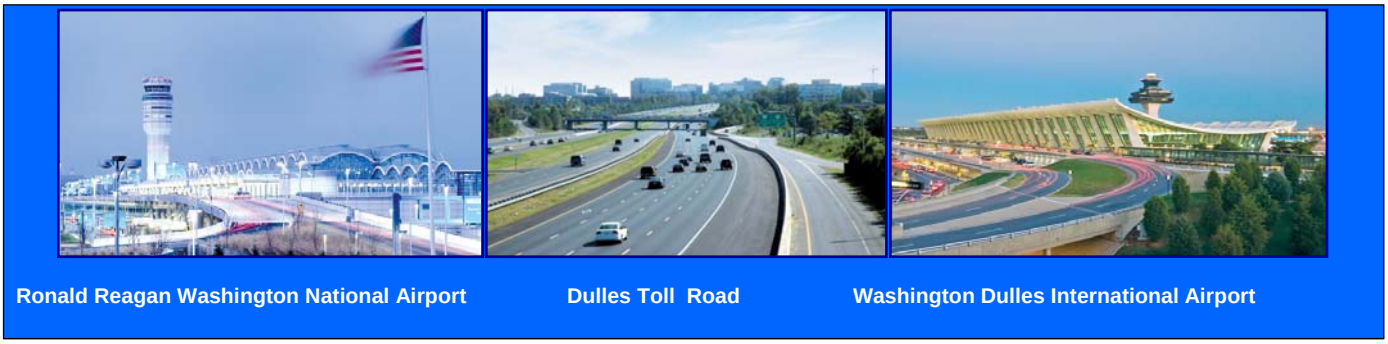
METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

CONSTRUCTION SAFETY MANUAL

Revision 17



Ronald Reagan Washington National Airport | Dulles Toll Road | Washington Dulles International Airport

OFFICE OF ENGINEERING & CONSTRUCTION DEPARTMENT

This construction safety manual is a contract document.

CONSTRUCTION SAFETY POLICY

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

It is the policy of the Metropolitan Washington Airports Authority (Airports Authority) to foster a safe environment where accident-free construction activities are achievable.

The contractor is responsible for all aspects of safety and accident prevention while under contract to the Airports Authority.

This Construction Safety Manual has been established by the Airports Authority to assist the contractor to promote safety and to limit, reduce and control hazards and risks associated with construction, repair, maintenance, and related services required by the Airports Authority. It provides safety and loss control requirements and procedures for all construction and construction-related activities.

The contractor is charged with the responsibility for conducting safe operations in order to protect anyone exposed to Airports Authority construction activities. Nothing contained in this manual relieves a contractor of its obligations assumed under contract with the Airports Authority or required by law.

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Acting Vice President for Engineering

7/2/2016
Date

Construction Safety Manual

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CHAPTER 1

DEFINITIONS

1.0 AIR OPERATIONS AREA (AOA)
Areas of the airport used or intended for landing, taking off, surface maneuvering, loading, unloading, or servicing of aircraft, operational vehicular traffic, and cargo operations. This is a high security area requiring badging and compliance with security regulations.

1.1 AIRPORT OPERATIONS DUTY MANAGER
A representative from the Airports Authority Operations Department has the authority to intervene if the contractor's actions on the airport are detrimental to the airport's operational safety or security.

1.2 AIRCRAFT RESCUE and FIRE FIGHTING (ARFF)
Airports Authority designation for Aircraft Rescue and Fire Fighting stations and equipment.

1.3 CAPITAL CONSTRUCTION PROGRAM (CCP)
A major portion of the Airports Authority's construction program is to upgrade the facilities of Ronald Reagan Washington National Airport (National) and to expand the facilities at Washington Dulles International Airport (Dulles).

1.4 CAPITAL OPERATIONS MAINTENANCE INVESTMENT PROGRAM (COMIP)
The Airports Authority program which is coordinated with the CCP, to provide major restoration or replacement of utilities or facilities at Ronald Reagan Washington National and Washington Dulles International Airports.

1.5 COMPETENT PERSON
One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate these conditions.

1.6 CONFINED SPACE
Any space not intended for continuous employee occupancy, having a limited means of egress, which is subject to a potentially hazardous atmosphere. These spaces include, but are not limited to, manholes, vaults, sewers, storage tanks, boilers, and other new construction. Note: Refer to Section 3.3 Confined Space Policy for additional definitions that apply to Confined Space Entry.

1.7 CONSTRUCTION SAFETY PROGRAM
The safety and loss prevention program established by the Airports Authority is to monitor the hazards and risks associated with construction projects.

1.8 CONSULTANTS
Any individual, partnership, corporation, or other business entity utilized by the Airports Authority as an independent contractor to provide engineering, design, construction management, technical support, testing, or other related services.

1.9 CONTRACT
The written agreement by and between the Airports Authority and a contractor.

1.10 CONTRACTING OFFICER (CO)
An individual with formally delegated written authorization to commit the Airports Authority by entering into contracts and other contractual instruments such as modifications, task orders, delivery orders, purchase orders, and blanket purchase orders.

1.11 CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR)
An individual, usually an Airports Authority employee, possessing technical expertise with respect to the contractual work being performed who has been delegated limited responsibility for monitoring technical performance and compliance with contract requirements. The COTR also provides administrative support for the contracting officer. Resident Engineers may also be designated as COTRs for assigned construction contracts.

1.12 CONTRACTOR
An individual, firm, partnership, or corporation undertaking a project through one or more contracts with the Airports Authority, program manager, or a tenant, performing work at a job site located on either airport.

1.13 CONTRACTOR'S PROJECT MANAGER
The contractor's senior management employee for a given project or task who has the overall responsibility to see that the work or job is satisfactorily completed.

1.14 CONTRACTOR'S SAFETY ENGINEER
A full time on-site safety professional (a STS/STSC,CHST,ASP preferred) with a minimum of five years dedicated past safety experience whose sole responsibility was managing safety (dual roles do not meet this requirement). Safety consultants will not be considered as a primary safety engineer. This person hired by the contractor shall be familiar with the type/scope of work to be performed under the contract and have no other duties but managing safety on the project. The requirements contained herein are in addition to any other requirements contained in the contract documents.

1.15 CONTRACTOR'S SAFETY MANAGER
A full time on-site safety professional with a minimum ten years of experience in managing safety programs on large construction projects comparable to this contract in scope and complexity (a CSP or WSO-CSM preferred). This person will monitor efforts of Safety Engineers assigned to the project and perform administrative duties assigned in the *Construction Safety Manual* and the applicable *OCIP Insurance Manual*. Safety consultants will not be considered as a primary safety manager. The requirements contained herein are in addition to any other requirements contained in the contract documents.

1.16 CONTRACTOR'S SUPERINTENDENT
The contractor’s superintendent is responsible for the day to day operation on the construction site and control of the short term schedule.

1.17 CONSTRUCTION FOREMAN/JOB FOREMAN
A construction foreman / job foreman is the worker or tradesman who is in charge of a construction crew.

1.18 CONSTRUCTION MANAGER
The Airports Authority employee or contractor responsible for the overall management of the construction phase of the Capital Construction Program and other designated projects.

1.19 DE-ENERGIZING REQUESTOR
Requestors for system de-energizing may include competent persons from the Airports Authority, airport contractors, airport tenants, concessionaires, airport tenants, concessionaire contractors, airport engineering, and maintenance departments.

1.20 DULLES CORRIDOR CAPITAL IMPROVEMENT PROGRAM (DCCIP)
Funds Dulles Corridor Capital Improvements related to the Toll Road, its ancillary ramps and interchanges, the Metrorail Project, and other corridor improvements. The Capital Improvement Program is funded from bond proceeds, Federal Transit Administration grants, contributions from Fairfax County, and from the Commonwealth of Virginia.

1.21 DULLES CORRIDOR RENEWAL AND REPLACEMENT PROGRAM (DCRRP)
Addresses major maintenance requirements including overlays, sound wall repairs, bridge deck replacements, erosion control, drainage control, and other maintenance projects. The Renewal and Replacement program is funded from Toll Road revenue.

1.22 ENGINEERING AND MAINTENANCE DEPARTMENT
A department reporting to the manager of an airport responsible for the construction and safety programs related to COMIP (major) and O&M (minor) facility projects.

1.23 FIRE MARSHAL
The Airports Authority official within the Office of Public Safety who is responsible for fire safety at both airports and enforcement of the Virginia Statewide Fire Prevention Code.

1.24 GENERAL PUBLIC
All persons not employed by the contractor or subcontractor, PMSS or other consultants, tenants, other Airports Authority contractors, or Airports Authority involved in the project. This will include Airports Authority employees not directly involved with the project, facilities, or other construction-related contracts.

1.25 IMMINENT DANGER
Any conditions or practices on the Job Site in which an immediate danger exists which could reasonably be expected to cause death or serious physical harm to any persons, property damage, or before the imminence of such danger can be eliminated. It may be a safety hazard such as an unstable trench or exposed electrical wire that could cause a serious or fatal accident immediately under present conditions or activities that could damage aircraft or other structures. It also may be a health hazard such as toxic substances or dangerous fumes, dusts, or gases that could cause death or irreversible physical harm, shorten life, or reduce physical or mental performance.

1.26 INCURSION
An incursion occurs when any area under air traffic control authorized for use by aircraft is compromised by an unauthorized aircraft, vehicle, or person.

1.27 INSURANCE BROKERS
Representatives from insurance brokerage firms responsible for assisting in the administration of the Airports Authority's OCIP programs.

1.28 INSURED
The Airports Authority, Program Management Consultant, contractors, consultants, architects, engineers, subcontractors, and any other party listed as an insured on the certificates of insurance signed by a duly authorized representative of the insurance carriers.

1.29 INSURERS
The companies providing insurance coverage for the OCIPs.

1.30 JOB SITE
The site of contract work is to include storage and laydown facilities on Airports Authority property at Ronald Reagan Washington National Airport, Washington Dulles International Airport, or the Dulles Toll Road. For the Dulles Corridor Metrorail Phase 2, job site is referred to as "On-Site" which means the location of the permanent work, including the Project Right-of-Way, and those areas that the Airports Authority has designated or may, from time to time, designate for contractor's use in performance of the work. For purposes of this document, "On-Site" is synonymous with "Job Site".

1.31 JOB HAZARD ANALYSIS (JHA) / ACTIVITY HAZARD ANALYSYS (AHA)
A plan outlining all associated hazards and corrective measures for a specific task.

1.32 LIVE LOAD
Any load of material (e.g., steel, building materials) attached to a crane by means of a cable or sling shall be referred to as a "live load" until the materials have been disconnected.

1.33 LOCKING
Locking is a method of controlling hazardous energy by preventing a switch or other electrical circuit opening device or energy restraining device from becoming accidentally altered.

1.34 METROPOLITAN WASHINGTON AIRPORTS AUTHORITY (Airports Authority)
The Metropolitan Washington Airports Authority (Airports Authority) operates Washington Dulles International and Ronald Reagan Washington National airports. Airports Authority also operates the Dulles Toll Road and is the financial manager and builder of the Metrorail extension through the Dulles Corridor, known as the Silver Line.

1.35 NEAR MISS
Near misses describe incidents where no property was damaged and no personal injury sustained, but where, given a slight shift in time or position, damage and/or injury easily could have occurred.

1.36 OBJECT FREE AREA
An area clear of vehicles and fixed objects that is in proximity to a runway or taxiway.

1.37 OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
The federal agency responsible for providing the rules and regulations on safety and health requirements in the work place.

1.38 OFFICE OF ENGINEERING
The Airports Authority office responsible for the implementation of the planning, design, overall program construction, and safety programs related to the Capital Construction Program and Dulles Corridor Capital Investment Program. In addition, the Office of Engineering is responsible for budgeting for Capital Operations Maintenance Investment Programs, Dulles Corridor Renewal and Replacement Program, and planning and design of individual COMIP projects, and construction of certain COMIP projects where assigned.

1.39 OFFICE OF PUBLIC SAFETY
The Airports Authority's office responsible for Fire and Police Department activities and the overall public safety at both National and Dulles airports.

1.40 OPERATION AND MAINTENANCE PROGRAM (O&M)
The Airports Authority program which provides for the daily operation of both airports and those functions performed centrally, including minor facility projects.

1.41 OWNER CONTROLLED INSURANCE PROGRAM (OCIP)
A coordinated insurance program providing certain coverages for the Airports Authority, eligible and enrolled construction managers, contractors, and subcontractors performing work at the job Site. Refer to the applicable OCIP Insurance Manual for coverage details.

1.42 OCIP SAFETY CONSULTANT (OSC)
A consultant to the Airports Authority's Risk Management Department responsible for OCIP-related claims, safety, and other risk management activities. May be the PSM for designated projects. Advises job site personnel of safety training and compliance issues to control losses.

1.43 PRE-TASK WORK PLAN (PTWP)
A daily detailed plan outlining all associated hazards and corrective measures for a specific task.

1.44 PROFESSIONAL ENGINEER (PE)
An individual, who has fulfilled education and experience requirements and passed rigorous exams that, under State licensure laws, permits them to offer engineering services directly to the public.

1.45 PROGRAM MANAGEMENT SUPPORT SERVICES CONSULTANT (PMSS)
The consultant employed by the Airports Authority under contractual agreement to provide program management support services for the CCP and selected COMIP projects, including planning, design, construction, and related services.

1.46 PROGRAM SAFETY MANAGER (PSM)
An employee of the Airports Authority, PMSS, or designated consultant who is responsible for the day-to-day management of a Construction Safety Program.

1.47 PROGRAM SAFETY PROFESSIONAL
A designated Safety Professional who is responsible for day-to-day management of the Construction Safety Manual answers directly to the PSM.

1.48 PROJECT
The term used to describe the specific construction work packages under the CCP, COMIP, DCCIP, DCRRP, and programs defined by contracts at both National and Dulles airports.

1.49 PUBLIC AREA
Any area of the airport accessible to the general public without requiring the issuance of a badge or escorting. Work areas within public areas need to be controlled to prevent attractive nuisances (e.g. ladders, lifts, equipment, and tools).

1.50 RESIDENT ENGINEER/SITE REPRESENTATIVE
The person responsible for the supervision and coordination of individual construction contracts usually provided by the PMSS Consultant.

1.51 RISK MANAGER
Airports Authority employee responsible for design and administration of Airports Authority’s insurance and self-insurance programs for property and casualty exposures. Manages claims, safety, insurance, and business continuity matters. Oversees the Airports Authority’s Risk Management Department (RMD).

1.52 RUNWAY/TAXIWAY SAFETY AREA
The surface adjacent to a runway or taxiway that is free of holes, trenches, bumps or other surface variations which is capable of supporting an aircraft under normal dry conditions.

1.53 SECURITY IDENTIFICATION DISPLAY AREA (SIDA)
A restricted area defined by the Airport Security Program. This area requires a background check, a badge, and or be escorted at all times by an approved badged individual.

1.54 SECURED AREA
A secured controlled area defined by the ASP. This area requires entry through a designated entry point (checkpoint, vehicle gate, or designated entry door). This area requires a background check, a badge, and or escorted at all times by an approved badged individual.

1.55 STERILE AREA
An area accessible to the public only after processing through a security checkpoint.

1.56 TAGGING
Tagging is the placement of a red "Danger-Hold" tag (See Appendix D Sample Lockout/Tagout “Danger Hold Tag”) directly on a circuit opening and/or locking device.

1.57 TENANT
An airline, concessionaire, or an entity that has a lease agreement with the Airports Authority and undertakes renovations or new construction on airport premises.

1.58 UTILITY SWEEP
Locating utility contractor (subsurface utility engineering company) hired by the contractor to perform a utility grid sweep search of the **entire** excavation area and **5 feet beyond the marked perimeter/boundary of the excavation** to locate known and unknown utilities. In addition, the utility sweep should also include looking into manholes and other identification markers to locate unknown utilities that might be in the excavation area.

1.59 VIRGINIA OCCUPATIONAL SAFETY AND HEALTH (VOSH)
The Department of Labor and Industry shall be responsible for administering and enforcing occupational safety and occupational health activities as required by the Federal Occupational and Health act of 1970 in accordance with the State plan for enforcement of that act. Refer to VA Code Title 40.1, including but not limited to Section 40.1-22(5). VOSH is a division of the Department of Labor and Industry of the Commonwealth of Virginia.

CHAPTER 2

PROGRAM MANAGEMENT

The Construction Safety Program has been established by the Metropolitan Washington Airports Authority (Airports Authority) to assist the contractor to promote safety, and to limit, reduce, control hazards, and risks associated with the CCP, COMIP, DCCIP, DCRRP, and other programs and other construction, repair, maintenance, and related services required by the Airports Authority. The Airports Authority's Construction Safety Manual sets forth general safety requirements that shall be followed by all contractors, tenants, and Airport Authority personnel who are performing construction activities. The specific Construction Safety Program goals are to foster a safety conscious environment to encourage contractors to actively manage safety in order to limit losses from personal injuries and property damage. The ultimate objective is to achieve greater efficiency and reduce direct and indirect costs associated with losses and loss control.

The effectiveness of the Construction Safety Program depends upon the active participation and cooperation of the contractor's project managers, supervisors, employees, and the coordination of their efforts with the Airports Authority in carrying out the following basic procedures:

2.0 PROCEDURES

2.0.1 Detection. Maintain a system of prompt detection and correction of unsafe practices and conditions.

2.0.2 Education. Establish and conduct an educational program to stimulate and maintain interest and cooperation of all employees. Education will be conducted through safety meetings, safety training programs, the use of personal protective equipment, and mechanical guards.

2.0.3 Investigation. All accidents, incidents, and claims will be investigated to determine their causes and reasonable corrective action will be taken.

2.0.4 Planning. Plan all work to minimize the potential for personal injury, property damage, and loss of productivity.

2.0.5 Regulations. Comply with Federal, State, local laws, ordinances, regulations, industry standards, Airports Authority regulations, and requirements. Refer to Appendix A for a list of applicable agencies. Virginia Unique Standards can be found at the following link: http://www.doli.virginia.gov/vosh_enforcement/vaunique_standards.html

2.1 ACCIDENT PREVENTION

2.1.1 Reporting Unsafe Conditions. Employees shall immediately report any condition suspected to be unsafe or unhealthy to their job foreman, contractor’s safety manager, or contractor’s safety engineer. If there is no resolution of the concern at that level, the employee shall report the concern to the PSM.

2.1.2 Prevent Job Site Accidents. All contractors have the responsibility to correct hazardous conditions and practices. When more than one contractor is working within a given job site, any job foreman shall have the authority to take action to prevent physical harm or significant property damage. If it is determined there is imminent danger, the job foreman or contractor's safety engineer shall:

2.1.2.1 Take immediate action to remove workers from the hazard and stabilize or stop work until corrective actions can be implemented to eliminate the hazard.

2.1.2.2 Immediately notify the COTR, PSM, contractor's safety engineer/manager, and others as identified in the contractor's safety plan of the condition.

2.1.2.3 Identify and implement corrective action to eliminate the hazard. Notify the proper emergency service personnel if the danger cannot be promptly corrected and could develop into an emergency condition. When the job foreman or safety engineer is made aware of an unsafe condition or act that cannot be corrected, he/she shall develop and submit an abatement plan to the COTR for transmission to the PSM and the Airports Authority's RMD.

2.1.2.4 Stop work until any condition that has been determined to constitute a safety hazard is corrected, guarded, or removed from the job site.

2.1.3 Protection of the Public and Property. The contractor shall take all necessary action to eliminate hazards which might reasonably be expected to cause injury to the general public or property damage.

2.1.4 Preparation for Work. Before commencing work, contractors shall take the following steps:

2.1.4.1 OCIP Enrollment. Refer to the applicable OCIP Insurance Manual for instructions. All contractors and their subcontractors of all tiers working on designated projects must enter their company information and certificates of insurance into the applicable OCIP web portal and receive acknowledgement from the OCIP Administrator before entering the job site. General contractors are responsible for monitoring their enrolled and excluded subcontractor's certificates of insurance and to ensure their subcontractors of any tier have submitted their information onto the applicable OCIP web portal.

2.1.4.2 OSHA Construction Certifications. Ensure all supervisory personnel are 30-hour OSHA trained and that all other trades workers are 10-hour OSHA trained. These certifications must be obtained within six months after the contract notice to proceed. If the contract is less than 6 months, the contractor must have trained personnel within two months. At least one 30-hour OSHA trained employee must be on-site during all work times per subcontractor.

2.1.4.3 Safety Equipment. Provide personal protective equipment and other safety items which have been identified as required by the Construction Safety Program, Airports Authority contracts, Office of Public Safety, all applicable laws, regulations, and orders. The contractor shall not receive additional payment or reimbursement for safety items.

2.1.4.4 Safety Plan. Meet with the PSM and representatives of the Airports Authority's Office of Engineering, the CO, and the COTR to discuss and develop a written safety plan (Refer to Appendix C for contractor safety plan requirements). Safety plans must be site specific and follow Appendix C safety plan outline sequence. The safety plan must be submitted and approved prior to the start of any work.

2.1.4.5 Safety Professionals. Submit resumes for the proposed safety managers / safety engineers as required in the Construction Safety Manual indicating their work experience and qualifications. Resumes for the contractor's safety engineers will be reviewed for approval by the PSM and OSC. Previous approved safety managers or safety engineers will be reassessed and approved based on their past performance on Airport Authority construction projects. It will be at the discretion of the PSM to approve or disapprove previous safety managers and safety engineers even though they meet the safety qualification requirements. **The contractor shall provide adequate safety coverage if the approved safety engineer or safety manager is "absent" or "for any other reason". Therefore, additional safety professionals must be pre-approved to cover safety staffing requirements.** On-site work may not be performed until the specified safety professional(s) is/are approved and present on-site. Safety professionals shall notify PSM when on site, when leaving the site, or sick/absent. Safety personnel can only work on one project at a time. Controlling contractor or sub tier contractors who have over 30 working employees working shall have a dedicated safety engineer.

2.1.4.6 Fire Protection Standby. Meet with the Deputy Fire Chief at the appropriate airport during the work planning phase regarding any foam unit standby that may be required during the project.

2.2 NONCOMPLIANCE

2.2.1 Cooperation and Involvement. It is the Airports Authority's intention to maintain a healthy and safe workplace. To succeed, all parties must be actively involved and maintain cooperation between Airport Authority, all contractors, subcontractors, and their employees. Contractors and subcontractors are responsible for orienting employees on the specific safety rules that must be followed by all persons working on the project.

2.2.2 Noncompliance. If the CO is aware of any noncompliance or unsafe practices the following may occur:

2.2.2.1 Claim. The Airports Authority will deny claim or requests from the contractor for equitable adjustment for additional time or money on any suspended work order issued under these circumstances. In addition, Notice of Noncompliance will be issued for serious safety violations and repeated violations (Refer to NCN Fine Schedule Appendix H).

2.2.2.2 Removal. The contractor shall be required to remove any employee or piece of equipment deemed to be unsafe from airport property. Given the concurrence from the CO, the PSM will direct the replacement of the contractor's safety engineer or other contract personnel for nonperformance of his or her safety/security duties at no additional cost to the Airports Authority. Violations impacting the safe environment of the airport will be treated as a safety violation.

2.2.2.3 Work Suspension. If the contractor fails or refuses to take corrective action within the specified time, the CO will exercise the right to suspend work, stopping all or part of the work. The order will remain in effect until satisfactorily corrected.

Individual Suspension. Any employee that commits a serious act shall be suspended from any airport project for a minimum of three (3) working days. Whether or not an act is serious will be determined by the PSM and Risk Management Department.

2.2.3 Grounds for Removal. Any employee of the contractor or subcontractor found to be violating the following safety rules, or other Airports Authority policies, or procedures as defined in this Construction Safety Manual, is subject to immediate removal from the job site. Disciplinary policies must be included in the contractor's safety plan to address violations.

2.2.3.1 Continued Violations. Any employee, who has been documented as having repeatedly violated the Federal, State, or Airports Authority safety regulations on any Airports Authority project, can be removed for cause.

2.2.3.2 Drugs and Alcohol. The possession, use, or being under the influence of drugs or alcohol while on the project is strictly prohibited (Refer to 3.6 Drug-Free Worksite Policy).

2.2.3.3 Unprofessional Behavior. Unprofessional behavior, such as fighting, gambling, or horseplay is strictly prohibited.

2.2.3.4 Weapons. Possession of firearms, knives not necessary for the performance of work, clubs, or other weapons is strictly prohibited.

2.2.4 Rehire. Any employee removed from an Airports Authority construction project for safety violations or unsafe work practices cannot be hired to work on any other Airports Authority project for a minimum of one year from the date of removal without the approval of the CO. The contractor shall provide the names of individuals removed from their projects for safety reasons to the COTR, PSM, and OSC.

2.3 CONSTRUCTION SAFETY RESPONSIBILITIES

2.3.1 Contracting Officer's Technical Representative (COTR). The COTR and any delegated/designated representative will observe the contractor's safety and accident prevention procedures for all activities and personnel working at the construction sites, including the Airports Authority, consultant, subcontractors, visitors, and materials or equipment suppliers. For O&M projects, the functions of the Program Safety Manager are performed by the COTR designated by the Airport's Engineering Division. The COTR on the project has the responsibility to:

2.3.1.1 Report Unsafe Conditions. Report directly, or assign another person to report, any unsafe working condition to the contractor, and the PSM.

2.3.1.2 Fire Safety. Report directly to the Airports Authority's Fire Code Enforcement Division, or assign another person to report, any fire safety issues, and fire protection system impairments.

2.3.1.3 **Corrective Actions.** Initiate measures to promptly notify the entities in control of construction activities to address unsafe working conditions, including taking corrective action when unsafe working conditions are detected (e.g. lack of good housekeeping practices, use of equipment in obviously poor condition, failure to adhere to any of the regulations and standards listed in Appendix A, or issued by any of the agencies listed in Appendix A which pertain to safety).

Unsafe conditions must be corrected by prompt referral to the contractor's safety engineer, safety manager, or the contractor's project manager. **Abatement photographs shall be required by the contractor's safety engineer, safety manager, or the contractor's project manager showing that the observed unsafe conditions have been corrected.**

2.3.1.4 **Documentation.** Maintain written documentation of communications concerning accident prevention to preclude any misunderstandings and ensure documentation.

2.3.1.5 **Imminent Danger.** If in the COTR's judgment, construction activity constitutes a threat of imminent danger, the COTR will stop such work and notify the contractor, the PSM, and the OSC.

2.3.1.6 **Monitor Contractor Enforcement.** The COTR will monitor to ensure that contractors provide effective safety enforcement on the project.

2.3.1.7 **Noncompliance**. Promptly notify the contractor, the PSM, and the OSC in writing of noncompliance with any of the safety requirements contained in the contract documents including this *Construction Safety Manual.* The Airports Authority's *Construction Safety/Security Inspection Report* will be used. (Refer to Appendix B).

2.3.1.8 **Safety Compliance.** Receive and review copies of the Contractor's Daily Reports, Equipment Maintenance Log, Accident Report forms, and other forms as they apply. These reports are to be continually monitored to ensure that the contractor takes prompt action to correct safety deficiencies. Any CO designated representative has the authority to direct the contractor in matters of safety or imminent danger.

For all CCP Task Order Contracts, DCCIP Task Order Contracts, COMIP, DCRRP and selected O&M projects, the COTR or project engineer is responsible to ensure the contractor's safety engineer requirements listed under Section 2.3.3. are performed by a specifically dedicated person on the project. A full-time contractor's safety engineer will be required for the following:

- **C**ontracts exceeding $250,000 depending on the scope of work
- Exposure to aircraft operations
- Certain task orders/projects

2.3.2 Contractor's Project Manager. The contractor, specifically the contractor's project manager, is responsible for accident prevention and job site safety. In addition, the contractor's project manager is responsible for their subcontractors and sub tier contractors safety. This responsibility cannot be delegated to subcontractors, suppliers, the Airports Authority, PMSS Consultant, or other persons. The contractor's project manager is responsible for ensuring the COTR is informed in advance if the contractor's safety personnel will not be on duty when work will be undertaken.

The contractor's project manager shall ensure compliance with all provisions of the contract, including the Airports Authority's *Construction Safety Manual*, OSHA, VOSH, FAA, and other agency and industry safety requirements and standards. Additional duties shall include the following:

2.3.2.1 Contractor's Safety Plan. Upon notification of contract award, submit in writing a contractor's safety plan (Refer to Appendix C for contractor safety plan requirements) to the COTR, who will forward the documents to the PSM and the OSC for review and recommendations. The contractor's safety plan must comply with Airports Authority's Construction Safety Manual before the COTR will approve the document. Delay in submitting a written safety plan shall not constitute grounds for a contract schedule extension or delay claim. Copies of the site layout and safety plan noting emergency response, access points, etc. shall be submitted to the Fire and Rescue Department Battalion Chief-Special Operations, prior to the start of work.

2.3.2.2 Cooperation. Cooperate with the Airports Authority, consultants, and safety representatives of the insurance brokers or the insurers. Lack of cooperation with the Airport Authority safety policies and procedures can be ground for removal from the project.

2.3.2.3 Corrective Action. Review and direct immediate action to correct all recognized unsafe conditions. This shall also apply to the work performed by all subcontractors on the project. **Abatement photographs shall be required by the contractor's safety engineer, safety manager, or the contractor's project manager showing that the observed unsafe conditions have been corrected.**

2.3.2.4 Emergency Contact Lists. Updated phone numbers for contractor personnel, Police Department, Fire Department, COTR, and other Airports Authority departments listed in the *OCIP Emergency Phone Number List* shall be posted on the project at all times in a conspicuous location.

2.3.2.5 Enforcement. Be responsible for providing the PSM with support in carrying out the duties and responsibilities of that position. Take an active part in supervisory safety meetings, including the discussion of observed unsafe work practices or conditions, a review of incidents, corrective actions, and encouragement of safety suggestions from employees.

2.3.2.6 Federal/State Citations. Provide the COTR copies of any citations immediately upon receipt.

2.3.2.7 Qualifications. Ensure that all heavy equipment operators (e.g., cranes, loaders, forklifts) are properly qualified and trained on the specific piece of equipment in use.

2.3.2.8 Regulations. Plan and execute all work to comply with the stated objectives and safety requirements contained in the Airports Authority's *Construction Safety Manual*, contract provisions, Federal, State, local laws and regulations, and industry standards, as listed in Appendix A.

2.3.2.9 Resumes for Safety Professionals. Submit a resume of the experience and qualifications for the proposed safety engineer or safety manager to the COTR. The resume will be reviewed for approval by the PSM and OSC, and a personal interview will be required. **Only qualified safety personnel will be approved (Refer to Definitions Section Chapter 1, 1.14, 1.15 for qualified personnel criteria).**

2.3.2.10 Safety Awareness. Ensure that all of its subcontractors and sub tier subcontractors are provided with a copy of this *Construction Safety Manual* and are informed of their obligations regarding safety. Suppliers and visitors must be informed of their obligations regarding safety and shall comply with this Construction Safety Manual.

2.3.2.11 Safety Inspections & Training. Select either a safety engineer, safety manager, or both, as required in the contract provisions, to perform safety inspections, and training services under the direction of the project manager.

2.3.2.12 Safety Meetings. Hold weekly safety meetings. These must be bilingual if dictated by the work force. Documentation of topics discussed and attendees shall be maintained with copies of record submitted to COTR.

2.3.2.13 Safety Orientation. Maintain an orientation program for new employees that includes at a minimum a review of (a) potential hazards in the work areas and (b) required personal protective equipment and apparel as specified under OSHA, VOSH, or the site-specific safety manual (c) applicable contents and potential consequences of violating safety rules and Airports Authority property. The contractor’s project manager shall also ensure that all new hires are accompanied by an experienced employee to evaluate his/her knowledge and skills.

2.3.2.14 Safety Performance Goals. Safety performance goals are identified by the Airports Authority, PMSS Consultant, and the prime contractor to evaluate contractor performance. The contractor’s project manager is responsible for developing and monitoring performance measures to meet or exceed these performance goals.

2.3.2.15 Job Hazard Analysis (JHA) / Activity Hazard Analysis (AHA) and Pre-Task Work Plan (PTWP).

(a) Submit for review a jobsite specific JHA/AHA for each definable feature of work and tasks associated with the work to be undertaken. This shall include the task, its hazard(s), and corrective measure(s). **The JHA/AHA shall be site specific and reviewed by the project safety engineer/safety manager prior to submitting to the Airports Authority PSM for review.** The JHA/AHA's shall be submitted within **15 days** prior to the preparatory meeting for that definable feature of work. In addition, all tasks shall have a site specific JHA/AHA. The working foreman shall attend all preparatory meetings.

(b) Prior to starting any task, the competent person shall ensure that a PTWP form is reviewed prior to each shift with all personnel involved in the task. The competent person, construction project manager/general superintendent, and personnel shall review and sign the PTWP form (Refer to appendix E PTWP form). The PTWP form shall be kept at the work site location.

2.3.2.16 Safety Compliance. For all CCP Task Order Contracts, DCCIP Task Order Contracts, COMIP, DCRRP, and selected O&M projects. The Project Manager is responsible to assign and monitor that the requirements listed under Section 2.3.3 are performed by a designated person whose sole duties relate to safety on the project. The safety representative may not be removed from the job by the contractor without written approval from the Program Safety Manager (PSM) and with concurrence with the Contracting Officer (CO).

2.3.3 Contractor's Safety Engineer. All CCP Contracts, DCCIP Contracts, COMIP, DCRRP, and selected O&M projects require a contractor's safety engineer (Refer to Definitions Section 1.14 for safety engineer requirements). The contractor's safety engineer shall perform daily safety inspections of the contractor's and subcontractor's job sites to eliminate unsafe acts or conditions. The safety engineer must be a full-time position on all CCP contracts with no other duties assigned. For contracts with exposure to the Air Operations Area (AOA), the safety manager or safety engineer must have at least one-year experience in an airport or other aviation environment unless approved by the CO with a recommendation from the PSM taking into consideration the proximity of the project to aircraft. For highway projects (e.g., DTR, DIAAH, and/or other connecting arterial roadways supporting vehicle conveyance at DCA or IAD) the safety engineer is required to have a minimum of one year of experience in highway safety as a VDOT Intermediate Trained Supervisor (See 3.12 Highway Safety Policy). Controlling contractor or sub tier contractors that have over 30 working employees shall have a dedicated safety engineer.

A safety engineer is required to be on the project during every shift including projects scheduled to work 24-hours a day or on weekends.

In the absence of a safety engineer on the project, the contractor's safety manager will perform the functions of the safety engineer. If there is only one safety engineer assigned to a project, the contractor shall submit other resumes for safety engineers to be interviewed and pre-approved prior to notice to proceed in order to provide safety coverage if the safety engineer is "absent" or "for any other reason". **This does not relieve the original approved safety engineered from their assigned project.**

The contractor's safety engineer has the responsibility to:

2.3.3.1 **Accident/Incidence Response**. Ensure that all employees are made aware of steps to take in case of an accident and the location of first-aid facilities. Contractors shall have post drug & alcohol testing results for any employee involved in an accident prior to returning back to work at the contractor's expense.

2.3.3.2 **Accident Investigation/Written Violations.** Investigate all accidents and implement immediate corrective action. **All accidents, injuries, and near misses shall be reported immediately to the COTR, PSM, and OSC when they occur on an Airports Authority project**. Prepare or assist in the preparation of all accident investigation reports. Submit copies of these written reports to COTR, PSM, and OSC within 24 hours of the incident. This includes all "near misses."

Provide written reports within 24 hours to the Airports Authority COTR, PSM, and OSC citing any observed unsafe conditions or practices, or violations of job security regarding safety issues, and take immediate corrective action. This includes all "near misses." **Abatement photographs shall be required by the contractor's safety engineer, safety manager, or the contractor's project manager showing that the observed unsafe conditions have been corrected.**

2.3.3.3 **Contractor Safety Meetings.** Provide the job foremen with appropriate training materials to conduct weekly "tool box" safety meetings. Whenever the attendees are non-English speaking, training materials must be provided in their language. The safety engineer shall attend the weekly "tool box" safety meeting to ensure that the meetings are held and are meaningful. The safety engineer shall also review the foreman's safety meeting reports.

2.3.3.4 **Cooperation.** Coordinate safety activities with the Airports Authority, PMSS Consultant, and OSC. Take the necessary steps to implement safety recommendations promptly. Coordinate the public relations aspects of the contractor's safety plan with Airports Authority personnel.

2.3.3.5 **Entry Points.** Drawings of all project entry points must be provided to the Airports Authority's Fire Department within 30 days of project commencement. When project conditions change, updated drawings must be re-submitted.

2.3.3.6 **First Aid.** Ensure adequate first aid supplies are available at the work site and personnel are qualified to administer first aid as required in the contract. Post an updated list of current availability of first aid and emergency treatment for injured employees.

2.3.3.7 **Injury Reports.** Report all injuries and accidents immediately to the PSM and OSC and all written reports shall be written and submitted within 24 hours according to Federal and State laws and Airports Authority orders or regulations.

2.3.3.8 **Man-hour Report.** Submit a completed *Monthly Project Man-hour/Injury Report Log* by the 10th of each month to the COTR and the PSM.

2.3.3.9 Organizational Safety Meetings. Attend special safety meetings held or sponsored by the Airports Authority, program management consultant, or contractor. The contractor's safety engineer or safety manager is expected to participate in these meetings.

2.3.3.10 Safety Equipment. Be responsible for the control, availability, and use of safety equipment, including personal protective equipment and apparel.

2.3.3.11 Safety Training. Implement safety training programs for supervisors and employees applicable to their specific responsibilities and use of equipment. In addition, participate in OCIP safety class.

2.3.4 Contractor's Safety Manager. For large complex construction projects, or when multiple safety engineers are required, the contractor shall employ a full-time safety manager on the project. This individual has the responsibility to monitor efforts of safety engineers assigned to the project. Additionally, this individual shall perform the administrative tasks required by the contractor, the *Construction Safety Manual,* and the *OCIP Manual*. In the absence of a safety engineer on the project, the contractor's safety manager shall perform the daily safety inspections and other responsibilities as outlined in Section 2.3.3.

2.3.5 Superintendent. The contractor's job superintendents are an integral part of an effective safety program. The effort put into accident prevention while performing the job superintendent's daily assignments determines a good accident record. The job superintendent's responsibilities shall include:

2.3.5.1 Accident Investigation. Performing a complete investigation of all accidents and taking corrective actions to prevent a recurrence.

2.3.5.2 Enforcement. Ensuring that unsafe practices or conditions are not allowed to exist on the job sites through continuous monitoring. Correct or report immediately to the job project manager, any unsafe conditions, practices, or violations of job security.

2.3.5.3 First Aid. Providing that prompt first aid is administered to an injured employee.

2.3.5.4 Instruction. Instructing personnel under his or her supervision in safe work methods and practices when assigning work.

2.3.5.5 Personal Protective Equipment. Protecting employees by having and using the proper protective equipment and tools for the job (Refer to 3.16 Personal Protection Equipment Policy).

2.3.5.6 Safety Attitude. Setting a good example for personnel.

2.3.5.7 Safety Meetings. Holding weekly "tool box" safety meetings with work crews to discuss any observed unsafe work practices or conditions; review the accident experience of the crew; discuss corrective action to prevent future accidents; and encourage safety suggestions from the employees. Recommendations from the meeting shall be given to the safety engineer.

2.3.5.8 Daily Pre-Shift Safety Meeting. Taking five minutes to advise employees on conditions and work to be performed prior to each day's shift (Refer to 3.17 Pre-Task Work Planning Policy).

2.3.6 Program Safety Manager (PSM). The PSM is the Airports Authority's designated employee or consultant who is responsible for the day-to-day management of the CCP Construction Safety Program. The PSM will:

2.3.6.1 Audits and Inspections. Conduct safety audits and inspections of all projects with the assistance of the insurance carrier as necessary. A copy of any written audit or inspection documentation must be forwarded to the OSC.

2.3.6.2 Contractor's Safety Plans. Review contractors' safety plans and programs, descriptions of hazards peculiar to their work, and nominees for the contractor's safety engineer positions as required by the contract. The PSM will recommend the approval/disapproval of the contractor's nominees.

2.3.6.3 Cooperation. Assist the Airports Authority, Site Managers, Consultants, COTRs, and field personnel on safety matters. Organize and conduct safety training as necessary. Act as a technical advisor for safety issues. Perform necessary actions to promote successful safety programs.

2.3.6.4 Document Review. Review pertinent contract documents for safety-related problems.

2.3.6.5 Emergency Incident. Work with the Airports Authority's Fire Department on construction sites when major incidents have occurred. Act as a resource to the Incident Commander and/or Airports Authority's Public Safety designated officer.

2.3.6.6 Enforcement. Work with the Airports Authority and consultant field personnel in assisting the COTRs, and inspectors toward strict enforcement of the contract safety provisions. This includes compliance with OSHA (Part 1910 and 1926 of the Code of Federal Regulations), VOSH, FAA, any other laws and applicable safety standards, as well as Airports Authority regulations set forth in the *Construction Safety Manual* (Refer to Appendix A).

The PSM has the right to enforce, through the contract designated on-site representative, stricter safety procedures than those that might have been issued by OSHA, VOSH, or any other related agency, when in his/her judgment, potential hazards could otherwise exist.

In case of conflict or ambiguity between various statutes, contract documents, or safety provisions, the PSM will recommend to the CO an interpretation as to which provision applies or what is implied in a given provision. The CO decision will be based on the PSM recommendation and will be considered the final decision.

2.3.6.7 Imminent Danger. Stop any construction activity or task which, in the PSM judgment, constitutes an immediate or evolving situation of imminent danger (any conditions or practices in any place of employment which are such that a danger exists which could reasonably be expected to cause death or serious physical harm).

2.3.6.8 Meetings. Participate in meetings with offerors and contractors (such as pre-proposal, pre-award, and pre-construction conferences) to outline and explain the Construction Safety Program and other safety-related aspects of the program.

2.3.6.9 Safety Report. Provide and distribute the CCP/COMIP Monthly Safety Report as directed by the Airports Authority.

2.3.7 Risk Manager. Airports Authority employee responsible for design and administration of Airports Authority's insurance and self-insurance programs for property and casualty exposures. Manages claims, safety, insurance, and business continuity matters. Oversees the Risk Management Department, which has the responsibility to perform the following:

2.3.7.1 Communication. Coordinate and maintain regular communication with all parties involved in the safety and loss control efforts provided by the Airports Authority, PMSS, OSC, insurers, and insurance brokers involved in construction.

2.3.7.2 Industry Awareness. Obtain and exchange current information on Federal, State, and local safety and environmental regulations.

2.3.7.3 Insurance. Provide the insurance coverage required under the applicable OCIPs or other coverage necessary to protect the Airports Authority's interests.

2.3.7.4 Loss Analysis. Analyze loss trends; prepare safety and loss control reports, including an analysis of accident frequency, severity, and causes. Provide recommendations to increase the effectiveness of the Airports Authority's *Construction Safety Manual.*

2.3.7.5 Program Evaluation. Monitor the Airports Authority's Construction Safety Program and make recommendations as required.

2.3.7.6 Risk Evaluation. Evaluate potential loss exposures and monitor the safety performance and enforcement of safety standards. Areas of evaluation include, but are not limited to; personnel safety, liability exposure, public safety, property preservation, emergency planning, and fire protection.

2.3.7.7 Claims. Manage the claims process for all property and casualty claims arising out of construction activities.

2.3.7.8 OCIP Safety Consultant. The OSC is a consultant to the Airports Authority's Risk Management Department and is responsible for OCIP-related claims, safety, and other risk management activities. All incidents, injuries, occupational-related illnesses, or property damage are to be reported within 24 hours to the OSC. The OSC advises and provides safety related recommendations to the Airports Authority and enrolled contractors performing work under the OCIP. Advises job site personnel of safety training and compliance issues to control losses and assists in the processing of OCIP claims.

2.3.8 Subcontractor's On-Site Project Manager. The on-site project manager, or other designated person, for all subcontractors shall be required by the contractor to perform or complete the following:

2.3.8.1 Accident Investigation. Complete supervisory investigation reports on all accidents.

2.3.8.2 Cooperation. Cooperate with the Airports Authority, PMSS Consultant, and the insurers' safety representatives. Assignment of these responsibilities by contractors to subcontractors shall not relieve contractors of their obligations.

2.3.8.3 Enforcement. Take immediate action to correct unsafe practices or conditions. Immediately report any unsafe conditions, hazardous practices or violations of job security to the contractor's safety engineer/safety supervisor or project manager.

2.3.8.4 Man-Hour Report. Submit a completed *Monthly Project Man-Hour/Injury Report Log* by the 10th of each month to the General Contractor.

2.3.8.5 Personal Protective Equipment. Provide and enforce the use of required personal protective equipment.

2.3.8.6 Safety Compliance. Plan and execute all work according to the Airports Authority's Construction Safety Program and incorporate the *Construction Safety Manual* in all subcontracts.

2.3.8.7 Safety Meetings. Participate in supervisory personnel safety meetings scheduled by the Contractor. Schedule and participate in weekly "tool box" safety meetings held by job foremen.

2.4 SAFETY AWARD PROGRAMS

The Airports Authority appreciates contractors who meet or exceed established safety goals. Awards may be given for overall loss performance and to recognize exceptional safety programs.

CHAPTER 3

PROGRAM SAFETY POLICIES & PROCEDURES

3.0 AIR OPERATIONS AREA (AOA) CONSTRUCTION POLICY

I. Policy Statement

The Airport Operations Department has established procedures to be followed during Airport Operations Area (AOA) construction operations. All construction work on the AOA is under the jurisdiction of the Airport Operations Department. The Airport Operations Department shall be notified in advance and give approval prior to the start of any work on the AOA. Activities on or within the vicinity of an active runway, approach or departure must not be distracting, confusing or alarming to pilots during aircraft operations. The contractor shall comply with all current FAA Advisory Circulars and/or Airport Orders and Instructions. The contractor shall follow these procedures and instructions that include but are not limited to the following procedures and requirements:

II. Procedures

1. **Barricades.** Barricades shall be properly highlighted for easy visibility by flight crews and airport support personnel. Tape of any type is prohibited.

2. **Clearance.** The contractor shall provide adequate clearances for takeoffs and landing and all other aircraft movements over obstructions or work or storage areas.

3. **Drop-offs.** Pavement drop-offs or pavement turf lips, either permanent or temporary, cannot exceed 3 inches in height.

4. **Hazardous Conditions.** In the event of a hazardous condition, the contractor or subcontractor shall immediately coordinate the corrective action with an Airport Operations Officer, who will issue proper notices to airport users.

5. **Inspections.** Daily inspections of temporary AOA fencing will be conducted. Replacement or repairs shall be given top priority to deter human and animal intrusion into the AOA.

6. **Lighting.** Obstruction lights may not be misleading or malfunctioning in the approach to any open runway, approach or departure surface. Night work lighting should be directed in such a manner that it does not interfere with airport operations. Steady burning lights are required on barricades.

7. **Lunch/Break Location.** Lunch and break locations will be approved by the COTR for employees working on the AOA. Adequate trash receptacles shall be provided and emptied on a daily basis or when trash receptacles are full.

8. **Marking/Lighting.** Temporary runway and taxiway threshold marking and lighting will be provided as required. Elongated or unmarked objects, especially tall cranes, pile drivers or drill rigs, must be properly lit or flagged.

9. **Objects.** Mounds or piles of earth, construction materials, temporary structures, or other objects in the vicinity of any operational runway, taxiway, taxilane, or in a related safety approach or departure area are prohibited. All trench spoils shall be trucked from airside when excavated unless storage is approved by the COTR. Objects such as manholes should be constructed at grade. **In no case should their height exceed 3 inches above grade.**

10. **Contractor's On-Call Personnel.** An employee, and a back-up individual, shall be on 24 hour call when work is not being performed on the job site. They shall have the capability to maintain construction barricades and lighting on the AOA.

11. **Vehicle/Equipment Operations.** Vehicles or equipment, whether operating or idle, may not be used on any open runway, taxiway, taxi lane , or in any related approach, departure, or safety area, except when coordinated with Airport Operations (Refer to Chapter 4, Motor Vehicle Operations). All drivers that are operating motorized equipment must have a valid driver's license and submit current driving record documentation. All drivers and equipment operators shall follow DOT regulations regarding amount of hours allowed operating equipment.

12. **Work Completion.** Upon completion of work within the AOA, the contractor shall return all areas to the conditions required by the contract and notify the COTR who will notify Airport Operations to issue the proper notice indicating completion of the construction.

13. **RSA Flagging Safety Lines.** All safety lines or lathe flag lines must be installed marking the RSA prior to work set up on the airfield.

14. **Powder- Actuated Tools.** Air Operations Department must be notified if powder actuated tools are going to be used on an Airports Authority construction project.

3.1 BASIC SAFETY PROVISIONS

I. Policy Statement

The contractor shall protect the health and safety of employees, the public, and any other persons take all necessary and reasonable actions to prevent damage to property, materials, supplies, and equipment, and avoid interrupting normal airport operation. Nothing contained herein alters the requirements to comply with the safety procedures in the contract or otherwise mandated by law or regulation. Examples of items requiring specific contractor attention are included in the following procedures and requirements:

II. Procedures

1. **AEROTRAIN TRACK ACCESS APPROVAL.** All contractors requiring access into the AeroTrain Track System must obtain track access approval through the COTR from the AeroTrain manager's representative. Access forms are available from the IAD Work Order Desk. No access allowed without the Aero Train Manager's written approval and designated escort.

2. **AOA Operation.** Prevent employees, subcontractors, suppliers, or equipment from intruding upon the AOA, without the knowledge and concurrence of the Airport Operations Officer. Contractors shall follow Air Operation Department O & I requirements when operating equipment on the AOA.

3. **Barricades.** Provide adequate and proper fencing, barricading, marking, and lighting of construction, maintenance, or other areas that are temporarily closed to normal airport use. The use of tape of any type is not acceptable.

4. **Buddy System.** No employee shall be allowed to do any activity on Airports Authority construction jobsite, unless accompanied by a fellow worker.

5. **Communication.** A fully operational telephone or other means of two-way communication shall be available at the site before construction begins and at all times when construction is in progress. Maintain radio communication between the construction and maintenance vehicles and air traffic control tower or other on field communications facility as required in the AOA.

6. **Compressors.** Provide ANSI or OSHA approved valve on all air compressors with hoses exceeding 1/2 inch inside diameter at the source of supply or branch line. Jack-Hammer operators must be rotated at least every two (2) hours to prevent acute injury, i.e. 2 hours on and 2 hours off. Pneumatic compressor hoses shall have positive locking pins and whip checks at all coupling connections. Metatarsal protection shall be required when working with jackhammers, earth compaction equipment, and other similar equipment.

7. **Confined Space.** Ensure all confined space entries are made only under the supervision of a qualified person. Each entry must have a permit signed by the contractor's designated qualified person and be kept in visual sight at the entry points. Confined space entries shall be made according to OSHA CFR 1926/VOSH (Refer to 3.3 Confined Space Policy).

8. **Cylinders.** Secure compressed gas cylinders in upright position at all times. Valve caps shall be in place when not in use. They shall be transported and stored according to Federal and State standards. Moving compressed gas cylinders by crane is prohibited, unless cylinders are capped and secured in an approved carrying device. When not in use (over 24 hour period not in use is considered storing), acetylene and oxygen tanks shall be separated 20 feet apart and stored outside of the building. When oxygen and acetylene is in use a 5 foot barrier with a fire resistant rating of at least one-half hour shall be used in between the oxygen and acetylene tanks.

9. **Demolition.** Ensure that material is not dropped outside the exterior wall of the building where the drop distance is more than 20 feet high, unless contained in a chute enclosed on all sides. If the drop distance is less than 20 feet high, the landing area must be barricaded. When material is dropped through openings in the building, the openings must be barricaded at least 42 inches high and 6 feet or more back from the edge of the open area at the landing (Refer to Demolition Policy Section 3.5 for additional demolition requirements).

10. **Electronic Interference.** The contractor shall not use any vehicles, equipment, excavations, stockpiles, or other materials that could degrade or otherwise interfere with the electronic signals from radios or electronic navigational aids.

11. **Fire/Rescue Department Emergency Access.** Prevent construction/maintenance activities or materials from hampering access by any airport rescue and firefighting (ARFF) vehicle to all parts of the airport. Contractors must provide and post signage to indicate where emergency access is located (see example below). Letters must be a minimum of 12 inches high and made of red reflective material on white background.

> *FD - _____EMERGENCY ACCESS*
>
> *Project:_____*
> *_____*
>
> *Contractor:_____*
> *_____*

Access for Fire/Rescue Department apparatus shall be maintained as directed by the Airports Authority Fire Code Enforcement Division.

12. **Equipment Perimeter Protection.** Heavy equipment with rotating superstructure, such as backhoes and power shovels, shall be guarded in such a manner that rotation and use shall not present a danger to individuals or infringe into any traffic lane.

13. **Flagging.** Provide properly trained and equipped flaggers at designated locations on all Airports Authority roadways including the AOA and for such *periods as necessary* for the control and protection of vehicular and pedestrian traffic in accordance with the *Manual of Uniform Traffic Control Devices* (MUTCD) and *Virginia Work Area Protection Manual*. Reflective vests (ANSI Class 3) shall be worn during ALL flagging operations. Refer to Highway Work Zone Safety Policy Section 3.12 for additional flagging requirements.

14. **Foreign Object Debris.** Foreign Object Debris (FOD) and other materials can cause serious damage to aircraft. Material or equipment shall not be permitted to obscure pavement markings, pavement edges, or detract from visibility of runway/taxiway markings or lighting. Prevent trash, water, snow, dirt, debris, or other transient materials with FOD damage potential from entering into or remaining in construction or maintenance areas, whether on runways, taxiways, aprons, or in related safety areas. Trash dumpsters shall be covered and removed when full.

    Remove all bird attractions, such as edibles (food scraps, etc.) or other miscellaneous garbage, trash, or pooled water while on or near the airports. All materials and equipment, such as lightweight construction materials, shall be secured to prevent displacement from wind or jet blast. Dust shall be controlled at all times by using water trucks, vacuum trucks, sweeping, and other acceptable means as determined by the COTR and at no additional cost to the Airports Authority.

15. **Forklift Operations.** Operators must be trained and certified as instructed under OSHA regulation 29 CFR 1910.66, 67 & 68, entitled, *"Powered Platforms/Manlifts"*. Forklift operators are required to have a "Forklift Trained" decal on their hard hat indicating the person is certified. Forklift operator's certification documentation (re-evaluation required every three years for certification) shall be provided to the Airports Authority and submitted to the COTR. Forklifts are to be used for stacking or moving of materials and not to set steel or as a lifting device, unless equipped with the manufacturers approved attachment. Additionally, **an AOA driver's license must be annotated to include forklift qualifications (Class B).**

16. **Ground Fault Circuit Interrupters (GFCI).** All construction related electrical services shall be equipped with ground fault circuit interrupters. All power tools must be GFCI protected regardless of power source.

17. **Imminent Danger.** Any employee can stop work if construction activity constitutes a threat of imminent danger. They shall notify their supervisor if this action is taken and shall not return to the dangerous situation until it has been resolved by the contractor's designated competent person.

18. **Ladders.** Inspect all ladders prior to use. Defective ladders shall be removed from service immediately. All ladders shall have firm footing, be secured at the top, and extend 36 inches above the landing level. Provide adequate training for employees and ensure ladders are being used properly. For example, frame ladders may not be used as extension ladders; the upper/lower section of extension ladders may not be dismantled and used as a separate ladder. Metal ladders and platform ladders are prohibited on Airports Authority projects. Job built ladders are permitted on Airports Authority's construction projects as long as there constructed in accordance with ANSI standards (Refer to Stairways and Ladders Policy Section 3.22 for additional ladder requirements).

19. **Loss Control.** Implement any additional safety measures the CO determines to be necessary to ensure project safety pursuant to a recommendation by the PSM, OSC, contractor's safety engineer or COTR.

20. **Manlifts/Aerial Lifts.** Man lift /Aerial Lift operators shall follow the procedures provided by the manufacturer and OSHA, as well as guidelines specified by either airport, for equipment provided by the contractor or owned by the Airports Authority. Must use tie off points if the lift has anchorage points on the lift (Refer to Scaffold Policy Section 3.20 for aerial lift and scissor lift requirements).

21. **Overhead Hazards.** It is strictly prohibited for one trade to work over/under another trade.

22. **Personal Electronic Devices.** The use of personal electronic devices is prohibited while operating any motorized equipment or motor vehicle on the Air Operation Area (AOA) and active construction work areas. Prohibited devices include but are not limited to; cell phone, radio, iPod, portable CD player and any other device that restricts hearing and distracts the operator.

23. **Piles.** Prevent cut-off piles from free falling if the top of the pile sticks out of the ground *above knee high. Holes shall be kept free of c*ut-off piles.

24. **Safety Data Sheets.** Current Safety Data Sheets (SDS) must be kept on-site and available to all personnel. Copies may be requested by the Airports Authority's Fire Department in connection with their responses for fire, injury, or spill incidents.

25. **Scaffolding.** Hollow concrete blocks, in any fashion, shall not be used under scaffold legs to support the scaffold. Appropriate base plates shall be utilized at all times. Prior to utilizing any scaffold or fall-protection systems, written documentation shall be provided upon request to PSM substantiating its compliance with current OSHA regulations. All scaffolding systems shall be required to utilize a tagging system (Refer to Scaffolding Policy Section 3.20).

    Scaffolding shall be inspected when erected and daily thereafter by the contractor's "Competent Person" as described in the OSHA regulations. All scaffolds 4 to 10 feet in height, having a minimum platform dimension of less than 45 inches horizontally in any direction, shall be equipped with a guardrail or a fall protection system. This includes a Baker Scaffold (Refer to Scaffolding Policy Section 3.20 for additional scaffolding requirements).

26. **Temporary Lighting.** All outdoor temporary electrical wiring within the construction area shall be flexible cord listed for hard usage suitable for wet locations, Type UF cable (direct burial type), or installed in rigid conduit. If installed outside the limits of the construction area, wiring shall meet the requirements of the *Airports Authority Design Manual*. All indoor temporary electrical lighting shall be a three-wire type system in compliance with OSHA regulations and NEC codes.

27. **Tools.** Tools in public areas are a security hazard, and shall be closely guarded or locked-up when not in use.

28. **Stilts.** Stilts are permitted to be used on Airport Authority construction projects, however, a safety plan shall be submitted to COTR, and reviewed by the PSM to include but not limited to a fall protection plan, housekeeping, stilt inspection, and coordination with other trades. Those who are in violation of not following the safety plan submitted will be prohibited from using stilts for future work.

29. **Weather.** When there is Inclement weather (e.g. lightning, tornado warning), outside construction activities shall stop until the weather event has dissipated. When there is lightning work shall stop when lightning is within a 10 mile radius. Contractors shall follow **National Oceanic and Atmospheric Administration** (**NOAA**) alerts. In the event of high winds construction materials shall be secured.

30. **Working Around Mechanized Equipment.** Construction personnel working around mechanized equipment and equipment operators shall be **aware of their surroundings at all times**. The employee shall get the operators acknowledgment before walking behind, working in front of or behind equipment as well as crossing in front of mechanized equipment. Construction personnel shall maintain a safe working distance around mechanized equipment. A spotter shall be required for all mechanized equipment operations.

3.2 CONCRETE & MASONRY POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractors performing concrete and masonry operations to be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart Q – Concrete and Masonry Construction, in addition to the following procedures and requirements:

II. Procedures

1. General requirements

    a) No construction loads may be placed on a concrete structure or portion of a concrete structure unless a qualified person, knowledgeable in structural design, determines that the structure is capable of supporting the load.

    b) Protruding reinforced steel, onto and into which employees could fall and be impaled shall be guarded to eliminate the hazard of impalement.

    c) Concrete and masonry workers shall wear appropriate personal protective equipment to prevent from getting chemical burns from concrete or mortar. When employees are using pneumatic hoses to pump cement, sand and water mixture, they must wear the appropriate PPE (e.g. face shield, safety goggles, and hardhat).

    d) All wood cutting activities shall be done on saw horse tables or supported surface. Cutting free hand in the air shall be prohibited.

    e) Employees shall not be permitted to work under concrete buckets while being elevated or lowered into position. In addition, elevated concrete buckets shall be routed in way that limits exposure to employees of a falling concrete bucket.

    f) Cutting concrete or block shall be wet cut whenever possible. When dry cutting, dust control measures and PPE requirements (e.g. safety goggles, face shield, dust mask according to SDS PPE requirements and respiration program requirements) shall be implemented.

    g) No employees (except those essential to post tensioning operations) shall be permitted behind the jack or end anchorages during post-tensioning operations. Signs and barriers shall be erected to limit employee's access to post-tensioning area during tensioning operations.

    h) When working above six feet, a fall protection plan shall be submitted to Airports Authority COTR and reviewed by the PSM.

2. Equipment and Tool Requirements

    a) Bulk storage facilities such as storage bins, containers and silos shall be equipped with conical or tapered bottoms, mechanical or pneumatic means of starting the flow of material.

    b) Masonry saws shall be provided with a semi-circular guard over the blade.

    c) Masonry saws that are made for dry cutting shall not be used for wet cutting operations unless the saw is made for wet cutting operations.

    d) Machines shall be locked and tagged out of service before employees can perform any maintenance or repair work.

    e) Powered and rotating concrete troweling machines as well as other powered tools shall have a “dead man” switch that automatically shuts off power whenever the hands of the operator are removed from the machine.

    f) Mortar Mixers that have belt driven motors shall have covers closed after starting them due to the exposure of belt drives that are not guarded.

    g) Concrete pumping systems that use compressed air hoses shall be provided with positive fail safe joint connectors. Concrete pumping systems using discharge pipes shall be provided with pipe supports designed for 100% over load.

    h) Concrete buckets equipped with hydraulic or pneumatic gates shall have positive safety latches or similar safety devices installed to prevent premature or accidental dumping.

3. Cast-In-Place Concrete Requirements

    a) Formwork shall be designed, fabricated, erected, supported, braced and maintained so it is capable of supporting all lateral and vertical loads anticipated to be applied to the form work.

    b) Formwork that is installed below grade over 4 feet shall have soils sloped or benched depending on soil classification.

    c) All shoring equipment must be inspected prior to erection to determine if it meets the requirements specified in the formwork drawings. Shoring plans shall be submitted to Airports Authority COTR and reviewed by the PSM.

    d) Erected shoring equipment shall be inspected immediately prior to, during and after concrete placement.

    e) A PE shall prepare the design of the shoring and shall inspect the erected shoring.

f) Forms and shores shall not be removed until it is determined that the concrete has gained sufficient strength to be determined by contract specifications (break test).

g) 100% fall protection shall be maintained while employees are climbing rebar and formwork.

h) Areas where form stripping is to be performed shall be properly barricaded fence and signage shall be posted on all sides.

i) Protruding nails shall be removed or bent immediately.

4. Masonry Requirements

a) A limited access zone shall be established prior to the start of any masonry work.
b) A limited access zone shall be established prior to the construction of the wall.

c) The limited access zone shall be equal to the height of the wall, plus four feet.

d) Contractors shall follow wall bracing requirements that is in accordance with OSHA 1926 standards.

e) Overhand brick/block installation from a scaffold requires 100% fall protection.

3.3 CONFINED SPACE POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) Confined Space Policy requires contractors that are performing confined space work shall be performed in accordance with 29 CFR 1926 Construction Industry Regulations for Confined Space or VOSH whichever standard is more stringent. In addition, contractors shall follow any additional Airports Authority requirements regarding confined space entry.

II. Procedures

1. General requirements: <u>All</u> confined space entries shall be classified as Permit-Required and shall be made according to the VOSH/OSHA Confined Space Entry Program. Additionally, Contractors/Subcontractors shall adhere to the following Airports Authority requirements:

    a) Prior to entry of a confined space, the contractor/subcontractor shall submit a Job Hazard Analysis (JHA) / Activity Hazard Analysis (AHA) to the Airports Authority COTR for review.

    b) *All contractors/subcontractors* shall maintain a written *Confined* Space Entry Program.

    c) All entrants and attendants must successfully complete a confined space entry-training program. In addition, Airports Authority shall be informed as to whom the contractor/subcontractor has deemed as their “Qualified Person”.

    d) ”Qualified person” means a person who is trained to recognize the hazards of the confined space and how to evaluate those anticipated hazards and shall be capable of specifying necessary control measures to assure worker safety.

    e) Once the JHA’s are reviewed, the contractor shall then contact the Airports Authority PSM of the scheduled entry.

    f) All entrants shall wear full-body harnesses. A tripod with a retrieval line shall always be readily available and immediately accessible to the Attendant.

    g) A trained Attendant shall be stationed immediately outside every confined space and have the means available to summon assistance.

    h) The “Qualified Person” shall assure that each confined space into which an employee may be required to enter is tested immediately prior to entry. The monitoring equipment shall be capable of

detecting oxygen level, potential flammable hazards and toxic material known or expected to be encountered.

i) At all times during occupancy, the “Qualified Person” shall also perform continuous atmospheric testing. Unless otherwise specified in the Job Hazard Analysis (JHA) or Pre-Task Work Plan (PTWP).

j) The air quality results shall be recorded on the Confined Space Entry Permit (contractor form in compliance with VOSH/OSHA), which shall be posted outside the confined space. Where the existence of an IDLH hazardous atmosphere is demonstrated by tests performed by qualified person, the Contractor/Subcontractor shall not enter or immediately exit the confined space and notify both Airports Authority PSM and Fire and Rescue. Thereupon additional steps will be required to deem the confined space safe.

k) Ensure all confined space entries are made only under the supervision of a qualified person. Each entry shall have a permit signed by the contractor’s designated qualified person and be kept in visual sight at the entry points.

l) Stand by rescue operations will be the responsibility of the contractor.

m) NFPA 70 E requirements shall be followed when exposed to energized parts. Must submit arc flash analysis documentation.

3.4 CRANES, DERRICKS, HOISTS, ELEVATORS & CONVEYORS POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) will require all contractors using a crane to perform their work shall be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart N – Cranes, Derricks, Hoists, Elevators and Conveyors, American National Standards Institute (ANSI) guidelines, Federal Aviation Administration (FAA) regulations in addition to the following procedures and requirements:

II. Procedures

1. General Requirements

a.) No crane shall be placed in service on an Airports Authority project until an annual inspection has been performed. All cranes shall be certified by a master mechanic or certified manufacturer's representative. The annual inspection report shall include the deficiencies report as well and be submitted to the Airports Authority COTR and reviewed by the PSM prior to mobilization.

b) Whenever a crane is assembled on Airports Authority job site, a third party inspection shall be conducted and all reports to be submitted to the Airports Authority COTR indicating that the crane meets the manufacturer's inspection criteria. If the crane is moved to a different location and has to be reassembled again then a third party inspector shall re-inspect the crane.

c) The contractor shall be responsible for making sure that the crane pad is suitable for the loads being put upon the crane pad (e.g. Verification of any voids underneath pad, compaction testing, slope verification etc…).

d) Airport Operations shall be notified prior to crane operations set up on an Airports Authority job site. FAA form 7460 shall be completed online and submitted to the FAA. All crane operations shall be in compliance with FAR Part 77.

e) Operating times and crane boom heights shall be reported to the Airport Operations Department.

f) Checkered orange and white flag shall be attached to the top of boom (light at top of boom required at night).

g) Airports Authority shall require all crane operators to be certified by the National Commission for the Certification of Crane Operators (NCCCO). Prior to mobilization, copies of all certifications shall be submitted to the Airports Authority COTR and reviewed by the PSM. The crane operators shall meet the certification of the crane being operated. All crane operators shall submit to a physical exam prior to beginning work on an Airports Authority project and provide documentation.

h) All riggers and signal man shall be certified by an accredited agency. Copies of all certifications shall be submitted to Airports Authority COTR and reviewed by the PSM.

i) Any lift **exceeding 75%** of the cranes rated load chart capacity or tandem lifts involving two or more cranes shall be considered a critical lift. In addition, any lift that will affect the critical path of the project deadline date will also be considered a critical lift. Contractors shall have a **master rigger** on all critical lifts. All other lifts that are not considered a critical lift shall have at least one **class 2 rigger** on site for crane rigging operations. All critical lifts plans shall have a Professional Engineer (PE) stamp on the plan with an approved signature. The PSM will determine if the lift is critical, this includes moving critical lifts, and grant approval. Critical lifts will only be considered as a last resort as the contractor shall exhaust all options not to perform a critical lift (e.g. use a larger crane). **A pre-planning meeting shall be held with the crane operation crew and contractor to discuss the critical lift plan that was submitted prior to the crane lift.**

j) All crane operations shall submit a crane lift plan to the Airports Authority COTR and be reviewed by the PSM prior to any crane lift. The weights of all lifts shall be determined and verified prior to lifting the load. Lift plan requirements that need to be submitted to the PSM for review are as follows; Crane load capacity % calculated, annual inspection with deficiencies report, rigging plan, wind speed limits calculated, certifications of crane operator with medical exam documentation, rigger and signal man certifications, and size of dunnage used for crane pad placement. Contractor shall use the Airports Authority crane lift plan form for calculations.

k) The swing radius of cranes must be properly barricaded at all times while working on site. No contractor's employees shall be working under any crane loads at any time. Tag lines shall be attached to all crane loads.

l) Crane operations shall follow crane manufacturer recommendations regarding wind speed limits. All cranes shall have a wind speed indicator. Preferred 20 MPH sustained winds as a limit for controlling loads. Wind speed limits shall be determined by the surface area of load and drag coefficient.

m) Multi member lifting or “Christmas treeing” of crane loads is prohibited on Airports Authority construction projects.

n) Wire rope, its attachments, fittings, sheaves and safety devices shall be inspected according to the manufacturer’s recommendations. Copies of the inspections shall be submitted to Airports Authority COTR.

o) Specialty slings and hooks shall not be used to set steel or move materials over workers. All hooks shall have functional safety latches installed (except shake out hooks).

p) Chains are prohibited for lifting crane loads.

q) All slings shall have labels attached and shall be legible or will be taken out of service. Slings shall be inspected before each use. Any sling that has visible signs of wear, holes, stitching undone, redline indicators showing shall be taken out of service.

r) An anti two-block or warning device is required on all cranes.

s) Cranes, hoists, boom trucks and derricks shall not be installed or operated within 10’ of overhead power lines unless they have been de-energized. Contractors shall follow VOSH Unique Standards/ Virginia Law in regards to Overhead Power Line Act requirements.

t) Outrigger cranes shall use blocking boards. For cranes over 30 tons capacity 6 inch x 6 inch blocking boards shall be used for cribbing. There shall be no separation between the boards and shall be bolted together. For cranes under 30 tons capacity 4 inch x 4 inch boards will be used for cribbing. Blocking boards shall also be required for all equipment that has outriggers (e.g. pump trucks).

u) Float Pads are mandatory irrespective of the terrain, conditions, or surfaces located beneath the pads. Size of float pad blocking is determined by dividing the crane capacity tons by 5 which will give the square footage of the size of the float pad. All cranes less than 50 tons shall have a float pad blocking size of no less than 9 feet.

Size of blocking in square feet = crane capacity tons ÷ 5

For example:

$$\frac{\textit{50 ton crane}}{\textit{5}} = \textit{10 square feet}$$

Note: All cranes less than 50 tons shall have a Float Pad blocking size of no less than 9 sq. feet.

v) All outrigger cranes and other vehicles with outriggers shall be operated with outriggers fully extended and have appropriate blocking. All pick and move picks shall be approved by the PSM. There shall be a barricade around the crane to prevent anyone from entering near the outriggers.

w) All material and personnel hoists shall comply with ANSI guidelines as well as the manufacturer's recommendations.

x) No crane personnel suspended work will be used without the involvement and agreement of the COTR, PSM, contractor's safety representative, and general superintendent. This operation will only be considered as a last resort as the contractor shall exhaust all other alternatives.

3.5 DEMOLITION POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractors performing demolition operations on an Airports Authority project shall be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart T – Demolition, in addition to the following procedures and requirements:

II. Procedures

1. Preparatory Operations

a) An engineering survey shall be done by a PE (depending on scope of work). The engineering survey will determine the condition the framing, floors and walls of the structure. In addition, the survey shall identify areas subject to unplanned collapse of any portion of the structure and the existence of other potential or real demolition hazards.

b) An environmental survey shall be conducted to assess potential hazards that might exist such as but not limited to asbestos and lead.

c) A demolition plan shall be written by a PE for the safe dismantling and removal of all building components and debris.

d) Employees that are working in demolition activities shall have knowledge and instructions of the demolition plan so that their work activities are done in a safe manner.

e) All utilities shall be shut off, capped (with a minimum 12 inch gap for visual verification) or otherwise controlled outside the building line before demolition work is initiated.

f) A hazard assessment must be performed prior to the start of demolition work to identify any hazardous chemicals, gases, explosives, flammable materials or similarly dangerous substances that may have been used on the property. If any substances are found or suspected, testing and purging shall be performed and the hazard eliminated before proceeding with demolition work.

g) All wall openings or open holes shall be protected by a guardrail, personal fall arrest system (PFAS), safety net, or covers that are secured marked and labeled. All covers shall be substantial enough to support the weight of any load which may be imposed on the cover.

h) Construction personnel working around mechanized equipment and equipment operators shall be **aware of their surroundings at all times**. The employee shall get the operators acknowledgment before walking behind, working in front of or behind equipment, and crossing in front of mechanized equipment. Construction personnel shall maintain a safe working distance around mechanized equipment. A spotter shall be required for mechanized equipment operations.

2. Stairs, Passageways and Ladders

a) The designated access points of the structure shall be in the demolition plan. Only designated stairways, passageways and ladders shall be used to access the structure. All other access ways of entry shall be closed at all times.

b) All stairways shall be properly illuminated.

c) All access points to a floor where demolition activities are being performed shall have a separate passageway that is properly lighted and protected.

d) All stairways, passageways and ladders shall be periodically inspected and maintained in a clean, safe condition.

3. Chutes

a) No material shall be dropped to any point outside the building exterior walls where the drop distance is more than 20 feet high, unless contained in a fully enclosed chute. If the drop distance is less than 20 feet high, the area landing shall be effectively protected with barricades. Warning signs shall be posted on the barricades.

b) Any chute opening where employees are dumping debris shall be protected by a guardrail system.

c) Chutes that have multiple openings, the chute doors shall be locked. Only one chute opening can be used at one time.

d) A substantial gate shall be installed in each chute at or near the discharge end. A competent person shall be assigned to control the operation of the gate and the backing and loading of trucks.

e) Chutes shall be designed and constructed of such strength as to eliminate failure due to the impact of material and debris loaded into them.

4. Removal of Walls, Masonry Sections and Chimneys

    a) Masonry walls, or sections of masonry, shall not be permitted to fall onto the floors of the building in such masses as to exceed the safe carrying capacities of the floors.

    b) No wall section, more than one story in height, will be permitted to stand alone without lateral bracing unless it was designed to stand alone.

    c) Structural or load-supporting members of any floor will not be cut or removed until all stories above such a floor have been demolished or removed.

5. Removal of Walls, Floors, and Material with Equipment

    a) Mechanical equipment shall not be used on floors unless the floors are of sufficient strength to safely support the loads imposed on the floor.

    b) Curbs shall be installed to prevent equipment from running over the edge. The curbs shall be marked for easy identification.

    c) Mechanical equipment will only be used for its intended purpose according to the manufacturer's recommendations.

6. Removal of Steel Construction

    a) Steel construction will be dismantled column length by column length, tier by tier.

    b) When floors arches have been removed, planking shall be provided for workers razing the steel framing.

    c) Any structural member being dismembered shall not be over stressed.

7. Mechanical Demolition

    a) All steel members shall be cut free prior to pulling over any portion of a wall. In addition, all roof cornices or stone work shall be removed prior to pulling over any wall.

    b) Continual inspections shall be conducted as the work progresses to detect hazards of the building structures.

3.6 DRUG –FREE WORK ENVIRONMENT POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) has made a commitment to protect the public, employees and contractors to provide a safe, hazard, and drug-free work environment. Contractors shall be in accordance with Occupational Safety & Health Administration (OSHA) 29 CFR 1926.20 General Safety and Health provisions in addition to the following procedures and requirements:

II. Procedures

I. General Requirements

a) Under OSHA general health provisions CFR 1926.20, the contractor has a duty to provide a hazard free environment for their employees. The contractor shall have a drug and alcohol policy in place to screen workers prior to working on an Airports Authority project.

b) The possession, use or being under the influence of drugs or alcohol while on an Airports Authority project is strictly prohibited.

c) All employees are prohibited from engaging in the unlawful manufacture, distribution, dispensing, use, possession or sale of narcotics: opiates, hallucinogens, or any other controlled substances while on Airports Authority property. Any employee who violates this prohibition is subject to discipline, including removal.

d) Any worker using prescription drugs which may impair their mental or motor functions, shall notify their supervisor. The controlling contractor shall be notified and take appropriate measures.

e) Workers who have been injured on the job and prescribed medication by a health care provider shall not be permitted to work until released as fit for duty (e.g. light/modified duty restrictions physician order) by the prescribing physician.

3.7 ENERGY CONTROL POLICY

I. Policy Statement

The intent and purpose of this energy control policy is to prevent serious injury and death by limiting exposure to employees of the unexpected release of stored or residual energy. Metropolitan Washington Airports Authority (Airports Authority) shall require contractors performing electrical work to be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart K, Section 1926.417, "Locking and Tagging of Circuits", NFPA 70E, in addition to the following procedures and requirements:

II. Procedures

1. **Guidelines and Purpose.** The purpose of this requirement is to establish safe electrical clearance procedures to protect life and property while requiring opening and closing of switches and pull out breakers for electrical transmission or distribution lines. This procedure, shall be followed by all contractors, provides for the blocking, tagging, and grounding of electrical switching and controlling devices to clear lines and equipment for the safe accomplishment of work in the de-energized condition.

2. **Responsibilities.** Each airport has identified certain individuals with defined responsibilities as described below:

3. **De-energizing Requestors.** De-energizing requestors are responsible for the implementation of all safe clearance procedures as defined in the *Construction Safety Manual* and the training of their representatives assigned to work at or near equipment requiring clearance procedures. The requestor's representatives shall be a "Competent Person" with the knowledge to implement these safety procedures.

4. **Electrical Outage Approval Authority.** The Airport Engineering and Maintenance Department Manager or designated representative, has the approval authority for all scheduled electrical outage requests which impact airport facilities and services.

5. **General requirements for Lockout/Tagout Procedures** are as follows: Contractors shall create an Electrical Safe Procedure, which will include their own Lockout/Tagout Procedure and submit it to the PSM through the COTR. Contractors shall use the Airport's Authority's Lockout/Tagout Procedure when indicated in the contract. Contractors shall not work on any energized circuits without an approved Electrical Safe Procedure approved by the PSM. The general procedure is as follows:

1. After obtaining approval for an approved outage, the contractor and Authority Electrician meet at the disconnecting device;

2. The Authority Electrician de-energizes the circuit/device on outage request;

3. The Authority Electrician provides an Authority red “Lockout/Tagout Tag” (TAG) to the contractor;

4. The contractor fills out the entire TAG;

5. The contractor places the TAG on the disconnecting device;

6. The contractor checks the circuit/device for the presence of energy (electrical and otherwise);

7. The contractor locks and grounds the circuit/device being worked on (as needed);

8. The contractor removes the STUB (bottom half of the TAG) and proceeds to work on the circuit / device;

9. Once the work is complete;

10. The contractor and Authority Electrician meet at the disconnecting device;

11. The contractor states they are ready to remove their grounds;

12. Discussion between Authority Electrician and contractor agreeing to proceed with energizing the circuit/device;

13. The contractor removes the electrical grounds from circuit/device;

14. The contractor signs the STUB authorizing the circuit/device to be energized AND assuring that all personnel and grounds are clear from the system he was working on and hands it over to the Authority Electrician; If the STUB is lost, the contractor is to provide names of all employees working on the circuit/device and physical verification such employees are no longer working on the circuit/device.

15. The Authority Electrician energizes the circuit/device;

16. The Authority Electrician and the contractor ensure all equipment downstream is operating properly;

17. Based on the circumstances, the STUB should be kept on file for a period of time ranging from 1 day to 1 week, possibly more;

18. Outage terminated;

19. Contractor may leave site

III. Approval Procedure. The following steps are required under the Electrical Safe Clearance Procedure:

1. **MWAA Form EM-27.** De-energizing requestors will complete MWAA Form EM-27 entitled, *Utility Outage Request* (see Appendix D). This form will be used to identify the area(s) required to have electrical circuits and equipment de-energized, the type of work to be performed, the desired start time, and the time required for the outage.

2. **Electrical Outage Approval Authority**. Requestors will submit to COTR, Form EM-27 to the Electrical Outage Approval Authority and provide a copy to the COTR. De-energizing requestors will submit blocking and tagging procedure for each type of device being disconnected. Approved outage requests will be forwarded to the Electrical Safe Clearance Approval Authority for further action. Disapproved requests will be returned to de-energizing requestors with reasons for disapproval annotated.

3. **Timeliness.** All activities set forth in the procedure section shall be completed in the scheduled work period so that the initiation and maintenance of regular airport service will not be adversely impacted.

4. **Locking.** Locking out will be accomplished by the use of padlocks, or other approved means, which will be controlled by the person receiving the safe clearance. The de-energizing requestor will use his lock and retain the key in his possession. Red tags will be tied to the requestor's lock by the Requestor, and the clearance stubs given to the de-energizing requestor. In addition, the requestor will attach his own tag with the name of the person working on the equipment. When possible, a visible line break must be provided at all points of possible feed.

5. **Re-energizing.** The de-energizing requestor is responsible to ensure switching operations are performed in reverse order. Beginning with the last detail of switching, blocking and tagging, perform the opposite sequence of events. For example, if the detail of switching, blocking and tagging reads, "open switch no. 27 install lock and attach danger tag," then the opposite operation should be "remove danger tag, remove lock, and close switch No. 27."

   The reverse operation is to be done only after red tag stubs are matched to the upper body of the red tag by the Airports Authority's representative and both copies are signed by the requestor. The requestor will return all Danger Tags to the Safe Clearance Approval Authority.

3.8 EXCAVATION POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractor's performing excavation and trenching operations to be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart P – Excavations, Subpart M Fall Protection, Virginia Occupational Safety and Health (VOSH) Unique Standards for Excavations/Trenches in addition to the following procedures and requirements:

II. Procedures

1. Prior to excavation operations:

    a) It will be the contractor's responsibility to verify underground installations (e.g., sewer, electrical lines, water lines, fuel lines, and communication lines) prior to excavating. An excavation/trenching checklist shall be filled out (Refer to excavation checklist in appendices of the safety manual in Appendix F) along with a work plan. A pre-planning meeting shall take place with the Airports Authority prior to any excavation work. GIS plans shall be reviewed, along with any other documentation that can help assist locating utilities where excavation work will be performed.

    b) Contractors shall have a third party locating company (subsurface utility engineering locating company) to locate utilities and mark where utilities are located. Miss Utility requires by law that contractors call for a Miss Utility ticket number even though they do not come out to locate utilities on Airport Authority property. The contractor shall submit the Miss Utility Ticket to the Airports Authority COTR/RE. The COTR will initiate the utility verification process. Once the verification process is initiated, there will be up to a 4 day/ 96 hour response time from utility owners (MWAA, FAA, ACS/Verizon, ASIG, Washington Gas (DCA), Park Authority (DCA), and Arlington Water (DCA) to verify utilities. The contractor shall follow Virginia Miss Utility guidelines.

    c) The "**entire"** excavating area in addition to 5 feet outside the marked perimeter/boundary of the excavation shall be swept in a grid system by the third party utility locating company. In addition, the contractor shall also locate manholes and other identifiers that could suggest unknown utilities in the excavation area. The contractor shall be present when the locating utility lines are marked.

d) It shall be the contractor's responsibility once the third party locating company has marked where the utilities are located to "**visually verify**" where the utility is in the ground by hand digging, pot holing, or hydro excavating in order to locate the utility. The contractor shall visually verify and document the depth, width (Note: duct bank shall be identified on both sides to determine width), and elevation of the utility prior to excavating. **Note: when locate markings are dissipated by environmental factors (e.g. rain, snow) or by earth moving activities, it's the responsibility of the contractor to have their third party locating company remark the lines.**

2. Excavation Requirements

a) The competent person shall inspect the excavation or trench prior to anyone entering the excavation. The competent person must have thorough knowledge of soil classification and protective systems that might be used in the excavation or trench.

b) The competent person shall be at the excavation/trench site while work is being performed.

c) The competent person shall inspect the excavation/trench frequently during the course of the day while work is being performed in the excavation/trench.

d) Any soils that have been previously disturbed (e.g. utilities, fill, blasting) will be classified as "C" type soil. All "C" type soils shall be sloped from the toe/bottom of the excavation/trench. When soils are classified as "B" Type and benching is the method used, the first bench shall be at 6 feet then 4 feet thereafter. Soil "A" type soil is rare on airport property. Note: shale soils that appear to be "A" type soil (at IAD) are not and are classified as "C" type soil. Shale soils break from East to West direction.

e) Excavations/trenches greater than **4 feet in depth** shall be protected by means of sloping soils, manufactured protective systems (trench box), or shoring.

f) Access and egress (ladder, ramp or stair) shall be installed for employees in the excavation/trench (depth of **4 feet** and above) and shall be no more than 25 feet unimpeded access and egress laterally from where the employee is working. When trench boxes are used a ladder shall be used inside the trench box.

g) If using a trench box, tabulated data shall be submitted to the Airports Authority COTR and reviewed by the PSM. The trench box data shall be stamped by a PE.

h) When using a trench box, soils shall be sloped/ benched back at the open ends, unless shields are provided.

i) Employees shall not work in excavations/trenches where water has entered the excavation/trench.

j) Employees shall not work under any load while working in an excavation/trench.

k) AOA requirements: An open trench or excavation exceeding 3 inches deep and 3 inches wide will not be permitted within the limits of restricted areas of operational runways, taxiways, or ramps. Trench/excavation coverings shall be sufficient to support the weight of the heaviest aircraft, or vehicle on the runway, taxiway, apron, or road way. All spoil piles shall be hauled off the AOA. No more than 3 degree slope can be made on the AOA.

l) All excavations, regardless of depth, shall be protected by a barrier (e.g. safety fence, guardrails) to prevent pedestrian traffic from falling into the trench/excavation. The protective barrier system used shall be at least six feet back from the leading edge of the excavation/trench.

m) Where there is vehicle traffic, excavations/trenches shall be protected by means of a physical barrier. On the AOA, lighted curb barricades (lights continuously burning) are required. The barricade must be secured. It's the contractor's responsibility to maintain and make sure barricade lights are working properly (e.g. brightness of the lights, checking batteries, and water filled barricades should be checked if used).

n) **Working Around Mechanized Equipment.** Construction personnel working around mechanized equipment and equipment operators shall be **aware of their surroundings at all times**. The employee shall get the operators acknowledgment before walking behind, working in front of or behind equipment as well as crossing in front of mechanized equipment. Construction personnel shall maintain a safe working distance around mechanized equipment. A spotter is required.

o) Temporary and permanent spoils must be kept back no less than two feet from the leading edge of an excavation.

p) If using a trench box, shall be 18 inches above grade at support. The bottom of the trench box cannot exceed 2 feet from the bottom of the trench. Employees shall not be in the trench box when being moved vertically or horizontally.

q) A registered professional engineer shall design sloping or benching systems for excavations greater than 20 feet in depth.

r) Persons walking or working adjacent to an excavation greater than 6 feet in depth must be protected from fall hazards in accordance with Airports Authority 100% Fall Protection Policy.

s) Any pipes or utilities running through an excavation/trench shall be supported.

t) Equipment operating next to an excavation shall be a minimum 2 feet away from the leading edge of the excavation.

3. Training Requirements

a) Each employee working in excavation/trenches shall be trained in the excavation trenching procedures.

b) Each employee working around mechanized equipment shall be trained to maintain safe working distances when working around mechanized equipment

c) Employees shall be trained in all sloping, benching, and shoring procedures prior to entering the excavation or trench.

d) Atmospheric monitoring must be documented and conducted by someone trained in the use of atmospheric monitoring equipment.

e) VOSH excavation testing requirements **(trench/excavation depth of 4 feet or greater**) shall be monitored by atmospheric monitoring equipment.

3.9 FALL PROTECTION POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) Fall Protection Policy requires 100% fall protection when employees are exposed to a fall hazard six (6) feet or greater. There will be a zero tolerance for not being 100 % tied off over 6 feet. Contractors working on an Airports Authority project installing and using fall protection systems shall be in compliance with 29 CFR 1926, Construction Industry Regulations, Subpart M - Fall Protection in addition to the following procedures and requirements:

II. Procedures

1. General Fall Prevention Requirements:

    a) Each contractor, with employees exposed to a fall greater than six (6) feet, shall submit their fall prevention plans to the Airports Authority COTR and reviewed by the PSM prior to beginning work on site.

    b) Fall protection systems that are acceptable systems to use on Airports Authority construction sites are as follows; guardrail systems, safety net systems, fall restraint devices, and personal fall arrest systems.

    c) At no time shall a safety monitoring system, warning line system, and controlled access zone be used as a means of fall protection. These systems shall be prohibited from use on Airports Authority projects; however, exceptions may be at the discretion of the PSM.

    d) Fall protection systems shall be inspected daily by the project safety manager as well as by the employees that are using the Personal Fall Arrest System (PFAS) system.

    e) A Personal Fall Arrest System (PFAS) shall be comprised of a full body harness with seat and leg straps, harness self-rescue attachment (relief step down device), retractable lanyard with double locking snap hook.

    f) All fall protection systems shall not be over 5 years (depending on manufacturer) of the manufacturers issue date or service date by the contractor (documentation required).

    g) All labels/tags on fall protection equipment shall be legible. If the labels/tags are not legible they will be prohibited to use on an Airports Authority construction project.

h) Shock absorbing lanyards with fall protection harnesses can only be used above 18 1/2 feet depending on the manufacturer of the system. Shock absorber lanyards systems are not designed to be used less than 18 1/2 feet above ground levels.

i) Horizontal Life line systems shall be an engineered system or designed by a licensed Professional Engineer (PE).

j) Vertical Lifeline systems shall have a grommet end with a double locking safety clip. All life lines will be attached to a D ring or designed fall protection device anchorage point that will be able to hold 5000 pounds. Knots are prohibited in lifeline systems (hold me termination bars are acceptable tie off connection points). All vertical lifelines shall be touching the ground when using the system. Vertical Lifeline systems shall be protected from abrasion by using a secured protective sleeve or softener. Barricades shall be used below as well as signage posted stating “workers working above”.

k) All vertical self-repelling devices shall have a separate vertical life line. Lines shall be protected from abrasion. All tools shall be tethered from falling below to lower working surfaces. Barricade shall be installed below workers above with appropriate signage “men working above”.

l) Wire cable guardrails shall be designed by a PE if the contractor plans to use the system for fall protection attachment points.

m) Employees shall be protected from falling objects by the installation of toe boards, barricades, snow fence, mesh or canopy structure.

n) Stilts are permitted to be used on Airport Authority construction projects, however, a safety plan shall be submitted to COTR, and reviewed by the PSM to include but not limited to a fall protection plan, housekeeping preparations, stilt inspection, and coordination with other trades. Those who are in violation of not following the safety plan submitted to the Airports Authority will be prohibited from using stilts for future work.

o) All life lines/ fall protection devices will be attached to a D ring or designed fall protection device anchorage point that will be able to hold 5000 pounds. Rigging devices are not acceptable for fall protection anchorage points.

2. Floor And Wall Openings

a) All employees shall be protected from falling or walking through holes or openings by the use of guardrail systems, covers, and or PFAS.

b) A hole that is 2 inches or more shall be covered, marked with "hole" written on the cover and secured from displacement. The cover shall be color coded to be easily identified.

c) An opening 30 inches or more high and 18 inches more wide where an employee could fall through the opening shall be protected by a guardrail system, safety net system, and or PFAS.

d) Coverings for floor and roof openings shall be of sufficient strength to support any load that may be imposed and shall be secured in place to prevent accidental removal or displacement. Covers shall support without failure at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.

e) Conduits, trenches, and manhole covers and their supports, when exposed to aircraft, vehicles, or equipment, shall be designed by a PE.

f) Standard guardrails must consist of top rail that is at a 42 inch height plus or minus 3 inches, mid-rails at 21 inches or half the top rail height and toe boards at 31/2 inches high at a minimum above walking /working level.

g) Every hatchway and chute floor opening shall be guarded by a hinged floor-opening cover. The opening shall be barricaded with railings so as to leave only one exposed side. The exposed side shall be provided either with a swinging gate or so offset that a person cannot walk into the opening.

h) An extension platform outside a wall opening onto which materials can be hoisted for handling shall have a standard railing that meets handrail standards. However, one side of an extension platform may have removable railings to facilitate handling materials. The employee shall wear a PFAS when removing the guardrail when on the platform.

3. Fall Prevention Systems

a) Guardrail Systems

i. Standard guardrails must consist of top rail that is at a 42 inch height plus or minus 3 inches, mid-rails at 21 inches or half the top rail height and toe boards at 3 1/2 inches high at a minimum above walking /working levels.

ii. The top rail of the guardrail system must be able to withstand a force of 200 pounds applied within two inches of the top edge, in any outward or downward direction without failure.

iii. Mid-rail shall be capable of withstanding, without failure, a force of at least 150 pounds applied in any downward or outward direction.

iv. Toe boards shall be capable of with stand, without failure, a force of at least 50 pounds applied in any downward or outward direction. There shall be no opening between toe boards.

v. Mesh fence shall be used from the bottom of the toe board to the top of the top guardrail until walls or windows are in place to prevent debris from being displace.

vi. Wood Guardrails, the post shall be at a minimum of 2" x 4" stock and spaced eight feet on center. Top and mid-rails rails shall be 2" x 4" inch stock. Toe boards shall be 1" x 4" inch stock.

vii. Structural steel railing post shall be 2x2 x 3/8"angles, with post spaced 8 feet on center. Steel posts used for safety rails post shall be at a height greater than 42 inches but not over 45 inches to accommodate the slab thickness of the floor.

viii. Wire Perimeter cable used as guardrails may be 1/2 inch wire rope, but in no situation may they be less than 3/8 inch steel cable. Closed 18 inch turnbuckles are to be used every 100 feet with no more than 3 inches of deflection in the cable guardrail line.

ix. The cable shall be flagged at 6' foot intervals with high visible material (reflective yellow duct tape 8 inches long preferred) and shall be looped and terminated with three "Crosby clips" on each end.

x. Saddle clips/J clips must have clips section on the dead or short end of the rope and the saddle part of the clip on the live or long end of the rope. All clips shall be separated by 6 times the wire rope diameter and in the same orientation.

xi. A Personal Fall Arrest System (PFAS) shall not be attached to a guardrail system unless the system is designed to accommodate the PFAS. A designed registered PE approved plan shall be in place in order to use PFAS application.

xii. The contractor installing the perimeter cable guardrail system shall submit a design with details on how the system will be installed and maintained.

xiii. Double headed nails are prohibited on guardrail systems.

xiv. Wood guardrails shall be continuous from post to post with no splices in the guardrail system.

b) Safety Net Systems

i. Safety net systems shall be installed as close as possible below the working deck, not to exceed a distance of 25'.

ii. Safety net systems shall be inspected at least once a week

iii. Safety net systems shall be drop tested after initial installation and before being used as a fall protection system.

iv. Additional drop tests are required after any repair, whenever the nets are relocated and at 6-month intervals, if the nets are left in place.

c) Personal Fall Arrest Systems

i. PFAS shall be used when exposed to a fall hazard of 6 feet or greater. The PFAS shall consist of a full body harness with seat and leg straps, a self-retracting lifeline, double locking snap hook.

ii. Decelerating devices and lanyards shall not be used with self-retracting lifelines or tied back to itself. Daisy chaining lanyards and retractable lifeline systems is strictly prohibited.

iii. Two retractable lanyards (manufactured designed system on same D ring) will be required when disconnecting and reconnecting to a different location at an elevation greater than 6 feet. At least one lanyard shall be attached to an anchorage point at all times to be in compliance with the Airports Authority's fall protection policy.

iv. A competent person shall assure that fall distance calculations have been evaluated in each circumstance where a PFAS is being used. Shock absorbing lanyard systems with a harness requires at least 18 1/2 feet clearance to use this type of fall protection system, depending on the manufactures recommendations. Therefore, retractable lanyard systems shall be used for heights 18 1/2 feet or below. If the employee is over 310 pounds, modification of the system may be warranted.

v. PFAS shall be rigged so that the employee cannot freefall more than 6 feet nor contact a lower level or obstruction. Retractable lanyard systems shall be attached above the employee or directly behind the employee opposite of the fall hazard. Retractable lanyard systems shall not be attached to an anchor that is parallel with fall hazard as this could cause swing fall effect and cause the employee to hit the lower level.

vi. A PFAS is not required when climbing up or down a ladder. However, if employees are working from a ladder, a competent person shall determine if positive fall prevention is feasible. If the employee is working on the ladder and going beyond the ladder side rails, fall protection shall be used.

vii. Retractable lanyards shall incorporate either a 3/16 inch steel wire cable or a nylon strap with a minimum width of 1 inch.

viii. All anchorage points must be capable of supporting a load of no less than 5000 pounds and shall be a designed fall protection system. Rigging devices shall not be used for fall protection anchorage points.

ix. Steel erectors and metal decking installers shall utilize 100% fall prevention devices at all times when working over 6 feet.

x. Masons who are overhand brick or block laying shall maintain a 42 inch wall in front of them at all times or use vertical lifelines or other fall protection devices to be in compliance with Airports Authority's fall protection policy. When erecting and dismantling scaffolding, employees shall be 100% tied off. The contractor shall check manufacture guidelines if fall protection can be attached to the scaffold system or use some other means to comply with Airports Authority's fall protection policy.

xi. Horizontal lifelines shall be designed by a PE and installed under the supervision of a qualified person. A safety factor of two must be maintained. A designed engineered system can also be used for horizontal lifeline systems (Note: retractable lanyards shall not be used on horizontal life lines).

xii. Vertical lifeline systems shall have a minimum breaking strength of 5000 pounds. Employees must use independent life lines and must be anchored independently from other vertical lifelines. Exception is made when constructing elevator shafts, two employees may be attached to one lifeline providing that they are both working on a false car. The breaking strength of the vertical lifeline shall be 10,000 pounds.

xiii. Adequate fall prevention devices shall be used at all loading platforms prior to removing existing perimeter protection.

xiv. A rescue plan shall be submitted to Airports Authority COTR and reviewed by the PSM prior to using fall protection systems.

4. Training Requirements

a) Each employee exposed to a fall hazard shall be trained by a competent person. Proof of fall protection training shall be made available to the Airports Authority upon request.

b) Specific training includes, but is not limited to the following:

i. The type of fall exposures expected.
ii. How to use the fall protection system correctly.
iii. How to wear the PFAS correctly.
iv. Identify the hazards of the use of the system selected.

3.10 FIRE PROTECTION and PREVENTION POLICY

I. Policy Statement

Contractors shall be responsible for compliance with all fire prevention and safety requirements established in the Virginia Statewide Fire Prevention Code (VSFPC) and other applicable regulatory requirements. Metropolitan Washington Airports Authority (Airports Authority) shall require all contractors to be in compliance with 29 CFR 1926, Construction Industry Regulations, Subpart F – Fire Protection and Prevention, in addition to the following procedures and requirements:

II. Procedures

1. General Requirements

   a) The contractor shall establish a Fire Prevention/Safety Plan referencing OSHA, VOSH, The Virginia Statewide Fire Prevention Code, and NFPA Standards. The Contractor shall meet with the Airports Authority Fire Marshal to determine what needs to be included in the plan. Guidelines for plan content can be obtained at www.mwaa.com/firecode.

   b) The contractor's Fire Prevention/Safety Plan shall be submitted to the COTR for the Airports Authority Fire Marshal's approval. The Fire Prevention/Safety Plan must be updated as job conditions change.

2. **Permits:** Contractors shall be required to obtain a permit from the Fire Code Enforcement Division for the following (this list is not all inclusive):

   a) Welding/Cutting/Hot Work

   b) Hazardous Materials Storage, Use, Handling (including flammable/combustible liquids, compressed gases)

   c) Organic Coating Application

   d) Explosives/Blasting

   e) Portable Tank Installation

   f) Temporary Heating Device Use

   Permits can be obtained at www.mwaa.com/firecode.

3. Fuel Line Hotwork:

   Possible Scenarios. The following are possible scenarios for welding on fuel lines at the airports.

   a) Welding with fuel in the line

   b) Welding with no fuel in line and a line that has been purged.

   c) Welding on a new fuel line

4. **Notification**: The contractor shall notify the Airports Authority's Fire & Rescue Department (FRD) of any welding on any fuel line and:

   a) Should the contractor weld on a fuel line containing fuel, the contractor shall be required to request a foam unit for standby. This request shall be submitted through the COTR and forwarded to the Deputy Fire Chief or FRD Shift Commander 72 hours prior to welding. If any foam unit standby will exceed eight (8) hours or be required for two (2) or more continuous days.

   b) Should the contractor weld on a fuel line that does not contain fuel and has been purged, the COTR shall ensure a courtesy phone call is made to the Airports Authority Public Safety Communications Center at the beginning and end of the welding operation.

   c) In all cases, the contractor shall contact the Airports Authority Fire Code Enforcement Division for the applicable permits in the prescribed timetables.

5. **Safety Data Sheets**: Safety Data Sheets for all hazardous materials on the jobsite shall be submitted to the Fire Code Enforcement Division prior to the start of construction.

6. **Pre-Shift Safety Meeting**: Take five minutes to advise employees on conditions and work to be performed.

7. **Fuel trucks** : must follow MWAA Fire Department O & I procedures and requirements.

3.11 HAND & POWER TOOL POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractors using hand and power tools to be in compliance with 29 CFR 1926, Construction Industry Regulations, Subpart I – Hand and Power tools, American National Standards Institute (ANSI) standards, in addition to the following procedures and requirements:

II. Procedures

1. General Requirements

a) Hand and power tools shall be used as its intended purpose, inspected and maintained according to the manufacturer's instructions and recommendations.

b) Hand and power tools shall be inspected before use to ensure the tool is in safe operating condition. Safety devices that came with the tool shall not be removed.

c) Hand and power tools shall not be modified in any way unless approved by the manufacturer.

d) Power tools that are designed to have a guard shall have the guard in place before use.

e) Power tools that are designed to have handles attached to them shall be used when performing work with the tool.

f) When work is being performed over head above a lower level, tools shall be tethered or secured in holders.

g) Power tools shall not be lowered to a lower level by its power cord or dropped to a lower level to another person.

h) Power tools that create sparks (e.g. grinder) shall be used in locations where there are no flammable or combustible materials in the work area. A hot work burn permit shall be required.

i) All cutting activities with hand and power tools shall be done on a supported surface. Cutting free hand shall be prohibited.

j) .All power tools shall have a "dead man" switch that automatically shuts off power whenever the hands of the operator are removed from the tool.

k) No cartridge style nail guns, nor any tool that uses a cartridge or any explosive charge, shall be permitted in public areas, unless authorized by Airport Operations / Security.

2. Hand Tools

a) Cheater bar extensions are prohibited on any hand tool unless manufactured for the tool.

b) When working with hand tools such as knives, workers shall cut away from the body to prevent lacerations. All knife sharp tools (e.g. utility knife) shall be retracted when not in use and placed in a holder. All knives and sharp tools shall be placed in a holder not in the workers pocket.

c) Wooden handle of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.

d) Impact tools such as chisels, wedges and drift pins shall be kept free of mushroomed heads.

e) A wrench, including adjustable, pipe, end, and socket wrenches shall not be used when jaws are sprung to the point slippage occurs. When working with these hand tools employees shall push away from the body and not toward the body to prevent injury.

3. Pneumatic Power Tools

a) Pneumatic power tools shall be attached to the air hose and shall be secured with a “whip-check” or similar device to prevent the tool from accidentally disconnecting.

b) All air hoses, with an inside diameter exceeding 1/2 inch, shall have a flow reduction safety device at the source of supply or branch line to reduce pressure in case of hose failure.

c) Compressed air shall not be used for cleaning purposes or use to clean yourself or other activities unless the pressure is reduced to less than 30 p.s.i. and appropriate guarding and PPE are in place (e.g. chip guard, nozzle reducing pressure, face shield, safety goggles).

4. Fuel Powered Tools

a) Fuel powered tools shall be turned off while being refueled, serviced or maintained.

b) Fuel powered tools shall not be used in enclosed spaces unless proper PPE is worn and air is monitored for toxic fumes. In addition, fuel powered tools shall not be used near any intake ventilation system.

c) Fuel power tools shall not be used on suspended scaffolds.

d) Gas portable generators shall be grounded according to manufactures recommendations.

e) Gas powered equipment shall have a fire extinguisher nearby.

5. Powder-Actuated Tools

a) Must notify Air Operations Department before using powder-actuated tools.

b) Employees shall be trained in the particular tool being used before using the powder-actuated tool.

c) Face shield, safety goggles and hearing protection shall be worn when operating a powder-actuated tool.

d) The powder-actuated tool shall be tested each day, according to manufacturer's recommendations, before loading to see that safety devices are in proper working condition.

e) Powder-actuated tools shall not be loaded until just prior to the intended firing time. Powder-actuated tools shall never be pointed at anyone regardless if unloaded or not.

f) Loaded powder-actuated tools shall not be left unattended. Powder-actuated tools in public areas could be a security hazard and must be closely guarded or locked-up if not in use.

g) Powder-actuated tools shall not be used in an explosive or flammable atmosphere.

h) All powder-actuated tools shall be used with the correct shield, guard or attachment recommended by the manufacturer.

i) Powder-actuated tools used by employees shall meet all other applicable requirements of American National Standards Institute A10.3-1970, Safety Requirements of Explosive-Actuated Fastening Tools.

6. Abrasive Wheels and Tools

a) The RPM rating on all grinding machine motors shall not exceed the speed rating of the grinding wheel attachment (Applies to all blade attachment on all tools).

b) All abrasive wheels must be closely inspected and ring tested before mounting to ensure they are free from cracks or defects.

c) All abrasive wheels and tools used by employees shall meet other applicable requirements of American National Standards Institute, B7.1-1970, and Safety Code for the Use, Care, and protection of Abrasive Wheels.

7. Woodworking Tools

a) All fixed, power driven woodworking tools shall be equipped with a disconnect switch that can be locked out in the off position.

b) All portable, power driven circular saws shall be equipped with guards above and below the base plate or shoe.

c) When the tool is withdrawn from the wood, the lower guard shall automatically and instantly return to the covering position.

d) Reciprocating saws shall be used with two hands. The material shall be secured before cutting.

e) All saws that have mounting holes on the tool shall be secured to the support structure.

f) Chain saws shall have an anti-kick guard on the chain saw.

3.12 HIGHWAY WORK ZONE SAFETY POLICY

I. Policy Statement

The objective of this policy is to provide coordinated work zone safety systems for the Airports Authority, contractor employees, and the traveling public by facilitating construction, maintenance, and related activities on the highway transportation system without injury or fatality. Work zone safety planning and procedures apply to all Airports Authority and contractor workers on Airports Authority projects working in roadway work zones.

II. Procedures

1. **General Requirements.**

A worker working along the highway in performing construction or maintenance activities is one of the most hazardous work environments in the Airports Authority outside of the airport environment. Work zones are established for the safety of workers and the traveling public whether they are pedestrian or a driver. The risk to workers of being struck by a vehicle traveling through the work zone increases as traffic gets more congested and the traveling public become more impatient with traffic conditions. To deal with this increase risk, improved planning and better protection measures for the workers are needed.

Work zone safety should be continually emphasized during the year. Additional emphasis activities should be conducted during the months of April through November, when the greatest exposure occurs due to the increase in construction and maintenance activities, and changes in daylight saving times. Supervisors should continually stress work zone safety awareness to all highway construction and maintenance workers.

Work zone traffic control allows vehicles and pedestrians to move safely and easily through and around the work areas. Effective traffic control enhances traffic safety and efficiency and protects workers working in the work zone. Different criteria will apply to the design, planning, setup, and maintenance of the necessary traffic control measures for each type of work zone.

Prior to performing construction, maintenance, or other work activities along the Dulles Toll Road (DTR), Dulles International Airport Access Highway (DIAAH) and/or other connecting arterial roadways supporting vehicle conveyance at DCA or IAD a Traffic Control Plan shall be developed in accordance with the most current versions of the following guidelines, manuals, regulations, and standards listed below:

(a) FHWA *Manual on Uniform Traffic Control Devices* (MUTCD) is referenced as the legal standard for traffic control.

(b) VDOT *Virginia Work Area Protection Manual* and the *Work Zone Safety Pocket Guide* provide work zone traffic control information for proving a safer work zone for workers and the traveling public.

(c) VDOT *Work Zone Safety Guidelines for Temporary Traffic Control* provides basic guidelines for work zone traffic control with emphasis on short term work sites on roads and highways.

(d) VDOT *Work Zone Traffic Control Training Procedures* establishes the training requirements for personnel involved in the planning, designing, supervising, implementation, inspection and maintenance of work zone traffic control.

A Traffic Control Plan (TCP) shall be developed prior to the start of work activities and approved by the Engineering Division of DCA, IAD, or by the Manager of Operations and Maintenance for the DTR. Pre-job planning and site visits shall be conducted no less than 7 days in advance of work activities to identify the work location, posted speed limit, traffic volume and pattern, the type of work to be performed, identify hazards and exposures to mitigate potential impacts to workers, travelers, and public throughout the duration of work. The contractor safety manager will notify PSM and OSC daily at the beginning and at the end of each work shift. The contractor will follow DTR administration policies and procedures.

Safety inspections shall be performed by an experienced (Minimum 1 year) Certified VDOT Intermediate Trained Supervisor:

(a) At the initial Work Zone set up;

(b) Daily prior to commencement of work activities;

(c) During any changes of the Work Zone configuration;

(d) Periodically (as often as necessary to maintain compliance with safe zone practices).

Safety Inspections shall focus on the effectiveness of the TCP, traffic control devices and equipment, worker PPE, and equipment safety devices and procedures such as: back-up alarms and signaling spotters.

Working Around Mechanized Equipment. Construction personnel working around mechanized equipment and equipment operators shall be **aware of their surroundings at all times**. The employee shall get the operators acknowledgment before walking behind, working in front of or behind equipment as well as crossing in front of mechanized equipment. Construction personnel shall maintain a safe working distance around mechanized equipment. A spotter shall be required for mechanized equipment operations.

2. **Flagging.** When operations are such that signs, signals, and barricades do not provide the necessary protection on or adjacent to highways or streets and direct control of vehicles in a work zone is required to provide direction to stop or proceed in a designated path; flaggers or other appropriate traffic controls shall be provided. Flaggers are to be used only when other reasonable means of control will not adequately control traffic in the work zone. **Flagging is a very important position, when selecting flagger personnel, it should be a person that is competent, responsible, and is able to make safety decisions**. All personnel performing flagging duties must have in their possession a valid Virginia Flagger Certification Card. The card must verify completion of the traffic control flagger training and be carried on the worker. The card must be renewed every two years.

   When flaggers are used, a method to ensure that flaggers have adequate warning of objects approaching from behind them must be used. Flaggers should not be assigned other duties while flagging. Flaggers shall not use personal cell phones, pagers, or radio headsets that could distract their vision, hearing, or attention while flagging. Two-way radios used for communications between flaggers to direct traffic or ensure flagger safety are acceptable.

   Flagger workstations **shall** be illuminated at night to increase their visibility to the public and other work zone vehicles and equipment.

3. **Setting Traffic Control.** Riding on the tailgate of a pick-up for any purpose is prohibited. Back-mounted cone cages (pickups and one-ton trucks) will be the accepted standard method allowed for use when setting cones and signs at work sites on all highways**. It is strictly prohibited for employees to cross any highway when setting up traffic control**. Truck-mounted front platform and single purpose signing vehicles such as a road warrior are also acceptable standard methods for setting cones.

   Platforms shall meet safety requirements involving load carrying capacity; and shall have a standard top, mid-rail, and toe board. While the cage is occupied and the vehicle is moving, the person occupying the cage shall have the closest end rail (bar or chain) closed. Workers standing on moving equipment with no top, mid-rail, toe board or safety chain must wear a lanyard to keep from being ejected or falling from the vehicle.

   Employees shall not be in the truck-mounted attenuator or in the buffer zone when traffic control is set up.

   Road plates shall be secured from displacement and marked with iridescent reflective tape on each corner of the plate (follow VDOT requirements).

4. **High-Visibility Clothing.** High-visibility clothing is required on all Airports Authority construction projects and roadway maintenance operations. All high-visibility clothing shall meet the latest ANSI/ISEA 107 standards and be worn as outermost garment.

    a) ANSI Class 3 high-visibility clothing is required on all Airports Authority construction projects and roadway maintenance operations and must comply with current Virginia Department of Transportation (VDOT) policies and procedures.

    b) Care should be taken to ensure high-visibility garments are in contrast with traffic devices and equipment. The Appointing Work Zone Specialist and/or Safety Manager shall have final approval authority over the “High-Visibility” T-shirt itself and its use by Airports Authority employees. Workers on foot in areas exposed to aircraft or vehicular traffic must wear the following:

        i. Daytime Operations: Flagmen shall wear an ANSI Class 3 high-visibility vest or jacket. A white or yellow hardhat marked with at least twelve (12) square inches of retro-reflective material applied to provide 360 degrees of visibility must also be worn.

        ii. Nighttime, Inclement Weather, and Limited Visibility and other low-visibility conditions flagmen shall wear ANSI Class 3 ensemble, consisting of an ANSI Class 3 upper garment and an ANSI Class E lower garment. A white or yellow hardhat marked with at least twelve (12) square inches of retro-reflective material applied to provide 360 degrees of visibility must also be worn.

        iii. During nighttime operations non-flagmen workers shall wear either an ANSI Class 3 garment with either white coveralls or ANSI Class E garment. When rain gear is worn it shall be ANSI Class 3 or have required high-visibility garment worn as outermost layer.

    c) Garment Maintenance: Retro-reflective vest, hardhats, white coveralls, rain gear, and other high-visibility apparel shall be maintained in a neat, clean, and presentable condition. High-visibility garments must be replaced periodically because of increased fading of the high-visibility colors. The Work Zone Specialist or Safety Manager has final authority for replacement of high-visibility garments.

d) Hard Hat Usage: Flaggers are required to wear a high-visibility hard hat that is iridescent or marked with 3 square inches of reflective material on each of the four sides of the hard hat. Bump caps and/or soft caps are strictly prohibited on construction and maintenance work sites.

3.13 HOT WORK POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) requires all hot work activities which includes but not limited to welding, burning, cutting, braising, open flame, or any other spark producing work shall be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart J – Welding and Cutting, Virginia Statewide (BOCA) Fire Prevention Code, NFPA 51B standards and other requirements established by the Metropolitan Washington Airports Authority, in addition to the following procedures and requirements:

II. Procedures

1. **General Requirements**: No one shall perform welding, cutting or other open flame work without first obtaining a permit from the Office of Public Safety, Fire Prevention Section. The Permit shall specify the area in which the cutting, welding or other open flame work will take place. Fire Prevention Section personnel will inspect the area in which the cutting, welding or other open flame work is to take place before issuing a permit and shall establish fire safety requirements if needed.

    a) An approved Welding/Cutting Hot Work Permit shall be posted where any welding/cutting or hot work operation is conducted and must be immediately available to the Airports Authority Fire Code Enforcement Division if requested. Welding or cutting operations shall be performed by, and under the supervision of, individuals capable of performing such operations safely and in accordance with applicable regulatory requirements. Welding or cutting operations shall only be conducted in areas approved for that purpose by the Fire Code Enforcement Division.

    b) A Fire watch is required during operations and for **30 minutes after completion of welding/cutting unless otherwise specified by the fire marshal** or other hot work operations. A trained fire watch shall be in attendance to watch for fires, operate portable fire extinguishers or fire hose when necessary and perform similar fire prevention duties. In some cases, additional fire watch may be required in other areas around or below the immediate work area. The person assigned as fire watch shall be capable of immediately reporting an emergency, via telephone or radio, to the Airports Authority Fire/Rescue Department Emergency Communication Center. At least one

(2)A:(20)B:C rated fire extinguisher is required where work is being performed.

c) At least one (2)A:(10)B:C rated fire extinguisher shall be attached to all portable welding carts.

d) No combustible materials shall be within **35 feet** of welding operations without approved shields/covers. Floors, ceilings, and wall openings shall be protected by non-combustible shields or covers.

e) Welding screens shall be in place when welding, cutting or burning to prevent arc welding flashes and burn exposure to surrounding contractor employees.

f) No welding/cutting or other potentially spark producing work shall be done within **100 feet** of flammable/combustible liquids, gases, solids or aircraft unless authorized by the Airports Authority Fire Code Enforcement Division. The need to operate in such a manner must be communicated to the Airports Authority Fire Code Enforcement Division at least 48 hours before such operations take place for consideration.

g) Welding/cutting or other potentially spark producing work shall not be performed in or near rooms or locations where flammable gases, liquids or vapors, lint, dust, or loose combustible stocks are present and where sparks or hot metal are capable of causing ignition or explosion of such materials. In area where the potential for such hazards exist, continuous monitoring shall be performed using the appropriate type instrumentation.

h) Prior to starting work, instrument readings shall be taken to verify the level of hazard present. Continuous monitoring with instrumentation shall be performed for a minimum of 30 minutes after the work is completed.

i) Welding and cutting shall not be performed on containers and equipment containing or having contained flammable liquids, gases or solids until the containers and equipment have been thoroughly cleaned, inerted or purged. Specific approval shall be required for all “hot tapping” on tanks and pipelines.

j) Welding/cutting shall be performed by qualified personnel only.

k) Flash arrestors shall be attached to regulator hoses at the cylinders and at the torch end.

l) Employees performing hot work shall wear non-flammable clothing. Wearing synthetic/ polyester clothing is prohibited when performing hot work. Welders PPE requirements shall wear leather welding jacket, leather gloves and apron. Welding helmets shall be attached to the hard hat. When using welding hoods employee(s) shall use filter lenses that have a shade number appropriate for the work being performed to protect the employee from optical radiation. Welding hoods shall be ANSI approved.

m) Compressed gas cylinders shall not be stored inside buildings, and shall be removed from the site each day unless a designated on site storage area has been approved by the Airports Authority Fire Code Enforcement Division.

n) Oxygen and acetylene tank cylinders that are in storage (outside of building) shall be separated at a minimum of 20 feet. When in use on a cart, a noncombustible barrier at least 5 feet in height having a fire resistant rating of at least one-half hour shall be used. All tanks shall be capped and secured when not in use and stored outside the building.

o) All compressed gas cylinders shall be secured at all times. Compressed gas cylinders shall be moved in a vertical position with caps in place and never in a horizontal position.

p) Automatic sprinkler protection shall not be shut off during welding/cutting operations. Where welding or cutting is performed close to automatic sprinklers, noncombustible barriers or damp cloth guards shall shield the individual sprinklers, but shall be removed immediately when the work is completed.

q) A Utility Outage shall be obtained when the possibility exists that a welding/cutting operation could cause the activation of a fire alarm/detection or fire protection system. A copy of the approved Utility Outage Request form shall be maintained on site with this welding/cutting permit document.

r) No fire alarm, detection, suppression, or other fire protection device or system shall be impaired or removed from service without a Utility Outage which includes approval from the Airports Authority Fire Code Enforcement Division and other appropriate Airports Authority Divisions.

s) Any unsafe practice or condition noted by the Airports Authority Fire Code Enforcement Division may result in the temporary or indefinite suspension of a welding/cutting permit and the immediate cessation of operations.

2. Compliance:

a.) Compliance with all requirements established in this policy shall be the responsibility of all personnel performing welding, cutting and other open flame work at the airports. Informational documents containing requirements and standards for welding, cutting and other open flame work may be obtained from the Metropolitan Washington Airports Authority Fire Marshal's Office, 703-572-3331, Office of Public Safety, Washington Dulles International Airport.

3.14 HOUSEKEEPING POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractors to ensure that their work areas are maintained in a clean and orderly manner in all construction activities they are performing. It will be the responsibility of the contractor to maintain good housekeeping practices by making daily provisions for the proper storage of materials, waste, and debris. In addition, contractor employees working on an Airports Authority project shall be in compliance with 29 CFR 1926, Construction Industry Regulations, Subpart C 1926.25., in addition to the following procedures and requirements:

II. Procedures

1. General requirements:

   a) Housekeeping shall be maintained as an integral part of every work operation. It's the controlling contractor's responsibility to conduct routine housekeeping inspections of their project. Debris and scrap materials shall be disposed of frequently. Materials, electrical cords, tools, and debris shall be off the floor at all times to prevent falls and tripping hazards.

2. Work environments:

   a) Materials, debris, and equipment shall not block or hinder access to valves, pipes, manholes, vaults, fire hydrants, fire extinguishers, fire alarm panels, smoke detectors, sprinklers, warning signs, fire lanes, electrical equipment, building entrances or exits.

   b) Stairways, aisles, corridors, and passageways shall be free from material, debris, and equipment for emergency access and egress.

   c) Work construction areas shall have adequate lighting (minimum 5 foot candles) so work can be performed safely. Temporary lighting or task lighting shall be installed if there is limited visibility in the work area.

   d) Employees shall clean up as they perform their work and not wait until the end of the shift to clean up their work area.

   e) Ventilation shall be required based on the work being performed such as work that produces the accumulation of dust and fumes.

   f) A sufficient number of waste receptacles shall be made available in the work area. Containers shall be provided for the collection and separation of waste, trash, oily and used rags and other refuse. Trash receptacles shall be removed immediately when full.

g) Protective covers shall be provided under equipment that could possibly leak to prevent oil, grease, or other fluids from saturating the floor. Protective coverings shall be flame resistant, oil resistant and heavy gauge material.

h) Large trash containers that are in the AOA area shall have a secured cover over the entire container to prevent debris (FOD) from entering the air field.

i) Tools & equipment that are not in use shall be placed back in tool gang boxes.

j) Spills shall be cleaned up immediately to avoid fall hazards. In the event that the spill cannot be cleaned up immediately, the area shall be appropriately guarded to prevent fall hazard exposure until the spill is cleaned up. A spill kit of appropriate size shall be readily available.

3. Work stations:

a) Work stations to perform work shall be elevated and not on the floor.

b) Work station areas where cutting, chopping, and sawing are performed shall have a receptacle next to the work station. All material scrapes shall be discarded in the trash receptacle not on the floor.

c) Work station areas shall be swept and kept clean at all times to prevent slip, trip, and fall hazards.

4. Material Storage:

a) Propane shall not be stored inside the building.

b) All gas cylinders shall be secured and in a vertical position. Acetylene and oxygen tanks when not in use shall be separated by 20 feet or have 5 foot fire rated barrier between the two gases when in use. When storing tanks, tanks shall be stored outside of the building.

c) Any type of gas cylinders shall not be stored in gang boxes.

d) When stacking materials for storage, make sure the base is firm and level. Cross tie each layer. Keep materials level and do not stack materials too high (preferred not over 5 feet). Keep aisles clear and maintain adequate space to work around the stacked materials.

e) Materials shall not be place next to any guardrails or leading edge. Materials must be placed at least 6 feet back from any guardrail system.

f) When unpacking materials in wood crates. Nails are to be removed or nail points hammered down as soon as lumber is disassembled to prevent impalement hazards. All banding/tie wire shall be discarded to prevent tripping hazards.

g) Materials stored where work is performed should be limited to only those materials that will be used in the same shift. Do not let materials and supplies that are no longer needed accumulate.

h) Dispose of all combustible materials properly to reduce the chance of fires.

i) Materials shall not be placed in front of any electrical panel. Shall have a minimum of 3 feet clearance in front of any electrical panel.

j) Materials shall not be placed on top of gang boxes or any movable parts where materials could be displaced.

5. Electrical Cord Management:

a) All electrical cords and power cords shall be inspected before use.

b) Electrical cords that have kinks, worn insulation, cuts, exposed strands of wire, and missing ground pins shall be prohibited to use on site.

c) All electrical cords shall be off the ground whenever possible. Electrical cords shall be run above at least 8 feet above ground. If electrical cords are on the ground they must be protected from traffic.

d) All electrical cords shall not be placed crossing corridors, passageways, emergency exits, and stairways.

e) All extension cords and power cords shall be equipped with GFCI protection or be plugged into a wall GFCI outlet.

f) Portable generators shall have GFCI protection when using as a power source. In addition, portable generators shall be grounded according to manufacturer's recommendations.

g) Cords may only be repaired by a qualified electrician.

h) Heavy-duty 12 gauge electrical cords (type S, SJO, SJTW, ST, SO, STD) are acceptable for use on an Airports Authority construction site.

3.15 MATERIALS HANDLING and RIGGING POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) requires each contractor that is conducting material handling and rigging operations shall be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart H – Materials Handling, Storage, Use and Disposal, in addition to the following procedures and requirements:

II. Procedures

1. Material Handling

    a) Employees shall be trained in safe lifting techniques. Any manual lift of over 50 pounds shall require two people to lift the item.

    b) Material handling devices shall be made available for the handling needs of the activity. Material handling devices (e.g. dollies, carts, pallet jack) shall be the preferred method over manual lifting methods.

    c) Material handling needs for moving heavy material shall be evaluated based on weight of the item being moved, size of the item, distance the item needs to be moved, and the path of movement where the item will be placed.

    d) Materials shall not be moved over or suspended above personnel.

    e) Materials loads shall have taglines or other devices to control the loads being handled by hoisting equipment.

    f) Chains are prohibited to use when hoisting materials. Chain fall hoists are acceptable to use.

    g) Forklifts are to be used for stacking or moving materials and not to set steel or as a lifting device, unless equipped with the manufacturers approved attachment. The lifting attachment shall be secured to the forks of the forklift with a lifting hook. The hook shall have a safety latch/mouse on the hook. Forklift operators shall use an attachment because free rigging straps on the forks of a forklift are prohibited.

    h) Forklift operators shall be certified to operate a forklift and shall have Airports Authority badge to operate a forklift. Forklift operators shall be re-certified every three years. Certifications shall be submitted to the COTR and reviewed by the PSM.

i) Scissor lifts shall not be used as lifting devices to install materials.

j) Duct jacks shall have the manufacturer's supplied forks/extension attachments for lifting materials.

2. Material Storage

a) All materials shall be stacked, blocked, interlocked, and limited in height of 5 feet, so that it is stable and secured against sliding or collapse.

b) Aisles and passageways shall be kept clear at all times for the safe movement of material handling equipment and employees.

c) Do not store material within 6' feet of any hoist way or interior floor opening.

d) Do not store material within 10' feet of an exterior wall.

3. Rigging

a) Prior to each use, rigging equipment, including its fastenings and attachments, shall be inspected by a competent person. All rigging devices shall have capacity rating markings or tags that are legible. Fall protection devices shall not be used for rigging and rigging devices shall not be used for fall protection.

b) Inspections shall also be conducted during use and where additional service conditions warrant.

c) Defective or damaged slings shall be removed from service immediately.

d) Taglines shall be utilized to control loads.

e) Wire Rope Slings

i. The manufacturer's safe working loads shall be followed at all times.

ii. Protruding wire rope shall be covered or blunted.

iii. Wire rope must not be used if, in any length of eight diameters, the total number of visible broken wires exceeds 10% of the total number of wires.

iv. Wire rope shall not be used if it shows signs of excessive wear, corrosion or defects.

v. When used for eye splices, the saddle clip shall be attached so the saddle section is on the live end of the rope.

vi. Slings shall not be shortened with knots, bolts or other makeshift devices.

vii. Slings shall be protected from sharp edges with padding, softeners or similar devices.

viii. Shock loading of a sling is prohibited and slings shall not be pulled from under a load when the load is resting on the sling.

f) Synthetic Slings

i. Each synthetic sling shall be identified with the name of the manufacturer, rated capacities and type of material.

ii. Nylon and polyester slings shall not be used in temperatures in excess of 180 degrees.

iii. Synthetic slings shall be immediately removed from service if any of the following conditions are present; acid or caustic burns, melting or charring of any of the sling surface, snag, puncture, tear or cut, broken or worn stitches, or red thread showing in the sling.

3.16 PERSONAL PROTECTIVE EQUIPMENT POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require each contractor working on an Airports Authority construction project to be in compliance with 29 CFR 1926, Construction Industry Regulations, Subpart E – Personal Protective and Lifesaving Equipment, American National Standards Institute (ANSI), and product safety data sheets recommendations by the manufacturer, in addition to the following procedures and requirements:

II. Procedures

1. General requirements: Airport Authority employees, subcontractor employees and visitors who are working or visiting Airport Authority construction projects are required to adhere to the following Personal Protective Equipment (PPE) Policy requirements;

    a.) All PPE shall be replaced after 5 years of the manufacturers issue date unless the contractor can provide documentation when the PPE was put into service not more than 5 years. These requirements may vary based on the manufacturer criteria.

    b.) Contractor shall provide in their Job Hazard Analysis / Activity Hazard Analysis and daily Pre-Task Plans specific PPE requirements for each task.

2. Eye Protection

    a) Eye Protection: All safety glasses shall comply with ANSI Z87.1 Standards. ANSI Z87.1 should be stamped on the lens or the arm of the glasses for identification that there ANSI-approved.

    b) Dark lens safety glasses shall not to be worn inside of buildings, enclosed areas or at night time. Clear safety glasses shall be worn.

    c) Safety goggles are required for operating circular saws, table saws, routers, and grinding concrete. In addition, safety goggles will be required when performing overhead work activities and operating air powered tools.

    d) Face shields and safety goggles (both) shall be worn to provide face and eye protection from flying debris/particles, splashes or mist. In addition, face shields and goggles (both) shall be worn when using abrasive wheels; chop saws; portable grinders, chipping concrete or stone; using explosive power actuated fastening tools.

e) Chemical splash proof goggles and face shield shall be worn when handling or dispensing liquid chemicals. Refer to chemical product manufacturer safety data sheets for specific PPE requirements.

f) Employees that wear prescription eye glasses shall wear ANSI Z87.1 approved prescription safety eye glasses with side shields.

g) When using welding hoods employee(s) shall use filter lenses that have a shade number appropriate for the work being performed to protect the employee from optical radiation. Welding hoods shall be ANSI approved. Welding screens will need to be installed if working on ground level to protect others who are not wearing the appropriate eye protection.

h) Employees working with hot tar shall wear a face shield, long sleeve shirt, and full apron.

3. Head Protection:

a) Hardhats shall comply with ANSI Z89.1 standards. ANSI Z89.2 Type Hardhats must be worn when exposed to 600 Volts or greater.

b) Western style hardhats, aluminum hardhats, baseball caps under the hardhat, and bump caps are prohibited on Airports Authority construction projects. Only approved hard hat liners made to attach to inside the hardhat will be allowed on Airport Authority projects.

c) Welding hoods shall have hardhat attachments for head protection.

d) The brim/bill of the hard hat must project forward to protect the face. Turning the hardhat backwards is prohibited unless the hardhat interferes with the task at hand, as with welders and surveyors.

e) Hard hats shall be worn at all times while on an Airports Authority project. On the AOA, hardhat shall have tethered attachment lanyard for windy conditions.

f) All flagging operation workers shall wear yellow or white hardhats with at least 12 inches square inches of retro-reflective material applied to the hardhat to provide 360 degrees of visibility.

4. Hand Protection:

a) Gloves will be required at all times when working on Airports Authority construction sites. The exception for not wearing gloves would be when working with rotary tools, which poses a greater hazard to the employee of getting the glove bound/caught in the rotating point of operation of the tool.

b) Cut resistant gloves (Kevlar) will be required when working with sharp materials such as metal and cutting activities using a knife or sharp tool. The cut resistant gloves shall be a 3+ plus cut resistant rating or above.

c) Contractors shall establish a “Glove Protection Policy” appropriate to the hazards identified by specific task(s).

d) Contractor employees working with hot tar shall wear long kettle gloves.

5. Foot Protection:

a) Airports Authority employees, subcontractor’s employees, and visitors shall wear a serviceable pair of leather ankle high safety toed work boots.

b) Sneaker style shoes (even ANSI approved sneaker shoes) shall not be worn on Airports Authority construction projects. Tennis shoes, sandals, street shoes, high heels and other similar shoes are not permitted.

c) Metatarsal protection covers over the shoes are required when operating jack hammers, earth compacting equipment, and similar equipment.

6. Construction Clothing:

a) Pants: Full length trousers without excessive length or flared bottoms. Shorts and sweat pants are prohibited on Airports Authority projects.

b) Shirts: Must cover entire midsection and sleeves shall cover the entire shoulder.

c) Sleeveless shirts, tank tops, net /mesh shirts, halter tops, flannel sweat pants and any other clothing with derogatory language or offensive photographs shall not be worn on an Airports Authority construction project.

7. High-visibility Clothing:

a) ANSI Class 3 high-visibility clothing is required on all Airports Authority construction projects and roadway maintenance operations.

8. Hearing Protection:

a) Contractors shall provide a hearing conservation program prior to beginning work.

b) Hearing protection shall be required when in designated areas posted as high noise areas. In addition, hearing protection shall be required when working around or using equipment that generates high noise such as but not limited to, using a jack hammer, pneumatic tools, powder-actuated tools, chainsaw operations, pile driving operations, and cutting metal studs or decking. The contractors hearing conservation program shall identify high noise equipment and tools that warrant a need for hearing protection.

9. Respiratory Protection:

a) Each contractor shall have a written respiratory program if their work requires the use of a respirator. The written respirator program shall include; selection of respirators, medical evaluation and monitoring, fit testing, respirator use, care and maintenance, training and record keeping.

b) Respirator protection shall be in accordance with safety data sheets (SDS) manufacturer's recommendations.

10. Fall Protection :

a) Guardrail systems, safety nets, or a personal fall arrest system (PFAS) shall be used during any activity where a worker is exposed to a fall hazard of more than 6 feet. One-hundred percent (100%) fall protection applies in all cases, unless the PSM grants permission otherwise.

b) Full body safety harnesses with seat support, leg straps, harness self-rescue attachment (relief step down device), double locking snap hook with retractable lanyard are the only acceptable fall protection outside of safety guardrails and safety nets.

c) Nylon shock absorbing lanyards can only be used over 18/1/2 feet in height depending on the manufacturer requirements.

d) Safety monitoring system, warning line systems and controlled access zones are prohibited on an Airports Authority project.

e) Refer to Fall Protection policy for more information regarding different types of fall protection and anchorage systems.

11. Hot Work:

a) Welders shall wear leather welding jacket, gloves, and apron.

12. Chain Saw Operations :

a) Employees shall wear full length chaps (e.g. Kevlar) or the equivalent, wire mesh face shield, leather gloves, safety goggles, steel/composite toed boots and hearing protection when operating a chain saw.

13. Working near or over water :

a) When working near or over water where there is a potential exposure to drowning a personal flotation device (life jacket) shall be worn.

b) The controlling contractor shall also provide a ring buoy and lifesaving skiff.

3.17 PRE-TASK WORK PLANNING POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require the contractor and their subcontractors to preplan their work activities on a daily basis**.** Prior to the actual start of work, the foreman shall conduct a Pre-Task Work Planning (PTWP) meeting with the work crew performing the work. Pre–Task Work Planning shall be required daily for each work operation/ task activity on an Airports Authority construction project. Unlike the Job Hazard Analysis (JHA) which is a general plan outlining the work steps and associated hazards of specific tasks, the PTWP greater defines the work plan and the associated hazards for the particular phase of work being performed.

II. Procedures

1. Pre-Task Work Planning

The Pre-Task Work Plan is designed to engage the work crews in the planning process so that they are aware of the hazards associated with the work that they will be performing. All workers and the competent person and project manager/general superintendent shall review and sign the PTWP form (Refer to PTWP form in Appendix E) for their assigned work at the beginning of each shift.

The main components of the PTWP meeting will include a five step process for foreman/competent person and workers to follow:

Step 1. Identify and define the tasks of the scope work.

Step 2. Identify the hazards of each step of the task.

Step 3. Abate the hazards that have been identified.

Step 4. Use controls measures as a guideline to control the hazards such as but not limited to the PTWP form, Airports Authority safety guidelines, ANSI standards, manufacturer's recommendations and OSHA regulations.

Step 5. Continual improvement such as but not limited to what worked and what did not work, safety inspections identifying problem areas, and looking at the work process to improve the work plan.

3.18 REGULATORY INSPECTION POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) policy is to fully cooperate and maintain a positive working relationship with all regulatory agencies such as but not limited to Virginia Department of Labor & Industry Occupational Safety and Health (VOSH) and Federal Occupational Safety and Health Administration (OSHA). The purpose of this policy is to prepare and provide guidance to contractors who may be subjected to a regulatory inspection. The Airports Authority will not deny entry to regulatory authorities; however, the controlling contractor can exercise their right by law to request a search warrant prior to any regulatory inspection.

II. Procedures

1. General Requirements:

   a.) If the OSHA/VOSH inspection location is located on the AOA, VOSH/OSHA must notify the Airports Authority and be escorted to the inspection worksite. The Airports Authority will immediately notify the controlling contractor that OSHA/VOSH is on airport property.

   b.) If an inspection is located outside the AOA/SIDA area, OSHA/VOSH can directly enter the site. The controlling contractor shall notify the Airports Authority COTR and PSM immediately of any OSHA/VOSH inspection.

   c.) The Airports Authority has a right to participate and be present in all inspections conducted by any regulatory agency on airport property and construction projects.

   d.) To give guidance to contractors regarding OSHA/VOSH inspection process, contractors should attain a copy of the OSHA Field Operations Manual (FOM) at OSHA's website at www.OSHA.gov. The FOM is a document that the compliance officer must follow during the inspection process. In addition, the FOM also covers and explains the employer's rights. The contractor should read the manual to better prepare and understand the OSHA/VOSH process prior to an OSHA inspection.

   e.) Regulatory inspectors or OSHA/VOSHA compliance officers shall provide proof of current credentials prior to conducting an inspection.

f.) Regulatory inspectors or OSHA/VOSH compliance officers should state the reason for the inspection and what type of inspection they will be conducting in the opening conference.

g.) If the inspection is due to a formal complaint, the compliance officer should provide the controlling contractor with a copy of the complaint before proceeding with the inspection. The controlling contractor shall submit a copy of the complaint to the Airports Authority COTR.

h.) Regulatory inspectors or OSHA/VOSH compliance officers shall not be harassed, intimidated, or abused during or after the inspection process.

i.) Regulatory inspectors or OSHA/VOSH compliance officers shall follow Airports Authority PPE requirements and safety policies during the inspection process.

3.19 SANITATION POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) Sanitation Policy requires contractors that are performing construction work shall be in compliance with Virginia Occupational Safety and Health (VOSH) Virginia Sanitation Standard for Construction 16VAC25-160 referenced below (use most current standard). Note: The following standard is unique for the enforcement of occupational safety and health within the Commonwealth of Virginia under the jurisdiction of the VOSH Program. The existing federal OSHA standard does not apply; it does not carry the force of the law.

II. Procedures

1. 16 VAC25-160-10 Water supply.

   a) Portable drinking water shall be provided and placed in locations readily accessible to all employees.

   b) The water shall be suitably cool and in sufficient amounts, taking into account the air temperature, humidity and the nature of the work performed to meet the needs of all employees.

   c) The water shall be dispensed in single-use drinking cups or by fountains. The use of common drinking cups is prohibited.

   d) Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers.

   e) Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purposes. Water shall not be dipped from containers.

   f) Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the cups shall be provided.

   g) Maintenance: potable drinking water, toilet and hand washing facilities shall be maintained in accordance with appropriate public health sanitation practices, and shall include the following: Drinking water containers shall be constructed of materials that maintain water quality; drinking water containers shall be refilled daily and shall be covered; and drinking water containers shall be regularly cleaned.

2. Non potable water

   a) Outlets for non-potable water, such as water for industrial or firefighting purposes only, shall be identified by signs meeting the requirements of Subpart G of this part (16VAC25-1926.200 et seq.), to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

   b) There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing non-potable water.

3. Toilet and hand washing facilities.

   a) One toilet and one hand washing facility shall be provided for each 20 employees or fraction thereof.

   b) Toilet facilities shall be adequately ventilated, appropriately screened, have self-closing doors that can be closed and latched from the inside and shall be constructed to ensure privacy.

   c) Toilet and hand washing facilities shall be readily accessible to all employees, accessibly located and in close proximity to each other.

   d) Toilet facilities shall be operational and maintained in a clean and sanitary condition.

   e) Sanitation facilities shall not apply to mobile crews having transportation readily available to nearby toilet facilities.

   f) Washing facilities; Hand washing facilities shall be refilled with potable water as necessary to ensure an adequate supply of potable water, soap, and single use towels.

   g) Disposal of wastes from facilities shall not cause unsanitary conditions.

   h) Definitions: 1. “Hand washing” facility means a facility providing a basin, container or outlet with adequate supply of potable water, soap and single use towels. 2. “Potable water” means water that meets the standards for drinking purposes of the state or local authority having jurisdiction or water that meets the quality standards prescribed by the U.S. Environmental Protection Agency’s Interim Primary Drinking Water Regulations, published in 40 CFR Part 141.

4. 16VAC25-160-20. General industry standards applicable to construction sanitation (29 CFR 1910.141).

    a) Every enclosed workplace shall be so constructed, equipped, and maintained so far as reasonably practicable, as to prevent the entrance or harborage of rodents, insects, and other vermin. A continuing and effective extermination program shall be instituted where their presence is detected.

    b) Eating and drinking areas. No employee shall be allowed to consume food or beverages in a toilet room or in any area exposed to a toxic material.

5. 16VAC25-160-30. Medical services and first aid (29CFR1910.151).

    a) Where eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

3.20 SCAFFOLD POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractors who are conducting scaffold operations to be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart L – Scaffolds, manufacturer requirements of the scaffolding system being used, Airports Authority fall protection policy, in addition to the following procedures and requirements:

II. Procedures

1. General Requirements

   a) All scaffolds shall be erected and maintained to comply with the manufacturer requirements.

   b) Special designed scaffolding systems shall be PE stamped and submitted to Airports Authority COTR and reviewed by the PSM.

   c) Scaffolds shall be erected under the supervision of a competent person. The name and qualifications of this person must be submitted to the Airports Authority COTR and reviewed by the PSM prior to the start of work.

   d) Prior to erecting any scaffold a written fall protection plan shall be submitted to Airports Authority COTR and reviewed by the PSM.

   e) Supported scaffolds with a height to base width ratio exceeding 4:1 must be stabilized from tipping by a solid connection such as pipe or wood. Wire support shall be prohibited on Airports Authority projects.

   f) When scaffolds are erected adjacent to structures, they shall be secured to the structure every 26 feet vertically and 30 feet horizontally.

   g) During the erection and disassembly of scaffold systems, all employees shall wear a Personal Fall Arrest System (PFAS) unless protected by a guardrail system. PFAS shall not be attached to scaffolding system unless the manufacturer allows personnel to attach a PFAS to the scaffolding system.

   h) Scaffolds and their components shall be able to support at least four times the maximum intended load combined with employee's weight, tools, and material loads imposed on the scaffold.

   i) All supported scaffolding shall have base plates for supports. Scaffolding systems that have locking wheels shall be prohibited from use in stairways.

j) Mudsills shall be required when the scaffolding is not supported by concrete. Mudsills shall be continuous under the base plate supports. Base plates shall be nailed down to the mudsill when used. It is strictly prohibited to use concrete blocks or any other masonry products as a support for a scaffolding system.

k) Screw jacks shall be installed according to the manufacturer's specifications.

l) All scaffolding and stair towers shall be inspected before use. Inspection tags shall be placed on the scaffold at its access point. The competent person shall inspect the scaffold daily and sign the inspection tag to verify that the scaffold is in compliance and is safe to use.

m) The contractor shall use a color-coded placard scaffolding tag system that signifies that the scaffold is in compliance or not.

    i. A green placard scaffold tag shall be used when the scaffolding system is in compliance and safe. The tag shall be signed by the competent person.

    ii. A red placard scaffold danger tag shall be used when the scaffold is not in compliance and unsafe to use. A red placard shall be used when erecting or dismantling the scaffold. Fall protection required. The tag shall be signed by the competent person.

n) All supported scaffolding systems shall have ladder access. Scaffolding built- in ladders shall meet the ladder rung spacing requirements. Scaffold ladders shall be continuous to the working platform. Extension ladders used to access scaffolding shall be 3 feet past the landing and secured to the scaffold. All openings at ladder access points shall have a corral system installed to prevent backing off the scaffold.

o) Scaffold components from different manufactures shall not be interchanged.

p) Scaffolds shall be kept free of snow, ice, or any other material from rendering the scaffold unsafe for personnel using the scaffolding system.

q) All scaffolds with a working height of 4 feet (includes bakers scaffold) and above shall have a guard rail system in place on all open ends. This includes masonry fabricated frame scaffolds with end bracket platforms.

r) Scaffolds that exceed 125 feet in height shall be designed and erected under the supervision of PE competent in scaffolding systems.

s) The area below a working scaffold shall be barricaded to protect employees from a falling object hazard.

t) Contractors shall not use another contractors scaffolding system unless a scaffold release form has been signed and has been approved by the contractor that owns the scaffolding system.

2. Specific Scaffold Types

a) Mobile Scaffolds (scissor lifts, bakers scaffolds, welded frame scaffolds with wheels)

i. Rolling scaffolds with personnel on the scaffold shall not be moved. Employees shall come off the scaffold to move the scaffold.

ii. Tools shall be removed from the scaffold before moving the scaffold.

iii. Wheels shall be locked on the scaffold prior to employees using the scaffold.

iv. Wheel casters shall be capable of supporting the loads imposed on the scaffold.

v. Mobile scaffolds shall only be used on level and suitable surfaces. It shall be prohibited to use material to level a mobile scaffold.

vi. Scaffolds that are narrow (30 inches wide) and above 4 feet with a height to base width ratio that exceeds 2:1 shall be braced with outrigger frames.

vii. Mobile scaffolds next to guardrail systems shall be perpendicular to the guardrail system when accessing and egressing from the scaffold (opposite side from the guardrail) to prevent exposures to falls.

viii. Baker scaffolds at 4 feet and above shall require a guardrail system.

ix. The work platform shall be fully planked. Planks shall be cleated and secured to prevent movement. Any gap in a working platform cannot exceed 1 inch. All planks or platforms must be cleated or overlap a minimum of 6 inches, but no more than 12 inches.

x. Toe boards shall be installed on all scaffolding.

xi. Employees using scissor lifts shall be tied off if attachment points are in the lift. Employees shall not climb on the rails of a scissor lift to reach their work.

xii. Scissor lifts shall not be used as a lifting device for materials.

b) Fabricated Frame scaffolds

i. It shall be prohibited to climb the rungs (rungs are structural only not for climbing) or cross braces of fabricated frame scaffolding systems.

ii. Cross braces shall not be used as a guardrail system. 2 x 4 wood rails or metal rails shall be used as a guardrail system.

iii. Frames and panels shall be joined together by stacking pins or couplings.

iv. The work platform shall be fully planked. Planks shall be cleated and secured to prevent movement and shall be overlapped at a minimum of 12 inches.

v. Any gap in a working platform cannot exceed 1 inch.

vi. Scaffolding planks that extend over their end supports shall be a minimum of 6 inches, but no more than 12 inches.

vii. Scaffolding planks shall not be painted. Scaffolding planks shall inspect for cracks and taken out of service when found.

viii. Scaffolding planks holding material shall not deflexed more than 3 inches.

ix. Toe boards shall be installed along the platform edges. Screening or paneling shall be installed if material, tools or equipment exceed the toe board height. The screening/paneling shall be place from the bottom of the toe board to the top of the top guardrail.

x. End bracket platforms shall have guardrail system in place. If the scaffold exceeds the face of the building, guardrail system shall be installed on the opening.

c) Suspension Scaffolds

i. Screening shall be installed inside the suspension scaffold to prevent overhead hazards.

ii. Employees working on a single-point or two-point suspension scaffold shall be protected by a PFAS with rope grab and guardrail system.

iii. Suspension scaffold support devices, such as outrigger beams, cornice hooks, parapet clamps that rest on surfaces (e.g. parapet wall) shall be capable of supporting at least 4 times the maximum intended load. Surfaces that support devices noted above shall be PE stamped approved to verify the support surface will support the load of the scaffolding system.

iv. Vertical life lines shall be independent of each other and shall have separate anchorage points independent of scaffolding tie backs and other lifelines anchorages. Vertical life lines shall have a grommet end with safety clip with mouse attached to a designed fall protection anchorage point. Knots are prohibited for securing vertical lifelines.

v. Vertical lifelines shall be protected from abrasion by using secured softeners on the vertical lifeline at the point of contact where abrasion can occur.

vi. Suspension scaffolds wire rope shall be capable of supporting six times the intended load. Suspension scaffolds shall not be used to hoist materials to the building roof.

vii. Outrigger beams shall be secured by tiebacks. The tiebacks shall be attached to a structural member of the building. Standpipes, vents, conduit and other piping systems are not adequate structural members. The tie backs shall anchored directly behind the outrigger beam, if not able to then two tiebacks shall be required on each outrigger beam.

viii. Suspension scaffolds with a load rating of 500 pounds shall have only two employees working on the scaffold. Suspension scaffolds with load rating of 750 pounds shall have only three employees working on the scaffold. The contractor shall follow manufacturer guidelines of the scaffolding system being used.

ix. Counterweights shall be secured to the outrigger beams to prevent accidental displacement.

x. Counterweights shall be made of non-flowable material. Sand, gravel, water or similar material shall not be used.

d) Aerial Lifts

i. Only trained employees may operate aerial lifts on an Airports Authority construction project.

ii. Employees shall be tied off (restraint device) while in the basket of articulating boom aerial lifts at all times.

iii. Employees shall keep both feet on the floor of the aerial lift basket. It shall be prohibited to climb on the rails of the aerial lift basket.

iv. When an aerial lift is operated on rough terrain, the operator shall boom down to move the lift. Once moved the operator can boom up to the working area.

v. Transferring from or leaving the aerial lift basket to another landing is prohibited unless the other landing point is fully protected with a guardrail system (follow manufacturers recommendations).

vi. Areal lifts shall not be modified or used as a hoisting device.

vii. Aerial lift operators shall check ground surface conditions prior to operating the aerial lift (e.g. holes, drop-offs).

3. Scaffold Training Requirements

i. Employees shall be trained by a qualified person in the recognition and avoidance of hazards associated with the type of scaffold they are using in the field.

ii. Employees that are involved in the erection, dismantling, moving, operating, repairing, maintaining or inspecting of a scaffold shall be trained by a qualified person in the recognition and avoidance of hazards associated with these operations.

3.21 SIGNS, SIGNALS, and BARRICADES POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractors performing installation of barricades, signs, and signals shall be performed in accordance with 29 CFR 1926, Construction Industry Regulations, Subpart G, Signs, Signals and Barricades, in addition to the following procedures and requirements:

II. Procedures

1. **Barriers/Barricades.** All barriers used on the project must comply with Virginia Department of Transportation and other applicable regulations (see Appendix A). The Contractor shall provide adequate visibility and protection when public use of work areas must be maintained on sidewalks, entrances to buildings, lobbies, corridors, aisles, stairways, and vehicular roadways. Appropriate barriers (i.e., guardrails, barricades, temporary fences or partitions, overhead protection, shields) shall be secured against accidental displacement and maintained in place except where temporary removal is necessary to perform the work. When a barricade is temporarily removed, a guard shall be placed at all openings.

2. Barricades shall be used where sidewalk sheds, fences, or guardrails are not required. Such barricades must guard against harmful radioactive rays or particles, open excavations, flying materials, falling or moving materials and equipment, hot or poisonous materials, explosives and explosive atmospheres, flammable or toxic liquids and gases, open flame, energized electric circuits, or other harmful exposures. In addition, the contractor shall provide adequate and proper fencing, barricading, marking, and lighting of construction, maintenance, or other areas that are temporarily closed to normal airport use. The use of tape of any type is not acceptable.

3. **Caution/Danger Tape.** The use of tape for marking unsafe conditions or open hazards is prohibited. Only plastic orange safety fences or other devices of similar construction shall be used.

4. **Egress.** Sidewalks, building entrances, lobbies, corridors, aisles, doors, or exits in use by the public shall be clear of obstructions to permit safe ingress and egress of the public at all times.

5. **Guardrails.** Guardrails shall be provided on both sides of vehicular and pedestrian bridges, ramps, runways, and platforms. Their height shall be approximately 42 inches.

Guardrails shall be made of rigid materials able to withstand a force of at least 200 pounds applied in any direction at any point in their structure. Pedestrian walkways elevated above adjoining surfaces, or walkways within 6 feet of the top of excavated slopes or vertical banks shall be protected with guardrails, except where sidewalk sheds or fences. Top rails and posts shall be 2 inches by 4 inches dressed wood or equal material. Posts shall not be more than 8 feet apart.

6. **Overhead Protection.** Sidewalk sheds, canopies, catch platforms, and appropriate fencing shall be provided when it is necessary to safely maintain public pedestrian traffic adjacent to the erection, demolition, or structural alteration of outside walls on any structure.

7. **Perimeter Fencing.** Temporary fencing shall be provided around the perimeter of aboveground operations adjacent to public areas except where a sidewalk shed or fencing is provided by the contract or as required by subparagraphs (3) and (5). Perimeter fencing shall be at least 6 feet high. Fencing shall be constructed of wood or metal frame and sheathing, wire mesh or a combination of both, as provided in contract documents and shall be adequately anchored.

   When fencing is adjacent to a sidewalk and near a street intersection, the upper fence section shall be composed of open wire mesh from a point not more than four feet above the sidewalk. The fencing must extend at least 25 feet in both directions from the corner of the fence.

8. **Public Areas.** Work shall not be performed in any area occupied or in public use unless specifically permitted by the contract or in writing from the Airports Authority, PMSS Consultant, or other designated party.

   All workers in the sterile area of the airport may utilize tools in their work area provided: 1) The tools are essential and necessary to their work. 2) Tools must be kept controlled at all times, and may not be left unattended. 3) Tool boxes must be guarded and locked when not in use.

   No cartridge style nail guns, nor any tool that uses a cartridge or any explosive charge, shall be permitted in public areas, unless authorized by Airport Operations / Security.

9. **Signage.** Appropriate warnings, signs and instructional safety signs shall be conspicuously posted where necessary. In addition, a properly certified flagger shall control the movement of motorized equipment in areas where the public might be endangered.

10. **Temporary Sidewalks.** Temporary sidewalks with guardrails shall be provided when a permanent sidewalk is obstructed by the contractor's operations. These sidewalks shall be built according to the local ordinances/codes.

11. **Warning Lights.** Signs and lighting shall be placed at both ends of any public protection or obstructions and not over 20 feet apart alongside such protection or obstructions. Warning signs and lights, including lanterns, torches, flares, and electric lights, meeting Airports Authority and FAA requirements, shall be maintained from dusk to sunrise along the guardrails, barricades, temporary sidewalks, and at every obstruction to the public.

3.22 STAIRWAYS and LADDERS POLICY

I. Policy Statement

Metropolitan Washington Airports Authority (Airports Authority) shall require contractors to comply with 29 CFR 1926, Construction Industry Regulations, Subpart X – Stairways and Ladders, ANSI Standards, in addition to the following procedures and requirements:

II. Procedures

1. General Requirements

   a) A stairway or ladder shall be provided at all points of access where there is a break in elevation of 19” or more.

   b) All ladders and stairways shall be inspected for hazards before use.

   c) Stairways shall be inspected and cleaned periodically to eliminate slip and trip hazards.

   d) Platform ladders and metal ladders shall be prohibited to use on Airports Authority projects.

   e) Job built ladders are permitted on Airport Authority construction sites. Job built ladders shall be built in accordance to ANSI standards.

   f) Two or more separate ladders shall be used when ladders are the only means of egress from a working area with 25 or more employees.

   g) There shall be two points of access and egress at all times in the building and between floors during construction.

   h) All ladders shall have the manufacturer’s safety and capacity labels on the ladder or shall be tagged out and taken out of service.

2. Stairways

   a) Structures that exceed 20 feet in height, stairways shall be provided during construction.

   b) Where doors or gates open directly onto a stairway, a platform must be provided and the swing of the door must allow an additional 20 inches.

c) Unprotected sides and edges of stairway landings shall be provided with a guardrail system (top rail, mid-rail, and toe boards). On stairways the hand rail height shall be not more than 37 inches in height nor do less than 36 inches from the upper surface of the stair rail system, in line with the face of the riser at the forward edge of the stair tread.

d) Mid-rails shall be installed between the top edge of the stair rail system and the stairway steps.

e) Employees shall not use metal pan stairs unless they have been fitted with wooden filler blocks or poured with concrete.

f) Stairways with four or more risers or rising more than 30 inches, whichever is less, must have a stair rail or handrail along each unprotected side or edge.

3. Ladders

a) All ladders shall be capable of supporting loads imposed upon on the ladder.

b) When working on a ladder above 6 feet in height, the employee shall work within the side rails of the ladder (the employee's belt buckle shall not exceed the side rails of ladder) or fall protection shall be required. Fall protection shall be required when working over 24 feet on a portable or fixed ladder.

c) All ladders shall be used for the purpose for which they were designed. It's prohibited to take an extension ladder apart and use the top or bottom half of the ladder.

d) Extension ladders shall be used at a 4 to 1 ratio base to the wall. Every 4 feet in vertical height, the base of the ladder will be 1 foot out horizontally.

e) At the top and bottom of a ladder shall be clear of debris and materials.

f) When employees ascend or descend a ladder, they shall maintain three-points of contact with the ladder at all times. Employees are prohibited to carry anything in their hands while ascending and descending a ladder.

g) Employees working on a ladder shall face the ladder at all times while working on the ladder. It is prohibited to work with your back facing the ladder.

h) Pull ropes shall be placed at all ladder access points so employees can safely lift tools or equipment to upper levels. Fall protection system shall be in place when hoisting up tools and supplies.

i) Step ladders shall be opened fully with the locking arm locked. It's prohibited to use a step ladder in a closed position using it as a straight ladder.

j) Employees shall not jump walk a ladder (hopping with the ladder). They shall come off the ladder to move it.

k) Employees are prohibited to use the top two steps of a step ladder while working on a step ladder.

l) Employees shall not sit on top of a step ladder or straddle the step ladder when working on a step ladder.

m) When ladders are used to access upper landings, the side rails shall extend at least 3 feet above the landing and secured at the top. A corral system shall be in place at all ladder access points to prevent fall hazards.

n) Step ladders shall not be used to transition to another landing. Only straight ladders shall be used for transitioning to another landing.

o) Materials or tools shall not be left on top of the step ladder.

4. Training

a) Employee shall be trained by a competent person in the recognition and avoidance of stair and ladder hazards.

3.23 STEEL ERECTION POLICY

I. Policy Statement

Each contractor involved in steel erection operations on a Metropolitan Washington Airports Authority (Airports Authority) project shall be in compliance with 29 CFR 1926, Construction Industry Regulations, Subpart R – Steel Erection, in addition to the following Airports Authority procedures and requirements:

II. Procedures

1. General Requirements**:** Pre-Steel Construction Meeting

    a) A pre-steel construction meeting shall be held prior to beginning steel erection on Airports Authority projects. This meeting will be held with all parties involved in steel erection activities including but not limited to the following: steel erector, steel fabricator, and architect and/or structural engineer of record.

    b) This pre-construction meeting will address issues and items relating to all actives to steel erection under 29 CFR 1926 Subpart R Steel Erection Standards in including but not limited to the following;

        i. Site layout, material storage and laydown areas
        ii. Site specific steel erection plan
        iii. Structural steel assembly sequencing
        iv. Crane operations, crane pad placement, critical lifts, paths overhead load
        v. Fall protection
        vi. Hoisting and rigging
        vii. Beams and columns
        viii. Open web steel joist
        ix. Metal decking installation
        x. Overhead hazards protection
        xi. Falling object protection
        xii. Ornamental and miscellaneous iron.
        xiii. Coordination with other trades and construction activities
        xiv. Training

    c) Multi member lifting “Christmas Treeing” is strictly prohibited on Airports Authority construction projects.

    d) Crane and rigging operations shall follow Airports Authority crane and rigging policy requirements.

    e) Walking on any live loads is prohibited.

f) The use of chains is prohibited on Airports Authority construction projects unless approved by the PSM.

g) No other trades shall work under steel operations.

2. Fall Protection Requirements

a) Employees who are working 6 feet above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, and/or personal fall arrest systems.

c) Safety monitor systems, warning lines systems and controlled access zones are prohibited on Airport Authority projects. These systems shall be prohibited from use on Airports Authority projects; however, exceptions may be at the discretion of the PSM.

b) Personal fall arrest systems shall have double locking snap hooks with two retractable lanyard systems attached to the D ring (must be manufactured for this application) of the harness to maintain compliance with Airports Authority 6 foot fall protection policy. Beam clamps shall be used for anchorage points on beams. Pin cables shall be prohibited to use on Airports Authority construction projects. All fall protection equipment shall be inspected daily prior to use. All fall protection lines shall be protected from abrasion or being cut by use of softeners.

c) Horizontal life line systems shall be a designed fall protection system or a PE stamped design. If the steel contractor is using cable guardrail as a fall protection system, the system shall be designed by a PE.

d) Construction activities below steel erection are prohibited.

e) Restraint devices are required in baskets of aerial Lifts.

f) Holes on roofs shall be decked over with penetration to be made only when equipment is ready to be installed. All open floor holes shall be protected with guardrails or covered by securing, marking and labeling the cover.

g) Perimeter safety cables shall be installed as soon as the metal decking has been installed.

h) All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement.

3.24

TUNNELING and UNDERGROUND CONSTRUSTRUCTION POLICY

I. Policy Statement

All tunneling and underground construction shall be performed in accordance with OSHA Regulation 29 CFR 1926, Subpart S-800-804 entitled, "*Underground Construction, Caissons, Cofferdams, and Compressed Air."* Additionally, Contractors will adhere to the following Airports Authority procedures and requirements:

II. Procedures

1. General Requirements:

a) Diesel Powered Equipment. Any diesel powered equipment used underground will require scrubbers and must be in good operating condition (i.e., no exhaust leaks, no excessive noise or smoking).

b) Lighting. Underground lighting must be free of defects and kept clean at all times. This includes the equipment lights and all temporary tunnel lighting.

c) Monitoring. Contractor shall provide air quality data to the COTR. Air quality shall be constantly monitored while any personnel are occupying the shafts, tunnels, or headings that are under construction. The monitoring equipment must be capable of detecting four gasses simultaneously and equipment must be calibrated and tested per the manufacturer's specifications.

d) Permits. Utility vaults require OSHA confined space entry permits. Completed walk back, baggage, tug, and train tunnels do not require confined space entry permits.

e) Prohibited Items. The use of the following items is prohibited in all underground or subsurface construction to include, but not limited to tunnels, cut and cover or other openings underground: gasoline or use of gasoline powered equipment; liquid propane gas; natural gas; PVC piping; and smoking materials.

f) Record Keeping. All daily air quality results shall be recorded and submitted to the COTR within 24 hours.

g) Safety Plan. Special safety requirements must be identified in the contractor's safety plan to cover all tunnel operations, including a comprehensive evacuation and rescue plan coordinated with the Airports Authority. This plan shall be updated concurrently as tunneling advances.

h) Ventilation. Fan line ventilation must be maintained within 10 feet of the tunnel heading. A hard line (steel) system is required.

i) Electric. Handling live electrical line and equipment shall be in compliance with MSHA regulations.

2. Tunnel and Underground Safety.

a) Job Hazard Analysis. The contractor shall submit for a review a job hazard analysis for each task to be undertaken. This includes the task, its hazards, and corrective measures. These must be submitted fifteen (5) working days prior to initiating the task.

b) Training. The contractor shall submit for approval by the PSM:

i. Orientation program
ii. Frequency of training
iii. Types of training
iv. Accommodation of non-English speaking language groups
v. List of qualified Competent Persons

3. **First-Aid and CPR.** A First-Aid and CPR trained individual shall be required on each crew.

4. **Safety Manager.** The Safety Manager must be a full time on-site position with one of the following qualifications:

(a) Minimum of ten years underground construction safety management experience.

(b) A Certified Safety Professional (CSP) or a Licensed Professional Engineer (PE) with a minimum of five years of experience in underground construction safety supervision.

5. **Safety Engineer.** The safety engineer must have a minimum of five years in underground construction safety supervision or equivalent Tunneling/Underground experience to be determined by PSM.

A Safety Engineer shall be required on all shifts regardless of the number of employees working.

6. **Whip Checks.** Whip checks are required on all air lines at all connections.
7. **Moving Energized Cables.** Pulling or moving energized electrical cable shall be done with electrical gloves or electrical stick.

8. **Walkway.** The contractor must provide a separate designated walkway for access and egress within the tunnel. They shall be separated and clearly marked.

9. **Conveyors.**

   (a) In addition to the audible warning requirements for conveyors in 29 CFR 1926.555, both a visual warning system and a minimum of a 30 second delay for conveyor start-up shall be incorporated into the system.

   (b) No one shall walk on the same side of the tunnel that a conveyor is installed while it is in operation.

10. **Mine Phones.** All phone systems shall be installed in accordance with 29 CFR 1926.800. Additionally, spacing between operating units shall not exceed 200 feet. Each phone location shall be provided with a 20 lb. ABC fire extinguisher. The mine phone and fire extinguisher locations shall be identified by a "red light."

11. **Compressed Air**. The use of compressed air is not allowed as a method to clean or empty any concrete, shotcrete, or grout delivery lines. All delivery lines must have adequate restraining devices which are certified in writing by a registered Professional Engineer (PE).

12. **Receiver Tanks.** All air receiver tanks shall comply with 29 CFR 1910.169. Written certification must be provided prior to their use on site.

13. **Personnel Underground**. No individual is allowed to be underground alone. Additionally, under no circumstances, is any individual allowed to be forward of any excavation in progress.

III. Emergency Preparedness.

a) Work Platform. If a shaft or work area accessible by stair tower or ladder is the means of access/egress, the contractor must provide a work platform at each shaft location. The platform must be capable of supporting a full rescue team and equipment. It must be designed by a licensed structural engineer and be appropriately tested and conspicuously posted in accordance with OSHA 29 CFR 1926.550.

b) Second Means of Retrieval. A second means of personnel retrieval must be available within fifteen minutes travel time to the shaft.

c) Vertical Conveyors. If a vertical conveyor system is utilized, it must be equipped with a fire suppression / sprinkler system the full length of the belt.

d) **Training Sessions.** Contractors must make arrangements with the Airports Authority's Fire Department to explain rescue procedures at the sites. This must include quarterly, on-site training sessions. This shall be coordinated with the COTR.

e) **Water Service.** For fire protection, a water service shall be installed and maintained throughout the tunnel. This water service shall require a "T" placed every 200 feet horizontally, starting at the portal, to be equipped with an operational shut off valve and a 1 ½" National Standard thread male end with a protective cap.

f) **Self-Rescuers.** Self-Rescuers shall be of the oxygen generating type with a minimum one hour supply.

3.25 VISITOR and TOUR POLICY

I. Policy Statement

It is imperative that the highest degree of protection is afforded to all individuals touring any Metropolitan Washington Airports Authority (Airports Authority) construction site. Visitors must adhere to the contractor's rules while on the construction site. All tours and visits must be coordinated through the Construction Department of the Office of Engineering and the contractor. The following policy guidelines and procedures have been prepared as general instructions for the organization, direction and safe conduct of tours and visits:

II. Procedures

Escorted Visitors. While on the job site, non-construction personnel or groups shall be accompanied at all times by an authorized representative from the PMSS Consultant, the Airports Authority, the contractor, or other designee familiar with the job site.

Notification and Tours. Personnel tours that do not involve technical inspections need to be cleared through the Construction Department of the Office of Engineering to allow reasonable advance notice. The COTR shall be consulted to coordinate the tour plan, identify specific rules, and to ensure necessary safety precautions are taken.

Safety Enforcement. Before entering a job site, all visitors must be informed of the need for careful, orderly conduct and be notified of any special hazards that may be encountered. All visitors and tour groups must comply with the safety precautions required under the contract for that site, including provision and use of personal protective equipment. The number of escorted persons on tours should be proportionate to the degree of hazard and operating space involved, but may not exceed ten visitors per authorized representative.

General Release Form. Before entering an Airports Authority job site, a visitor release form shall be signed by visitors (Refer to Appendix G).

CHAPTER 4:
MOTOR VEHICLE OPERATIONS

4.0 BASIC VEHICLE PROCEDURES

The Airports Authority created a series of motor vehicle rules, which was adopted by the Board of Directors and became regulations with the full force of law. A complete copy of the regulations is located on the Airports Authority's web site at www.mwaa.com, Airports Authority Publications, Motor Vehicle Rules. In addition, the following rules apply:

4.0.1 General

4.0.1.1 **Right of Way.** Drivers must yield the right of way to an aircraft, including aircraft under tow. Drivers must also yield the right of way to Fire, Police, Airport Operations, and other emergency response vehicles that have lights and sirens activated; all mobile lounges or Plane Mates; passengers and employees walking on the ramp to/from aircraft; pushback equipment and wing walkers departing from or returning to the gate; and snow removal equipment.

4.0.1.2 **Cleaning.** The contractor shall provide means for cleaning haul vehicles as needed to prevent mud or other potentially hazardous material from accumulating on ramps, taxiways, runways, and airport roads.

4.0.1.3 **Flagging.** The contractor shall furnish flaggers as necessary to control the work traffic, unless otherwise directed by the CO. Reflective (ANSI class 3) vests must be worn by all personnel.

4.0.1.4 **Obstructed View.** All motorized equipment and vehicles shall be equipped with a functioning back-up alarm. In addition, a spotter must be used in ALL construction areas where other personnel are working near motorized vehicles, and any foot traffic.

4.0.1.5 **Parking.** Employee parking shall be as designated in the contract documents.

4.0.1.6 **Site Access.** Access to the construction sites and haul roads shall be as shown and described in contract documents.

4.0.1.7 **Spoil Covers.** Spoil covers shall be used whenever trucks are loaded.

4.0.1.8 **Unattended Vehicle/Equipment.** No vehicle or equipment operator shall dismount any equipment without first turning off the engine, removing the key, and securing the equipment from movement.

4.0.1.9 Vehicle Inspection. Construction equipment and all vehicles shall be inspected at the beginning of each shift. Safety equipment such as windshields, side windows, head, tail, brake, and clearance lights, etc., shall be kept clean, tested and unbroken.

4.0.1.10 Vehicle Weight. No vehicle may be operated on any road within Airports Authority property in excess of approved highway weight limits.

4.0.1.11 Fueling Operations. Equipment shall be turned off when fueling equipment.

4.0.1.12 Gas Powered Equipment. All gas powered equipment shall have a five pound fire extinguisher in the cab of the equipment.

4.1 SPECIAL REQUIREMENTS FOR AOA

After award of the contract, and before commencing vehicle use, the contractor shall furnish to the COTR a complete vehicle and operators list, including subcontractors, who will be operating motor vehicles on the AOA. The list shall contain the name of each employee, their address, valid operator's permit (i.e., State driver's license number), and the vehicle registration number for each vehicle that will be used at the airport. The following requirements apply to motor vehicle operations within the AOA:

4.1.1 AOA Permit. All contractor personnel driving unescorted motor vehicles on airside must obtain and maintain an AOA operator's permit from the Airport Operations Department. The airport has specific Orders and Instructions addressing vehicle and driver's license requirements.

4.1.2 AOA Tour. Prior to beginning construction on the AOA, the contractor's safety representative shall tour airside with an Air Operations Officer.

4.1.3 Communication. The contractor shall contact the COTR to arrange Airside Radio Communication training before they are permitted to use radios on the AOA. Contractor's traffic must not be permitted to cross active runways, taxiways, and ramps in the AOA, except as specifically approved and controlled by the COTR. It shall be the contractor's responsibility to ascertain the status of runways, taxiways, and ramps at all times and maintaining continuous communication while on the airside through means identified by the COTR. The clearance should be confirmed by the driver's personal observation that no aircraft is approaching or departing in that area.

4.1.4 Escort Procedures. Operators who do not possess a valid airport driver's license must be escorted. Unlicensed operators or not registered vehicles on the airport entering the AOA must be escorted by a licensed operator into, through, and out of the AOA by a vehicle properly identified to operate in the area. All persons operating vehicles on the AOA must have a valid State driver's license with CDL endorsements as necessary.

Escort of vehicles onto the AOA is permitted only when the vehicle has a demonstrated need, i.e. unloading / loading of tools, equipment, supplies, etc. No personal vehicle parking is permitted on the AOA.

4.1.5 Flagging, Airfield Crossing. Unless specifically approved, flaggers shall be positioned only to control traffic across an active taxiway. Flaggers shall obtain an Airport Identification Badge and use the standard red (18 inch) square flag with weighted baton and lighted wands during nighttime operations. Contractor's working at DCA only must use the standard signals as defined by the Airport Operations Department for flagging operations through all active runway, taxiway and ramp areas, including the following:

Stop = Hands/flags crossed to represent an X.

Proceed = Right hand stretched upward, left hand pointed at the ground.

Wait at Hold Line = Waving both hands in a crossing motion indicates return to hold line and wait for signal to cross.

4.1.6 Vehicle Identification. Only properly identified vehicles shall be allowed in the project work area (Consult Airport Operations: Orders & Instructions at each airport for details of vehicle and drivers program).

CHAPTER 5

REPORTING PROCEDURES

5.0 CONSTRUCTION SAFETY/SECURITY INSPECTION REPORT

5.0.1 Inspection Report. The Airports Authority's *Construction Safety/Security Inspection Report* form is required for recording any unsafe conditions or acts noted (see Appendix B). This form is used by the contractor's safety engineer, the PSM, the COTR, the OSC, Airports Authority staff, inspectors, or insurers' personnel when inspecting the job sites. The following instructions apply to the use of the form:

5.0.1.1 Classification. Unsafe conditions or acts having potential to cause bodily injury or property damage should be classified as either "imminent danger" or "serious." In either case, immediate action should be taken to correct the hazard. The unsafe condition or act must be reported as instructed in this Construction Safety Manual, even if it has been corrected.

5.0.1.2 Corrective Action. The last item in the "Contractor's Correcting Action" column must indicate abatement action and a deadline date. (For example, "Repair or replace rail, immediately. Clean up accumulated trash, 9/27. Relocated flammable storage, 9/25.") Abatement photographs shall be taken showing the unsafe condition has been corrected and submitted for review..

5.0.1.3 Detailed Information. Provide specific information under "Safety Violations." Descriptions such as, "safety rails need repair" are adequate, but a better description would be, "broken top rail in safety rail, 8' long at head of Smith Avenue escalator entrance needs repair." Give exact locations of safety violations.

5.0.1.4 Distribution. All forms will be distributed electronically, if available, or in the following manner:

White Original	*Project Safety Manager (PSM)*
Green Copy	*Contractor*
Yellow Copy	*Contracting Officer's Tech. Rep, (COTR)*
Pink Copy	*Site Manager*
Gold Copy	*Contracting Officer (CO)*
Xerox Copy	*OCIP Safety Consultant (OSC)*

5.0.1.5 Item Numbering. Number each item, beginning with #1 on each report. May be soft copy.

5.0.1.6 Legible. Print or write legibly with a ball point pen, so that all copies are readable.

5.0.1.7 Report Signature. The person conducting the inspection must sign and date the form in the space marked, "Report Prepared By:" after the inspection is completed.

5.0.1.8 Review. The violations or comments marked on the inspection report shall be reviewed with the project manager, contractor's safety engineer, COTR, and any other persons authorized by the project manager to implement the necessary corrective action. The project manager, or the authorized representative, must note in the "Contractor's Corrective Action" column the appropriate action that must be taken, such as [*Defective regulator must be removed from service this date]*. That individual must sign and date the report.

The PSM or safety engineer will review the report with the COTR. The COTR or a designated inspector will follow-up and ensure that the contractor's corrective action is completed as Stated. If corrective action is not taken, incomplete or is substantially delayed, the COTR will promptly report it to the PSM or Construction Manager.

5.1 REPORTING ACCIDENTS AND INCIDENTS

5.1.1 Reporting Accidents. Accidents and incidents must be reported, verified, investigated, and analyzed as prescribed by this manual and/or the applicable *OCIP Insurance Manual*. All contractors and other individuals involved in the construction programs shall instruct employees and other personnel to follow these reporting procedures:

5.1.1.1 Accident Notification. Employees must report all accidents and incidents, as soon as possible, to their employer or immediate supervisor, who shall report all accidents and incidents to the contractor's safety engineer, or other designated person, COTR, OSC, PSM, the Airports Authority Construction Department, and others in charge at the job site. For incidents involving fire or hazardous materials releases, the Airports Authority Fire Code Enforcement Division shall be contacted immediately to conduct an investigation. In addition, the contractor must comply with all VOSH notification requirements.

5.1.1.2 Accident Investigation and Reports. Following any accident or incident, the contractor shall notify the Airports Authority COTR, PSM, and OSC immediately. The contractor shall conduct an in-depth investigation identifying all causes and recommend hazard control measures. Completed reports shall be sent to the CO, PSM, and OSC within 24 hours of the accident/incident. No supervisor may decline to accept a report of injury from a subordinate.

5.1.1.3 Monthly Project Man-Hour/ Injury Report Log. OCIP **Contractor**s **shall** submit, by the 10th day of each month, a Monthly Project Man-Hour/Injury Report Log indicating the total number of man-hours worked and recordable injuries for the month. This is separate from the OSHA No. 300 form, which is maintained at the job site.

5.1.1.4 Medical Assistance. Contact 911 for all emergencies. The injured person's supervisor will ensure that first aid is administered.

5.1.1.5 Public Information. Information concerning accidents or incidents shall only be provided to authorized personnel (i.e., the Office of Public Safety, Risk Management Department, Airport Operations Department, and Office of Legal Counsel). Questions from the media are to be referred to the Airports Authority's Public Affairs Manager at 703-417-8370.

5.1.1.6 Secure the Incident Area. Except for rescue and emergency procedures, the accident area must be tightly and quickly secured for all major accidents. The accident scene shall not be disturbed until released by the investigating Airports Authority officials.

5.1.2 Occupational Exposures. In the event an employee is exposed to toxic materials or harmful physical agents, the Contractor shall:

5.1.2.1 Notification. Notify the COTR, OSC, and the PSM of the incident. Develop procedures under the Airports Authority's guidance to contact the following Airports Authority offices for the events listed below:

Fire Department	• *Hazardous Material Incidents* • *Fire Related Incidents* • *Medical Emergencies*
Police Department	• *Bomb Threats* • *Public Demonstrations*
Risk Management	• *Insurance/Claim Issues* • *Property Damage* • *Injuries to Employees or the Public*

5.1.2.2 Reports. Any occupational exposures shall be reported on an accident investigation form along with an explanation of the corrective action taken to eliminate further exposures. The completed form must be submitted to the PSM and OSC within 24 hours.

5.1.2.3 Review Procedures. Review the emergency procedures regularly and adjust as necessary to provide maximum effectiveness. All such procedures are to be included in the Contractor's Safety Plan and coordinated with the Contracting Officer and COTR.

5.2 ON-SITE FIRST AID

At least one qualified person shall be available at the work site, at all times, to render first aid. This person must have a valid certificate in first aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent verifiable training program. A minimum ratio of one such qualified person for every 25 employees shall be maintained throughout the project.

APPENDIX A

APPLICABLE GOVERNMENTAL AGENCIES AND INDUSTRY SAFETY STANDARDS

APPENDIX A

APPLICABLE GOVERNMENTAL AGENCIES AND INDUSTRY SAFETY STANDARDS

The Contractor shall comply with the safety requirements and provisions of the following agencies, associations, councils, societies, etc.

- American Concrete Institute
- American National Red Cross
- American National Standards Institute (ANSI)
- American Petroleum Institute (API)
- American Society of Mechanical Engineers (ASME)
- American Society for Testing Materials (ASTM)
- American Welding Society
- Associated General Contractors of America (AGCA)
- Building Officials Conference of America (BOCA)
- Federal Aviation Administration (FAA)
- Federal Fire Council
- Federal Safety Council
- Industrial Hygiene Foundation of America, Inc.
- Institute of Makers of Explosives
- Interstate Commerce Commission (ICC)
- Manual of Uniform Traffic Control Devices (MUTCD)
- National Electrical Code (NEC)
- National Fire Protection Assoc. (NFPA)
- National Institute of Occupational Safety and Health (NIOSH)
- National Institute of Standards & Technology (NIST)
- National Safety Council (NSC)
- Underwriters Laboratories, Inc. (UL)
- U.S. Army Corp of Engineers
- U.S. Atomic Energy Commission
- U.S. Department of Interior, Bureau of Mines
- U.S. Department of Labor (DOL)
- U.S. Environmental Protection Agency (EPA)
- U.S. General Services Administration (GSA)
- U.S. Occupational Safety and Health Administration (OSHA)
- U.S. Standards Institute
- Virginia Occupational Safety and Health Administration (VOSHA)
- Virginia Department of Transportation (VDOT)
- Virginia Division of Motor Vehicles and the Motor Vehicle Safety Responsibility Act
- Virginia Statewide Fire Prevention Code (VSFPC)

APPENDIX B

CONSTRUCTION SAFETY/SECURITY INSPECTION REPORT FORM

MWAA
CONSTRUCTION SAFETY / SECURITY INSPECTION REPORT

CONTRACTOR _____

CONTRACT No. _____

ITEM NO.	SAFETY / SECURITY VIOLATIONS	REFERENCE	CONTRACTOR'S CORRECTING ACTION	DATE CORRECTED

Safety and Security are Awareness Action!

REPORT PREPARED BY _____

SIGNATURE _____

TITLE _____

DATE _____

CONTRACTOR PROJECT MANAGER

SIGNATURE _____

DATE _____

RESIDENT ENGINEER _____

SIGNATURE _____

DATE _____

cc: White Original: Project Safety / Security Manager
Pink Copy: PMSS Site Manager
Yellow Copy: Resident Engineer
Green Copy: Contractor
Gold Copy: Extra
If prepared electronically, remember to distribute signed copies to each person listed above plus the person who prepared the report.

APPENDIX C

CONTRACTOR'S SAFETY PLAN REQUIREMENTS

SAFETY PROGRAM CONTRACTOR'S PLAN REQUIREMENTS

EXAMPLE – Minimum Requirements Provided

The contractor is responsible to review the specific requirements of the contract, analyze the planned methods of operation, incorporate any additional specific or unique safety requirements in the written plan, and ensure that all applicable safety regulations are addressed. **The written contractor safety plan shall follow the sequence in the outline provided.** The "Contractor's Safety Plan" shall include, but is not limited to, the following guidelines:

General Provisions

1. **Policy Statement.** The contractor will state that they are committed to provide a safe and healthy working environment that is free from recognized hazards for all employees. This policy is to be reinforced by upper management and implemented by all project managers. In addition, the contractor, and their subcontractors will state and sign a document that they have read and understand the Airports Authority Construction Safety Manual. The controlling contractor's subcontractors shall follow their safety policies.

2. **Compliance.** Contractor's plan to comply with the specific safety requirements identified in the Airports Authority's *Safety Program Construction Manual*, including the procedures for completing and forwarding to the COTR/RE and OSC Safety Consultant all on-site accident and incident reports.

3. **Medical Treatment.** Providing medical service in compliance with *OCIP Manual*. A copy is to be posted at the work site first aid station. The following emergency numbers shall be included for the given work area:

Ronald Reagan Washington National Airport

703-417-2400 Fire or Ambulance
703-417-2400 Police

Washington Dulles International Airport

703-572-2400 Fire or Ambulance
703-572-2400 Police

Employee Clinic Address and Phone Number

Employees shall call 911 for life threatening emergency and give FD # location.

4. **OSHA Requirements and Personal Protection.** Safety and health provisions for providing adequate lighting, ventilation, noise control, and personal protective equipment, company housekeeping rules, which construction areas shall be designated "Hard Hat Areas," and where warning signs will be posted at all entry points.

5. **Personnel Instruction.** The contractor must identify the greatest number of employees to be working at any one time during peak construction periods, the company policies for initial safety indoctrination of all employees, and company plans for continued safety education for all employees, including weekly safety meetings. Contractor orientation programs including Airports Authority safety orientation information (provided to the contractor) and weekly training meetings

should be able to accommodate the various language groups.

6. **Responsibilities.** Acknowledgment that the contractor is totally responsible for compliance with OSHA and VOSH requirements and relevant FAA, Authority or other applicable rules and orders. Additionally, the plan will require a place of employment that is free of unsanitary or hazardous conditions that would harm an employee's health or safety.

7. **Safety Inspections.** The frequency at which safety inspections will be conducted by the contractor's safety engineer or other assigned safety personnel. Using Airports Authority Safety Inspection Check List (provided to the contractor).

8. **Safety Personnel.** State the name of the contractor's safety engineer and his/her qualifications. Indicate his/her authority to direct work stoppage and expend funds to eliminate imminent hazardous conditions. Submit resume of contractor's safety staff. This includes alternate safety professionals.

9. **Safety Requirements, Electrical.** Checking and testing of electrical tools, appliances for the required ground, and the installation of electrical circuits in accordance with the National Electric Code.

10. **Safety Requirements, Equipment.** Testing and inspecting of equipment, and the provision for backup alarms for tractors, backhoes, dozers, motor graders, etc.

11. **Safety Requirements, Ladders.** Types of ladders for specific uses and the anchoring to be utilized with each type.

12. **Site Layout.** The following shall be included in all site layout drawings:

    a. Fire/rescue apparatus access roads and fire lanes
    b. Fire hydrant locations
    c. Fixed/portable fire equipment locations
    d. Building entry/egress routes
    e. Topographic hazards (excavations, etc.)
    f. Hazardous materials and wastes storage
    g. Flammable/combustible liquid storage
    h. Compressed gas cylinder storage
    i. Temporary heating equipment and fuel source locations
    j. Utility system(s) control valve(s)
    k. Evacuation assembly points
    l. Material Safety Data Sheet (SDS) storage location
    m. Eyewash station location
    n. Laydown Area

13. **Storage.** Requirements for storage of flammable and combustible liquids or gases, including paints.

14. **Toilets.** Provision of toilets, including frequency at which toilet will be cleaned with soap and water, and sterilized (Refer to Sanitation Policy).

15. **Traffic Control.** How the traffic will be controlled and marked for hazards, such as haul roads, highways, intersections, utilities, pedestrian walkways, and prohibited areas.

16. **Accident Investigation.** There are four types of incidents or accidents that must be investigated, workman's compensation injury, auto accidents, vehicle liability, and general liability. A detailed report shall be provided in a timely manner explaining what happened, why, who, when, where, etc., and the corrective measures taken to prevent future occurrence.

Special Provisions

Depending on the type of construction, additional items must be incorporated into the Contractor's Safety Plan. When applicable, include the following:

1. **Blasting Plan.** Complete Blasting Plan which includes procedures for blasting, permits, explosives handling, explosive storage, explosive transportation, hole loading, blast signals, and blaster qualifications.

2. **Confined Space Entry.** Procedures for confined space entry and work operations in and around confined spaces, as well as, emergency retrieval measures (Refer to Confined Space Policy and Procedures).

3. **Competent Person Documentation &Training.** Contractors shall submit a list of competent persons for the work their performing. Training documentation shall be included. This includes required 30 hour OSHA and 10 Hour OSHA certified employees.

4. **Cranes.** Use of cranes or derricks and the testing and inspection thereof, including hook latches, cables, boom stops, load tables, warning devices, fire extinguishers, and where the illustration of crane operation signals shall be posted on the job site (Refer to Crane Policy for additional crane requirements).

5. **EMR Rates**: Contractors with an Experience Modification Rate (EMR) rating over 1.0 shall provide a Safety Mitigation Plan addressing the safety issues that the contractor has had over the past three years also including the current year.

6. **Excavations.** Excavation plans must indicate slope angle and protection, shoring, guarding, barricades, excavation access, and excavated material storage (Refer to Excavation Policy and Procedures).

7. **Fall Protection.** The use of full-body harnesses, life lines, and lanyards when necessary.

8. **Formwork.** Procedure for submitting formwork and falsework drawings for review and approval. This item should also be indicated on the contractor's progress schedule to prevent submittal delay which could hold up project.

9. **Hazard Communication Program.** Policy for following the hazard communication program, including the location of SDSs on the job site. Global Harmonization Training Program.

10. **Identification Sticker Program**. Identification (hard hat stickers) shall be required to identify trained employees on equipment and tool use (e.g. forklift operators, powder actuated tools, scaffolds, scissor lifts).

11. **Interruption of Fire/Security Systems.** Plans shall include measures and/or procedures to provide interim fire and security protection to facilities or areas affected by interruptions. These include automatic detection devices and alarms, automatic sprinkler systems, fire pumps, fire hydrants, applicable water supplies and reservoirs.

12. **Lockout/Tagout.** Procedures for lockout/tagout and the control of energy during work operations.

13. **Safety Nets.** Use of safety nets in areas where the use of full-body harnesses and life lines or scaffolds is not practical.

14. **Scaffolding.** Planking size, cleats, guardrails, toeboards, anchor points, putlogs, section pins, fall protection, and access points.

15. **Welding Protection.** How welding protection will be provided, including shields, fire extinguishers, ventilation, hot work permits and fire watches.

16. **Respiratory Program.** How and when respiratory protection will be provided and monitored.

17. **Disciplinary Program.** The contractor shall provide an outline of disciplinary action regarding safety violations, for example;

    first offense - written notice
    second offense - one day off
    third offense - three days off
    fourth offense - removal from company

18. **Substance Abuse Policy.** Policy Statement - e.g., pre-employment drug testing , post-accident, random testing, etc.

19. **Emergency Evacuation and Rescue Plan.** The contractor's plan for steps to take if a crisis/serious injury or incident occurs. This plan should be developed with assistance from Program Management Consultant, Airport Operations, and the Airports Authority's Fire Department. A drawing of the site should be submitted to Authority's Fire, Police, and Operations departments. If site conditions that may affect this plan change during construction, the contractor shall submit a revised plan for approval. This plan should be made available in English as well as other languages as necessary, so that all employees can understand and react accordingly. Controlling contractor shall keep an accurate man count of employees on site (e.g. man count on white board of each contractor).

20. **Signage.** At all construction sites, the contractor will install signs that are clearly visible from 50 feet that identify any hazardous or dangerous condition. Signs must be white with red lettering.

21. **Job Hazard Analysis Program.** The contractor shall submit a program that identifies any upcoming work activities which pose a potential safety hazard. This program should be documented into definable and manageable components whenever the risk of personal injury exists as a result of hazardous tasks or activities. These will be submitted five (15) working days prior to initiating the task. In addition, daily pre-task planning shall be required for work to be performed (Refer PTWP Form Appendix E and PTWP Policy).

22. **Return to Work Program**. Contractor and their subcontractors shall establish a "Return to Work" policy in compliance with the OCIP Manual and OSHA standards. This is mandatory for all controlling contractors and their subcontractors.

23. **Personal Protective Equipment. Refer to Airports Authority PPE Policy**

APPENDIX D

ELECTRICAL CLEARANCE FORMS

Metropolitan Washington Airports Authority
WASHINGTON DULLES INTERNATIONAL AIRPORT

UTILITY OUTAGE REQUEST

(Must be submitted to and approved by Manager Utilities Services Division **4** business days before requested outage date)

PROJECT NAME (Print or Type)	CONTRACT NO.	
REQUESTER (Print or Type)	COMPANY	
ADDRESS	PHONE NO.	E-MAIL. (Print or Type)

REQUEST SYSTEM OUTAGE FOR:

☐ Electrical ☐ Gas ☐ Water ☐ Fire Alarm ☐ Sewer ☐ Sprinkler

☐ Other (Specify) **NOTE: If Directed by Fire Code Official, Requestor Shall Provide A Fire Watch for Fire Alarm and Sprinkler Outages.**

Person Responsible For Fire Watch (print):

Telephone Number:

START DAY	DATE	TIME (24 HR)	**COMPLETION** DAY	DATE	TIME (24 HR.)

DESCRIPTION

PURPOSE (Indicate project and describe specific tasks to be performed, attach additional sheets if necessary)

AFFECTED BUILDINGS, TENANTS and SYSTEMS (attach additional sheets if necessary**)**

CONCURRENCES

(Requestor to obtain the following concurrences before submitting form for final approval sign and print all approval signatures)

AFFECTED: Tenant's / Owner's (If applicable)	DATE	**RESIDENT ENGINEER** (PMC, MA-224)	DATE
FIRE CODE OFFICIAL (MA-320 If applicable) ☐ **Fire Watch Required.**	DATE	**INTERIOR ELECTRICAL** SUPERVISOR, MA-223 (If applicable)	DATE
EXTERIOR ELECTRICAL SUPERVISOR, MA-223 (If applicable)	DATE	**PLUMBING** SUPERVISOR, MA-223 (If applicable)	DATE
UTILITY SUPERVISOR, MA-223 (If applicable)	DATE	**Comments:**	

FINAL APPROVAL / REJECTION, MANAGER UTILITIES SERVICES DIVISION, MA-223

OUTAGE REQUEST APPROVED / REJECTED FOR INDICATED DATE AND TIME ☐ APPROVED ☐ REJECTED	CONTROL NO.	DATE
APPROVAL / REJECTION COMMENTS:		

FOR AUTHORITY / PMC USE ONLY

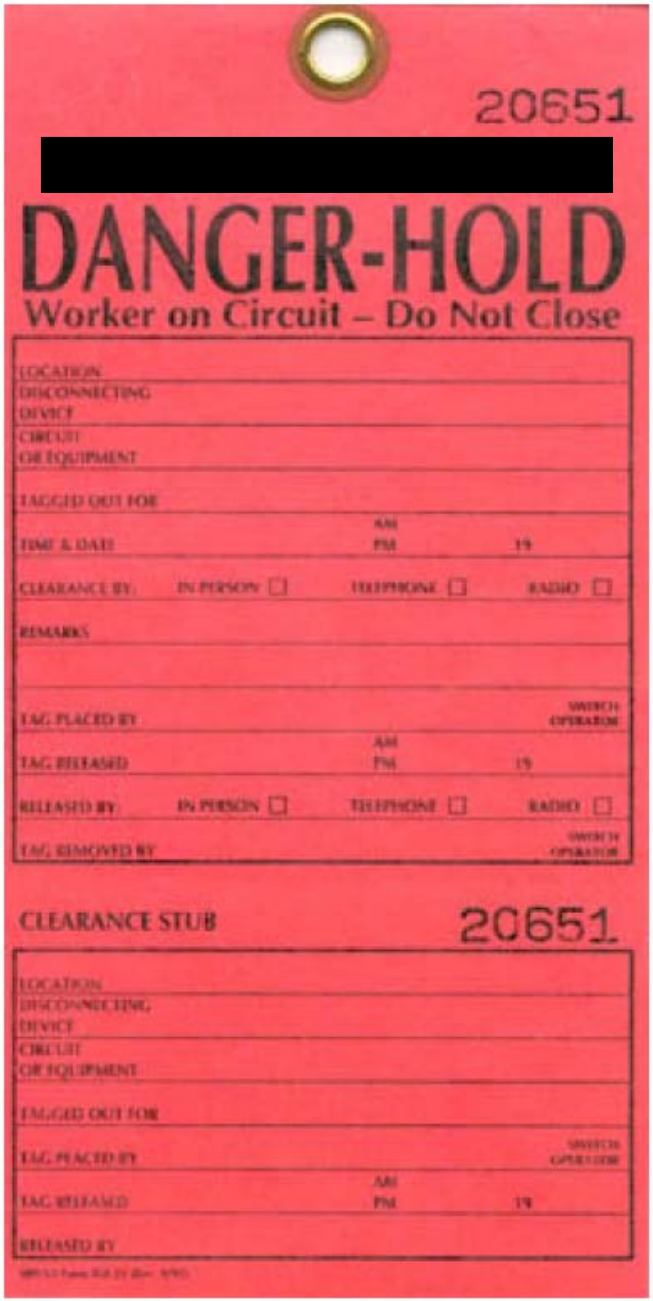
PRINT OR TYPE

PMC Resident Engineer Name:

E-Mail:

MA-224 Engineer Name:

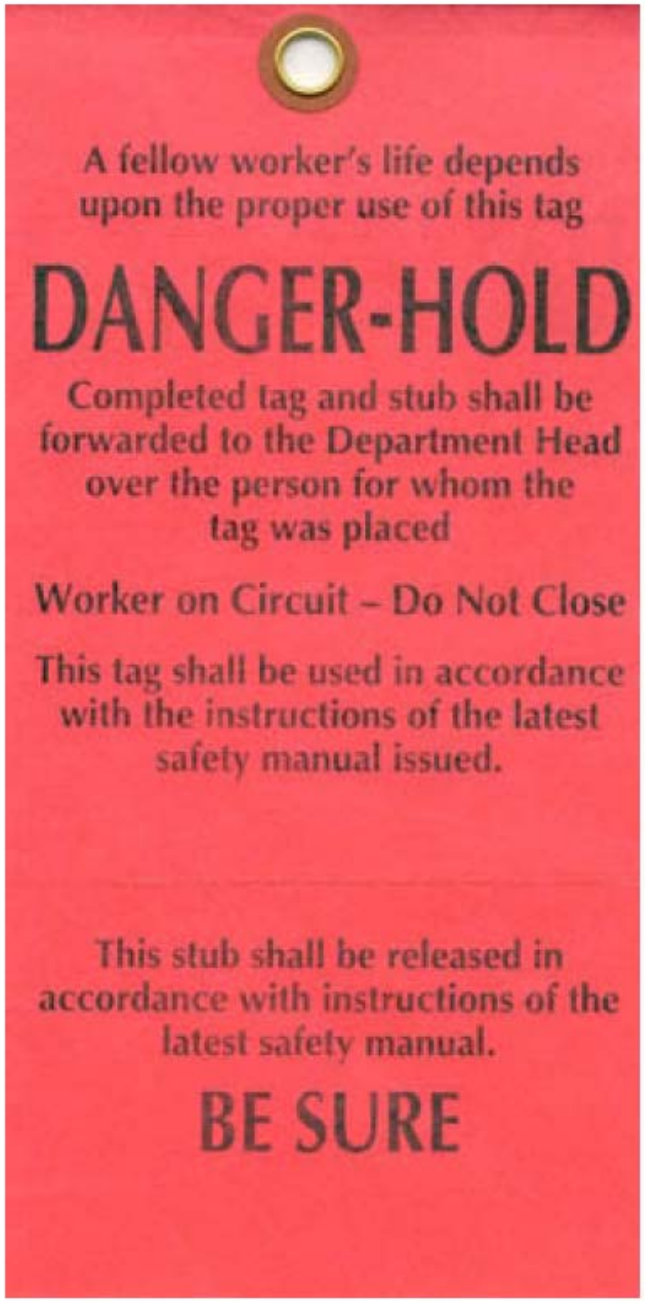
E-Mail:



Front

Sample Lockout / Tagout

"Danger Hold Tag"



Back

APPENDIX E

PRE-TASK WORK PLANNING FORM (PTWP)

Pre- Task Planning (PTP) Work Plan

Date:	**Safety Management System FAA Airports (ARP) Safety Risk Assessment**					
Activity/WorkTask:						
Project Name:	**Safety Risk Assessment (SRA) Code Matrix**					
Contract number:	**Severity**	**Probability**				
Location of work:		**Frequent**	**Probable**	**Remote**	**Extremely Remote**	**Extremely Improbable**
Prepared by:	**Catastrophic**	**E**	**E**	**H**	**H**	**M**
Reviewed by:	**Hazardous**	**E**	**H**	**H**	**M**	**L**
Notes: (Field Notes ,Review Comments,etc.)	**Major**	**H**	**M**	**M**	**L**	**L**
	Minor	**M**	**L**	**L**	**L**	**L**
	Minimal	**L**	**L**	**L**	**L**	**L**

Step 1: Review each "Hazard" with identified safety "Controls" and determine SRA Code (See above).

"Probability" is the likelihood to cause an incident, near miss, or accident as: Frequent, Probable, Remote, Extremely Remote, or Extremely improbable.	**SRA Code Chart**
"Severity" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Hazardous, Major, Minor, or Minimal.	**E= Extremely High Risk**
Step 2: Identify the SRA Code (probably/Severity) as E, H, M, or L for each "hazard" on PTP work plan.	**H= High Risk**
Step 3: Put Letter of SRA Code in SRA Column for each task (see below).	**M= Moderate Risk**
	L = Low Risk

Work Area Evaluation – Circle Yes or No

Has Air Operations been notified of the work plan if working on AOA?	Yes	No	Do you have adequate lighting in the work area?	Yes	No
If excavating, has Miss Utility been called ?	Yes	No	Is a respirator required for the task?	Yes	No
Has the Airports Authority excavation check list been filled out?	Yes	No	Have you met the requirements to wear a respirator if used (fit test/medical evaluation)?	Yes	No
Has the Safety Data Sheets (SDS) been reviewed?	Yes	No	Have all tools/equipment been inspected before use?	Yes	No
Have SDS hazards been reviewed and coordinated with other trades?	Yes	No	Do you have a fall protection plan if working above 6 feet?	Yes	No
Are work permits required (Confined Space, Excavation, Hot work)?	Yes	No	If using a crane has air operations/FAA been notified?	Yes	No
Have PPE requirements been met?	Yes	No	Has the work plan been coordinated with other trades/contractors?	Yes	No

List Tools & Equipment Being Used:

List documented safety training given to perform task:

Circle Task Hazards

1.Caught In/Between	10.Falls From Elevations	19.Line Breaking	28.Sharp Tools/Objects	37.
2.Chemical Burns	11.Fire/Explosion	20.Lock Out/Tag out	29.Slip trip Hazards	38.
3.Chemical Spills	12.Hazardous Chemicals	21.Manual Lifting	30.Struck By	Describe Hazards of Task:
4.Compressed Gases	13.Heat Exhaustion/Stress	22.Mechanical Lifting	31.Thermal Burns	
5.Confined Space	14.High Noise Levels	23.Mobile Equipment	32.Radiation	
6.Critical Lift	15.Hot Work	24.Particles in the Eyes	33.Rigging	
7.Electrical Shock	16.Inadequate Access	25.Plant Operations	34.Utilities	
8.Elevated work	17.Inhalation Hazard	26.Poor Housekeeping	35. Other Hazards	
9.Excavations/Trench	18.Ladders	27.Scaffolding	36.	

Description of Steps to be performed	Hazards Associated with Each Step	Required to Eliminate or Control the Hazard	SRA Code
	1.	1.	
2.	2.	2.	
3.	3.	3.	
4.	4.	4.	
5.	5.	5.	

INSTRUCTIONS: 1. Identify each task and write the steps of each task 2. List all possible hazards involved in each task 3. What corrective actions that will be taken to prevent the hazards 4. Use Airports Authority & OSHA safety guidelines and the PTP as a control measure 5. Continual improvement, see what works and what does not work and make remedial actions to improve the process.

Description of Steps to be performed	Hazards Associated with Each Step	Required to Eliminate or Control the Hazard	SRA Code
6.	6.	6.	
7.	7.	7.	
8.	8.	8.	
9.	9.	9.	
10.	10.	10.	

INSTRUCTIONS: 1. Identify each task and write the steps of each task 2. List all possible hazards involved in each task 3. What corrective actions that will be taken to prevent the hazards 4. Use Airports Authority & OSHA safety guidelines and the PTP as a control measure 5. Continual improvement, see what works and what does not work and make remedial actions to improve the process.

Required: Project Manager or General Superintendent Signature: _____**Date:**_____

Required: Competent Person Name, Title and Signature:

_____ _____ **Date:** _____

Required: Work Crew Employee Signatures:

_____ **Date:** _____
_____ **Date:** _____
_____ **Date:** _____
_____ **Date:** _____
_____ **Date:** _____
_____ **Date:** _____
_____ **Date:** _____
_____ **Date:** _____

APPENDIX F

EXCAVATION & TRENCHING CHECKLIST

Excavation & Trenching Checklist

Miss Utility Permit # :

Date:

Section 1 – Preparation (Contractor Safety Manager Completes Section 1)

Job Name:

Name of Contractor:

Location of The Excavation Work:

Description of Excavation Work :

Subsurface Engineering Utility Locating Company Name: Locater Employee Name:

Communication Verification Signature:

MWAA Utilities Verification Signatures; Electrical Shop: Pipe Shop:

FAA Utility Verification Signature: Fuel Utility Verification Signature:

Following Items Listed Below Must Be Done Prior To Opening an Excavation

Pre-Planning Meeting with MWAA		Yes		No
GIS Plans Reviewed For Existing Utilities		Yes		No
Utility Grid Sweep Conducted of the "**Entire"** Excavation Area and 5 feet beyond marked excavation perimeter.	i	Yes		No
Utilities Marked and Utilities Physically /Visually Located (hand dig, pot hole, hydro)		Yes		No

Section 2 – Excavation (Contractor Competent Person Completes Section 2)

Competent Person Name:

Soil Type: Slope Ratio: Protective System Used (Tabulated Data Submitted to MWAA):

Excavation/Trench Depth: Excavation/Trench Width:

Note: Soils that have been previously disturbed (e.g. existing utilities, sewer,) are classified as "C" type soils

Section 3 – Hazard Assessment and Control (Contractor Competent Person Completes Section 3)

	Controls to be Implemented *(Contractor shall perform excavation work in accordance with OSHA and VOSH Unique Excavation Standards).*	**Completed**	**N/A**
Personnel & Property Safety Issues	Competent Person has inspected excavation, adjacent areas, and protective systems prior to employees performing work in the excavation/trench.		
	Professional Engineer was obtained to approve excavation of >20' depth.		
	Trench area has restricted access via physical barrier for vehicle traffic and guardrails, fencing 6 feet back for pedestrian protection.		
	Employees protected from loose rock/soil that could pose a hazard by falling or rolling into the excavation/trench.		
	Trench is shored and/or sloped per CFR 1926 Subpart P/VOSH requirements.		
	Trench is free from standing water and other contaminants.		
	Excavated material, equipment and other items will be placed at least 2' from edge of trench.		
	Employees are prohibited working under suspended loads.		
	Walkways and bridges over excavations/trenches **6 feet** or more in depth shall have standard guardrails and toe boards.		
	Trench box system meets all regulatory requirements.		
	Underground utilities protected, supported or removed when excavation is open (P.E. may be required for supporting utilities).		
	Wood used for shoring or bracing is in good condition and free from defects.		
	Ladder provided in trench >**4' depth** with ladder extending at least 3' above top of trench.		
	Ladder, ramp, or stair is provided within **25'** of all personnel working in trench.		
	Air testing was performed at **4' depth** or more (Oxygen, LEL, Toxics). Results:		
	Soils Classified as "B" type soil shall have first bench 6 feet.		
	Note: Important to note that soils at IAD are classified either type "B" or "C" due to shale soils break (fissures) East to West directions. There is no type "A" soils at IAD unless verified.		

Section 4 – Approvals – I have reviewed this Permit and all conditions and agree that work can proceed safely.

Contractor Project Manager/General Superintendent Name & Signature: *Date:*

Competent Person Name, Title & Signature: *Date:*

APPENDIX G

VISITOR RELEASE FORM

VISITOR RELEASE FORM

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY
VISITOR RELEASE FORM

PARTICIPANT'S NAME: _____

DATE OF VISIT: _____

While participating in a site visit at _____Airport, I agree to conduct myself in an appropriate manner with respect to the rules and regulations of the Metropolitan Washington Airports Authority and any other entity conducting business on the property of the Metropolitan Washington Airports Authority. I also agree to stay with any designated escort during my visit and follow instructions throughout my visit. In the event that an accident or damage occurs, I agree not to hold the Metropolitan Washington Airports Authority, its agents, and contractors responsible since this visit is conducted for my benefit. I also agree to assume the risk associated with my visit and accept all financial responsibility in consideration of the benefit associated with the visit. In consideration therefore I, for myself, my heirs, personal representatives or assigns, do hereby release, waive, discharge and covenant not to sue the Metropolitan Washington Airports Authority, its officers, employees, and agents from liability from any and all claims, including the negligence of the Metropolitan Washington Airports Authority, resulting in personal injury, accidents or illnesses (including death), and property loss arising from, but not limited to, participation in the visit.

ACKNOWLEDGEMENT OF UNDERSTANDING: I have read this contract including terms waiving liability and assumption of risk, fully understanding its terms, and understand that I am by matter of contract giving up substantial rights in exchange for the benefit of this visit to me. I acknowledge that I am signing the agreement freely and voluntarily, and intend my signature to be a contractual release of liability to the greatest extent allowed by law.

Visitor's Name: _____

Visitor's Signature: _____ Date: _____

Witness: _____

APPENDIX H

NCN VIOLATION FINE SCHEDULE

NCN Violation Fine Schedule

AOA & NON- AOA Safety Violations	Fine
1. Incursion of Aircraft	$5,000 per occurrence
2. Encroachment of RSA	$5,000 per occurrence
3. Violation of not having flagging operations on active runways	$1,000 per occurrence
4. Failure to follow MWAA Utility Locating Procedures	$1,000 per occurrence
5. Violation of MWAA Excavation Policy	$5,000 per occurrence
6. Exposure to Live Electrical Parts / Not Following MWAA LOTO Procedures or NFPA 70 E Requirements	$5,000 per occurrence
7. Violation of MWAA Confined Space Procedures & Policies	$1,000 per occurrence
8. Violation of MWAA Fall Protection Policy	$2,000 per occurrence
9. Violation of Escort Procedures on the AOA	$1,000 per occurrence
10. Violation of Airport Security Policies & Procedures	$1,000 per occurrence
11. Violation of MWAA Fire Prevention Procedures/Hot Work Policies & Procedures	$1,000 per occurrence
12. Violation of MWAA Crane Policies & Procedures / FAA Requirements	$7,000 per occurrence
13. Violation of not providing safety representation on the job site	$1,000 per occurrence
14. Violation of not following and maintaining MOT Plan	$500 per occurrence
15. Violation of creating an imminent danger situation	$7,000 per occurrence
16. Violation of MWAA Scaffolding Policy	$1,000 per occurrence
17. Violation of MWAA Material Handling Policy	$500 per occurrence
18. Violation of MWAA Safety Construction Manual Policies & Procedures	$500 per occurrence