petroleum or mineral-based oils; metallic soaps or polyurea derivatives; sulfur, chlorine, zinc; amine phosphate or other irritants	ü	ü
Light Bulbs	Energy Star or FEMP fluorescent bulbs or tubes; reduced mercury content	Mercury	N/A	N/A
Mastic	Water or acrylic-based; non-toxic; low-VOC	Petroleum-distillates (mineral spirits)	ü	X
Paint	Remanufactured or recycled paint; water-based or latex-based; low-VOC	Aerosol; oil-based (alkyd) paints (mineral spirits, aliphatic hydrocarbons); SARA 313 chemicals (toluene, xylene, ethyl benzene); acetone	ü	X
Paint Remover	Biobased; non-toxic; low-VOC	SARA 313 chemicals (n-methyl-2-pyrrolidone, methanol, methylene chloride); isopropyl alcohol	ü*	ü
Spray Foam	CFC-free; biobased (soy); low-VOC	HCFCs; SARA 313 chemicals (formaldehyde)	X	ü*

ü Product available and offered through GSA Advantage
ü* Product available, but not currently offered through GSA Advantage
X Product currently not available

Notes:

a - On the GSA Advantage website some environmental product indicators, such as ‘Non-Toxic’ and ‘Biobased’, are specified by the product vendor and have not been independently verified. Prior to procurement, it is important to examine the Material Safety

EXHIBIT J.4 Building Operating Plan Template

The Building Operating Plan is a sample of the National Template issued in 2008. There are some items that are above and beyond the contents listed in C.9.2. Because GSA Central Office was in the process of collecting all of the BOPs it was felt that it would be best to keep using the current template with the understanding that it would be updated in the near future. Make changes where obvious updates are warranted. The BOP is a mandatory requirement and shall contain the minimum requirements (if applicable) in the SOW and additional items may be add by the regions if necessary.

Region 7 GSA believes the BOP is a joint document where both parties benefit from the data it contains. Generally, a BOP already exists for the facilities in this contract. We don't believe the contractor should develop, but should work closely with Property Management Office to fill in or update the data in the plan. This should be done within 60 days of start date. An example of a BOP is located in the Reference Document. The intent is that GSA is responsible for the plan, while the Contractor is responsible for providing any data needed by GSA to fill out the plan.

EXHIBIT J.5 Smart Buildings

GSA Smart and Sustainable Buildings

Smart Technologies - Background and Purpose

Background Because of current Government energy reduction executive orders and regulatory mandates, GSA Public Buildings Service has several programs in development and at various stages of implementation that O&M Contractors should be aware of. One of these programs includes Smart Building technologies. Currently, approximately 250 buildings in the GSA portfolio are undergoing Smart Technologies design and implementation enhancements. Some facility projects involve complete detailed design-built from the infrastructure to completed project designs. Others involve modest retrofits to update key building controls systems. A key objective of implementing Smart Technologies in GSA buildings is to capture and make available more real-time performance data about the individual building systems (HVAC/BAS, Lighting, and Advanced Meters). This data will be made available to O&M Contractors and building support personnel and will increase in significance over time as more details are learned as GSA analyzes this new trend of monitoring building performance at a detailed level. O&M Contractors should be aware that if they are involved in operational support of one of GSA's newer Smart Buildings, that tools, processes, data, and some procedures may need to be modified to meet GSA requirements for long-term improved operational efficiencies as a result of the investment the Government is making in these new technologies. O&M Contractors should continue to monitor developments in this area as more buildings in the GSA portfolio deploy Smart Technologies.

1.0 Trend Toward Integrated Building System Technologies

New building technologies, and their convergence with traditional information technology, have altered the way in which facilities can be monitored, maintained, and operated. Trends in building systems technology have provided opportunities in the market place to alter the way facilities managers use real time data to operate their facilities more efficiently. Building Systems are getting increasingly more dependent on software, IT networks (physical and wireless), servers, internet access, and cloud-based/hosted solutions. This shift in domain expertise has outpaced traditional design and construction practices. As a result, building operations and maintenance staff need to adapt, be more proactive, and leverage the availability of real-time data to help them perform building systems support more effectively. This may involve more thorough planning and redefining some processes, procedures, and job roles in order to better operate the facilities that have these newer technology based systems.

EXHIBIT J.6

Water Treatment

INSTRUCTIONS, CONDITIONS, AND NOTICES TO

Table of Contents

1.0 Introduction

This appendix establishes mandatory standards for water in HVAC and domestic water systems in GSA facilities, along with information related to the intent of the standards and guidelines that in most circumstances can be used to construct a water treatment program that will be approved by GSA. Treatment standards are mandatory; procedural instructions in these guidelines are advisory unless required by law or regulation. Subject to GSA approval, maintenance Contractors generally may propose alternative programs where accompanied with sufficient technical data and implementation detail for GSA to determine the likelihood of success of such an alternative program. Any program approved by GSA may be subsequently disapproved if results are unsatisfactory.

Regardless of the complexity or size of a loop, a qualified water treatment Contractor or personnel should be consulted or employed to help the building maintenance personnel develop a water treatment program specific to the needs of each system. The treatment chemicals themselves should be purchased through a licensed supplier that specializes in commercial and/or industrial water systems. Many water treatment chemicals require licenses for specific uses and are regulated by Federal, state, and Local governments. Maintenance Contractors are responsible for selecting and submitting for approval an appropriate program, and for compliance with laws regarding chemical discharge and usage.

Maintenance Contractors are responsible for providing all instrumentation and test equipment necessary to monitor compliance with these standards (e.g., installation of coupon racks or other corrosion monitoring equipment where not already installed).

2.0 Types of Recirculation Water Loops

There are five basic open and closed loop water systems used for the daily operation of commercial buildings. Each system is vital to the everyday operation of the buildings mechanical systems. The following open and closed loop water systems are described as follows.

2.1 Open Loop Cooling Water System

An open loop cooling water system generally uses cooling towers to cool condenser water that serves chilled water central plants, water source heat pumps and computer room air conditioning units. There are cases where a waterside economizer “free cooling” system is used in place of a chiller to cool condenser water during periods of low ambient conditions. During “free cooling” mode the chilled condenser water is passed through a heat exchanger to cool the closed loop cooling or chilled water loop.

An open loop is exposed to outside contaminants and requires frequent maintenance, chemical tests, and chemical treatment that should be determined by a water treatment Contractor. In general, large systems require chemical tests be performed weekly and a water treatment Contractor to inspect the chemical systems monthly. The four main goals of maintaining an open loop cooling system are; inhibition of mineral scale, corrosion, minimizing bacterial contamination, and general fouling inhibition. See Section 3.0 for a detailed description of cause and effect when using chemical inhibitors.

2.2 Closed Loop Cooling Water Systems

A closed loop cooling water system can either be used for chilled water or condenser water. In a closed loop chilled or condenser water system the cooling water is circulated through the chiller

or heat exchanger where it is cooled then pumped through air handlers' cooling coils, fan coil units, computer rooms units, water source heat pumps, etc.
In view of the fact that a closed loop cooling water system will not be exposed to as much outside containments and no evaporation as in an open loop system, the dissolved mineral concentration in the system will remain relatively constant and there will be virtually no need for blow down. Once the system is filled, every effort should be made to limit the amount of water leakage from seals, water sampling, valve testing and other routine system maintenance. When water leaks out of the system, it will be replaced with untreated makeup water. This water introduces additional minerals and dissolved oxygen into the system. Consistent chemical treatment is sustained with the use of chemical tablet "slug" feed water treatment products.
The treatment program for closed loop cooling water systems requires less frequent testing. The goal of the closed loop program is to inhibit corrosion, inhibit mineral scale formation, and inhibit bacteria growth. See Section 3.0 for a detailed description of cause and effect when using chemical inhibitors.

2.3 Steam and Condensate Recirculation Systems

Steam systems are closed loop systems that produce either saturated low pressure or superheated high-pressure steam via a steam boiler. The condensate water, with the addition of makeup water, is re-circulated through the steam boiler. A steam system should have an automated water makeup, a mechanical deaerator, condensate pumps, feed water pumps, steam traps, low feed water flame cut off controls and chemical pot feeders for condensate and makeup water treatment. The steam system will be a collection of steam regulators, steam turbines, heat exchanges for heating purposes, or through an absorption chiller to indirectly produce chilled water for space cooling.

The evaporation of water and elevated temperatures cause most of the minerals present in tap water to bond with each other, causing an increase in system mineral concentration. The four main goals to maintaining a steam system is prevention of mineral scale formation, oxygen corrosion, general corrosion, and condensate corrosion. Biocides are not needed in a steam system because bacteria do not grow in high temperature environments. Alternatively, if steam is supplied by a Local utility, then the steam has already been chemically treated and further chemical treatment may not be necessary. See Section 3.0 for a detailed description of cause and effect when using chemical inhibitors.

2.4 Closed Loop Hot Water Systems

A closed loop hot water heating system is not exposed to a great deal of outside containments. Therefore, the dissolved mineral concentration in the system will remain relatively constant and there will be virtually no need for blow down. Once the system is filled, every effort should be made to limit the amount of water leakage from seals, water sampling, valve testing and other routine system maintenance. When water leaks out of the system, it will be replaced with untreated makeup water. This water introduces additional minerals and dissolved oxygen into the system. Consistent chemical treatment is sustained with the use of slug feed water treatment products.

The treatment program for this system is very similar to the closed loop cooling system. The key difference is that hot water systems require more corrosion inhibitor as a result of higher water temperatures. In fact, most hot water systems require two to three times the corrosion inhibitor of closed loop cooling water systems. The goal of a closed loop hot water treatment program is to

inhibit corrosion, mineral scale formation, and bacteria growth. See Section 3.0 for a detailed description of cause and effect on using chemical inhibitors.

2.5 Domestic Hot and Cold Water System

A domestic hot and cold water system provides potable water for washing and general domestic use. The water within these systems will contact food, people, or will be consumed, so there is no chemical treatment used for this system to prevent mineral scale or corrosion due to water supplied by the Local utility. The only water treatments used for these systems is the addition of water softeners and filtration systems. The reduction of the corrosive and scaling tendencies of oxygenated hard or softened water is done by repairing leaky fittings and fixtures, limiting the velocity of the circulating water, and/or limiting the operating temperature of the hot water system.

3.0 Water Chemicals Treatment Additives

Environmental regulations, handling guidelines and the chemical additives for water systems should be provided by a certified Local water treatment consultant. It is the building operator's responsibility to ensure compliance with municipal by-laws, and environmental regulations when disposing of chemicals and handling accidental spills. Disposing of chemically treated water into the sewer system must be monitored in blow down logs and not allowed to exceed levels specified by municipal sewage utility by-laws.

The chemical additives suggested herein are organized by class to encompass a variety of chemical additives that are used in open and closed water loops and steam boiler systems.

3.1 Mineral Scale Inhibitor

Mineral scale is the precipitation of dissolved minerals such as calcium carbonate onto the surfaces of the cooling tower, boiler, heat exchangers tubes, and piping. This mineral scale forms an insulating layer on the surfaces that inhibits heat transfer and restricts flow through the system. Mineral scale also promotes corrosion and fouling in open loop and steam systems. All re-circulating water and steam boiler systems should have a mineral scale inhibitor as part of their water treatment program.

Mineral scale inhibitors are separated into two main categories, sludge conditioners and dispersants. Sludge conditioners are typically used when there is a relatively high concentration of calcium and magnesium in the makeup water. Sludge conditioners are crystal modifiers that allow the minerals to precipitate but interfere with the structure of the crystal to help form a soft sludge that can be easily removed from the steam boiler or cooling tower through blow down. Dispersants are usually polymer-based molecules that help to keep the trace minerals in solution so that they do not precipitate into scale deposits. The mineral scale inhibitors are especially needed when there is little or no pretreatment of the makeup water or when filtration equipment is not reliable. Even with excellent control of the scale inhibitor, chemical scale formation still occurs.

Water treatment consultants use computer models to determine the type of scale inhibitor needed as well as the limits for system pH and total dissolved solids (TDS). These computer models take into account the specific operating parameters of the system and help the water treatment consultant to choose a specific water treatment program that will work.

Open Loop Cooling Water System:

An open re-circulating cooling water treatment program commonly uses a chemical additive that is a combination of a mineral scale inhibitor and a corrosion inhibitor. The type and dosage of mineral scale inhibitor needed is dependent upon the concentration and composition of the minerals in the makeup water, the pH of the cooling water, and the temperature of the cooling water.

The overall scale inhibitor program for a cooling water system may consist of a mineral scale inhibitor additive (such as a polymer dispersant), acid for pH control, and limits for the total dissolved solids and/or conductivity of the cooling water. Acid feed and pH control will not be needed in every system.

Steam Systems with Re-circulating Water:

In steam boilers, the buildup of an insulating layer can lead to tube failure and efficiency losses. Calcium and magnesium are the most abundant forms of mineral scale found in a steam boiler system because the solubility of these two minerals decreases as the temperature increases. To minimize the potential for mineral scale formation, most steam boilers have some type of makeup water pretreatment to remove certain minerals from the water before it enters the boiler. The goal of most pretreatment equipment is to minimize the concentration of these two minerals in the makeup water so that there is a less significant chance that they will precipitate and form a crystal scale deposits. Even with good pretreatment, mineral scale inhibitors are needed in all steam boiler systems.

Dispersant mineral scale inhibitor programs are used in steam boilers that have good pretreatment and very low levels of calcium and magnesium in the makeup water. Dispersants are usually only used when the total hardness in the makeup water is greater than 5 ppm consistently. The dispersants are usually a polymer based molecule that helps keep the trace minerals in solution so that they do not precipitate into scale deposits.

Closed Loop Cooling Water and Hot Water (Heating) Systems

In a closed loop system the mineral concentration is relatively stable because very little makeup water is needed. This helps to minimize the need for mineral scale inhibitors. In systems that have poor quality makeup water, with a total hardness above 300 ppm, it is best to pre-treat the water with softeners to remove calcium and magnesium from the makeup water. In most cases, pretreatment of the makeup water is not necessary. Closed loop cooling and hot water systems should be treated with a polymer dispersant mineral scale inhibitor. This scale inhibitor is usually combined with a corrosion inhibitor in a one-drum formulation.

3.2 Corrosion Inhibitor

Open Loop Cooling Water Systems:

The corrosion inhibitor chemical treatment protects the metal piping from degradation over time. The type of corrosion inhibitor that is used depends upon the specific metallurgy present in the system as well as the chemistry of the makeup water and pH level in the water. Corrosion inhibitor additives are intended to provide a protective layer on the interior walls of piping which stops the occurrence of corrosion in the system. A certified chemical water treatment consultant should be contacted to determine the specific type and amount of corrosion inhibitor necessary for each building’s distinct system.

In most cases, there is more than one type of metallurgy in a system, such as galvanized steel, copper, stainless steel, etc. Different metals require distinct chemicals to prevent corrosion, so it is important that the corrosion inhibitor portion of the program have additives that are specific to each type of metal. In most cases, blends of different corrosion inhibitors are used to ensure that all of the metal is protected.

Closed Loop Cooling and Hot Water Systems

Corrosion is the principal concern in a closed loop cooling and hot water systems. There are many different types of corrosion inhibitors available on the market, but the most common products are nitrite based. As with any corrosion inhibitor program, the type of program used is determined by the type of metals used throughout the system. Mild steel systems should be treated with nitrite, molybdate, or phosphonate type inhibitors. Systems containing copper should have some type of azole product.

If bacterial contamination is a problem, Nitrite programs should be avoided. The nitrite corrosion inhibitor can act as a food source for bacteria. The bacteria will convert the Nitrite into Nitrate and Ammonia. This will destroy the corrosion inhibitor function of the product. A certified chemical water treatment consultant will be able to find the best product for this type of system.
There is one difference between a closed loop cooling and heating systems, which is the dosage of the corrosion inhibitor. The corrosion inhibitor of closed loop hot water system will have dosage 2 – 3 times greater than the dosage for a closed loop cooling water system.

3.3 Bacteria Contamination Control

The control of the bacteria growth is the most important part of an open loop cooling and closed loop cooling and hot water treatment program because bacterial contamination can lead to fouling, mineral scale, and corrosion. Bacterial contamination is controlled through the use of biocides. Below is a description on bacterial contamination control that is used for open loop cooling, closed loop cooling, and closed loop hot water systems.

Open Loop Cooling Water Systems

Open loop cooling water systems are inherently prone to bacterial contamination without a proper water treatment. High bacteria levels in a cooling water system can lead to bio-deposits (algae for example) and increased fouling that can reduce heat transfer in the heat exchangers and cooling tower. The bio-deposits and increased fouling can reduce water flow through the system if there is improper water treatment.

In view of the fact that open cooling water systems are highly susceptible to bacteria growth, the water treatment program should have some type of biocide chemical additive. Biocides kill living organisms and/or bacteria and can be categorized as either oxidizing or non-oxidizing. An oxidizing biocide, when applied at the correct dosage, will kill all types of bacteria. A non-oxidizing biocide targets certain bacteria and will not kill some types of bacteria.

A non-oxidizing biocide can be compared to an Anti-biotic that is used to treat bacterial infections in people. Over dosing a system or improper usage of a non-oxidizing biocide can create strains of bacteria in the cooling water system that are resistant to the biocide. Limit the program to the use of non-oxidizing biocides alone is never recommended. It is good practice to utilize both an oxidizing biocide and a non-oxidizing biocide to strictly control bacteria contamination. This method is more costly so some building managers chose to only utilize only oxidizing biocides.

The types of oxidizing biocide needed are dependent upon the physical limitations of the facility, safety concerns, costs, and maintained pH of the recirculation water. For example, bromine based oxidizing biocides should be used any time the pH of the water in the system is above 7.5. A water treatment supplier or consultant can provide specific information regarding the different types of oxidizing and non-oxidizing biocides that will suit the needs of your system.

It is important to note that there are both Federal and state laws that regulate the usage and application of biocides for commercial and industrial usage. When choosing a water treatment supplier or consultant, make sure that they are properly licensed and registered in your area to provide guidance on the usage of biocides or pesticides. Also, it is important that you only use biocide products that are specifically approved for use in an open loop cooling water system.

Closed Loop Cooling and Hot Water Systems

It is not uncommon for closed loop systems to experience bacterial contamination, especially if these systems are treated with nitrite. In general, the more makeup water a system needs, the more likely that system is predisposed to bacteria problems.

If a closed loop system has a bacteria problem or will not maintain a nitrite residual, there are basically two options to correct the problem. The first solution is to switch the corrosion Inhibitor program to a program that does not contain a food source for bacteria. The second best solution is to utilize non-oxidizing biocides to treat the bacteria problem. A non-oxidizing biocide should be used in a closed loop system because they do not react with the corrosion inhibitors and they do not promote corrosion themselves. An oxidizing biocide will degrade most corrosion inhibitors and they can increase corrosion rates in a closed loop system. It is always best to contact a licensed water treatment consultant that can help you to determine the dosages of biocide needed and which biocide will work for your system.

3.4 General Fouling Inhibitor

A fouling inhibitor is added to an open loop cooling water system when the makeup water contains high levels of suspended particles or turbidity. This includes high levels of dirt, silt, Iron, or other colloidal particles present in the makeup water, which occurs in rare applications. If this is the case, it may be necessary to add a fouling inhibitor additive to the system. These inhibitors are similar to mineral dispersants but are designed to target suspended particles instead of dissolved minerals. Generally, the mineral dispersant treatment program will be sufficient to provide general system fouling inhibition. If the mineral dispersants are not sufficient, contact a licensed water treatment consultant to see if a fouling inhibitor is needed for the system.

3.5 Oxygen Corrosion Control

Steam Systems with Condensate Recirculation

Due to the high temperatures produced by a steam boiler plant, the corrosive reaction between oxygen and carbon steel is greatly increased. The oxygen corrosion in a steam system usually causes internal pipe pitting and can lead to pipe failures and leaks very rapidly. In order to protect the steam system metal from oxygen pitting, it is very important to remove the oxygen from the makeup water using both mechanical deaeration and chemical processes.

At room temperature, water normally contains about 9 ppm of dissolved oxygen. As the temperature of the water increases, the solubility of oxygen in the water decreases. A mechanical deaerator is designed to raise the temperature of the feed water to just below boiling so that the

oxygen concentration in the water drops from 9 ppm to less than 0.05 ppm. After the makeup water is mechanically depleted of its oxygen content, it is still necessary to reduce it further. The further reduction in oxygen content is done with an oxygen scavenger chemical, which will reduce the concentration of oxygen to levels below 0.005 ppm.

There are many different types of chemicals used as Oxygen Scavengers. The most common Oxygen Scavenger is Sodium Bi-Sulfite. Contact a licensed water treatment consultant that will decide what product meets all the needs of a given steam system.

3.6 General Corrosion Control

Steam Systems with Condensate Recirculation

A steam system should include an Oxygen corrosion control treatment program along with a general system corrosion control treatment program. A general corrosion control chemical treatment program includes the addition of buffering agents to the boiler feed water to minimize the potential for corrosion throughout the system. This buffering agent is frequently in the form of alkali solution. The alkali species neutralize acids in the water and raise the pH to create a slightly Basic environment that is less corrosive to the metal piping.

Some makeup water has enough natural alkalinity and is able to provide the feed water system with sufficient buffering, to keep the pH of the steam boiler feed water at or above 10.2. When there is not enough natural Alkalinity in the steam boiler feed water, a Caustic chemical should be added to raise the pH above 10.2. A water treatment consultant will be able to test the feed water in the steam system to determine if Caustic feed is needed and what dosage is necessary to raise the pH above 10.2.

3.7 Condensate Corrosion Control

Steam Systems with Condensate Recirculation

The feed water is heated to produce high or low-pressure steam by the boiler. When this occurs some of the alkali solution species will breakdown into Carbon Dioxide (CO_2) gas. The CO_2 vapor produced will leave the steam boiler, along with the steam and is dissolved into the condensed condensate water, after the energy from the steam is utilized. As the CO_2 dissolves into the condensate water it produces a carbonic acid and will dramatically increase the corrosiveness of the condensate return water. In order to protect the condensate return piping from corrosion, the condensate must be feed with corrosion control chemicals.

The two most common types of condensate water treatment are neutralizing and filming chemical additives. A neutralizing chemical additive will neutralize the Carbonic Acid in the condensate water and raise the pH above acidic levels. A filming chemical additive will provide a protective layer on the interior of the piping to keep the condensate return water from actually touching the metal. In most cases a neutralizing chemical additive will tend to be slightly more expensive, but these chemicals are usually more effective.

There are limitations to the type of condensate treatment implemented for steam systems. For example there are certain treatment programs are restricted if the steam is used for food preparation or direct contact humidification, a treatment product that is approved for use with food preparation or direct contact humidification should be used. Contact a licensed water

treatment consultant or supplier for more information regarding which products can be used and for which systems these chemicals are allowed.

4.0 Setting Up a Water Treatment Program

The most important step to setting up a water treatment program is to know what systems are present in the building and what are the requirements for water properties such as pH, conductivity, total dissolved solid (TDS), etc. The water property ranges, definitions and testing schedules are in Section 5. Many of these water chemistry properties can be monitored using stand-alone controllers or global building automation system (BAS) controls. A licensed water treatment consultant should be employed to model the building's water systems and develop an appropriate treatment plan for each system. There are many treatment plans available; below is a summary of typical plans used for each system, which are used by water treatment consultants in the United States.

4.1 Open Loop Cooling Water Systems

Monitoring conductivity as a measurement of the concentration of Total Dissolve Solids (TDS) is a crucial part of controlling an open loop water system. Conductivity limits should be set by a water treatment consultant and routinely monitored to ensure that mineral scale does not form. Cycles of concentration of the system should not exceed limits set by water treatment consultant. Automated blown down controls with a conductivity meter is recommended for open loop systems. The pH of the water should be routinely monitored especially if an acidic additive is used to control the pH. Corrosion inhibitor residual tests should also be run to verify that the system is receiving the correct dosage. Routine tests should be conducted daily, weekly, or monthly to monitor oxidizing biocide residuals and bacteria concentrations to ensure Micro-Bio levels are under control. In general, bacteria concentrations in the open loop cooling water system should be less than 100,000 cfu/ml (colony forming units per milliliter) at all times.

Corrosion Monitoring should be performed using a real time on-line monitoring device or corrosion coupons with a 90-day rotation schedule. Coupon test results should show mild steel corrosion rates less than 5.0 mils per year (MPY) and Copper Corrosion Rates less than 2.0 MPY at all times.

Recommended Corrosion and Scale Control Programs

Program 1:

Description:	Multifunctional Molybdate Based Corrosion Inhibitor and Dispersant
Function:	Corrosion Inhibition, Mineral Scale Inhibition
Components:	Molybdate for Mild Steel Corrosion Control Azole for Copper Corrosion Control Dispersant for Mineral Scale Inhibition
Form:	Liquid
Feed Location:	Tower Basin or Header
Control Tests:	Molybdate Residual or Test for Tracing Agent if present, Corrosion Monitoring

Program 2:

Description:	All Organic Based Multifunctional Corrosion Inhibitor and Dispersant
Function:	Corrosion Inhibition, Mineral Scale Inhibition
Components:	Phosphonate for Mild Steel Corrosion Control Azole for Copper Corrosion Control Dispersant for Mineral Scale Inhibition
Form:	Liquid
Feed Location:	Tower Basin or Header
Control Tests:	Organic Phosphate Test or Test for Tracing Agent if Present, Corrosion Monitoring

Program 3:

Description:	Zinc Phosphate Multifunctional Corrosion Inhibitor and Dispersant
Function:	Corrosion Inhibition, Mineral Scale Inhibition
Components:	Zinc and Phosphate for Mild Steel Corrosion Control Azole for Copper Corrosion Control Dispersant for Mineral Scale Inhibition
Form:	Liquid
Feed Location:	Tower Basin or Header
Control Tests:	Ortho-Phosphate or Test for Tracing Agent if present

Program 4:

Description:	Stabilized Phosphate Corrosion Inhibitor and Dispersant
Function:	Corrosion Inhibition, Mineral Scale Inhibition
Components:	Phosphate for Mild Steel Corrosion Control Azole for Copper Corrosion Control Dispersant for Mineral Scale Inhibition
Form:	Liquid
Feed Location:	Tower Basin or Header
Control Tests:	Ortho-Phosphate or Test for Tracing Agent if present, Corrosion Monitoring

Bacteria Control Programs

Program 1:

Description:	Chlorine Bleach Oxidizing Biocide
Function:	Oxidizing Biocide

Components: Sodium Hypochlorite
Form: Liquid
Feed Location: Tower Basin
Control Tests: Free Chlorine Residual, Bacteria Monitoring

Program 2:
Description: Stabilized Chlorine Oxidizing Biocide
Function: Oxidizing Biocide
Components: Stabilized Sodium Hypochlorite
Form: Liquid
Feed Location: Tower Basin
Control Tests: Free Chlorine Residual, Bacteria Monitoring

Program 3:
Description: Activated Bromine Oxidizing Biocide
Function: Oxidizing Biocide
Components: Separate Feed of Sodium Hypochlorite
Separate Feed of Sodium Bromide
Form: Both Liquid
Feed Location: Mix together in feed line to activate Bromine then feed to Tower Basin
Control Tests: Free Chlorine Residual, Bacteria Monitoring

Program 4:
Description: Stabilized Bromine Based Oxidizing Biocide
Function: Oxidizing Biocide
Components: Stabilized Bromine
Form: Liquid
Feed Location: Tower Basin
Control Tests: Free Chlorine Residual, Bacteria Monitoring

Program 5:
Description: Solid Chlorine Bromine Tablets
Function: Oxidizing Biocide
Components: Chlorine and Bromine
Form: Solid Tablet
Feed Location: Fed from pot feeder to Tower basin
Control Tests: Free Chlorine Residual, Bacteria Monitoring

Program 6:
Description: Solid Chlorine Bromine Tablets
Function: Oxidizing Biocide
Components: Chlorine and Bromine
Form: Solid Tablet
Feed Location: Fed from pot feeder to Tower basin
Control Tests: Free Chlorine Residual, Bacteria Monitoring

Program 7:
Description: Isothiazoline
Function: Non-Oxidizing Biocide

Components:	Isothiazoline
Form:	Liquid
Feed Location:	Slug fed to tower basin
Control Tests:	Bacteria Monitoring

Program 8:

Description:	Glutaraldehyde
Function:	Non-Oxidizing Biocide
Components:	Glutaraldehyde
Form:	Liquid
Feed Location:	Slug fed to tower basin
Control Tests:	Bacteria Monitoring

Program 9:

Description:	DBNPA
Function:	Non-Oxidizing Biocide
Components:	Dibromonitropropianamide
Form:	Liquid
Feed Location:	Slug fed to tower basin
Control Tests:	Bacteria Monitoring

Program 10:

Description:	Quaternary Amine
Function:	Non-Oxidizing Biocide
Components:	Quaternary Amine
Form:	Liquid
Feed Location:	Slug fed to tower basin
Control Tests:	Bacteria Monitoring

Program 11:

Description:	MBT
Function:	Non-Oxidizing Biocide
Components:	Methylene-bis-thiocyanate
Form:	Liquid
Feed Location:	Slug fed to tower basin
Control Tests:	Bacteria Monitoring

4.2 Closed Loop Cooling and Hot Water Systems

General guidelines for the control of a closed loop cooling or hot water system include the monitoring of the conductivity, pH, corrosion, and micro bio-levels. Water chemistry limits should be set by a water treatment consultant and routinely monitored by maintenance personnel to ensure that mineral scale and corrosion does not occur. Automated make up water controls along with a makeup water meter should be added to the system to maintain a consistent amount of water. The pH of the water should be routinely monitored, especially if an acidic additive is used to control the pH. Corrosion inhibitor residual tests should also be run to verify that the system is receiving the correct dosage. Monthly monitoring of bacteria concentrations to ensure biological organism levels are under control. If biological organism levels are above recommended levels, there could be a point where oxygen is entering the system, i.e. a leak in the system. Corrosion monitoring should be done with iron or copper corrosion coupons with a

six month rotation schedule. Coupon test results should show mild steel corrosion rates less than 0.5 mils per year (MPY) and Copper corrosion rates less than 0.2 MPY at all times.

Recommended Corrosion and Scale Inhibition Programs

Program 1:

Description:	Multifunctional Molybdate Based Corrosion Inhibitor and Dispersant
Function:	Corrosion Inhibition, Mineral Scale Inhibition
Components:	Molybdate for Mild Steel Corrosion Control Azole for Copper Corrosion Control Dispersant for Mineral Scale Inhibition
Form:	Liquid
Feed Location:	Slug feed with Pot Feeder
Control Tests:	Molybdate Residual or Test for Tracing Agent if present, Corrosion Monitoring

Program 2:

Description:	Multifunctional Nitrite Based Corrosion Inhibitor and Dispersant
Function:	Corrosion Inhibition, Mineral Scale Inhibition
Components:	Nitrite for Mild Steel Corrosion Control Azole for Copper Corrosion Control Dispersant for Mineral Scale Inhibition
Form:	Liquid
Feed Location:	Slug feed with Pot Feeder
Control Tests:	Nitrite Residual or Test for Tracing Agent if present, Corrosion Monitoring

4.3 Steam and Condensate Recirculation Systems

The water treatment program for a steam and condensate recirculation system should include monitoring for conductivity. Proper Conductivity limits will vary slightly depending upon the type, age, and size of the steam boiler system. The absolute maximum conductivity level for any steam system is 5,500 µmhos.

The alkalinity concentration in the steam boiler should routinely be monitored my maintenance personnel. There two main types of alkalinity measured in a steam system total (M)-Alkalinity and hydroxide (OH)-alkalinity. The P-alkalinity test is used to measure the portion of M-alkalinity contributed to by Hydroxide (OH)-alkalinity. Barium chloride is added to water samples containing OH-alkalinity then sulphuric acid is added to neutralize the OH, alkalinity is then measured to show the change in alkalinity due to the elimination of OH molecules. P-Alkalinity is used to monitor the condensate return system; to avoid corrosion within the steam boiler OH-alkalinity is measured. Proper chemical dosage for the steam boiler is ensured by running routine chemical residual tests for the oxygen scavenger and internal scale inhibitor.

In addition, it is very important to monitor the chemistry of the steam boilers feed water. Maintenance personnel should test the conductivity of the feed water on a regular basis. If makeup water pretreatment is exists, Maintenance personnel should also test the total hardness level of the feed water.

The remaining tests to be conducted on condensate return for filming Amine residual, or Iron concentration and the condensate pH should be tested to ensure that the system has received the proper chemical dosage. Further tests can be conducted by a water treatment consultant to

determine if dosages should be altered to maintain proper steam, makeup and feed water chemistry.

Recommended Oxygen Scavengers

Program 1:

Description:	Sulfite
Function:	Chemical Oxygen Scavenger
Components:	Catalyzed Sodium Sulfite
Form:	Liquid or Powder
Feed Location:	Deaerator Drop Leg or Storage Section
Control Tests:	Residual Sulfite

Program 2:

Description:	Volatile Oxygen Scavenger
Function:	Chemical Oxygen Scavenger
Components:	Various Types Available
Form:	Liquid
Feed Location:	Deaerator Drop Leg or Storage Section
Control Tests:	DEHA Residual

Recommended Scale Control Programs

Program 1:

Description:	Precipitating Phosphate
Function:	Sludge Conditioner
Components:	Phosphate
Form:	Liquid
Feed Location:	Boiler Steam Drum or Feedwater line
Control Tests:	Conductivity, P Alkalinity, M Alkalinity, OH Alkalinity, Silica, Ortho-Phosphate, Visual Color Test

Program 2:

Description:	Polymer Dispersant
Function:	Mineral Dispersant
Components:	Polymer
Form:	Liquid
Feed Location:	Boiler Steam Drum or Feedwater line
Control Tests:	Feedwater Hardness, Polymer Residual, Silica, OH-Alkalinity, Tracing Agent if available

Program 3:

Description:	Chelant
Function:	Sludge Conditioner
Components:	EDTA Chelant
Form:	Liquid
Feed Location:	Boiler Steam Drum or Feedwater line
Control Tests:	Feedwater Hardness, Chelate Residual, Silica, O-Alkalinity, Tracing Agent, if available

Recommended Condensate Corrosion Control

Program 1:

Description:	Neutralizing Amine
Function:	Raise pH of Condensate
Components:	Various Types
Form:	Liquid
Feed Location:	Steam Header or Boiler Steam Drum
Control Tests:	Condensate pH, Condensate Iron

Program 2:

Description:	Filming Amine
Function:	Provide Protective Barrier for Condensate Piping
Components:	Various Types
Form:	Liquid
Feed Location:	Steam Header or Boiler Steam Drum
Control Tests:	Filming Amine Residual, Condensate Iron

Recommended General Corrosion Control (Steam Drum)

Program 1:

Description:	Caustic
Function:	Increase Alkalinity
Components:	Sodium or Potassium Hydroxide
Form:	Liquid or Powder
Feed Location:	Deaerator storage or Boiler Steam Drum
Control Tests:	O-Alkalinity

5.0 Water System Testing

Routine water chemistry tests play an important role in maintaining building water systems; they can be used to anticipate and prevent water's capacity to accelerate fouling, scaling and corrosion within a mechanical system. Chemical test kits for each building water system are available through most water treatment chemical suppliers or consultants. Section 5.2 lists the most common water tests used and a water treatment consultant can determine if a system requires more rigorous tests.

5.1 Water Sampling

When water samples are taken, they should be isolated from large amounts of mineral buildup, incoming feed water or makeup water and chemical feed points. Samples should be collected during normal operation before system blow down and chemical dosing. When collecting water, allow the samples container to overfill and to avoid sample contamination use sampled water to rinse cap or container. Label the container appropriately and test sample as soon as possible. A licensed water treatment consultant will be able to give advice on chemical testing. However, building maintenance staff should be familiar with specific test procedures that should be provided by the chemical test equipment supplier(s).

5.2 Common Water Chemistry Tests

Conductivity:
This test is used to estimate the Total Dissolved Solids (TDS) concentration in a water sample. Conductivity is the measures of electrical conductance in the water. In general 1.0 umhos of conductance is equal to 0.67 ppm of total dissolved solids or minerals. High levels of conductivity increase the scaling potential of the system which depends on water temperature, composition of dissolved solids and interaction with other chemical additives, and the system's metallurgy.

Cycles of concentration for a water system is measured as the ratio of mineral content (TDS) of system water divided by the mineral content (TDS) of make-up water. High cycles of concentration are an indicator of increased scaling potential. Maintaining high cycles can be done with proper chemical water treatment. Cycles of concentration are mainly monitored in open loop cooling systems and general range from 2 to 14 times the mineral content of the makeup water. The cycles of concentration of a system are completely dependent upon the TDS of the makeup water and the optimum point where corrosion and scale build-up are minimized. A water treatment consultant should specify the optimal cycles for the water system.

pH:
In general, low pH water is corrosive and has a high acidity, a meter reading lower than 7.0. High pH water is prone to scaling and is considered to be alkaline and is specified by a meter reading greater than 7.0 and less than 14. Tests for pH, acidity or alkalinity, are used to monitor chemical treatment product dosages and are used for general troubleshooting of a water system.

Nitrite:
The concentration of Nitrite in a closed loop cooling or hot water system's water sample is measured to monitor the corrosion inhibitor program. Nitrite is used to passivate metal surface and remove dissolved oxygen resulting in a non-corrosive water system. A water treatment consultant will set the minimum levels of nitrate that need to be maintained.

Sulfite:
This test is a residual oxygen scavenger test used to determine the concentration of sulfite available in a closed loop hot water system. If used as the oxygen scavenger, Sulphite must be maintained at levels between 30-50 mg/L (ppm). When Sulphite levels are not maintained corrosion will occur. Over charging a system with Sulphite will increase the conductivity of the water, corrosively and may cause the growth of sulphate reducing bacteria.

Silica:
Silica testing measures the concentration of Dissolved Silica in a water sample, typically for steam boiler systems. If silica levels are too high and pH is low scaling will occur. Silica can form extremely hard and dense scale on heat transfer surfaces increasing the risk of mechanical failure. Common water test sample points for silica include the boiler drum and the saturated steam.

Corrosion Coupons:
Corrosion coupons are small, slender circular or rectangular pieces of metal (Iron or copper) used to monitor the actual corrosion level in a water system. Typically corrosion coupons are monitored on a 90-day rotation schedule. The original dimensions, thickness, of the coupon are known. When the coupon is removed from the water loop the change in dimensions are noted as

the corrosion rate. If the corrosion inhibitor program is effective the coupon's corrosion rate are below the recommended levels, as specified in Section 5.3.

Bacteria Dip Slide:
This test measures the concentration of bacteria in an open or closed loop cooling water system water sample. A media called "Agar" is wetted with the cooling water then is placed into a tube were Bacteria, yeasts, and fungi are grown. This test is used to confirm that biocide program in an open or closed cooling water system is effective.

Dissolved Iron:
Iron testing is used to monitor corrosion products in a water system. Iron testing is used to either verify that the treatment program is working or to troubleshoot a problem. Dissolved Iron levels should be less than 30 ppm. Increased corrosion problems, leaks, poor heat transfer efficiency, as well as bacteria problems can occur when the dissolved Iron level is high.

Molybdate:
A Molybdate test measures the concentration of Sodium Molybdate in both closed and open loop cooling water systems. A water treatment consultant will state the minimum levels of Molybdate that is needed to maintain the systems' corrosion inhibitor program.

Organic Phosphate:
This test measures the concentration of organic Phosphate in an open loop cooling water system. This test is needed only if an organic phosphate is used as a corrosion inhibitor. A water treatment consultant will set the minimum levels of organic phosphate that need to be maintained to prevent corrosion.

Ortho-Phosphate:
This test measures the concentration of inorganic Phosphate in a water sample. Ortho-Phosphate is a commonly used in closed loop cooling water and hot water systems as an Iron (ferrous) and non-ferrous alloy corrosion inhibitor. If phosphate is used a minimum concentration of 200 – 300 mg/L (ppm) is required.

Free Chlorine:
A free chlorine test measures the concentration of active oxidizing biocide in a open loop cooling water system. Free Chlorine tests are used to monitor both Chlorine and Bromine and are more accurately described as free halogen tests. These tests are commonly used to monitor the dosage of oxidizing biocide in an open re-circulating cooling water system. Since excessive chlorine concentrations are corrosive, a free chlorine residual of 0.2 to 0.8 ppm is maintained.

5.3 Maintenance Parameters

The following charts list the minimum monitoring requirements for each open loop or closed loop water system. The frequency of the water testing can be increased to better maintain the performance in open loop cooling water, steam boiler, or closed loop system. The chemical test ranges and frequencies given are general and should be clearly defined by a certified water treatment consultant. A water treatment program can be controlled to an optimum level if the system is checked on a daily basis and automated monitoring equipment, such as conductivity and pH meters, are installed.

The operating ranges are **mandatory performance standards**. The maintenance Contractor must maintain water within these tolerances, unless GSA gives a written waiver for specific reasons. GSA may require more rigorous standards where circumstances dictate. The testing frequencies establish **minimum mandatory frequencies**. Contractors may test more frequently. Sporadic short-term deviations from operating ranges may not, depending on the terms and conditions of specific Contracts, result in a determination of unsatisfactory Contract performance where the Contractor takes prompt action to correct the condition.

Open Loop Cooling Water Systems

Chemistry Tests	Frequency of Test	Operating Ranges
Tower Water Conductivity	Auto Blow down: Weekly, Monthly Manual Blow down: Daily	(110-1600 ppm)
Makeup Water Conductivity (Hardness)	Auto Blow down: Weekly, Monthly	(30-400 ppm)
pH Test	Daily, Weekly	7.5 to 9.5
Corrosion Monitoring (Coupon Test)	Quarterly (3 months)	Iron: 2 to 5 mils/ year Copper: 0.2 to 0.5 mils/ yr
Bacteria Testing	Monthly	Max: 10^3 cfu/ml (colony forming units/ ml)
Chlorides	Weekly, Monthly	Max: 250 ppm as Cl Max: 410 ppm as NaCL
Sulfites	Weekly, Monthly	50-100 ppm SO_3 80-160 ppm Na_2SO_3
Corrosion Inhibitor Residual	Auto Chem. Feed: Weekly, Monthly	Defined by Consultant
Oxidizing Biocide Residual	Auto Chem. Feed: Weekly, Monthly	Defined by Consultant

Closed Loop Cooling Water Systems

Chemistry Tests	Frequency of Test	Optimum Operating Ranges
pH	Monthly	7.5-9.5
Total Dissolved Solids (TDS) or Conductivity	Quarterly (3 months)	Maximum: 2000 ppm or (2500µS/cm)
Polyphosphates (PO_4)	Monthly	10- 20 ppm
Sulfites	Monthly	50-100 ppm SO_3 80-160 ppm Na_2SO_3

Bacteria Testing	Monthly	Max: 10^3 cfu/ml (colony forming units/ ml)
Corrosion Monitoring (Coupon Test)	Bi-Annually (6 months)	Iron: max. 0.5 mils/ year Copper: max. 0.2 mils/ yr
Corrosion Inhibitor Residual	Monthly	Defined By Consultant

Steam Systems with Re-circulating Water

Chemistry Tests	**Frequency of Test**	**Optimum Operating Ranges**
Total Hardness Concentration	Daily or 3 times/week	Less Than 2 ppm $CaCO_3$
Feed water pH	Daily or 3 times/week	10.5-11.5
Feed Water Conductivity or TDS	Daily or 3 times/week	1500 - 3000 ppm (2000 – 4000 µS/cm)
Condensate Return pH	Daily or 3 times/week	8.5-9.5 pH
Condensate Return Conductivity or TDS	Daily or 3 times/week	40 ppm (50 µS/cm)
Makeup Water Conductivity	Weekly	40-600 mmHOS (30-400 ppm)
Hydroxide Alkalinity	Daily or 3 times/week	150-300 ppm $CaCO_3$
Total Alkalinity	Auto Chem Feed: Daily, Weekly	<700 ppm $CaCO_3$
Sulphite	Daily or 3 times/week	30-60 ppm SO_3 50 ppm Na_2SO_3
Steam Drum Scale Inhibitor Residual	Auto Chem Feed: Daily, Weekly	Defined By Consultant
Steam Drum Oxygen Scavenger Residual	Auto Chem Feed: Daily, Weekly	Defined By Consultant

6.0 RESERVED

6.1 RESERVED

6.2 RESERVED

EXHIBIT J.7
Qualifications of Electrical Testing Technicians (ETT)

(ANSI/NETA ETT-2010 Standard for Certification of Electrical Testing Technicians)

TITLE:	**Trainee Techncian**	**Assistant Technician**	**Certified Technician**	**Certified Senior Technician**
LEVEL:	**Level I**	**Level II**	**Level III**	**Level IV**
EDUCATION AND TRAINING:	High School / GED	Safety 40 hours Electrical 160 hours	Safety 24 hours add'l Electrical 240 hours add'l	Safety 40 hours add'l Electrical 200 hours add'l
RELATED EXPERIENCE:	None	Two Years*	Five Years*	Ten Years*
TYPICAL DUTIES:	None	Generally requires direct supervision. Responsible for safety of self. Understands hazardous electrical energy control procedures.	Capable of supervising Levels I and II. Routine and moderately complex projects. Record keeping. Safety of others. Switching. Evaluations.	Supervises large projects, multiple crews. Works independently. More complex investigations, tests, and evaluations.
TYPICAL ACTIVITIES:	Simple assistance. Simple measurements. Test equipment set up and removal. Cleaning.	Assists. Inspects. Tests. Data collection. Test for deenergized locked out/tagged out equipment.	Lockout/Tagout, safety grounding. Test for deenergized medium-voltage equipment. Performs moderately complex tasks. Interacts with other skills and operations.	Corrects system failures. Performs very complex tests. Interacts with engineers and managers. Writes reports.
EXAMINATION:	By employer	By certifying organization, 70% minimum score	By certifying organization,70% minimum score	By certifying organization, 70 % minimum score

NOTE: Candidates for Levels II, III, IV must have met the qualifications for all previous levels.
*** Completion of two or more years of technical education in an electrical field shall be equivalent to a maximum of one year of experience.**

EXHIBIT J.8

Miscellaneous Best Practices
Shave Energy

The Shave Energy Program is designed to assist field offices to systematically identify and implement simple no cost energy efficiency measures. The primary objective of the program is to identify no cost inefficiencies in operations, make appropriate adjustments, and reduce total energy consumption at participating facilities, on average, by 10% per year. Program participants will use various audit procedures, tools, templates, strategies, educational tools and reference materials to implement a variety of best practices. These include optimizing HVAC & lighting schedules, controls, and equipment, implementing energy- and comfort-optimized thermal set points and lighting levels, demand shedding, and tenant engagement.

Field office personnel will be essential to the success of the program and will be pivotal to reducing cost significantly through no cost means. They will be supported by regional super users and Central Office contract with technical support.

The Miami Service Centers participated in the *unintentional* Shave Energy pilot program last year and the results are very promising. The Service Center, under the leadership of Don Rollins, implemented numerous no cost items into its portfolio and the benefits were profound as they maintained reductions over a one year period.

Over the past year (2011), the Service Center reduced energy consumption by 4,916 BTU/GSF and a 15% reduction in total KWH usage (equivalent to almost 6 million KWH). This reduction is very significant and equivalent to "not using" 161,294 gallons of gas. The cost benefit associated with these reductions is also significant as it reduced total energy cost by $541,419 in FY11 KWH dollars.

The Wilkie Ferguson facility has also seen phenomenal success on its own as it reduced its usage by 15,369 BTU/GSF over the last year. The property manager reduced total consumption by 3.5 million KWH or 29% over the last year. This reduction is equivalent to "not using" 95,093 gallons of gas or removing 1,521 cars from the road. The cost savings associated with these reductions is $314,861 in FY11 KWH dollars.

The Pilot Shave Energy Program was expanded to include an additional service center in the fall. After initial walk through and audits of two of its' facilities, possible annual consumption reductions between 2.8 million and 3.8 million KWH were identified. Again, these reductions would result from "no cost" methods. The potential cost savings is approximately $250K to $340K. The pilot participants are currently vetting the various audit procedures, tools, templates, and strategies with much success.

The Shave Energy Program presents a unique methodology to bridge the gap between the identification of energy-saving opportunities and implementation of energy retrofits by outlining specific actionable items based on simple operational best practices. Integration of Shave Energy

with advanced metering programs will significantly expedite the detection of opportunities for energy reduction through the analysis of building energy consumption.

The success of Shave Energy is dependent on managerial commitment to existing GSA operational standards. In order to maximize the impact of the Shave Energy Program, GSA management must be proactively engaged at the national, regional, field office, and building levels.

The first step is to identify core team members. These core team members will assist in fully developing the program and providing guidance to the national program team. The second step is to make people and buildings available for training and implementation of best practices. This program's training is expected to be 10 hours for regional and field office super users and participating property managers. The audit process is expected to take approximately 24 to 30 hours per facility depending on size. And a strong commitment to implement cost saving measures uncovered during the audits.

In conclusion, it is still feasible to reduce consumption and cost with little or no investment. In these current uncertain fiscal times your commitment and support is fundamental.

Schedule Alignment

One of the easiest ways to reduce energy usage in a building is to ensure that operations such as heating, cooling, and lighting satisfy occupant requirements only during occupied times. The GSA definition of occupancy in the workplace is defined as the times during which at least 75% of all people typically working in the office are present. The Contractor should align all operational schedules to reflect GSA's occupancy definition. Providing heating and cooling services beyond the occupied operational schedule without prior approval of GSA is prohibited unless those services will be required to maintain the facility in accordance to ASHRAE thermal comfort and efficiency standards. All operating schedules must be adjusted seasonally and be approved by GSA every 90 days.

Unoccupied Heating and Cooling Operations

During unoccupied times, heating and cooling operations should be shut off, or in climates that require the circulation of mildly conditioned air, their set points set back by (at minimum) 8-10°F (e.g. if the cooling set point is 74°F then an appropriate unoccupied set point would be 84°F). As required by the Federal Management Regulations, heating temperature set points must be no higher than 55°F during non-working hours. When the building is unoccupied, only emergency lighting should remain on inside the building. During times when occupants are filtering in or out of the building at the beginning and end of the day, the air conditioning system can be in the process of ramping up or down because a lower internal load (i.e. body heat and appliance use) exists under these conditions. For more information, see SEP Reference Manual Sections.

Morning Start-Up and Afternoon Drift

Depending on the system type and building size and air conditioning load, some systems may take a number of hours to stabilize at the desired heating or cooling set points. The O&M Contractor should be aware of these start-up times and should operate the equipment schedules based on the observed response and the space occupancy. However, the system start-up response time will also vary by season. For example, GSA would expect a system that takes 2 hours to meet occupied cooling set points in August to take significantly less time to meet these set points in March. The Contractor should adjust the heating and cooling system start-up times seasonally

to align the observed stabilized response of the system with the periods of 75% occupancy or greater, keeping in mind that full air conditioning need not be applied during times of lower occupancy.

Many building automation systems have algorithms for optimal start procedures based on the outside air temperature and the load required to reach set points in morning start-up. Where such systems exist, these algorithms should be utilized to minimize start-up energy consumption.

GSA recommends that Contractors shut down or set back equipment in a similar manner. In many buildings, while exact temperature set points may not be upheld, favorable temperatures will be maintained long after equipment have been shut off or set back to unoccupied levels. As occupants leave at the end of the day, cooling loads decrease. For example, if occupants leave the building between 3:30 p.m. and 5:00 p.m., the unoccupied temperature set back can actually be applied at 4:00 or 4:15 and the temperature allowed to slowly drift upwards as people leave the building. In order to determine the appropriate time for shutting down or setting back equipment operations, the Contractor should evaluate the current system capabilities and adjust the systems schedule daily if needed to optimize energy usage while maintaining acceptable levels of comfort.

Heating, Ventilation, and Air Conditioning (HVAC)

This Section summarizes the best practices for operating heating, ventilation, and air conditioning systems. As the Contractor surveys the building spaces and the associated systems, each of the following practices should be verified and the need for adjustment noted.

Timing of HVAC Adjustments

Changes to centralized building temperature set points for more efficient operation should be gradual but substantial enough to reduce system inefficiencies. If centralized building temperature set points are required the Contractor should adjust no more than by 2°F per week.

Set Point Control

ASHRAE Standard 55 for Thermal Comfort identifies acceptable comfort ranges based on humidity and mean outdoor air temperature using a metric of Predicted Percentage Dissatisfied (PPD) to optimize thermal comfort. For most summer climates for which air conditioning is utilized in the United States, acceptable cooling set points range between 74°F and 78°F. Acceptable heating set points range between 68°F and 72°F for most US climates. The Contractor shall operate all GSA conditioned space in accordance to ASHRAE Standard 55 for appropriate space types and all building thermostat dead bands shall be limited to no more than ± 2°F. For example, an appropriate set point and dead band would be 74°F ± 2°F for a cooling environment if the ASHRAE standard acceptable cooling set points range between 74°F and 78°F. An inappropriate set point and dead band would be 72°F ± 2°F or 74°F ± 3°F for a cooling environment if the ASHRAE standard acceptable cooling set points range between 74°F and 78°F.

Supply Air Temperature Resets

When outside air temperatures are lower, the building can meet space cooling temperature set points using higher supply air temperature set points. This lowers the energy costs associated with running the cooling system and, in buildings with zonal reheat, this can also prevent the waste of energy through simultaneous heating and cooling. For applicable systems, the Contractor should implement a supply air temperature reset. Where such automation is not possible, Contractors

should manually implement this strategy on a seasonal basis. In most climates, discharge air temperature can be reset by about 10°F while maintaining favorable indoor temperatures and reducing energy consumption. Typical discharge air temperature resets range between 50°F and 60°F for cooling.

Chilled Water and Hot Water Resets
The prescribed recommendations for the reset of chilled water and heating hot water set points apply only to hydronic systems, in which the heating and cooling sources to the air handler are chilled water and hot water served by chiller(s) and boiler(s) respectively.

Many HVAC system configurations can be programmed to automatically reset the CHW temperature set point in response to building load, similar to supply air temperature reset control, if the system is programmable the Contractor shall automate all configurations. The Contractor should adopt a chilled water reset strategy and implement a temperature control range of 5-10°F. In general the lower limit of the control range should be no less than 42°F and that the upper limit should be no more than 2°F less than the minimum supply air temperature. Where such automation is not possible, Contractors should implement this strategy on a seasonal basis.

Most buildings can be programmed to automatically modulate hot water temperatures in response to building load. The Contractor should implement a hot water reset strategy which decreases the range to which the hot water temperature can be reset; if the system is programmable the Contractor shall automate all configurations. As a rule of thumb, the hot water temperature set point should be no lower than 140°F and no greater than 180°F. For example, if the building is controlling heating hot water temperatures to 170°F, an appropriate reset control strategy would control heating hot water between 140°F and 170°F.

Static Pressure Resets
Variable air volume systems typically modulate supply fan speed to maintain a constant duct static pressure. This static pressure set point is designed to overcome all system pressure loss at peak fan airflows. Under partial load conditions, the required airflow is less than the design airflow and a lower duct static pressure is required to meet the load. In order to meet ventilation requirements, the degree to which duct static pressure can be reduced depends on the number of zones, the zone size and maximum occupancy, and the system's air balance. Poorly balanced systems require greater static pressure to ventilate the worst-served zones. The Contractor shall rebalance any poorly balanced zones.

Most air handling units use constant duct static pressure set points around 2" WC. Depending on the building, static pressure may even be reset to below 0.5" WC while maintaining sufficient airflow for heating, cooling, and ventilation. The Contractor should determine the minimum required static pressure to meet ventilation requirements. If adjustment is possible the Contractor shall lower the static pressure until airflow to the worst stops providing adequate ventilation, as required by ASHRAE 62.1 (see next Section). Wherever systems can support it, the Contractor shall implement a duct static pressure reset control strategy that ranges from the design static pressure to the minimum static pressure required for ventilation.

Outside Air Intake
When buildings are occupied, they are required by law to intake a certain amount of outside air to maintain appropriate indoor air quality. The Contractor must verify that all HVAC systems provide ventilation as required by ASHRAE Standard 62.1 – 2010 every three years through

system testing. These reports must be submitted to GSA for approval. The use of TAB reports to verify performance is strictly prohibited. The value to note in verifying the intake of outside air is the combined outdoor air rate, shown in Table 6-1 of ASHRAE 62.1. This may be calculated based on the maximum number of occupants and floor area, as shown in the equation below, or using the default values based on default occupant densities.

$$Required\ Ventilation\ (CFM) = R_P * (Max.\#\ Occupants) + R_a * (Floor\ Area)$$

Table 1 Selection of ASHRAE Standard 62.1 Table 6-1

Occupancy Category	People Outdoor Air Rate R_p		Area Outdoor Air Rate R_a		Notes	Default Values			Air Class
						Occupant Density (see Note 4)	Combined Outdoor Air Rate (see Note 5)		
	cfm/person	L/s·person	cfm/ft^2	L/s·m^2		#/1000 ft^2 or #/100 m^2	cfm/person	L/s·person	
Office space	5	2.5	0.06	0.3		5	17	8.5	1
Reception areas	5	2.5	0.06	0.3		30	7	3.5	1
Break rooms	5	2.5	0.06	0.3		25	10	5.1	1
Conference/meeting	5	2.5	0.06	0.3		50	6	3.1	1
Corridors	–	–	0.06	0.3		–			1
Courtrooms	5	2.5	0.06	0.3		70	6	2.9	1
Legislative chambers	5	2.5	0.06	0.3		50	6	3.1	1
Libraries	5	2.5	0.12	0.6		10	17	8.5	1
Lobbies	5	2.5	0.06	0.3		150	5	2.7	1

One Section of the ASHRAE 62.1 Table 6-1 is shown above. The Contractor can access the full document and a comprehensive list on the GSA Shave Energy Google Site. A conservative estimate for the required outside air flow is 20 CFM per occupant. The intake of outside air above minimum requirements can reduce or increase the total cooling energy use, depending on the outside air temperature. If possible, the Contractor shall implement airside economizer control to optimize the intake of outside air for cooling operations. If the minimum outside air intake is greater than required by ASHRAE 62.1, however, then additional energy is required to condition that air to space requirements. As best practice, minimum ventilation rates should be within 100-110% of that required by ASHRAE 62.1.

Exhaust Fan Control

GSA prohibits running exhaust fans constantly. The Contractor shall adopt an exhaust fan strategy and where possible use sensors to control all exhaust fan systems.

Placement of Supply and Return Air Diffusers

In order for building spaces to be effectively cooled and heated, the air supplied to each zone must be allowed to distribute and mix with the warmer (for cooling) or cooler (for heating) air in these spaces. If supply and return diffusers are placed too close to each other, then air flow will be short-circuited and conditioned air will be returned without effectively conditioning the space. The Contractor shall verify that all supply and return air diffusers are placed no less than 5 feet apart. The O&M Contractors shall re-distribute the supply and return air connections when necessary and feasible.

Demand Response Strategies

If GSA has a Demand Response Strategy in place the Contractor shall operate the facility in accordance to that strategy. In addition, any strategies that can be adopted on a normal routine should be adopted as standard daily practice. Any strategy that can temporarily decrease energy consumption (e.g. lighting reduction, where applicable) should be applied during high-rate demand response events and were feasible daily. The Contractor shall maximize demand reduction strategies during high-rate periods.

Lighting and Lighting Controls

The Contractor shall remove or replace lighting fixtures and bulbs with more efficient equivalent alternatives when available when those alternatives can be procured at the same market cost. It is important to note that these investments in time pay off on their end as well because in the future they'll need to replace fewer bulbs less often. If such an alternative more efficient product is available at the request of the government the Contractor is required to use them if the payback is less than three-fourths of the Contract period or less than eighteen months whichever is less. In addition, if an appropriate lighting efficiency strategy is identified at the facility the Contractor, shall support the effort if there is no undue burden placed upon the Contractor (e.g. a de-lamping 2 hours per week over a specified amount of time).

Acceptable Levels of Luminance

Section 6.3 in the P100 specifies interior lighting requirements, which must be realized at work surfaces or a height of 30 inches by the combination of ambient lighting fixtures, task lighting, and ambient daylight. These standards should be interpreted as guidelines for appropriate lighting levels - as in actual application, these levels will vary throughout the space. The below guidelines recommended minimum and maximum values for luminance for most GSA space types. These are to be realized at working surfaces by a combination of installed lighting fixtures, task lighting, and daylight.

Table 2 Acceptable Levels of Luminance

Area/Activity	Guideline Average Illuminance (foot candles)	Recommended Minimum Illuminance (foot candles)	Recommended Maximum Illuminance (foot candles)
Parking lot	N/A	.1	5
Elevator	N/A	5	10
Inactive storage	5	5	10
Active storage	10	5	15
Stairs	10	10	15
Restroom	10	10	20
Corridor	10	10	30
Dining area	10	10	30
Lounge	10	10	30
Atrium	10	10	30
Lobby	10	10	30
Elec./Mech/Tech. room	30	20	40
Enclosed office	30	20	50
Open office	30	30	50
Conference	30	30	50

Classroom	30	30	50

The U.S. Courts Design Guide derives required levels of illumination from IESNA standards, as shown below. These have also been coupled with recommended minimum and maximum values for space luminance.

Table 3 U.S. Court Facilities – Acceptable Levels of Luminance

Area/Activity	Guideline Average Illuminance (foot candles)	Recommended Minimum Illuminance (foot candles)	Recommended Maximum Illuminance (foot candles)
Public seating	10	10	20
Supplies and storage	20	10	30
Attorney witness table	30	30	50
Witness box	30	30	50
News media room	30	30	50
Attorney work room	30	30	50
Attorney witness room	30	30	50
Jury assembly suite	30	30	50
Trial jury suite	30	30	50
Grand jury suite	30	30	50
Central court libraries	30-50	30	50
Judges chamber suites	30-50	30	50
Judge's bench	50	40	60
Bailiff	50	40	60
Interpreter	50	40	60
Court reporter	50	40	60
Jury box	50	40	60

The recommended levels of luminance should be provided for each space and over lit spaces should be reduced in electrical lighting by one of the following lighting reduction measures.

Removal and Relocation of Fixtures

Where excessive lighting exists, the simplest measure to reduce lighting energy consumption is to remove some of the fixtures that serve that area. Where over lit spaces can output favorable lighting levels using fewer of the existing installed fixtures, determine the minimum number of fixtures required to meet the desired level of luminance. Remove the unnecessary lighting fixtures and rearrange them to effectively distribute luminance throughout the space. A multiple period plan should be developed and submitted to GSA if removal or relocation of fixtures is warranted.

Removal of Lamps (De-lamping)

Where the distribution of lighting fixtures is appropriate, yet lighting levels are higher than needed, one option for reducing lighting energy is to remove lamps from the existing fixtures. For example, if a room with excessive lighting has six fixtures with three lamps per fixture, an acceptable solution could be to remove the center lamp from each fixture in order to maintain fixture symmetry yet reduce the lighting energy by 33%.

Replacement of Lamps/Fixtures

Many buildings were installed with fixtures and lamps that are grossly inefficient compared to modern lighting technology. Furthermore, newer induction, CFL and LED technologies last longer and require replacement less often than older, inefficient lamps. As these lamps burn out, they should be replaced with more efficient lamps, and where necessary, fixtures should be

replaced. To maintain aesthetic consistency, a plan to replace the lamps or fixtures for an entire zone over time should be submitted to GSA for approval. For more information regarding appropriate efficient lighting technologies, see GSA Standards Related to Shave Energy and the P100 Facilities Standards for the Public Buildings Service.

Re-ballasting fixtures
Re-ballasting fixtures can be an effective method for reducing the energy consumption of lighting fixtures or increasing their total lifetime. Ballasts regulate the amount of electrical current available to a lighting fixture. When older, more inefficient, ballasts are in place and expire the Contractor shall replace them with more efficient technology. When lighting fixtures are replaced and/or existing ballasts are incompatible with the installed lighting, the Contractor must ensure that the ballast is installed to the light bulb specifications. Improper ballasting severely reduces lamp life and incurs additional maintenance and repair costs. For spaces in which dimming capabilities are desired, such as for photocell control, install dimmable ballasts to regulate the electrical current to the light bulbs.

Occupancy Control
Occupancy controls have become significantly more economical in recent years, and are proven to significantly reduce energy by allowing lighting to turn on only when spaces are occupied. They can be applied to any building interior space or parking structure. Depending on the layout and use for each space, the Contractor should choose (a combination of) specific sensor types found below when current lighting controls fail or require replacement:

- Wall-Mounted Sensors
- Ceiling-Mounted Sensors
- Bi-Level Sensors
- Passive Infrared (PIR)
- Ultrasonic
- Dual Technology

Daylight Control
Many office spaces maintain high levels of luminance during the day through windows and skylights and require no electrical lighting during most occupied hours. In some places, lighting fixtures can simply be removed where they are not unnecessary. In places where electrical lighting is only required during some hours, however, one of two strategies should be employed by the Contractor if appropriate systems are in place to allow the lights to come on only when needed:

Photocell Sensors: Measures luminance and interacts with the fixtures or BAS to control area lighting by switching lights on and off or by electronic dimming. The sensor sensitivity is adjustable.

Timer Switches: Timers interact with the fixtures directly or through the BAS to control area lighting based on the time of day.

Lighting Demand Response
Lighting reductions may also be utilized as a measure for demand response. For buildings that incur demand charges and where systems are in place, implement a continuous dimming or stepped lighting reduction demand response strategy during the peak demand period. From standard lighting levels, dim lighting by 20%, 40%, and 60% for zones with no daylight, low

daylight, and high daylight respectively without occupant impact – assuming that the dimming takes place over the matter of minutes – GSA recommends at 1% per minute. With prior GSA approval lighting can be reduced up to 60% across the board during the worst demand response.

Stepped lighting reductions require stepped dimming lighting control or a wiring configuration that supports turning only some lights off. During peak demand periods, reduce the stepped lighting output or the number of lights served.

Federal High Performance Guiding Principles

Performance Measurement - Building Automation System (GP4.3a)

A BAS supports ongoing accountability and optimization of the building energy performance, and helps building engineers to efficiently operate GSA assets.

The BAS must monitor and control the major building systems, including at minimum, heating, cooling, ventilation exterior and interior lighting, if a preexisting BAS is in place. Operating in manual or non-automated modes is strictly prohibited. Altering any building system that is, was, or previously has been automated or controlled by the BAS or similar control system is prohibited and is grounds for Contract termination or penalty. Lighting may be controlled by the BAS or by time clocks, occupancy sensors, or photocells. Critical spaces include all spaces within the building except for storage closets and mechanical closets. All regularly occupied spaces, stairwells, lobbies, and corridors are considered to be critical spaces and therefore must have automatic controls in place if applicable.

All critical sensors should be calibrated annually to ensure accurate readings and control points. When used effectively, a BAS allows building engineers and management to make informed decisions regarding changes in building operations and energy saving investments.

The Contractor shall record the Base Building Systems Control and BAS Operating Capabilities in the GSA Sustainable Operations and Maintenance Tool. The Contractor shall develop a maintenance plan for all zone level sensors and actuators using GSA's "Zone Level Sensor Maintenance Plan Template and Sample." The maintenance plan must demonstrate that zone level sensors and actuators will be calibrated according to the manufacturer recommended intervals to ensure sensor and actuator accuracy and precision and proper operation of the overall systems. The plan must also demonstrate that any malfunctioning zone level sensors and actuators will be repaired or replaced. At a minimum, the maintenance plan must include the following zone level sensors and actuators:

- Terminal unit damper
- Terminal unit flow sensor
- Space temperature sensors
- Space humidity sensors (if applicable at the facility)
- Zone CO2 sensors (if applicable at the facility)
- Calibrate all system level sensors and actuators annually

The Contractor shall maintain zone level sensors and actuators according to the Zone Level Sensors Maintenance Plan. Ensure the standard operating procedure for responding to comfort calls includes calibration/verification of zone level sensors and actuators as applicable to the facility. The Contractor shall check temperature set points and resets annually, record changes to

set points, programming, and schedules, set up trends so that unusual equipment operation can be identified and corrected, annually provide GSA a Calibration and Testing Report. The Contractor shall operate the facility in accordance to the Federal High Performance Guiding Principles 3.1 Performance Measurement - Building Automation System as outlined in the GSA Sustainable Operations and Maintenance Tool and Reference Guide. The Contractor shall provide GSA documentation to support compliance to the Federal High Performance Guiding Principles 3.1 Performance Measurement - Building Automation System as outlined in the GSA Sustainable Operations and Maintenance Tool and Reference Guide. The Contractor shall provide GSA a schematic of the floor layout showing automated lighting controls.

If no BAS system is in place or limited control the Contractor shall operate the GSA asset in accordance to the GSA GP3.3b - (EQc2.2) - Controllability of Systems – Lighting requirements. The contractor will confirm that the facility provides automated lighting controls (occupancy/vacancy sensors with manual-off capacity) for appropriate spaces including restrooms, conference and meeting rooms, employee lunch and break rooms, training classrooms and offices. **Provide GSA a schematic of the floor layout showing automated lighting controls**

Benchmarking, Energy and GHG Performance (GP 2.1a, 2.3, 2.4, 2.5)

GSA utilizes EPA's Energy Star Portfolio Manager (ESPM) as a tool to allow buildings to directly compare their observed energy consumption to a database of national energy data, and to establish a building energy performance rating accordingly. The facility's ESPM will be shared with the Contractor in a read only view.

GSA's Energy Star Rating goal is an Energy Star Rating of at least 75 or be 19th percentile points above the national average energy usage intensity. GSA centrally maintains all energy use for its buildings centrally and that data is uploaded to Energy Star on or about the 20th of each month.

The Contractor shall annually review the space information and building profile in the facility's ESPM account for accuracy and report to GSA an inaccuracy. The Contractor shall not update, alter, or change any utility data or entries. Support GSA in efforts of documenting compliance for an Energy Star Label. Operate the facility in accordance to the Energy Star PE Guide standards. Calibrate meters in accordance to the GSA Sustainable Operations and Maintenance Tool and Reference Guide. Operate the facility in accordance to the Federal High Performance Guiding Principles 2.1a, 2.3, 2.4, & 2.5 Energy and GHG Performance as outlined in the GSA Sustainable Operations and Maintenance Tool and Reference Guide. Provide GSA documentation to support compliance to the Federal High Performance Guiding Principles 2.1a, 2.3, 2.4, & 2.5 Energy and GHG Performance as outlined in the GSA Sustainable Operations and Maintenance Tool and Reference Guide.

BP 1 - ASHRAE 62.1-2007

To ensure that the facility is adequately ventilated with outside air (OA) the GSA has adopted the ASHRAE 62.1-2007 standards. Facilities with naturally ventilated systems (i.e. no mechanical ventilation) are not required to document compliance to the ASHRAE 62.1-2007 standard. An alternative standard can be used at GSA's discretion.

The Contractor shall annually document that all mechanical ventilation systems are meeting ventilation requirements of ASHRAE 62.1-2007. Any air handlers (AHU) that are physically not

able to meet these standards must provide at least 10 CFM/person of outside air. The Contractor shall annually document proper function of all dedicated exhaust systems and operate the facility in accordance to the Federal High Performance Guiding Principles 4.1 Outside Air Ventilation & Indoor Air Quality Best Management Practices as outlined in the GSA Sustainable Operations and Maintenance Tool and Reference Guide. The Contract shall operate all heating and cooling systems and equipment in accordance the Shave Energy program standards, best practices, training, and reference guides. The Contractor shall provide GSA documentation to support the Federal High Performance Guiding Principles 4.1 Outside Air Ventilation & Indoor Air Quality Best Management Practices as outlined in the GSA Sustainable Operations and Maintenance Tool and Reference Guide.

Besides the aforementioned lighting and HVAC efficiency measures, there are a great number of other no cost efficiency measures that can easily be implemented into building operation. The following list demonstrates a number of additional strategies the Contractor should adopt if appropriate and feasible at the GSA facility:

- Timer control for, or removal of, water fountain cooling systems
- Keypad access to freight elevators
- Smart programming for elevator operation (automated, timer, BAS, sleep mode)
- Extended elevator door close operation
- LED lighting for elevators, stairs, exterior, flood lighting
- Weather stripping of doors and windows
- Plug standby load controllers (timer, occupancy)
- Dynamic modification of BAS equipment schedules
- Additional strategies can be found in the National Energy Efficiency Best Practices Study.

EXHIBIT J.9
PREVENTIVE MAINTENANCE SCHEDULE

TO BE PROVIDED BY CONTRACTOR

K. REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF BIDDERS/OFFERORS

The following clauses are incorporated by reference:

52.212-3, Offeror Representations and Certifications – Commercial Items

L. INSTRUCTIONS TO OFFERORS

L.1 FAR and GSAR Provisions in Full Text

52.216-1 -- Type of Contract (Apr 1984)

The Government contemplates award of a Firm-Fixed Price contract resulting from this solicitation. (End of Provision)

52.252-1 -- Solicitation Provisions Incorporated by Reference (Feb 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address: http://farsite.hill.af.mil/vffara.htm

L.2 FAR and GSAR Provisions incorporated by reference.

52.214-12 Preparation of Bids.
52.214-34 Submission of Offers in the English Language
52.214-35 Submission of Offers in U.S. Currency.
52.214-4 False Statements in Bids.
52.214-6 Explanation to Prospective Bidders.
52.215-1 Instructions to Offerors-Competitive.
52.215-1 Instructions to Offerors-Competitive. Alternate I
52.237-1 Site Visit.

L.3. PRE-PROPOSAL MEETING AND SITE VISIT

The Pre-proposal Meeting and Site Visit will be held at the RC White Federal Building, 700 East San Antonio Avenue, El Paso, TX on Monday, June 19, 2017 starting at 1:00 pm MST. Please email COR and the Contract Specialist **t**o reserve a seat (seating is limited due to space). All contractors must present a photo ID. Please allow enough time to pass the security checkpoint in the building lobby. The meeting will begin promptly as scheduled.

The purpose of the meeting is to provide a briefing of the scope of work, overview contract requirements, and to allow prospective offerors the opportunity to ascertain the complexities and the location of the services to be performed, along with the general and

local conditions which could materially affect conduct of operations and the costs involved.

The Government considers attendance at this conference vital to the preparation of a competitive offer. It will enable the Contractor to become acquainted with the areas to be serviced, and to be aware of the specific problem areas which require special attention or services.

Failure to attend this meeting may not be used as an excuse for omissions or miscalculations in offers. It is emphasized that it is more advantageous for each offeror to have qualified representation at the Pre-Proposal conference.

While the meeting will provide an opportunity to discuss and clarify the solicitation provisions, nothing said or represented in the conference shall be deemed to modify the solicitation requirements unless followed by a written amendment.

Offerors are strongly encouraged to submit questions relative to the solicitation document in advance of the meeting, in writing, to the Contract Specialist, Amy Powell, so the Government representatives may prepare responses prior to the conference**. THE CUTOFF DATE FOR QUESTIONS UNDER THIS SOLICITATION IS CLOSE OF BUSINESS JUNE 27, 2017. QUESTIONS RECEIVED AFTER JUNE 27, 2017 MAY BE ANSWERED AT THE DISCRETION OF THE CONTRACTING OFFICER.**

A summary of the topics discussed at the conference will be provided to all prospective offerors. Seating capacity is limited (2 per firm request, if possible) and available on a first come, first served basis.

L.3.1. Site Visit/Walk-Through Tours

The site visit/walk-through portion of the buildings will be provided by GSA, beginning at directly after the Pre-Solicitation meeting. The site visit/walk through portion of the buildings may last 5 days. An opportunity will be provided to view all locations.

Prospective Contractors are encouraged to make an on-site, in-depth review of the facility(ies), equipment, job requirements, etc.

Please be aware that because of the potential for disruption to governmental activities, particularly in the U.S. Court, and other tenant areas, additional access to non-public areas of the building(s)/facility(s) for inspection purposes may not be possible.

Please limit the number of attendees per firm to 2 people.

L.4. Instructions for Submitting Proposals

The electronic proposals shall be received no later than July 21, 2017 at 2:00 CDT to the following address:

General Services Administration (GSA)
Public Building Service
Attn: Amy Powell, Contract Specialist (7PQB)
819 Taylor Street, Floor 12B01
Fort Worth, TX 76102

L.4.1. General

The following information is instructions for the preparation and submission of proposals. The purpose is to establish requirements for the format and content of proposals so that proposals contain all essential information and can be evaluated equitably. The proposal submission shall be clear, concise, and shall include sufficient detail to evaluate and substantiate the validity of stated claims. Offerors shall assume that the Government has no prior knowledge of the company's capability and experience.

Non-compliance may result in the offeror being ineligible for award. All proposal information is subject to verification by the Government. All information within the page limitations of the solicitation is subject to evaluation. Information that is contained in pages that exceed page limitations will not be evaluated. The Government will evaluate proposals in accordance with the evaluation criteria set forth in Section M of this solicitation.

Offerors are prohibited from modifying, in any way, shape, or form, any documents, printed or electronic, associated with this solicitation, including, but not limited to, the Statement of Work and any amendment(s) thereto.

The electronic solicitation documents, as posted on FedBizOpps.Gov (http://www.fedbizopps.gov) shall be the "official" documents for this solicitation. Any inconsistency between the official documents posted on FedBizOpps.Gov and the offeror's copy of these documents shall be resolved by giving precedence to the official documents posted on FedBizOpps.Gov. Additionally, any other documents provided to offerors by the Government via first class mail, express mail, electronic mail, or any other delivery method, shall be considered official documents, and shall not be altered.

L.4.2. Submittal Package

Failure to submit any of the following information, including any documents within each factor, may deem the offeror unacceptable for award.

L.4.2.1. Proposals shall be submitted in three (3) separate parts:

Part 1 - Technical Proposal

A. Management Plan
B. Experience
C. Past Performance

Part 2 - Price Proposal

Part 3 - Miscellaneous Documents

Signed Standard Form 33
Signed Standard Form 30 (s), if any
List on offeror key personnel and point of contact information
Proof of registration in System for Award Management (www.sam.gov)

L.4.2.2. Format

Offerors shall submit their Technical Proposal using the following format:

PDF Page size shall be 8.5 x 11 inches;

PDF Pages shall be single-spaced;

The font size shall be no less than eleven (11) point except for tables, charts, graphs and figures, which shall be no smaller than eight (8) point; text in "screen shot", intended for representation of the actual item, are exempt from font size requirements when there is accompanying text explaining them.

Top and bottom margins shall be at least one-inch. Margins may contain a disclaimer regarding proprietary information in the footer and provide corporate logos in the header within the one-inch top and bottom margins. Side margins shall be at least ¾-inch;

Tables, charts, graphs and figures may be used wherever practical to depict systems and layout, implementation schedules, and plans if necessary.

The proposal shall be provided on CD-R (not CD-RW) compact disks, using Adobe Reader (.pdf format) (Version 9.4) **and** Microsoft Word format (.doc format) for the technical proposal and Microsoft Excel 2007 (.xlsx format) for Figure B-3 Pricing of Services and Figure L-1 Management Plan Worksheet. All CD-R compact disk(s) shall be labeled with the solicitation number, company name and date. Offerors shall ensure that all disks are virus free. Nothing may be on the disks except the proposal files. Hard copies will **not** be submitted.

L.4.2.3 Submission

The offeror shall submit Part One - Technical Proposal, Part Two - Price Proposal and Part Three – Miscellaneous Documents in conformance with the outline detailed in this section.

Part One - Technical Proposal shall be marked "TECHNICAL PROPOSAL for Solicitation [GS-07-P-17-JU-D-0012]." The CD-R must consist of a consolidated Adobe Acrobat compatible .pdf file of all components of the technical proposal. Additionally, the CD-R must include original completed versions of spreadsheets provided in Section J in the format provided.

Part Two – Price Proposal shall be marked "PRICE PROPOSAL for Solicitation [GS-07-P-17-JU-D-0012]". The CD-R must consist of a consolidated Adobe Acrobat compatible .pdf file of all components of the price proposal. Additionally, the CD-R must include original completed versions of spreadsheets provided in Section J in the format provided.

Part Three – Miscellaneous Documents shall be marked "MISCELLANEOUS DOCUMENTS for Solicitation [GS-07-P-17-JU-D-0012]."

Note: For Miscellaneous Documents, the offeror must sign and submit the Standard Form (SF) 33 with their proposal, submit a copy of their SAM Registration in accordance with the paragraphs (4) and (5).

L.4.2.4 SF 33 Offer and Acceptance

Sign and date (Blocks 15, 17 and 18 of the SF 33) to constitute your acceptance of the terms and conditions of the solicitation

The Government requires a minimum acceptance period of not less than **90** calendar days. The offeror shall complete Block 12 of each SF 33 submitted with full cognizance of the minimum acceptance period established herein. "Acceptance Period" means the number of calendar days available to the Government for awarding a Contract from the date specified in this solicitation for receipt of your offer. Your offer may only specify a longer acceptance period than the Government's minimum requirement.

The offeror must fill out their address, phone number, and authorized representative to commit the offeror to contractual obligations (Block 15A, 15B, and 16 of the SF 33). The address must match the information in the System for Award Management (SAM). The mailing address listed in Block 15A will be the official mailing address used by the Government for letter correspondence.

The offeror must sign and date (Block 17 and 18 of the SF 33) to constitute your acceptance of the terms and conditions of the solicitation.

If any amendments to the solicitation are issued, the offeror must acknowledge the amendment number and date in Block 14 of the SF 33.

L.4.2.5 System for Award Management

The offeror must submit a current printed copy of the company's System for Award Management (SAM) data at https://www.sam.gov.

L.5. Technical Proposal Requirements

The technical Proposal submission requirements and outline, as set forth below, shall be in consideration of the required services as described in the solicitation.

The page limitations set forth below are not guides for Proposal submissions but are **FIRM** limits. Pages in excess of the stated limitations will not be considered in the evaluation of the Proposal.

L.5.1 Management Plan Proposal

L.5.1.1 Management Plan Narrative: There is a 10 page limitation for the Management Plan Narrative.

The Offeror's Management Plan narrative must demonstrate that all the services required by this solicitation will be satisfactorily performed. The Offeror shall explain in its Management Plan how it will continuously identify, mitigate, manage, and control risks. The Offeror must convey its ability to insure successful performance.

The Offeror shall demonstrate a clear understanding of the management and performance requirements of this solicitation by providing a concise description of offeror's proposal for the following topics:

- Managerial Approach

    - Explain the offeror's approach to recruit, retain, and train qualified personnel
    - Demonstrate how the offeror is going to fill unexpected manpower shortages until position is filled.
    - Explained the offeror's selection process and ongoing management of subcontractors. Detail the methodology for selecting, tracking, and managing subcontractors and other teaming arrangements, as well as a list of all work that will be subcontracted for each facility covered by the Statement of Work (if any)
    - Discuss the Communication Plan and the offeror's communication approach between Offeror's Personnel, CO, COR, Building Manager to include the ability to respond to emergencies 24 hours a day/7 days a week.

- Explain the logistic approach to parts and materials and inventory management to include emergency requisitions
- Demonstrate how the offeror will successfully operate and maintain GSA's Building Automation System (BAS) associate at this solicitation.

- Quality Control Plan:

  - Demonstrate how the offeror will be proactive in quality control plan
  - Demonstrate how the offeror will perform Quality Control on completed work to include frequency and sampling rates
  - Demonstrate how the offeror will conduct Facility Inspections to include frequency
  - Explain how the offeror will to schedule and perform corrective action on identified deficiencies.
  - Explain how management will allocate Quality Control personnel

L.5.1.2 Management Plan Worksheet and Narrative (if needed)

Figure L-1 indicates the government's baseline manpower projection. The projection is not intended to mandate the labor mixed utilized fulfill this requirement. The offeror may elect to propose any alternative that will fulfill the requirement of this solicitation. If the offeror elects to deviate from the government's manpower projection, the offer must submit a Worksheet Narrative explaining how their proposed manpower approach will meet the requirement of the solicitation. **There is a 2 page limitation on the Worksheet Narrative.**

L.5.1.2.1 Additional information regarding Management Plan Worksheet

The staffing/labor mix proposed in the Management Plan Worksheet **must** be adhered to for the Base year period of performance. The offeror may request an annual review of the labor mix **60** days prior to issuance of the first Option Period. Any requests for changes to the Management Plan Worksheet may be submitted and considered at that time. Any approved adjustment to the labor mix will not result in an increase in price. However, any request to reduce manpower may result in a lower price to be negotiated at time of request. Any deviation from the accepted/approved Management Plan Worksheet may result in deductions.

L.5.1.2.2 Worksheet Instructions.

The Management Plan Worksheet attached to this solicitation **must** be utilized for this purpose. See the Microsoft Excel Attachment, Section J.8, titled, "Management Plan Worksheet" FIGURE L-1. No other Management Plan Worksheet will be considered.

The Management Plan Worksheet must be filled out according to the following instructions.

1. An example has been provided as a guide for how to fill out the worksheet.

2. Boxes highlighted in RED are the only input areas allowed by the Offeror. After inputting the numerical data, the Excel spreadsheet will automatically calculate in the ORANGE boxes. Offerors may NOT change any boxes shaded in BLUE.

3. The Management Plan Worksheet must include supervisory and productive work schedules indicating classification of employees for each facility covered by the Statement of Work. When inputting the supervisory classification, the offeror must include "(SUPERVISORY)" next to the position title.

4. Work schedules must be broken out according to LOCATION – See Section C. Scope of Work

5. The labor DISCIPLINE must match the discipline as stated in the Department of Labor Wage Determination or CBA as applicable. Offerors shall list DOL or CBA next to the labor discipline as applicable.

6. 2080 Hours is considered 1 Full Time Equivalent (FTE). This is the maximum number of work hours per year. Provide the lines of authority and responsibilities to act and to commit for timely problem identification and quick mitigation.

7. WORK SCHEDULE for each discipline. See Normal Working Hours in Section C. Scope of Work.

L.5.2 Experience

The offeror must submit a minimum of 3 projects within the last 5 years that detail experience that is similar to scope and magnitude of this requirement. The offeror must demonstrate experience providing contract services for the management, supervision, labor, materials, equipment and supplies in the services described in Section C that are similar in nature to the size, scope, and complexity of the services being required by this solicitation. To be considered similar the project provided must demonstrate:

- Performing required services for building with approximately 1,054,885 square feet or greater
- Perform required services for multi-storied/multi-tenant
- Ability to periodically conduct 24 hour operations
- Ability to perform schedule and unscheduled maintenance and repair of equipment and systems
- Ability to operate and maintain Electrical Systems & Equipment
- Ability to operate and maintain mechanical, plumbing, BAS, HVAC (Boilers, Chillers, AHU's)

- Ability to operate and maintain fire protection and life safety systems and equipment
- Experience with building automation control systems such as BAS, Niagra Tridium JACE, Public Address, and Computerize Lighting Systems
- Ability to operate and maintain architectural and structural systems, fixtures and equipment
- Ability to conduct Service Request Desk Operation to include CMMS
- Maintenance of landscape irrigation systems
- Ability to operate and maintain egress and access systems to include: Locks, keys, keycard system, vehicle barrier system, static and dynamic bollard systems, dock levelers and bumpers, roll-up and sliding garage doors.
- Experience with Storm Drainage System
- Ability to operate and maintain sanitary sewage equipment and systems

The offeror must submit a minimum of 3 projects but may elect to provide up to 5 projects to demonstrate experience. Each project should be submitted separately. **There is a 2 page limitation for each project submitted.** For each Project, the Offeror must provide the following information:

- Contractor's Name
- Contract Number
- Dates of Contract Performance
- Contractor's DUNS
- Total Contract Value (including options)
- For Government Contracts: Indicate if a Contract Performance and Assessment Report was accomplished.
- Contractor role: [i.e., Prime, Subcontractor, or Joint Venture]
- Address, City, and State of performance
- Building Name, Square Footage, and Type of Services: [Identify each building name, the square footage of each building, and what types of services were provided in each building]
- Total Square Footage
- Type of Space Serviced: [i.e., Commercial Office Building, Federal Courthouse, Federal Parking Garage, etc.]
- Contract Requirements: Describe all services provided under the contract and any special/unique contract requirements.
- Describe any problems encountered and how they were resolved, and describe the autonomy and authority of the Project Manager
- Briefly describe how this project met each of the relevancy criteria listed above

L.5.3 Past Performance

The offeror must demonstrate that they have satisfactorily performed comparable services to those described in this solicitation. Past Performance information must be submitted on the 3 projects that were submitted for evaluation under L.5.2 Experience. If a CPARS report was accomplished on the projects submitted, the government will use the CPARS report to evaluate Past Performance. If the project(s) were not evaluated in CPARS, the Past Performance will be evaluated using the Past Performance Questionnaire using the directions below. The offeror may submit Past Performance on an additional 2 projects for a maximum of 5 Past Performance projects.

For offers from joint ventures, past performance records of the joint venture and both firms will be considered. A minimum of 1 of the maximum 5 Past Performance projects must be submitted from each member of the joint venture. An offeror may also submit a past performance record for a joint venture in which they were a party; however, they must clearly specify their role and contribution to the joint venture. In accordance with FAR 15.305(a)(2)(iii), the evaluation will take into account past performance information regarding predecessor companies, key personnel who have relevant experience, or subcontractors that will perform major or critical aspects of the requirement when such information is relevant as long as it is properly identified.

The Government is not limited to only those references provided by the offeror. The Government may also consider the offeror's performance on contracts not submitted by the offeror that the Government is aware of or becomes aware of as a result of reference interviews. Additionally, the government may consider information in the Past Performance Information Retrieval System (PPIRS), Contractor Performance Assessment Reporting System (CPARS), or any other available government database.

L.5.3.1 Past Performance Questionnaires

The offeror must submit a Past Performance Questionnaire on the 3 projects used for the Experience factor. The offeror may submit an additional 2 Past Performance Questionnaire they deem similar to the size, scope, and complexity of this solicitation. The "Past Performance Questionnaire" attached to this solicitation **must** be utilized for this purpose. See the Attachment titled, "Past Performance Questionnaire" FIGURE L-2. If the projects being submitted have been evaluated in CPARS, the offeror will complete the CONTRACT IDENTIFICATION section of the questionnaire and submit with their proposal, no further action is required.

Past Performance Questionnaires must be received by the Contract Specialist by the due date for receipt of proposals.

The Offeror shall **e-mail** the Past Performance Questionnaires to the Past Performance references and instruct the references to **e-mail** their responses directly to the GSA Contract Specialist, Amy Powell at amy.powell@gsa.gov. The offer must submit a copy

of the Past Performance questionnaire with the Contract Identification and Respondent Identification completed.

An Optional e-mail instruction is provided below to assist in requesting this information from the references:

We are preparing a Proposal for Operation & Maintenance Services in El Paso, Texas. The solicitation requires submission of Past Performance Questionnaires. See attached Past Performance Questionnaire.

In accordance with the solicitation instructions, the following Past Performance Questionnaire must be filled out ***and e-mailed to the Contract Specialist, Amy Powell, at amy.powell@gsa.gov.***

If you have questions you may contact Amy Powell by telephone or e-mail at the following location.

General Services Administration (GSA)
Public Building Service
Attn: Amy Powell
Ph: 817-850-5545
Email: amy.powell@gsa.gov

*Please ensure the Past Performance Questionnaire is received by the Contract Specialist on or before July 21, 2017. The e-mail subject line should be marked "Past Performance Questionnaire – Solicitation [*GS-07-P-17-JU-D-0012*]"*

L.6. Pricing Proposal Requirements

The Offeror shall submit the following pricing in the format specified herein.

The "Pricing Template" attached to this solicitation **must** be utilized/ See the Microsoft Excel Attachment, Section J.7., titled, "Pricing Template" FIGURE B-3**. No other pricing template will be considered.**

The Offeror shall only fill in the shaded areas of the pricing template for the initial Base Period and all option periods.

Failure to propose pricing as specified below will result in a rejection of your offer based on non-responsiveness.

a. Standard Services (See Section B.1.0. of the pricing template): The Offeror must propose a price per month for services for facilities listed in Section C.1.

b. Above Standard Services (See Section B.1.1 of the pricing template): Propose a fully burdened price per hour for (6:00am to 6:00 pm) and (6:00 pm to 6:00 am) for each of the skill tasks indicated. Additional services are defined in Section C Statement of Work and Section HM.18. A fully burdened price per hour is defined as a price that includes wages, overhead, general and administration expenses, and profit.

c. Markup Coefficient (See Section B.1.2. of the pricing template): Markup Coefficient includes all material handling fees, including General and Administrative (G&A) fees, and profit. No additional markup coefficient is allowable under this contract. The markup coefficient rate is fixed and applies **only** to parts, materials, and equipment for reimbursable repairs or additional services. See Section C.

The Offeror must propose a fixed markup coefficient for the base and each option period. The proposed material markup rate shall be fixed throughout the life of the contract for reimbursable repairs and additional services under Section B pricing.

M. EVALUATION FACTORS FOR AWARD

M.1. 52.217-5 -- Evaluation of Options (Jul 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

M.2. Basis for Award

Award will be made to a responsible offeror whose proposal is determined to provide the best value to the Government. Trade-off analysis of price or technical factors will be used in the award determination.

The Government intends to evaluate the proposal and award a contract without discussions with the offeror, except for clarifications, as described in FAR 15.306(a). Therefore, the initial proposal should contain your best terms from a Technical and Price standpoint. However, the Government reserves the right to conduct discussions if determined necessary.

All evaluation factors other than price, when combined, are significantly more important than price. The following evaluation factors will be used to evaluate each proposal. Award will be made to the offerors whose proposal is most advantageous to the government based upon an integrated assessment of the evaluation factors and subfactors described below:

Factor 1: Technical Proposal:

This factor is further divided into the following subfactors:

Subfactor 1: Management Plan
Subfactor 2: Experience
Subfactor 3: Past Performance

Evaluation of the offeror's proposal shall address each subfactor as it applies to the Performance Work Statement. A detail explanation of the criteria for the evaluation is set forth below. During evaluations of each proposal, the government will assign each subfactor and adjectival rating and write a narrative evaluation reflecting the identified findings.

Factor 2: Price:

The resulting award will be a Firm Fixed Price contract. Price reasonableness will be utilized in the valuation of the Firm-Fixed Price effort.

Relative of Importance:

All evaluation factors other than price, when combined, are significantly more important than price.

M.3. Evaluation Approach

The overarching evaluation approach for all factors and subfactors is as follows:

Adequacy of Response. The proposal will be evaluated to determine whether the offeror's methods and approach have adequately and completely considered, defined, and satisfied the requirements specified in the solicitation. The proposal will be evaluated to determine the extent to which each requirement has been addressed in the proposal in accordance with the proposal submission section of the solicitation.

Feasibility of Approach. The proposal will be evaluated to determine the extent to which the proposed approach is workable and the end results achievable. The proposal will be evaluated to determine the extent to which successful performance is contingent upon proven devices and techniques. The proposal will be evaluated to determine the extent to which the offeror is expected to be able to successfully complete the proposed tasks and technical requirements within the required schedule.

Marginal ratings of any factor or subfactor could indicate a lack of understanding concerning requirements of the solicitation and may result in the entire proposal receiving an unfavorable rating and/or being eliminated from the competitive range.

M.3.1 Factor 1 – Technical Proposal

M.3.1.1 Subfactor 1 Management Plan: This subfactor evaluates the offeror's proposed Management Plan for the basic contract period and all option years. The evaluation will focus on the offerors':

- Managerial Approach: The offeror will be evaluated on the areas and requirements identified for submission Section L. The narrative will be evaluated for understanding and ability to complete the requirements of the solicitation.

- Quality Control Plan: The offeror will be evaluated on the areas and requirements identified for submission Section L. The narrative will be

evaluated for understanding and ability to complete the requirements of the solicitation.

- Management Plan Worksheet will be evaluated on how well the offeror demonstrates a clear understanding of the service requirements, proposed labor and labor mix, and ability to identify, mitigate, manage, and control risks for successful performance and customer satisfaction. If the offeror deviates from the government's baseline and submits a Worksheet Narrative, the narrative will be evaluated on the ability to meet the requirements of the solicitation with the proposed manpower.

M.3.1.2 Experience.

This subfactor evaluates the offeror's proposed Experience for the basic contract period and all option years. The evaluation will focus on the offerors experience with projects that are similar in scope and magnitude of this requirement. The offeror will be evaluated on the areas and requirements identified for submission Section L.

M.3.1.3 Past Performance.

The Government will evaluate the offeror's record of past and current performance to ascertain the probability of successfully performing the required efforts of the PWS. The offeror's past performance will be evaluated on the services performed to the services required under this solicitation, the record of conforming to contract requirements and standards of good workmanship, and the commitment to customer satisfaction.

The Past Performance evaluation will take into account any past performance information regarding predecessor companies, key personnel who have relevant experience or subcontractors that performed major or critical aspects of the requirement when such information is relevant. For joint ventures, past performance records of both firms will be considered.

In the case of an offeror without a record of relevant past performance or for whom information on past performance is not available, the offeror will not be evaluated favorably or unfavorably on past performance.

M.3.2 Price Evaluation

The Government may use various price analysis techniques and procedures to evaluate price.

Total evaluated price will be calculated by adding the total price for the base and option periods combined in accordance with the pricing template submitted by the offeror. For purposes of the determining total price evaluation, the price for an extension of services

authorized by FAR 52.217-8 will be evaluated as part of the Option IV price; however, if the option to extend services is exercised pursuant to FAR 52.217-8, the rates will be the same as the immediately preceding contract period (i.e. after the initial contract period, Option I, Option II, Option III, Option IV).

Prices for Above Standard Services and pre-priced tasks will not be included in the total evaluated price. However, the prices will be reviewed for price realism and may be subject to discussion. Prices for Above Standard Services and pre-priced tasks, when reviewed in conjunction with the total evaluated price, should be consistent. Offerors with low total evaluated price and high prices for Above Standard Services and pre-priced task may be considered unbalanced pricing and may result in the offer being rejected.

NOTE: The price may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. A price adjustment for supplies, materials, equipment and labor other than prevailing labor rate revisions will not be considered.

M.4 Miscellaneous Documents

This is not an evaluation factor. However, failure to submit completed, required documents may result in the offeror being considered non-responsive and eliminated from further consideration.

AGREEMENT

between

Prime Star Construction Corporation

and

LOCAL 351, INTERNATIONAL UNION OF
OPERATING ENGINEERS, AFL-CIO

Maintenance Services
January 1, 2017 thru December 31, 2018

CONTENTS **PAGE NO,**

This Agreement, made and entered into this ____ day of _____2016, by and between Prime Star Construction Corporation with its principal office at 1402 Corinth Ste 251, Dallas TX 75215 (hereinafter referred to as the "Company") and Local 351 of the International Union of Operating Engineers, AFL-CIO, with its principal office at 111 East Coolidge - Borger, Texas 79007 (hereinafter referred to as the "Union").

Article 1
Union Recognition

The Company recognizes the Union as the sole and exclusive bargaining agency in all matters concerning wages, hours and working conditions for all maintenance employees personnel employed by the Company under GSA El Paso Full Maintenance Contract No. GS-O7-P-15-JU-D-7003 excluding, custodial and, guards, professional employees, confidential employees and supervisors as defined in the National Labor Relations Act as amended

Article 2
Union Security

All employees covered by this Agreement, as defined in Article 1, including temporary employees shall, as a condition of their continued employment become members of the Union not later than the 31st day following the date of their employment or the effective date of this Agreement whichever is later, and shall, thereafter, remain members in good standing in accordance with Section 8 (a) (3) of the Labor-Management Relations Act, 1947, and any amendments or additions thereto.

Article 3
Check-off Authorization

Upon receipt of a signed authorization of the employee involved, the Company shall deduct from the employee's pay, consistent monthly dues, payable to the Union.

The Union further agrees to save the Company harmless from any legal actions growing out of these check-off deductions that may be instituted by any employee involved therein before a court, the National Labor Relations Board, or any other body asserting or having jurisdiction, against the Company and further agrees to reimburse the

Company for any financial payment adjudged by a court, the National Labor Relations Board, or any other body asserting or having jurisdiction, against the Company as well as reasonable costs and expenses involved in defense of any such action as set forth in this paragraph.

The current dues structure is two times the regular rate plus $ 11.75 per month.

If any change in the amount of dues is made by the aforesaid Union during the term of this Agreement, the Union will give written notice of such to the Company.

Article 4
Rights of Management

Except as specifically limited by the express language of this Agreement, the Company has and retains exclusively to itself, all rights in the exercise of the functions of Management, including but not limited to the following rights: To manage and operate its business facilities; to direct its employees; to direct, plan, and control all operations; to establish and/or change existing methods, work schedules, productivity standards, materials, equipment, facilities and accounting methods. The company shall determine what products shall be handled or distributed and service or work performed at its facilities by employees covered by this Agreement and/or where they shall otherwise be handled or services and/or work performed to utilize suppliers and subcontractors. The company shall test, select and hire employees and assign them to work as needed, to establish hours of work, to transfer, promote and demote employees for just cause. The Company shall have the right to suspend, discipline and discharge employees for just cause or relieve them from duty for lack of work or for other proper reasons. The Company shall have the right to establish and enforce rules and regulations relating to the operation of any and/or all facilities and to employee conduct.

Article 5
No Strike - No Lockout

During the life of this Agreement, the Union shall not authorize, and the employees shall not participate in a strike of any kind, or any boycott, picketing, work stoppage, slowdown, or any other type of organized interference, coercive or otherwise, with the Company's business. During the life of this Agreement, the Company shall not lock out the employees.

Article 6
Seniority

Section 1. Classification Seniority under this Agreement shall be defined as length of continuous service by work classification on a regular assignment. Company Seniority under this Agreement shall be defined as length of continuous service from the employee's date of hire by the Company or a previous contractor performing the services under any prior contracts of the same properties performed for the General Services Administration, El Paso District.

Section 2. The Company shall establish available work shifts, days off and vacation periods. Classification Seniority shall be considered in the selection of work shifts, days off, reduction and restoration of the working force. Company Seniority shall be considered in the selection of vacation periods, amount of vacation, and sick leave.

Section 3. Classification and Company Seniority lists shall be prepared by the Union Steward in conjunction with Company and shall be posted January 1st of each year and shall be revised each six (6) months thereafter. Such lists shall be subject to correction upon protest and clarification, but if no complaint is made within thirty (30) days of posting, the list published will be assumed to be correct.

Section 4. In case of layoff, seniority by classification shall be followed with due consideration for the efficiencies and special needs of the operation. In case of the restoration of the working force, seniority by classification shall be followed with due

consideration for the efficiencies and special needs of the operation. The Steward shall be the last employee in his classification laid off provided he has the ability to perform the remaining work.

Employees who are promoted to positions excluded from the bargaining unit will be given a leave of absence from the bargaining unit for three (3) months and shall continue to retain and accrue seniority during that period. If at the end of this period the employee has not returned to work within the classifications covered by this Agreement, he shall lose all seniority rights under this Agreement, and his name shall be removed from the seniority lists.

Section 5. Employees covered by this Agreement shall lose their seniority status and their names shall be removed from the seniority lists under the following conditions:

A. The employee quits or resigns.

B. The employee is discharged for cause.

C. The employee is laid off and not re-employed within six (6) months.

D. The employee has been laid off for less than six (6) months and the employee does not return to the service on or before a date specified in a Registered Mail letter from the Company mailed to the employee's last known address offering such employee re-employment, which date shall not be prior to five (3) days after mailing such notice, provided, however, that this paragraph D shall not apply to offers of temporary work. If after the allocated 3 days the position has not been filled the employee will be given first choice for rehire.

E. An employee, while on a leave of absence, accepts another job, applies for unemployment compensation, or goes into business for himself, his employment and all seniority rights will automatically be terminated.

F. The employee fails to return to work at the expiration of either a medical or personal leave of absence.

G. Absence from work for three (3) days or longer without notice.

Article 7
Probationary and Temporary Employees

Newly hired employees shall be on probation for the first ninety (90) days of employment. During this period, employees shall receive the rates of pay provided herein, but shall not be entitled to any other benefits under this Agreement. During the probationary period, the Company may discipline or discharge any employee for any reason without recourse to the grievance procedure.

Upon completion of the probationary period, employees shall be placed upon the seniority list as of the first date of employment. Seniority shall be by classification and all benefits provided in this Agreement shall be accrued by service within a given classification, including layoff and rehire after layoff. Employees will, however, accrue vacation and sick leave benefits based on their total length of service with the Company.

Temporary employees are those who are employed for a period of ninety (90) days or less with notification to the Union.

Article 8
Wages, Health & Welfare and Pension

The Wage rates which shall be effective during the term of this Agreement are set forth in Schedule "A".

The Health & Welfare and Pension rates which shall be effective during the term of this Agreement are set forth in Schedule "B".

Article 9
Hours of Work and Overtime

Normal Hours. The provisions of this Article are intended only to provide a basis for determining the number of hours of work for which an employee shall be entitled to be paid at overtime rates and shall not be construed as a guarantee to such employee of any specified number of hours of work either per day or per week, or as limiting the right of the Company to determine and fix work schedules and to require such employees to work any specified number of hours either per day or per week.

The normal work week for full time employees, shall be forty (40) hours, consisting of five (5) work days of eight (8) hours each day in a pay week. Where possible each employee shall have two (2) regularly assigned days off after each forty (40) hour workweek and, these days shall be consecutive. Should an employee be assigned to work on either of his/her assigned days off, or both, shall be paid overtime accordingly, but shall not be reassigned alternate days off to avoid payment of overtime. All employees are paid semi-monthly.

Overtime. The rate of one and one-half times (1 1/2 X) the regular straight time rate of pay shall be paid for all work performed in excess of forty (40) hours in any pay period running Sunday through Saturday and for all work performed on a holiday as defined in this Agreement in addition to holiday pay.

In order to meet operational or maintenance needs, or in case of emergency, employees may be required to work overtime.

The Company will make every reasonable effort to distribute overtime opportunities as equally as practicable among employees in their respective job classifications within a reasonable period. However, familiarity and assignment to buildings will also be taken into consideration.

The Company shall be free to fix the starting hours of shifts and to determine the work schedule from depending upon the business requirements. The Company agrees, when possible,

to post a work schedule at a convenient place for observation by the employees at least one (1) week in advance. All changes in regular scheduled days off and shifts shall be posted 48 hrs. in advance unless there is an emergency.

Article 10
Holidays

The Company will pay eligible employees for the following holidays not worked:

New Year's Day	Labor Day
Martin L. King's Birthday	Columbus Day
President's Day	Veteran's Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

Employees will be paid their normal scheduled hours at their normal straight time hourly rate for holidays. Employees required to work on a holiday shall be paid in addition to their normal straight time rate an additional standard straight time rate for the holiday hours worked. This additional straight time rate will be paid in addition to the holiday pay.

To be eligible to receive holiday pay, an employee must be on the active payroll and must work the last regularly scheduled shift prior to and the first regularly scheduled shift following the holiday unless he is on vacation.

If a holiday falls within an employee's vacation period, the employee shall be paid eight (8) hours additional pay at his straight time hourly rate in lieu of the holiday.

Article 11
Vacation

An employee who shall have attained the years of continuous service specified in the following table, shall receive a regular vacation corresponding to such years of continuous service with vacation pay as shown in the following table:

Years of Service	Entitlement
One (1) year of service	Ten (10) days
Five (5) years of service	Fifteen (15) days
Ten (10) years of service	Twenty (20) days

The Company shall have the exclusive right to fix and determine the vacation schedule; however, wherever practicable the Company will provide priority consideration to those employees with the most seniority in scheduling vacation, but such schedule will necessarily be governed by the operating requirements of the facility.

Vacation payment will be calculated on the basis of a regularly scheduled day at the employee's straight time rate in existence at the time of vacation.

Payment of vacation pay shall be made to each employee entitled thereto on the last regular payday of the company published payroll schedule.

Vacations shall be based on an employee's anniversary date.

Eligible employees who are laid off or otherwise removed from the payroll, shall be paid any accrued vacation pay. Employees discharged for cause or employees who do not provide two (2) weeks' notice of resignation shall not receive any vacation pay.

Article 12
Jury Duty

An employee summoned for Jury Duty to a court of record shall be allowed, whenever possible, the necessary time off for such service.

Whenever an employee may be summoned, he shall be compensated for the difference between his straight time hourly rate for such scheduled work hours lost and the payment received for jury duty, to a maximum of five (5) days, following presentation to the Company of a statement from the clerk of the court showing the dates of such service and the amount of compensation thereof.

Jury Duty requiring more than five (5) days shall be reviewed on a case-by-case basis and the Company's Project Manager of the Facilities with its Corporate Office and the Union Representative will make a decision.

Article 13
Disciplinary Actions

Employee Discharge: The Employer reserves the right to discharge any employee for just cause. No employee shall be discharged, except hereinafter provided, unless he/she shall have been given warning notices, in writing. Whenever a warning notice is issued by the Employer, a copy of such notice shall be sent simultaneously to the Union Business Manager. Such notice shall state the complaints of the Employer.

1st Offense:	Written Warning
2nd Offense:	Written Warning or Discharge depending on severity of the incident (i.e., insubordination)
3rd Offense:	Time Off or Discharge

No warning notices need to be given to an employee before he/she is discharged if the cause of such discharge is for proven dishonesty, sexual or other discriminating harassment,

theft, insubordination, possession of weapons or explosives, inability to maintain security credentials, Conviction of a felony or misdemeanor which compromises the integrity of the business or is otherwise related to the employee's job duties, drug sale, use, possession or impairment, drunkenness, willful destruction of property, or willful damage of equipment. All official disciplinary warnings against an employee's record shall be in writing and a copy thereof shall be given to the Union.

In the event any employee goes for a period of twelve (12) consecutive months without receiving an official warning on the same all previous warnings for that subject shall be removed from consideration of any proceedings which affect the status of the employee.

Drug and Alcohol Testing:

The Company and the Union agree to work toward the goal of establishing a work force that is free of drug abuse and alcohol abuse. Both are committed to foster safety, productivity, and compliance with the Drug-Free Work Place Act of 1988 and applicable Federal and State laws, statutes and regulations. Accordingly, it is agreed that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is strictly prohibited in the work force.

Further, the use of alcohol is strictly prohibited in the work place. The Company's Drug-Free and Alcohol-Free Policy will be made an appendix to this agreement.

Employees will be scheduled for alcohol and drug testing as directed or required including pre-employment. When the employee is notified of being selected for drug testing, they will be offered union representation by a steward prior to and during the actual sample gathering process. The Company will make every reasonable effort to safeguard the privacy of the employee. All testing will be performed by a federally approved testing laboratory. Employees may also be sampled for alcohol and drug use upon reasonable suspicion, random testing and work related accidents or injuries.

Article 14
Grievance and Arbitration

Section 1. Definition: A grievance is defined as a dispute, difference, disagreement or complaint between the parties related to wages, hours, and conditions of employment. A grievance shall include, but is not limited to the complaint of an employee, Company, or of the Union which involves the interpretation, application of or compliance with the provisions of this Agreement.

Section 2. Procedure:

Step I Within five (5) working days of an incident or event giving rise to a grievance, the Shop Steward must provide a written grievance to the Project Manager in order to initiate the grievance. The employee may accompany his Steward, if he so desires. The Company shall render a written decision within five (5) working days hours after the conclusion of the Step I hearing.

Appeal If the Union wishes to appeal, it must appeal a denied grievance to Step II within forty-eight (48) hours after the receipt or non-receipt of the Company's decision. Such appeal shall be in writing to the Project Manager or department head of the Company's operation at the facility.

Step II The Shop Steward or Union Representative shall represent the employee. The Project Manager or department head shall meet with the Steward or Union Representative as expeditiously as possible. A decision by the Company shall be rendered within ten (10) working days .

Appeal The Union may appeal a denied Step II grievance to Step III within ten (10) working days of the receipt or non-receipt of the Step II decision. The Union must provide written notice of appeal.

Step III The Union Business Representative shall meet to discuss the grievance with the Project Manager and the Company's Corporate Representative as expeditiously as possible. A written decision by the Company shall be rendered within ten (10) working days.

Appeal The Union may appeal a denied Step III grievance to Arbitration within twenty (20) working days of the receipt or non-receipt of the Company's decision. The Union must provide written notice of appeal and the Company will render a written decision within ten (10) working days.

Step IV Arbitration: In the event that the Union or the Company elects to arbitrate the grievance, it shall be heard by an arbitrator to be designated by mutual agreement of the Company and the Union.

In the event the parties fail to mutually agree upon an arbitrator, either party may move to arbitration through the rules of arbitration as provided by the Federal Mediation and Conciliation Service.

The arbitrator's decision shall be final and binding on all parties concerned. Any compensation required to be paid to the arbitrator shall be borne equally by the parties.

The arbitrator shall have jurisdiction and authority to apply, interpret and determine compliance with the terms of this Agreement but in no case add to, deviate from, detract from or alter in any way the provisions of this Agreement. The decision of the arbitrator shall be confined to the matter submitted to him for arbitration.

Article 15
UNIFORMS

The Company will provide five (5) sets of uniforms at no cost to the employees. In addition the Company will provide two (2) replacement sets of uniforms each year if necessary. The uniforms will consist of shirts and trousers. Uniforms will be cleaned by the Company thru its uniform service. The Company shall provide reimbursement to employees for the cost of

safety boots not to exceed $100 per year with receipt. The Company will determine which positions are designated for this reimbursement.

Article 16
Health and Safety

The Company and the Union shall cooperate to promote employee safety and accident prevention in and around all operations and premises.

The Company shall maintain safe, sanitary and healthful conditions and shall provide first aid equipment to take care of employees in case of accident or illness.

It shall be the responsibility of each employee to maintain his place of work in a clean and orderly condition. Employees shall be required to observe safety rules and regulations established by the Company, including the use of prescribed safety equipment or clothing.

As a condition of continued employment all employees shall be required to conform to all reasonable work rules and regulations that may be issued by the Company from time to time pertaining to the operations, health and safety.

Article 17
Leave of Absence

Employees with at least one (1) year of service may, at the discretion of the Company, be granted a leave of absence without pay for periods not to exceed thirty (30) calendar days in any year.

Employees are allow to donate, and/or contribute any leave days to another employee.

Article 18
Visitation Rights

Officers of the Union shall have the privilege of visiting members of the Union during working hours upon reasonable notification of the Manager or his designee but only to such extent as does not neglect, retard or interfere with the work or duties of employees. This may not be in violation of any Federal Government standards or security provisions. It must also be during the employee's time not designated for work.

Article 19
Captions and Terms

Captions or Articles of this Agreement are for convenience only and do not in any way limit or amplify the terms and provisions thereof. Wherever the singular or plural number is used herein, it shall equally include the other and wherever the masculine or feminine gender is used, it shall equally include the other.

Article 20
Saving Clause

Should any part or provision of this Agreement be rendered invalid by reason of any existing or subsequently enacted legislation, such invalidation of any part or provision of this Agreement shall not invalidate the remaining portions hereof, and they shall remain in full force and effect.

Article 21
Bulletin Boards

The Company agrees to provide Union with a bulletin board, however, all material to be posted requires the approval of the Company's Project Manager or his designee prior to posting.

Article 22
No Discrimination

It is agreed by the Company and the Union, there shall be no discrimination against any present or future employee by reason of race, creed, color, age, disability of any individual in accordance with applicable law, national origin, sex, sexual preference, veteran's status or as a veteran of the Vietnam era.

Article 23
Shop Steward

The Union may select two (2) employees of the Company to act as Shop Steward and shall notify the Company upon selection. A Shop Steward's authority shall be limited to and shall not exceed the following duties and activities:

Section 1. The investigation and presentation of grievance to the designated Company's representative in accordance with the provisions of the collective bargaining agreement.

Section 2. **The** Shop Steward may receive and may discuss grievances of employees on the premises of the Company, but only to such extent as the receiving and discussing of grievances as does not neglect, retard or interfere with the work or duties of employees. Shop Steward shall obtain permission of his respective supervisor prior to leaving his work assignments to handle grievances, and report to his supervisor upon return.

Section 3. The transmission of such messages and information which shall originate with and be authorized by the local Union, or its officers, provided such messages and information had been reduced to writing and, if not reduced to writing, are of a routine nature and do not involve work stoppages, goods or other interferences of the Company's business.

Section 4. Any activities undertaken by the Shop Steward outside of his normal working hours, shall not be considered as time worked for pay or overtime purposes.

Article 24
Call-in Pay

If an employee has completed his shift, leaves the premises, and is called back to the facilities, he shall be guaranteed a minimum of two (2) hours pay or actual time worked at the applicable rate, whichever is greater, measured from the time he/she receives the call until the time he/she completes work on the callout and closes out the service order. If the employee receives additional calls during the time between the first call and prior to closing out the service order, no additional two (2) hours minimum will be paid for the new call. This will not apply to repeat calls from the initial call for the same issue and is applicable if the employee is more than 5 (five) miles away. This provision shall not apply, however, when the employee is called in for work prior to his regular shift and is scheduled to work up to and through his regular shift. The fore-going guarantee shall not apply in the event the call-in is the result of the employee's prior negligence or poor workmanship. All call-ins must be approved by the project manager or his designee.

Article 25
Sick Leave

Employees are entitled to sick leave, with pay, at the employee's regular rate of pay, as identified in Schedule "A". The Company requires medical proof of illness for absences in excess of three (3) consecutive days, or as needed based on individual circumstances, and failure to provide said proof may result in non-payment of sick leave pay, as well as disciplinary action. Employees may use sick leave in one (1) hour increments. The employee will accumulate 4.67 hours per month or 7 full days per year. Sick leave not used will be paid on the next pay period after the anniversary date of this agreement.

Sick leave may be used in the event of a personal illness or when an immediate family spouse, child (including stepchild), parent (including stepparents and in-laws), sibling (including in-laws), and grandchild member requires care due to illness or injury or for a doctor or dental appointments for the employee or immediate family member.

ARTICLE 26- BEREAVEMENT LEAVE

Employees are authorized up to three (3) days of paid leave for a death in the immediate family. These 3 days must include the day of the funeral or burial, and they must be used consecutively. The maximum amount of bereavement leave that may be requested by an employee in any fiscal year is four (4) days.

For purposes of this Section, the immediate family includes: spouse, child (including stepchild), parent (including stepparents and in-laws), sibling (including in-laws), grandparent (including in-laws) and grandchild.

Proof of death and/or relationship to the deceased will be required.

Article 27
WAGE RATE CLASSIFICATIONS

The wage rate classifications and present job titles applicable thereto are attached and made part hereof as Schedule "A". Employees will be paid for time worked in each classification to which assigned at not less than the job rate for the work performed.

Article 28
Modification

It is the intent of the parties hereto that the provisions of this Agreement, which supersedes all prior agreements and understandings, oral or written, express or implied, between such parties, shall govern their entire relationship and shall be the sole source of any and all rights or claims which may be asserted in arbitration hereunder, or otherwise.

The provisions of this Agreement can be amended, supplemented, rescinded or otherwise altered only by mutual agreement in writing hereafter signed by the parties hereto.

The parties hereto mutually agree not to seek, during the term of this Agreement, to negotiate or bargain with respect to any matters pertaining to rates of pay, wages, hours of

employment, or other conditions of employment, covered by this Agreement or in the negotiations leading thereto, and any rights in that respect are hereby expressly waived.

The provisions of this Agreement shall be conclusive as to all bargainable matters relating to wages, hours or work, and working conditions, except that rates of pay for new classifications are bargainable. Therefore, the Company and the Union, for the lifetime of the Agreement each agree that the other shall not be obligated to bargain collectively with respect to any subject matter referred to or governed by this Agreement, unless the Company and the Union mutually agree to alter, amend, supplement, enlarge or modify any of its provisions.

Article 29
Duration

This Agreement shall be in full force and effect from 12:01 A.M. January 1, 2017 to 12:00 midnight December 31 2018, and shall continue from year to year thereafter, unless written notice of desire to modify or terminate the Agreement is served by either party upon the other sixty (60) days prior to the date of expiration.

In Witness Whereof, the parties hereto have executed this Agreement as of this 29nd day of November, 2016.

[redacted]

Prime Star Construction Corporation

[redacted]

International Union of Operating Engineers, Local 351, AFL-CIO

SCHEDULE "A"
WAGES

Classification	Current	1/1/2017	1/1/2018
Chief HVAC	$ 27.23	$ 28.18	$ 29.17
HVAC Mechanic	$ 25.39	$ 26.28	$ 27.20
General Maintenance Worker	$ 17.15	$ 17.75	$ 18.37
General Clerk	$ 17.35	$ 17.96	$ 18.59
Electrician	$ 26.35	$ 27.27	$ 28.23

Mileage Allowance and Transit Pay:

Employees performing their duties while using their personal vehicle when authorized will be provided compensation per mile in accordance to the IRS standard mileage rate for business currently at 54 cents for mile business driven.

SCHEDULE "B"
HEALTH & WELFARE, LONG TERM DISABILITY AND PENSION

Health Insurance

The total Health and Welfare Benefit ("HWB") contribution to be paid by the Employer under this Agreement shall be as follows per hour paid not to exceed forty (40) hours per week.

The Company and the Union agree and acknowledge that the HWB contributions mentioned below will be paid to the Employer's group health insurance plan not to exceed forty (40) hours per week per employee. Any contribution in excess of the cost of such health insurance plan will be contributed to an employee's saving 401(K) account set up by the Employer.

Employee will have the option to waive all of the different health insurance plans mentioned above if the employee has evidence of insurance through another source and the health and welfare benefit below should be contributed to the employee's 401 K account. It is the employee's responsibility to maintain the health insurance coverage active for the life of this agreement.

	Current	1/1/2017	1/1/2018
Health and Welfare Benefit	$ 5.36	$ 5.57	$ 5.80

Pension:

Effective January 1, 2016 the Company agrees to contribute the amounts listed below per hour paid, not to exceed two thousand and eighty (2080) hours per year, for all employees as covered herein, to the Central Pension Fund of the International Union of Operating Engineers and Participating Employers.

	Current	1/1/2017	1/1/2018
Central Pension Fund	$ 1.80	$ 2.00	$ 2.20