DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, DC

AFI32-1001_AFGM2016-01

22 April 2016

MEMORANDUM FOR DISTRIBUTION C - MAJCOMs/FOAs/DRUs/PSUs

FROM: HQ AF/A4
1030 Air Force Pentagon
Washington, DC 20330

SUBJECT: Air Force Guidance Memorandum to AFI 32-1001, *Operations Management*

By Order of the Secretary of the Air Force, this Guidance Memorandum immediately implements changes to AFI 32-1001, *Operations Management*, 16 October 2014. Compliance with this memorandum is mandatory. To the extent its directions are inconsistent with other Air Force publications; the information herein prevails, in accordance with AFI 33-360, *Publications and Forms Management.*

The Air Force is required to save energy. The most cost effective method is to operate and maintain heating and cooling systems at the greatest energy efficient and economical manner possible. To meet Air Force energy requirements, HVAC systems should maintain appropriate temperatures when facilities are occupied, and be shut down or reduced during unoccupied periods. Compliance should be achieved in accordance with suspense dates in subparagraphs below.

A. HVAC control systems will have control set points not to exceed the conditions in Table 1 for their respective occupancies. Temperature setbacks that coincide with facility usage hours (e.g. night and weekend) will be used in all occupancies without a 24-hour mission. The Base Civil Engineer (BCE) is authorized to allow temporary deviations from the set points for spaces with broken systems, exterior envelope issues, temporary changes in occupancy, and dramatic temperature variations (as determined by the BCE). Spaces with these issues should have a plan to correct the issue prior to granting the deviation. Installations are authorized and expected to establish local policies that are equal to, or more stringent than, Table 1. BCEs will comply within 60 days of the issuance of this guidance. **(T-1)**

Table 1: Set Points for Maximum Heating and Minimum Cooling Temperatures

Occupancy	Heating Max Temp (deg F)		Cooling Min Temp (deg F)		
	Occupied	Unoccupied	Occupied	Unoccupied	Max Humidity**
Administrative areas*	70	55	73	80	50%
NAF retail space	70	55	73	80	50%
Community Areas such as theaters, youth facilities, etc.	70	55	73	80	50%
Warehouse***	60	55	80	80	50%
Shop Space***	65	55	76	80	50%

*Administrative areas include administrative spaces in all facilities. Any administrative space co-located with mission equipment, defaults to the temperature and humidity requirements of the equipment.
**Represents a design humidity for the space. The goal is to avoid mold problems in the facility (typically 40 – 60% relative humidity). Actual humidity levels will vary depending on local climate.
***Where eligible for air conditioning.

B. To ensure the facility occupants' needs are met and installation energy policy is followed, the CE unit will establish formal procedures to temporarily change schedules, periodically coordinate with facility managers, and validate that HVAC schedules and temperature settings coincide with facility usage hours. Set points for mission critical facilities will be identified in the implementation plans. BCEs will comply within 60 days of the issuance of this guidance. **(T-1)**

C. At installations' request, Civil Engineer Maintenance Inspection and Repair Team (CEMIRT) provides troubleshooting and recommendations to improve our most complicated systems. CEMIRT will provide a formal report and out-brief to BCEs upon conclusion of installation visits. Installations will develop formal processes to ensure CEMIRT recommendations are evaluated, implemented, and tracked to completion. Installations should establish procedures to ensure decisions not to implement CEMIRT recommendations are documented and provided to CEMIRT no later than 30 days after the formal report is published. BCEs will comply within 60 days of the issuance of this guidance. **(T-1)**

D. HVAC control systems are essential to operating efficient and cost effective HVAC systems. Installations will establish control systems that allow multiple temperature set points for all occupancies without a 24-hour mission. For facilities that require a constant temperature over a 24-hour period, ensure that required set points are clearly identified. Where technically and economically feasible, HVAC controls should be connected to an Installation Energy Management Control System. Where it is not feasible, local programmable thermostats should be installed. Each installation will establish and implement a plan to ensure compliance. BCEs will comply within 120 days of the issuance of this guidance. **(T-1)**

E. The maintenance of the HVAC systems is essential to ensure continued operations at optimum efficiency. To ensure the base Preventative Maintenance (PM) program is accurate, installation HVAC shops should conduct a complete annual maintenance program review, as required by AFI 32-1001, *Operations Management*, and must properly identify all facilities and complete HVAC equipment inventories in BUILDER™. Baseline PM tasks for common HVAC systems will be vetted by AFCEC's Operations Maintenance Division. **(T-1)**

F. To ensure implementation, installation BCEs will confirm completion of paragraphs A–E items by 31 October 2016 in MICT.

This memorandum becomes void after one-year has elapsed from the date of this memorandum, or upon publication of an Interim Change or rewrite of the affected publication, whichever is earlier.

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DCS/Logistics, Engineering & Force Protection

BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 32-1001

16 OCTOBER 2014

Civil Engineering

OPERATIONS MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air Force Instruction (AFI) implements Air Force Policy Directive (AFPD) 32-10, *Installations and Facilities* as well as Headquarters United States Air Force Program Action Directive (PAD) 12-03, *Implementation of Enterprise-Wide Civil Engineer Transformation*, and the associated Programming Plans (P-Plans) for implementation. It provides the directive requirements for the operations management of civil engineering. It establishes a civil engineer worldwide baseline set of definitions, operations process descriptions, and organizational guidance which apply to the objective Operations Flight organization for both groups and squadrons (civil engineer groups should use the appropriate organizational equivalent to flight used in this AFI). Contracted functions will provide the same level of service, utilize the same Air Force mandated information technology (IT) systems, and implement the same asset and activity management principles and processes as government operated Operations Flights in a manner that is indistinguishable to the installation, Major Commands (MAJCOMs), Air Force Civil Engineer Center (AFCEC), and Headquarters Air Force. This AFI applies to active duty and reserve Air Force units. It does not apply to Air National Guard units. This publication may be supplemented at any level, but all direct Supplements must be routed to the Office of Primary Responsibility (OPR) of this publication for coordination prior to certification approval. The authorities to waive wing/unit level requirement in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. Refer recommended changes and questions about this publication to the OPR using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes

prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This publication has been rewritten. This rewrite of AFI 32-1001 includes a mandated organizational structure and corresponding office symbols within the Operations Flight; directs Operations Flights to utilize Playbooks as guides for executing the requirements set forth in this AFI; implements a new work prioritization system for work accomplished within the Operations Flight; directs the Operations Flight to implement standardized Air Force preventive maintenance, asset data collection, and asset analysis methodologies; and captures inspection programs that the Operations Flight must manage in accordance with Public Law as well as Air Force policy.

1. Main Objective. The Operations Flight's main objective is to effectively operate, maintain, and repair Air Force facility and infrastructure assets classified as real property or real property installed equipment (RPIE). Operations Flights, or equivalent contracted function, must utilize common reporting tools and procedures to gather data, conduct analysis, and make decisions on operating, maintaining, and repairing its assets to maximize mission accomplishment and return on investment (ROI), from an Air Force-wide, risk based perspective. **(T0)** Operations Flights will achieve this as follows:

1.1. Provide execution, management, and oversight of facility and infrastructure operations, maintenance and repair, materiel control, work planning, customer service, service contract management, and operations engineering. **(T-1)**

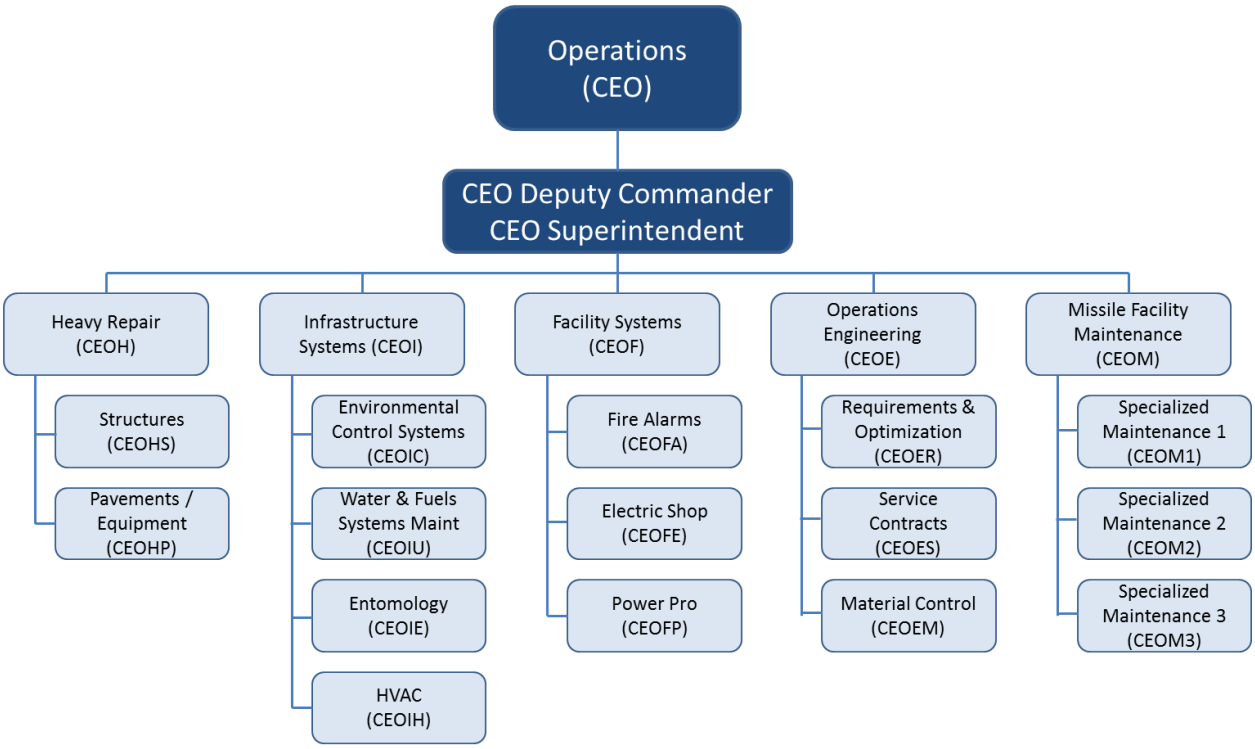
1.2. Maintain capability to respond to and eliminate any facility or infrastructure related emergency condition 24 hours a day. **(T-0)**

1.3. **Conduct all activities in compliance with applicable environmental, fire, and safety laws, codes, and directives. (T-0)**

2. Playbooks. Playbooks are tools that document standardized CE business processes, operating procedures, and resources needed for each of the business processes. They are updated to reflect lessons learned, new policies, and best practices. Operations Flights will utilize Playbooks to receive guidance on how to meet the requirements dictated in this AFI. **(T-2)** Links to the Playbooks can be found in Attachment 1. When applicable, supporting Playbooks will be found in parenthesis at the end of paragraphs or subparagraphs.

3. The Operations Flight within the Objective Squadron. The Operations Flight must be organized in accordance with the current revision of the P-Plan for PAD 12-03 – Volume (Vol) 1, and be composed of the following sections: Heavy Repair, Infrastructure Systems, Facility Systems, and Operations Engineering. (Note: Missile Facility Maintenance Element is an approved Air Force Global Strike Command variance.) Deviations from this construct must be approved by submitting an organizational change request in accordance with AFI 38-101, *Air Force Organization*. The organizational structure for the Operations Flight is found in **Figure 1**. **(T-1)**

Figure 1. Operations Flight Section Structure.



3.1. Staffing for the Operations Engineering element must include a civil, mechanical, and electrical engineer as well as technicians from CEOHS, CEOHP, , CEOIU, CEOIH, and CEOF. **(T-1).**

3.2. Elements within the Operations Flight must perform base level flight tasks as dictated in the current revision of the P-Plan for PAD 12-03 – Vol 2. **(T-1)**

4. Standardized Work Task Prioritization. Work completed by Operations Flights must be executed and tracked according to the work prioritization system provided in the current revision of the P-Plan for PAD 12-03 – Vol 1. **(T-1)**

4.1. There are four general classifications of work. They are categorized and prioritized for execution as seen in **Table 1**. (Operations Support Playbook) **(T-1)**

Table 1. Work Prioritization System.

Work Priority	Work Type	Definition
1	Emergency Corrective Maintenance Work	1. All/only unscheduled (24 hours) 2. Needed to sustain/ensure continued mission operations 3. "Don't go home" type of work 4. Work until emergency is mitigated/fixed
2A (High)	Preventive Maintenance (PM)/Physical Plant	Right-sized PM (right work/frequency) Risk based PM approach

	Operations	
2B (Medium)	Contingency Construction Training	Multi-craft work orders Infused to meet AFI 10-210 requirements
3A (High)	Scheduled Sustainment Work (Corrective Maintenance)	High mission/equipment sustainment risk RAC 1-3 (unabated) FSD I and II High ROI corrective maintenance
3B (Medium)	Scheduled Sustainment Work (Corrective Maintenance)	1. Moderate mission/equipment sustainment risk 2. Time sensitive requirements 3. RAC 4 and 5 (unabated)
3C (Low)	Scheduled Sustainment Work (Corrective Maintenance)	4. Low mission/equipment sustainment risk 5. RAC 4 and 5 (unabated)
4A	Scheduled Enhancement Work	• Work defined and prioritized by base
4B	All other Enhancement Work	• Work that is not mission priority, but potentially funded by other units

4.2. Execution methods and levels of approval for work will be based on work classification and dollar value. (Operations Support Playbook) **(T-1)**

4.2.1. Emergency work requires immediate response. Only those actions necessary to mitigate the emergency are accomplished on the initial work task. If additional work is required to restore complete functionality, a future lower priority work requirement will be created and executed in a time and manner consistent with requirements of similar scope and nature. Emergency work must be identified to the Operations Flight by the quickest means possible, which may include verbal notification. The Air Force mandated IT system will be utilized for documentation after the call is received and a response dispatched. **(T-1)**

4.2.2. PM must be prioritized and have resources identified for execution ahead of all other forms of scheduled work. It will be scheduled and approved prior to the work being performed. **(T-1)**

4.2.3. The Work Request Review Board will review all potential project opportunities, to include contingency construction training and enhancement work. The decision to fulfill a requirement and its method of execution will be determined in the shortest possible amount of time. Work requests that cannot be executed or are not essential to sustaining the mission must not be allowed to accumulate as a back log. Stakeholders must be notified once a decision on a work request is made. If approved for execution, the scope and budgeted costs will be formally planned and approved by the appropriate authority. The scheduled execution of work will be based on the availability of resources and its overarching impact to sustainment of the mission. **(T-1)**

4.2.4. Time sensitive corrective maintenance/sustainment work will be prioritized as 3B. For example, dormitory change of occupancy maintenance must be accomplished within the necessary timeframe to maintain occupancy rates in accordance with AFI 32-6005, *Unaccompanied Housing Management*. **(T-1)**

4.2.5. Funding approval levels for work accomplished in the Operations Flight must be delegated down by the Base Civil Engineer (BCE). These approval levels must be documented in writing and renewed annually by the BCE. **(T-1)**

4.3. Proper coordination must be completed and documented with appropriate agencies, such as safety, fire, bioenvironmental, on work that requires civil engineer support prior to execution. (Operations Support Playbook) **(T-0)**

4.4. Only Air Force mandated IT systems directly feeding Real Property Asset annual operating costs through labor, materiel, and contracted services will be used to track enterprise-wide asset management, maintenance effectiveness, and improvement opportunities. **(T-1)**

4.5. The Operations Flight must monitor the budgeted cost and scope of work it will execute. Significant changes in scope or budgeted cost requires work plans and records be updated and approval authority revalidated. Situations that require these actions include, but are not limited to the following. (Operations Support Playbook) **(T-0)**

4.5.1. Costs are estimated to exceed the authority of the individual who approved the work. **(T-0)**

4.5.2. Actual costs are estimated to exceed budgeted costs by 25 percent. **(T-0)**

4.5.3. The scope of work increases or decreases from the originally approved work plan, such as a decision to repair rather than replace RPIE or the addition of requirements to alter other infrastructure, facilities, or RPIE not included in the originally approved plan. **(T-0)**

4.6. Closeout must be accomplished in a complete and accurate manner. At a minimum, work records must demonstrate that the following closeout actions have been addressed. (Operations Support Playbook) **(T-1)**

4.6.1. As-built drawings are updated. **(T-1)**

4.6.2. Asset records are created, retired, and associated with the appropriate facilities and systems. **(T1)**

4.6.3. The Real Property Officer (RPO) is notified by Operations Engineering to review the completed work requirement. CEOE has provided all required information to satisfy real property accountability and reporting guidance as required by the RPO. **(T-1)**

4.6.4. Associated PM records have been updated, created, and activated. **(T-1)**

5. Standardized Preventive Maintenance.

5.1. The Operations Flight must inventory and conditionally assess PM assets. PM tasks must be defined, standardized, balanced, scheduled, monitored, and measured addressing life-cycle management and ROI as part of the PM program. These activities must be executed by CEOE in concert with CEOH, CEOF, and CEOI. These activities must be

performed on a continual basis as an integral part of day-to-day operations. (Operations Support & Preventive Maintenance Playbooks) **(T1)**

5.2. The Operations Flight must execute 100% of the scheduled PM visits for assets identified in the PM program. PM must be accomplished in accordance with Air Force approved Preventive Maintenance Task Lists (PMTL). Preventive maintenance for assets in the PM program must be prioritized over all other forms of work, with the exception of Work Priority 1, *Emergency Corrective Maintenance*. Bases are authorized to deviate from standard PM visit frequencies when frequencies are shown not produce optimum ROI. Bases may add additional steps to Air Force approved PMTLs, but must not reduce or ignore steps. **(T-1)**

6. Standardized Asset Data Collection and Analysis. Operations Flights must utilize a standard method of asset data collection and analysis. **(T-1)**

6.1. Asset data must be collected to support Air Force life-cycle investment decisions on facilities, infrastructure, and RPIE. Operations Flights must collect, maintain, update, and report, utilizing Air Force mandated systems, the following information sets: **(T-0)**

6.1.1. RPIE inventory and condition data. (Operations Support, Preventive Maintenance, & Facility Condition Assessment Playbooks) **(T-0)**

6.1.2. Facility condition assessment data. (Facility Condition Assessment Playbook) **(T-0)**

6.1.3. Linear segmentation infrastructure data. (Linear Infrastructure Playbooks) **(T-0)**

6.1.4. Air Force mandated IT system data fields. (Preventive Maintenance Playbook) **(T-0)**

6.1.5. Air Force Common Output Level Standards (AF COLS) data. (AF COLS Playbook) **(T-0)**

6.2. The Operations Flight must analyze asset data to align and de-conflict current and future investments. This must be accomplished in coordination with the Installation Management and Engineering Flights. (Activity Management Plan (AMP) Playbook) **(T-1)**

6.3. The Operations Flight is responsible for multiple AMP and sub-AMPs. Lists of these AMPs, as well as responsibilities for AMP and sub-AMP managers, are found in the current revision of the PPlan for PAD 12-03 – Vol. 2. (AMP Playbook) **(T-1)**

7. Service Contracts. The Operations Flight must manage infrastructure and facility operations related service contracts exceeding the $100K acquisition threshold in accordance with base level flight tasks. Integrated Solid Waste Management, Custodial, and Grounds Maintenance must be executed utilizing the standard Air Force Performance Work Statement template and the current published AF COLS level. (AMP, Operations Support, & Contract Management Playbooks) **(T-1)**

8. Materiel Control. The Operations Flight must perform materiel control in accordance with base level flight tasks and maintain documents as required for audit purposes. (Operations Support & Contract Management Playbooks) **(T-1)**

9. Facility Manager Program. The Operations Flight must execute and manage the base facility manager program. This includes the execution and documentation of facility manager

assignment, training, and communications. Facility managers must be an officer, E-5 and above, or civilian equivalent. All facility manager records, training documents, and guidance must be continually kept current. No facility manager, or any other facility occupant, will make or facilitate alterations to real property without coordination and proper approval documentation from the BCE (Operations Support Playbook) **(T-1)**

10. Miscellaneous Inspections.

10.1. The Operations Flight must inventory and inspect bridges on Air Force installations according to Unified Facilities Criteria (UFC) 3-310-08, *Bridge Inspection, Maintenance and Repair*. This UFC implements the Surface Transportation Assistance Act of 1978, established by Public Law (PL) 95-599, in accordance with 23 CFR 650.315. The Operations Flight must provide the Air Force Civil Engineer Center's Operations Directorate (AFCEC/CO) with an update to the Federal Highway Administration National Bridge Inventory annually. **(T-0)**

10.2. The Operations Flight must inventory, inspect and provide the required reporting for dams on Air Force installations according to the Federal Guidelines for Dam Safety as established by the Federal Emergency Management Agency (FEMA) of the Department of Homeland Security and published in FEMA 93. This section implements PL 92-367, *Dam Safety Act*, as amended by PL 104-303, PL 107-310, and PL 109-460. Additional state or county laws may also be applicable. The Operations Flight must provide AFCEC/CO with a biennial report on odd numbered years detailing the current status of the Air Force dam inventory, including updated inspection information. AFCEC/CO must consolidate this information and provide a formal report to the United States Army Corps of Engineers. **(T-0)**

10.3. The Operations Flight must execute maintenance, inspection, and testing to verify that the Vehicle Final Denial Barrier (FDB), FDB control systems, and supporting safety systems are in good working order and functioning properly. Maintenance of the FDB must be completed in accordance with the manufacture's recommendations, but the controls and supporting safety systems must be inspected and tested quarterly. Records of these inspections and tests must be documented in writing. The Operations Flight must report quarterly status of FDBs through their BCE to their MAJCOM and then AFCEC/CO. **(T-1)**

11. Real Property Similar Equipment (RPSE). RPSE is non-RPIE structures and equipment deployed or permanently assigned to an installation as facility substitutes that support the installation mission. RPSE is not real property and does not earn sustainment funds for CE. At home station, the owning unit is responsible for accountability, maintenance, and operation of RPSE. In deployed locations, Civil Engineers may assist with maintenance of RPSE assets when required to sustain mission related operations.

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DCS/Logistics, Installations & Mission Support

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

Air Force Publications:

AFI 33-360, *Publications and Forms Management*

AFI 38-101, *Air Force Organization*

AFMAN 33-363, *Management of Records*

AFPD 32-10, *Installations and Facilities*

PAD 12-03, *Implementation of Enterprise-Wide Civil Engineer Transformation*

Programming Plan for Implementation of Enterprise-Wide Civil Engineer Transformation, Volume 1

Programming Plan for Implementation of Enterprise-Wide Civil Engineer Transformation, Volume 2

Programming Plan for Implementation of Enterprise-Wide Civil Engineer Transformation, Volume 3

Prescribed Forms

AF Form 847, *Recommendation for Change of Publication*

Playbooks

AF COLS:

https://cs1.eis.af.mil/sites/AFCOLS/FY14Playbook/default.aspx

AMP:

https://app.eis.af.mil/a7cportal/CEPlaybooks/IM/AA/AMP_4_0/Pages/Facilities_UH.aspx

Contract Management:

https://app.eis.af.mil/a7cportal/CEPlaybooks/ENG/PM/ContractManagement/default.aspx

Facility Condition Assessments:
https://app.eis.af.mil/a7cportal/CEPlaybooks/OPS/OE/FCA/default.aspx

Linear Infrastructure:

https://app.eis.af.mil/a7cportal/CEPlaybooks/OPS/LI/default.aspx

Operations Support:
https://app.eis.af.mil/a7cportal/CEPlaybooks/OPS/OE/OperationsSupport/default.aspx

Preventive Maintenance:

https://app.eis.af.mil/a7cportal/CEPlaybooks/OPS/PM/default.aspx

Abbreviations and Acronyms

AFCEC/CO—Air Force Civil Engineer Center's Operations Directorate

AF COLS—Air Force Common Output Levels Standards

AMP—Activity Management Plan

BCE—Base Civil Engineer

CE—Civil Engineer

CM—Corrective Maintenance

FDB—Final Denial Barrier

FEMA—Federal Emergency Management Agency

FSD—Fire Safety Deficiency

PM—Preventive Maintenance

PMTL—Preventive Maintenance Task List

RAC—Risk Assessment Code

ROI—Return on Investment

RPIE—Real Property Installed Equipment

RPO—Real Property Officer

UFC—Unified Facilities Criteria