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19 May 2016

MEMORANDUM FOR DISTRIBUTION C
MAJCOMs/FOAs/DRUs

FROM: HQ USAF/A4C
1260 Air Force Pentagon
Washington, DC 20330-1260

SUBJECT: Air Force Guidance Memorandum to AFI 32-1032, Planning and Programming
Appropriated Fund Maintenance, Repair, and Construction Projects

By Order of the Secretary of the Air Force, this Air Force Guidance Memorandum immediately changes AFI 32-1032, *Planning and Programming Appropriated Fund Maintenance, Repair, and Construction Projects*. 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*.

In advance of a revision or interim change to AFI 32-1032, 24 September 2015, the attachments to this memorandum provide guidance changes that are effective immediately.

This Memorandum becomes void after one year has elapsed from the date of this Memorandum, or upon incorporation by interim change to, or rewrite of AFI 32-1032, *Planning and Programming Appropriated Fund Maintenance, Repair, and Construction Projects*, whichever is earlier.

JOHN COOPER
Lieutenant General, USAF
DCS/ Logistics, Engineering and Force Protection

Attachment:
Guidance Changes

AFI32-1032_AFGM2016-01 19 May 2016
Guidance Changes

Programming work in multiple facilities

(Replace the following paragraph):

3.4.1. **Work in multiple facilities.** As stated in **Paragraph 3.4**, work in multiple facilities should not typically be combined in a single project. However, if the work is essentially identical or indistinguishable from facility to facility and is intended to be procured in one acquisition action, then work in multiple facilities may be programmed within a single project. If work in multiple facilities is combined into a single project, programmers must clearly lay out in the programming text which facilities are involved and must clearly delineate what work is taking place in each facility. **(T-1)** For approval threshold determination (in both programming and execution) programmers and project managers must sum the cost of the work in all facilities included in a single project. **(T-1)** Per the aggregation requirements in **Paragraph 4.3.**, include any other *current repair requirements* in any of the facilities involved in a multi-facility project for threshold determination. Work at separate installations may not be combined in a single project. Example projects allowable under this programming exception include: 1) removing bat guano and repair/sealing of access points in multiple lodging facilities, 2) repairing the same door-opening/closing problem on multiple protective aircraft shelters, and 3) repairing the fire protection system which spans two hangars from a single pump house. Combining multiple facilities with extensive renovations into one project, such as renovating dorms to Dorms-4-Airman standards, does not meet the intention of this policy allowance. Work in multiple facilities may be solicited in a single acquisition even if not programmed in a single project.

Certification signature

(Replace the following paragraph):

3.5.7.1. Per AFI 10-245, *Antiterrorism*, the installation commander will certify on the certificate of compliance or in the Department of Defense Form (DD Form) 1391, *FY__ Military Construction Project Data*, that new facilities or renovation projects comply with UFC AT standards. **(T-1)** The AT Officer (ATO) will work with the engineering staff during planning, design, and construction to ensure requirements are met, including coordination prior to certification. **(T-1)** A member of the installation Civil Engineer staff should complete security engineering training in accordance with AFI 10-245.

(Replace the following paragraph):

3.6.5.1. Programmers must ensure project documents (DD Form 1391 or AF Form 332 or 327) are signed by an appropriate certifying official. **(T-1)** Programmers must ensure packages forward to the Air Staff for approval contain the following: 1) a DD Form 1391 containing the following signed certification from the Base Civil Engineer: **“I have reviewed this document and certify it is complete and accurate, and is compliant with appropriate statute(s) and instructions. I have validated the project’s primary and supporting costs and work classification. It has been fully coordinated with the user and other appropriate agencies.”**, 2) a copy of the Facility Board minutes signed by the Installation Commander approving the project, and 3) a Certificate of Compliance for Critical Planning Actions (signed by the installation commander). **(T-1)** AFIMSC programmers must ensure project approval request packages coming to the Air Staff include at a minimum the following documents: approval request signed or sent by an AFIMSC/IZB Branch Chief including a certifying statement of review and concurrence, DD1391 (per **Attachment 2**), economic analysis or waiver as necessary, and Certificate of Compliance for Critical Planning Actions (see AFI 32-1021 for Certificate of Compliance guidance). **(T-1)** The AFIMSC certifying statement should read similarly to the following: **“This package's programming document has been reviewed, and I certify it is complete and accurate, and compliant with appropriate statute(s) and instructions. The primary and supporting costs and the work classification have been reviewed.”**

(Replace the following paragraph):

A2.14.6. **Certification.** Provide Certificate of Compliance for Critical Planning Actions (signed by the installation commander) and signature certification as required by **Paragraphs 3.6.5.1.** or **A2.1** of this AFI. The installation ATO must document certification of compliance with required AT measures. **(T-1)**

Calculating facility replacement cost

(Replace the following paragraph):

3.5.1. **Facility Replacement Cost.** Several provisions in this Instruction relating to repair projects require consideration of the facility repair-to-replacement cost ratio. “Replacement cost” is the estimated cost of a MILCON project to replace the facility. For purposes of this Instruction, programmers must use the following formula to calculate the facility replacement cost **(T-1)**:

$$\text{Estimated Replacement Cost} = \text{Plant Replacement Value (PRV)} \times 1.4$$

Except where noted in this Instruction, programmers must calculate the Plant Replacement Value (PRV) using the PRV formula in UFC 3-701-01, *DoD Facilities Pricing Guide*, paragraph 3-2.2. **(T-1) Note:** One factor in the UFC formula is the facility’s 4-digit Facility Analysis Category (FAC). Some facilities have more than one FAC. Programmers should check the facility’s “use record” which will provide all FACs for the facility. The formula should be calculated for each FAC and then summed for the total PRV.

Because PRV is a modeled cost, the 1.4 factor in the formula above accounts for one standard deviation from the modeled cost plus additional costs of a construction project such as supporting structures and demolition. Programmers cannot expand the facility used in the replacement cost estimate to accommodate new or additional requirements beyond the existing facility function, recognizing that the replacement facility can have components and materials not found in the existing facility (e.g., improvements being made in the compared repair project). **(T-1)** When an exception from using the PRV formula is allowed in this Instruction, programmers may use the HAF/A4C-approved facility PRV of record as available in the Air Force Civil Engineer real property asset database. For packages going to the Air Staff for approval, in Block 11 of the project’s DD1391 programmers must show the factors/numbers and calculations used in UFC 3-701-01’s PRV formula. **(T-1)**

When the repair project cost is 75% of the estimated replacement cost or higher, in accordance with **Paragraph 3.6.6.**, the BCE must notify financial analysis offices that an economic analysis (EA) must be accomplished. **(T-1)** When accomplishing an EA, programmers must demonstrate use of an acceptable cost estimating method for determining facility replacement cost, which may include PACES, use of RSMeans, or other industry standard cost-estimating guides/tools, etc. **(T-1) Note:** In order to comply with UFC guidance, programmers must use the PRV (not including the 1.4 factor) when determining the antiterrorism threshold (see **Paragraph 3.5.7.**). **(T-0)**

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

AIR FORCE INSTRUCTION 32-1032

24 SEPTEMBER 2015



Civil Engineering

**PLANNING AND PROGRAMMING
APPROPRIATED FUND MAINTENANCE,
REPAIR, AND CONSTRUCTION PROJECTS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Maj Gen Timothy Green)

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This instruction implements Air Force Policy Directive 32-10, *Installations and Facilities*, which establishes an asset management framework to deliver common levels of services for civil engineering activities. It provides guidance and instruction for planning and programming projects for real property classified as maintenance, repair, and unspecified minor construction (UMC), using operation and maintenance (O&M) funds. It applies to individuals at all levels who plan, program, and approve said projects, including Air National Guard units and Air Force Reserve Command. To ensure a full understanding of the process of providing, maintenance, repair, and UMC support to real property, users of this instruction should be familiar with other Air Force 32-(Civil Engineer) and 65-(Budget) series publications. AFI 65-601, Vol. 1, *Financial Management, Budget Guidance and Procedures*, is particularly important for determining funded and unfunded costs for all projects. Refer recommended changes and questions about this publication to the Office of Primary Responsibility using AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, and T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, Table 1.1 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. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule in the Air Force Records Information Management System. 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. MAJCOMs may supplement this instruction to include command-unique requirements. The waiver authority is the Deputy Assistant Secretary of the Air Force (Environment, Safety, and Infrastructure) (SAF/IEE).

SUMMARY OF CHANGES

This paragraph lists major changes. **Chapter 1** was updated to include MAJCOM approval and certification responsibilities during the transition to the Air Force Installation and Mission Support Center structure. This chapter also includes the increased unspecified minor construction threshold. **Chapter 3** was updated to include: an update to the facility conversion guidance for re-allocation of space for existing functions, clarification that a project includes the work in a single facility, the requirement for each phase of a project to have a unique project number, guidance noting that all phases must be included when determining building code threshold compliance, new policy for considering network facilities in programming projects to include a network facility table which replaces the previous guidance for linear systems, guidance for security escorts in project execution, and the requirement to program companion projects on separate programming documents.. **Chapter 4** updates include: clarification of the repair definition, updates to repair-by-replacement policy, direction that industry standards must be well-documented and well-accepted, deletion of the restriction that facility structural load capacity cannot be increased as part of a roof repair, the aggregation rule now only requires aggregation of work in a facility that is related or contiguous/adjacent, and the aggregation rule includes updates to incorporate the network facility policy. **Chapter 5** updates include: the increased unspecified minor construction threshold and clarification of classifying the addition of airfield lighting in a project. **Chapter 6** update includes the addition of the Defense Health Program approval authority. **Chapter 7** update includes the increased unspecified minor construction threshold. **Attachment 2** includes new policy for project numbering for phases, clarification for designating the element of expense investment codes on the DD1391, and clarification that facility scope compliance metrics only apply pre-award. **Attachment 3** updates include minor clarifications to some of the examples.

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Chapter 1

OVERVIEW

1.1. Purpose. This instruction establishes policy and provides guidance on planning, programming, and executing cost-effective operation and maintenance (O&M)-funded maintenance, repair, and unspecified minor construction (UMC) projects for real property facilities in compliance with law and Department of Defense (DoD) and Air Force policies.

1.2. Responsibilities. Organizations at all levels are responsible for employing a sustainable asset management approach while performing the activities described in this instruction.

1.2.1. Deputy Assistant Secretary of the Air Force (Environment, Safety, and Infrastructure) (SAF/IEE). SAF/IEE establishes and provides oversight of policies relating to all real property and installation-related authorities as delegated in Headquarters Air Force Mission Directive (MD) 1-18, and grants waivers to those policies in appropriate circumstances. SAF/IEE is the final approval authority for facility projects exceeding specified cost thresholds as stated in this Instruction. Project approval by SAF/IEE does not constitute funding approval.

1.2.2. The Director of Civil Engineers (AF/A4C). AF/A4C provides programming and investment planning guidance, oversight, and policy. AF/A4C reviews, validates, and coordinates active duty O&M-funded repair and UMC projects for AF/A4C or SAF/IEE approval of those projects exceeding approval authorities delegated to the Major Commands (MAJCOM) or the Air Force Installation and Mission Support Center (AFIMSC). AF/A4C is the approval authority for repair projects exceeding specified cost thresholds as re-delegated from SAF/IEE and stated in this Instruction. AF/A4C, through the Installation Support Panel, applies asset management principles to make recommendations to the Assistant Secretary of the Air Force for Financial Management (SAF/FM) and the Air Force Corporate Structure (e.g., Air Force Board, Air Force Council) on requirements for, and appropriate allocation of, resources across the Air Force Civil Engineer portfolio.

1.2.3. MAJCOMs. MAJCOMs provide oversight to ensure compliance with law, DoD, and Air Force policies. They may provide supplements to Air Force policies, procedures, and instructions. They use Activity Management Plans (AMPs) to validate and prioritize requirements provided by their installations or subordinate units. They build and advocate for command budgets for maintenance, repair, and UMC projects, with timely funds obligation. MAJCOMs approve projects within delegated approval levels and execute investment plans. The Air National Guard (ANG) and Air Force Reserve Command (AFRC) Civil Engineer perform these MAJCOM functions for their installations. The ANG and AFRC Civil Engineers will process their respective packages for SAF/IEE approval for O&M-funded repair and UMC projects exceeding their approval authority.

1.2.4. Air Force Installation and Mission Support Center (AFIMSC). Responsibilities to be defined in future updates to this Instruction. Unless superseded by other re-delegation or guidance, as Air Force Civil Engineering transitions to the AFIMSC structure, on a case-by-case basis, some MAJCOM responsibilities in this Instruction may appropriately be carried out by the AFIMSC, including an AFIMSC detachment. MAJCOM Civil Engineer approval and certification must be made at a grade no less than colonel or GS-15 (defined as “senior

Civil Engineer”), and may be carried out by an AFIMSC Detachment’s senior Civil Engineer. If the senior Civil Engineer does not reside on the MAJCOM staff or Detachment’s staff, approval or certification must be made either at the AFIMSC or AF/A4C. Routing to the Air Staff for approval must be made through a MAJCOM or AFIMSC (Detachment or Center) Civil Engineer at a grade no less than colonel or GS-15.

1.2.5. Air Force Civil Engineer Center (AFCEC).

1.2.5.1. AFCEC provides the chair for the Installations Integration Group (I2G), which is the forum for integrating all requirements to create the Air Force Activity Management Plan (AFAMP) and Air Force Comprehensive Asset Management Plan (AFCAMP) and is the primary link for MAJCOM and installation input. In conjunction with MAJCOM representatives, AFCEC serves as the final integrator of its various directorate product line investment plans (AFAMPs and AFCAMP) to ensure an enterprise-wide, mission critical/worst-first portfolio management methodology is applied to the installation investment strategy.

1.2.5.2. AFCEC provides built and natural infrastructure technical support and subject matter expertise, and manages Air Force enterprise space planning and optimization. AFCEC Centrally manages facility and infrastructure assessments and surveys to inform the AFAMP/AFCAMP integration processes and decision making. AFCEC provides guidance on facility and infrastructure condition assessments to include data maintenance standards.

1.2.5.3. AFCEC serves as design manager/construction manager (DM/CM) responsibilities for military construction (MILCON) programs. For O&M-funded projects, in the event the requirement exceeds installation capability or capacity or if AFCEC identifies a strategic sourcing opportunity, in coordination with MAJCOMs, AFCEC may determine the execution agent.

1.2.5.4. AFCEC provides a comprehensive design review across all relevant engineering disciplines, technical reach-back, and support for all AFCEC-executed projects and installation-executed projects when requested. For those projects that the AFCEC executes, AFCEC assists the base with development of programming documents and completion of final project documents.

1.2.5.5. AFCEC provides strategic support for environmental impact analysis process (EIAP) planning, programming, and budgeting. AFCEC is the Air Force real estate proponent to acquire, manage, and dispose of Air Force-controlled real property.

1.2.6. **Installation Commander.** The Installation Commander has overall responsibility and accountability for the operation of an Air Force installation. The Installation Commander, assisted by the BCE, is responsible and accountable to ensure all work accomplished on Air Force real property is properly authorized, approved, and funded in accordance with all laws, policies, and regulations. The Commander is also responsible for (1) ensuring the effective and efficient use of Air Force real property to include optimization through consolidation, demolition, and timely disposal of excess real property; and (2) planning and programming all O&M-funded, maintenance, repair, and UMC for real property requirements necessary to properly support assigned missions and people (including tenants) in accordance with approved investment plans.

1.2.7. United States Property and Fiscal Officer (USPFO).

1.2.7.1. The USPFO is accountable for all ANG property with a Federal interest.

1.2.7.2. The USPFO may approve project funding as described in the current ANG delegation of authority memoranda and Base Civil Engineers (BCEs) shall submit projects greater than these limits to Air National Guard, Civil Engineer Programming Division, ANG/A7AD. The USPFO may delegate some or all of this authority to the installation commander.

1.2.8. The Surgeon General (HQ USAF/SG) and Air Force Medical Support Agency/Health Facilities Division (AFMSA/SG8F). HQ USAF/SG advocates for and distributes resources for O&M-funded (Defense Health Program funds) maintenance, repair, and UMC of medical facilities. AFMSA/SG8F, or successor agency, provides technical and functional design guidance for medical facilities. AFMSA/SG8F also provides planning, programming, and budgetary guidance, direction, and oversight as required to the MAJCOMs for using appropriated funds (APF) for medical facility repair, maintenance, and UMC projects.

1.2.9. Host, Tenant, and Supported Unit Responsibilities. The host installation will provide services to tenant and supported units in accordance with Department of Defense Instruction (DoDI) 4000.19, *Support Agreements*, AFI 25-201, *Intra-Service, Intra-Agency, and Inter-Agency Support Agreements Procedures*, and AFI 65-601 V1, *Budget Guidance and Procedures*. **(T-0)** These services include, but are not limited to, preparing program documents, obtaining required certifications, and providing BCE services. The host will prepare facility repair project packages requiring AF/A4C and SAF/IEE approval and congressional notification (see [Paragraph 6.10](#) for a Defense Logistics Agency-Energy exception and [Paragraph 6.11](#) for a Defense Health Agency exception). The host Civil Engineer unit will route approval packages through the host MAJCOM or AFIMSC detachment as appropriate. **(T-1)** The host installation must receive coordination from the funding organization prior to staffing. **(T-1)** AF/A4C and SAF/IEE approval does not constitute funding approval. Air Reserve Components (ARC) will prepare and staff approval request packages for ARC-funded work. As a tenant on other Air Force installations, ARC units will coordinate their approval request packages with the host. See [Chapter 6](#) for further guidance.

1.3. Scope. This instruction provides general procedures for planning and programming O&M-funded projects for Air Force real property classified as maintenance, repair, or UMC, and demolition projects. Funds for these projects are normally in the 3400 appropriation (3740 for AFRC and 3840 for ANG), but may include: Research, Development, Test, and Evaluation (RDT&E) funds (3600 appropriation); Working Capital Funds (WCF); Defense Health Program funds; Defense Sustainment/Restoration and Modernization (S/R&M) accounts, and other fund sources when made available for O&M purpose (e.g., other nations, other government agencies, non-governmental entities). It applies to all projects, including, but not limited to, those planned for accomplishment by organic forces (including overhires and temporary duty augmentees), troop labor, or contract (including Simplified Acquisition of Base Engineer Requirements [SABER]). See AFI 32-1001, *Operations Management*, for guidance on functions at the installation level. See Air Force Manual (AFMAN) 32-1084, *Facility Requirements*, for guidance for determining space allocations for facilities and for evaluation of existing facilities.

See AFRCH 32-1001, *Standard Facility Requirements*, for AFRC-occupied facilities, and ANGH32-1084, *Facility Space Standards*, for ANG-occupied facilities.

This instruction does not address the following:

(1) construction work funded by Military Construction Appropriations (MCA), including MCA-funded unspecified minor military construction (UMMC) (commonly referred to as P-341) (see AFI 32-1021, *Planning and Programming Military Construction Projects*); (2) Nonappropriated Fund Instrumentalities work (see AFI 32-1022, *Planning and Programming Nonappropriated Fund Facility Projects*); and (3) military family housing work (see AFI 32-6002, *Family Housing Planning, Programming, Design and Construction*).

1.4. Work Classification. Work classification is key to properly programming facility requirements. Applicable statutory authorities and definitions for work classification are set forth in [Paragraph 1.5](#) Work classification is addressed further in [Paragraph 3.3](#) Work must be classified as maintenance, repair, or construction. Demolition unrelated to or which does not enable any maintenance, repair, or UMC project is not considered to be a class of real property work. Project approval levels and appropriate funding sources vary with work classification. See also [Chapter 4](#) for maintenance and repair details and [Chapter 5](#) for UMC details. **Note:** Work classifications are not to be confused with fund source categories such as Sustainment or Restoration and Modernization. See [Chapter 6](#) for O&M fund source categories.

1.5. Statutory Authorities. Differing statutory authorities regarding repair and UMC make it critical to distinguish between these two work classifications in planning and programming projects. In particular, the misclassification of construction as repair can lead to statutory violations. Although there are no statutory limitations on the use of O&M funds for facility maintenance, it is also important to distinguish maintenance from repair and construction. The Air Force defines maintenance as the recurring, day-to-day, periodic, or scheduled work required to preserve real property facilities, systems, or components and prevent premature failure or deterioration, so these may be effectively used for their designated purposes.

1.5.1. **Facility.** A “facility” (for purposes of both repair and UMC) is defined in Title 10 of the United States Code, § 2801 (references to sections of Title 10 of United States Code [USC] sections are hereafter set forth in the following format: 10 USC § xxxx) as a building, structure, or other improvement to real property. See [Paragraph 3.5.4](#) for the definition and explanation of network facilities.

1.5.2. **Repair.** 10 USC, § 2811 authorizes the Secretary of the Air Force (SECAF) to carry out repair projects for an entire single purpose facility or one or more functional areas of a multipurpose facility using O&M funds.

1.5.2.1. The statute defines a “repair project” as a project to restore a real property facility, system, or component to such a condition that it may effectively be used for its designated functional purpose.

1.5.2.2. The statute provides that a repair project costing more than \$7,500,000 may not be carried out unless approved in advance by SECAF. In determining the cost of a repair project, SECAF must include all phases of a multi-year repair project to a single facility (see [Paragraph 3.5.2](#) for definition of project phases). In considering a repair project for approval, SECAF must ensure that the project is consistent with force structure plans,

that repair of the facility is more cost-effective than replacement, and that the project is an appropriate use of O&M funds.

1.5.2.3. SECAF must notify Congress of a decision to approve a repair project with an estimated cost in excess of \$7,500,000 and provide a report that includes: the justification for the project; if estimated repair cost exceeds 75% of the estimated cost of a military construction project to replace the facility, an explanation of why replacement is not in the best interests of the Government; and a description of any elements of construction included in the project.

1.5.2.4. See **Chapter 4** for detailed guidance on planning and programming maintenance and repair projects.

1.5.3. Unspecified Minor Construction. 10 USC § 2805 authorizes SECAF to carry out a UMC project costing not more than the threshold in 10 USC §2805(c) (\$1,000,000 as of the date of this Instruction) using O&M funds.

1.5.3.1. “Military construction” is defined in 10 USC § 2801 as any construction, development, conversion, or extension of any kind carried out with respect to a military installation, whether to satisfy temporary or permanent requirements, including acquisition of land.

1.5.3.2. Title 10 USC § 2805 currently includes a laboratory revitalization and recapitalization **exception** to the cap on the use of appropriations available for operation and maintenance. For these construction projects, the threshold is stated in 10 USC § 2805(d) (\$4,000,000 as of the date of this Instruction). This provision currently expires on September 30, 2018. Contact HQ USAF/A4C (through the MAJCOM) for the most current expiration date of this authority. The appropriation used for construction must be the same as that used for future sustainment of the facility. Exceptions will be addressed on a case-by-case basis, and must be staffed through SAF/FMBI, and coordinated by SAF/GCA, SAF/GCN, and AF/A4C. However, Section 219(a) funds may be used regardless of the future sustainment appropriation. SAF/IEE is the approval authority for all laboratory revitalization construction projects costing more than the threshold in 10 USC § 2805(c) (\$1,000,000 as of the date of this Instruction).

1.5.3.3. A “military construction project” includes all construction and other work necessary to produce a complete and useable facility or a complete and useable improvement to an existing facility.

1.5.3.4. For Reserve Components, UMC authority similar to 10 USC § 2805 is granted to the Secretary of Defense under 10 USC § 18233b. This authority has been delegated to SECAF under DoD Directive (DoDD) 1225.07 and DoDI 1225.8. For ANG real property, the USPFO is the approval authority unless otherwise delegated

1.5.3.5. UMC projects may not be used to construct new military family housing units.

1.5.3.6. See **Chapter 5** for detailed guidance on planning and programming UMC projects.

1.6. Delegation and Approval Levels. By MD 1-18, the SECAF delegated authorities under 10 USC § 2805 (DoDD 1225.07 and DoDI 1225.8 for ANG and AFRC) and 10 USC § 2811 to SAF/IE, who re-delegated them to SAF/IEE with the authority to further re-delegate. ANG and

AFRC repair and construction authorities under 10 USC Chapter 1803 § 18233 have also been delegated to SAF/IE and subsequently to SAF/IEE. **Table 1.1** provides the approval levels re-delegated by SAF/IEE for maintenance and repair projects. SAF/IE and SAF/IEE may, at their discretion, for particular projects, reduce or otherwise impose restrictions on the delegated approval levels. DoD Directive 4270.5, *Military Construction*, delegates to the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD-ATL) the statutory authorities vested in the Secretary of Defense by United States Code Title 10 Chapter 169, but excluding sections 2804 and 2808. OUSD-ATL delegated these authorities to the U.S. Special Operations Command Commander, Directors of the Defense Agencies, and Directors of the DoD Field Activities, for purposes of administering their respective military construction programs within the Defense-wide military construction account. Additionally, OUSD-ATL delegated to these same officials authority to approve prior determinations, approvals, notifications, and other actions previously taken on projects within their respective military construction programs using these same statutory authorities.

1.6.1. Re-Delegation by AF/A4C. Except as set forth in **Table 1.1**, or as specified in superseding re-delegation memorandum from SAF/IEE, AF/A4C may re-delegate approval authorities to MAJCOM Civil Engineers or the AFIMSC for O&M-funded maintenance, repair, and UMC projects. MAJCOM Civil Engineers or the AFIMSC may re-delegate approval authorities to the installation level. The Chief, National Guard Bureau, and the Chief, Air Force Reserve, accomplish their re-delegations for ANG and AFRC respectively.

1.6.2. Work Classifications are Independent for Approval Purposes. The cost of each work classification within in a complete and usable project is considered independently of the cost of other work classification(s) within the same project when determining the approval authority for a project with multiple work classifications. A project may require separate, multiple approvals for each of the work classifications. For example, a project that repairs a facility at a cost of \$4,500,000 and constructs an addition to the same facility for \$600,000 must be approved by the office whose delegated repair approval authority is at least \$4,500,000 and by the office whose delegated UMC approval authority is at least \$600,000.

Table 1.1. Maintenance and Repair Approval Levels.

	SAF/IE	SAF/IEE	AF/A4C ¹	MAJCOMs ²	Installations or USPFO ³
Maintenance	Unlimited	Unlimited	Unlimited	Unlimited	As delegated
Repair ⁴	Unlimited ⁵	Unlimited ⁵	NTE \$7,500,000 ⁶	NTE \$5,000,000 ⁶	As delegated

1. Chief of Air Force Reserve and Chief of Air National Guard are delegated approval authority not to exceed \$5,000,000.

2. See **Paragraph 1.2.4**.

3. For ANG real property, the USPFO is the approval authority unless otherwise delegated (see **Paragraph 1.2.7**).

4. For APF support to NAF facilities, refer to AFI 32-1022. Different approval thresholds may apply.

5. Repair projects over \$7,500,000 require notification to the appropriate congressional committees.

6. See aggregation rules in **Paragraph 4.3**.

Chapter 2

PROJECT PLANNING

2.1. Project Planning Defined. Project planning is the identification of requirements for built or natural assets to satisfy current and future mission needs. It addresses the ultimate goal to be achieved and includes the specific work required with regard to the development and sustainment of Air Force installations. Understanding how built or natural assets support mission requirements allows planners to successfully develop sustainable investment plans, which may include multi-year phased maintenance and repair projects and any needed construction projects. For other planning, such as installation planning, refer to AFI 32-7062, *Air Force Comprehensive Planning*.

2.2. Facility Requirement Identification. The BCE uses a variety of methods to identify facility requirements, including, but not limited to: projected mission changes; installation development plans; AMPs; space utilization surveys; sustainable infrastructure assessments; condition surveys (pavements, roofs, etc.); environmental compliance assessments, safety, security, laws, codes, regulations, design guides, and unified facilities criteria; energy conservation surveys and audits; and user-identified requirements. The BCE will identify and document requirements in accordance with applicable AMP procedures (refer to the applicable AFAMP playbook on the Civil Engineer (CE) Portal under the Playbooks menu in the Engineering Flight Portfolio Optimization list). **(T-1)**

2.3. Project Definition. Any maintenance, repair, construction, or combination of the three performed on or in a facility necessary to produce a complete and usable facility or improvement to a facility is a “project”, regardless of dollar amount or execution strategy. See [Paragraph 3.4](#) for more detail on defining a project.

2.4. Planning Determinations. With a defined requirement, the BCE determines: (1) solutions to provide, operate, maintain, and protect facilities, infrastructure, and installations for effective mission support at the lowest life-cycle cost to include sustainable design concepts (i.e. facility site, space allocation, facility orientation, energy and water sources); (2) technical engineering requirements; (3) work classification (see [Paragraph 3.3](#)), and (4) cost estimates. These actions enable project(s) development and programming. Existing built or natural assets should be used to the greatest extent possible to minimize new construction. Facilities that are inefficient or excess to requirements should be demolished when possible. Consider facility space utilization, asset operating costs, and asset condition when making planning considerations. Planners and programmers should refer to the Requirements Definition & Programming Playbook (RD&P) for assistance in defining and programming projects. The RD&P Playbook can be found on the CE Portal under the Playbooks menu in the Engineering Flight Portfolio Optimization list.

Chapter 3

PROGRAMMING

3.1. Programming Defined. Programming is the process of documenting requirements and acquiring both the authority and the resources necessary to accomplish planned work.

3.2. Prioritization. With a defined facility requirement, the BCE will develop facility project programming proposals and use the AMP process to prepare investment plans and present them to the installation Facilities Board for approval and awareness, regardless of fund source. **(T-2)** Prioritization guidance will be provided by Headquarters Air Force (HAF) and AFCEC through the AMP process, and will include installation and subordinate unit considerations. MAJCOMs (or AFIMSC as applicable to each MAJCOM) will evaluate installation investment plans using the AMP process to consider integrating projects into MAJCOM-level priority lists. See AFPD 32-10, *Installations and Facilities*, for general prioritization guidance, and AFI 32-10142, *Facilities Board*, (ANGI 32-1003, *Facilities Board (FB)*, for ANG), for guidance regarding Facilities Board functions.

3.3. Work Classification. Programmers must classify work as maintenance, repair, or construction. **(T-0)** Demolition is not a work classification. Project approval levels, and appropriate funding sources vary with work classification. See **Chapter 4** for details on maintenance and repair and **Chapter 5** for details on UMC. **Note:** Maintenance, repair, and construction are work classifications, and are not to be confused with fund source categories such as Sustainment or Restoration and Modernization. See **Chapter 6** for O&M fund source categories. Ensure solicitations for projects which include multiple work classifications include a Contract Line Item Number (CLIN) structure that identifies project costs by type of work (e.g., maintenance, repair, construction, or demolition).

3.3.1. Demolition. The Air Force will provide and retain the minimum number of facilities required to effectively support mission requirements, and will dispose of facilities excess to requirements. Demolition of a facility (or portion of a facility) unrelated to or which does not enable any maintenance, repair, or UMC project is not considered to be a class of real property work. Demolition work performed independently from repair or construction work (is not required for or does not enable the work), regardless of cost, is not subject to O&M project approval thresholds. See **Chapter 6** for guidance on fund source categories for demolition. Demolition assists in reducing infrastructure and sustainment investment, and directly reduces base operational costs; therefore, it should not be cut from the scope of work. See AFI 32-9004, *Disposal of Real Property*, and AFH 32-9007, *Managing Air Force Real Property*, Chapter 4, for Air Force property disposal procedures. When programmers program this work, the first word of the project title will be “Demolish.” **(T-1)**

3.3.2. Facility Consolidation. As stated in **Paragraph 3.3.1**, the Air Force will provide and retain the minimum number of facilities required to effectively support mission requirements. Effective facility consolidation can be a significant enabler to disposing facilities excess to requirements. When programmers program consolidation work, the word “consolidate” shall be included in the project title. **(T-1)** See **Paragraph 6.1** for detailed guidance on fund source categories for each work classification. Programmers shall ensure proposed work is conducted on real property and within the limitations and work classification descriptions

established for O&M-funded repair and minor construction work as described in **Chapters 4 and 5** of this Instruction. **(T-1)**

3.3.3. Facility Conversion. Under 10 USC § 2801, “construction” specifically includes conversion of a facility, which this Instruction defines as change from one functional purpose to another. “Repair”, according to 10 USC § 2811, is “a project to restore a real property facility, system, or component to such a condition that it may effectively be used for its designated functional purpose.” Based on these definitions, if the functional purpose of the facility or affected portion of the facility remains consistent, then facility conversion has not taken place. If the functional purpose of the facility or affected portion of the facility does change, then facility conversion has taken place. In multi-functional facilities, re-allocation of space between existing functions is not conversion if the predominant use of the facility does not change. See **Paragraph 5.1.1.1** for additional conversion guidance. Planners and programmers shall document and justify any decisions distinguishing repair from conversion. **(T-1)**

3.3.3.1. Functional Purpose Categories. To provide consistent application of the functional purpose filter, **Table 3.1** below provides ten “functional purpose categories”. Programmers shall use these categories to determine the functional purpose of the affected portion of the facility. If the functional purpose changes from one category to another, then conversion takes place, and programmers must classify associated work as construction. **(T-0)** **Note:** These functional purpose categories are not real property categories (facility analysis categories, category codes, etc.). This guidance does not alleviate the need for real property actions or designation changes mandated in other publications.

3.3.3.2. When undertaking a conversion, programmers must take into account all work, and classify each portion of the work according to the following:

3.3.3.2.1. Programmers shall classify work necessary to affect the change in functional purpose as construction. **(T-0)** See additional guidance on construction work associated with conversion in **Paragraphs 5.1.1.1** and **5.1.1.2**

3.3.3.2.2. Work consistent with sustainment of the facility may be classified as repair.

3.3.3.3. Respective funding and approval thresholds apply to both the total construction work and total repair work. Programmers must ensure that any project, including both repair and construction work, results in a complete and usable facility. **(T-0)**

Table 3.1. Facility Functional Purpose Categories.

Functional Purpose	Definition	Examples (Note: Facilities provided in these <u>examples</u> are situational. Each real-world situation will require judgment for determining the most appropriate Functional Purpose Category.)
Administrative	Space intended to support persons performing and functions related to and supporting the management of organizations	MAJCOM, wing, group, and squadron HQ facilities; squadron operations facilities; conference centers, command/control centers
Industrial	Space intended to support persons performing and functions related to industrial mission sets assigned to organizations	Aircraft maintenance hangars, maintenance back shops, missile launch facilities, missile maintenance facilities, civil engineer shops, explosive ordnance disposal facilities, fire stations, logistics readiness complexes, mobility processing centers, laboratories, washracks, corrosion control facilities, full-motion flight simulators, etc.
Housing	Space intended to accommodate (either temporarily or permanently) Air Force personnel and/or their families	Military Family Housing (government-owned or privatized), Dormitories, Temporary Lodging Facilities, Distinguished Visitor Quarters, Lodging, etc.
Medical	Space associated with the provision of health care services	Hospitals, medical clinics, dental clinics, pharmacies, etc. Note: Satellite pharmacies located apart from medical campuses for the express convenience of the Air Force community are assigned to the "community support/recreation" category
Storage	Space associated with the support of the Air Force supply system or organizational storage requirements	Base Supply Warehouse, Medical Supply Warehouse, Furnishings Management Warehouse, Fuel Tank Farm, HazMat Pharmacy, covered or enclosed vehicle/equipment parking, etc.
Education & Training	Space intended for the provision of formal education and training and serving any and all portions of the Air Force community	Education centers, PME centers, DoDEA schools, AETC school houses, static flight simulators, etc. Note: space supporting installation-level industrial training functions (e.g., field training detachments, maintenance training facilities, etc.) are

Functional Purpose	Definition	Examples (Note: Facilities provided in these <u>examples</u> are situational. Each real-world situation will require judgment for determining the most appropriate Functional Purpose Category.)
		assigned to the "Industrial" category
Community Support & Recreation	Space intended for the provision of the morale, welfare, recreation, and fitness of the Air Force community	Commissary, Base Exchange, Officer's/Enlisted Club, Satellite Pharmacy, Flight Kitchen, Dining Facility, Library, Running Track, Outdoor Recreation, Golf Course, Sports Fields, Rod and Skeet Range, Fishing Pond, RV Lot, community center, bank, vendor or fast-food restaurant, etc.
Airfield Pavement	An artificially covered surface including flexible pavements (asphalt), rigid pavements (concrete), composite pavements, etc.	Runways, taxiways, aircraft parking areas, hangar aprons (does not include vehicle roadways), etc.
Grounds	Encompasses all improved and unimproved squares, reservations, streets, roadways, walks, and other areas as defined on a map and found on soil or earth	Parade grounds, vehicle roads, meadows, pastures, woods, waters, marshes, mines, outdoor activity space not included in "Community Support & Recreation", etc.
Utilities	A facility or system composed of one or more pieces of equipment connected to or part of a structure and designed to produce, transmit, or distribute a service such as heat, electricity, water, or sewage disposal	Substations, HVAC systems, water lines, steam lines, power or steam plants, storm water conveyance, electrical distribution etc.

3.3.4. Work Other Than Facility Maintenance, Repair, or Construction. On a reimbursable basis, the BCE may perform other types of work which are not directly related to O&M-funded maintenance, repair, or UMC and which do not fit the work categories described in this Instruction. Examples of reimbursable work include direct burial of communication cables, work on non-real property equipment (e.g., equipment listed on the Equipment Authorization Inventory Data (EAID) account), or installing raised flooring or non-capitalized air conditioning to support computer equipment (for air conditioning installed solely for the purpose of cooling communications-electronic equipment, see AFI 65-601 V1). Work that is not facility maintenance, repair, or UMC is not subject to the limitations placed on O&M-funded maintenance, repair, or UMC work—if included as part

of a project, it is an unfunded cost to the project. See [Paragraph 3.5.15](#) for additional guidance on funded and unfunded costs.

3.3.5. Work on Non-DoD Property. 10 USC § 2012, *Support and Services for Eligible Organizations and Activities Outside Department of Defense*, authorizes certain support and services to eligible organizations and activities outside the DoD for the purpose of addressing community and civic needs when such assistance is incidental to military training or otherwise authorized by law. The purpose is to build upon the long-standing tradition of the Armed Forces, acting as good neighbors at the local level, in applying military personnel to assist worthy civic and community needs. See DoDD 1100.20, *Support and Services for Eligible Organizations and Activities Outside the Department of Defense*, and AFI 32-9001, *Acquisition of Real Property*, for further guidance.

3.4. Project. Any maintenance, repair, construction, or combination of the three performed on or in a **facility** necessary to produce a complete and usable facility or improvement to a facility is a “project,” regardless of dollar amount or execution strategy. Do not combine requirements from multiple facilities into one project (see an exception in [Paragraph 3.4.1](#)). A project represents the work in a single facility. Combining requirements in multiple facilities for a single contract or task order is an execution strategy, which could include multiple “projects”. However, there may also be multiple “projects” within a single facility if each individual project fulfills an individual requirement which produces a complete and usable facility or improvement to a facility (or component of a facility) and is independent and not interrelated with other requirements within the facility. To determine if a planned construction or repair effort may exceed project approval thresholds, aggregation of individual projects within a single facility may be necessary (see **Chapters 4** and **5** for specific guidance on repair and minor construction, respectively). When programming **construction** to meet a requirement, if each facility/structure that comprises the requirement cannot be considered complete and usable without any of the other facilities or structures, then programmers must aggregate the costs of the dependent facilities/structures for approval threshold determination. **(T-0)**

3.4.1. Similar work in multiple facilities. As stated in [Paragraph 3.4](#), work in multiple facilities should not be combined in a single project. However, if the work is similar from facility to facility, is intended to be procured in one acquisition action, and the cost per facility is less than \$250,000, then work in multiple facilities can be programmed under a single project. For threshold determination (in both programming and execution), tracking through the work’s life cycle, and auditability purposes, the programming text must clearly delineate the work in each facility.

3.5. Planning, Programming, and Accomplishing Projects. The installation BCE with real property accountability is responsible to ensure all facility work complies with applicable laws, codes, and standards (e.g., Unified Facilities Criteria [UFC], Engineering Technical Letters [ETLs], and AFIs). **(T-1)** See [Paragraph 6.6](#) for programming considerations for host-tenant requirements and responsibilities. Projects must be planned and programmed to support current and future mission needs. Programmers must ensure each maintenance, repair, and UMC project provides a complete and usable facility or improvement to a facility. **(T-0)** A complete and usable facility is ready for the installation of necessary equipment other than Real Property Installed Equipment (RPIE) such that it enables user occupancy and meets all required legal certifications for operation of specialized activities (e.g., child development centers, air traffic control towers, etc.). See [Paragraph 3.5.15.1.2](#) for RPIE guidance. Non-RPIE equipment

typically includes systems furniture, desks, chairs, communications systems, electronic alarm systems, and other non-RPIE equipment listed in AFI 32-9005, *Real Property Accountability and Reporting*. Programmers must ensure the facility requirement is fully defined. **(T-0)** Additionally, programmers must ensure the bona fide need of the current year is not split to keep the project under the construction threshold. **(T-0)** The entire construction requirement is subject to the appropriate statutory limitations.

3.5.1. Facility Replacement Cost. Several provisions in this Instruction relating to repair projects require consideration of the facility repair-to-replacement cost ratio. “Replacement cost” is the estimated cost of a MILCON project to replace the facility. Programmers must base the replacement cost on the existing facility’s purpose and characteristics (mission, function, size, etc.), which can be brought up to current standards and codes. **(T-1)** Programmers cannot expand the facility used in the replacement cost estimate to accommodate new or additional requirements beyond the existing facility function, recognizing that the replacement facility may have components and materials not found in the existing facility (e.g., improvements being made in the compared repair project). **(T-1)** Programmers may use the current AF/A4C approved facility plant replacement value (PRV) of record as submitted to the Office of the Secretary of Defense (OSD) as part of the annual reporting of unclassified real property assets in accordance with 10 USC § 2721, *Property Records: Maintenance on Quantitative and Monetary Basis*, as available in the Air Force Civil Engineer real property database. When the project cost is 75% of the PRV or higher, programmers must use the estimated cost of a MILCON project to replace the facility in the denominator of the repair-to-replacement ratio. **(T-1)** **Note:** In order to comply with UFC guidance, programmers must use the PRV when determining the antiterrorism threshold (see [Paragraph 3.5.7](#)). **(T-0)**

3.5.2. Phasing. A requirement may be phased to minimize the impact of work on a facility’s mission, or for other reasons. For programming purposes, phases are defined as being interdependent in achieving an overall requirement or objective (e.g. renovating a facility, repairing a system, etc.) but must be complete and usable on their own. Programmers shall not use the word ‘phase’ in project titles unless it meets this definition. **(T-1)** The word “phase” has statutory implications. Do not confuse the programming definition of “phases” with a project’s construction “phases”. For approval and notification threshold determination programmers must sum the cost of all phases of a project, and include all phases in project approval requests. **(T-0)** Each phase will have its own project number (do not use suffixes in the project number to delineate phases). Use an “umbrella” programming document to list the phases (to show the overall scope), and the “umbrella” will have its own project number. **(T-1)** Also, for compliance purposes, programmers must program and secure authorization of all phases of minor construction work as a single minor construction project. **(T-0)** Programmers must consider the sum of all project phases for determining major repair and renovation building code and UFC compliance triggers. **Note: Programmers must not split projects into increments to circumvent approval authorities, reporting requirements, building code, UFC, or programming policy. Programmers must include all phases when determining appropriate approval levels and building code/UFC compliance triggers.** **(T-0)**

3.5.3. Bona Fide Need. The “bona fide needs rule” is a fundamental rule of appropriations law. It mandates that a fiscal year’s appropriations be obligated *only* to meet a legitimate

need existing in the fiscal year for which the appropriation was made. It restricts *this year's* appropriated funds from being used to fund *next fiscal year's* requirement.

Refer to DoD FMR, Vol. 3, Ch. 8, for detailed guidance regarding bona fide need. Applications of the bona fide need rule include delivery or production lead time, stock level, non-severable and severable services, maintenance, repair, and construction. In addition, AFI 65-601 Paragraph 6.3.3. includes the following, "(See DFAS-DE 7000.4-R, Chapter 2, and GAO, *Principles of Federal Appropriations Law*, Volume 1, Chapter 5, for more information concerning the bona fide need rule)."

3.5.4. Network Facilities. Network facilities are complete "systems" or compound assets comprised of linear structures, buildings, and structures. The interconnected assets of a network facility deliver a capability, commodity, or service. The following policy applies for project programming applications and may not align with Air Force real property facility naming convention or segmentation (e.g., a network facility will likely not have a unique facility number, but components of a network facility may have unique facility numbers). Additionally, the components of a network facility may not all have the same mission importance (e.g., components may have different mission dependency indices). This network facility policy is not used as a facility definition when pursuing centralized funding via AFCEC. Follow AFCEC's business rules for this purpose. This policy is primarily used for the repair-to-replacement ratio determination and repair-by-replacement consideration.

3.5.4.1. The following definitions apply:

3.5.4.1.1. Building. A roofed and floored facility enclosed by exterior walls and consisting of one or more levels that is suitable for single or multiple functions and that protects human beings and their properties from direct harsh effects of weather such as rain, wind, sun, etc.

3.5.4.1.2. Linear Structure. A facility whose function requires that it traverse land (e.g., runway, road, rail line, pipeline, fence, pavement, electrical distribution line) or is otherwise managed or reported by a linear unit of measure at the CATCODE level.

3.5.4.1.3. Structure. A facility, other than a building or linear structure, that is constructed on or in the land.

3.5.4.2. For programming purposes, including repair-by-replacement considerations (see **Paragraph 4.2.2**), programmers shall define network facilities in accordance with **Table 3.2 (T-1)** The two-digit DoD Category Groups, three-digit DoD Basic Categories, four-digit DoD Facility Analysis Categories (FACs), and six-digit Category Codes are defined in The Department of Defense Real Property Classification System published by DUSD (I&E).

3.5.4.3. Parking lots not serving a single building should be treated as separate discrete facilities, and are not part of a network facility. Programmers must group parking lots, fences, and/or sidewalks serving a single building with the associated building for determining compliance with construction and repair approval and notification thresholds.

3.5.4.4. Project aggregation requirements are described in **Paragraph 4.3.3**, including rules for aggregating within network facilities.

Table 3.2. Network Facility Determination.

Network Facility	<p style="text-align: center;">Network Facility Components <i>(those which are interconnected within the network facility)</i> Note: FAC = Facility Analysis Category</p>
<p><u>Airfield Pavements:</u> Interconnected assets within the 2-digit DoD Category Group "11".</p>	<ul style="list-style-type: none"> - Airfield Runways (3-digit DoD Basic Category - 111) <ul style="list-style-type: none"> -- Associated Lighting, Runway (6-digit Category Code - 136664) -- Associated Utility Vaults (4-digit DoD FAC - 8927) -- Associated Aircraft Pavement Shoulder (4-digit DoD FAC - 1165) -- Exclude Runway, Unsurfaced (4-digit DoD FAC - 1114) - Airfield Taxiways (3-digit DoD Basic Category - 112) <ul style="list-style-type: none"> -- Associated Taxiway Lighting (6-digit Category Code - 136667) -- Associated Utility Vaults (4-digit DoD FAC - 8927) -- Associated Aircraft Pavement Shoulder (4-digit DoD FAC - 1165) - Airfield Aprons (3-digit DoD Basic Category - 113) <ul style="list-style-type: none"> -- Associated Airfield Pavement Lighting (4-digit DoD FAC - 1361) -- Associated Utility Vaults (4-digit DoD FAC - 8927) -- Associated Aircraft Pavement Shoulder (4-digit DoD FAC - 1165) - Compass Calibration Pad, Surfaced (4-digit DoD FAC - 1161) <ul style="list-style-type: none"> -- Associated Airfield Pavement Lighting (4-digit DoD FAC - 1361) -- Associated Utility Vaults (4-digit DoD FAC - 8927) -- Associated Aircraft Pavement Shoulder (4-digit DoD FAC - 1165) - Aircraft Washing Pad, Surfaced (4-digit DoD FAC - 1163) <ul style="list-style-type: none"> -- Associated Airfield Pavement Lighting (4-digit DoD FAC - 1361) -- Associated Utility Vaults (4-digit DoD FAC - 8927) -- Associated Aircraft Pavement Shoulder (4-digit DoD FAC - 1165) - Miscellaneous Airfield Pavement, Surfaced (4-digit DoD FAC - 1164)

<p align="center">Network Facility</p>	<p align="center">Network Facility Components <i>(those which are interconnected within the network facility)</i> Note: FAC = Facility Analysis Category</p>
<p><u>Aircraft Fuel Dispensing Facilities:</u> Interconnected assets within the 3-digit DoD Basic Category “121”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Aircraft Fueling Facility (4-digit DoD FAC - 1211) - Aircraft Defueling Facility (4-digit DoD FAC - 1212) - Aircraft Operating Fuel Storage (4-digit DoD FAC - 1241) - Other Operating Fuel Storage (4-digit DoD FAC - 1244) - POL Pipeline (4-digit DoD FAC - 1251) - POL Piping (4-digit DoD FAC - 1252) - Liquid Fuel Loading/Unloading Facility (4-digit DoD FAC - 1261) - POL Pump Station (4-digit DoD FAC - 1262) - Bulk Liquid Fuel Storage (4-digit DoD FAC - 4111) - Large Bulk Liquid Fuel Storage (4-digit DoD FAC - 4112) - Cut-and-Cover Bulk Liquid Fuel Storage (4-digit DoD FAC - 4113) - Small Bulk Storage (4-digit DoD FAC - 4114) - Miscellaneous Storage Tank and Basin (4-digit DoD FAC - 8951)
<p><u>Marine Fuel Dispensing Facilities:</u> Interconnected assets within the 3-digit DoD Basic Category “122”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Marine Fueling Facility (4-digit DoD FAC - 1221) - Marine Operating Fuel Storage (4-digit DoD FAC - 1242) - Other Operating Fuel Storage (4-digit DoD FAC - 1244) - POL Pipeline (4-digit DoD FAC - 1251) - POL Piping (4-digit DoD FAC - 1252) - Liquid Fuel Loading/Unloading Facility (4-digit DoD FAC - 1261) - POL Pump Station (4-digit DoD FAC - 1262) - Bulk Liquid Fuel Storage (4-digit DoD FAC - 4111) - Large Bulk Liquid Fuel Storage (4-digit DoD FAC - 4112) - Cut-and-Cover Bulk Liquid Fuel Storage (4-digit DoD FAC - 4113) - Small Bulk Storage (4-digit DoD FAC - 4114) - Miscellaneous Storage Tank and Basin (4-digit DoD FAC - 8951)

Network Facility	<p align="center">Network Facility Components <i>(those which are interconnected within the network facility)</i> Note: FAC = Facility Analysis Category</p>
<p><u>Land Vehicle Fuel Dispensing Facilities:</u> Interconnected assets within the 3-digit DoD Basic Category “123”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Vehicle Fueling Facility (4-digit DoD FAC - 1231) - Vehicle Operating Fuel Storage (4-digit DoD FAC - 1243) - Other Operating Fuel Storage (4-digit DoD FAC - 1244) - POL Pipeline (4-digit DoD FAC - 1251) - POL Piping (4-digit DoD FAC - 1252) - Liquid Fuel Loading/Unloading Facility (4-digit DoD FAC - 1261) - POL Pump Station (4-digit DoD FAC - 1262) - Bulk Liquid Fuel Storage (4-digit DoD FAC - 4111) - Large Bulk Liquid Fuel Storage (4-digit DoD FAC - 4112) - Cut-and-Cover Bulk Liquid Fuel Storage (4-digit DoD FAC - 4113) - Small Bulk Storage (4-digit DoD FAC - 4114) - Miscellaneous Pump Station (4-digit DoD FAC - 8924) - Miscellaneous Storage Tank and Basin (4-digit DoD FAC - 8951)
<p><u>Communication Lines:</u> Interconnected assets within the 3-digit DoD Basic Category “135”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Communication Lines (4-digit DoD FAC - 1351) - Associated Utility Vaults (4-digit DoD FAC - 8927) - Associated Utility Tunnels (4-digit DoD FAC - 8931)
<p><u>Electrical Power:</u> Interconnected assets within the 2-digit DoD Category Group “81”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Electrical Power Distribution Line, Overhead (4-digit DoD FAC - 8121) - Exterior Lighting, Pole (4-digit DoD FAC - 8122) - Electrical Power Distribution Line, Underground (4-digit DoD FAC - 8123) - Electric Power Substation (4-digit DoD FAC - 8131) - Electric Power Switching Station (4-digit DoD FAC - 8132) - Electric Power Transformers (4-digit DoD FAC - 8133) - Associated Utility Vaults (4-digit DoD FAC - 8927) - Associated Utility Tunnels (4-digit DoD FAC - 8931) - Exclude all Electric Power Source assets (3-digit DoD Basic Category - 811)

<p align="center">Network Facility</p>	<p align="center">Network Facility Components <i>(those which are interconnected within the network facility)</i> Note: FAC = Facility Analysis Category</p>
<p><u>Heat Transmission and Distribution Lines:</u> Interconnected assets within the 3-digit DoD Basic Category “822”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Heat Distribution Line (4-digit DoD FAC - 8221) - Miscellaneous Pump Station (4-digit DoD FAC - 8924) - Associated Utility Tunnels (4-digit DoD FAC - 8931) - Associated Utility Channels (4-digit DoD FAC - 8932)
<p><u>Heat Gas Transmission:</u> Interconnected assets within the 3-digit DoD Basic Category “824”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Heat Gas Storage (4-digit DoD FAC - 8232) - Heat Gas Distribution Line (4-digit DoD FAC - 8241)
<p><u>Chilled Water (Air Conditioning) Transmission and Distribution Lines:</u> Interconnected assets within the 3-digit DoD Basic Category - 827”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Chilled Water and Refrigerant Distribution Line (4-digit DoD FAC - 8271) - Miscellaneous Pump Station (4-digit DoD FAC - 8924) - Associated Utility Tunnels (4-digit DoD FAC - 8931) - Associated Utility Channels (4-digit DoD FAC - 8932)
<p><u>Sewage and Industrial Waste Treatment and Disposal:</u> Interconnected assets within the 3-digit DoD Basic Category “831”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Septic Tank and Drain Field (4-digit DoD FAC - 8314) - Septic Lagoon and Settlement Ponds (4-digit DoD FAC - 8315) - Sewage Lift Stations (4-digit DoD FAC - 8316) - Sewer and Industrial Waste Line (4-digit DoD FAC - 8321) - Associated Utility Tunnels (4-digit DoD FAC - 8931) - Associated Utility Channels (4-digit DoD FAC - 8932) - Exclude all Sewage Treatment assets (4-digit DoD FAC - 8311) - Exclude all Industrial Waste Treatment assets (4-digit DoD FAC - 8312) - Exclude all Water Separation Facility assets (4-digit DoD FAC - 8313)

Network Facility	<p align="center">Network Facility Components <i>(those which are interconnected within the network facility)</i> Note: FAC = Facility Analysis Category</p>
<p><u>Potable Water Distribution System:</u> Interconnected assets within the 3-digit DoD Basic Category “842”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Water Storage, Potable (4-digit DoD FAC - 8413) - Water Distribution Line, Potable (4-digit DoD FAC - 8421) - Water Pump Facility, Potable (4-digit DoD FAC - 8422) - Associated Utility Tunnels (4-digit DoD FAC - 8931) - Associated Utility Channels (4-digit DoD FAC - 8932)
<p><u>Fire Protection Water Facilities:</u> Interconnected assets within the 3-digit DoD Basic Category “843”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Water Distribution Line, Fire Protection (4-digit DoD FAC - 8432) - Water Impoundment, Fire Protection (4-digit DoD FAC - 8433) - Water Pump Facility, Fire Protection (4-digit DoD FAC - 8434) - Water Tank, Fire Protection (4-digit DoD FAC - 8435) - Associated Utility Tunnels (4-digit DoD FAC - 8931) - Associated Utility Channels (4-digit DoD FAC - 8932) - Exclude all Water Source, Fire Protection assets (4-digit DoD FAC - 8431)
<p><u>Non-potable Water Distribution System:</u> Interconnected assets within the 3-digit DoD Basic Category “845”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Water Storage, Non-potable (4-digit DoD FAC - 8442) - Water Distribution Line, Non-potable (4-digit DoD FAC - 8451) - Water Pump Facility, Non-potable (4-digit DoD FAC - 8452) - Associated Utility Tunnels (4-digit DoD FAC - 8931) - Associated Utility Channels (4-digit DoD FAC - 8932)
<p><u>Roads, Bridges, and Tunnels:</u> Interconnected assets within the 3-digit DoD Basic Category “851”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Road, Surfaced (4-digit DoD FAC - 8511) - Vehicle Bridge (4-digit DoD FAC - 8513) - Vehicular Tunnel (4-digit DoD FAC - 8514) - Traffic Control Signals (4-digit DoD FAC - 8541) - Exclude all Driveway assets (6-digit Category Code - 851145) - Exclude all Road, Unsurfaced assets (4-digit DoD FAC - 8512)

<p align="center">Network Facility</p>	<p align="center">Network Facility Components <i>(those which are interconnected within the network facility)</i> Note: FAC = Facility Analysis Category</p>
<p><u>Sidewalks and Other Pavements:</u> Interconnected assets within the 3-digit DoD Basic Category “852”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Sidewalk and Walkway (4-digit DoD FAC - 8524) - Pedestrian Bridge (4-digit DoD FAC - 8525) - Exclude all Vehicle Parking, Surfaced assets (4-digit DoD FAC - 8521) - Exclude all Vehicle Parking and Staging Area, Unsurfaced assets (4-digit DoD FAC - 8522) - Exclude all Vehicle Staging Area, Surfaced assets (4-digit DoD FAC - 8523) - Exclude all Miscellaneous Paved Area assets (4-digit DoD FAC - 8526)
<p><u>Railroad Tracks:</u> Interconnected assets within the 3-digit DoD Basic Category “860”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Railroad Track (4-digit DoD FAC - 8601) - Railroad Bridge (4-digit DoD FAC - 8611)
<p><u>Grounds Drainage:</u> Interconnected assets within the 3-digit DoD Basic Category “871”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Storm Drainage (4-digit DoD FAC - 8711) - Retaining Structure assets (4-digit DoD FAC - 8712) [Note: only those contributing to grounds drainage] - Grounds Drainage Dams (4-digit DoD FAC - 8713) - Levees and Dikes for Ground Drainage (4-digit DoD FAC - 8714) - Storm Water Ponds (4-digit DoD FAC - 8715) - Sewer and Industrial Waste Line (4-digit DoD FAC – 8715) [Note: only those contributing to grounds drainage]- Miscellaneous Pump Station (4-digit DoD FAC - 8924)
<p><u>Grounds Fencing, Gates, and Guard Towers:</u> Interconnected assets within the 3-digit DoD Basic Category “872”, to include associated components as listed to the right.</p>	<ul style="list-style-type: none"> - Boundary Fence and Wall (4-digit DoD FAC - 8721) - Security Fence (4-digit DoD FAC - 8722)

Network Facility	Network Facility Components (those which are <i>interconnected</i> within the network facility) <i>Note: FAC = Facility Analysis Category</i>
<u>Installation Gas Distribution Line</u> : Interconnected assets within the 4-digit DoD Facility Analysis Category "8930", to include associated components as listed to the right.	- Installation Gas Distribution Line (4-digit DoD FAC - 8930)

3.5.5. **Work on New Facilities.** To preclude project splitting or incrementing, a violation of the Military Construction Codification Act, 10 USC § 2801, et seq, the BCE shall not modify newly constructed facilities, funded by any source, within 12 months of the placed-in-service date unless the modification is determined to be outside the scope of the original project (i.e., a newly identified requirement not covered by the "REQUIREMENTS" statement in the DD Form 1391). Possibilities include a modification necessitated by a mission requirement or equipment change which was unforeseen prior to the placed-in-service date or necessitated by a life/safety/health deficiency not covered by warranty. **(T-1)** The BCE shall not use O&M funds to correct deficiencies in MCA-funded projects throughout the life of the facility. **(T-0)** A deficiency exists when a component of the original construction has never functioned properly. Should it be necessary to correct a deficiency of the original MCA-funded project (e.g., whether due to inadequate design, construction, or installation), MCA funds must be used to correct the deficiency.

3.5.6. **Concurrent Work.** To the extent possible, construction, maintenance, and repair requirements for a particular facility should be accomplished concurrently to take advantage of economies of scale.

3.5.6.1. Programmers must ensure each concurrent project in a facility results in a complete and usable improvement without being dependent on another project. **(T-0)** The programming documents for concurrent projects should be cross-referenced.

3.5.6.2. There may be cost-savings or other value in construction, maintenance, or repair work being accomplished on several facilities at the same time. This work may coincide with other concurrent construction, maintenance, or repair requirements. Examples include a multi-facility energy improvement or multi-facility roof repair program being undertaken in one or more facilities in need of other work. Programming document(s) should reference any concurrent work in any of the affected facilities.

3.5.6.3. Programmers must aggregate concurrent work within a single facility for approval and congressional notification threshold determination in accordance with **Paragraph 4.3.3** (repair) and **Paragraph 5.2** (construction). **(T-1)**

3.5.7. **Facility Security and Antiterrorism (AT) Measures.** Security and AT must be primary considerations in the planning, programming, and design of Air Force facilities and utilities, which should include independent review and consultation with installation security and AT personnel. UFC 4-010-01, *Design: DoD Minimum Antiterrorism Standards for Buildings*, is the official AT minimum design standard for DoD facilities. If the total of any new construction (including additions) and/or any repairs, regardless of funding source,

exceeds 50% of the current PRV of record or changes the occupancy level of the facility (as defined in UFC 4-010-01), programmers must ensure the entire facility is brought into compliance with UFC 4-010-01. **(T-0)** This threshold is applicable in the pre-award phase of the project. Planners and programmers must ensure planned window and door replacement or new installation included in any project for existing inhabited buildings, regardless of cost, must meet UFC 4-010-01 glazing requirements. **(T-0)** UFC 4-020-01, *DoD Security Engineering Facilities Planning Manual*, provides the initial AT process for identifying AT requirements, design basis threat, and protection levels. UFC 3-340-01, *Design and Analysis of Hardened Structures for Conventional Weapons Effects*, is the design standard for DoD facility hardening against nuclear, biological, chemical, and conventional weapon effects.

3.5.7.1. Per AFI 10-245, *Antiterrorism*, the installation commander, or the installation's senior Civil Engineer on the commander's behalf, will certify on the certificate of compliance or in the Department of Defense Form (DD Form) 1391, *FY__ Military Construction Project Data*, that new facilities or renovation projects comply with UFC AT standards. **(T-1)** The AT Officer (ATO) will work with the engineering staff during planning, design, and construction to ensure requirements are met, including coordination prior to certification. A member of the installation Civil Engineer staff should complete security engineering training in accordance with AFI 10-245.

3.5.7.2. For fund source category purposes, programmers will assign the "XT" Element of Expense Investment Code (EEIC) subshred for AT requirements utilizing only EEICs 521xx, 522xx, 524xx, 529xx, 532xx, and 536xx. **(T-1)** See [Paragraph 6.1](#) for detailed guidance on fund source categories. Additionally, planners and programmers can classify permanently installed bollards, drop-arm barriers, tire shredders, and pop-up barriers as RPIE; however, cameras, radar, scanners, card readers, mobile/repositionable tire shredders, barriers, and transmitting detection systems/alarms are not RPIE. **(T-1)** See [Paragraph 3.5.15.1.2](#) for RPIE guidance. References include, but are not limited to, UFC 4-010-02, *Design (FOUO) DoD Minimum Standoff Distances for Buildings*; UFC 4-021-01, *Design and O&M Mass Notification Systems*; DoDI 2000.12, *DoD Antiterrorism (AT) Program*; DoDI 5200.8, *Security of DoD Installations and Resources*; DoDI 2000.16, *Antiterrorism Standards*; AFI 65-601 V1; AFMAN 32-1084, and AFI 32-9005 Attachment 2 for additional information. The process for allowances and approval of applicable deviations from AT facility standards is provided in AFI 10-245, Appendix 6.

3.5.7.3. Programmers may classify real property AT measures added to comply with codes or standards within existing footprint and attached to the building/structure as repair (unless the AT measure is considered an equipment item). Programmers shall classify real property AT measures added outside existing footprint and unattached to the building/structure, regardless of the reason, as construction (unless the AT measure is considered an equipment item). **(T-1)**

3.5.7.4. **Installation Entry Control Areas.** The *AF Facilities Entry Control Design Guide* and UFC 4-022-01, *Security Engineering: Entry Control Facilities / Access Control Points*, establish standards for improving and strengthening the protection of our forces and installations from potential terrorist attack. The following four basic types of facilities may be needed at installation entry control areas: gatehouse, vehicle inspection facility, visitor control center, and overwatch (including associated final pop-up barriers). Although these facilities each contribute to controlling access to an installation, they each

accomplish separate and distinct functions and do not have to be accomplished at the same time (although they may be) as long as they are non-contiguous and are physically separated from each other at an installation's entry control area. Programmers may program these four facility requirements as separate projects provided there is not a specific reason at a particular location that makes aspects of one project dependent on another project. For programming roadwork (repair or construction), programmers will determine if the new facility is complete and usable if the road is not constructed. If not, programmers shall program the roadwork as a funded cost of the facility project. **(T-0)** Programmers must include supporting requirements, such as roads, parking lots, lighting, utilities, and landscaping which make the facility complete and usable in the cost of the project. **(T-0)** Generally, programmers should not program roadwork as "repair" if the route of the road is being changed (see [Paragraph 5.1.3.9](#)). **(T-1)**

3.5.7.5. Intrusion Detection System (IDS), Integrated Base Defense Security System (IBDSS), and Remote Targeting Engagement Systems (RTESs). An IDS or IBDSS attached to or connected to a building, that transmits a signal to an alternate monitoring location is classified as an equipment item. IDSs installed within a facility that do not transmit a signal outside the facility are RPIE (e.g., a ringing alarm that does not transmit a signal). An RTES is an equipment item. Cameras, radar, scanners, and card readers are equipment items. If a system requires installation of a platform to support the sensors (e.g. fencing, gates, posts, slabs, etc.) and/or allied support (e.g. power, conduit, etc.), the platform component(s) and/or allied support are considered real property. The real property components of these systems should be funded, installed, maintained, and sustained with S/R&M-type funds. If any components are not considered to be real property per the criteria above, they are equipment items, and the user or security unit responsible for the procurement, installation, and sustainment. **(T-1)**

3.5.7.6. Guard Towers and Defensive Fighting Positions (DFPs). Verify with the installation Real Property Officer whether guard towers and defensive fighting position structures are real property. If the structure is: 1) permanently installed, 2) not temporary in nature, and 3) not relocatable in practice, it is real property. If real property, planners and programmers shall classify installation of these where they did not previously exist as construction. **(T-1)** If permanently installed, these shall be maintained, sustained, and repaired as real property. If these are not real property per the criteria above, they are equipment items, and the procurement, installation, and sustainment is the responsibility of the user.

3.5.7.7. Sensitive Compartmented Information Facilities (SCIF). When a project will include a SCIF subject to *Intelligence Community Directive [ICD] Number 705*, the Installation must obtain project security requirements from the Site Security Manager/Accrediting Official. **(T-0)** All applicable construction standards and any escorts, construction surveillance technicians (CST), or cleared American Guards (CAG), if allowed by 10 USC § 2465, shall be identified in the Construction Security Plan by the Site Security Manager/Accrediting Official. Any additional construction costs, SIOH, or escort requirements (if necessary) drive by *ICD 705* must be delineated as separate lines in DD Form 1391. **(T-0)** If the installation is to provide any project support, only that portion of installation overhead or support costs that can be identified as additional costs

that would not have been incurred were it not for the project should be included (*FMR Vol 3, Chapter 17, Paragraph 1702*). Any ICD 705 requirements that exceed a standard, even when based on risk, require a waiver be processed and approved in accordance with ICD 705 (see *Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities, Version 1.2, April 23, 2012 and ICD 705, Section D.4.*). (T-0)

3.5.8. Obsolete Facilities. Limit construction, maintenance, and repair work in facilities identified for disposal to the minimum required to ensure safety and security, to protect health and the environment, and to permit the facility to accomplish its mission.

3.5.9. Temporary Facilities. Planners, programmers, and project managers shall ensure temporary facilities are used for the shortest term possible (less than five years) and only until the permanent facility is built or the mission no longer requires their use. (T-1) If the requirement for a temporary facility concludes and a new requirement makes use of the same facility, the “clock” toward the five-year threshold starts over. These facilities must be functional yet austere. Planners, programmers, and project managers shall ensure these facilities have no appearance of permanence, such as brick exteriors, brick building signs, or extensive landscaping. (T-1)

3.5.9.1. Relocatable Buildings. Relocatable buildings, by definition, are used to fulfill a temporary requirement (less than five years, declared contingency, mobile in practice, etc.). A structure physically capable of being moved does not alone qualify it as a “relocatable building”. See AFI 32-1021, Ch. 6, and DoDI 4165.56, *Relocatable Buildings*, for further guidance, including fire, safety, and antiterrorism requirements.

3.5.9.2. Temporary Facilities Interim or Incident to O&M S/R&M Projects. Temporary facilities may be obtained either as an interim solution prior to funding an O&M-funded repair or UMC project or as an incident solution during execution of an O&M-funded repair or UMC project. Programmers shall program an *interim* temporary facility as a stand-alone project. (T-1) *Incident* temporary facilities are considered companion to a repair or UMC project and programmers should reference them on the project programming document. (T-1) For temporary incidental facilities, programmers shall include the procurement cost (to include lease cost) of the temporary facility on the DD 1391, as an unfunded cost. (T-1) If leased, programmers shall include the full cost of the lease on the DD Form 1391. (T-1) The lease cost will reflect the period when the facility being maintained, repaired, or constructed will not be available. Work to add allied support is classified as construction and programmers shall program this work as a funded cost to both incident and interim temporary facilities, even if it is not to be retained. (T-0) Allied support includes, but is not limited to; foundations, concrete mounting slabs, site preparation, utility connections, stairways, porches or breezeways between units, extra wall covering and paneling, ceramic works, lighting, and other interior and exterior finishes and features not included in the original facility package or unit. Planners, programmers, and project managers may consider the relocatable facility as an equipment item and unfunded cost. (T-0) See [Paragraph 3.5.15](#) for additional guidance on funded and unfunded costs.

3.5.9.3. Siting Temporary Facilities. Planners shall ensure siting temporary facilities is approved by the Installation Commander through the Facilities Board, is consistent with

the installation development plan, and should avoid, when possible, primary thoroughfares and high visibility areas. **(T-1)** Landscaping and screening material should be employed only to the extent necessary to meet minimum military requirements.

3.5.9.4. Temporary Facilities to be Retained Following Completion of an O&M Project. Relocatable buildings may be acquired as real property. When converting temporary facilities to real property the BCE shall secure SAF/IEE approval. **(T-1)** See AFI 32-1021, Chapter 6.

3.5.9.5. Temporary Facilities Incident to Military Construction Projects. For temporary facilities incident to military construction projects, refer to AFI 32-1021.

3.5.10. Communications Requirements. Refer to UFC 3-580-01, Telecommunications Building Cabling Systems Planning and Design and AFI 65-601 V1, for guidance on communications-related requirements for O&M-funded repair and construction projects. The real property elements of a project (e.g. conduit, manholes, duct banks, etc.) are subject to construction and repair approval and congressional notification thresholds, are funded costs of the project, and cannot be financed with equipment procurement funds (e.g., 57*3080 account). Elements of a project that are not real property, such as communications wiring (telephone lines, data lines, etc.) and termination devices (telephones, computers, racks, switches, etc.), will be unfunded costs of the project and financed as expenses in accordance with AFI 32-9005 and AFI 65-601V1. See **Paragraph 3.5.15** for additional guidance on funded and unfunded costs. When planned facility projects will include installation or replacement of communications systems, CE programmers are urged to coordinate closely with A6/Communications officials to ensure that adequate resources for both facility work and communications systems work will be available concurrently to enable on-time delivery of facilities.

3.5.11. Waste Management. When solid waste, including hazardous waste, is generated during maintenance, repair, construction, or demolition projects, ensure that management of such waste conforms to the requirements of AFI 32-7042, *Waste Management*.

3.5.12. Contamination Cleanup. Programmers and project managers shall treat removal and disposal of contaminated material (e.g., soil, fuel, asbestos containing material, mold) identified in anticipation of or during a facility maintenance, repair, construction, or demolition project (within the project footprint) as a funded cost of the project. **(T-1)** Programmers and project managers shall classify remediation associated with a repair or construction project as repair. **(T-1)** Remediation associated with an isolated demolition project (unrelated to a maintenance, repair, or construction project) is part of the demolition project and carries no work classification. See AFI 32-1022 for NAF projects.

3.5.13. Military Family Housing (MFH). A number of statutory provisions prohibit the use of O&M funds for maintenance, repair, and construction on MFH units, including areas in such units that may be used for the purpose of conducting official DoD business. Exceptions may be permitted to meet operational mission requirements. MFH-designated funds will be used for maintenance, repair, and construction on infrastructure systems which primarily support non-privatized MFH areas and units. For a project encompassing systems which support both APF and non-privatized MFH areas, prorate the project costs. Funding for systems encompassing privatized MFH areas will be determined on a case-by-case basis. See AFI 32-6002, for details on MFH programming and funding.

3.5.14. Seismic Evaluation and Potential Mitigation. The determination of whether seismic evaluation and mitigation of an existing building must be considered during repair or minor construction is governed by UFC 3-310-04, *Seismic Design for Buildings*, and the Interagency Committee on Seismic Safety in Construction - Recommended Practice (RP) 8 (ICSSC RP 8), "Standards of Seismic Safety for Existing Federally Owned and Leased Buildings". RP 8 is applicable to all existing DoD-owned and leased buildings, as well as to newly acquired buildings added to the DoD inventory through purchase, lease, or donation.

3.5.14.1. RP 8 Section 1.3 describes buildings that are exempt from the RP 8 standards.

3.5.14.2. RP 8 Section 2.1. lists all other situations that require evaluation and potential mitigation. In general, in case of the following situations, planners and programmers shall trigger seismic evaluation and potential mitigation of existing facilities (the thresholds below are applicable in the pre-award phase of the work):

3.5.14.2.1. UFC 3-310-04 Replacement for RP 8 Section 2.1 (b): For Seismic Design Category C buildings, a project is planned, which totals more than 50% of the replacement value of the building. **(T-0)**

3.5.14.2.2. UFC 3-310-04 Replacement for RP 8 Section 2.1 (c): For Seismic Design Category D, E, or F buildings, a project is planned, which totals more than 30% of the replacement value of the building. **(T-0)**

3.5.14.2.3. UFC 3-310-04 applies to DoD facilities worldwide, and for specific applicability defines the "United States" to include all 50 states, the District of Columbia, Commonwealth of Puerto Rico, Virgin Islands, Guam, American Samoa, Commonwealth of the Mariana Islands, and any other territory or possession of the United States.

3.5.15. Funded and Unfunded Costs. For determinations regarding the classification of project costs as funded or unfunded, for both repair and UMC, conform to guidance in the Department of Defense Financial Management Regulation (DoD FMR) 7000.14R, V3. Note that DoD FMR, V3, Ch. 17, Paragraph 1702 provides information unique to projects funded by MCA; the guidance provided below pertains to O&M-funded facility repair and UMC projects. In addition to the paragraphs below, refer to AFI 65-601 V1, Ch. 9, AFI 32-1021, Attachment 1, and ETL 02-12 for definitions and guidance on funded and unfunded costs.

3.5.15.1. **Funded Costs.** Funded project costs are those costs used to determine the project cost for purposes such as approval authority (including need to notify the appropriate congressional committee) and appropriate source of funds. Programmers and project managers shall consider the following as funded project costs (the list may not be all inclusive) **(T-0)**:

3.5.15.1.1. **Construction Equipment.** Project execution costs applicable to maintenance and operation of government-owned construction equipment or applicable to contractor or government construction equipment rental expense.

3.5.15.1.2. **Real Property Installed Equipment (RPIE).** The cost of all permanently installed RPIE (government-furnished or contractor-furnished) is a funded cost. An exception is government-owned equipment obtained on a non-reimbursable basis. In accordance with DoD FMR V3, Chapter 17, Paragraph

170102.I.6, DoD Components are precluded from using materials, supplies, or items of RPIE on their own UMC projects on a non-reimbursable basis. Information regarding RPIE is provided in AFI 32-9005 and AFI 65-601V1. For medical projects, refer to Military Standard (MIL-STD) 1691, *Construction and Material Schedule for Military Medical, Dental, Veterinary and Medical Research Laboratories*, to determine which equipment should be accounted as “funded” costs. “Funded” medical equipment is described as Logistics Category “A” within MIL-STD 1691.

3.5.15.1.3. **Labor.** Labor costs include foreign national construction units, except as noted below with respect to DoD WCF activities, and exclude U.S. military labor. Labor costs for in-house civilian employees are calculated based on DoD FMR guidance. When the work is accomplished by contract, include the labor component of all contract costs except labor costs attributable to pre-construction execution planning and design. The cost of military labor shall not be included as a funded project cost except for the cost of military personnel assigned to DoD WCF activities. DoD WCF activities shall be reimbursed by their customers for the cost of military labor as prescribed in DoD FMR V11A, Chapter 1, Paragraph 010203.B and V11B, Chapter 13, Paragraph 130704. Troop labor temporary duty (TDY) costs are funded costs to the project unless TDY costs are provided by the troop labor organization from its training budget, in which case these are unfunded costs to the project.

3.5.15.1.4. **Land.** The cost of any land procured for the proposed project or an independent land acquisition. See [Paragraph 5.1.3.20](#) for classifying land acquisition. Refer to [Paragraph 3.5.15.2.8](#) for unfunded costs associated with land procurement.

3.5.15.1.5. **Material.** The cost of direct material (government-furnished and contractor-furnished) used in accomplishing the project except government-owned material obtained on a non-reimbursable basis from another agency. Materials purchased for troop labor projects are funded costs to the project for which they were purchased. Only materials used on the project should be capitalized. Wasted materials (substantial losses due to fire, theft, etc.) on troop labor projects are not capitalized and do not count against the project cost threshold. This does not apply to incidental wastage (e.g., lumber ends, bent nails, non-reusable scraps). Excess materials used on another project become funded costs of the latter project. Materials for troop labor projects may be incrementally procured in different fiscal years.

3.5.15.1.6. Estimated (for programming) or actual (during execution) contractor overhead and profit, and/or that portion of installation overhead or support costs that can be identified as representing additional costs that would not have been incurred were it not for the project, reference DoD FMR V3, chapter 17, Paragraph 170204. Overhead is typically estimated at a rate in the range of 15%, but can vary on contract type, complexities, and location. In accordance with Federal Acquisition Regulation paragraph 15.404-4(c) (4) (C), for cost-plus-fixed-fee contracts which are not research related or are not architect-engineer services for public works or utilities, profit shall not exceed 10% of the contract's estimated cost, excluding profit.

3.5.15.1.7. Government Supervision, Inspection, and Overhead (SIOH) incident to a real property facilities project or program (see 10 USC § 2802 and DoD FMR V3, Ch. 17, Paragraphs 170102 D.1.e., 170203, and 170204). SIOH is a funded cost and must be included in the overall project cost. For purposes of determining approval and notification thresholds, SIOH must be accounted for both in programming and during execution. SIOH can include:

3.5.15.1.7.1. Post award construction contract administration.

3.5.15.1.7.2. Technical direction and coordination of awarded projects.

3.5.15.1.7.3. Land planning studies or reports, appraisal, and title search after congressional authorization of a land acquisition or exchange.

3.5.15.1.7.4. Construction project management and administration not otherwise identified above, such as: constructability review; source selection team participation regarding construction issues; construction quality assurance; testing of materials; claims analysis; forensic work; and expert consultation, litigation, or other costs related to determining A&E or construction contractor liability.

3.5.15.1.7.5. SIOH performed by the U.S. Army Corps of Engineers (USACE) for repair projects (non MILCON) is 5.6% of the total funded cost for projects within the continental United States and 7.5% of the total funded cost for projects outside of the continental United States. SIOH performed by the Naval Facilities Engineering Command (NAVFAC) will range from 4% to 8% of the total funded cost depending on the type of project. Any factor other than these must be explained in the programming document. Ensure costs included as SIOH are among those listed in **Paragraphs 3.5.15.1.7.1 to 3.5.15.1.7.4**. See **Paragraph A2.11** for guidance about stating the SIOH cost in the DD1391.

3.5.15.1.7.6. SIOH performed organically (i.e., performed by local Air Force employees for locally-contracted or in-house-executed projects) in lieu of another execution agent must also be taken into account both in programming (by the programmer) and in post-award execution (by the construction manager). For SIOH performed organically, use of an Air Staff-approved SIOH factor of 4% of the sum of the subtotal and contingency is acceptable both in programming and execution. When SIOH is performed organically, this effort is not actually funded (or reimbursed) from the project. The 4% factor represents and accounts for SIOH activities performed organically and is considered along with actual project costs for threshold determination.

3.5.15.1.8. Reimbursable cost of materials, supplies, services, and items of installed capital equipment obtained from surplus stocks at estimated fair market value. **Note:** Acquisition of such materials, supplies, and items from those sources on a non-reimbursable basis is prohibited.

3.5.15.1.9. **Transportation.** The costs applicable to transportation of materials, supplies, installed capital equipment, and government-owned material and capital equipment necessitated by a particular project. Projects accomplished by deployable Air Force units (Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer (RED HORSE), Prime Base Engineer Emergency Force (BEEF), etc.) shall

include these costs only when a deployment is intended for the sole purpose of accomplishing that particular project. Transportation costs incurred by deployable units shall not be included as a funded project cost when the deployment is conducted for training purposes. Transportation costs for materials transferred between supply offices are not included as a funded project cost.

3.5.15.1.10. **Travel.** Travel costs incurred by DoD civilian employees and military personnel incurred in performance of a work order/project shall be charged as a funded cost when such travel can be identified specifically to the order/project, in accordance with DoD FMR V11A, Ch. 1, Paragraph 010203.C.

3.5.15.1.11. **Disposal.** Removal and disposal of construction debris, including costs to reimburse the base for solid waste management.

3.5.15.2. **Unfunded Costs.** Unfunded project costs are those capitalized for purposes of real property investment but are excluded from approvals or determinations relating to the funded costs of facilities projects. Programmers and project managers shall consider the following as unfunded project costs (the list may not be all inclusive **(T-0)**):

3.5.15.2.1. **Military labor.** All costs funded from Military Personnel Appropriations, except for the cost of military personnel assigned to DoD WCF activities. DoD WCF activities shall be reimbursed by their customers for the cost of military labor. See DoD FMR V11A, Ch. 1, Paragraph 010203.B.1.

3.5.15.2.2. **Depreciation.** Costs applicable to the depreciation of government-owned equipment.

3.5.15.2.3. **Surplus stock from sources outside the Air Force.** Cost of materials, supplies, and items of RPIE obtained for a project on a non-reimbursable basis from sources outside the Air Force are not included in the project cost (e.g. excess distributions from other government agencies).

3.5.15.2.4. **Gifts from private parties if accepted in accordance with law.** See AFI 51-601, *Gifts to the Department of the Air Force*.

3.5.15.2.5. Personal property equipment procurement and installation.

3.5.15.2.6. **Design Services.** 10 USC § 9540, *Architectural and Engineering Services*, authorizes the SECAF to engage architect-engineer services firms to produce and deliver designs, plans, drawings, and specifications at a cost not to exceed 6% of the estimated cost of construction (including repair), which is reiterated in Federal Acquisition Regulation, Paragraph 15.404-4(c)(4)(i)(B). For UMC projects, the costs of producing and delivering designs, plans, drawings, and specifications, which are classified as Design Services for both Design-Build and Design-Bid-Build projects, are statutorily limited to 6% of the estimated cost of construction. Similarly for maintenance and repair projects, the costs of producing and delivering designs, plans, drawings, and specifications, for both Design-Build and Design-Bid-Build projects, are limited to 6% of the estimated cost of maintenance and repair. O&M-funded design is not required to be reported to congressional committees. See [Paragraph A2.11.3](#) for designating Design-Build design costs on the DD1391. As described in the following paragraphs, **planning and design are**

unfunded costs and are excluded from the cost for purposes of determining compliance with the amounts established in 10 USC § 2805 for UMC and 10 USC § 2811 for repair:

3.5.15.2.6.1. Pre-construction contract award design costs associated with preparation and review of contract solicitation documents, including design plans and specifications (completed through either A&E contracts or in-house) in accordance with FMR V3 Chapter 17, Paragraphs 170102.C, 170102.I.4, and 170302.

3.5.15.2.6.2. Post-construction contract award design costs in accordance with DoD FMR V3, Ch. 17, Paragraphs 170102.I.4 and 170302.

3.5.15.2.7. **Engineering Services.** Services other than Design Services that may be performed by A&E firms prior to award of a repair or UMC contract include site investigations, surveys, subsurface investigations, existing facility investigations, and presentation materials. These services, classified as Engineering Services, are not subject to the 6% statutory fee limitation and are classified as unfunded costs.

3.5.15.2.8. **Land.** Surveys, site investigations, appraisals, and other actions required for procuring land.

3.5.16. **Air Force Government Furnished Equipment (GFE).** Planners, programmers, and project managers shall comply with the following when determining how to classify GFE. **(T-0)** Policy regarding GFE and accounting for GFE when developing the cost of a repair or UMC facility project is addressed in the DoD FMR, V4, Ch. 6, and in AFI 65-601V1, Chapters 10 and 21. When RPIE designated as GFE is being added to a facility where that specific GFE did not previously exist, such GFE is generally classified as a funded cost of a facility project. See [Paragraph 3.5.15.1.2](#) for RPIE guidance. If GFE is depreciated (i.e., is not new), then the depreciated value of the GFE, as opposed to the value of the GFE when newly procured, should be used in calculating the funded cost of a facility project. When unfunded equipment (such as communications equipment, systems furniture, desks, chairs, electronic alarm systems, etc.) is designated as GFE, such GFE should be classified as an unfunded project cost. Designation of either funded RPIE or unfunded equipment as GFE does not change the nature of the equipment, it simply signifies that the equipment was procured via means other than competitive sourcing by the contractor. Document all GFE cost decisions and determinations. Refer to AFI 32-9005 for policy regarding the recording of the value of GFE in real property inventory records.

3.5.17. **Artificial Turf.** When determining the benefit of artificial turf use, installations should consider the life-cycle cost of sustaining both the artificial and natural turf fields prior to installing. Refer to [Paragraph 4.2.3.12](#) for work classification guidance regarding repair by replacement of natural turf with artificial turf.

3.5.17.1. **Exterior Artificial Turf, Permanently Installed.** Programmers must ensure artificial turf used in place of grass or natural turf is considered real property, an improvement to land, and is programmed as a funded, capitalized cost. **(T-1)**

3.5.17.2. **Interior Artificial Turf, Permanently Installed.** Artificial turf used as an interior floor surface (such as carpet or court surface) is considered an improvement to real property. If installed when the facility is originally constructed, programmers will

ensure the cost of the turf is a funded cost of the construction project and value of the turf will be capitalized. (T-1)

3.5.17.3. **Non-permanently Installed Turf--Interior or Exterior.** If artificial turf may be rolled up or otherwise dismantled and is removed in practice, then planners and programmers will ensure such turf is classified as equipment and is user-funded. (T-1)

3.5.18. **Floodplain Management.** Executive Order (EO) 11988, *Floodplain Management*, requires Federal agencies to carefully consider floodplain area use. Federal Emergency Management Agency flood hazard insurance maps may be used to identify if an installation or part of an installation is located within a designated 100 year floodplain area. EO 13653, *Preparing the United States for the Impacts of Climate Change* requires Federal agencies to evaluate climate change risks and vulnerabilities so as to manage effects on missions and operations, and tasks Federal agencies with developing and implementing climate adaptation plans. Paragraph 2-2.16 of UFC 2-100-01, *Installation Master Planning*, provides guidance regarding protection of facilities in flood hazard areas. These documents and pertinent DUSD(I&E) guidance require that DoD components comply with the following:

3.5.18.1. Planners and programmers will ensure renovation of existing facilities or construction within 100-year floodplain areas is minimized, but not prohibited. (T-0)

3.5.18.2. Programmers will document on DD Forms 1391 that flood mitigation measures have been incorporated in the project when renovating or constructing facilities within a 100 year floodplain areas; in particular, for restoration and modernization projects costing over \$7.5 million, assess the vulnerability of mechanical and/or electrical subsystems to flood damage and program necessary measures to mitigate those vulnerabilities (T-0)

3.5.18.3. This policy does not apply to leased space.

3.6. Project Documentation. The BCE shall prepare appropriate project documentation and obtain appropriate approvals based on the work classification and total funded cost of a facility project (or aggregated projects as appropriate) prior to obligating project funds or awarding the project (ARC units will staff approval packages for ARC-funded work). (T-1) Planning and design may be accomplished prior to project approval. Refer to the AFAMP playbook (or ARC-specific guidance) on the CE Portal under the Playbooks menu in the Engineering Flight Portfolio Optimization list for processes and criteria to determine when to enter requirements into the Civil Engineer project management database system.

3.6.1. **Work Documentation.** AF Form 332, *Base Civil Engineer Work Request*; AF Form 327, *Civil Engineering Work Order*; or DD Form 1391, *FY ___ Military Construction Project Data* are all acceptable means of documenting projects. Refer to AFI 32-1001, for coordination requirements. At a minimum, programmers will ensure all projects forwarded to Air Staff are documented on a DD Form 1391. (T-1) MAJCOMs and AFIMSC shall establish guidance regarding work documentation for delegated approval thresholds. See [Attachment 2](#) for guidance on preparing DD Forms 1391/1391c.

3.6.2. Programmers shall ensure project documents are sufficient to allow an independent reviewer to understand the requirement, the benefit, the classification of work, the total cost (funded and unfunded), current impact to installation mission, the impact if not provided, and the timing of project requirements, including all potential phases (see [Paragraph 3.5.2](#) for definition of project phases). (T-1) User organizations must help develop a project scope and

justification for user-originated projects. The project programmer determines whether the requirement will be incorporated into existing project(s) or made into a new project (create a new project). Documents must indicate that the project will incorporate life-cycle-cost-effective sustainable design and procurement including impact on energy and water conservation when applicable.

3.6.3. Programmers shall ensure a project containing multiple EEICs is programmed on a single programming document—all work/EEICs necessary to fulfill the requirement. **(T-1)** Companion projects should be programmed on separate programming documents. But, if necessary, companion projects may be programmed on a single programming document (see [Paragraph 4.2.7](#) for clarification on “companion” projects). If programmed separately, the programming documents should reference the other project(s). If necessary to execute a contracting strategy or to capture other interrelated actions, multiple projects may be programmed on a single “umbrella” programming document; however, details for each project must be provided (see [Attachment 2](#)) either within the primary programming document or in separate supplemental programming documents. See [Paragraph 3.4](#)

3.6.4. **Project Files.** The installation Civil Engineer programming and project management offices are responsible for establishing and maintaining project files in accordance with established AF standards. Project folders will be created and maintained to capture project documentation, including evidence of proper approval. Project information will be input into the current Civil Engineer electronic programming and project management database in accordance with AF, AFCEC, and MAJCOM/AFIMSC (see [Paragraph 1.2.4](#)) policy and guidance. The Civil Engineer programming chief will ensure project documentation and electronic data meet the requirements in [Paragraph 3.6](#) and applicable AMP requirements. **(T-1)**

3.6.5. **Project Approval.** Project approval requirements are defined in **Chapters 4, 5, and 7** of this Instruction. For Defense Logistics Agency-Energy and Defense Health Programs exceptions see [Paragraphs 6.10](#) and [6.11](#), respectively. BCEs must review current requirements in a single facility (or component of a network facility) to ensure proper approvals are received before project award. **(T-1)** The appropriate approval authority must verify that a project is programmed according to this Instruction before signing and dating the approval document.

3.6.5.1. MAJCOM (or AFIMSC) programmers must ensure project approval request packages coming to the Air Staff include at a minimum the following documents: approval request memorandum signed or sent by the MAJCOM Engineering Division Chief (or equivalent), DD1391 (per [Attachment 2](#)), economic analysis or waiver as necessary, and Certificate of Compliance for Critical Planning Actions (see AFI 32-1021 for Certificate of Compliance guidance). **(T-1)** MAJCOM (or AFIMSC) programmers must ensure each document includes an approval date or the date submitted to higher approval authority. **(T-1)** Programmers must ensure project documents (DD Form 1391 or AF Form 332 or 327) are signed by an appropriate certifying official. **(T-1)** Programmers must ensure DD Forms 1391 forwarded to Air Staff for approval contain the following signed certification from the MAJCOM (or AFIMSC) senior Civil Engineer (see [Paragraph 1.2.4](#)): **“I have reviewed this document and certify it is complete and accurate, and is compliant with appropriate statute(s) and instructions. I have validated the project’s primary and supporting costs and work**

classification. It has been fully coordinated with the user and other appropriate agencies and approved by the Installation Commander.” (T-1)

3.6.5.2. Programmers must ensure DD Forms 1391 forwarded to AFCEC for central funding under the energy program contain the following signed certification from the Base Civil Engineer: **“I have reviewed this document and certify it is complete and accurate. It meets the intent of the energy program and the project is the best lifecycle cost solution. I have validated the project’s primary and supporting costs, Building Lifecycle Cost (BLCC) and work classification. It has been fully coordinated with the user and other appropriate agencies, and approved by the Installation Commander.” (T-1)**

3.6.5.3. Changes or modifications to the project cost, during pre-award or execution, may cause the cost to exceed an approval threshold thus requiring re-approval or higher authority approval. The BCE is responsible for obtaining appropriate approval prior to commencement of the work that causes the project to exceed the threshold. **(T-1)** See **Paragraph 4.5** for repair projects and **Paragraph 5.1.2** for UMC projects.

3.6.5.4. **Electronic Signature.** In accordance with AFI 33-321, *Authentication of Air Force Records*, use of electronic (including digital) signatures on documents supporting O&M-funded projects is authorized if the signature meets the criteria established in AFI 33-321, Paragraph 3.1.3.

3.6.6. **Economic Analysis (EA).** In accordance with AFI 65-501, *Economic Analysis*, when total funded costs of a project (companion projects should not be summed) exceed \$2 million (in constant dollars with the fiscal year baseline as referenced by AFI 65-501) **and** repair costs exceed 75% of the estimated cost of a military construction project to replace the facility, the BCE must notify financial analysis offices that an EA must be accomplished. **(T-1)** If at any time in the life cycle of a project the cost of the project exceeds these thresholds (prior to award or during execution), an EA or EA waiver must be accomplished before work can continue. **(T-1)** When the project scope of work includes network facilities, see **Paragraph 3.5.4** to determine the extent of the physical plant to include in the facility replacement value calculation.

3.6.6.1. BCEs must ensure an EA is submitted with all relocatable facility acquisition requests in accordance with AFI 32-1021. **(T-1)**

3.6.6.2. BCEs and MAJCOM/AFIMSC programmers must ensure waivers to EA requirements are approved by SAF/FMCE, through AF/A4C. **(T-1)** In accordance with AFI 65-501, EA waiver requests shall be forwarded to higher headquarters through the functional channel (e.g., Civil Engineering). The functional office is responsible for obtaining FM coordination before forwarding to the next level.

3.6.6.3. If an EA is necessary, programmers must ensure all requests for Air Staff repair project approval include an EA or EA waiver. **(T-1)** See **Paragraph 4.4**.

3.6.6.4. When facility repair cost exceeding 75% of the replacement cost is because of lifecycle-cost-effective energy program improvements, the BLCC analysis may be used in the EA justification.

3.6.7. **Emergency Projects.** Emergency projects require approval at the same levels as non-emergency projects, in accordance with designated thresholds. However, these projects may follow an expedited approval request process. At minimum, the request must include a front-page DD Form 1391 with additional information justifying the expedited approval process. Emergency repair projects exceeding the congressional notification threshold may proceed with SAF/IEE's approval. However, notification to the appropriate congressional committees is still required. To enable notification, the installation/MAJCOM/AFIMSC must provide a complete project approval request package as soon as possible.

Chapter 4

MAINTENANCE AND REPAIR

4.1. Maintenance (EEIC 521xx). Maintenance is the recurring, day-to-day, periodic, or scheduled work required to preserve real property facilities, systems, or components and prevent premature failure or deterioration, so these may be effectively used for their designated purposes. Maintenance does not change the function of a facility. All maintenance is considered Sustainment Maintenance (EEIC 521xx). When programming this work classification programmers will ensure the first word of the project title is “Maintain”. (T-1) See [Attachment 2](#) for details on preparing a DD1391.

4.1.1. Work which entails the application of “protective coatings” or “sealants,” removal of rubber from paved surfaces, dredging of existing features (not for new construction), and upkeep of existing dredging spoils areas should be classified as maintenance.

4.1.2. **Sustainment Services Contracts.** Each service task must be evaluated to determine if it is investing in (sustaining) real property or not. Grounds maintenance not associated with a facility project is normally funded in Facilities Operation (FO) (PEC***79). The following services or commodities are examples meeting the definition of “investing in (or sustaining) real property”. These should be classified as maintenance:

4.1.2.1. Real property installed appliance maintenance

4.1.2.2. Elevator inspections

4.1.2.3. Gas line surveys

4.1.2.4. Real property installed hoist and crane testing

4.1.2.5. Hood and duct cleaning

4.1.2.6. Bridge inspections; and

4.1.2.7. Chemical, Biological, Radiological, and Nuclear (CBRN) collective protection system maintenance, filter replacement and periodic system recertification. CBRN filter replacement does not include the cost of the filters.

4.1.3. **Energy System Re- and Retro-Commissioning.** These projects restore complex, high energy systems to their optimal performance and are considered “maintenance” if the investment is less than 25% of the replacement cost of the energy system. If the investment is greater than 25% of the replacement cost of the energy system, planners and programmers will classify the work as “repair”. (T-1)

4.1.4. **Grading.** Grading required solely to remove airfield obstructions or hazards to navigation should be classified as maintenance. This can include seeding to control erosion. See [Paragraph 4.2.3.11](#) for landscaping guidance.

4.1.5. **Maintenance Funding.** Maintenance is typically funded using O&M funds, but may also be funded using other fund sources made available for O&M purposes (RDT&E, WCF, etc.). There is no limitation on the amount of O&M funds that may be used for maintenance. However, some MAJCOMs, installations, and the NGB set approval thresholds for maintenance project approval.

4.2. Repair Authority (EEIC 522xx and 524xx). Repair means to sustain or restore real property and real property systems or components to such condition that they may effectively be used for their designated functional purposes. Repair does not change the function of a facility. Repair does not normally increase the capacity, volume, or footprint of a facility, although repair may result in greater usable floor space due to reconfiguration of the interior of a building. Real property and real property systems or components need not have failed to permit a repair project. Repair can be Sustainment Repair (EEIC 524xx) or Restoration and Modernization Repair (EEIC 522xx). See [Paragraph 6.1](#) of this Instruction for further definition and guidance on appropriate assignment of EEICs for repair class work. When programming this work classification, planners and programmers will ensure the first word of the project title is “Repair” or “Renovate”. (T-1) See [Attachment 2](#) for details on preparing a DD1391.

4.2.1. Repair Funding. 10 USC § 2811 authorizes the use of O&M funds to repair facilities or functional areas of multipurpose facilities (10 USC § 18233 for ARC). There is no limitation on the amount of O&M funds that may be used for repair, but there are approval and congressional notification requirements, depending upon the funded cost of the project. See [Table 1.1](#) for approval and congressional notification levels. Refer to [Paragraph 3.5.15](#) for definitions and guidance on funded and unfunded costs. Repair work may be accomplished via an MCA-funded project; however, the fund source does not change the work classification.

4.2.2. Replacement. Existing components of a facility, including components and sub-components of network facilities, may be repaired by replacement, and replacements can be up to current industry, Federal, DoD, or AF standards, directives, or codes. Industry standards must be well-documented and widely-accepted. Component repair-by-replacement **must be predicated** on the need to repair the component (e.g., life cycle repair, damage repair) and replacement must be the most cost-effective method of repair. The only exception to the foregoing rule is where a component must be replaced or added because a Federal, DoD, or AF standard, directive or code requires that the facility be retro-fitted independent of any construction or repair requirement, and compliance is not being triggered by a change in use of the facility. In such case, the replacement or addition of the component may be classified as repair. In all cases, replacement components cannot have greater capacity than the original component, except as required by standards, codes, or directives.

4.2.2.1. Components eligible for being repaired by replacement may be relocated (and linear structures extended as necessary) as part of the repair if the scenario fulfills one of the following criteria:

4.2.2.1.1. When the component being replaced must remain functional until the new component is ready.

4.2.2.1.2. When safety or code requirements warrant moving the component or portion of a component.

4.2.2.1.3. When it is more cost effective to move the component or portion of the component than to replace it in its current location, to include consideration of life cycle costs and benefits.

4.2.2.1.4. When repair-by-replacement requirement aligns with a mission change driving the need to alter the location of the item in order to continue to provide the support originally intended.

4.2.2.2. The allowable extent of repair-by-replacement of facility components is as follows:

4.2.2.2.1. For buildings, the major components of a facility are as follows: foundation, superstructure, roofing, HVAC, electrical, plumbing, fire protection, exterior enclosure, interiors (including conveying). Any single major component may be replaced as repair. More than one component may be replaced in a building, but if more than one component is being replaced, the primary components which define the facility structure (foundation, superstructure, and exterior enclosure) must remain intact. Intact is defined as no more than 25% of the component being replaced (based on a reasonable quantification of the component).

4.2.2.2.2. For network facilities, any number of the components (including sub-components or portions thereof) can be replaced as repair; however, no more than 75% of an entire network facility can be replaced as repair in a project, which shall be determined in accordance with the project aggregation rules in **Paragraph 4.3.3.1**. The percentage is based on a reasonable quantification of the network facility as a whole (e.g., linear feet, square feet, etc.). Major components of network facilities are listed in **Table 3.2**.

4.2.2.3. When a component is repaired by replacement, the original component must be demolished. **(T-1)** It cannot remain in place for its original function or any new function. Lack of resources necessary to accomplish the demolition is not an exception to this policy. When it is cost-prohibitive to demolish the component (e.g., removing an abandoned drainage pipe running under an aircraft parking apron), the original component must be left in a state where it is incapable of being re-used for any function. **(T-1)** If the component being replaced is not demolished or left in a state incapable of being re-used for any function, then the work to replace the component cannot be classified as repair.

4.2.3. **Repair Examples.** As examples, repair may include the following, subject to the limitations in **Paragraph 4.2.2**:

4.2.3.1. Existing heating, ventilation, and air conditioning (HVAC) systems can be replaced or sized to meet current standards or codes. Industry standards must be well-documented and well-accepted. **(Note:** Installation of HVAC where none exists is construction.) Replacing an evaporative cooler system with a central air conditioning system can be considered repair if the evaporative cooler system is ducted and the new air conditioning system uses or replaces that same ducting, but does not expand or add additional ducting to areas of the facility not currently served by conditioned air.

4.2.3.2. Interior rearrangements and restorations of an existing facility can be classified as repair if they allow for effective use of existing space or to meet current building standards and code requirements (e.g., accessibility, health, safety, seismic, security, and fire). Repairs may include the movement or reinforcement of existing interior load-bearing members within a facility. However, programmers must classify any interior

reconfiguration done to a facility necessitated by a conversion (change in functional purpose) as construction. (T-0) See [Paragraph 3.3.3](#) and [Paragraph 5.1.1](#) for facility conversion guidance.

4.2.3.3. Replacement of one type of roof system (e.g., a flat roof) with another, more reliable or economical type of roof (e.g., sloped roof) may be considered repair.

4.2.3.4. Installation of exterior appurtenances as a means of complying with building codes and access laws is considered repair (e.g., fire escapes and elevators, even if enclosed, and ramps directly adjoining facilities).

4.2.3.5. The expansion of existing or installation of new fire protection systems, to include reservoirs, deluge storage tanks, pipes, pumps, valves, connections, and other integral parts may be classified as repair if undertaken to comply with appropriate UFC or building codes (not driven by a conversion). Refer to UFC 3-600-01, *Fire Protection Engineering for Facilities*, Paragraph 1-3.2.2, and AFI 32-10141, *Planning and Programming Fire Safety Deficiency Correction Projects*, for policy regarding the programming of fire protection system work when facility repair costs equal or exceed 50% of the facility replacement cost. This threshold applies in the work's pre-award phase.

4.2.3.6. Installation of backflow prevention devices in accordance with building/uniform plumbing code on drinking water systems may be considered repair.

4.2.3.7. Existing pavement facilities may be repaired by replacement. In general, any work to expand the footprint of a pavement facility/component is considered construction (see [Paragraphs 5.1.3.7.](#), [5.1.3.8.](#), and [5.1.3.13](#)). However, replacement of pavement components (see [Paragraph 3.5.4](#) for rules on defining pavement facilities) may include expansion of the paved footprint and depth of any course (to include in situ subgrade) if required to comply with international, Federal, DoD or AF standards, directives, or codes. For example, replacement of a runway facility may include the addition of paved shoulders to comply with paragraph 3-9 of UFC 3-260-01 (in accordance with [Table 3.2](#), runways and their shoulders are considered components of a network facility). In these cases to expand footprint, repair must include replacement of at least 50% by area of the existing pavement entity (as described in [Paragraph 3.5.4](#)), unless the underlying code or standard establishes a lower threshold of applicability. Changing a paved surface from Asphalt Cement Concrete (ACC) to Portland Cement Concrete (PCC) or PCC to ACC is considered repair (e.g., changing existing paved surface of parking areas, driveways, runways, and taxiways or installing a PCC keel on a runway to replace an ACC surface).

4.2.3.8. Work to install above ground utilities below grade may be considered repair provided the utility follows the same general route and does not install new utility service. The repair/replacement lines can be modernized and/or functionally sized to current requirements plus an allowance for possible growth. The “aggregation rule” ([Paragraph 3.5.4.4](#) and [Paragraph 4.3.3](#)) applies to utility repairs.

4.2.3.9. Consider each wastewater treatment plant or water treatment plant as a single facility (inclusive of all components, but not the external collection or distribution systems/lines—see [Table 3.2](#)). Existing components of the plants can be repaired by replacement, functionally sized, and modernized with state-of-the-art equipment. The

components can be installed in a new location if required to keep the existing plant operational throughout project execution. However, if addition of a new capability requires expansion of the facility footprint (such as addition of a tertiary waste treatment process where none existed previously), the programmer must classify the work as construction, as noted in **Paragraph 5.1.3.18. (T-0)**

4.2.3.10. As part of a utility system repair, the system components may be functionally sized and modernized to current requirements (for example, replacing 8-inch pipe with 12-inch pipe) plus some allowance for possible future growth is repair.

4.2.3.11. Landscaping or planting work done in conjunction with a facility project, which is on previously improved land, is classified as repair. Landscaping unimproved land is classified as construction. See **Paragraph 4.1.4** for guidance on natural infrastructure work to remove hazards.

4.2.3.12. **Artificial Turf.** Installations may replace natural turf on existing recreation fields or other improved surfaces with artificial turf and classify the work as repair. If classifying the work as repair, the existing improved surface must have demonstrated use (prior to installation of the artificial turf) as the same functional purpose it will have after the installation of the artificial turf. If the functional purpose of the improved surface changes upon installation of the artificial turf, then installation of the turf must be classified as construction. Installing artificial turf on unimproved land/surface must be classified as construction. See **Paragraph 3.5.17** for programmatic definitions of artificial turf.

4.2.3.12.1. Multiple fields in a single recreational complex may comprise a single “facility”. In such a situation, when comparing a repair project cost to the replacement cost (in accordance with **Paragraph 4.4**), the replacement cost includes the entire facility.

4.2.3.12.2. In accordance with **Paragraph 4.4.**, when a project to repair a natural turf surface by replacing it with artificial turf will exceed 75% of the replacement cost of the natural turf surface if a stand-alone facility, the BCE must ensure the project is approved by the MAJCOM (or AFIMSC) senior Civil Engineer (see **Paragraph 1.2.4**). **(T-1)**

4.2.3.12.3. In those instances in which the cost to repair a natural turf surface by replacing it with artificial turf will exceed the replacement cost of the facility, it may be possible to install the artificial turf surface under the classification of repair if it can be shown to be more cost effective than replacement. On a life cycle cost basis, if an artificial turf surface is less expensive than a natural turf surface because of recurring maintenance costs (watering, grass cutting, re-striping, etc.), it may be possible to replace an existing natural turf surface with artificial turf that has a higher initial cost than turf replacement. Programmers are cautioned to cite a realistic expected life of the artificial turf surface to preclude bias toward installation of an artificial turf surface.

4.2.3.13. Existing CBRN collective protection systems can be replaced with functionally-sized, state-of-the-art systems as repair.

4.2.3.14. To classify any other work which adds a component which did not previously exist, but is necessary to bring a facility into compliance with other codes as repair, address on a case-by-case basis with HAF/A4C.

4.2.4. **Golf Courses.** Refer to AFI 32-1022, for programming golf course maintenance and repair. For work classification determinations, components of a “golf course playing area” per AFI 32-1022, Paragraph 4.5.4. can be repaired by replacement. Installation of a component where it does not currently exist is construction.

4.2.5. **Combat Arms Training Facilities.** Unless fulfilling a temporary requirement, Combat Arms Training Facilities are real property. Ventilation systems, baffles, and manufactured bullet traps (permanently installed) may be maintained and repaired as real property. Installation of these where they did not previously exist is construction. Typically, if these components meet the following criteria, then they are RPIE: 1) permanently installed, 2) not relocatable in practice, **and** 3) integral to function of the facility. Verify RPIE determination with the Real Property Officer. Built-in target movement and retrieval systems are not considered real property or RPIE, and are the responsibility of the user. See [Paragraph 3.5.15.1.2](#) for RPIE guidance. Refer to ETL 11-18, *Small Arms Range Design and Construction*, for combat arms training facility standards. Cleaning, inspection, disposal of hazardous and nonhazardous residues, and daily maintenance of range components is the responsibility of the user to fund or perform. Periodic maintenance, repair, and replacement of range components, if RPIE, is a Civil Engineer (CE) responsibility.

4.2.6. **Repair and Construction.** Although repair and construction may overlap to some degree, it is important to distinguish between the two in programming and execution. See [Chapter 5](#) for examples of construction.

4.2.7. Multiple Fund Sources, Companion Projects, and Concurrent Work.

4.2.7.1. When repair work in a facility requires multiple fund sources (to include multiple EEICs) to provide a complete and usable facility, programmers must ensure all work is programmed on a single programming document, but with costs identified separately (e.g., Restoration and Modernization [R&M] Repair EEIC 522xx, Sustainment Repair EEIC 524xx, and UMC EEIC 529xx, each detailed on separate line items). **(T-1)** For example, if a dormitory (reconfiguration) requires construction of balconies to be complete and usable, program a single project including both the reconfiguration work classified as repair and the balcony work classified as construction. Similarly, when sustainment work is to be done in a facility and R&M work is also necessary to allow the work to be complete and usable, programmers must ensure both the sustainment (EEIC 521xx or 524xx) and R&M work (522xx or 529xx) are programmed together, but with the costs identified separately. **(T-1)** The work schedule for multiple fund sources must identify the various elements of work in each category (maintenance, repair, or construction) and include the costs for each element. The above guidance applies to both in-house and contract work. For contract work, project managers and contracting officers shall make sure this requirement is explained in the invitation for bids or request for proposals, included in the submittals, and incorporated into the resulting contract. **(T-1)** Additionally, project managers and contracting officers shall ensure the contractor clearly identifies the separate categories of work on the contract drawings. **(T-1)** Also, for all contract change orders, the project managers and contracting officers must identify

changes against the applicable work schedules, and compute and fund the costs accordingly. **(T-1)**

4.2.7.2. Do not confuse multiple fund sources with companion projects. Companion projects are complete and usable on their own, whether they are from multiple fund sources or not, but are both necessary to fulfill the requirement (e.g. a NAF project with a *companion* demolition project). Companion projects may be programmed on a single programming document, but if they are in separate documents, they must refer to each other. Companion UMC projects must comply with **Paragraphs 5.2.2.** and **5.2.3** guidance on multiple projects in a single facility.

4.2.7.3. Concurrent projects are independent projects taking place in the same facility and being accomplished at approximately the same time. Concurrent projects should not be programmed on a single programming document; however, it is acceptable to develop a single document (e.g., approval request cover memo) that serves as a comprehensive listing of multiple concurrent projects for the purpose of aggregating projects to determine if total cost of repair or construction work within a single facility requires higher-level approval. It must be clear in the comprehensive document that it is a compilation of separate “projects”. **(T-1)** See **Paragraph 4.3.3** for the definition of *current repair requirements*. Programming either companion or concurrent projects in separate programming documents does not prevent a contracting strategy of combining the projects for a single acquisition.

4.2.8. Energy and Water Conservation and Renewable Energy Improvements. When programming projects which achieve energy conservation, programmers shall use the “EC” shred as the last two digits of the EEIC (e.g., 529EC, 522EC), regardless of fund source. **(T-1)** Subject to the limitations in **Paragraph 4.2.2**, modernization efforts to repair or replace existing systems for energy efficiency improvements can be considered repair by replacement projects. These modernization efforts can include:

4.2.8.1. Heating/cooling Systems (decentralized heat plants, energy recovery, paint hangar HVAC recirculation, Precision Measurement Equipment Laboratory efficiencies, infra-red heating, destratification fans, etc.).

4.2.8.2. Heating/cooling/fuel distribution that supports existing infrastructure.

4.2.8.3. Water conservation/water re-use (distribution, plumbing, fixtures, controls, wells, no-flow, xeriscape, etc.).

4.2.8.4. Lighting efficiencies (daylighting, replacing lighting system technologies, etc.) as long as no new areas are lighted.

4.2.8.5. Sensors (CO₂, occupancy sensors, etc.) that support existing infrastructure.

4.2.8.6. Meters/hardware/software that support existing infrastructure (Energy Management and Control Systems, Direct Digital Controls, Supervisory Controls and Data Analysis, Building Automation Systems, Industrial Control Systems that support existing infrastructure).

4.2.8.7. Renewable Energy systems (solar hot water, ground source heat pumps, wind, solar (photo-voltaic) power, solar walls, geothermal, biomass, waste-to-energy, etc.) that support existing electrical loads.

4.2.8.8. Adding roofing (cool roofs, green roofs, etc.) over existing roofed areas that improve existing facility energy performance. See [Paragraph 4.2.2](#) for repair by replacement. Adding any of the supported capabilities where none currently exists is construction.

4.2.9. **Sustainability and Guiding Principles Compliance.** The Air Force is committed to incorporate sustainable concepts in the planning, programming, design, construction, and operation of facilities and infrastructure. As project planning and programming is the first stage of the facility development process, decisions made during this stage set the project direction and have the greatest impact upon facility life-cycle costs. Installations must comply with Air Force sustainable design and development guidance to the maximum extent practicable. Programmers shall ensure all major renovations (50% of replacement cost) which provide a significant opportunity for substantial improvement incorporate Federal requirements for High Performance and Sustainable Buildings (HPSB). **(T-1)** This threshold is applicable in the work's pre-award phase. UFC 1-200-02, *High Performance and Sustainable Building Requirements* provides guidance regarding HPSB requirements. See [Paragraph 6.14](#) for additional sustainability guidance.

4.3. Approval and Notification Levels.

4.3.1. Approval and congressional notification levels for repair projects are set forth in [Paragraph 1.6](#) and [Table 1.1](#). See [Paragraph 3.6.5.1](#) for project approval request requirements. Maintenance projects do not require approval under 10 USC § 2811 (MAJCOMs, AFIMSC, and installations may have approval requirements for maintenance projects).

4.3.2. Through Headquarters Air Force Mission Directive 1-18, SECAF re-delegated 10 USC § 2811 project approval authority to SAF/IE, who further re-delegated the authority to SAF/IEE. SAF/IEE re-delegated approval authority for active duty repair projects costing \$7,500,000 and less to HQ USAF/A4C. HQ USAF/A4C further re-delegated approval authority for repair projects costing \$5,000,000 and less to each MAJCOM's or AFIMSC detachment's senior civil engineer (see [Paragraph 1.2.4](#)), who may re-delegate as desired. Failure to seek proper approval before obligating project repair funds can expose personnel to a possible statutory violation. In a multi-phase project (single facility), failure to obtain the appropriate level of approval for all phases before obligating funds on any phase may expose personnel to a programming or statutory violation. See [Paragraph 3.5.2](#) for definition of project phases. See [Paragraph 3.6.5.1](#) for project approval request requirements. For Defense Logistics Agency-Energy and Defense Health Programs exceptions see [Paragraphs 6.10 and 6.11](#), respectively.

4.3.3. **“Aggregation Rule”.** Splitting projects/requirements to stay below a threshold is a programming violation. The Aggregation Rule is in place to protect programmers from the temptation or direction to avoid approval thresholds. Programmers shall ensure all *current repair requirements* in a facility are combined when determining the appropriate approval authority for a repair project. **(T-1)** *Current repair requirements* means anticipated repair requirements in a facility which are needed and planned for accomplishment during the current fiscal year (FY) which are related or contiguous/adjacent, to include in-house work exceeding \$100,000. If a new requirement arises which is related or contiguous/adjacent to another current requirement, it must be aggregated for approval threshold determination,

even if those other requirements have been previously approved or awarded in the current fiscal year. Related requirements are those that contribute to the same requirement—only exclude those which are clearly unrelated. Also, all phases (see guidance in [Paragraph 3.5.2](#)) of a repair requirement, even though they extend beyond the current FY, must be included in the *current repair requirements*. Do not include in the aggregation requirements/projects or phases of projects that have been awarded in previous FYs. However, approval requests should reference phases awarded in previous FYs. Un-awarded, previous-FY projects must either be cancelled or updated to reflect the newly required FY and must be considered *current repair requirements*. If the cost of un-awarded, previous FY, current year requirements, and new *current requirements* in aggregate exceeds the current approval authority, the BCE must seek appropriate approval authority for the combined cost. **(T-1) Note:** Do not split requirements. Do not manipulate the timing of a repair project or ignore repair requirements to influence a project's appropriate approval level. Do not separate related or adjacent/contiguous requirements over multiple years to avoid a cost threshold (or even give the impression of avoiding a threshold). For example, do not renovate bays/rooms 1, 3, 5, and 7 one year and the intervening bays/rooms 2, 4, 6, and 8 the following year without aggregating all of them for approval. Aggregated projects submitted for approval can be listed together in a cover memo or some other document.

4.3.3.1. Aggregation in Network Facilities. Aggregation in a network facility may be necessary for two purposes: 1) to determine the extent of the network facility being replaced or 2) for approval threshold determination. The rules for each purpose are different. For purposes of determining whether more than 75% of a network facility is being replaced as repair (see [Paragraph 4.2.2.2.2](#)) all known phases of a repair-by-replacement requirement through the current AMP cycle for the entire network facility must be included in the *current repair requirement* (see [Paragraph 3.5.2](#) for definition of project phases). However, for approval threshold determinations, aggregation is only necessary at the major component level (or in some cases sub-component level as described below). Projects and phases of projects (for both repair and repair-by-replacement) within those components or sub-components shall be aggregated in accordance with [Paragraph 4.3.3](#). Situations for project aggregation at the sub-component level are as follows:

4.3.3.1.1. Named roads can be treated as separate sub-components of the “Road” component for project aggregation purposes. Programmers must group parking lots, fences, and/or sidewalks serving a single building with the associated building for determining compliance with construction and repair approval and notification thresholds. **(T-1)**

4.3.3.1.2. Non-contiguous and non-adjacent (e.g., separated by unimproved surface) airfield pavements can be treated as separate sub-components for aggregation purposes—project aggregation is only required within a sub-component, not the entire network facility. For example, Taxiway Alpha may be a sub-component of the “Airfield Taxiway” component, and can stand alone for aggregation purposes. Programmers may not necessarily distinguish “named” infrastructure (e.g. Alpha Apron, Bravo Apron) as separate sub-components unless they meet the criteria of being non-contiguous and non-adjacent. Intersecting taxiways can be treated as separate sub-components; however, continuous taxiways (e.g., a taxiway that turns,

but does not intersect another taxiway) must be treated as a single sub-component for aggregation purposes. (T-1) A taxiway crossing a runway is a continuous taxiway for aggregation purposes.

4.3.3.1.3. Feeders separated by substations may be programmed as separate sub-components. A feeder which can be activated/de-activated independent of other feeders can be considered a distinct sub-component. (Lighting systems are separate from distribution.)

4.3.4. After approving O&M-funded repair projects in a single facility (individually or in aggregate) estimated to exceed \$7,500,000 SAF/IEE will report the approval to the appropriate congressional committees and such projects may not proceed until AF/A4CF notifies the MAJCOM/AFIMSC detachment that the congressional notification has been completed. Failure to obtain SAF/IEE approval of such projects prior to the obligation of funds may be a statutory violation. See **Attachment 2, Paragraph A2.14** for details on the contents of a project approval request package. ARC will establish procedures within their respective chains to obtain necessary SAF/IEE approvals and notifications for O&M-funded projects.

4.3.5. The “aggregation rule” (**Paragraph 4.3.3**) does not apply to emergency repairs required solely to correct a life, health, or safety threatening deficiency. However, emergency projects, standing alone, require approval at the appropriate level prior to obligating funds (without regard to other pending non-emergency repair projects), to include modifications or other changes. Programmers and project managers must ensure proper approval is in place prior to funds obligation. (T-0) See **Paragraph 3.6.7** for additional emergency project guidance.

4.4. Economic Analysis and Cost Effectiveness. If *current repair requirements* (defined in **Paragraph 4.3.3**) exceed the EA thresholds and meet criteria laid out in **Paragraph 3.6.6**, the BCE must ensure an EA documenting that repair is more cost effective than constructing a new facility or EA waiver accompanies the DD Form 1391. (T-1) MAJCOM (or AFIMSC) senior Civil Engineers (see **Paragraph 1.2.4**) must approve requests to perform facility repairs (including EEIC 524xx sustainment repairs) which exceed 75% of the estimated cost of a military construction project to replace the facility. (T-1) See **Paragraph 3.5.1** for facility replacement cost policy.

4.4.1. **Facilities on National Register of Historic Places.** Repairs to facilities eligible for listing or listed on the National Register of Historic Places should be more cost effective than replacement. However, exceptions may be requested and require documentation from the State Historic Preservation Office noting that the repairs for the facility in question must be undertaken as proposed and the facility cannot be demolished. Even with this documentation, an exception is not assured.

4.4.2. **Replacing Overhead Electrical Distribution Facilities.** In a case where overhead electrical distribution is being replaced with an underground system for the purposes of reduced maintenance cost, mitigating storm susceptibility, or AT mitigation, the repair cost may exceed the replacement cost of the portion of the system being moved underground. At minimum, for any project under this exception programmers must secure MAJCOM (or AFIMSC) senior Civil Engineer approval (see **Paragraph 1.2.4**). (T-1) Approval thresholds

for staffing beyond the MAJCOM apply. A request for approval must include justification explaining the benefits.

4.5. Re-Approval “125% Rule”. Repair cost increases may not exceed 125% of the approved amount without re-approval by the appropriate approval authority. When multiple projects are approved in aggregate, each individual project will require re-approval at the 125% cost increase threshold by the appropriate approval authority for that individual project. Programmers or project managers must ensure the work causing an individual project to exceed 125% of the approved amount does not commence until approved or re-approved by the appropriate authority. **(T-1)** See **Paragraph 4.3.3** for aggregation requirements.

4.5.1. Cost Increase and Re-approval. Once approval for a scope of work is obtained in accordance with **Paragraph 4.3**, repairs may proceed without further review under 10 USC § 2811. If, after AF/A4C approves an O&M-funded-repair project costing over \$5,000,000 and project costs later exceed \$7,500,000, programmers or project managers must request SAF/IEE approval, including notification to the appropriate congressional committees, regardless of whether the cost is 125% of the approved amount. **(T-0)** The BCE must ensure **any portion of the work** that will cause the project (including all phases) to exceed \$7,500,000 shall not start until after approval by SAF/IEE and SAF/IEE’s necessary report to the appropriate congressional committee is complete. **(T-0)** Do not proceed with obligation of funds until AF/A4CF provides written notification that the congressional notification and waiting period is complete.

4.5.2. If modifications or additional phases of an already-approved project will cause the total project cost to exceed the current approval level or change the approved scope, programmers or project managers must obtain appropriate approval prior to obligating funds for the newly-added repair (see **Paragraph 3.5.2** for definition of project phases). **(T-1)** Also, if other current repair requirements in the same facility collectively cost more than the currently-approved level, programmers or project managers must ensure funds for the repair causing the aggregated amount to exceed the approval level may not be obligated until appropriate approval is obtained. **(T-1)**

Chapter 5

UNSPECIFIED MINOR CONSTRUCTION

5.1. Unspecified Minor Construction (EEIC 529xx). The source of funds for UMC can be either O&M or Military Construction Appropriations (MCA), which is referred to as unspecified minor military construction (UMMC). This Instruction does not provide guidance for MCA-funded UMMC. See AFI 32-1021 for MCA-funded UMMC guidance. As discussed in Chapter 1, the cost of an O&M-funded UMC project may not exceed the threshold stated in 10 USC § 2805(c) (\$1,000,000 as of the date of this Instruction). The threshold for using funds available for operation and maintenance for laboratory revitalization and recapitalization projects is stated in 10 USC § 2805(d) (\$4,000,000 as of the date of this Instruction).

5.1.1. Construction. Construction means to build, develop, convert, or extend real property and real property systems or components, or any acquisition of land. It includes erecting, installing, or assembling a new facility; adding, expanding, extending, or converting an existing facility; or relocating an existing facility. This definition includes RPIE installed and made a part of such facilities, and related site preparation (excavation, filling, landscaping, or other land improvements). See [Paragraph 3.5.15.1.2](#) for RPIE guidance. The product of a construction project must be complete and functional for its intended purpose. Refer to the examples of construction class work provided in this chapter to determine what constitutes construction. When programming this work classification within the Air Force Civil Engineering project management database, programmers will ensure the first word of the project title is “Construct”, “Add”, or “Convert”. **(T-1)** See [Attachment 2](#) for details on preparing a DD1391.

5.1.1.1. Facility Conversion. As defined in [Paragraph 3.3.3](#), conversion takes place when the functional purpose of a facility or portion of a facility changes from one of the Functional Purpose Categories outlined in [Table 3.1](#) to another. The work necessary to affect the change in functional purpose is classified as construction, including interior reconfiguration. The work consistent with sustainment of the facility may be classified as repair or maintenance. When undertaking conversion work, programmers will take account of all work to be done, and properly classify each portion of the work according to the guidance of this paragraph. **(T-1)** The sum of the construction work and the sum of the repair work is each subject to respective approval thresholds. The total project (both the repair and construction work), must result in a complete and usable facility. Programmers will document the justification for classifying the work. **(T-1)**

5.1.1.2. Classifying Post-Conversion Work. Within 24 months following a facility conversion (as defined in [Paragraph 3.3.3](#)) work consistent with sustainment of the facility, regardless of function, can be classified as maintenance or repair as appropriate. However, during this 24-month time period, work not considered consistent with sustainment, regardless of function, is construction (except for damage repairs). The 24-month “clock” begins upon award of a conversion project **or** the first demonstrated use of the affected portion of the facility as its new function (where a change in functional use occurs without or before construction) documented by a memorandum for record signed by the real property officer, whichever occurs first. If work is necessary to meet current standards or codes and is solely driven by the conversion (new function) within the 24

months following conversion, then the work must be classified as construction. If the work necessary to meet current standards or codes is justifiable regardless of the change in functional purpose, it can be classified as repair. Advise the real property accountable officer to complete AF Form 123 to document a category code change. **Note:** A category code change is not the equivalent of change in functional purpose.

5.1.2. **Cost Increases.** Programmers or project managers shall ensure UMC cost increases do not exceed 125% of the approved amount without reapproval by the appropriate approval authority. **(T-1)** Programmers or project managers shall ensure that at no time may a UMC project exceed the statutory threshold. **(T-0)** Re-approval at the appropriate level is required if UMC project cost increases cause the total funded cost to exceed the current approval threshold. The BCE must ensure management controls are in place until project financial closeout to ensure total obligated costs do not exceed approval levels. **(T-1)**

5.1.3. **Specific Projects Classified as Construction.** The following will, as a minimum, be classified as construction unless clearly falling within the definition of repair (see [Paragraph 4.2](#)): **(T-1)**

5.1.3.1. Creating new or enlarging existing real property facilities (volume or footprint), including adding mezzanines (unless installed as free standing equipment), or expanding the coverage of real property facility systems or components which are not inside a building.

5.1.3.2. Purchase and installation of RPIE when the RPIE did not previously exist. See AFI 32-9005, Attachment 2, for a representative list of equipment that is considered RPIE. RPIE determinations are made by AF/A4C in accordance with applicable General Services Administration and DoD policy. See [Paragraph 3.5.15.1.2](#) for RPIE guidance.

5.1.3.3. Expansion of any part of a facility's foundation system beyond its current footprint and elevation, or expansion of functional space, including, but not limited to, ground level landings and sidewalk systems, balconies, and new basement areas.

5.1.3.4. Increases to a facility's total volume, although increases in the existing usable floor space and interior volume are properly classified as repair if they result from rearranging the existing space within a facility (i.e., the overall footprint of the facility did not increase). Refer to [Paragraphs 5.1.1.1](#) and [5.1.1.2](#) for conversion restrictions.

5.1.3.5. Installation of building systems not presently installed (e.g., upgrading an existing ventilation system with air conditioning and/or heating).

5.1.3.6. All work required to relocate a facility, including transportation, site work at the new location, and restoration of the vacated site.

5.1.3.7. Upgrading the surface of unpaved roads, walks, trails, parking areas, driveways, runways, and taxiways; for instance, converting from unimproved soil to crushed rock/gravel or from crushed rock/gravel to asphalt pavement.

5.1.3.8. Increasing the footprint of existing paved surfaces.

5.1.3.9. Changing the permanent route of roads, walks, trails, or other real property transportation systems, except when done solely to reduce the cost resulting from, or to avoid, unacceptable traffic disruption during repair. Costs to temporarily reroute traffic during repair projects are an integral part of the repair and should be classified as repair.

- 5.1.3.10. Installation of real property walkways.
- 5.1.3.11. Installation of roadway accessories such as curbs and gutters, not currently in place.
- 5.1.3.12. Installation of bicycle or jogging paths and related benches, lighting, or other real property support structures.
- 5.1.3.13. Installation of underground storm water conveyance systems not currently in place.
- 5.1.3.14. Adding or expanding utility service (water, electric, HVAC, etc.) to a section of a building that currently does not have it, to include the completion of any previous work associated with the expansion (e.g., adding plumbing fixtures to previously “roughed in” plumbing).
- 5.1.3.15. Adding an additional story (including a mezzanine) within the existing footprint and volume of a facility. Any added space must be within the allowed square footage (see AFMAN 32-1084 or ANGH 32-1084 for ANG facilities).
- 5.1.3.16. Installation of airfield navigational aids to include airfield lighting. Adding lighting integral to airfield pavements (e.g., taxiway lighting) is construction, unless it is added to meet documented codes or standards and is being added as part of a repair to the respective pavement.
- 5.1.3.17. Installation of a protective cap on a solid waste landfill. Scope of work includes but is not limited to required sediment and erosion controls, establishing proper subgrade slopes, installing landfill gas vent wells and stone trenches, installing geosynthetic gas vent/liner/drainage layers, final cover soils, and the relocation/consolidation of waste material found unexpectedly outside the reported limits of waste.
- 5.1.3.18. Adding or installing a new treatment component to a wastewater or water treatment plant that did not previously exist and that creates new footprint for the plant, even if done to meet code or standards.
- 5.1.3.19. Allied support (e.g., site work, foundations, utilities, etc.) to non-RPIE is considered real property and is a Civil Engineer responsibility. Adding allied support that did not previously exist shall be classified as construction. For guidance regarding allied support for temporary facilities, see **Paragraph 3.5.9**.
- 5.1.3.20. Any acquisition of land is classified as construction. If land acquisition is associated with another project, it is a funded cost to the project. Independent land acquisition is programmed as a construction project.

5.2. Aggregating Construction Projects.

5.2.1. **General Rule.** Planners and programmers will plan and program all known UMC work required for a facility within the next 12 months (do not split the full requirement to stay under a cost threshold), whether O&M- or MCA-funded, for accomplishment as a single construction project. **(T-1)** The 12-month window is defined as completion (placed-in-service date) of one project and start (award) of the next project or upon the start of construction for non-contract projects. Planners and programmers shall not combine funds

from different appropriations (i.e., O&M, P-341-UMMC, RDT&E, and NAF) for a single UMC project, although you may program certain APF activities within a NAF facility (e.g., a military clothing sales store in a base exchange). **(T-0)** SAF/IEE must approve the combined use of APF and NAF for construction in a NAF facility, regardless of cost (see AFI 32-1022). UMC may be phased as long as the total cost of all phases does not exceed the statutory limit for minor construction. Phases are defined as being interdependent in achieving an overall requirement or objective, and are complete and usable on their own. See [Paragraph 3.5.2](#) for the details about phases.

5.2.2. Exceptions to Construction Aggregation. **Exceptions** to the criteria for combining construction work into a single project as outlined in [Paragraph 5.2.1](#). are as follows:

5.2.2.1. The requirement for an additional construction project in a 12-month period could not have been reasonably anticipated at the time the previous construction project was initiated; or

5.2.2.2. The requirement for an additional construction project is for an area of the facility with a different category code or function. Each project must be independently complete and usable, must be in **clearly** unrelated and noncontiguous areas of the building, and each programmed separately with its own approval threshold and statutory limit. For infrastructure and utility systems, construction on clearly unrelated and noncontiguous components of the system can be programmed as separate undertakings, each with its own approval threshold and statutory limit.

5.2.3. Approval for Multiple Construction Projects. To carry out any of the **exceptions** noted in [Paragraph 5.2.2](#) programmers must obtain prior written approval (signed programming documents) by the senior MAJCOM (or AFIMSC) CE (see [Paragraph 1.2.4](#)) when the total, combined funded construction cost of such projects in a single FY exceeds the UMC statutory limit. **(T-1)**

5.3. Sustainability. Planners and programmers shall ensure all new vertical construction meeting United States Green Building Council LEED Minimum Program Requirements (MPRs) fully incorporate Federal requirements for HPSB. **(T-0)** See [Paragraph 4.2.9](#) for additional guidance regarding HPSV requirements. New vertical construction not meeting these MPRs shall incorporate these Federal standards to the maximum extent practicable. Additionally, installations must comply with Air Force sustainable design and development guidance. See [Paragraph 6.14](#) for additional sustainability guidance.

5.4. Aircraft Sunshades. AF/A4L establishes AF policy on aircraft sunshades. Siting, energy/water consumption systems, and other considerations must be approved by the installation Facilities Board. Allied support, such as power or water up to a stub at the sunshade location, is considered real property and is a Civil Engineer responsibility. Adding allied support that did not previously exist shall be classified as construction. See [Paragraph 6.19](#) for additional guidance on aircraft sunshades.

Chapter 6

SPECIAL PROGRAMMING CONSIDERATIONS

6.1. Fund Source Categories. This paragraph addresses the source of funds for O&M-funded work classified according to **Chapters 4 and 5**. **It is critical that programmers first correctly identify the work classification when programming projects to determine the appropriate approval authority thresholds and fund sources.** (T-0) Work classifications (maintenance, repair, and construction) as well as demolition should not be confused with fund source categories (Sustainment and R&M). Work classification, not fund source, determines O&M threshold amounts for S/R&M projects. After the work has been classified, the proper O&M funding category can be determined, as defined in **Paragraphs 6.1.1, 6.1.2, and 6.1.3** below. O&M S/R&M funds (3400) are provided in two PECs: PEC ***78F, Sustainment and PEC ***76F, Restoration and Modernization.

6.1.1. Sustainment.

6.1.1.1. Sustainment Maintenance. Maintenance includes work to maintain the inventory of real property assets through its expected service life. It includes regularly scheduled adjustments and inspections, and preventive maintenance tasks. Maintenance is routinely completed through the Recurring Work Program and Direct Scheduled Work Program. There may be times when a contract effort is necessary to complete maintenance work. See **Paragraph 4.1.2.** for examples of contract maintenance work. Assign these projects EEIC 521xx (Sustainment Maintenance). All funded costs, in-house or contract, for this work should be charged to PEC ***78F. Refer to **Paragraph 6.2.1** for environmental compliance funding eligibility.

6.1.1.2. Sustainment Repair. Sustainment repair includes scheduled repair activities to maintain the inventory of real property assets enabling them to reach their expected service life. It includes emergency response and service calls for minor repairs. It also includes major repairs or replacement of facility components (usually accomplished by contract) that are expected to occur periodically throughout the life cycle of facilities, and any repairs to inadequately-sustained components. This work includes regular roof replacement, refinishing of wall surfaces, repairing and replacement of heating and cooling systems, replacing tile and carpeting and similar types of work. Timing of the work (within or post life cycle) isn't the determining factor between sustainment and R&M—the purpose of the work is the primary factor. Life cycle repairs accomplished post-expected life cycle (e.g., deferred, delayed, neglected) are still sustainment repairs. Use Asset Management concepts and tools to identify and program life cycle sustainment projects. Assign these projects EEIC 524xx (Sustainment Repair). All costs for this work should be charged to Program Element ***78F. Refer to **Paragraph 6.2.1** for environmental compliance funding eligibility. See **Paragraph A3.2.** for more details and examples for sustainment funding.

6.1.2. Restoration and Modernization.

6.1.2.1. Restoration Repair. Includes repair and replacement work to restore facilities collaterally damaged due to inadequately sustained components, natural disaster, fire, accident or other causes. This is considered non-life cycle repair of real property.

Programmers shall assign these projects EEIC 522xx (Restoration & Modernization Repair). **(T-1)** All costs for this work should be charged to PEC ***76F. In the case of repairs necessary because of inadequate sustainment, any work required to directly resolve the lack of sustainment is still considered sustainment repair (not to include collateral damage).

6.1.2.2. **Modernization Repair.** Includes alteration of facilities or components solely to implement new or higher standards (including regulatory changes and code compliance), or to accommodate new activities. This is considered non-life cycle repair of real property. **Exceptions** include work associated with functional conversion and work classified as construction (see [Paragraph 5.1.3](#)). Programmers shall assign these projects EEIC 522xx (Restoration & Modernization Repair). **(T-1)** All costs for this work should be charged to PEC ***76F

6.1.2.3. **Modernization Minor Construction.** Includes work associated with functional conversion and work classified as UMC (see [Paragraph 5.1.3](#)). Programmers shall assign these projects EEIC 529xx (Minor Construction). **(T-1)** All costs for this work should be charged to PEC ***76F.

6.1.3. **Examples.** Detailed examples of these categories of work are in [Attachment 3](#). Refer to [Paragraph 6.2.1](#) for environmental compliance funding eligibility.

6.1.4. Demolition and Consolidation.

6.1.4.1. **Demolition.** Programmers shall assign contract costs for independent facility demolition work PE***93F, EEIC 53601, Building Demolition. **(T-1)** When demolition is required to comply with AT requirements, assign EEIC 536XT. If demolition work is required to accomplish a UMC project or a repair project (i.e., the project depends on the demolition), the cost for demolition or removal work is a cost of the associated project and will be funded as an integral part of the associated project and carries the same class of work and EEIC as the associated project.

6.1.4.2. **Consolidation.** Consolidation may be performed using PE***93F, EEIC 53601, Building Demolition, **if the consolidation includes demolition.** See [Paragraphs 3.3.1](#) and [3.3.2](#) for definitions of demolition and consolidation. Any consolidation effort using PEC ***93F funds must include demolition that results in a net reduction of real property. Programmers or project managers must ensure the associated demolition work is awarded no later than the end of the period of performance of the consolidation project. **(T-1)** Design of a consolidation project which includes demolition may be funded with PEC ***93F funds. Consolidation-related work also may be funded with other PECs. Work classified as repair will be properly assigned Element of Expense Investment Code (EEIC) 522xx or 524xx, minor construction work will be assigned EEIC 529xx, and demolition work will be assigned EEIC 53601 (536XT for AT demolition requirements). Programmers must ensure the programming document indicates the appropriate Element of Expense Investment Code (EEIC) for the type of fund being used. **(T-1)**

6.1.5. **Programming for Different Fund Categories within a Single Project.** If a single requirement includes both Sustainment work and R&M work which are dependent upon each other for the facility to be complete and usable, programmers shall ensure each type of work is accounted for separately, but programmed within the same project and on a single

programming document. (T-1) If multiple requirements in a facility are independent of each other, then they can be programmed on separate programming documents.

6.1.6. Program Element Code (PEC) and Element of Expense Investment Code (EEIC). Refer to **Table 6.1** for the most commonly-used PECs aligned to each MAJCOM. Customers' funding may require deviations from this table. Designating the proper EEIC may depend on several factors (work classification, acquisition method, type of project, etc.). The first three digits of many EEICs are discussed throughout this Instruction. **Table 6.2** lists the EEICs assigned to work classifications.

Table 6.1. PECs commonly aligned to MAJCOMs.

MAJCOM	Sustainment	R&M	Demolition	WCF
AFGSC	11978f	11976f	28093f	
AFSOC	22178f	22176f		
AETC				
PACAF				
ACC				
USAFE				
AFSPC	31378f	31476f	58093f	
ANG	52278f	52276f		
AFRC	52578f	52576f		
AFDW	41978f	41976f	41893f	42978f
AETC				42976f
AMC				43078f
AETC	85978f	85976f	85793f	
USAFA	86078f	86076f	85893f	
AFMC	72978f	72976f	72893f	
AFMC (T&E)	65978f	65976f	91293f	AFMC only 72974f
AFDW	91378f	91376f		72975f

NOTE: Projects selected for funding under the centralized Sustainment, Restoration and Modernization (R&M), and Demolition programs may execute under PECs 22178f, 22176f, and 23093f respectively. The first three digits (***) of the PEC are MAJCOM and mission area specific.

(see <https://fmdd.affsc.af.mil/data-elements/home> to verify if a PEC is current)

Table 6.2. Element of Expense Investment Code (EEIC) Series Table.

Work Classification	Description	EEIC Series¹	PEC Fund Source
Maintenance	See Paragraphs 4.1. and 6.1.1.1.	521xx	PEC ***78F Sustainment
Repair (Sustainment)	See Paragraphs 4.2. and 6.1.1.2.	524xx	PEC ***78F Sustainment
Repair (Restoration)	See Paragraphs 4.2. and 6.1.2.1.	522xx	PEC ***76F R&M
Repair (Modernization)	See Paragraphs 4.2. and 6.1.2.2.	522xx	PEC ***76F R&M
O&M Unspecified Minor Construction (Construction ≤ \$1M)	See Paragraphs 5.1.1. and 6.1.2.3.	529xx	PEC ***76F R&M ¹
A/E Design	Design to support Sustainment or R&M projects	532xx	Same as the predominant work
Engineering Services	See Paragraph 3.5.15.2.7.	532xx	Same as the predominant work
Inspection Services	See Paragraph 3.5.15.1.7.	Same as work being performed	Same as work being performed
Demolition	See Paragraph 3.3.1	536xx	PEC ***93F

1. For use of USSOCOM MFP-11 funds, use PEC 19578, see **Paragraph 6.1.7.**

Note: Refer to the Financial Management Data Quality Service (FMDQS) website for proper determination of the final two digits of the EEIC. The local Comptroller and/or Resource Advisor can assist in locating this resource.

6.1.7. United States Special Operations Command (USSOCOM) Restrictions. Major Force Program-11 (MFP-11) for facility O&M supports only minor construction (PEC 19578 and EEIC 529xx) and only for special operations-specific requirements. When a USSOCOM unit is a tenant, the BCE shall ensure the USSOCOM senior civil engineer representative is included in MFP-11-funded project approval. **(T-1)**

6.2. Other Funding Considerations.

6.2.1. Environmental Quality (EQ) Funding Eligibility. Primarily, EQ funding is to be used for the cost of initial construction, modification, or upgrade of a facility, system, or component(s) to comply with new environmental laws or regulations. Once constructed, maintenance and repair of these systems should be accomplished with S/R&M funds even if the need to perform maintenance or repair is to satisfy environmental requirements, as cited by an environmental law, regulation, or permit. However, EQ funding is to be used for construction, modification, or upgrade necessary to comply with new or increased EQ requirements. See AFI 32-7001, *Environmental Management*, for additional guidance on programming environmental projects and information on EQ exceptions including limited exemption on using EQ to address formal Enforcement Actions.

6.2.2. **Funding of Replacement Real Property Installed Equipment (RPIE).** If RPIE is being replaced and worked properly when originally installed, the repair or replacement of the item should be funded using O&M funds. This is applicable whether the equipment is being replaced as part of a larger repair project or as a stand-alone replacement. If the equipment was initially and properly funded with procurement funds, then it is not real property and its replacement would be funded with procurement funds. See [Paragraph 3.5.15.1.2](#) for RPIE guidance.

6.2.3. **Funding Military Construction Deficiencies.** Programmers and project managers shall ensure O&M funds are not used, regardless of funding source, to correct deficiencies in MCA-funded projects (when a component of the original MCA-funded construction has never functioned properly whether due to inadequate design, construction, or installation), including RPIE, throughout the life of the facility. **(T-0)**

6.3. Joint Basing Responsibilities. Guidance regarding joint basing facilities management responsibilities has been promulgated in Deputy Undersecretary of Defense (Installations and Environment) memorandum of 15 April 2008 “*Department of Defense Supplemental Guidance for Implementing and Operating a Joint Base*”, AF/A4C memorandum of 27 April 2011 “*Air Force Guidance for Military Construction (MILCON) Programming and Budgeting at Joint Bases*”, and subsequent guidance that supersedes or supplements this existing guidance. Memoranda of Agreement will govern where applicable. Questions regarding S/R&M responsibilities at specific installations may be directed to AF/A4C.

6.4. Use of Troop Labor. As discussed in [Paragraph 3.5.15.2.](#), troop labor is an unfunded project cost (except for the cost of military personnel assigned to DoD WCF activities). Programmers and project managers must ensure the MAJCOM (or AFIMSC) senior Civil Engineer (see [Paragraph 1.2.4](#)) responsible for the real property being constructed or repaired approves minor construction or repair projects in the United States, including Guam, Puerto Rico, and the Virgin Islands, planned for accomplishment with RED HORSE or Prime BEEF, if total funded **and** unfunded costs exceed the unspecified minor construction threshold stated in 10 USC § 2805(c). **(T-1)** For ANG, SAF/IEE approval is required. The policy to combine funded and unfunded costs is in consideration of fair competition with local contractors. This policy does not apply to any other locations. Nothing in this paragraph affects the statutory limitations and approval levels designated in [Chapter 1](#) of this Instruction for funded project cost. Retain documentation for such projects totaling over \$100,000 at the installation. This policy does not apply to facilities constructed with NAF.

6.5. Augmenting In-House Work Force. Programmers and project managers shall ensure the MAJCOM (or AFIMSC) senior Civil Engineer (see [Paragraph 1.2.4](#)) approves repair projects over \$750,000 planned for accomplishment by augmenting in-house workforce with civilian overhires or temporary duty personnel. **(T-1)** Further approval may be required per approval levels designated in [Chapter 1](#) of this Instruction.

6.5.1. To use civilian overhires or temporary duty augmentees in the U.S., the Installation Commander must certify at least one of the following conditions exists: (1) use of troop labor or overhires is required as a consequence of a labor strike which precludes work being done on schedule, and delay will seriously impede the mission; (2) there are no responsive bids to an Air Force invitation for bids or request for proposals; (3) security clearance requirements prevent contractor accomplishment; (4) there is an overriding urgency for completion of the

project by a specified date, not allowing time to prepare detailed plans and specifications; or (5) the safety and health of workers or the public is jeopardized. (T-1)

6.5.2. Projects with scopes of work limited to demolition and asbestos and lead based paint abatement may be accomplished by organic, temporary duty, overhire, or contract labor, so long as the choice is made to achieve best value for the Air Force while continuing to recognize the imperatives of mission accomplishment, and adherence to the principles and provisions of Office of Management and Budget Circular A-76. This limited authority will not be used in conjunction with repair projects and must be supported by an EA that compares contract accomplishment to other options considered.

6.6. Host-Tenant Relationships and Responsibilities.

6.6.1. **Host Base Planning Responsibility.** Tenants will provide appropriate input to hosts in the preparation, implementation, and maintenance of the Installation Development Plan (IDP). The host planners will work with tenants to integrate tenant plans into the IDP. (T-1) The host installation approves facility projects as determined through delegation of authority regardless of which organization provides project funds (ARC units will staff approval packages for ARC-funded projects). For Defense Logistics Agency-Energy and Defense Health Programs exceptions see **Paragraphs 6.10** and **6.11**, respectively.

6.6.2. **Tenant Planning Responsibility.** A tenant is responsible for providing the host with the tenant's requirements and justification data to support construction and repair projects using the host installation requirements identification process (normally an AF Form 332). Tenants shall have membership in the host installation's Facility Board. See AFI 32-10142, *Facilities Board*, for additional guidance.

6.6.3. Host-Tenant O&M Funding and Programming Responsibility.

6.6.3.1. **Air Force Tenants on Air Force Installations (Intraservice).** An Air Force host is responsible, in Air Force buildings with Air Force tenants, for funding all Sustainment requirements. The tenant is responsible for prioritizing and advocating all Restoration and Modernization (R&M) requirements with their parent MAJCOM. Parent MAJCOMs must incorporate and prioritize requirements of subordinate units which are tenants on other Air Force installations. Tenants without a parent MAJCOM must advocate for their R&M requirements through the host installation's Facility Board. **Paragraphs 6.1.1** and **6.1.2** provide the definitions of Sustainment and R&M respectively. Nothing precludes a tenant from funding facility support it deems necessary—the tenant must use appropriate funds for the facility and the work being accomplished. The tenant must follow appropriate procedures for coordinating S/R&M projects with the host. The tenant's real property permit and current support agreement may require reimbursement for specific support provided by the host.

6.6.3.2. **Contractor, Interservice, Interdepartmental, and Interagency Tenants.** The real property permit, license, lease, or other outgrant to the tenant, and the current Support Agreement with the tenant, provide guidance for determining when a tenant will provide reimbursement for support provided by the host.

6.6.3.3. The Air Force host is responsible for preparing or overseeing development of programming documents and obtaining proper project approval (per re-delegated approval authority thresholds), unless otherwise specified in a Memorandum of

Agreement, Memorandum of Understanding, or current Support Agreement (ARC units will staff approval request packages for ARC-funded work). For Defense Logistics Agency-Energy and Defense Health Programs exceptions see **Paragraphs 6.10** and **6.11**, respectively. The Air Force host shall program all O&M-funded facility requirements for new mission beddowns, including existing facility deficiencies, regardless of work classification, in accordance with AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*.

6.6.3.4. The tenant is responsible for advocating for or funding projects unique to the operation of the tenant, such as rearrangement of interior partitions to improve operations or force protection measures necessitated by the nature of the tenant's operation.

6.6.3.5. **ANG.** See **Paragraph 6.7** for ANG facility considerations.

6.7. Air National Guard Facilities Considerations.

6.7.1. **ANG Facilities on Other Component Installations.** The ANG is responsible for authorizing and funding all maintenance, repair, and construction projects for licensed, exclusive use ANG facilities per AFI 32-1012, *Reserve Components Facilities Programs*. The host installation engineer must review all ANG-funded construction and repair projects for potential conflict with other installation work. When the ANG is a tenant, the host is responsible for all O&M costs of jointly used areas which are not licensed to the ANG. O&M costs for unlicensed facilities used by ANG personnel performing an active duty mission shall be provided by the MAJCOM responsible for the mission.

6.7.2. **ANG Cooperative Agreements.** ANG S/R&M (O&M) projects outside Air Force owned or leased property require an agreement between the ANG and local authority. This is done via a Military Construction Cooperative Agreement (MCCA). The MCCA program is comprised of requirements for the terms, conditions, and cost sharing ratios for the ANG share of improvements on non-federal land--refer to NGR 5-1, *Grant and Cooperative Agreements*, Chapter 40. For design and execution of ANG S/R&M projects, refer to ANGI 32-1023, *Criteria and Standards for Air National Guard Construction*.

6.8. Air Force Reserves Facilities Considerations. Refer to AFRCH 32-1001 for guidelines and information for facility requirements in support of AFRC missions.

6.9. Energy/Water Conservation. Incorporate energy/water efficient features to the maximum extent possible in all construction and repair projects. See UFC 1-200-02 for energy criteria.

6.9.1. To help meet the mandated energy/water goals, several different funding sources for capital investments may be available for renewable energy, energy conservation and water conservation projects. Sources can include regular MCA funds, regular S/R&M funds; Energy Initiative funds; Energy Conservation Investment Program (ECIP) funds (Energy MILCON); Research, Development, Test & Evaluation; Environmental Security Technology Certification Program; Federal Energy Management Program (FEMP) funds; and grants. Non-appropriated funds (NAF) may be used to fund energy and water conservation projects for facilities and activities where NAF is the appropriate fund source.

6.9.2. Contact AFCEC regarding latest energy guidance pertinent to preparing project submittals and submit through MAJCOM.

6.9.2.1. The Energy Initiative Funds are funds centrally managed by the AFCEC Energy Directorate (AFCEC/CN).

6.9.2.2. ECIP funds are managed by OSD and administered by AFCEC/CN.

6.9.3. Other funding sources include third-party-financed projects, such as Energy Savings Performance Contracts (ESPCs), Utility Energy Service Contracts (UESCs), and Renewable Energy Power Purchase Agreements. However, before considering these funding sources, installation or MAJCOM engineers must contact AFCEC/CN for process, approval, and implementation details. Third party financing of projects is normally considered when there are not sufficient funds available for a direct Air Force capital investment. Transportation Working Capital Fund (TWCF), Medical, and Defense Commissary Agency (DECA) projects are excluded from consideration for NRG funding and are managed by others.

6.10. Petroleum, Oil, Lubricant (POL) Systems. Defense Logistics Agency-Energy (DLA-E) funds and is responsible for project approval on Air Force installations (including ANG installations) for the fuel systems and related appurtenances which receive, store, and dispense DLA-E-owned fuels, as well as for projects in facilities for which DLA-E earns sustainment funding. For guidance regarding POL project requirements, to include programming and documentation, contact DLA-E.

6.11. Defense Health Program (DHP). The Defense Health Agency (DHA) has authority to classify and approve DHP-funded projects. In the project planning stage, the medical unit on Air Force installations will coordinate their projects (fire compliance, safety compliance, siting approval, National Environmental Policy Act compliance, architectural compatibility, etc.) with the host Civil Engineer unit and other applicable installation officials early in project development and prior to sourcing funds. **(T-1)** The Using Medical Service facilities component will prepare and staff approval request packages through DHA for DHP-funded work in medical facilities. The Using Medical Service facilities component will also coordinate project closeout (real property updates, as-built updates, etc.) with the host Civil Engineer unit, including final project costs to complete financial close-out actions. **(T-1)** The Using Medical Service can determine the execution agent for O&M (DHP)-funded efforts.

6.12. Working Capital Fund (WCF). WCF activities (e.g. Transportation, Defense, etc.) are responsible for costs associated with S/R&M (O&M) projects in accordance with DoD Regulation 7000.14R, *DoD Financial Management Regulation*, Vol. 11B, Chapter 12, §1205. WCF activities use WCF funds to reimburse host installations or use direct cite funding for such work. When a WCF activity partially occupies a building, WCF will, as established above, fund costs in support of the space occupied by the WCF activity. WCF projects are subject to the same statutory limitations as O&M-funded projects. The Defense Commissary Agency (DECA) is a WCF activity; however, DECA facility S/R&M requirements are programmed, approved, and funded with non-appropriated funds and guidance. AFI 65-601V1 details all WCF activities on Air Force installations. Additionally, refer to any established base support agreements.

6.13. Accessibility. Planners and programmers shall ensure the scope of each construction and repair project incorporates applicable accessibility standards as prescribed by the Architectural Barriers Act (ABA). **(T-0)** Information on ABA guidelines may be found at their website at:

<http://www.access-board.gov/ada-aba/aba-standards-dod.cfm>.

6.14. Sustainability. Horizontal, vertical, and utility work must comply with Air Force sustainable design and development guidance. To the maximum extent possible, incorporate sustainable design principles in compliance with UFC 1-200-02; Air Force sustainable development policy; EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*; EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*; Energy Independence and Security Act of 2007; and the Federal Leadership in High Performance and Sustainable Buildings memorandum of understanding, consistent with budget and mission constraints. When applicable, programmers shall ensure programming documents include the cost associated with sustainable design elements necessary to achieve sustainable design guidance compliance, UFC and/or ETLs, as appropriate. **(T-0)** Sustainability elements shall not be cut from scope to reduce cost unless it can be demonstrated the only remaining option is to cut elements which directly impact mission.

6.15. Green Procurement. All projects, regardless of fund source or classification, shall comply with the Air Force Green Procurement Program (GPP), and GPP language shall be incorporated into contract documents. For specific compliance requirements refer to the Federal Acquisition Regulation (FAR) Part 23, Environment, Energy and Water Efficiency, Renewable Energy Technologies, Occupational Safety, and Drug-Free Workplace; FAR, Part 11, Describing Agency Needs; Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, dated 5 Oct 09; the DoD GPP Strategy; and the Vice Chief of Staff of Air Force Memorandum, Air Force Green Procurement Program, dated 2 Jun 2011. Referenced documents can be found on the Air Force Federal Acquisition Regulation Supplement Library webpage at: https://cs.eis.af.mil/airforcecontracting/knowledge_center/pages/5323.aspx.

6.16. Historic Property Considerations. Title 16 USC § 470f, *Effect of Federal undertakings upon property listed in National Register; comment by Advisory Council on Historic Preservation*, requires the Air Force to consider the impact of undertakings on properties that are potentially eligible (identified, but unevaluated), eligible for, or listed on the National Register of Historic Places (NRHP). For undertakings on historic properties (including force protection and anti-terrorism measures), the Air Force must engage in consultation with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) for Indian lands and other consulting parties to identify, evaluate, and mitigate any adverse effects on historic properties. Air Force undertakings that are found to adversely affect historic properties require mitigation measures outlined in a Memorandum of Agreement or Programmatic Agreement or cited in relevant concurrent National Environmental Policy Act documents (in compliance with Title 32, Code of Federal Regulations, Part 989, *Environmental Impact Analysis Process [EIAP]*). When projects are programmed to repair historic facilities, some additional cost may result from the use of materials and construction methods (life cycle costs may actually show historic properties are less expensive to repair and maintain in the long term) that comply with the Secretary of the Interior's Standards for Rehabilitation. AFI 32-7065, Cultural Resources Management Program, has additional guidance for undertakings on historic properties.

6.17. Fire Safety Deficiencies (FSDs). For guidance regarding programming projects to correct FSDs refer to AFI 32-10141.

6.18. Capitalizing Facility Improvements. Any capital improvements (e.g., extends useful life; increases efficiency, capacity, or size; changes functionality) to a facility or any other improvements must be capitalized by the installation Real Property Office in accordance with AFI 32-9005. Refer to UFC 1-300-08, *Criteria for Transfer and Acceptance of DoD Real*

Property, for facility capitalization guidance. The project manager is responsible for reporting all capital improvements on a DD Form 1354 to the Real Property Office. **(T-1)** A capital improvement is defined in the Financial Management Regulation (DoDI 7000.14-R, Volume 4, Chapter 6) and UFC 1-300-08 as an improvement to real property that increases the real property asset's square footage, size, capacity, efficiency, or useful life. Replacing a facility or facility component of the same size or capacity that has failed or is no longer performing the function for which it was designated is NOT a capital improvement and should not be recorded in the real property inventory. Capitalization costs include total project costs (both funded and unfunded). See AFI 32-9005 and UFC 1-300-08 for further details.

6.19. Aircraft Sunshades. AF/A4L establishes AF policy on aircraft sunshades. Aircraft sunshades, which are comprised of a roof and maximum of two sides, are equipment items (refer to AFI 21-136, *Aircraft Sun Shade Management*). Aircraft sunshades generally fulfill a long-term requirement and are not considered as relocatable facilities per the definition in DoDI 4165.56. The sunshade user is responsible for advocating, procuring, installing, and maintaining aircraft sunshades. Procurement will be made in accordance with AFI 65-601 V1, Paragraph 9.6., *Funding Relocatable Buildings, STSs and Aircraft Sunshades* and Table 9.2., *Funding For Relocatable Buildings, Stress Tension Shelters, Aircraft Sun Shades, And Other Modular Structures*. The user will appoint (to be designated by the contracting officer) a Contracting Officer Representative (COR) from within the user's organization for contract oversight of procurement, installation, and long-term sustainment of aircraft sunshades. With concurrence from the local Civil Engineer unit, the user may recommend a Civil Engineer as a technical representative to assist the COR in ensuring contractor compliance. Siting, energy/water consumption systems, and other considerations must be approved by the installation facility board. See [Paragraph 5.4](#) for allied support guidance. See AFI 65-601V1, Table 9.2., *Funding For Relocatable Buildings, Stress Tension Shelters, Aircraft Sun Shades, And Other Modular Structures*, for information regarding appropriations for funding sunshades.

6.20. Tension Fabric Structures. For tension fabric structures assembled from modular components intended to temporarily fulfill a requirement please refer to [Paragraph 3.5.9](#) Planners and programmers shall ensure structures intended to fulfill a long-term or permanent requirement are procured as real property and follow all appropriate construction guidance and policy. **(T-0)** Those previously procured as equipment items will remain equipment and remain the responsibility of the user. For guidance on converting equipment structures to real property, see AFI 32-1021, Chapter 6. See AFI 65-601V1, Table 9.2., *Funding For Relocatable Buildings, Stress Tension Shelters, Aircraft Sun Shades, And Other Modular Structures*, for information regarding appropriations for funding tension fabric structures.

6.21. Equipment Structures. Refer to AFI 32-9005 for guidance on real property determinations. Consider the following criteria to determine whether a structure is equipment or real property--a structure is likely real property if it fulfills a long-term requirement, is not mobile in practice, or has more than two walls. Also, if the structure encloses or covers equipment that is considered RPIE (see [Paragraph 3.5.15.1.2](#) for RPIE guidance), then the structure is likely real property. Allied support, such as power or water up to a stub at the equipment structure location, is considered real property and is a Civil Engineer responsibility.

6.22. Claims. AFI 65-601 V1, Paragraph 6.3.6.7.2 states that claims against O&M-funded minor construction projects are not to be counted against statutory limits. Similarly, claims against O&M-funded repair projects are not to be counted against statutory limits.

Chapter 7

FACILITIES FOR OPERATIONAL REQUIREMENTS

7.1. Authority and Limitations. Congress may authorize specific, unique authorities for O&M-funded facility construction supporting contingency operations (e.g., FY04 National Defense Authorization Act, Section 2808—as amended and extended by subsequent Defense Authorization Acts). When such authority is provided, provisions of this Chapter will apply to the extent they are consistent with such authority and any Undersecretary of Defense (Comptroller) (USD(C)) implementation guidance. Consult with AF/A4C as to the current status of such authority. The fund source for facilities provided under this chapter will be Air Force O&M Appropriation 3400.

7.1.1. This chapter only applies to construction projects necessary to meet an urgent military operational requirements of a temporary nature in support of a declaration of war, a national emergency under section 201 of the National Emergencies Act (50 USC § 1621, *Declaration of Emergency by President; Publication in Federal Register; Effect on Other Laws; Superseding Legislation*), or a contingency operation as defined in 10 USC § 101(a)(13).

7.1.2. Refer to DoDD 3000.10, *Contingency Basing Outside the United States*, for guidance regarding facility programming actions that may be undertaken in support of contingency basing outside the U.S. See AFI 10-504, *Overseas Force Structure Changes and Host Nation Notification*, for guidance regarding procedures for all basing actions affecting overseas installations.

7.1.3. This chapter only applies to that geographical area for which the combatant command conducting the contingency operation is responsible and then only in the area where actual operations are being conducted. The requirement for projects carried out under this authority should be in immediate and direct support of combat operations or force protection for those engaged in combat operations. It does not apply to a rear echelon even if that echelon provides support to the front-line troops.

7.1.4. This chapter is intended to address contingency facility requirements costing more than the UMC threshold stated in 10 USC § 2805(c). Requirements costing less than the UMC threshold stated in 10 USC § 2805(c) may be accomplished using other available authority, such as 10 USC § 2805, *Unspecified Minor Construction*, if applicable to the geographical area.

7.1.5. This chapter only applies to an operational requirement expected to be temporary. This guidance is offered as a means by which to program contingency facility requirements identified too late for inclusion in a normal facility programming cycle such as MILCON.

7.1.6. Without regard to standard Air Force or DoD facility construction standards, any facility provided under the authority of this chapter will be designed and built as temporary construction. The **exception** to this requirement is when the host nation requires a higher standard to obtain its approval or where the temporary standard and the permanent standard are essentially identical. The DD Form 1391 should explain any exceptions. The applied construction standard will recognize that the facility is being provided to meet a temporary need and will be abandoned at termination of operational requirements. No facilities provided under authority of this chapter will be built with the expectation they will

eventually be turned over to and used by other organizations beyond the original Air Force requirement. All such facilities will meet appropriate safety standards and force protection requirements applicable in the area, but will not necessarily be expected to meet the safety standards and force protection requirements that would apply to permanent construction.

7.1.7. This chapter does not apply to construction to be carried out at a military installation, as defined under 10 USC § 2801(c), or at a location where the U.S. is reasonably expected to have a long-term interest or presence unless otherwise provided in specific authorizing legislation. In context of this Chapter, a military installation is defined as a location where the U.S. Armed Forces have operational control by virtue of a written basing agreement.

7.1.8. No facility supporting morale, welfare, and recreation activities will be provided under the authority of this chapter.

7.2. Characteristics of Projects.

7.2.1. Projects to which the authority of this chapter may be applied include erection of facilities, acquisition of temporary interests in land, and design.

7.2.2. The requirement for such projects should be in immediate and direct support of combat operations or force protection for those engaged in combat operations. This authority is particularly applicable in countries, friendly or not, where the United States does not currently have a significant permanent military presence.

7.2.3. Such projects may combine work typically considered as construction with work considered as FO (e.g., leasing a trailer, security, refuse, or custodial service etc.).

7.2.4. Such projects may include repair of pre-existing facilities.

7.2.5. Use relocatable or semi-permanent construction to the maximum extent possible. The types of structures normally used should be trailers, tension fabric structures, K-spans, air-supported domes, or pre-engineered buildings. More permanent construction materials should normally not be used, unless specifically required for security, force protection, or mission operations. Any departure from the use of semi-permanent construction must be well-documented and justified on the DD Form 1391. Program projects with all costs being funded for the structure, transportation, erection, site preparation, and related costs.

7.3. Project Documentation. Facilities that are part of a single undertaking (i.e., are accomplished at the same time, for the same general need, and are required for the same time period) can be listed on a single DD Form 1391 provided each facility to be approved under this authority is identified separately with its associated justification, purpose, and cost. It is important to identify each facility requirement in accordance with **Paragraph 3.5**, as part of the same undertaking so a cost for each facility requirement can readily be identified. General costs such as site preparation should be spread over the associated facilities with which it is associated. Facilities that are satisfying separate facility requirements (e.g., lodging, administrative, base operations, maintenance, utilities) but satisfy a general purpose such as a beddown should be submitted and approved as part of the same undertaking. Facilities meeting different contingencies, not being accomplished at the same time, or are required for differing periods of time, should be programmed on separate DD Forms 1391.

7.4. Approval Limitations. Submit project requests to AF/A4C, who will coordinate projects with SAF/GCN before sending to SAF/IEE for review of conformance with Air Force

programming policy for O&M-funded projects promulgated in this Instruction. Upon coordination by SAF/IEE, SAF/FMB will seek approval of the proposal by USD(C) before proposed work may proceed. Programmers and project managers must ensure a project approved under this chapter does not exceed 125% of the approved cost without re-approval, unless limited by specific direction from USD(C). (T-1)

7.5. Documentation. All projects constructed under this authority must be documented on a standard DD Form 1391 project document and signed by the appropriate approving official including the approval date. The document must be dated and clearly identify the military operation the work supports, and define the period of time the facility will be required, based on known planning factors. The document must explain the urgency and how the temporary construction will satisfy the mission requirements. The document can be classified, or not, depending on the operational details and dates written in the text, and current classification guidance for the military contingency. Personnel will mark classified documents in accordance with AFI 31-401, *Information Security Program Management*. Classification of a project's information neither excuses nor waives compliance with the requirements of this chapter. Particular care must be exercised to document compliance with all conditions of specific authority provided by Congress and/or required by USD(C).

7.6. Certification. Programmers must ensure DD Forms 1391 forwarded to Air Staff for approval contain the following signed certification from the Air Force component senior Civil Engineer: **I have reviewed the DD Form 1391 for this project and certify that the document is accurate. This construction has been directed by higher headquarters to accomplish specified operational requirements. I certify that the project described above is in compliance with Department of Defense regulations, as implemented by Air Force Instruction 32-1032, and the FYxx National Defense Authorization Act. (T-1)** Include the signed certification in the approval documentation, using a DD Form 1391c, *FY__ Military Construction Project Data (continuation)*. Adhere to the provisions of any applicable international agreements to ensure compatibility with applicable host nation construction criteria.

7.7. Related Authority. The authority provided in this chapter is separate from the provisions of temporary short-term facilities defined in AFI 32-1021, and is not related.

JOHN COOPER
Lieutenant General, USAF
DCS/Logistics, Engineering and Force Protection

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

- 10 USC § 101, *Organization and General Military Powers*
- 10 USC § 2012, *Support and Services for Eligible Organizations and Activities Outside DoD*
- 10 USC § 2721, *Property Records: Maintenance on Quantitative and Monetary Basis*
- 10 USC § 2801, *Scope of Chapter; Definitions*
- 10 USC § 2805, *Unspecified Minor Construction*
- 10 USC § 2811, *Repair of Facilities*
- 10 USC § 9540, *Architectural and Engineering Services*
- 10 USC § 18233, *Facilities for Reserve Components*
- 50 USC § 1621, *Declaration of Emergency by President*
- Title 32, Code of Federal Regulations, Part 989, *Environmental Impact Analysis Process (EIAP)*
- Title 36 Code of Federal Regulations, Part 60.4, *Criteria for Evaluation Architectural Barriers Act of 1968*, adopted by DoD on 31 Oct 08
- EO 11988, *Floodplain Management*, 24 May 1977
- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, 24 Jan 07
- EO 13514, *Federal Leadership in Environmental, Energy and Economic Performance*, 5 Oct 09
- EO 13653, *Preparing the United States for the Impacts of Climate Change*, 1 Nov 13
- FAR, Part 11, *Describing Agency Needs*, current edition
- FAR, Part 23, *Environment, Energy and Water Efficiency, Renewable Energy Technologies, Occupational Safety, and Drug-Free Workplace*, current edition
- DoDD 1100.20, *Support and Services for Eligible Organizations and Activities Outside the Department of Defense*, 12 Apr 04
- DoDD 3000.10, *Contingency Basing Outside the United States*, 10 Jan 13
- DoDD 4270.5, *Military Construction*, 12 Feb 05
- DoD FMR 7000.14R, *DoD Financial Management Regulation*, Jun 11
- DoDI 2000.12, *DoD Antiterrorism (AT) Program*, 1 Mar 12, Incorporating Change, 9 Sep 13
- DoDI 2000.16, *DoD Antiterrorism Standards*, 8 Dec 06
- DoDI 4000.19, *Support Agreements*, 25 Apr 13
- DoDI 4165.14, *Real Property Inventory (RPI) and Forecasting*, 17 Jan 14
- DoDI 4165.56, *Relocatable Buildings*, 7 Jan 13

DoDI 5200.08, *Security of DoD Installations and Resources and the DoD Physical Security Review Board (PSRB)*, December 10, 2005 *Incorporating Change 1*, 19 May 10, *Incorporating Change 2*, 8 Apr 14

MIL-STD 1691, *Construction and Material Schedule for Military Medical, Dental, Veterinary and Medical Research Laboratories*, Mar 15

Real Property Inventory Requirements Document, DUSD(I&E), Jan 05

AFI 10-245, *Antiterrorism (AT)*, 25 Jun 15

AFI 21-136, *Aircraft Sun Shade Management*, 20 Jul 2012

AFI 25-201, *Intra-Service, Intra-Agency, and Inter-Agency Support Agreements Procedures*, 18 Oct 13

AFI 31-401, *Information Security Program Management*, 18 Sep 13

AFI 32-1012, *Reserve Components Facilities Programs*, 22 Jul 94

AFI 32-1021, *Planning and Programming Military Construction (MILCON) Projects*, 31 Oct 14

AFI 32-1022, *Planning and Programming Nonappropriated Fund Facility Construction Projects*, 13 Nov 14

AFI 32-6002, *Family Housing Planning, Programming, Design and Construction*, 19 Mar 2015

AFI 32-7001, *Environmental Management*, 16 Apr 15

AFI 32-7042, *Waste Management*, 7 Nov 14

AFI 32-7062, *Air Force Comprehensive Planning*, 27 Jun 13

AFI 32-7065, *Cultural Resources Management Program*, 19 Nov 14

AFI 32-9004, *Disposal of Real Property*, 3 May 07

AFI 32-9005, *Real Property Accountability and Reporting*, 03 Mar 15

AFI 32-10140, *Programming and Resourcing Appropriated Funded Facilities Operation Requirements*, 19 Feb 10

AFI 32-10141, *Planning and Programming Fire Safety Deficiency Correction Projects*, 5 Feb 15

AFI 32-10142, *Facilities Board*, 14 May 13

AFI 33-321, *Authentication of Air Force Records*, 3 Aug 11

AFI 65-501, *Economic Analysis*, 29 Aug 11

AFI 65-601, Volume 1, *Budget Guidance and Procedures*, 16 Aug 12

AFMAN 10-2503, *Operations in a Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Environment*, 6 Jul 11 *Incorporating Change 1*, 31 May 12

AFMAN 32-1084, *Facility Requirements*, 20 Apr 12

AFMAN 33-363, *Management of Records*, Certified Current 9 Apr 15

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*, 8 Mar 07

AFPD 32-10, *Installations and Facilities*, 4 Mar 10

AFRCH 32-1001, *Standard Facility Requirements*, 25 Jan 12

ANGH 32-1084, *Facility Space Requirements*, 1 Nov 13

ANGI 32-1003, *Facilities Board (FB)*, 1 Jan 05

NGR 5-1, *National Guard Grants and Cooperative Agreements*, 28 May 10

ETL 02-12, *Communications and Information System Criteria for Air Force Facilities*, 27 Jun 02

ETL 11-18, *Small Arms Range Design and Construction*, 19 Apr 11

UFC 1-200-02, *High Performance and Sustainable Building Requirements*, 1 Mar 13, Change 3, 7 Nov 14

UFC 1-300-08, *Criteria for Transfer and Acceptance of Military Real Property*, 16 Apr 09, Change 2, Aug 11

UFC 2-100-01, *Installation Master Planning*, 15 May 2012

UFC 3-310-04, *Seismic Design for Buildings*, 1 Jun 13

UFC 3-340-01, *Design and Analysis of Hardened Structures for Conventional Weapons Effects*, 30 Jun 02

UFC 3-580-01, *Telecommunications Building Cabling Systems Planning and Design*, 22 Jun 07

UFC 3-600-01, *Fire Protection Engineering for Facilities*, 26 Sep 06, Change 1, 14 July 2009, Change 3, 1 Mar 13

UFC 3-701-01, *DoD Facilities Pricing Guide*, March 2011, Change 8 Jul 15

UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, 9 Feb 12, Change 1, 1 Oct 13

UFC 4-010-02, *Design (FOUO) DoD Minimum Standoff Distances for Buildings*, 9 Feb 12

UFC 4-020-01, *DoD Security Engineering Facilities Planning Manual*, 11 Sep 08

UFC 4-021-01, *Design and O&M Mass Notification Systems*, 9 April 2008 Change 1, January 2010

UFC 4-022-01 *Security Engineering: Entry Control Facilities / Access Control Points*, 25 May 2005

Adopted Forms

AF Form 332, *Base Civil Engineer Work Request*

AF Form 327, *Civil Engineering Work Order*

DD Form 1391, *FY ___ Military Construction Project Data*

DD Form 1391c, *FY ___ Military Construction Project Data (continuation)*

Abbreviations and Acronyms

ACC—Asphalt Cement Concrete

ACES—Automated Civil Engineer System

AF—Air Force
AFAMP—Air Force Activity Management Plan
AFCEC—Air Force Civil Engineer Center
AFCAMP—Air Force Comprehensive Asset Management Plan
AFI—Air Force Instruction
AFIMSC—Air Force Installation and Mission Support Center
AFPD—Air Force Policy Directive
AFRC—Air Force Reserve Command
AIRFA—American Indian Religious Freedom Act
AMP—Activity Management Plan
ANG—Air National Guard
ANGI—Air National Guard Instruction
ARPA—Archeological Resources Protection Act
AT—Antiterrorism
BCE—Base Civil Engineer
BOD—Beneficial Occupancy Date
CE—Civil Engineer
CBRN—Chemical, Biological, Radiological, and Nuclear
DECA—Defense Commissary Agency
DLA—E—Defense Logistics Agency-Energy
DoD—Department of Defense
EAID—Equipment Authorization Inventory Data
ECIP—Energy Conservation Investment Program
EEIC—Element of Expense Investment Code
ETL—Engineering Technical Letter
FEMP—Federal Energy Management Program
FP—Force Protection
FY—Fiscal Year
HPSB—High Performance Sustainable Buildings
IDP—Installation Development Plan
MAJCOM—Major Command
MCA—Military Construction Appropriations

MCCA—Military Construction Cooperative Agreement
MFH—Military Family Housing
MILCON—Military Construction
MWR—Morale, Welfare, and Recreation
NAF—Nonappropriated Funds
NAGPRA—Native American Graves Protection and Repatriation Act
NEPA—National Environmental Policy Act
NGR—National Guard Regulation
NHPA—National Historic Preservation Act
NRG—Energy Conservation and Initiative Funds Source code
NRHP—National Register of Historic Places
NTE—Not to Exceed
O&M—Operation & Maintenance
OH&P—Overhead and Profit
OSD—Office of the Secretary of Defense
PCC—Portland Cement Concrete
PEC—Program Element Code
RDT&E—Research, Development, Test, and Evaluation
RPIE—Real Property Installed Equipment
SIOH—Supervision, Inspection and Overhead
SHPO—State Historic Preservation Officer
S/R&M—Sustainment, Restoration and Modernization
THPO—Tribal Historic Preservation Officer
UMC—Unspecified Minor Construction
UMMC—Unspecified Minor Military Construction
USPFO—United States Property and Fiscal Officer
WCF—Working Capital Fund

Terms

Aircraft Sunshade. A structure with the sole purpose of providing minimal protection for personnel from the elements (sun, wind, rain, snow, etc.) with a roof and a maximum of two sides. Aircraft sunshades generally fulfill a long-term requirement and are not considered as relocatable facilities per the definition of DoDI 4165.56. AF/A4L establishes AF policy on aircraft sunshades (refer to AFI 21-136, *Aircraft Sun Shade Management*). Aircraft sunshade procurement will be made in accordance with AFI 65-601 V1, Paragraph 9.6., *Funding*

Relocatable Buildings, STSs and Aircraft Sunshades and Table 9.2., Funding For Relocatable Buildings, Stress Tension Shelters, Aircraft Sun Shades, And Other Modular Structures.

Allied Support. Real property support to a non—real property asset. Allied support includes utilities roads, sidewalks, parking, fencing, signage, lighting (exterior and not attached to the asset), foundations, and other site preparation.

Collective Protection. Systems that protect those inside a building, room, shelter or tent against contamination through the combination of impermeable structural materials, air filtration equipment, air locks, and over—pressurization. See AFMAN 10-2503, *Operations in a Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Environment*

Companion Project. A project that enables a separate project. For example, the construction of an AAFES facility requires the demolition of another facility. The demolition project is a companion project. The programming documents for each project should reference the other. Note: If a requirement (related work in a single facility) includes multiple work classifications (e.g. repair or minor construction), these are not companion projects—they are interdependent elements of the requirement.

Concurrent Project. A separate project in a facility that is independently a complete and usable improvement to the facility from another coinciding project in the facility. For example, a repair project to replace the roof on a facility is concurrent to a construction project that adds to the facility. Each project is independent of the other; however, they are cross—referenced in the programming documents.

Construction.—To build, develop, convert, or extend real property and real property systems or components. It includes erecting, installing, or assembling a new facility; adding, expanding, extending, or converting an existing facility; or relocating an existing facility. This includes real property installed equipment installed and made a part of such facilities, and related site preparation (excavation, filling, landscaping, or other land improvements). The product of a construction project must be complete and independently functional for its intended purpose.

Facility. A real property asset consisting of a building, structure, or linear structure. See AFI 32—9005 for more detail.

Facilities Operation (FO): The FO program encompasses those services performed on an installation that are related to real property such as refuse collection, grounds maintenance, and custodial service. FO also includes Civil Engineer (CE) combat capabilities (i.e. Prime Base Engineer Emergency Force (BEEF)). The FO program includes manpower authorizations, support equipment, contracts, and associated costs belonging exclusively to and required to plan, manage, and execute the functions defined throughout this document. The FO program excludes sustainment, restoration and modernization of facilities, environmental services (such as disposal of hazardous waste), Installation Services (IS), and mission—funded costs which are funded through other Program Element Codes (PECs). The PEC for 3400 O&M FO is ***79.

Funded and Unfunded Costs—See AFI 65-601 V1, Paragraphs 9.14.3 and 9.15.1. [Note: Paragraph 9.15.2. does not apply to facility O&M appropriations.] See clarifying guidance on troop labor, design, and GFE in this Instruction.

Host. A unit or activity that has management control of facilities, and provides services or facilities to another unit or activity (tenant). Within the Air Force, the host is the Air Force MAJCOM that has jurisdiction over the installation and other real property (including use rights such as leases, permits, easements, and licenses). Also, the host may be the organization which has been designated by the MAJCOM, or by HQ USAF as a supplier (reference AFI 25—201), to furnish tenant support.

Historic Property.—Any district, site, building, structure, or object included on or eligible for inclusion on the National Register of Historic Places (National Register). Title 36 Code of Federal Regulations (CFR), Part 60.4, *Criteria for Evaluation*, explains criteria for determining eligibility for listing to the National Register.

Interservice, Interdepartmental, and Interagency.—A unit or activity of one department, agency, or command that occupies the facilities of, or receives support from, another department, agency, or command, usually on a continuing basis (see DoDI 4000.19, *Interservice and Intragovernmental Support*).

Intraservice.—An Air Force, Air Force Reserve, or Air National Guard unit or activity that occupies the facilities of, or receives support from, one another.

Joint Use.—Concurrent use of host facilities and equipment by both host and tenant, as required by the mission of each user.

Maintenance. The recurring, day—to-day, periodic, or scheduled work required to preserve real property facilities, systems, or components and prevent premature failure or deterioration, so these may be effectively used for their designated purposes. Maintenance does not change the function of a facility. All maintenance is considered Sustainment Maintenance (EEIC 521xx).

Major Force Program. A major force program is an aggregation of related budget items that can be used to track resources that support a macro—level combat or support mission, such as special operations forces.

Modernization.—May include either repair or construction work. Includes the alteration of facilities or components solely to implement new or higher standards (including regulatory changes) or to accommodate new functions. Includes work associated with functional conversion and work classified as construction.

National Register of Historic Places (National Register).—The Federal government's official list of buildings, structures, districts, sites, and objects that are significant in American history, architecture, archaeology, engineering, or culture, and are thereby considered for preservation. The National Register is administered by the Department of the Interior, National Park Service. Criteria for eligibility, and the procedures for nomination, making changes to listed properties, and for removing properties from the National Register are detailed in 36 CFR Part 60.4

Overhead.—Includes personnel services and related expenses (such as travel, transportation, printing and binding, rents and utilities, contractual services, supplies, and materiel) used to perform the following: project management and administration; inspection and supervision of construction; and direct administrative support of these two categories.

Phases.—Interdependent portions of a project which achieves an overall requirement or objective (e.g. renovating a facility, repairing a system), and are complete and usable on their

own. Phases will have unique project numbers (i.e., phases are not delineated by adding suffixes to the same project number). See [Paragraph 3.5.2](#) for more details about project phases.

Plant Replacement Value (PRV). Represents a modeled cost, in current year dollars, to design and construct a notional facility to replace an existing facility at the same location. The notional replacement facility will perform the same functions as the existing facility, within the same capacity (size) as calculated in the assigned Facility Analysis Code (FAC) primary unit of measure. The notional replacement facility will also be constructed to current standards of materials and design consistent with DoD policies. PRV does not represent the actual cost to construct a specific, existing facility, and should not be used as a cost estimate. **Note:** PRV for a single facility does not include the costs for land acquisition, site preparation, earthwork, landscaping, supporting facilities, associated facilities, or studies/surveys outside normal planning and design for construction. Additionally, it does not include costs not associated with recapitalization or replacement construction such as demolition or environmental mitigation/remediation. Refer to UFC 3—701-01 *DoD Facilities Pricing Guide*, for the PRV formula and factors.

Project.—Includes the maintenance, repair, and construction work necessary to produce a complete and usable single facility or a complete and usable improvement to an existing facility.

Project Splitting.—The splitting of a project into separate parts where: it is done solely to reduce costs below an approval threshold or the minor construction ceiling; or each part is not in itself complete and usable; or the total project is not complete until all parts are complete.

Real Property Installed Equipment. Installed real property building equipment item affixed or built into the facility which is an integral part of the facility. See AFI 32—9005, Attachment 2 for examples of RPIE and non-RPIE. See [Paragraph 3.5.15.1.2](#) for RPIE guidance.

Repair. Repair means to sustain or restore real property and real property systems or components to such condition that they may effectively be used for their designated functional purposes. Repair does not change the function of a facility. Repair does not normally increase the capacity, volume, or footprint of a facility, although repair may result in greater usable floor space due to reconfiguration of the interior of a building. Repair can be Restoration and Modernization Repair (EEIC 522xx) or Sustainment Repair (EEIC 524xx). In determining the total cost of a repair project, include all phases of a multi—year repair project to a single facility (see [Paragraph 3.5.2](#) for definition of project phases).

Replacement Cost. Replacement cost is “the estimated cost of a military construction project to replace the facility”. The replacement cost must be based on the existing facility (mission, function, size, etc.), but can be brought up to current standards and codes. The facility used in the replacement cost estimate cannot be expanded to accommodate new or additional requirements beyond the existing facility function, but can include repair improvements within the scope of the compared repair project. Programmers must demonstrate use of an acceptable cost estimating method for determining facility replacement cost, which may include PACES, use of UFC 3—701-01 *DoD Facilities Pricing Guide*, use of RSMMeans, or other industry standard cost-estimating guides/tools, etc. **Note:** This definition is for programming in compliance with Title 10 Chapter 169, and may not be consistent with real property definition.

Restoration. Includes repair and replacement work to restore facilities collaterally damaged due to inadequately sustained components, premature aging, natural disaster, fire, accident or other causes. This is considered non—life cycle repair of real property.

State Historic Preservation Officer (SHPO).—The official appointed by the Governor of each State and territory to carry out the functions defined in the NHPA, and to administer the State Historic Preservation Program. SHPOs provide advice and assistance to Federal agencies regarding their Cultural Resources Management programs and historic preservation responsibilities. Throughout this Instruction, SHPO is understood to mean Tribal Historic Preservation Officer (THPO) where consulting a designated THPO is appropriate.

Support Agreement. A host—tenant support agreement between Air Force units drawn up under AFI 25-201 and recorded on DD Form 1144, Support Agreement.

Sustainment.—Includes resources for cyclical maintenance **and** scheduled repair activities to maintain the inventory of real property assets through its expected life. It includes regularly scheduled adjustments and inspections, preventative maintenance tasks, and emergency response and service calls for minor repairs. It also includes major repairs or replacement of facility components (usually accomplished by contract) that are expected to occur periodically throughout the facility life cycle. This work includes regular roof replacement, refinishing of wall surfaces, repairing and replacement of heating and cooling systems, replacing tile carpeting, and similar type work. Sustainment does not include restoration, modernization, environmental compliance, historical preservation, or costs related to unexpected events, which are funded elsewhere. See [Paragraph 6.1.1](#) for details regarding fund source programming guidelines and [Paragraph A.3.2](#) for sustainment examples.

Tribal Historic Preservation Officer (THPO).—The official appointed by an Indian Tribe in accordance with the NHPA to administer the Tribal Historic Preservation Program and assume duties and functions for tribal lands similar to those that the SHPO has for State lands. The Secretary of Interior designates tribes with THPO responsibilities. Air Force installations must consult with the THPO, instead of the SHPO, on undertakings on or over Indian tribal lands where a Tribe has been granted THPO responsibilities by the Secretary of the Interior.

Undertaking.—Any project, activity, action, or program wholly or partly funded under the direct or indirect jurisdiction of a Federal agency. Includes projects and activities that are executed by or on behalf of a Federal agency; Federally funded; require a Federal permit, license or approval; or are subject to State or local regulation administered through delegation or approval authority by a Federal agency.

Unspecified Minor Construction (UMC). O&M—funded (to include all appropriations available for operation and maintenance) minor construction projects authorized by 10 USC § 2805. These projects may not exceed the UMC threshold stated in 10 USC § 2805(c) in funded cost. 10 USC § 18233a(b) *Notice and Wait Requirements for Certain Projects*, provides minor construction authority for the Reserve Component. Laboratory Revitalization minor construction projects are authorized by 10 USC § 2805, Paragraph (d).

Unspecified Minor Military Construction (UMMC). MCA—funded (to include all appropriations available for MILCON) minor construction projects (often referred to as P-341) authorized by 10 USC § 2805, Paragraph (a) (10 USC § 18233(a) for the Reserve Component)

and are unlike O&M-funded UMC projects both in funding source and permissible project cost. See AFI 32-1021 for additional details.

Attachment 2

PREPARING DD FORM 1391

A2.1. Preparing DD Form 1391, *FYXX Military Construction Project Data*. Use the following directions to prepare DD Forms 1391 for all projects funded from funds available for operation and maintenance. If a software-generated form is not capable of meeting the guidelines, then it may be necessary to modify or create a DD Form 1391 to meet the guidelines using an alternate method (e.g., Adobe Professional). Since the DD Form 1391 is the basis on which individual projects and some Air Force-wide programs are justified and approved, they must be carefully prepared to provide complete, accurate, and essential information. The project documents must provide a complete word picture of the work planned and reason for the work. For phased work, include an “umbrella” DD1391 with its own project number and a clear description of the phased program’s ultimate goal, and each phase must have a unique project number (phases are not to be delineated by adding a suffix to a project number). See [Paragraph 3.5.2](#) for definition of project phases. The appropriate authority must certify project documents on the DD Form 1391 or DD Form 1391c for each facility project. Project documents for O&M-funded projects should follow the same format as those for MILCON projects to the maximum extent possible. Projects submitted for Air Staff approval must have a Certificate of Compliance for Critical Planning Actions. Instructions for completing a Certificate of Compliance for Critical Planning Actions are in AFI 32-1021 Chapter 2. Recommend projects approved at lower levels also include this certification.

A2.2. Block 1, Component. For O&M projects, enter the parent MAJCOM (or “USAF” or “ANG” or “AFRC”) of the requesting unit. If the project is for a tenant requirement, identify in Block 11.

A2.3. Form Title Block. Enter the projected fiscal year of the funds paying for the project.

A2.4. Block 2, Date. Enter creation date or date of most recent amendment to project document. Every DD Form 1391 must have the date of the current document.

A2.5. Block 3, Installation and Location. Put the name of the installation and the state or country where located. If it is an off-base site, enter the name of the associated installation.

A2.6. Block 4, Project Title. To clarify what the project work will do, the first word will be “Maintain”, “Repair”, “Renovate”, “Construct”, “Add”, “Consolidate”, or “Demolish”. Abbreviations are acceptable when necessary. Include both the facility name and facility number. Include **all** work classifications associated with each project. An example project using these naming conventions is: “Add/Repair F-15 Aircraft Maintenance Hangar, Bldg 1000”. This allows all parties reviewing the DD Form 1391 to understand the facility use. If the programming document is an “umbrella” for multiple projects in multiple facilities (see [Paragraph 3.4.1](#)), use the word “Multi” in place of the facility number, and list the applicable facility numbers in Block 11.

A2.7. Block 5, Program Element Code (PEC). Indicate the five-digit number corresponding to the source of funds to be spent and the corresponding EEIC. Enter all PECs being used. If all PECs will not fit in the block, enter “Multi” and list the PECs in Block 11.

A2.8. Block 6, Category Code (CATCODE). For work in/on existing facilities, enter the facility’s real property CATCODE that appears in the Real Property 7115 report. For single use

facilities, enter the “A line” CATCODE. For multi-use facilities, enter the appropriate “D line” CATCODE for the area where the work will be accomplished. If the work will be accomplished on a component or RPIE, do not list building service systems category codes that appear in the “X lines” (e.g., HVAC, fire suppression, etc.), use the facility’s CATCODE. If the work is to construct a new facility or convert an existing facility’s functional use, load the new CATCODE.

A2.9. Block 7, Project Number. This number is comprised of the installation’s 4-letter alpha designation followed by the 2-digit fiscal year programmed and locally-assigned project numbering convention (e.g. WXYZ130000). If the programming document is an “umbrella” for multiple projects, use the word “Multiple” in place of the project numbers, and reference the project numbers in Block 9 or in an attached DD1391c. For phased projects, the umbrella DD1391 will have its own project number.

A2.10. Block 8, Project Cost. Show element of expense investment code (EEIC) and total funded project cost, for example EEIC 529xx - \$000K. Do not include unfunded costs in this block. Exception: Though the design cost of a design-build project is considered an unfunded cost for threshold determination, it is a cost necessary to award and execute the project and should be included in the total project cost in Block 8. Do not include other unfunded costs in Block 8. If the project includes more than one EEIC, state “Multi EEIC” in this block and delineate per instructions for Block 11 “ADDITIONAL”. Round project cost to the nearest thousand. If the project is a repair project and includes non-repair costs (UMC, design-build design costs, etc.), the approval request memo should delineate the amount to be approved as repair as well as in Block 11 “ADDITIONAL”.

A2.11. Block 9, Cost Estimates. This section provides for a breakout of costs by identifiable elements of work such as electrical, mechanical, structural, fire protection, AT protective measures, site work, etc. Use these or other useful measures to provide a summary of the project cost. If a lump sum cost is used in this block, use a DD Form 1391c to provide a detailed breakout of the involved disciplines. Also, in this block, show elements which are part of the overall effort but which are funded from other sources, such as equipment. Refer to AFI 65-601 V1 and AFI 32-1021 for detailed breakouts of funded versus unfunded costs. Ensure there are no mathematic errors in the cost estimate. Use current inflation indices to bring appropriate project costs into the year of expected execution (especially for phased work). The estimate of contractor’s overhead and profit (OH&P) is often included in the project cost estimating factors. If this is the case, OH&P does not need to be delineated as its own line item in Block 9. However, if the estimating factors do not include OH&P, it must be shown in Block 9. [**Note:** If the DD Form 1391 software will not allow deletion of a line item with zero cost, note and explain in Block 10.]

A2.11.1. Show Supervision, Inspection, and Overhead (SIOH) when applicable. SIOH should not be rolled up in other line items. Show the SIOH as its own line item either in Block 9 or in the DD 1391c. See [Paragraph 3.5.15.1.7](#) for explanation of SIOH and typical factors. Programmers must explain use of factors other than those provided in **Paragraph 3.5.15.1.7**, and any SIOH charged in addition to execution agent SIOH must have its own line item. Denote in Block 10 who the intended execution agent is.

A2.11.2. Per **Paragraph 4.2.7.1**, all work necessary to result in a complete and usable facility, component, or improvement to a facility must be included in a single programming document. Include separate line item details for each EEIC. In cases where it is most

practical to program multiple projects in a single programming document (i.e., projects in multiple facilities per [Paragraph 3.4.1](#)), identify the funded cost for each facility to determine the approval threshold. Inclusion of a DD 1391c may be necessary to break out cost by facility.

A2.11.3. Design costs for design-bid-build or design-build projects, when paid from O&M funds or when design is accomplished by in-house personnel or troop labor, are unfunded. Display estimated design cost as a separate line item. [**Note:** Though the design costs are unfunded for threshold determination, for D-B projects the design cost is necessary to execute the project and should be part of the funding request.]

A2.11.4. Per [Paragraph 4.2.7](#), companion projects should be programmed on separate programming documents, and should reference each other.

A2.11.5. Cost of work within each work classification determines approval level. Within a project, the repair and minor construction portions should not be summed for threshold determination. If repair work includes both 524xx and 522xx EEICs, the cost must be summed to determine the repair approval level.

A2.11.6. Include demolition costs if appropriate and applicable (see [Paragraph 3.3.1](#)).

A2.11.7. **Foreign Currency Exchange Rate.** Enter the rate used, when applicable.

A2.11.8. **Contingency Costs.** Identify contingencies as a percent of total, when appropriate. If the contingency cost exceeds 5% of the project's funded cost or \$1 million, whichever is smaller, justification is necessary in Block 11.

A2.11.9. **AT Measures.** When AT measures are required, provide separate cost line items for interior and exterior AT requirements.

A2.11.10. Include any unfunded costs such as non-RPIE equipment (e.g. systems furniture, communications systems) and display beneath the total funded cost. See [Paragraph 3.5.15.1.2](#) for RPIE guidance.

A2.12. Block 10, Description of Proposed Work. Replace the word "Construction" in the item 10 heading with the word "Work." This section describes the scope of work. The description of the work to be done must coincide with the classification(s) of work. Avoid use of verbs or other language which would indicate another work classification. For example, "install" and "alter" **may** give the idea that work is new (e.g., construction) whereas "replace" may indicate repair. Use descriptive engineering terms to describe architectural features, structural elements, and utilities. Include required site work. When an MCA-funded project is concurrent to a repair project, ensure each project references the other. Identify additional scope necessary to comply with executive orders and/or policies (OSHA, AT, sustainability, etc.). For phased work, describe the work included in each phase (see [Paragraph 3.5.2](#) for definition of project phases). Be succinct, but descriptive.

A2.13. Block 11, Requirement. The Requirement block is sub-divided into five sections: PROJECT, REQUIREMENT, CURRENT SITUATION, IMPACT IF NOT PROVIDED, and ADDITIONAL. Guidance for completing each section is as follows:

PROJECT: Restate the project title as in Block 4, followed by the facility number. Spell out any acronyms and abbreviations. When appropriate, a sub-paragraph can be added explaining the purpose of the facility to the installation mission.

REQUIREMENT: Describe why this project is required to support the mission. If phased, include the ultimate goal of all phases (see **Paragraph 3.5.2.** for definition of project phases). Clearly and concisely define the proposed scope of both the primary and supporting facilities and infrastructure that will result in a complete and useable facility. Include information regarding the need for future phases, related construction, leases, and other activities that will be required to be carried out as part of the project.

CURRENT SITUATION: This section provides critical details supporting why the project is required. Describe the current situation and mission impact. Include as many user facts as possible to describe impacts to mission, costs, personnel, time, efficiencies, functional conflicts, etc. This section should also include pertinent information about the facility (when constructed, recent major repairs, pavement condition index, general facility or component condition, etc.).

IMPACT IF NOT PROVIDED: With as much detail as possible, state impacts to mission if this project is not completed (e.g., sorties lost, possible fines, accreditation lost). Avoid generalities.

ADDITIONAL: Provide the name of the BCE and commercial phone number. Include the following statement: “The total funded cost of \$X is Y% of the estimated cost of a military construction project to replace the facility of \$Z.” If the project includes a network facility, include the following statement: “In accordance with AF/A4C guidance, this repair project replaces less than 75% of the <type of network facility> network facility.” Enter the types of funds to be used for the work, such as O&M, RDT&E, DHP O&M, WCF, etc. If categorically excluded (CATEXed), put the CATEX number (verify applicability of CATEXes with appropriate subject matter experts). Include explanation of compliance with executive orders, codes, policies, etc. If phased, include a brief description of each phase (more detailed descriptions of the phases can be included in a DD Form 1391c). Clearly identify, by project number and title, any companion projects associated with this work. Include any other additional information pertinent to the project, which is not provided above.

If the project includes multiple fund sources and multiple EEICs, provide the breakout in this section. The breakout should be straightforward and simple for the reviewer to understand. Following is an example of how the breakout might look:

AF O&M

Total 524 = \$12.1M

Total 522 = \$1.3M

Total 529 = \$650K

(all costs exclude design-build design costs)

DWCF

Total 522 = \$6.3M

(excludes design-build design costs)

Total repair = \$19.7M

For repair projects, if the programmed amount is within 5% of the Air Staff approval threshold or statutory notification threshold, include an explanation of measures to ensure the limitation will not be exceeded. For UMC projects, if the programmed amount is within 5% of the statutory threshold, include an explanation of measures to ensure the limitation is not exceeded.

A2.13.1. If rented or leased facilities are involved, provide the following information in either the **CURRENT SITUATION** or **ADDITIONAL** section as appropriate:

A2.13.1.1. **Location.** City, State (or Country), and street address.

A2.13.1.2. **Occupied By.** Official name of agency using facility.

A2.13.1.3. **Lease Number.** Official lease number under which facility is being used.

A2.13.1.4. **Annual Rental.** Annual rent paid for use of the property.

A2.13.2. **Compliance Metrics.** Ensure and note, when applicable, compliance with the following rules of thumb in developing repair and/or minor construction projects:

A2.13.2.1. **30% and 50% Seismic Rule.** Seismic evaluation required--see UFC 3-310-04 and [Paragraph 3.5.14](#) of this Instruction. These thresholds apply in the pre-award phase of a project.

A2.13.2.2. **50% AT Rule.** AT protective measures (see UFC 4-010-01). See [Paragraph 3.5.7](#) of this Instruction. This threshold applies in the pre-award phase of a project.

A2.13.2.3. **50% Fire Protection Rule.** See [Paragraph 4.2.3.5](#) of this Instruction. This threshold applies in the pre-award phase of a project.

A2.13.2.4. **50% Sustainability Rule.** High Performance and Sustainable Buildings. See [Paragraph 4.2.9](#) of this Instruction. This threshold applies in the pre-award phase of a project.

A2.13.2.5. **75% EA Rule.** Preparation of EA--see AFI 65-501 V1 and [Paragraph 3.6.6](#) of this Instruction. This threshold applies through the life cycle of the project.

A2.13.2.6. **75% Repair versus Replacement Rule.** MAJCOM (or AFIMSC) senior Civil Engineers (see [Paragraph 1.2.4](#)) must approve requests to perform facility repairs which exceed 75% of the estimated cost of a military construction project to replace the facility. See [Paragraph 4.4](#) Additionally, for repair projects notified to congressional committees, if the estimated repair cost exceeds 75% of the estimated cost of a military construction project to replace the facility, 10 USC § 2811 requires an explanation of why replacement is not in the best interests of the Government. See [Paragraph 1.5.2.3](#) This threshold applies through the life cycle of the project.

A2.13.2.7. **125% Rule.** See [Paragraphs 4.5, 5.1.2, and 7.4](#) A project approved under [Chapter 7](#) may not exceed 125% of the approved cost without re-approval, unless limited by specific direction from USD(C). This threshold applies through the life cycle of the project.

A2.13.2.8. **Floodplain Management.** For repair projects over \$7.5M on facilities within a 100-year floodplain, DoD requires development of flood damage vulnerability assessments of mechanical and electrical subsystems. See [Paragraph 3.5.18](#).

A2.14. Supporting Documentation. Do not hesitate to use DD Forms 1391c in your programming documentation. Include the following:

A2.14.1. Provide current copies of DD Form(s) 1391.

A2.14.2. Provide current copies of DD Form(s) 1391 for any concurrent or companion projects.

A2.14.3. For energy projects requesting NRG or ECIP funding, provide BLCC analysis (current approved version). For detailed guidance, on completing and documenting this analysis contact AFCEC/CN. Provide supporting documentation deriving energy savings shown in the BLCC. Required for projects containing multiple buildings.

A2.14.4. **Single Line Drawing.** Provide a drawing of the facility to show its general layout and all areas of work in the project. Before and after site or floor plans are recommended.

A2.14.5. **Site Plan.** This plan will show only immediate areas involved in the project. Ensure the site plan is consistent with the Installation Development Plan.

A2.14.6. **Certification.** Provide Certificate of Compliance for Critical Planning Actions (signed by the installation commander or BCE on the installation commander's behalf) and signature certification as required by **Paragraphs 3.6.5.1** or **A2.1** of this AFI. The installation ATO must document certification of compliance with required AT measures.

A2.14.7. **Cost Estimate DD Form 1391c.** Provide a cost estimate in enough detail to complete a word picture of the proposed work. Include a separate entry for SIOH. Ensure all cost estimates are up-to-date and that proper inflation is used for phased work.

A2.14.8. Unique Requirements for Airfield Pavements.

A2.14.8.1. Furnish a single line drawing to clearly show pavement configuration of the runways, taxiways, aprons, and other airfield pavements and the project location. Include a drawing providing a detailed before and after pavement cross section if available.

A2.14.8.2. Projects submitted for approval must include a current Pavement Condition Index for all sections comprising the project. A current pavement evaluation report and photographs of deficiencies are good justification for project approval.

Attachment 3

EXAMPLES OF SUSTAINMENT, RESTORATION AND MODERNIZATION

A3.1. Applicability. This attachment is primarily for the purpose of illustrating Sustainment, Restoration, and Modernization funding categories (PECs and EEICs). See [Table A3.1](#) for fund source (PECs and EEICs) alignment with O&M work classifications. Funding categories are not to be confused with work classification. For more detail on work classification, refer to [Chapters 4 and 5](#) of this instruction.

Table A3.1. O&M Work Classification and Fund Source Table.

Work Classification		Fund Source	
		EEIC	3400 Program Element
Maintenance		521xx	SUSTAINMENT PEC ***78
Repair	<i>Sustainment (Life Cycle)</i>	524xx	
	<i>R&M (Non-Life Cycle)</i>	522xx	R&M
Minor Construction		529xx	PEC ***76 ¹

1. For use of USSOCOM MFP-11 funds, use PEC 19578, see [Paragraph 6.1.7](#).

A3.2. Sustainment. This category of work provides resources for cyclical maintenance and scheduled repair activities to maintain the inventory of real property assets through its expected service life. It includes regularly scheduled adjustments and inspections, preventive maintenance tasks, and emergency response and service calls for minor repairs. It also includes major repairs or replacement of facility components (e.g., electrical, fire protection, HVAC, interior finishes, plumbing, roofing) that are usually accomplished by contract and expected to occur periodically throughout the facility life cycle. Timing of the work (within or post life cycle) isn't the determining factor between sustainment and R&M—the purpose of the work is the primary factor. Life cycle repairs accomplished post-expected life cycle (e.g., deferred, delayed, neglected) are still sustainment repairs. Work accomplished by sustainment does not include unexpected repair (e.g., storm damage, accident).

Sustainment work includes regular roof replacement, refinishing wall surfaces, repair and replacement of heating and cooling systems, replacing tile and carpeting, and similar types of work. Replacement of permanent components (e.g., foundation, etc.) intended to last through the facility's life cycle is not sustainment repair. Sustainment does not include requirements funded elsewhere, such as modernization, environmental compliance, historical preservation or costs related to unexpected events.

A3.2.1. Examples of sustainment projects include, but are not limited to:

A3.2.1.1. Repairing a roof on a lifecycle basis (built up roof, standing seam metal roof, etc.) (EEIC 524xx).

A3.2.1.2. Replacing telephone poles periodically (EEIC 524xx).

A3.2.1.3. Rebalancing an HVAC system (EEIC 521xx).

A3.2.1.4. Inspecting or performing corrective maintenance fire detection/suppression systems (EEIC 521xx).

A3.2.1.5. Repainting the exterior or interior of facilities (EEIC 521xx).

A3.2.1.6. Performing spall repair or crack sealing on the airfield (EEIC 521xx).

A3.2.1.7. Completely replacing a runway or taxiway that achieved its expected life cycle (concrete, base course, drainage system, etc.) (EEIC 524xx).

A3.2.1.8. Cleaning out storm drainage systems on a periodic basis (EEIC 521xx).

A3.2.1.9. Repairing a water line break caused by inadequate sustainment (EEIC 524xx).

A3.2.1.10. Replacing the floor covering in a facility (EEIC 524xx).

A3.2.1.11. Chip sealing a road surface (EEIC 521xx).

A3.2.1.12. Restriping airfields and base parking lots (EEIC 521xx).

A3.2.1.13. Mill and overlay existing pavement (EEIC 524xx).

A3.2.1.14. Replacing wastewater treatment process components as required for maintenance on a cyclical basis as required to satisfy the installation wastewater permit (EEIC 521xx or 524xx).

A3.2.1.15. Replacing overhead electrical power lines with underground lines when the existing lines have reached the end of their economic life. The underground lines must generally follow the same path as the overhead lines and cannot contain additional feeders but can be properly sized. Similarly, the replacement of other interior or exterior utility lines (sewer/water/gas/electrical) that have reached the end of their economic life is sustainment so long as the lines follow the same path as the existing lines and do not expand to new areas. Also, these utility lines can be properly sized (EEIC 524xx).

A3.2.1.16. Replacement of HVAC systems, in kind or to current standards, that have reached the end of their useful life (EEIC 524xx).

A3.2.1.17. Replacement of CBRN Collective Protection Systems, in kind or to current standards, that have reached the end of their useful life (EEIC 524xx).

A3.2.1.18. Inspecting, recertifying, or performing corrective maintenance on CBRN collective protection systems (EEIC 521xx).

A3.3. Restoration and Modernization (R&M). *Restoration* includes non-life-cycle (unexpected) repair and replacement work to restore facilities damaged by natural disaster (storm damage), fire, accident, or other causes. *Modernization* includes alteration of facilities solely to implement new or higher standards (including regulatory changes) or to accommodate new functions. R&M also includes mission beddowns. Examples of Restoration and Modernization projects include, but are not limited to:

A3.3.1. Repairing collateral facility damage caused by a leaking roof (i.e. collapsed ceiling, drywall, floor, etc., resulting from lack of sustainment) (EEIC 522xx) [Repairing the roof will be sustainment repair unless the leak was caused by a damage roof. (EEIC 524xx)]

A3.3.2. Repairing damage to a facility caused by a natural disaster (fire, tornado, hurricane, flood, earthquake, etc.)

A3.3.3. Repairing a water line damaged by natural disaster or accidental damage (not caused by insufficient sustainment) (EEIC 522xx).

A3.3.4. Repairing a facility (to include structural members) as a result of an explosion (EEIC 522xx in accordance with 10 USC § 2811).

A3.3.5. Completely replacing an existing road due to failure before the end of its expected useful life, but requires repair and replacement is the best course of action (EEIC 522xx).

A3.3.6. Completely replacing a runway or taxiway that has not achieved its reasonably expected useful life (concrete, base course, drainage system, etc.), but requires repair and replacement is the best course of action (EEIC 522xx).

A3.3.7. Replacing a facility component or system that was poorly designed and/or never worked properly (EEIC 522xx). However, if initially MCA-funded, and it never worked properly, then MCA must be used to correct the deficiency.

A3.3.8. Replacing the existing lighting with a more energy efficient system before the end of its useful life (EEIC 522xx).

A3.3.9. Converting a library to administrative space (a change in functional purpose category) within the minor construction threshold—(EEIC 529xx).

A3.3.10. Reconfiguring/modifying a facility to accommodate new modular furniture (EEIC 522xx).

A3.3.11. Modernizing a facility (new walls, ceiling, floor covering, etc.) to house a new function (administrative, shop, etc.) (EEIC 522xx as long as the footprint and/or volume of the facility does not increase, otherwise it is EEIC 529xx); however, if the new function fits the definition of conversion per **Paragraph 5.1.1.1**, conversion rules apply.

A3.3.12. Modernizing a facility (new walls, ceiling, floor covering, etc.) to beddown a new mission (EEIC 522xx as long as the footprint and/or volume of the facility does not increase, otherwise EEIC 529xx); however, if the beddown of the new mission fits the definition of conversion per **Paragraph 5.1.1.1**, conversion rules apply.

A3.3.13. Installing a new fire suppression system to comply with an updated fire code (EEIC 522xx), as described in **Paragraph 4.2** Installing a new fire suppression system driven by a change in function should be classified as construction (EEIC 529xx). This example also applies to seismic improvements.

A3.3.14. Constructing a new road or expanding the footprint of an existing road within O&M funding limits (EEIC 529xx).

A3.3.15. Replacing a functioning facility component solely for modernization (EEIC 522xx), subject to the limitations in **Paragraph 4.2.2**.

A3.3.16. Adding striping to previously-existing, unstriped pavement to meet standards or codes (EEIC 522xx).