Job Series 0801, 0808, 0810, 0819, 0830 and 0850

ENGINEER/ARCHITECT

CFETP

CAREER FIELD EDUCATION AND TRAINING PLAN

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Welcome to the CFETP for Department of the Air Force Engineers and Architects!

This Career Field Education and Training Plan (CFETP) identifies and provides a description of recommended training, education, professional development, and experience to empower Department of the Air Force (DAF) Engineers/Architects in General Schedule (GS) and equivalent 0801, 0808, 0810, 0819, 0830, and 0850 occupational series; DAF includes both the Air Force and Space Force. The CFETP was developed in accordance with the requirements of AFI 36-2670, "*Total Force Development*" (_here_).

This CFETP is meant to help any Civil Engineer (CE) Engineer/Architect to be successful in their position and help prepare them to reach their career goals, whether that goal is to remain at the installation as a technical expert or proceed down one of two primary tracks: to ascend to a GS-14 Engineer/Architect Subject Matter Expert (SME) functional leader role at Air Force Civil Engineer Center (AFCEC), Air Force Reserve Command (AFRC) or Headquarters National Guard Bureau (HQ NRB); or ascend to a GS-15 leadership track as a mobile enterprise leader. As part of the enterprise leadership track, an individual may even be able to ascend to a Senior Executive Service (SES) leadership role at the Interim or Strategic Headquarters level with the Air Force Installation and Mission Support Center (AFIMSC), AFCEC, HQ Air Force level with the Directorate of Civil Engineers (A4C), or with the Assistant Secretary of the Air Force Installations, Environment and Energy (SAF/IEE). There may also be a few unique 0800 engineering series, such as the Fire Protection Engineer (0804) that an Engineer/Architect may transition into later in their career following the SME track. This CFETP is intended to serve as a career roadmap for each Engineer/Architect, whether they are new to a base level position or those with broad experiences at the intermediate and senior levels.

Serving as an Engineer/Architect is an exciting, challenging, and rewarding career. Even early in your career serving in the CE Squadron, you will have the opportunity to manage projects and influence senior leaders on your base. DAF bases operate as small cities, and base level Engineers and Architects play a role supporting the DAF equivalent of an Assistant City Manager (Deputy Base Civil Engineer (DBCE)) and City Manager (Base Civil Engineer (BCE)), who support the equivalent of a municipalities' elected mayor (the Installation or Wing Commander) and voting members of the city council (the installation's Facilities Board).

Although some Engineers/Architects working at the installation level may not be mobile and wish to be functional leader that provides valuable expertise to installation leadership as a Subject Matter Specialist (SMS) following the SME GS-14 track, others may wish to advance within the squadron to serve in a leadership role following the GS-15 enterprise leadership track, which may include serving as a DBCE at the installation. The DBCE, who supports the BCE in providing, operating, and maintaining the highly complex infrastructure and facilities on a DAF installation, helps ensure long-range planning for a power projection platform necessary to generate combat power. The DBCE helps senior installation leaders develop a vision for each DAF installation, ensuring that they are, "adaptive, resilient, right-sized and fiscally sustainable," by leveraging facilities, services and resources both on and off DAF installations to meet current and future mission needs. There are also other opportunities to be an

engineering enterprise leader. Mobility is one key factor to consider if the goal is advance and serve as a SME or leader at the Interim HQ or Strategic HQ level.

A primary goal in the Air Force CE Annex for Agile, Innovative, and Ready Airmen Engineers is the need to recruit, develop, and retain individuals that will serve as leaders of our Airmen Engineer team. Engineers/Architects are key players involved with shaping the CE enterprise end state goal of Right-Sized, Resilient Installations. As explained in the Air Force Infrastructure Investment Strategy (I2S) (here)), our installation leaders have a duty to ensure our infrastructure requirements and investments are consistent with the current version of the National Defense Strategy (here).

This CFETP provides detailed information about knowledge, skills, and abilities that Engineers/Architects require to be successful in their careers. It includes typical career field progression information, duties and responsibilities relevant to the Engineer/Architect's career, training strategies, and career path information. It identifies the knowledge, education, training, and other skills required for Engineers/Architects, whether they have a goal to be an advisor or leader within their squadron, a technical SME, or an Intermediate or Strategic HQ level leader. It also suggests training that will help the individual prepare for the next step in their career.

Part I – Career Field Information

1.1 SECTION A: INTRODUCTION TO PART 1 OF THE CFETP

1.1.1 Purpose of the CFETP

The AF/A4C, the SAF/IEE, and our enterprise leaders throughout the Total Force are all committed to ensuring that our Engineers/Architects have the depth, breadth, knowledge and capabilities they need to successfully serve our CE Enterprise and our Air and Space Forces.

This CFETP was developed to support the objectives of the CE Human Capital Roadmap (here). The Human Capital Roadmap emphasizes the importance of "cultivating workforce talent" through advanced education and training, talent management, and development of civilian workforce expertise. Throughout this document, you will find information about opportunities for Professional Military Education (PME), Professional Continuing Education, and Advanced Education. This document also includes information about positions available throughout the DAF enterprise to help Engineer/Architect's chart the next step of their career paths.

1.1.2 CFETP Format

The CE Functional Advisory Council (FAC) developed professional credentials key to progression within the CE enterprise: depth and breadth of experience, advanced academic degrees, PME, and professional certification. Each of these credentials plays a role in individual career management and competitiveness for select jobs and training opportunities. This document is formatted with these professional credentials in mind and is divided into two parts: Part I, which focuses on career field information and the education, experience, training, skills, and competencies required to help you meet your career goals as an Engineer/Architect and Part II, which provides detailed information on training opportunities and mentorship.

Part 1 Career Field Information: Informs management of the Engineer/Architect's career.
- Section A explains how Engineers/Architects should use this plan.
- Section B identifies career field progression information, duties and responsibilities, training strategies, and career field path information.
- Section C describes recommended competencies related to an Engineer/Architect's installation support role, the DBCE's organizational leadership role, and how to support successful community engagement.
- Section D indicates resource constraints.

Part 2 Training Standards: Provides relevant training information for Engineers/Architects.
- Section A details professional training and education requirements.
- Section B includes information on leadership and mentorship.

Appendices: Relevant key abbreviations and terms are in Appendix A. Appendix B provides a list of competencies. Appendix C provides an example of an Individual Development Plan (IDP). Appendix D provides an index of training courses and resources. Appendix E provides a matrixed list of courses to assist in career development.

1.2 SECTION B: DEPTH AND BREADTH OF EXPERIENCE

1.2.1 Career Progression Information

Career progression can vary substantially for Engineers/Architects due to a variety of factors including personal goals, availability of positions at an installation, geographic mobility, professional certification, training, and continuing education. Within the first five to ten years, career goals should start to solidify and align with serving in an enterprise leadership or SME functional role, and establish the echelon or level of the CE enterprise that best meet the goals. For example, a goal to become a senior leader will drive career and education decisions differently than a goal to be a SME in a specific Engineering/Architect discipline or program. The intent of the CFETP is to focus the traditional Engineer/Architect on what they need to do to be successful in their current role, and what they should do to achieve their career aspirations. In some cases, Engineers/Architects may not be geographically mobile, may enjoy the work they are doing at the installation level, and may not want to relocate to other installations. In this case, the CFETP can still assist with career development, as both leadership and key advisory opportunities exist at the base level. The ultimate goal of the CFETP is to support the CE Human Capital Roadmap lines of effort to envision the force and to recruit/retain Engineers/Architects to meet the mission requirements across the full spectrum of the CE enterprise.

There is no single, optimal career path to ensure career success. A successful career path includes steady growth in job responsibility and professional development with a broad variety of experience. Periodically, personal situations should be reviewed, as well as the organization's needs in order to periodically reassess career path goals. Consider personal strengths, weaknesses, training or experience gaps, commitment to the organization's mission, and short and long-term goals. Organizationally, consider the organization's needs, training resources, position availability, and promotion opportunities. How well an Engineer/Architect performs in his/her current position is the most important factor in determining future success.

1.2.2 DAF Enterprise Career Building Blocks

The structure of the Engineer/Architect workforce is described with Career Building Blocks (CBBs), which rises from a broad base of installation level experiences to a GS-15 leadership role that can then open a path to potentially serve at the Senior Executive Service (SES) level or to serve as a GS-14 SME. The DAF CBBs (Figures 1 and 2) show appropriate positions for various stages of the Engineer/Architect's career, available at each level of the CE enterprise: base, intermediate, and headquarters. Within each development level, the CBB recommends opportunities from the GS-11/12 to the GS-15 leadership track or GS-14 SME track. Progression through these three levels allows Engineers/Architects to obtain depth and breadth of experience required to lead at the higher levels of the CE enterprise. However, engineering professionals should not assume quick advancement between GS levels within the three levels

of the CE enterprise is the norm. Instead, it is expected that a significant part of the early career will focus on obtaining depth and breadth of experience by holding multiple, various positions within an installation at the base and intermediate levels of the CE enterprise; mobility to other installations may be required to broaden experiences outlined on the CBB, due to limited vacancies or size of the unit. Engineers/Architects will typically gain their initial experience at the base level and may not formalize long-range goals or what track to follow until they reach the intermediate level of their career.

Base Level. These are base-level positions, with training and education orientated towards meeting basic requirements of the engineering occupational series, concentrating not only on development of technical skills, but effective writing and briefing skills as well. The Engineer/Architect should pursue professional licensing/ registration. Typically, these are developmental positions for recent graduates with a target grade of GS-12.

- Project management and execution to include design, cost estimates, specification development, and construction management
- Portfolio management to include planning, program development and energy management
- Operations engineering to include developing requirements and optimization through asset management plans
- Environmental engineering overseeing compliance and/or restoration programs

Base and Intermediate Level. The Engineer/Architect must be competent in the management of resources and direction of planning, design management, and post construction management of facilities. Training and education are focused on preparing the employee to transition into leadership or more complex technical positions at the base, AFIMSC, AFCEC, or at a MAJCOM. Intermediate level positions include advisory roles as a SMS in each base level Engineer/Architect occupational series or entry level supervisors in the environmental, portfolio optimization, project management, and operations engineering elements. The Engineer/Architect should be professionally licensed/registered.

- Deputy Base Civil Engineer
- Engineering (must be registered PE or RA), Operations, and Installation Management Flight Chiefs
- SME or division chief at MAJCOM or AFCEC
- Element Chief in the portfolio management, project execution, operations engineering, or environmental sections at the base level

Headquarters. These are normally complex AFCEC, AFIMSC, HQ AFRC, HQ NGB, or HAF positions. These employees represent the DAF in managing engineering resources and human capital engaged in the formulation of strategic policies, plans, and programs that may involve other services, DoD, and the secretariat. Training and education at this level are focused on further developing staff-level skills in support of installation engineering programs and human capital; and developing executive and managerial abilities.
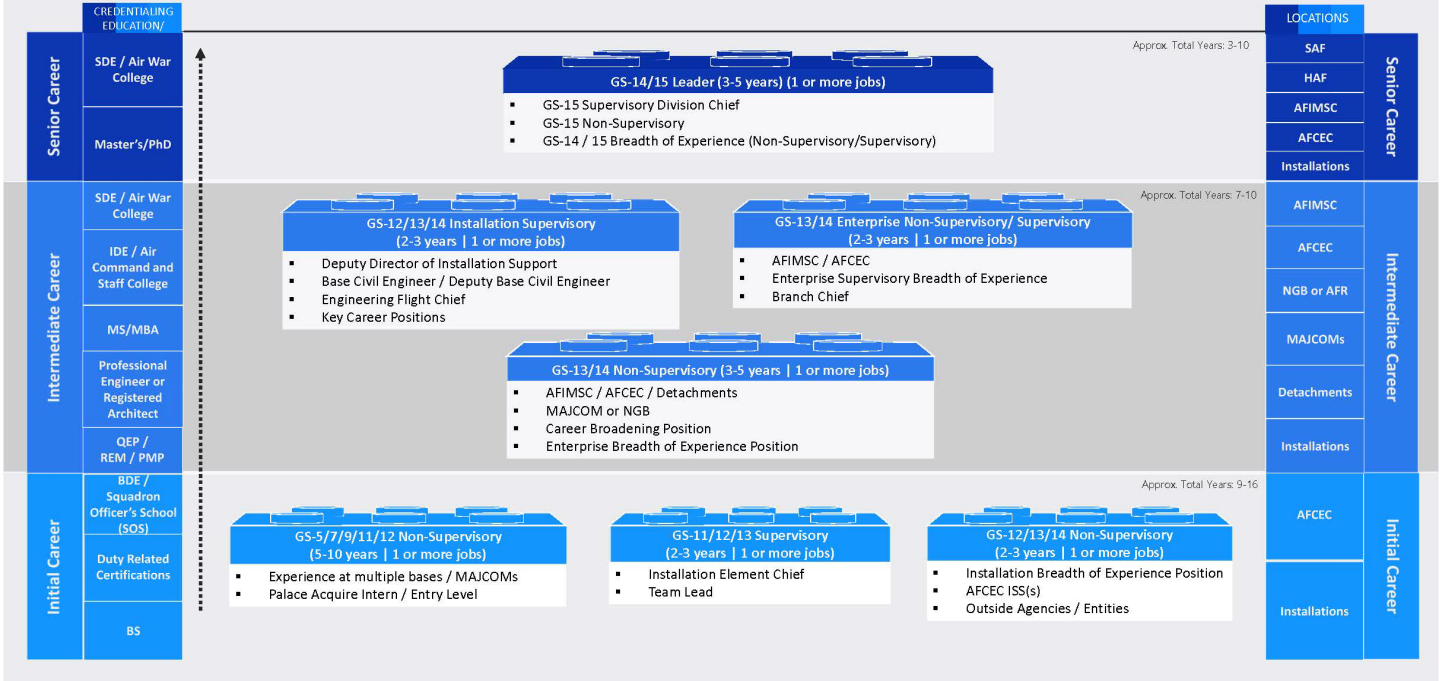
- Branch or Directorate Chiefs at AFCEC, AFIMSC, HQ AFRC, or HQ NGB
- Division Chief at HAF (Director of Air Force Civil Engineers)

Management of the Engineer/Architect's career beginning at the installation level will provide the broad level of experiences necessary to compete for positions at the intermediate and headquarters levels; and make individuals more competitive for leadership positions of increasing responsibility later in their career. A career path could consider moving to positions at different levels of the CE enterprise, as well as between service components, such as moving from the installation level to the intermediate level, then back to the installation level, then to the strategic level, then back to the installation level, in order to remain in touch with current issues facing CEs at the tactical level. Experiencing a broad variety of positions, both leadership and non-leadership, best prepares potential candidates to hold an Engineering/Architect SME position and senior leadership positions in the CE enterprise.
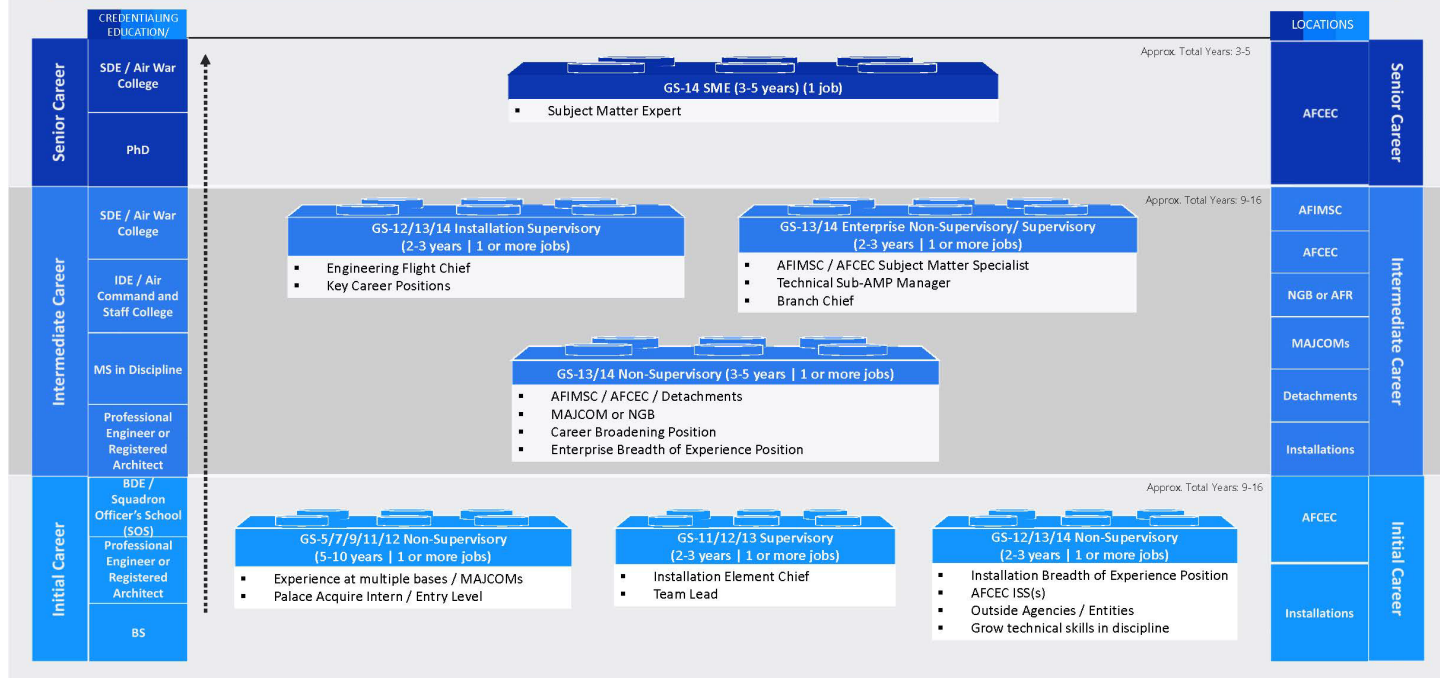
Figures 1/2. Department of the Air Force Engineer/Architect Career Building Blocks

ENGINEERING AND ARCHITECTURAL LEADER CAREER BUILDING BLOCKS
OCCUPATIONAL SERIES 0801, 0808, 0810, 0819, 0830, 0850

CREDENTIALING EDUCATION/

Senior Career
- SDE / Air War College
- Master's/PhD

Intermediate Career
- SDE / Air War College
- IDE / Air Command and Staff College
- MS/MBA
- Professional Engineer or Registered Architect
- QEP / REM / PMP

Initial Career
- BDE / Squadron Officer's School (SOS)
- Duty Related Certifications
- BS

Senior Career — Approx. Total Years: 3-10

GS-14/15 Leader (3-5 years) (1 or more jobs)
- GS-15 Supervisory Division Chief
- GS-15 Non-Supervisory
- GS-14 / 15 Breadth of Experience (Non-Supervisory/Supervisory)

Intermediate Career — Approx. Total Years: 7-10

GS-12/13/14 Installation Supervisory (2-3 years | 1 or more jobs)
- Deputy Director of Installation Support
- Base Civil Engineer / Deputy Base Civil Engineer
- Engineering Flight Chief
- Key Career Positions

GS-13/14 Enterprise Non-Supervisory/ Supervisory (2-3 years | 1 or more jobs)
- AFIMSC / AFCEC
- Enterprise Supervisory Breadth of Experience
- Branch Chief

GS-13/14 Non-Supervisory (3-5 years | 1 or more jobs)
- AFIMSC / AFCEC / Detachments
- MAJCOM or NGB
- Career Broadening Position
- Enterprise Breadth of Experience Position

Initial Career — Approx. Total Years: 9-16

GS-5/7/9/11/12 Non-Supervisory (5-10 years | 1 or more jobs)
- Experience at multiple bases / MAJCOMs
- Palace Acquire Intern / Entry Level

GS-11/12/13 Supervisory (2-3 years | 1 or more jobs)
- Installation Element Chief
- Team Lead

GS-12/13/14 Non-Supervisory (2-3 years | 1 or more jobs)
- Installation Breadth of Experience Position
- AFCEC ISS(s)
- Outside Agencies / Entities

LOCATIONS
- SAF
- HAF
- AFIMSC
- AFCEC
- Installations
- AFIMSC
- AFCEC
- NGB or AFR
- MAJCOMs
- Detachments
- Installations
- AFCEC
- Installations

ENGINEERING AND ARCHITECTURAL SME CAREER BUILDING BLOCKS
OCCUPATIONAL SERIES 0801, 0808, 0810, 0819, 0830, 0850

CREDENTIALING EDUCATION/

Senior Career
- SDE / Air War College
- PhD

Intermediate Career
- SDE / Air War College
- IDE / Air Command and Staff College
- MS in Discipline
- Professional Engineer or Registered Architect

Initial Career
- BDE / Squadron Officer's School (SOS)
- Professional Engineer or Registered Architect
- BS

Senior Career — Approx. Total Years: 3-5

GS-14 SME (3-5 years) (1 job)
- Subject Matter Expert

Intermediate Career — Approx. Total Years: 9-16

GS-12/13/14 Installation Supervisory (2-3 years | 1 or more jobs)
- Engineering Flight Chief
- Key Career Positions

GS-13/14 Enterprise Non-Supervisory/ Supervisory (2-3 years | 1 or more jobs)
- AFIMSC / AFCEC Subject Matter Specialist
- Technical Sub-AMP Manager
- Branch Chief

GS-13/14 Non-Supervisory (3-5 years | 1 or more jobs)
- AFIMSC / AFCEC / Detachments
- MAJCOM or NGB
- Career Broadening Position
- Enterprise Breadth of Experience Position

Initial Career — Approx. Total Years: 9-16

GS-5/7/9/11/12 Non-Supervisory (5-10 years | 1 or more jobs)
- Experience at multiple bases / MAJCOMs
- Palace Acquire Intern / Entry Level

GS-11/12/13 Supervisory (2-3 years | 1 or more jobs)
- Installation Element Chief
- Team Lead

GS-12/13/14 Non-Supervisory (2-3 years | 1 or more jobs)
- Installation Breadth of Experience Position
- AFCEC ISS(s)
- Outside Agencies / Entities
- Grow technical skills in discipline

LOCATIONS
- AFCEC
- AFIMSC
- AFCEC
- NGB or AFR
- MAJCOMs
- Detachments
- Installations
- AFCEC
- Installations

1.2.3 Master Development Plan (MDP)

The MDP is a comprehensive list of desired education, self-development, training, and typical assignments for each level of the career path. The MDP will assist Engineers/Architects in the development of their IDPs and aligns with the CBBs. MDPs are shown in Table 1 for those pursuing a leadership role at the Installation, MAJCOM, AFCEC, AFIMSC, or HAF and Table 2 for installation advisory roles as a SMS that can lead to a SME position and. Each phase includes desirable training, education, and self-improvement from the previous phases/grade groups. For example, in Table 2, professional registration or certification is shown desirable for the mid-management phase; therefore, it is also desirable for the senior management phase, although not listed again. Basic Developmental Education (BDE), Intermediate Developmental education (IDE), and Senior Developmental Education (SDE) are shown at the grade level in which they should be obtained and are not required for those specific roles/grades. Refer to Appendix D for more information on education opportunities and training resources.

TABLE 1
ORGANIZATIONAL LEADER
OCCUPATIONAL SERIES ENGINEERING and ARCHITECT
This MDP covers the following series: 0801, 0808, 0810, 0819, 0830, 0850

Grade	Formal Education	CDE	Training	Certification	Experience	Typical Jobs
GS - 15	• Should have MS/MBA/MPA • PhD possible	• SDE completed • Consider others		• Licensed Professional Engineer (PE) or registered architect (RA), multiple certifications preferred		• Air Staff • AFIMSC • Det • AFCEC • MAJCOM • Division Chief • Base senior leader

GS - 14	• Should have MS/MBA/MPA
	• Could pursue PhD
		• Obtain SDE
		• Consider others
		  ○ Academic
		  ○ Fellowships
		  ○ Leadership Seminars
		  ○ Short Courses add to competitiveness
			• WMGT 400 Civil Engineer Commander/Deputy Course	• Should have PE or RA, consider additional certifications	• Seek broader leadership experience
					• Expert program manager role
						• Air Staff senior program manager
						• AFIMSC
						• Det
						• AFCEC
						• MAJCOM branch chief
						• Deputy Director of Installation Support
						• Deputy Base Civil Engineer

GS - 13	• Obtain MS/MBA/MPA	• Obtain IDE • Consider others	• AFIT CE Commander course(s) • AFIT CE technical courses	• Should have PE or RA, consider additional certifications	• Seek leadership experience. • Broad program management	• AFMISC • Det • AFCEC • MAJCOM • Career broadener • Base flight chief.
GS-12	• Pursue MS/MBA/MPA	• Obtain BDE • Consider others	• AFIT CE technical courses • In-house designs	• Obtain PE or RA	• Seek leadership / element leader / team leader position	• Base design engineer • Base project programmer
GS-11	• Begin pursuing MS/MBA/MPA	• Consider BDE	• WMGT 100 AF CE Basic Civilian Course • Additional AFIT courses	• Plan for PE or RA • Engineer-in-Training or Fundamentals-in-Engineering	• Excel in current base-level role	• Base design engineer • Base project programmer
GS-5/7/9		• Palace Acquire	• WMGT 100			• Base level
Basic Requirements: Bachelor of Science in Engineering or Architecture						

TABLE 2
SUBJECT MATTER EXPERT (SME)
OCCUPATIONAL SERIES ENGINEERING and ARCHITECT
This MDP covers the following series 0801, 808, 0810, 0819, 0830, 0850

Grade	Formal Education	CDE	Training	Certification	Experience	Typical Jobs
GS - 15	Positions not available at this grade.					
GS - 14	• Should have MS in technical discipline • PhD preferred	• Obtain SDE • Consider others ○ Academic ○ Fellowships ○ Leadership Seminars ○ Short Courses add to competitiveness	• Advanced training in area of expertise	• Professional engineer (PE) licensing or registered architect (RA) • Multiple certifications preferred	• Capstone – Air Force Subject Matter Expert	• AFCEC • HQ AFRC • HQ NGB
GS - 13	• Obtain MS in technical discipline • Pursue PhD in technical discipline	• Obtain IDE • Consider others	• AFIT CE technical courses. • Industry and commercial courses.in areas of expertise	• Should have PE or RA, consider additional certifications	• Seek technical experience. • Subject matter specialist. • Media manager. • Obtain leadership experience	• AFMISC • Det • AFCEC • MAJCOM • Career broadener • Base flight chief. • Technical Sub-AMP Manager
GS-12	• Pursue MS in technical discipline	• Obtain BDE • Consider others	• AFIT CE technical courses • Industry and commercial courses in areas of expertise	• Obtain PE or RA	• Seek media area experience • Team leader position • Further develop technical skills	• Base design engineer • Base project programmer • Media expert • Requirements and Optimization
GS-11	• Begin pursuing MS in technical discipline	• Consider BDE	• Additional AFIT courses • WENG 400 cost estimating • WTSS 200 PACES • In-house designs	• Plan for PE or RA • Engineer-in-Training or Fundamentals in Engineering	• Excel in current base-level role • Grow technical skills in discipline	• Base design engineer • Base project programmer
GS-5/7/9		• Palace Acquire Intern	• WMGT 100 AF CE Basic Civilian Course			• Base level
	Basic Requirements: Bachelor of Science in Engineering or Architecture					

1.2.4 MyVector

The MyVector site provides numerous resources for Engineers/Architects. Information is available on the site related to Mentoring, Career Planning and Knowledge sharing. The Mentoring section of MyVector can be used to fine tune career goals, experience and plans. A mentor search capability is available, where Engineers/Architects can search for a mentor by profile details or make a by-name request for a mentor. MyVector also allows for knowledge sharing through forum-based discussion groups.

MyVector also includes a number of training resources. The site includes an "Air Force Competencies" section that includes a competencies self-assessment function and related resources. The competencies include the traditional ones such as developing self and developing others, but also include emerging topics such as "Digital Literacy". Based on the results of the self-assessment, the platform includes a "Competency Improvement Plan" with suggested videos, books, courses, and/or articles that can help improve that focus area. The courses recommended are linked to the Air Force e-Learning site (here) and are available online/for free.

One way for an Engineer/Architect to determine a desired career path is to go through the Career Development Plan process known as "vectoring." The CE Career Field Team (CECFT) manages the process with an annual call, which typically goes out each fall. While the vectoring cycle is annual, it generally alternates between grades (e.g., GS-12 one year, GS-13 the next). The vectoring process will assist an Engineer/Architect with identifying educational, professional, or experiential gaps or needs in their career experience, and get valuable feedback from CE senior leaders on steps to successfully achieve their plan. It is not a promise of a promotion or a commitment to move, but an opportunity to gain insight on how to achieve career goals, which could include: what jobs to seek, professional registration, career program choices, PME, or Civilian Development Education (CDE) recommendations. Engineers/Architects should consider updating their Career Brief on MyVector, and explore PME and CDE options on the site. Note that MyVector is used to register for Vectoring as well as serves as the hub for Engineers/Architects to self-nominate for PME and CDE. The nomination process for these programs usually occurs in the winter. Access MyVector (here).

1.2.4.1 Individual Development Plan

An Individual Development Plan (IDP) will help lay out long-term professional career goals, and identify knowledge, skills, and abilities needed to meet those goals, as well as, developmental assignments, positions, training, and activities, which will assist a supervisor to help you reach those goals. There are a variety of resources available online to develop an IDP. An IDP form suitable for all federal employees can be found in Appendix C. A DAF IDP Resource Guide is available (here). The CECFT recommends use of MyVector to develop IDPs; MyVector is also used for career development opportunities. For example, applicants who apply for CDE submit their applications through MyVector to obtain supervisor review and endorsement of their applications.

1.2.5 Breadth of Experience

Experiencing a wide variety of Engineering/Architect roles, beginning within the CE Squadron or Group at the installation level is an important part of gaining depth and breadth of experience,

knowledge and capabilities. It is recommended to obtain a diversity of experience at more than one installation falling under different MAJCOMs or components to include varied assignments within other CE Squadron flights. Holding positions in at least two of three flights with Engineering/Architect authorizations, provides broad mission experience that may prepare an individual to hold a leadership position within the CE Squadron or Group. There may be some limitations as the architect and environmental engineer series may be limited when crossing between flights; however, the architect has a bit more flexibility to move into community planning or real estate positions. Engineers/Architects should plan to hold an installation level position at the target grade for three to five years prior to holding a base level leadership position. Obtaining experience as an installation supervisor, such as the Portfolio Optimization Element Chief, Asset Accountability Element Chief, Environmental Element Chief, Operations Engineering Element Chief, or Project Management Element Chief at the early stages of a career is essential to ensure competitiveness to advance to an intermediate or headquarters level leadership position later in the career.

1.2.6 Geographic Mobility

For those willing and able to be geographically mobile, there may be more opportunities to achieve breadth and depth in career experiences. Effective civilian force development depends upon filling enterprise leadership positions with those who have a variety of work experiences. Holding positions at multiple installations exposes an Engineer/Architect to a wider understanding of DAF missions. For example, experiencing operations at a fighter or heavy aircraft, research and development, or training and education focused installation provides unique experiences. Engineers/Architects should also consider size of installation and geographic location when considering breadth of experiences at the installation level. Engineer requirements at an overseas base are different from those at a Continental United States (CONUS) base, as are the requirements at a small single mission installation vis-à-vis a large multi-mission installation. Experience working with a Reserve Component mission will also provide an understanding of the benefits, limitations, authorities, and proper application of the different components to meet Total Force mission requirements. Variations in climate (southern coastal vs northern tier) can also provide breadth of experience. When applying for installation level leadership positions, this depth and breadth of experience may be the factor that makes an Engineer/Architect the best-qualified candidate for a selection to fill a vacancy. This is increasingly true when applying for non-leadership or leadership positions at the intermediate and headquarters level of development.

1.2.7 Career Broadening

This CFETP has addressed the need for Engineers/Architects to broaden their career through a broad breadth of experiences whether at the installation or by relocating to another installation. The DAF and the CE community also have a formal career-broadening program, which is an integral part of the DAF leadership development framework. It is designed to build functional and institutional competencies while enhancing leadership perspective. More information is available (here) (log into myPers first to access the site) and in AFMAN 36-606. Career broadening assignments advertised on USAJobs (here), although of relatively short duration (36 months), are complex and demanding, but also increase and broaden experiences. Career broadening assignments are designed to enhance CE professional's breadth of experience and diversity of thought. The key in determining which career broadening assignment to pursue is to consider which opportunity will enhance the strategic skills and perspective required to meet individual goals.

1.2.8 Professional Licensing/Registration/Certification

Professional licensing or registration for Engineers/Architects is highly valued by the CECFT and hiring authorities. Professional licensing/registration is indicative of a work force with strong technical skills which have been developed and exhibited through a rigorous program of education, experience, and testing. Types of professional licensing/registration include licensed Professional Engineer (PE), Registered Architect (RA), licensed Structural Engineer (SE), and Professional Land Surveyor (PLS).

Several positions within the CE enterprise require engineers with professional licenses or registration. Typically, at the base level only the engineering flight chief requires a professional license or registration. Professional licensing or registration is also highly desirable, if not required for senior leadership positions and SMEs. For those Engineer/Architect positions in the CE enterprise that do not require registration, selecting officials are encouraged to consider registration as an indicator of the candidates' professionalism and excellence and it is a factor in evaluating candidates for promotion. More information on the CE credentialing policy can be found (here).

Professional certification from a recognized professional association is also highly desired by selecting officials such as Project Management Professional (PMP), Leadership in Energy and Environmental Design (LEED), continuous process improvement, such as Lean Six Sigma certifications, etc., as these enhance the skills and knowledge necessary for becoming a successful Engineer/Architect and leader in the CE enterprise. Certification usually requires a commitment of time and money outside of the normal work environment, and employees are encouraged to discuss the various options with their supervisor and/or mentor.

Additional details on certifications may be found at the Department of Defense (DoD) Civilian Credentialing Opportunities On-Line (DCOOL) website (here). The site allows users to search by occupational series code or title and find general information on credentialing relating to the individual federal occupational series. Clicking on a credential title in the system provides detailed information about the credential, such as a description, its eligibility requirements, exam topics, and recertification requirements.

Expenses for training and professional registration can be paid by the unit. Specifically, Title 5, U.S.C., Section 5757, provides that an agency may use appropriated funds to pay for expenses for employees to obtain professional credentials, including expenses for professional accreditation, State-imposed and professional licenses and professional certification; and examinations to obtain such credentials. This authority may not be exercised on behalf of any employee occupying or seeking to qualify for appointment to any position that is excepted from the competitive service because of the confidential, policy-determining, policymaking, or policy advocating character of the position. This authority is permissive, not mandatory. It does NOT establish an entitlement. Because the authority is codified in Title 5 U.S.C., Government Organization and Employees, this authority is applicable to civilian employees only and not to military members. The use of appropriated funds to pay expenses to obtain professional credentials does not extend to employees' memberships in professional organizations unless the membership is a prerequisite to obtaining the professional license of certification.

1.3 SECTION C: COMPETENCIES

1.3.1. Introduction

While most duties and responsibilities are position-specific, Engineers/Architects generally must demonstrate facilitation, collaboration, and functional analysis skills through leadership and core Occupational Competencies (OCs) where core OCs are foundational, common, critical, and cultural to being a leader in the CE enterprise.

1.3.2 Leadership Competencies

The Federal Managerial Framing Network identifies additional leadership competencies for managers at different stages of their career, including: Technology Management; Leveraging Diversity; Financial Management; Creativity and Innovation; Political Savvy; Partnering; Human Capital Management; Resilience; Influence/Negotiating; External Awareness; Strategic Thinking; Entrepreneurship and Vision. Effective writing skills and oral communications are also a key skill required of strategic leaders. More information is available (here).

Engineers/Architects wishing to pursue strategic leadership roles may wish to begin developing the Executive Core Qualifications (ECQ) leadership competencies of:

Competency 1. Leading Change: Ability to bring about strategic change, both within and outside the organization, to meet organizational goals with an inherent ability to establish an organizational vision and implement it in a continuously changing environment.

Competency 2. Leading People: Ability to lead people toward meeting the organization's vision, mission, and goals. Inherent to this ECQ is the ability to provide an inclusive workplace that fosters the development of others, facilitates cooperation and teamwork, and supports constructive resolution of conflicts.

Competency 3. Results Driven: Ability to meet organizational goals and customer expectations. Inherent to this ECQ is the ability to make decisions that produce high-quality results by applying technical knowledge, analyzing problems, and calculating risks.

Competency 4. Business Acumen: Ability to manage human, financial, and information resources strategically

Competency 5. Building Coalitions: Ability to build coalitions internally and with other federal agencies, State and local governments, non-profit and private sector organizations, foreign governments, or international organizations to achieve common goals.

More information on ECQs is available (here).

1.3.3 Occupational Competencies

Core OCs are foundational, common, critical, and cultural to being a leader in the CE enterprise, as well as providing the building blocks for further force development as a SMS or SME. A common OC is expected in many positions filled by an Engineer/Architect. A critical OC is one where an Engineer/Architect must be able to make informed decisions that can affect

the overall life, safety, and health of squadron members, base personnel, or the surrounding community, understanding the limitations of financial or personnel resources. Lastly, a cultural OC is one that is important as a representative of a leader within the CE enterprise. All competencies fall under one of the four criteria for core CE OCs.

The OCs are not comprehensive for all positions. It is expected that positions available to the growth of the Engineer/Architect will be centered on one of the two career tracks as an enterprise leader or functional SME. While Engineers/Architects are expected to demonstrate portions of the competencies of a project programmer, for example, the member is not expected to know all the competencies unique to being a project programmer unless they have filled that position.

> *The Department of the Air Force defines competencies as an attribute that an individual possesses to successfully and consistently perform a given task, under specified conditions, or meet a standard of performance. This enables engineers to perform their jobs and contribute to the overall success of the Department of the Air Force. Competencies influence human performance and have a subsequent impact on mission and organizational success.*

Engineers/Architects turn OCs into required capabilities. The success of current and future operations lies in the direct and deliberate development of its Airmen. Development occurs across the distinct but related elements of education, training, and experience. Foundational education is primarily provided to the CE career field through The Civil Engineer School (TCES). Specialized (to include advanced degrees) and leadership training can be found through various sources and is discussed in other sections of the CFETP. Lastly, experience is the application of education and training for the individual at his or her organization. The elements of the continuum of learning are complementary; each enhances the values of others. The blend of all three elements across an entire career is key in the development of CEs who pursue leadership roles to achieve occupational competencies and meet DAF operational needs.

Force development is a responsibility of both the individual and CECFT. Engineers/Architects that wish to advance their careers and take on positions with a greater depth of knowledge and experiences must take on the responsibility to guide their own competency development, while the CECFT provides a wide range of developmental opportunities.

1.3.3.1 Occupational Competency Structure

The OCs provide a framework that describes the technical/functional skills, knowledge, abilities, and other characteristics required to perform at that level. The technical competency list consists of 6 competencies and 17 sub competencies grouped into three categories of installation support, contingency operations, and organizational leadership (see Appendix B). Additional leadership competencies discussed in paragraph 1.3.1.2 provide a framework for those on a strategic leadership track and are described through ECQs.

1.3.3.2 Occupational Competency Categories

Installation Support: This group can be broken down into three competencies of planning and programming, execution, and operations management. Planning and programming encompass the process to identify, validate, and scope requirements to include project requirements. In addition, it gets at the funding and approval aspects of planning and programming. Execution covers the competencies required for design and construction of requirements to include both in-house and contracted means of execution. Operations management evaluates the seven major facility systems of a building that in turn feed into the development of FSRM programs and requires close coordination with operations personnel that sustain the systems.

Contingency Operations: This group encompasses the support of operations across the conflict continuum and includes competencies of base recovery and closure. Contingency operations apply across the globe for both CONUS and OCONUS installations. Recovery and closure include incident planning and management as well as attack and disaster response. In addition, the competency of recovery and closure covers CE requirements during the closure of an installation.

Organizational Leadership: This group encompasses the human and personal characteristics required for DBCEs to include employing engineer capabilities and managing resources. Organizational leadership blends institutional requirements with the unique aspects of the CE career field and can be applied across the competencies of the other two groups.

These competencies reflect the interaction across various levels within the DAF organization and outside to include joint services, other government organizations, companies, and other nations. Employing engineer capabilities encompasses engineer organization capabilities, engineer joint and partnership capabilities, and individual engineer capabilities. Managing resources specifically describes resource stewardship, force development, and posture and presentation.

The installation is typically an integral part of the surrounding community. Strong relationships contribute to an enduring partnership that is mutually beneficial to both. Specifically, the impact an enduring installation has on the local economy and ensuring the city's master planning decisions will not negatively impact the mission. Public to private and public-to-public agreements (P4) through Memorandums of Understanding (MOUs) mutually benefit both parties and strengthen the wing's position within the DoD as a premiere cost-effective installation. Installation encroachment is also another key community partnership area, to not lessen the military value of the installation. Innovative leveraging of partnerships such as 501c, grants, and third-party financing aligns with the Infrastructure Investment Strategy (I2S) to increase the resources for an installation to generate combat power.

1.3.3.3 Core Competencies

- **Competency 1. Installation Planning and Programming**: Identification of requirements with stakeholders, validation using CE enterprise business tools, scope development that comply with codes and criteria, and securing funding and approval.

- **Competency 2. Execution**: Interpret drawings and specifications to ensure contractor compliance with codes and regulations. Ability to develop specifications, technical requirements, and independent government estimates for construction or service contract solicitation packages.
- **Competency 3. Operations Management**: Understand the logistics and work management required to sustain the installation and meet mission requirements. Leverage third party financing through public and private partnerships to finance acquisitions of equipment, supplies, and facilities. Develop and execute plans to provide services and utilities that sustain installation readiness capabilities.
- **Competency 4. Recovery and Closure:** Knowledge of incident planning and management of CE resources for any natural disaster; where CE would operate a unit control center, provide emergency support functions in the Emergency Operations Center (EOC), and mange EOC operations.
- **Competency 5. Employ Engineer Capabilities:** Employing engineer capabilities encompasses a knowledge of engineer organization capabilities, engineer joint and partnership capabilities, and individual capabilities.
- **Competency 6. Manage Resources:** Understand the responsibility of managing resources that includes resource stewardship, force development, and posture and presentation.

1.3.3.4 Proficiency Levels

A developing Engineer/Architect will pass through three proficiency levels of each of the 17 technical sub competencies during their career: Basic, Advanced, and Master. Proficiency levels are progressive in that they build on top of one another. The general criteria for each proficiency level are discussed below. Each criterion helps enable members to determine attainment of a competency at the different proficiency cycles through observable and measurable behaviors. At some point, typically early in the career, an Engineer/Architect may decide to be a functional Subject Matter Expert (SME) working at AFCEC or they may want to be in a leadership role at the base level with possible sights on a SES leadership role at AFCEC/HAF. The competency checklist developed in this CFETP is designed for a DBCE that can translate into positions with HAF, MAJCOMs, Centers, Direct Reporting Unit or AFCEC.

- **Basic:** The member comprehends the basic order of tasks but requires guidance and supervision to minimize errors and ensure successful accomplishment. The skills learned at this proficiency is at a foundational knowledge level.
- **Advanced:** The member demonstrates ability to perform most tasks with limited guidance and supervision with some errors and omissions. The skills learned at this proficiency allows the member to apply the foundational knowledge earned at the basic level with various degrees of success.
- **Master:** The member consistently performs tasks with little or no assistance, and the result contains few, if any, errors or omissions. The skills learned at this proficiency allows the member to create and synthesize products past the basic and advanced level. This is most often achieved with experience gained throughout a career.

1.3.3.5 Competency Checklist

The technical competency checklist (Appendix B) was developed as a tool for individuals to self-assess their own personal development. It can also be used as a talking point with supervisors in the preparation of IDPs. The list is broken down by the competencies, sub-

competencies, and descriptors on the left and the expected proficiency level on the right. Each descriptor shows the grade level and years of experience, that should be achieved, as the individual progresses through their career. The expected proficiency levels at each stage of an individual's career should be used as a guide to determine the progress of an individual's force development.

Note: Descriptors are balanced at a level specific enough to provide a basic expectation for both the Engineer/Architect and their supervisor, but not so specific as to limit the application of a descriptor to an overly restrictive scenario. Both the Engineer/Architect and their supervisor should use their best judgment in determining the exact behaviors that demonstrate a descriptor, and at what proficiency level each is achieved.

Through self-assessment, an Engineer/Architect can determine the required skills he/she needs to develop their career. The structure of the competencies allows one to look at overall areas that are lacking and can tie to an education or training program or a job opportunity that will provide the experience. An individual can look at the list and determine if he/she is lacking in any overall areas such as design or logistics management and can look deeper into the descriptors that are part of those sub-competencies. If an individual is lacking in a certain area, there are several steps that can be taken to gain or broaden their experience. For example, an Engineer/Architect with no training in programming may take a course through TCES or work with their supervisor to swap roles with another individual, so both could benefit from an internal job exchange to expand their breadth and depth of experiences.

The competency list is also a tool for supervisors to mentor and develop Engineers/Architects. The supervisors have the intimate knowledge of specific jobs and opportunities Engineers/Architects will need to meet the competency requirements of their short, mid and long-range goals. Commanders and supervisors have the intimate knowledge of specific jobs and opportunities Engineers/Architects will need in order to meet the competency requirements in addition to having a balanced career necessary to achieve long range goals.

The use of this list is not intended to be punitive or tied to performance evaluations. It is merely a tool to help guide career development for Engineers/Architects and is designed for those with a goal to be a future DBCE or director that can lead to a leadership role within AFCEC or HAF, if that is the desired long-range goal.

1.4 SECTION D: RESOURCE CONSTRAINTS

This section identifies known resource constraints, which preclude optimal and desired training from being developed or conducted, including information such as costs and manpower. Limiting resources will put strains on the career field to adequately cover all training. Priority will go to mission essential training courses, then focus on mission enhancement training. TCES continues to develop Distance Learning courses to mitigate the effects of resource limitations.

1.4.1 Tuition Assistance (TA)

The goal of the Civilian Tuition Assistance Program (CTAP) is to assist civilians in their continued self-development and includes coursework at the associate, bachelor's, master's, and doctorate levels at an accredited college or university. TA is used for course(s) that contribute to occupational and institutional competencies, special interest needs, and readiness by supporting the current and future needs of the DAF.

1.4.1.1 Eligibility

Funds are available for individuals who are permanent full time appropriated fund employees (including wage grades). Applicants must currently have an acceptable performance appraisal rating and have an approved education goal in the Air Force Virtual Education Center (AFVEC) (here).

1.4.1.2 Funding Management and Limitations

TA is available for two (2) courses per semester/quarter. There is no limitation on the number of credit-by-exam tests. TA can be used for up to 75% of the tuition cost but may not exceed $250.00 per semester hour or $166.00 per quarter hour and $4,500 per fiscal year. Students are responsible for the remainder of the expense.

TA can be used for 100% of credit-by-exam fees at an on-base and/or fully funded testing center. TA does not pay professional certification fees, charges related to accrediting work or life experiences or the following examination fees: Graduate Management Admissions Test (GMAT), Graduate Records Examination (GRE), Law School Admission Test (LSAT), Medical College Admissions Test (MCAT), Standard Achievement Test (SAT), or Admissions College Test (ACT).

TA is not provided, in whole or in part, for courses for which the employee is receiving other federal or state tuition subsidies such as Veterans Administration educational benefits, scholarships or grants, etc. However, TA can be used in conjunction with student loans.

TA funded under CTAP is not an entitlement or condition of employment and past approved TA does not guarantee future funding. TA funding does not apply to courses at a level lower or equal to a degree already attained by the applying member.

1.4.2 TDY Funding

Many training opportunities exist away from the installation and personnel would attend in a Temporary Duty Status (TDY) that pays for transportation, lodging, meals, incidentals, and course costs. Funding for TDYs come from various sources to include TCES, AFCEC, MAJCOMs, and the unit.

Part II – Training

2.1 SECTION A: PROFESSIONAL TRAINING/EDUCATION

2.1.1 Purpose

Formal training covers the classes, either in person or distance learning. Successful Engineers/Architects will establish technical competencies and understand the DAF culture. Individuals will join the DAF Civil Service at different points in their careers; this CFETP is written from the perspective of entering into the CE enterprise at any time in an Engineers/Architects career. Foundational training requirements are detailed in Appendices D and E.

2.1.2 Training

Career goals will likely evolve as one navigates their career. As an individual increases their depth and breadth of experience and moves to different positions within or among organizations, perspectives and desires will contribute to shaping those goals. However, it is important to determine an ultimate career goal, in terms of leadership or technical track, as early as possible. Training decisions should be informed with the long-game in mind, which may impact the type of training an individual should pursue.

The DAF defines Force Development as, "a deliberate process of preparing Airmen through the Continuum of Learning (training, education, and experience) with the required competencies to meet the challenges of the 21st Century." The below topics discuss additional ways to obtain training, education and experience through offerings available to DAF Civil Servants. Additional information about these and other topics are available at the CECFT SharePoint site (here).

2.1.3 Civilian Developmental Education (CDE) Programs

Development programs, including the new employee orientation, resident and nonresident PME, leadership training, experiential focused learning, and higher-level strategic leadership programs are learning opportunities available to selected personnel to enhance their professional growth. CDE can consist of short- and long-term leadership, academic, and fellowship training programs. There are three types of CDE: PME, Academic programs and Fellowships, and Leadership Seminars. Individuals are chosen for the in-residence version of these programs through a formal nomination and selection process, which begins with self-nomination and a recommendation from their leadership chain as part of annual nomination calls. Individuals should discuss their interest in CDE programs with their supervisor to understand how these programs could enhance their professional growth. Previous job performance, accomplishments, and leadership potential are typically factored into each nomination and selection.

PME includes learning the history and strategic business of the DAF. Eligibility for each CDE level of PME is based upon an Engineer/Architect's grade:

Basic Developmental Education (BDE)—GS-07 to 12, or equivalent (Squadron Officer School)
Intermediate Developmental Education (IDE) —GS-12 to 13, or equivalent (Air Command & Staff College)
Senior Development Education (SDE) —GS-14 to 15, or equivalent. (Air War College)

Completing PME courses at the appropriate level (distance learning or in-person) is key for advancement within the CE Career Field. Note, completing the previous PME course is not a prerequisite for starting the next PME course; individuals should take the PME course appropriate for their current grade.

Most programs do not require the applicant to be mobile; some include a short-duration TDY. Basic eligibility is 2 years of "Federal" civil service by the application deadline. Distance Learning programs for CDE can be started at any time, if minimum requirements are met.

Individuals apply to Air University directly. Details on all CDE opportunities are available on the myPers Civilian Force Development Home Page, to include PME, the various Academic programs, and Fellowships, and Leadership Seminars (here).

2.1.4 Civilian Strategic Leadership Program (CSLP)

The Civilian Strategic Leadership Program (CSLP) is the DAF civilian enterprise development program designed to provide selected GS-13/14/15 (or equivalent) DAF employees competencies needed to build a federal corporate culture that drives for results, services customers, and builds successful teams and coalitions within and outside the organization. GS-13s may apply for permanent promotion opportunities for GS-14 Installation-level assignments. More information about the CSLP can be found (here). The Deputy Director of Installation Support/Deputy Mission Support Group Commander is one of the more common positions, which is usually filled by the CSLP.

2.1.5 Key Career Positions (KCP)

Key Career Positions (KCPs) are stepping-stones for individuals to gain expertise that may qualify them to move from functional experts to functional leaders. KCPs help applicants gain experience at the intermediate and headquarters levels. KCPs are peppered throughout AFCEC, AFIMSC, MAJCOM, and HAF. These positions have a mobility agreement requiring the incumbent to move positions after three to five years. The KCPs ensure multiple intermediate-level personnel have the opportunity to gain breadth of experience. Additional information is available through the CECFT (here).

2.1.6 Temporary Duty (TDY)/Temporary Assignments
When considering areas an individual may be lacking in experience, they may consider a TDY or Temporary Assignment. TDY opportunities are available for both CONUS and OCONUS. Additionally, it may be possible to request a temporary assignment, or additional duty request, within their organization to gain the experience needed to more fully understand the many facets of the Engineering/Architecture workforce.

2.1.7 Documentation of Training

Use the IDP in Appendix C to document training requirements and completion of formal training requirements. Each Engineer's/Architect's career IDP should be developed with an understanding of the basic competencies and skills required to be a DAF CE SME or leader. The IDP should be reviewed and updated annually.

2.1.8 Competencies

Section D is designed to ensure Engineers/Architects have the occupational competencies to successfully perform their jobs. As discussed in section 1.3.3, the Occupational Competencies are Installation Planning and Programming, Execution, Operations Management, Installation Recovery and Closure, Employ Engineer Capabilities, and Manage Resources. In addition, Engineers/Architects are encouraged to develop Leadership Competencies from section 1.3.2 (Leading Change, Leading People, Results Driven, business Acumen and Building Coalitions); especially those on a leadership track.

2.1.9 Continuing Education Requirements

In addition to the formal training requirements, licensed Engineers or registered Architects are required to complete hours of professional training in accordance with state requirements. The formal training courses through TCES count towards the continuing education requirements; however, there are many additional opportunities to continue to learn about DAF Engineering.

2.1.10 Symposium/Workshop Attendance

One opportunity for training that allows Engineers/Architects to receive many training hours in a short period attending symposiums or workshops. Many DAF and larger DoD sponsored events include courses relevant to or geared towards any Engineer/Architect development path.

2.1.11 Air Force Institute of Technology (https://www.afit.edu/CE/):

Required for CE Squadron Commander and DBCE-selects.

- WMGT 400, Civil Engineer Commander's Course, 2 week course
- WMSS 600, Advanced Base Civil Engineer Seminar, 4 day resident course

2.2 SECTION B: LEADERSHIP/MENTORSHIP

2.2.1. Mentoring for Department of the Air Force Engineers/Architects

Engineers/Architect at all levels, to include those serving as an Engineer/Architect, should make it a priority to seek advice from more experienced DAF leaders, to include seeking advice and mentorship from military leaders, as well as senior civilians. DAF leaders, be they military or civilian leaders, as well as other senior personnel in various functional areas, have rich insights developed and learned through years of experience, and they are often excited to coach and mentor other professionals. When seeking this opportunity, Engineers/Architects

should have questions prepared, have a vision/plan for the next 5-10 years included on an IDP (Appendix C), which may include plans for CDE, career broadening, separation, retirement, etc., and have a biography and resume ready. Prior to meeting with a mentor or coach, Engineers/Architects should contemplate how they may be viewed by the mentor (i.e., consider the perspective of others when evaluating personal performance) and anticipate the types of questions the mentor may ask, such as career aspirations, work values, unique knowledge, skills, or abilities, and preferred types of work and learning. Additional information about mentoring is available (here).

Technical Engineers/Architects at all levels should explore the competencies (discussed in Section 1.3 of this CFETP) then use the competencies to first self-assess their level of proficiency for each competency and identify a plan to develop these competencies by pursuing education, training and experience throughout his/her career to attain the highest level of proficiency possible. These plans should be identified in an IDP. Not all Engineers/Architects may achieve the desired level of proficiency; however, gaps that exist between expected and actual proficiency levels should be used as a discussion tool with mentors to help target growth and development issues. Engineers/Architects should discuss these gaps with their mentors and help identify training and experiences to be added to the IDP that might help the Engineer/Architect to build upon these competencies. Engineers/Architects should focus on competencies needed for the current assignment first, and then explore competencies needed for the next assignment.

Engineers/Architects may also wish to review resources used to mentor CE officers at the Air Force Officer Classification Directory (AFOCD) on the AFPC website (here). See also AFMAN 36-2643, Air Force Mentoring Program (here). Finally, the Treasury Executive Institute offers online and in-person leadership courses and coaching for GS-14s through SES, or equivalent (here).

There is no single, optimal career path to ensure career success for an Engineer/Architect. A successful career path includes steady growth in job responsibility and professional development with a broad variety of experience. Periodically, Engineers/Architects should review their personal situation and their organization's needs in order to reassess their career path goals. They may consider personal strengths, weaknesses, training or experience gaps, commitment to the organization's mission, and short and long-term goals. Organizationally, Engineers/Architects should consider their organization's needs, training resources, position availability, and promotion opportunities. How well an Engineer/Architect performs in his/her current position is the most important factor in determining their future success.

2.2.2. Mentorship

The DBCE is often one of the highest-level civilians that many CE Airmen come into contact with at the installation, and often he/she has a good deal of knowledge and advice that can be passed on to first or second -level civilian supervisors and leaders within the squadron. All Engineers/Architects in a leadership role should work with high performing civilian team members to develop an IDP that identifies training and career path activities valuable to the growth of future civilian leaders. Leaders should encourage deserving team members to complete the civilian Vectoring process, pursue training opportunities and explore career broadening assignments. A myriad of training opportunities are available for leaders and

supervisors on Milsuite (here) and for architects, engineers, and construction professionals on RedVector (here).

OPM's center for Leadership Development helps training officers, managers and supervisors meet the challenge of succession management to include helping future leaders assess leadership effectiveness, gain core knowledge and develop critical skills. These courses are offered on a competitive basis annually through the CECFT as funding permits. The current course schedule is available (here).

Appendices

APPENDIX A: TERMS AND ABBREVIATIONS

AF/A4C. The Directorate of Civil Engineers. In accordance with Air Force Policy Directive (AFPD) 32-10, Installations and Facilities, AFPD 32-20, Fire Emergency Services, 18 HAFMD1-38 21 JUNE 2021 AFPD 32-30, Explosive Ordnance Disposal, AFPD 32-60, Housing, AFPD 32-70, Environmental Considerations in Air Force Programs and Activities, AFPD 32-90, Real Property Asset Management, AFPD 10-2, Readiness, and AFPD 10-25, Emergency Management, the Director of Civil Engineers formulates DAF Civil Engineer strategy, policy and implementation guidance supporting AF and DoD strategic goals and objectives, and manages CE enterprise governance to guide the development and execution of the associated strategy, policy, implementation guidance, and related oversight.

CFM. Career Field Manager. The focal point for the designated career field within a functional community. Serves as the primary advocate for the career field, addressing issues and coordinating functional concerns across various staffs. Responsible for the career field policy and guidance. Must be appointed by the Functional Manager (FM) and hold the grade of colonel/GS-15 (or equivalent).

AFCEC. Air Force Civil Engineer Center. AFCEC provides civil engineering services and enterprise lifecycle leadership to AF and SF installations that enable the warfighter. AFCEC is installation focused and globally linked to provide best-practice solutions to Airmen…anytime and anywhere. AFCEC is the cornerstone of the CE enterprise by managing all centralized CE functions and optimizing key capabilities.

AFIMSC. Air Force Installation and Mission Support Center. One of the centers under AF Materiel Command, the AFIMSC is the single organizational entity in the AF providing intermediate-level installation and mission support capabilities to supported Major Commands (MAJCOMs) and installations across the full range of military operations.

AFIT. Air Force Institute of Technology. Located at Wright-Patterson AFB, OH, AFIT is the Air Force's graduate school of engineering and management as well as its institution for technical professional continuing education. A component of Air University and Air Education and Training Command, AFIT is committed to providing defense-focused graduate and professional continuing education and research to sustain the technological supremacy of America's air, space, and cyber forces. AFIT accomplishes this mission through four schools: the Graduate School of Engineering and Management, the School of Systems and Logistics, The Civil Engineer School, and the School of Strategic Force Studies. Through its Civilian Institution Programs Office, AFIT also manages the educational programs of officers enrolled at 350+ civilian universities, research centers, hospitals, and industrial organizations.

AFOCD. Air Force Officer Classification Directory The official directory for all military officer classification descriptions, codes, and identifiers.

AFPC. Air Force Personnel Center. Headquarters Air Force Personnel Center (HQ AFPC) executes and integrates United States Air Force (USAF) personnel programs to develop Air Force people and meet the field commanders' needs. HQ AFPC is a Field Operating Agency (FOA) of Headquarters United States Air Force.

AFVEC. Air Force Virtual Education Center. The Air Force's "go-to" site for information about your educational benefits. The site offers a wide range of online services that empowers you to actively take part in all parts of your education-including the ability to create and manage your Tuition Assistance funding requests.

AT&L. Assistant Secretary of the Air Force (Acquisition, Technology, and Logistics). The Office of the Assistant Secretary of the Air Force for Acquisition, Technology and Logistics oversees Air Force research, development, acquisition, and program sustainment activities totaling an annual budget in excess of $60 billion for more than 550 acquisition programs.

AU. Air University. Located at Maxwell AFB, AL, AU is the Air Force's resident home for Professional Military Education as well as Officer Training School (OTS) and Air Force Reserve Officer Training Corps (AFROTC) Field Training. In-resident PME programs include Squadron Officer School (SOS), Air Command and Staff College (ACSC), and Air War College (AWC).

BCE. Base Civil Engineer. Develops and implements civil engineer force employment, and provides staff supervision and technical advice. Performs and manages Civil Engineer functions and activities to provide facilities and infrastructure supporting the United States and allies. Activities include programming, budgeting, project management, drafting, surveying, planning, feasibility studies, construction management, utilities operations, energy and environmental programs, land management, real property accounting, fire protection, explosive ordnance disposal, disaster preparedness programs, family housing and dorm management, and mobilization programs at base level. Serves on response teams and related installation support services. Advises commanders and government officials on effective use of Civil Engineer resources.

BDE. Basic Developmental Education. BDE programs are tactical level programs that introduce employees to the Air Force and DoD missions and prepare them for future leadership, managerial, and leadership roles. Key BDE programs include Squadron Officer School (SOS), the Defense Civilian Emerging Leader Program (DCELP) and the Developing Team Leader Course. Program eligibility requirements vary. See the Civil Engineer Career Field Team SharePoint for more information.

CDE. **Civilian Development Education**. The Air Force CDE program is central to the Air Force's Civilian Leadership Development continuum that spans a civilian's professional career (see Part II, Section C for a link to the continuum). The programs included in the CDE portfolio prepare civilian students from the Air Force, its sister services, and allied nations for positions of greater responsibility. Emphasis in these programs includes leadership, military doctrine and aerospace power. More information about available programs is (here).

CECFT. Civil Engineer Career Field Team. Functionally oriented teams that execute Force Development policy and programs for civilians.

CFETP. **Career Field Education and Training Plan**. A comprehensive, multipurpose document encapsulating the entire spectrum of training for a career field. It outlines a logical growth plan that includes training resources. The CFETP is designed to make career field training identifiable, eliminate duplication, and ensure the training budget is defensible.

CFM. **Career Field Manager**. See Air Force Career Field Manager (AFCFM).

CL. **Continuous Learning**. The Office of the Under Secretary of Defense (Acquisition, Technology and Logistics) promotes a philosophy of career-long learning by AT&L workforce members to enhance proficiency and currency. See Part II for CL program application guidance and guidelines for crediting CL activities.

CONUS/OCONUS. Continental United States/Outside Continental United States. CONUS refers to United States territory, including the adjacent territorial waters, located within North America between Canada and Mexico. Areas outside the 48 contiguous states are OCONUS. Areas such as Alaska and Hawaii are defined as non-foreign OCONUS.

CSLP. Civilian Strategic Leadership Program. The Air Force civilian enterprise development program designed to provide selected GS-13/14/15 (or equivalent) Air Force employees competencies needed to build a federal corporate culture that drives for results, services customers, and builds successful teams and coalitions within and outside the organization

CTAP. **Civilian Tuition Assistance Program**. Air Force civilian post-secondary Tuition Assistance (TA) supports civilians in their continued self-development and includes coursework at the associate, bachelor, masters and doctoral levels. TA is for courses that contribute to occupational and institutional competencies, special interest needs and readiness by supporting the current and anticipated needs of the Air Force. This includes courses that will provide employees the breadth of knowledge and problem-solving tools that aid in critical thinking, allowing individuals to address a wide range of problems and weigh alternative solutions. Additional information about TA and CTAP is available in the AFMAN 36-606, Civilian Career Field Management and Development.

Currency. Maintaining proficiency in the community planning occupational series as demonstrated by meeting DoD and Air Force Continuous Learning (CL) standards and performing acquisition duties. See CL.

DCOOL. **Defense Civilian Credentialing Opportunities On-Line**. DCOOL is a website focused on civilian credentialing opportunities for federal workers. The site provides information about certifications and licenses providing professional growth opportunities in their career areas. At the site, civilians can provide both general information on credentialing as well as specific information on credentials related to their individual federal occupational series. After searching on a federal occupational series by either code or title, users can view a list of credentials related to most or some of their job duties. Clicking on a credential title in the list provides detailed information about that credential, including a description of the credential, its

eligibility requirements, exam topics, and recertification requirements. The site is available (here).

DE. **Developmental Education**. An array of educational opportunities comprised of professional and specialized education programs, research and doctrinal studies, fellowships, and graduate- level studies. DE spans a member's entire career and provides the knowledge and abilities needed to develop, employ, and command air, space and cyberspace forces.

DAU. **Defense Acquisition University**. Located at Ft Belvoir, VA, DAU is the Department of Defense's (DoD)'s institutional authority in implementing Defense Acquisition Workforce Improvement Act (DAWIA) and conferring certification levels. DAU offers a variety of acquisition courses in resident and via Distance Learning.

DAWIA. Defense Acquisition Workforce Improvement Act. This is a standard curriculum that requires the DoD to establish and secure education, training, requirements and courses for civilian and military workforce.

(D)BCE. (Deputy) Base Civil Engineer. This position serves as the Deputy to the Base Civil Engineer at a Department of the Air Force or Joint Base installation with responsibilities for all day-to-day support activities provided by the Squadron to the installation and tenant organizations.

Distance Education. Distance education is on the cutting edge of teaching media and takes advantage of delivery methods such as satellite, internet, and computer-based instruction to deliver course information. Many AFIT courses are offered through distance education.

DL. **Distance Learning**. Includes Video Tele-seminar (VTS), Video Tele-training (VTT), and Computer Based Training (CBT). Formal courses that a training wing or a contractor develops for export to a field location (in place of resident training) for trainees to complete without the on-site support of the formal school instructor. For instance, courses are offered by Air Force Institute of Technology, Air University, and Training Detachment.

DT. **Development Team**. The Civil Engineering career field DT is comprised of civil engineer senior leaders and is led by the Deputy Director of Engineers (AF/A4C-2). The DT meets bi-annually and provides guidance on civilian development plans, provides advice/feedback on policy issues affecting the workforce, provides vectors to workforce members, and endorses candidates for CDE. The DT's mission is to prepare future Air Force Civil Engineering leaders to meet the challenges of shaping the Air Force through appropriate training, education, and experience.

EOC. Emergency Operations Center. The protected site center where coordination and management decisions are facilitated in the event of an emergency incident. (UFC 4-141-04).

FA. **Functional Authority**. FAs are designated general officers or members of the Senior Executive Service (SES) serving as deputy chiefs of staff or assistant secretaries appointed by the Secretary of the Air Force to provide oversight and functional advisory services related to functional communities. The Assistant Deputy Chief of Staff for Logistics, Engineering and Force Protection (AF/A4-2) is the FA for DAF Civil Engineering.

FM. Functional Manager. Senior leaders, designated by the appropriate functional authority (FA), who provide day-to-day management responsibility over specific functional communities at the MAJCOM, field operating agency (FOA), direct reporting unit (DRU), primary supporting unit (PSU), or air reserve component (ARC) level. While they should maintain an institutional focus regarding resource development and distribution, FMs are responsible for ensuring their teams are equipped, developed, and sustained to meet the functional community's mission as well as encourage force development opportunities in order to meet future needs of the total Air Force mission. The FM for Air Force Civil Engineering is the Deputy Director of Engineers (AF/A4C-2).

FY. Fiscal Year. For the U.S. Government, the 12 month period covering 1 October to 30 September.

GS. General Schedule. The General Schedule (GS) classification and pay system covers the majority of civilian white-collar Federal employees (about 1.5 million worldwide) in professional, technical, administrative, and clerical positions. GS classification standards, qualifications, pay structure, and related human resources policies (e.g., general staffing and pay administration policies) are administered by the U.S. Office of Personnel Management (OPM) on a government wide basis. Each agency classifies its GS positions and appoints and pays its GS employees filling those positions following statutory and OPM guidelines.

IDE. Intermediate Development Education. IDE programs are operational level programs that continue the development and education of mid-career civilians and continue to prepare them to take on increased leadership, managerial, and leadership roles. IDE programs include Air Command and Staff College (ACSC), Executive Leadership Development Program (ELDP), Air Force Legislative Fellows Program (LEGIS), and others. Program eligibility requirements vary. Also see CDE and Part II, Section C for a link to CDE programs.

IDP. Individual Development Plan. A document used to record short- and long-range career goals, the specific competencies, knowledge, skills, and abilities necessary to meet current objectives, and training, education, and other professional development strategies used to develop the desired competencies. In conjunction with a performance assistance plan, the individual development plan assists in making civilian performance more effective in present and future positions and is used for civilians below the executive level. A template is available (here).

KCP. Key Career Positions. Stepping-stones for individuals to gain expertise that may qualify them to move from functional experts to functional leaders.

LEED. Leadership in Energy and Environmental Design. Leadership in Energy and Environmental Design is the most widely used green building rating system in the world. Available for virtually all building types, LEED provides a framework for healthy, highly efficient, and cost-saving green buildings.

MAJCOM. Major Command. The level of command below Headquarters Air Force (HAF) and directly above Numbered Air Forces (NAF). The Air Force is organized on a functional basis in the U.S. and a geographical basis overseas. The functional MAJCOMs are Air Combat

Command (ACC), Air Education and Training Command (AETC), Air Force Global Strike Command (AFGSC), Air Force Materiel Command (AFMC), Air Force Reserve Command (AFRC), Air Force Special Operations Command (AFSOC), Air Mobility Command (AMC), and Air National Guard (ANG). The geographic MAJCOMs are U.S. Air Forces in Europe and Air Forces Africa (USAFE) and Pacific Air Forces (PACAF).

MDP. Master Development Plan. A comprehensive list of desired education, self-development, training, and typical assignments for each level of the career path.

OC. Occupational Competencies. A set of competencies required of all personnel within a specific workforce category (a group of functions requiring similar work, i.e., contracting). They describe technical/functional skills, knowledge, abilities, behaviors, and other characteristics needed to successfully perform that function's mission. A competency identifies behaviors and other attributes and the knowledge, skills, and abilities that define successful job performance. Competencies are important because they are the stepping-stones for civilian development and for the achievement of personnel success and the mission of the Air Force.

OPM. Office of Personnel Management. The U.S. Office of Personnel Management (OPM) serves as the chief human resources agency and personnel policy manager for the Federal Government. OPM provides human resources leadership and support to Federal agencies and helps the Federal workforce achieve their aspirations as they serve the American people. OPM directs human resources and employee management services, administers retirement benefits, manages healthcare and insurance programs, oversees merit-based and inclusive hiring into the civil service, and provides a secure employment process.

OSD. Office of the Secretary of Defense. The principal staff element of the Secretary of Defense in the exercise of policy development, planning, resource management, fiscal, and program evaluation responsibilities. OSD includes the immediate offices of the Secretary and Deputy Secretary of Defense, Under Secretaries of Defense, Director of Defense Research and Engineering, Assistant Secretaries of Defense, General Counsel, Director of Operational Test and Evaluation, Assistants to the Secretary of Defense, Director of Administration and Management, and such other staff offices as the Secretary establishes to assist in carrying out assigned responsibilities.

PME. Professional Military Education. Critical subset of developmental education that: 1) provides the nation with personnel skilled in the employment of air, space, and cyberspace power in the conduct of war, small scale contingencies, deterrence, peacetime operations, and national security; 2) provides DAF personnel with the skills and knowledge to make sound decisions in progressively more demanding leadership positions within the national security environment; and 3) develops strategic thinkers, planners, and war fighters. In addition, professional military education programs strengthen the ability and skills of DAF personnel to lead, manage, and supervise.

PMP. Project Management Professional. Project Management Professional is an internationally recognized professional designation offered by the Project Management Institute.

RC. Reserve Component. The Armed Forces of the United States Reserve Component consists of the Army National Guard of the United States, the Army Reserve, the Navy Reserve, the Marine Corps Reserve, the Air National Guard of the United States, the Air Force Reserve, and the Coast Guard Reserve.

SAF/IEE. The Deputy Assistant Secretary for Environment, Safety and Infrastructure. SAF/IEE is responsible for all matters pertaining to DAF built and natural infrastructure. This includes the life cycle management of real property interests, real property and facilities (including utilities) for planning, programming, acquisition, sustainability, utilization, and disposal to include any associated portfolio management of real property transactions; maintenance, repair and operation of all facilities, utilities, and land; military construction; privatization of utilities, military family housing, or other facilities or real property improvements; joint military-civil airfield usage; changes in legislative jurisdiction of Air Force Assistant Secretary for Installations, Environment and Energy (SAF/IE) Deputy Assistant Secretary for Installations (SAF/IEI) Deputy Assistant Secretary for Energy (SAF/IEN) Deputy Assistant Secretary for Environment, Safety, and Infrastructure (SAF/IEE)23 HAFMD1-18 10 JULY 2014 real property; and annexation of installations by municipalities. SAF/IEE, working with AF/A7C, has specially arranged lines of authority to and oversight of the Installations Directorate within the Air Force Civil Engineer Center (AFCEC), a field operating agency of AF/A4/7, that is responsible for executing and managing DAF real property acquisitions and disposals, providing corporate level portfolio management for DAF property. Except for EIAP, SAF/IEE is also responsible for all matters pertaining to DAF environment, safety, occupational health, radiation safety and radioactive materials management interests. This includes the planning, programming, implementation, operations, management, and interagency/intergovernmental coordination for all DAF programs, projects and activities subject to environmental, safety, occupational health, radiation safety and radioactive materials management requirements in law, regulation, international agreements, executive orders, DoD directives, instructions and policy, DAF policy directives, instructions and policy, and special agreements. SAF/IEE interfaces with outside organizations on matters concerning DAF -wide environment, safety, occupational health and built/natural infrastructure matters.

SCPD. Standard Core Personnel Documents. A single core personnel document used for a number of like positions across the DAF issued by AFPC. SCPDs eliminate duplication of effort in composing individual descriptions and eliminate confusion arising from variations in phraseology that do not represent variations in substance.

SDE. Senior Developmental Education. SDE programs are strategic level programs that provide for the deliberate development of senior civilian leaders. These programs provide a more strategic perspective that will prepare senior civilians to lead organization and programs to achieve results in the Joint, inter-agency and multi-national environments. SDE programs include Defense Senior Leader Development Program (DSLDP), Air War College (AWC), The Dwight D. Eisenhower School for National Security and Resource Strategy, and others. Program eligibility requirements vary. Also, see CDE.

SES. Senior Executive Service. The Senior Executive Service (SES) lead America's workforce. As the keystone of the Civil Service Reform Act of 1978, the SES was established to "...ensure that the executive management of the Government of the United States is responsive to the needs, policies, and goals of the Nation and otherwise is of the highest quality." These leaders possess well-honed executive skills and share a broad perspective on

government and a public service commitment that is grounded in the Constitution. Members of the SES serve in the key positions just below the top Presidential appointees. SES members are the major link between these appointees and the rest of the Federal workforce. They operate and oversee nearly every government activity in approximately 75 Federal agencies. The U.S. Office of Personnel Management (OPM) manages the overall Federal executive personnel program, providing the day-to-day oversight and assistance to agencies as they develop, select, and manage their Federal executives.

SME. Subject Matter Expert. A subject matter expert is an individual who exhibits the highest level of expertise in performing a specialized job, task or skill within an organization.

SMS. Subject Matter Specialist. A subject matter specialist excels in various components within their engineering discipline and provides advice to leadership on course of actions required to sustain facilities or infrastructure.

TA. Tuition Assistance. Financial assistance for tuition, laboratory and other instructional fees for academic mission-related courses at accredited post-secondary academic institutions.

TCES. The Civil Engineer School. The Civil Engineer School is one of four schools within the Air Force Institute of Technology, located at Wright-Patterson AFB, OH. The Civil Engineer School provides professional continuing education to Civil Engineers. Course list is available (here).

APPENDIX B: COMPETENCIES CHECKLIST

ENGINEER/ARCHITECT COMPETENCIES

The competency model has three proficiency levels: Basic, Advanced, and Master. Proficiency levels are progressive in that they build on top of one another. The general criteria for each proficiency level are discussed below. Each criterion helps enable members to determine attainment of a competency at the different proficiency levels through observable and measurable behaviors.

- **Basic (B)** – The member comprehends the basic order of tasks but requires guidance and supervision to minimize errors and ensure successful accomplishment. The skills learned at this proficiency is at a foundational knowledge level.
- **Advanced (A)** – The member demonstrates the ability to perform most tasks with limited guidance and supervision with some errors or omissions. The skills learned at this proficiency allows the member to apply the foundational knowledge earned at the basic level with various degrees of success.
- **Master (M)** – The member consistently performs tasks with little or no assistance, and the result contains few, if any, errors or omissions. The skills learned at this proficiency allows the member to create

INSTALLATION SUPPORT		
PLANNING & PROGRAMMING		
Requirements Identification		
	GS 7-11 (1-3 yrs)	GS 12 (3-10yrs)	GS 13-15 (10+yrs)
Anticipate emerging requirements across the installation and incorporate into work plans	B	A	M
Identify and define requirements with stakeholders	B	A-M	
Communicate facility and infrastructure requirements and expected risk to stakeholders	B	A-M	
Organize resources to gain and maintain accurate asset visibility, condition assessment, and information requirements	B	A	A
Perform data analysis using enterprise business tools to optimize infrastructure investments at the lowest life-cycle operating cost	B	A-M	
Requirements Validation		
Validate requirements using infrastructure data and analysis with enterprise business tools	B	A	M

Task	B	A	M
Prioritize requirements for execution that are informed by funding strategies, sustainment data, base master planning, schedule, mission requirements, and risk	B	A	M
Organize resources to produce an installation development plan	B	A	M

Scope Development			
Define and refine requirements in accordance to applicable codes and standards, and coordinate with stakeholders to determine appropriate scope, cost and schedule	B	A-M	
Incorporate applicable environmental agreements, laws, and host nation requirements into Civil Engineer activities	B	A	M
Identify installation infrastructure vulnerabilities and mitigate risk to mission assurance by development options to improve resilience	B	A	M

Funding and Approval			
Advocate, support, and defend Civil Engineer resources within assigned program element		B-A	M
Operate within the Congressional cycle by communicating Civil Engineer requirements, resources, and risk to influence the Air Force Program Objective Memorandum (POM) position		B-A	M
Defend the resources required to execute mission priorities and explain risk to mission for unfunded requirements		B-A	M
Identify the legal, appropriate, and effective source of funds for requirements	B	A-M	
Develop a comprehensive project programming package for funding and approval	B-A-M		

EXECUTION			

Design			
Interpret construction drawings and specifications to validate that the design complies with applicable codes and regulations	B-A-M		
Assess commercial capabilities, risks and opportunities, and incorporate into design	B-A	M	
Design a simplified facility and infrastructure system for construction	B-A-M		
Adapt standard designs to meet user requirements and site considerations where appropriate	B-A	M	
Develop the specifications, technical requirements, and independent government estimate of a construction and service contract solicitation package	B-A-M		

Construction			
Interpret construction drawings and specifications to verify that construction complies with the design	B-A-M		
Coordinate stakeholders during the construction stage of a project	B-A-M		
Evaluate contractor submittals for technical acceptability, execution feasibility, and completeness	B-A-M		
Assess, monitor, and document contractor progress and performance against contract scope of work and recommend corrective actions to the contracting officer	B-A-M		
OPERATIONS MANAGEMENT			
Logistic Management			
Direct management of Civil Engineer materials and equipment to meet mission requirements	B	A-M	
Collaborate with supply and logistics organizations to enable support for mission requirements	B-A	M	
Leverage public and private partnerships through community engagement, mutual agreements, and third-party financing in the acquisition of materials and equipment	B	A	M
Work Management			
Direct collection of and assess performance measures to optimize organizational performance	B	A	M
Develop a plan that addresses manpower and personnel requirements to have resources that enable the mission	B	A	M
Services and Utilities			
Develop and execute plans to mitigate mission impact during unplanned utility service interruptions	B	A-M	
Validate service for utility performance against contractual and level of service agreements	B	A-M	
Establish and cultivate relationships with community partners to maximize installation readiness capabilities	B	A	M

CONTINGENCY OPERATIONS			
RECOVERY & CLOSURE			
Incident Planning & Management			
Develop and maintain engineer portions of installation contingency plans and the Installation Emergency Management Plan 10-2	B	A-M	
Lead Civil Engineer Unit Control Center (UCC) operations and coordinate response to contingencies	B	A-M	
Serve as an Emergency Support Function (ESF) Representative in the Emergency Operations Center (EOC)	B	A-M	
Serve as Emergency Operations Center (EOC) director and coordinate response to contingencies	B	A	M
Post Attack & Disaster			
Validate and interpret Chemical, Biological, Radiological, and Nuclear (CBRN) modeling and mapping for senior leaders	B	A-M	
Coordinate installation preparations that enable personnel to survive and operate in a Chemical, Biological, Radiological and Nuclear (CBRN) environment	B	A-M	
Organize and direct installation recovery activities	B	A	M
Organize and direct Rapid Airfield Damage Recovery (RADR) and Base Recovery After Attack (BRAAT) activities	B	A	M
Closure			
Organize Civil Engineer efforts when divesting mission, resources, and property to the host nation	B	A	M
ORGANIZATIONAL LEADERSHIP			
EMPLOY ENGINEER CAPABILITIES			
Engineer Organization Capabilities			
Communicate the fiscal, human, material, and information resources and capabilities available within Civil Engineer Squadron	B	A	M
Understand the development of a squadron strategic plan with lines of efforts and established goals	B	A	M
Develop and manage plans and programs to achieve mission requirements	B	A	M

Understand the criteria to develop high performing teams that develop personnel through mentorship and training	B	A	M
Engineer Joint and Partnership Capabilities			
Provide guidance to Air Force, joint, and coalition partners to enable the proper employment of Air Force Civil Engineer capabilities		B-A	M
Navigate staff relationships to acquire resources and authority for engineer activities in a joint or coalition organization	B	A	M
Leverage public and private partnerships through community engagement, mutual agreements, and third-party financing that better support the mission	B	A	M
Individual Engineer Capabilities			
Anticipate and adapt in a dynamic operating environment with good engineering judgement and critical thinking skills	B	A-M	
Employ references and consultation agencies to determine engineering limitations and options	B	A-M	
Actively participate in operational planning teams to continuously improve operational capabilities	B	A-M	
Cultivate relationships to build trust and influence across units at the installation and above-wing-level headquarters organizations	B	A	M
Establish mutually supporting relationships with other squadrons to maximize unity of effort supporting the installation mission	B	A	M
MANAGE RESOURCES			
Resource Stewardship			
Communicate Civil Engineer enterprise business rules and rationale to stakeholders	B	A	M
Communicate status of Civil Engineer resources to stakeholders	B	A	M
Translate policy and guidance into prioritized operational and tactical objectives	B	A	M
Direct execution of Civil Engineer resources to meet operational and functional mission requirements	B	A	M
Cultivate a positive organizational climate based on trust, mutual respect, inclusion, safety consciousness, and stewardship of government resources	B	A-M	

Ensure compliance with standards, laws, and regulations through the commander's inspection program	B	A-M	
Identify safety hazards and organize responses and mitigation options	B	A-M	
Force Development			
Articulate history and heritage of Air Force Civil Engineers	B	A-M	
Establish personal and professional goals to ensure career-long Civil Engineer civilian development	B	A-M	
Identify the Occupational Competencies relevant for a specific job, position, or duty upon assignment and pursue appropriate Force Development opportunities	B	A	M
Facilitate the force development for Civil Engineer personnel to attain the desired proficiency level through training opportunities	B	A	M

INDIVIDUAL DEVELOPMENT PLAN	DATE INITIALLY PREPARED (YYYYMMDD)

PART A - EMPLOYEE PERSONAL DATA

1. NAME *(Last, First, Middle Initial)*	2. POSITION TYPE *(X one only)* ☐ Non-Supervisory ☐ Supervisory	3. SERIES AND GRADE

4. POSITION TITLE

PART B - CAREER GOALS

1. SHORT TERM GOALS. *(State career goals for the next one to two years. Specify position titles and grade (if appropriate) or subject area.)*

2. LONG TERM GOALS. *(State career goals for the next three to five years. Specify position titles and grade (if appropriate) or subject area.)*

NAME *(Last, First, Middle Initial)*	DATE INITIALLY PREPARED *(YYYYMMDD)*

PART C - PLANNED DEVELOPMENTAL ACTIVITIES (METHOD OF DEVELOPMENT)

1. TRAINING AND DEVELOPMENTAL ACTIVITIES. Some examples are, but not limited to, formal training/courses, on-the-job training, new or rotational assignment, professional seminar/conference, added responsibilities or self-development. Indicate training and developmental activities by occupational and/or foundational competencies in which skills need further development.

PART D - CONCURRENCE AND APPROVAL

1. EMPLOYEE

a. SIGNATURE	b. DATE SIGNED

2. SUPERVISOR

a. SIGNATURE	b. DATE SIGNED

This document should be reviewed and updated annually. Opportunities identified are not an employee entitlement or a management commitment and are subject to approval and funding availability.

Introduction to Training Course and Resource Index

This section includes a list of formal training requirements for Engineers/Architects, as they progress through their careers. It is expected that Engineers/Architects will continue learning in their respective fields, so they are competent in the design, project management, and supervision of construction that align within their conferred degree. This index is not all inclusive and is a general guide to assist Engineers/Architects to achieve career goals. A more comprehensive list of courses can be found through MyPers, which links to AFIT, DAU, CDE, and MyVector which contain course catalogs for their various programs. Additional sources include professional organizations. Career paths generally align with being a DBCE at base level, SME at AFCEC or HHQ, or executive leadership roles at the command, AFCEC, HAF or SAF levels; and acquisition coding is highly desirable or required for engineering positions. Engineers can use the Individual Development Plan in Appendix C or MyVector to establish goals and training required to achieve those goals. The Individual Development Plan should be a living document that you revise as you advance in your career or change short/long range goals. Course availability at TCES changes annually and should be reviewed for currency when developing an IDP or when annual updates are made.

Basic Skills & Knowledge	
Course Title	**Description**
Air Force Culture / Organizational Leadership	New employee orientation
WGMT 100	Air Force Civil Engineer Basic Civilian Course
WGMT 101	WMGT 101 Air Force Civil Engineer Basic Course

Airfield, Pavement, and Facility Systems	
Course Title	**Description**
WENG 440	Roofing Design and Management Course
WENG 481	Contingency Facility Design
WENG 550	Airfield Pavement Design and Maintenance
WENG 555	Airfield Pavement Construction Inspection

Asset and Resource Management	
Course Title	**Description**
WMGT 131/231/331	SMS BUILDER Level 1/2/3
WMGT 141/241	SMS PAVER Level 1/2
WGMT 301	Introduction to Asset Management. Understand the fundamental concepts of asset management in the AF Civil Engineer Structure. Become better versed in the business practice, nomenclature, and mindset to be an effective member of the Civil Engineer organization.
WMGT 417	Activity Management. Comprehend the fundamental principles of asset management practices through the Air Force Civil Engineer organizational structure.
WMGT 436	Requirements and Optimization

Asset and Resource Management cont'd

Course Title	Description
WMGT 480	High Performance and Sustainable Building Requirements. Comprehend the guiding principles of High Performance and Sustainable Buildings as well as to enhance their skills to effectively apply those principles to the design, construction, and maintenance of assets on an AF installation. Be prepared to execute mandated principles as directed in UFC 1-200-02, High Performance and Sustainable Building Requirements.

Electrical Systems

Course Title	Description
WENG 572	Facility Electrical Power Systems Design
WENG 573	Electrical Power Distribution Design and Analysis
WENG 576	Electrical Power Systems Design Capstone

Environmental Conservation & Compliance & Management

Course Title	Description
WENV 521	Hazardous Waste Management Course
WENV 531/532	Air Quality Management Course
WENV 541/542	Water Quality/Drinking Water Management Courses
WENV 450	Environmental Impact Analysis Process: Comprehend the AF Environmental Impact Analysis Process required by law to proactively inform decision making on proposed mission activities. Gain foundational knowledge of the AF EIAP program and understand key procedures

Environmental Restoration

Course Title	Description
WENV 417	Environmental Restoration Project Management Course
WENV 441	Environmental Sampling Design and Data Quality Assurance Course

Mechanical, Energy & Cyber Security

Course Title	Description
WENG 170/370	Cyber Security for Civil Engineers/Control Systems Cyber Security for CE Leaders
WENG 560/561	Fundamentals of HVAC & Application of Design and Analysis
WENG 563	HVAC Control Systems
WENG 590	Corrosion Control
WENG 420	Energy Management

Mechanical, Energy & Cyber Security cont'd

Course Title	Description
WTSS 464	Certified Energy Management Technology

Planning & Programming

Course Title	Description
WENG 200	Comprehend and consistently apply scoping and cost estimating principles infrastructure requirements, tools and standards to more effectively plan Air Force.
WENG 400	Life-Cycle Cost Estimating: Covers drawing reading and Class 5 to Class 1 cost estimating applications and processes; required in order to obtain a PACES license
WENG 500	Advanced Cost Engineering. Comprehend and implement Tri-Service policy and analyze cost estimates to more effectively plan, program, budget, and execute Air Force infrastructure requirements.
WENG 519/520	Air Force Installation and Comprehensive Planning Principles/Development
WENG 423	Project Programming Course

Project Management

Course Title	Description
WENG 200	Scoping and Estimating for SABER program managers and Requirements and Optimization personnel
WENG 400	Life-Cycle Cost Estimating: Covers drawing reading and Class 5 to Class 1 cost estimating applications and processes; required in order to obtain a PACES license and AFI
WENG 500	Advanced Cost Engineering. Comprehend and implement Tri-Service policy and analyze cost estimates to more effectively plan, program, budget and execute Air Force infrastructure requirements.
WENG 422	Project Management Course Comprehend the principles that will lead to a successful construction project.
WENG 423	Project Programming Course. Comprehend the process, program avenues, rules, and documentation of AF project planning and programming for natural and built infrastructure.
WMGT 421	Contracting for Civil Engineering. Acquisition Management. Understand the DoD systems acquisition process, to include the joint capabilities integration and development system, the planning, programming, budgeting and execution process, DoD 5000- series policy documents, and current issues in systems acquisition

Leadership Skills & Knowledge

Course Title	Description
New Supervisor Course	Focus on hiring principles and authorities/workplace management, labor management relations/civilian personnel fundamentals, performance management/workforce incentives, and employee engagement/handling unacceptable performance. Required for all first time supervisors of civilians within one year of appointment
USAF Military Personnel Management Course	First level supervisors of AF military personnel learn about the military airman (military standards, discipline, the role of JAG/First Sergeant, Benefits), Career Management (evaluations, promotions, assignments and retention), and AF education and training.

Leadership Skills & Knowledge cont'd	
Course Title	**Description**
Experienced Supervisor Course (ESC)	Understand fundamentals in Labor Management Relations, Employee Management Relations, Staffing/Hiring, Performance Management, and Handling Unacceptable Performance. Attend supervisory refresher training at least once every three years available via the AF Portal
WMGT 436	Requirements & Optimization. Comprehend the roles and responsibilities of the CEOE Requirements & Optimization section and sub activity managers for effective and efficient mission support.
WMGT 513	Financial Management for Civil Engineer Leaders Financial Management for Civil Engineer Leaders: comprehend strategic financial management concepts, principles, and programs in order to lead within the civil engineer organization while providing effective financial decision support utilizing asset management principles.
WMGT 531	Installation Management Flight Commander Course Learn how to perform the duties of the Installation Management Flight Chief.
Squadron Officer School (BDE)	Application for in-residence or Air University Distance Learning (GS-09 through GS-12) More info for DL https://www.airuniversity.af.edu/eSchool/SOS/ More info for in-residence / CDE: https://mypers.af.mil/app/answers/detail/a_id/9067/kw/SOS/p/2
Air Command and Staff College (IDE)	Application for in-residence or Air University Distance Learning (GS-12 through GS-13) More info for DL https://www.airuniversity.af.edu/eSchool/ACSC/ More info for in-residence / CDE: https://mypers.af.mil/app/answers/detail/a_id/9051/kw/ACSC/p/2
Air War College (SDE)	Application for in-residence or Air University Distance Learning (GS-13/14/15) More info for DL: https://www.airuniversity.af.edu/eSchool/AWC More info for in-residence / CDE: https://mypers.af.mil/app/answers/detail/a_id/49479/kw/AWC/p/2
Air Force Culture / Organizational Leadership	Excellence in Government; Leading Effectively through Change, etc. SDE Short Course (varies from year to year) Develop interpersonal communication and leadership skills as an AF civilian pursuing future leadership roles. Develop skills in team building, technical credibility, conflict management, problem solving, accountability, and decisiveness. Attend USAF Emerging Leader Course or Developing Team Leader course, available through the AF Portal, or the Collaborative Leadership course at OPM Center for Leadership Development

Continuing Education Resources	
myLearning	
myLearning	https://lms-jets.cce.af.mil/moodle/
Air Force Institute of Technology (AFIT)	
AFIT Civil Engineer School	http://www.afit.edu/CE/ New Cybersecurity for Control Systems. For more info, https://lms-jets.cce.af.mil/moodle/enrol/index.php?id=10068
AFIT GEM Distance Learning Program	https://www.afit.edu/DL/ Online graduate degree program run by AFIT https://www.afit.edu/ADMISSIONS/ New Data Analytics Graduate Certificate via Distance Learning. For more info, e-mail afitensdataanalytics@afit.edu
Other AF – Sponsored Training Resources	
AF Community Partnership	https://community.apan.org/wg/airforcepartnerships/p/training
AF eLearning	https://usafprod.skillport.com/skillportfe/main.action?assetid=RW$3140928:_ss_book:144206#whatshappening Provides resources to enhance personal and professional knowledge.
AFIMSC Installation Health Assessment Data Analytics and Collaboration Site	https://cs2.eis.af.mil/sites/13298/iha/SitePages/Home.aspx Training available for IHA Tools.
Developing Team Leader Course (DTLC)	https://mypers.af.mil/app/answers/detail/a_id/33633 https://www.airuniversity.af.edu/Eaker-Center/DAFCS/Leadership-Development/
Emerging Leader Course	https://www.airuniversity.af.edu 32 hour elective course to develop interpersonal communication and leadership skills for AF civilians pursuing future leadership roles.
Professional Military Education	https://www.airuniversity.af.edu/ACSC Squadron Officer School, Air Command and Staff College, and Air War College via distance learning are available from Air University.
Virtual Force Development Center	https://www.my.af.mil/
Full list of CDE/Non-CDE, PME/Academic & Fellowships /Leadership Seminars	https://cs2.eis.af.mil/sites/10016/CE%20FAC%20Workspace/Shared%20Documents/01%20Marc h%202019%20CE%20Summit/CDE%20Cheatsheet.xlsx
Naval Civil Engineer Corps Officers School Courses	https://www.public.navy.mil/netc/centers/csfe/cecos/About.aspx https://www.public.navy.mil/netc/centers/csfe/cecos/Registration.aspx
US Army Corps of Engineers Learning Center	http://ulc.usace.army.mil Course Schedule: https://ulc.usace.army.mil/CrsSchedule.aspx
Whole Building Design Guide	https://www.wbdg.org/continuing-education Distance learning courses offering continuing education credit.

Commercially Available Training / Professional Organizations	
Society of American Military Engineers	https://www.same.org/ Professional Organization with Training Opportunities
American Society of Civil Engineers	https://www.asce.org/continuing-education/ Information on Professional Certification and Free Training
National Society of Professional Engineers	https://www.nspe.org/resources/pe-institute The PE Institute has a catalog of live educational events, webinars, and conferences for the professional engineer. As engineering disciplines become more specialized, continuing education becomes more crucial to managing a rising career. Online webinars and conferences can help PEs stay current on a variety of topics. All events provided by NSPE, its state societies, and partners are available to members at a discount.
RedVector	https://enterprisetraining.com/afimsc/
Supervisor Resources	
DAU	https://www.dau.edu/
myLearning	https://lms-jets.cce.af.mil/moodle/
AF e-Learning	https://www.my.af.mil Free online resources for supervisors, to include training on time management Time Management course: https://usafprod.skillport.com/skillportfe/main.action
AF Portal	Log in to AF.mil then copy and paste the following links: Mandatory Courses for supervisors are listed but check website for the most up to date list of mandatory courses. https://www.my.af.mil/gcss-af/USAF/ep/contentView.do?contentType=EDITORIAL&contentId=c330D 98A15BC6E686015BEE402F270227&channelPageId=s0ECF2BB84DBE AE7B014DD 46E712201EF&programId=tE3494DD0504287C101504334D7B20048 Orientation Course: USAF New Supervisor: Supervisory & Managerial Development Portfolio: USAF Experienced Supervisor Military Personnel Manager Course USAF New Manager USAF Experienced Manager Leadership Development Portfolio: https://www.my.af.mil/gcss-af/USAF/ep/contentView.do?contentType=EDITORIAL&contentId=c330D98 A15BC6E686015BEE3A85810225&channelPageId=s0ECF2BB84DBEAE7 B014DD 46E712201EF&programId=tE3494DD0504287C101504334D7B20048 Virtual Force Development Center: https://www.my.af.mil/gcss-af/USAF/ep/browse.do?programId=tE3494DD0504287C101504334D7B 20048&channelPageId=s0ECF2BB84DBEAE7B014DD46E712201EF

Supervisor Resources cont'd	
Air University Air Force Negotiation Center	www.airuniversity.af.edu/AFNC
Air University Press	http://aupress.maxwell.af.mil/bookinfo.asp?bid=497 General Lorenz on Leadership, Lessons on Effectively Leading People, Teams, and Organizations. Book available on Air University website.
Employee Assistance Program	https://foh.psc.gov/fohservices/bhs/management.html Counselors available to work with supervisors, managers and union representatives to help engage with employees on productivity concerns. Coaching resources available. Employee Assistance Program Supervisor's Guide: https://www.shaw.af.mil/Portals/98/Civilian%20Employee/Supervisor%20Guide%20EAP.pdf Work Life Training and Federal Occupational Health Website: https://foh.psc.gov/fohservices/bhs/campaigns.html Multiple webinars available to share with employees such as pre-retirement prep, overcoming depression, making life work for you, safeguard your personal security, life changes, optimizing output, safeguarding your financial future, calming your concerns, communicating with clarify, the power of being present.
National Defense University	https://www.ndu.edu/
National Intelligence University	http://ni-u.edu/wp/leadership-and- management/
Office of Personnel Management (OPM)	OPM's Center for Leadership Development: https://leadership.opm.gov Helps training officers, managers and supervisors meet the challenge of succession management. Helps future leaders assess leadership effectiveness, gain core knowledge and develop critical skills. (Current course schedule: https://leadership.opm.gov/courses.aspx) LEAD Certification Program: https://cldcentral.usalearning.net/mod/page/view.php?id=249 OPM's Federal Leadership Development Program: https://leadership.oprm.gov/courses.aspx Catalog of hundreds of Federal leader development programs available through Federal agencies across the government. OPM Federal Managerial Training Framework: https://www.opm.gov/wiki/uploads/docs/Wiki/OPM/training/Complete%20508-%20Frameworks,%20Fact%20Sheet,%20learning%20objectives,%20and%20additional%20resources.pdf Outlines mandatory training and recommended training for supervisors. OPM Training and Development Policy Wiki: https://www.opm.gov/WIKI/training/Individual-Development-Plans.ashx Information for supervisors on Individual Development Plans

Supervisor Resources cont'd	
Treasury Executive Institute	https://home.tei.treasury.gov/ Offers online and in-person leadership courses and coaching GS14-SES or equivalent

Miscellaneous Resources

Career Development and Progression Resources

CE Career Field Team (CFT) SharePoint	https://cs2.eis.af.mil/sites/10016/default.aspx Includes information on Civilian Development Education, Tuition Assistance, Recruitment/Retention, the Key Career Position Program, Mentoring/Vectoring, Policies, Memos and Guidance, Acquisition Coding, etc. Questions: contact the Civil Engineer CFT at afpc.ce.cft@us.af.mil or https://usaf.dps.mil/sites/10016/SitePages/Home.aspx
eOPF	https://eopf.opm.gov View Your Electronic Official Personnel File
Individual Development Plan Resource Guide	https://www.airman.af.mil/Portals/17/002 All Products/004 Benchmarks/004_OrganizationsInputs/AMC/AMC_Individual_Development_Plan_Resource_Guide_v4.pdf?ver=2016-07-01-112805-277
MyBiz	https://compo.dcpds.cpms.osd.mil/ Database for civilians that includes career brief with information on duty history, previous education and training
myPers Civilian Force Development Home Page	https://mypers.af.mil/app/home Force Development: https://mypers.af.mil/app/categories/c/549/p/2/ Discussion forums and links to online resources, to include books and courses Annual CDE Nomination Data Call: https://mypers.af.mil/app/categories/c/549/p/2/
MyVector	https://myvector.us.af.mil • Build resume in MyVector • CDE applications, Info on Civilian Strategic Leader Program • Discussion forums, links to online books • Air Force Competencies Information on mentoring, career planning and more

References	
Number	**Title**
AFGM2020-23-03	*Career Field Education Training Plans for Civil Engineer Federal Wage System Series* https://static.e-publishing.af.mil/production/1/af_a4/publication/afgm2020-32-03/afgm2020-32-03.pdf
AFI 36-130	*Civilian Career and Developmental Programs* https://static.e-publishing.af.mil/production/1/af_a1/publication/afi36- 130/afi36-130.pdf
AFI 36-2670	*Total Force Development* https://static.e-publishing.af.mil/production/1/af_a1/publication/afi36-2670/afi36-2670.pdf
DODI1400.25V451_AFI 36-1004	*Civilian Recognition Program* https://static.e-publishing.af.mil/production/1/af_a1/publication/dodi1400.25v451_afi36-1004/dodi1400.25v451_afi36-1004.pdf
AFH 36-2643	*Air Force Mentoring Program* https://static.e-publishing.af.mil/production/1/af_a1/publication/afh36-2643/afh36-2643.pdf
AFI 36-2639	*Education With Industry Program* https://static.e-publishing.af.mil/production/1/saf_aq/publication/afi36-2639/afi36-2639.pdf
AFMAN 36-606	*Civilian Career Field Management and Development* http://static.e-publishing.af.mil/production/1/af_a1/publication/afman36- 606/afman36-606.pdf
AFPD 36-26	*Total Force Development* https://static.e-publishing.af.mil/production/1/af_a1/publication/afpd36-26/afpd36-26.pdf

APPENDIX E: THE CIVIL ENGINEER SCHOOL COURSE MATRIX

Course	Title	Level	General Core	Discipline Core
WENG 200	Scoping and Estimating	Entry	✓	
WENG 400	Life-Cycle Cost Estimating	Mid (Entry for programmers)	✓	
WENG 440	Roofing Design and Management Course	Elective		✓
WENG 460	Introduction to Mechanical Systems	Elective		✓
WENG 466	Facility Energy Manager	Elective		
WENG 470	Introduction to Electrical Systems	Elective		✓
WENG 481	Contingency Facility Design	Elective		
WENG 500	Cost Engineering	Elective		✓
WENG 519	Air Force Installation Planning Principles	Elective		✓
WENG 520	Comprehensive Planning Development	Elective		
WENG 550	Airfield Pavement Design and Maintenance	Elective		✓
WENG 555	Airfield Pavement Construction Inspection	Elective		
WENG 560	Fundamentals of HVAC Design and Analysis	Elective		✓
WENG 561	Applications of HVAC Design and Analysis	Elective		✓
WENG 563	HVAC Control Systems	Elective		✓
WENG 572	Facility Electrical Power Systems Design	Elective		✓
WENG 573	Electrical Power Distribution Design and Analysis	Elective		✓
WENG 576	Electrical Power Systems Design Capstone	Elective		
WMGT 100	Air Force Civil Engineer Basic Civilian Course	Entry/Dev	✓	

WMGT 131	SMS BUILDER Level 1 (Read Only rights)	Mid		
WMGT 141	SMS PAVER Level 1	Elective		
WMGT 231	SMS BUILDER Level 2 (Assessor rights)	Elective		
WMGT 241	SMS PAVER Level 2	Elective		
WMGT 301	Introduction to Asset Management	Entry/Dev	✓	
WMGT 322	Introduction to Project Management Course	Entry/Dev	✓	
WMGT 331	SMS BUILDER Level 3 (Data Manager rights)	Elective		
WMGT 412	Fundamentals of Financial Management in Civil Engineering	Mid	✓	
WMGT 417	Activity Management	Mid	✓	
WMGT 421	Contracting for Civil Engineering Course	Entry/Dev	✓	
WMGT 422	Project Management Course	Mid	✓	
WMGT 423	Project Programming Course	Entry/Dev	✓	
WMGT 424	Realty Management Course (Real Property Management Course)	Elective		
WMGT 426	SABER Management Course	Elective		
WMGT 436	Requirements & Optimization	Elective		
WMGT 437	Troop Construction Project Management Course	Elective		
WMGT 480	High Performance and Sustainable Building Requirements	Elective		
WMGT 513	Financial Management for Civil Engineer Leaders	Mid	✓	

WMGT 585	Contingency Engineer Command Course	Elective		
WMGT 590	Joint Engineer Operations Course (JEOC)	Elective		
WENV 220	Unit Environmental Coordinator (UEC) Course	Elective		
WENV 450	Environmental Impact Analysis Process (EIAP) Course	Elective		
WESS 031	Construction Site Stormwater Seminar	Elective		
WESS 070	Hazardous Material Management Seminar	Elective		
WESS 150	Proponent Responsibilities in EIAP Seminar	Entry	✓	
WMSS 500	Civil P.E. Exam Review Seminar	Elective		
WTSS 464	Certified Energy Management Technology	Elective		
WTSS 518	Encroachment Management Worldwide Symposium	Elective		