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ROBINS AIR FORCE BASE**

**ROBINS AIR FORCE BASE INSTRUCTION
63-104**



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CONFIGURATION MANAGEMENT

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This publication implements Air Force Policy Directive (AFPD) 63-1, *Capability-Based Acquisition System*, AFI 63-131, *Modification Program Management*, and AFI 63-1201, *Life Cycle Systems Engineering*. This Robins Air Force Base Instruction (RAFBI) establishes policies, procedures, and responsibilities for effective and consistent configuration management (CM) of weapon system hardware and software. This RAFBI applies to all military, civilian, and contractor personnel assigned or attached to the Warner Robins Air Logistics Center (WR-ALC) with responsibility for supporting Operational Safety, Suitability, and Effectiveness (OSS&E) on WR-ALC managed systems, subsystems, end-items and components. This includes Robins AFB tenant organizations to include other Air Logistics Centers, Test Centers, Air Force Global Logistics Support Centers (AFGLSC), or Product Centers. This publication specifically establishes a structure for managing change from requirement documentation through system/item disposal. The process is designed to apply generically and defines the change approval authorities and change coordination/notifications requirements for any configuration change relative to the item traceability and impacts to higher level assemblies. This publication provides a structure for different types of configuration reviews and approvals, and provides specific guidance with regard to the type and amount of documentation required for each. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at

<https://www.my.af.mil/afrims/afrims/afrims/rims.cfm>. See Attachment 1 for a glossary of references and supporting information.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. Changes in this revision of RAFBI 63-104 are extensive and the document must be reviewed in its entirety. The title has changed from *Configuration Control Board (CCB)* to *Configuration Management* because of the change in scope of the document to encompass CM processes, of which CCB is a subset. Previous revisions of this local publication provided additional guidance, but were focused primarily on system level configuration changes (i.e. aircraft modifications) and the administration of a single CCB event. The current publication recognizes that configuration changes in the sustainment phase of a weapon system occur at many levels in the system hierarchy and across many organizations responsible for the management of items at the subsystem and component level. A structured and disciplined approach to such widespread change is necessary to ensure such changes are reviewed and approved by competent and cognizant authorities such that unintended consequences do not manifest at the system level.

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Chapter 1

GENERAL

1.1. Recognizing the diversity and complexity of items managed and the organizations managing them,- this instruction defines the overarching configuration management (CM) process to be applied across Robins AFB. This document enhances the understanding of configuration management and assists organizations in applying configuration management to their programs. It documents the CM process from requirement generation to system/item disposal; a process which shall be used for any change, at any level in the system hierarchy. It defines the roles, responsibilities, and authorities for reviewing and approving changes based objectively on the impact of the change and engineering authority.

Chapter 2

CONFIGURATION MANAGEMENT OVERVIEW

2.1. CM- is essential to the systems engineering process. It allows for the systematic development of systems, subsystems, and configuration items. ANSI/EIA-649 defines CM “as a management process for establishing and maintaining consistency of a product’s performance, functional, and physical attributes with its requirements, design and operational information throughout its life.”

2.1.1. MIL-HDBK-61, defines five major CM functions:

2.1.2. CM Life Cycle Planning and Management – Plan and manage the CM process and provide for monitoring and improving the CM processes.

2.1.3. Configuration Identification – Identify and document the function and physical characteristics of configuration items.

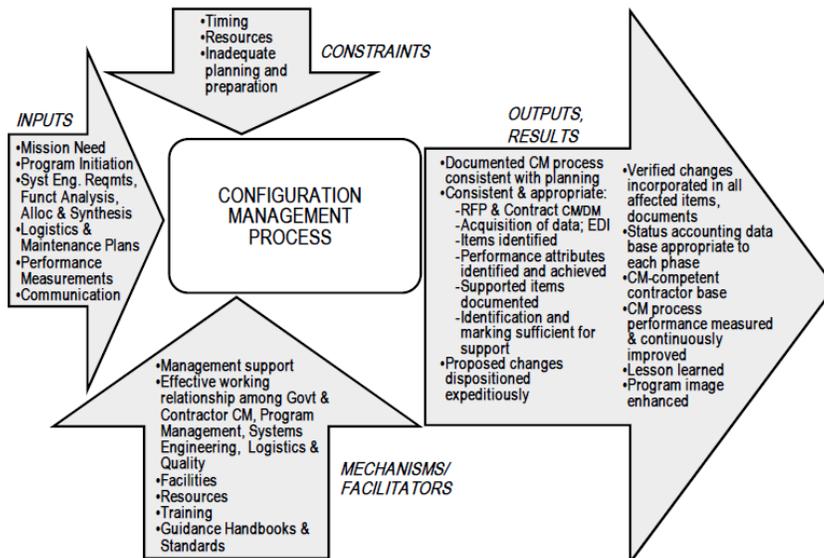
2.1.4. Configuration Change Management – Control changes to configuration items and their related documentation.

2.1.5. Configuration Status Accounting – Record and report information needed to manage configuration items effectively, including the status of proposed changes and implementation status of approved changes.

2.1.6. Configuration Verification & Audit - Audit configuration items to verify conformance to specification, drawings, interface documents and other contractual requirements.

2.1.7. Maximum benefit from the CM process is assured when the five functions work together throughout the product life cycle.

Figure 2.1. DoD CM Process Model – Overview



2.2. CM Life Cycle Planning and Management. CM Life Cycle Planning and Management is essential for the configuration management process. A good configuration management program ensures that designs are traceable to requirements, that change is controlled and documented, that interfaces are defined and understood, and that there is consistency between the product and its supporting documentation. Planning should include the organizational and functional structure that defines the methods and procedures used to manage and control functional and physical characteristics, interfaces, and documents of the system and its components. It includes statements of responsibility and authority, methods of control, methods of audit or verification, milestones, and schedules. The end result of this effort is an effective Configuration Management Plan (CMP). The CMP is prepared to ensure that all program participants clearly understand the specific manner in which CM is conducted for that program or system. Early development and maintenance of the CMP ensures that configuration baselines are appropriately established, that changes are correctly managed, that there are means to accurately identify an item's current configuration, and that the correct technical data is procured.

2.3. Configuration Identification. Configuration Identification is the activity within configuration management which establishes the configuration items to be managed, organizes configuration items into a hierarchical structure, determines nomenclature and product identifiers of those configuration items, determines the documents and document identifiers which define the items, and establishes baselines (functional, allocated, and/or product) for the system. Configuration Items (CIs) are a combination of hardware, firmware, computer software, or any of their distinct portions, which satisfy an end-use function and are designated for separate configuration management. Components may be designated CIs because of critical interfaces or the need to be integrated with operation with other components within or outside of the system. Documentation defines the approved product configuration, and constitutes the baseline to which future configuration changes are made. Integrated Product Teams (IPTs) ensure all CIs are uniquely identified in accordance with guidance in MIL-HDBK-61. IPTs will maintain appropriate configuration documentation for all configurations, including as applicable; technical requirements specifications, engineering drawings, interface control documents, technical orders, technical decision documentation, and other documentation. Documents will be maintained in a permanent archive, in a retrievable manner, and in accordance with procedures applicable to each form of document (e.g. T.O. documentation procedures).

2.3.1. Establishing Configuration Baselines. Configuration baselines are the foundation of CM. They are the defined and approved collection of configuration documentation (e.g. specifications, drawings, Technical Data Package) established at a specific point in time. The baseline is a formal, controlled and maintained set of data that serves as a basis for defining change. There are three baseline types established during the lifecycle of a product: Functional, Allocated, and Product. The functional and allocated baselines are inputs to the design process. The product baseline is an output of the design process. Once configuration baselines have been established, they should be managed and updated through a configuration control process and through continuing audit and verification.

2.3.1.1. Functional Baseline. The Functional Baseline (FBL) defines the quantitative performance parameters and design constraints, including operational and logistic parameters and their respective tolerances. Functional characteristics include all performance parameters, such as range, speed, lethality, reliability, maintainability, and safety.

2.3.1.2. **Allocated Baseline.** The Allocated Baseline (ABL) describes how a configuration item operates within the next higher system of interest. It is the documentation describing a Configuration Item's functional, performance, interoperability, and interface requirements that are allocated from those of a system or higher-level configuration item; interface requirements with interfacing configuration items; and the verifications required to confirm the achievement of those specified requirements.

2.3.1.3. **Product Baseline.** The Product Baseline (PBL) is the Configuration Item's detailed design documentation including, for software, the source code and components listing, and those verifications necessary for accepting product deliveries during the production, operation, maintenance, and logistic support of its life cycle. For hardware items, it incorporates design definition from the FBL and the ABL with the physical description provided in the engineering drawings. The information contained can also be applicable to an NDI or COTS item.

2.4. Configuration Change Management. After the initial release of product configuration information, all changes shall be controlled. Configuration Control is the systematic proposal, justification, prioritization, evaluation, coordination, approval or disapproval, and implementation of all approved changes in configuration of a system or item after formal establishment of a baseline. It provides management visibility, ensures all factors associated with a proposed change are evaluated, prevents unnecessary or marginal changes, and established change priorities. The primary mechanism used to establish and control these changes is the Configuration Control Board (CCB). See Attachment 3 for a detailed description of the change management process.

2.4.1. **Configuration Control Board.** The purpose of the Configuration Control Board (CCB) is to ensure each proposed change to an item's performance or physical characteristics is thoroughly evaluated with respect to technical, logistics, cost and schedule impacts and benefits. The CCB is an official, non-voting board, where the Chairperson has sole decision authority. The CCB requires sufficient expertise in appropriate functional and technical areas that it can render sound decisions on proposed changes and system related issues. Depending on the type of change proposed, the CCB may require specialized advice. With approval of the CCB Chairperson, functional and technical advisors from DoD as well as from external sources may be invited to participate in the CCB. The Configuration Control Board Executive Secretariat (CCBES) should provide these advisors background information in advance of the CCB meeting.

2.4.1.1. The CCB Process outlined in Attachments 3 and 4 will be followed when processing change requests. Every program, system, or item of equipment shall utilize a CCB to review all Class I Engineering Change Proposals (ECPs), and major or critical Requests for Deviation (RFD) and Request for Waiver (RFW).

2.4.1.2. The System Program Manager (SPM)/Product Group Manager (PGM)/Supply Chain Manager (SCM) is the CCB Chair. This authority may be delegated to an alternate chairperson; however this delegation must be documented with an appointment letter. At Robins AFB, Configuration Control Board chair delegation may be no lower than Division level or Chief Engineer. Delegations to AFMC Product Center organizations may be no lower than Branch level or DSM Chief Engineer. The chair or delegate is

authorized to advise the disposition of all configuration proposals presented to the CCB. SSM organizations will follow the SPM organization's CCB process in lieu of this instruction, if it exists.

2.4.1.3. The System Program Manager (SPM), with support from the Development System Manager (DSM), System Support Manager (SSM), Product Group Manager (PGM), Supply Chain Manager (SCM), and the pertinent Chief / Lead Engineers shall:

2.4.1.3.1. Coordinate to jointly maintain the system or end-item configuration baseline and manage changes.

2.4.1.3.2. Implement a joint management team configuration baseline change and management process and bring all proposed temporary and proposed Class 1 permanent configuration changes before the Configuration Control Board (CCB) for approval.

2.4.2. WR-ALC CCB Process. The WR-ALC CCB Process consists of 6 phases (Attachment 3, Section A3.5). A description of each phase is given below. Each phase has entry and exit criteria detailed within local guidelines.

2.4.2.1. Requirement Initiation (Phase I). This phase consists of requirement initiation and local validation. A change requirement is identified. Using the Class I definition in this document (Attachment 1, Section A1.3), the initiator submits Part I of the WR-ALC/Sustainment Configuration Change Proposal (SCCP) Form or AF Form 1067 to the Configuration Manager (CM). The CM forwards 1067 to MAJCOMS, or the WR-ALC/SCCP Configuration Control Authority/Requirement Validation Authority (RVA) as necessary (Attachment 3, Figure 2).

2.4.2.1.1. Other documentation other than 1067s may be used to evaluate a change request and can consist of the following: Initial Capabilities Document, Combat Capability Document, Risk Assessments, MISHAP Reports, Deficiency Reports, Market Research, Drawings, Specifications, Standards, Technical Orders, etc.

2.4.2.2. Requirement Validation (Phase II).

2.4.2.2.1. Requirement Validation (1067). This phase consists of requirement validation. The Configuration Manager (CM) ensures the requirement has been validated by the local organization and forwards to Using Major Command. CM receives AF Form 1067 back from Lead Command and ensures Lead Command/Using Major Commands (MAJCOMs) have completed and validated parts II and III (Attachment 3, Figures 3, 4, & 5). The requirement must be complete, understandable, validated and properly annotated. All required attachments must be included; otherwise the CM will return the package to the initiator and/or validating officials in blocks 11, 12, & 20. When the correct documentation is received, the CM tracks the proposal by the assigned number and forwards the package to the appropriate Project Management office for assignment (PM).

2.4.2.2.2. Requirement Validation (SCCP). This phase consists of requirement validation. The Configuration Manager (CM) ensures the requirement has been validated by the local organization and forwards to CI Engineering Support Activity (ESA). SCCP Part II Block 12 H is signed by the proposed CI ESA and validates the

requirement for the proposed change. An analysis is completed as to the Fit, Form or Function impact on the next higher assembly (NHA). If there is an impact, then the part number to the proposed CI rolls and change is assigned to the ESA for the next higher assembly. This process will continue until no NHA impact is determined. Then the ESA determines if the highest level impact assembly is traceable. If it is not traceable, then the part number for this assembly rolls and the process is re-initiated. Once the highest level of impact and traceability to the end item is determined, then this is the highest level of assembly part number to be rolled. At this point the responsible ESA for the change is determined and is the approving authority for the change. The SCCP is now forwarded by the change initiating CM to the responsible ESA's CM. Note: if the CI is common to multiple NHA's, the CCA will be the SM of the common item and will coordinate invites of all SM's for NHA's to the common item SM's CCB.

2.4.2.2.2.1. The requirement must be complete, understandable, validated and properly annotated. All required attachments must be included; otherwise the CM will return the package to the initiating CM and/or validating officials in blocks 11, 12, & 20. When the correct documentation is received, the CM tracks the proposal by the assigned number and forwards the package to the responsible ESA.

2.4.2.2.2.2. The responsible ESA signs Part III as a validated requirement. The CCA identifies the Program Execution Authority (PEA) and forwards the SCCP to the CM for PEA assignment and evaluation (Attachment 3, Figures 6 & 7).

2.4.2.3. Configuration Change Process, Feasibility, and Concept Exploration (Phase III).

This phase consists of requirement evaluation and preparation for CRB review/approval. The assigned PM assembles the Evaluation Team, which conducts engineering reviews and investigations to include performing initial feasibility assessments and/or engineering studies. The Evaluation Team reviews impacts in the following areas, including but not limited to: Threat, Technology, Cost, Schedule, Engineering (to include OSS&E, Logistics, Manufacturing, Intelligence, Environmental, Safety, Occupational Health (ESOH) and Developer's capabilities). The assigned PM develops initial Budgetary Cost Information (BCI), if required, and forwards it to the CM to schedule the CRB. The CM forwards AF Form 1067 to MAJCOMS, or the WR-ALC/SCCP to the CCA/RVA as necessary (Attachment 3, Figures 8 & 9).

2.4.2.4. Budgeting and Funding (Phase IV). In this phase, the assigned PM forwards the approved Budgetary Cost Information (BCI) to the CM who coordinates with the Funding Unit for approval. For 1067 requirements, Lead MAJCOM will prioritize and POM for funding. For SCCP requirements, budgeting and funding reside within the PEA portfolio (Attachment 3, Figure 10).

2.4.2.5. Program Refinement and Program Execution Plan (CCB) Approval (Phase V). In this phase, the assigned PM re-assembles the Evaluation Team, which conducts engineering reviews and investigations to include performing detailed feasibility assessments. The Evaluation Team develops the program execution plan for the following areas, including but not limited to: Threat, Technology, Cost, Schedule, Risk Management, Engineering (to include OSS&E, Logistics, Manufacturing, Intelligence, Environmental, Safety, Occupational Health (ESOH) and Developer's capabilities).

Once the program execution plan is complete, the assigned PM forwards compiled CCB package to the CM to schedule the CCB. The CCB approves the change and signs part 4. The CM forwards the approved CCB package to the appropriate budget authority (Attachment 3, Figure 11).

2.4.2.6. Program Execution, Testing, and Implementation (Phase VI). The PM executes the project. Then the PM compiles the Configuration Transition Board/Technical Readiness Board (CTB/TRB) package and forwards to the CM to schedule the CTB/TRB. The CTB/TRB approves the execution of the change validation/verification and testing. Once all validation/verification and testing is complete, the PM compiles the CIB package and forwards to the CM to schedule the CIB. The CIB approves the execution of the final implementation plan and the change is incorporated (Attachment 3, Figure 12).

2.5. Configuration Status Accounting. Configuration Status Accounting (CSA) provides traceability of configuration baselines and changes and is used as a management tool for accomplishing all related tasks (including implementation status) resulting from such changes. It is the recording and reporting of the information that is necessary to effectively manage the configuration of an item. Organizations shall complete CSA activities throughout the lifecycle of a system to achieve an efficient configuration management process.

2.6. Configuration Verification & Audit. Configuration audits shall be used to verify a system and its components' conformance to their configuration documentation. Each organization shall state the responsibilities, timeframes, and user results for continuous improvements and be available for review. There are typically two types of configuration audits: Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA). The FCA verifies that the CI has achieved all functional and performance requirements established in the performance specifications. The PCA verifies that the system has been built or modified in accordance with the Technical Data Package which describes the Product Baseline.

MITCHEL H. BUTIKOFER, Colonel, USAF
Commander

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

DODD 5000.01, *The Defense Acquisition System*

DODI 5000.02, *Operation of the Defense Acquisition System*

DoDD 5200.1R, *Acquisition Systems Protection Program*

AFI 91-204, *Safety Investigations and Reports*

AFI 10-601 *Operational Capability Requirements Development*

AFI 21-101, *Aircraft and Equipment Maintenance Management*

AFI 21-402, *Engineering Drawing System*

AFI 63-131, *Modification Program Management*

AFI 63-1201, *Life Cycle Systems Engineering*

AFI 99-103, *Capabilities Based Test and Evaluation*

AFMCI 21-126, *Temporary 2 (T-2) Modification of Aerospace Vehicles*

AFMCI 21-302, *Processing Interim Technical Orders (ITO) and Rapid Action Changes(RAC)*

AFMCI 63-1201, *Implementing Operational Safety Suitability and Effectiveness (OSS&E) And Life Cycle Systems Engineering*

AFMCPAM 63-101, *Life Cycle Risk Management*

RAFBI 99-103 *Test and Evaluation Process*

T.O. 00-5-1, *Air Force Technical Order System*

T.O. 00-5-15, *Air Force Time Compliance Technical Order Process*

T.O. 00-5-16, *USAF Automated CPIN System Software Managers Manual*

T.O. 00-5-17, *USAF CPIN System Users Manual*

T.O. 00-35D-54, *USAF Deficiency Reporting and Investigation System*

MIL-HDBK-61, *Configuration Management Guidance*

MIL-HDBK-514, *Operational Safety, Suitability & Effectiveness for the Aeronautical Enterprise*

MIL-HDBK-516B, *Airworthiness Certification Criteria*

MIL-STD 130N, *Identification Marking of U.S. Military Property*

MIL-STD 882D, *Standard Practice for System Safety*

EIA 632, *Processes for Engineering a System*

EIA 836A, *Configuration Management Data Exchange and Interoperability*

ANSI/EIA EIA-649, *National Consensus Standard for Configuration Management*

EIA-649-HDBK, *Configuration Management Guidance*

Prescribed Forms

Robins AFB Form 1067, *WR-ALC Sustainment Configuration Change Proposal Form*

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AF Form 1067, *Modification Proposal*

Abbreviations and Acronyms

ADPE—Automatic Data Processing Equipment

AETC—Air Education Training Command

AFI—Air Force Instruction

AFMC—Air Force Materiel Command

AFMCI—Air Force Materiel Command Instruction

AFPD—Air Force Policy Directive

AFSEO—Air Force SEEK Eagle Office

ALC—Air Logistics Center

ASC—Aeronautical Systems Command

ATE—Automated Test Equipment

ATP—Automatic Test Procedures

ATS—Automated Test Systems

BCI—Budgetary Cost Information

BCU—Block Cycle Update

BCC—Block Cycle Change

BEE—Bioenvironmental Engineering

CCB—Configuration Control Board

CCBAD—Configuration Control Board Approval Documents

CCBC—Configuration Control Board Chairperson

CCBD—Configuration Control Board Directive

CCP—Contract Change Proposal

CDCA—Current Document Change Authority

CE—Chief Engineer

CI—Configuration Item

CLS—Contractor Logistics Support

CM—Configuration Manager
CO—Contracting Officer
CPI—Critical Program Information
CPIN—Computer Program Identification Number
CRB - Configuration Review Board
CSA—Configuration Status Accounting
CSI—Critical Safety Item
CTB—Configuration Transition Board
DLA—Defense Logistics Agency
DSM—Developmental System Manager
DoD—Department of Defense
ECO—Engineering Change Order
ECP—Engineering Change Proposal
ESC—Electronic System Command
EIA—Electronic Industries Alliance
ERRC—Expendability, Recoverability, Reparability Code
ES—Equipment Specialist
ESOH—Environmental, Safety, and Occupational Health
F3I—Form, Fit, Function, and Interface
FMS—Foreign Military Sales
FRB—Flight Review Board
FRRB—Flight Readiness Review Board
GFE—Government Furnished Equipment
GFM—Government Furnished Materiel
GS - Ground Safety
HIS—Human Systems Integration
IAP—Initial Accumulation Point
IAW—In Accordance With
ICD—Interface Control Document
ICS—Interim Contract Support
ILSP—Integrated Logistics Support Plan
IPT—Integrated Product Team
KPP—Key Performance Parameters

LCMP—Life Cycle Management Plan
MACC—Modification Airworthiness Compliance Criteria
MAJCOM—Major Command
MDF—Mission Data File
MDS—Mission Design Series
MIL—HDBK - Military Handbook
NHA—Next Higher Assembly
OFF—Operational Flight Program
OI—Operating Instruction
OPR—Office of Primary Responsibility
OSHA—Occupational Safety & Health Administration
OSS&E—Operational Safety, Suitability, and Effectiveness
OTA—Operational Test Authority
PGM—Product Group Manager
PHS&T—Packaging, Handling, Shipping & Transportation
PM—Project Manager
PMD—Program Management Directive
POC—Point of Contact
POM—Program Objective Memorandum
PTO—Preliminary Technical Orders
RAFBI—Robins Air Force Base Instruction
R&M—Reliability and Maintainability
RFD—Request for Deviation
RFP—Request for Proposal
RFW—Request for Waiver
ROM—Rough Order of Magnitude
RSP—Readiness Spares Package
RTO—Responsible Test Organization
SCCSB—Software Configuration Control Sub Board
SCCP—Sustainment Configuration Change Proposal
SCM—Supply Chain Management
SCN—Specification Change Notice

SMR—Source, Maintenance and Recoverability

SORAP—Source of Repair Assignment Process

SPM—System Program Manager

SPR—Special Program Requests

T-1— Temporary -1

T-2— Temporary -2

TCTO—Time Compliance Technical Order

TO—Technical Order

TPM—Technical Performance Measures

TPS - Test Program Sets

TRB—Test Readiness Board

UID—Unique Identification

VTC—Video Teleconference

WR—ALC - Warner Robins Air Logistics Center

Terms

AF Form 1067:—Requirements document used to add new capability or sustainment change requiring MAJCOM coordination or funding fielded/government owned items.

Budgetary Cost Information (BCI):—An analysis identifying all associated costs for the proposed change. A BCI provides decision data and POM data.

Configuration Manager:—The individual designated to manage the configuration change proposal from the time the change is initially identified through the incorporation of the approved change into the contract and implementation into the configuration end item.

Change Notices:—Change notices transmit, manage, and record changes to documentation. They delineate the exact change(s) in documents, using an “is”/“was” format for review. Change notices are submitted and approved within a formal change proposal (ECP/CCP) unless otherwise specified by the contract (e.g., administrative).

Chief Engineer (CE):—The individual responsible for OSS&E and all system technical activities, including engineering and configuration changes, in support of the SPM/SSM.

Class I Configuration Change—: A proposed change to approved configuration documentation (baseline) for which the Government is the Current Document Change Authority (CDCA) or that has been included in the contract or statement of work by the tasking activity and:

- (1) Affects any physical or functional requirement in approved functional or allocated configuration documentation, or
- (2) Affects any approved functional, allocated, or product configuration documentation and cost, warranties or contract milestones, or

(3) Affects approved product configuration documentation and one or more of the following:

- (a) Government furnished equipment
- (b) Safety
- (c) Compatibility, interoperability or logistic support
- (d) Delivered technical manuals for which changes are not funded
- (e) Will require retrofit of delivered units
- (f) Preset adjustments or schedules affecting operating limits or performance to the extent that a new identification number is required
- (g) Interchangeability, substitutability or replaceability of any item down to non—repairable subassemblies**
- (h) Sources on a source control drawing
- (i) Skills, manning, training, biomedical factors or human engineering design
- (j) Critical Safety Item (CSI), Critical Application Item (CAI) or Critical Program Information (CPI)

Class II Configuration Change: All other changes that are not Class I, such as, but not limited to, the following: correction of grammatical errors, spelling, format, etc.

Configuration Control: (1) A systematic process that ensures changes to a baseline are properly identified, documented, evaluated for impact, approved by an appropriate level of authority, incorporated, and verified; (2) the configuration management activity concerning the systematic proposal, justification, evaluation, coordination, and disposition of proposed changes; and (3) the implementation of all approved and released changes into the applicable product configurations, supporting and interfacing products, and their associated information.

Configuration Control Authority (CCA): Organization with configuration management and change approval authority for a CI.

Configuration Control Board (CCB): The CCB is composed of technical and administrative representatives who recommend approval or disapproval of CCB items (ECPs/CCPs, Deviations, Waivers, and certain Request for Proposal (RFP) items) and recommend engineering approval/disapproval for all temporary and permanent modifications. The CCB is an official, non—voting board, where the Chairperson has sole decision authority.

Configuration Control Board/Program Execution Plan (CCB/PEP):—Detailed review of proposed change, impacts to the system, plans for addressing impacts, expected funding, schedule, risk, etc.

Configuration Control Board Approval Document (CCBAD):—The official records indicating the recommendation of the CCB members relative to a modification proposal. These forms (e.g. AFMC Form 518, or equivalent) are retained by the CCBES.

Configuration Control Board Chairperson (CCBC):—The System Program Manager (SPM)/Product Group Manager (PGM)/Supply Chain Manager (SCM) or designee with sole approval authority for all CCB actions.

Configuration Control Board Directive (CCBD):—The AFMC Form 518 is used to record the CCB disposition and authorizes contractual incorporation of changes (ECP/CCP).

Configuration Control Board Executive Secretariat (CCBES):—Serves as the focal point on all official documentation for CCB items between the customer and the Program Office.

Configuration Implementation Board/Fielding Release Board (CIB/FRB):—Review of technical and logistical readiness for implementation of the change on a full scale.

Configuration Item (CI): An aggregation of hardware or software (including firmware) that satisfies an end—use function and is designated by the Government for separate management.

Configuration Review Board (CRB):—Review feasibility and cost estimates associated with a proposed configuration change prior to final validation and approval of the requirement.

Configuration Transition Board/Test Readiness Board (CTB/TRB): Approves temporary implementation of configuration change on limited assets for purpose of testing and evaluation (Includes kit—proof and Val/Ver)

Current Document Change Authority (CDCA):—Organization that controls and has authority to update drawings, specs, standards for the configuration item (typically the same organization as ESA).

Engineering Change Proposal (ECP): A proposed change to the technical baseline of the program (CI and/or its approved documentation). It can include changes to contractual requirements and contains all the documentation by which the change is described, justified, and submitted to the Government change authority for disposition. Organic engineering changes are proposed and implemented by Government entities. Organic engineering changes are proposed and approved under the normal Class I/Class II change process and documented via AF Form 1067, Modification Proposal, per AFI 63—131, *Modification Management*. ECPs are submitted by the contractor during the production phase of a modification.

Class I ECP:—A document used to propose a change to the configuration item baseline when related equipment, CIs, interfaces, or technical manuals are affected or retrofit is involved. Also, this type of change usually requires changes to some contract provisioning. Class I ECPs require CCB approval authorization. There are three types of priorities for Class I ECPs:

Emergency: 48—hour action required

Urgent: 30—calendar day action required

Routine: 90—calendar day action required

Class II ECP:—Affects documentation only; does not affect functional requirements, physical requirements, interchangeability, cost, interface, or schedule.

Engineering Support Activity (ESA):—Organization with OSS&E authority for the configuration item (typically resides in the CCA organization).

Equipment Specialist:—Provides assistance as needed to resolve technical issues.

Form, Fit, Function and Interface: Form, fit, function and interface (F3I) includes each of the elements listed below. Any deviation from one or more of these categories constitutes a change in F3I and shall be coordinated through the formal CCB process.

Form: identifies all the manufacturing process/requirements to produce the component such as material type, tempers, finish processes, finishes/coatings, all dimensional geometry/loft data and tolerances.

Fit: identifies the manner in which a component attaches to the adjacent surface/component such as mounting points and mounting configuration in relation to itself and adjacent components.

Function: identifies the manner in which a component operates and performs its intended function such as the interoperability with any adjacent component.

Interface: interfaces are performance, functional and physical attributes which exist at a common boundary and are subject to interface agreements and interface documentation such as specifications and drawings.

Evaluation Team: A team of administrative and technical personnel who evaluate technical feasibility and cost for a proposed change.

Interface Control: is the process of identifying, documenting and controlling all performance, functional and physical attributes relevant to the interfacing of two or more products provided by one or more organizations.

Logistics Manager: Ensures all impacts to logistical requirements are addressed.

Maintenance Planning: A review of requirements for impacts to levels of maintenance, manpower and personnel, supply support/support equipment, tech data, training/training equipment, package/handling/storage/transportation, computer resources/facilities support, and design interfaces.

Next Higher Assembly (NHA): The next higher CI in the system hierarchy

Organic Change Request: Internal change request developed/initiated by government

Originator: Organization submitting change requirement.

Permanent Modification: A modification to correct materiel deficiencies, improve reliability and maintainability (R&M), or to add or remove capability. Permanent modifications are documented through the use of Time Compliance Technical Orders (TCTO).

Permanent— Safety Modification: Safety modifications are permanent modifications which correct material or other deficiencies which could endanger the safety or health of personnel or cause lose or extensive damage to systems or equipment. Safety modifications have priority and precedence over all other permanent modifications.

Program Execution Activity (PEA):—Organization designated by the CCA and delegated authority to evaluate/implement an approved change requirement

Project Manager (PM):—Responsible for managing and monitoring the requirement from origination to implementation of the approved configuration change.

Request for Deviation (RFD): A RFD is a written request for the manufacture of an item to depart from a particular requirement(s) of an item's currently—approved configuration documentation for a specific number of units or a specified period of time. A deviation differs from an engineering change in that an approved engineering change requires corresponding

revision of the item's currently approved configuration documentation, whereas a deviation does not.

Request for Waiver (RFW):—A RFW is a written request to accept an item which, during production or after being submitted for Government inspection or acceptance is found to depart from specified requirements, but nevertheless is considered suitable for use “as is” or after repair by an approved method.

Requirement Validation Authority (RVA):—Organization with responsibility for certifying a configuration change as a valid requirement (note: operational requirements typically on 1067 validated by lead/using commands, sustainment requirements typically on SCCP validated by engineering authority within AFMC).

Sustainment Configuration Change Proposal (SCCP): Requirements document for any configuration change to a WR—ALC managed item.

System Engineer:—Evaluates and validates the requirement to ensure the critical technical engineering requirements have been adequately addressed.

T—1 Modification: Temporary modifications that change, add, or remove equipment to provide increased capability for a special/specific mission. They are normally made by using commands for operational reasons, and are not used as substitutes for permanent modifications. T-1 modifications are not maintained on the system for more than one year without a waiver from the SPM and are not installed on more than five systems without prior HQ USAF/ILM approval.

T—2 Modification: Temporary modifications required to support RDT&E, inservice testing of potential replacement items (form, fit, function, and interface (F3I)) for aircraft, and stores-compatibility testing. They are normally accomplished only on programs having approved Program Management Directives (PMD). T-2 modifications are usually accomplished to evaluate a selected set of operational or test systems, a proposed permanent modification, test operational suitability, etc.

Time Compliance Technical Order (TCTO): Authorized method of directing and providing instructions for modifying equipment and performing or initially establishing one—time inspections.

Attachment 2**TRAINING TEMPLATE**

A2.1. Configuration Management Training Template. All organizations approving changes to a configuration item will have a dedicated configuration manager. The organization's configuration manager will coordinate only change actions between itself and other organizations pertaining to a configuration change.

A2.1.1. Training requirements for the configuration manager should include the mandatory courses listed below. Certification for now is only done through commercial courses which will have to be paid for by the organization.

A2.2. Mandatory Courses. AFIT SYS 028 Introduction to Configuration Management

AFIT SYS 172 Modification Management Process

DAU Log 204 Configuration Management

DAU Targeted Training Configuration Management (Introduction to MIL-HDBK-61)

SYS 110 Fundamentals of Data Management

A2.3. Optional Courses. CCM-601 Basic Configuration Management

CCM-602 Advanced Configuration Management

SCM-603 Software Configuration Management

ECM 605 Enterprise Configuration Management

Standard CMII Courses

Advanced CMII Courses

Special CMII Courses

Attachment 3

CONFIGURATION CHANGE MANAGEMENT PROCESS

A3.1. Decision criteria for topics that need to go before the CCB:

A3.1.1. All Class I configuration changes (as defined in Attachment 1 of this document) will be boarded before the organizational CCB.

A3.1.2. All Class II configuration changes will be approved IAW organizational procedures.

A3.1.3. AFMC Form 202, Technical Order 00-25-107 Requests for Technical Assistance and Repairs IAW Maintenance Manuals are not required to be boarded IAW this process.

A3.2. Roles and Responsibilities.

A3.2.1. CCB Member(s):

A3.2.1.1. Participates or designates a representative to participate in the CCB meeting.

A3.2.1.2. Reviews CCB agenda and packages prior to the CCB meeting and provides input and concurrence/non-concurrence to the CCBES and PM.

A3.2.1.3. Concurs or non-concurs with the CCB Chairperson's decision and documents concurrence on the CCBAD.

A3.2.2. CCB Core Members.

A3.2.2.1. The minimum requirements for the CCB include but are not limited to:

A3.2.2.2. CCB Chairperson

A3.2.2.3. CCB Executive Secretariat/Configuration Manager

A3.2.2.4. System Program Manager (SPM)/Product Group Manager (PGM)/Supply Chain Manager (SCM)

A3.2.2.5. Chief Engineer

A3.2.2.6. Center Test Authority (CTA) (WR-ALC/ENT)

A3.2.2.7. Logistics

A3.2.2.8. System Safety

A3.2.2.9. MAJCOMs

A3.2.2.10. Division Chief of Contracting

A3.2.2.11. Financial Management

A3.2.3. CCB Chairperson.

A3.2.3.1. Presides over the CCB.

A3.2.3.2. Approves, approves with comments, disapproves or defers all CCB items.

A3.2.3.3. Formalizes the CCB decision by signing Configuration Control Board Approval Document (CCBAD).

A3.2.3.4. Determines CCB core membership by official letter.

A3.2.3.5. Designates additional members of the CCB.

A3.2.3.6. Has the authority to make ancillary members a part of the CCB core.

A3.2.3.7. Determines CCB meeting frequency.

A3.2.4. CCB Executive Secretariat/Configuration Manager.

A3.2.4.1. Serves as the focal point for all official documentation for CCB items between the customer and the System Program Office.

A3.2.4.2. Maintains applicable regulatory and policy documentation/correspondence and is knowledgeable of the current policies, procedures, and criteria applicable to the evaluation and approval of change proposals, modifications, and any other CCB related documentation.

A3.2.4.3. Ensures official letters are published and maintained. Examples include CCB delegation and CCB membership.

A3.2.4.4. Maintains a tracking database for requirements submitted for CCB disposition. Records the final disposition of the effort.

A3.2.4.5. Develops and maintains CCB action item tracking system and distributes those action items to the appropriate offices of primary responsibility (OPRs) for action.

A3.2.4.6. Maintains CCB checklists and templates.

A3.2.4.7. Ensures requirement submitted is validated.

A3.2.4.8. Assists PM in preparing the CCBAD.

A3.2.4.9. Reviews all packages submitted to the CCB for accuracy and completeness.

A3.2.4.10. Distributes CCB schedule, agenda and package.

A3.2.4.11. Provides telecon/video teleconference (VTC) number to non-local CCB members.

A3.2.4.12. Identifies open action items to the CCB.

A3.2.4.13. Records and publishes official CCB minutes approved by the CCB Chairperson. Distributes copies of the minutes to all board members, PMs, and users.

A3.2.5. System Program Manager (SPM)/Product Group Manager (PGM)/Supply Chain Manager (SCM).

A3.2.5.1. Makes final decision regarding configuration control when serving as the CCB Chairperson.

A3.2.5.2. May delegate CCB responsibilities to Chief Engineer or Deputy.

A3.2.6. Chief Engineer.

A3.2.6.1. Responsible for all engineering and OSS&E for systems and proposed changes.

A3.2.6.2. Responsible for ensuring that any work delegated to a contractor or organic resource has a system in place that complements the rigor and structure of the CCB process. For instance, if software work is performed by an organic resource, then that

work must be tightly controlled by a process similar to that contained in the software engineering institute's framework leading to a CMMI maturity level 3 or higher organization.

A3.2.6.3. Ensure that there is an agreement in place between product line managers and end item managers.

A3.2.7. Center Test Authority.

A3.2.7.1. Provides guidance on test and evaluation requirements, capabilities, and issues.

A3.2.8. Logistics.

A3.2.8.1. Ensures all areas of logistical support for the requirement are addressed

A3.2.9. System Safety.

A3.2.9.1. Evaluates and validates the system safety requirements to ensure safety issues have been adequately addressed

A3.2.9.2. Provides support for those areas identified as deficient

A3.2.10. MAJCOMS.

A3.2.10.1. Affected MAJCOM shall participate as required.

A3.2.11. Division Chief of Contracting.

A3.2.11.1. Reviews the CCB package and advises the CCB chairperson on contracting issues, schedules, and procedures.

A3.2.11.2. Provides input as required to clarify information and assist in determination

A3.2.11.3. Negotiates and makes the appropriate changes to the contract.

A3.2.11.4. Provides direction to the contractor on final disposition of Requests for Deviation, Engineering Change Proposals, Value Engineering Change Proposals, etc.

A3.2.12. Financial Management.

A3.2.12.1. Reviews the CCB package for funding appropriation.

A3.2.12.1.1. Evaluates execution of funds schedule.

A3.2.12.2. Maintains record of budget inputs.

A3.2.12.3. Track obligations and expenditure rates.

A3.2.12.4. Concurs on funding request after CCB approval of change request.

A3.2.13. CCB Ancillary Members.

A3.2.13.1. Ancillary membership denotes members who attend in advisory roles. These are suggested members and may not be all inclusive.

A3.2.13.1.1. Nuclear Certification Manager

A3.2.13.1.2. 78 ABW/SEG Robins Safety/Flight (Safety Office)

A3.2.13.1.3. National Science Foundation (NSF)

A3.2.13.1.4. 78 AMDS/SGPB (Bioenvironmental)

- A3.2.13.1.5. 78 CEG/CEV (Environmental Mgt)
 - A3.2.13.1.6. Responsible Test Organization (RTO)
 - A3.2.13.1.7. Operational Test Authority (OTA)
 - A3.2.13.1.8. Affected Platform/IPT
 - A3.2.13.1.9. Other services
 - A3.2.13.1.10. Foreign Military Sales (FMS)
 - A3.2.13.1.11. WR-ALC/XP2 (INTEL)
 - A3.2.13.1.12. Simulators/Ground Trainers (OO-ALC/YWS)
- A3.2.14. Project Manager.
- A3.2.14.1. Manages and monitors the requirement from origination to implementation of the approved configuration change.
 - A3.2.14.2. Facilitates communication and coordination between members of the evaluation team and ensures work is being completed according to budget and schedule guidelines.
 - A3.2.14.3. Participates in a variety of preliminary tasks related to the creation of a project. Participates in all preliminary needs assessments and establishes an interim team for the project.
 - A3.2.14.4. Prepares or obtains all preliminary program planning/business documents such as the project plan, OSS&E requirements, cost requirements, budgets and performance requirements for the project.
 - A3.2.14.5. Ensures the team is resourced properly, develops a baseline schedule that is signed and approved by key members of the team and takes the lead to establish requirement objectives.
 - A3.2.14.6. Participates in process analysis, document development, coordination of the appropriate reviews and continuing to manage the team and the work that is being accomplished.
 - A3.2.14.7. Ensures all project briefings and package documents are prepared for presentation to the CCB to include the CCBAD
 - A3.2.14.8. Creates and maintains modification project folder.
 - A3.2.14.9. Implements CCB decision.
 - A3.2.14.10. Responsible for ensuring any work delegated to a contractor or organic resource maintains integrity of the CCB process at the interface level. Assigns and tracks version numbers as appropriate to ensure that product delivery supports the intended CCB identified work.
 - A3.2.14.11. When necessary, serves as customer focal point. When serving in this capacity, the Project Manager shall advise the CCBES of all configuration change activity.
- A3.2.15. Evaluation Team.

A3.2.15.1. Project Manager: Serves as the Evaluation Team Lead for the requirement. Ensures all aspects of the requirement are evaluated before providing recommendation to the CCB. Ensures all CCB package documentation is complete and accurate before forwarding package to the CCB Executive Secretariat.

A3.2.15.2. Environmental, Safety and Occupational Health (ESOH): The Engineer or Equipment Specialist coordinates any new or revised processes or procedures that may affect the environment (land, water, air impacts/compliance), safety, and health of personnel, cause damage or destruction of government owned equipment, or potentially change Technical Orders, with the appropriate ESOH activities (e.g. Center Safety, Bioenvironmental Engineering (BEE), Environmental Management).

A3.2.15.3. Equipment Specialist (ES): Provides assistance as needed to resolve any technical order issues. Evaluates requirement for Mission Design Series (MDS) impact and Technical Orders. Coordinates with affected Supply Chain Managers (SCMs) early in the process to ensure proper coordination on issues such as source of repair, provisioning, Expendability, Recoverability, Reparability Code (ERRC)/Source, Maintenance and Recoverability (SMR) coding and D200 entry/management.

A3.2.15.4. System Engineer: Evaluates and validates the requirement to ensure the critical engineering issues have been adequately addressed and provide support for proposal development. Ensures OSS&E requirements are adequately addressed.

A3.2.15.5. Logistics Manager: Ensures all areas of logistical support for the requirement are addressed.

A3.2.15.6. Simulators/Ground Trainers (508 MASSG/GFMMA): Provides input on potential impacts to systems.

A3.2.15.7. Personnel from other affected organizations (e.g. Support Equipment, Automated Test Systems (ATS)): Provides input on potential impacts to systems.

A3.2.15.8. Other offices (e.g. Intelligence Office, 78 SFS): Evaluates requirement as necessary.

A3.3. CCB Meetings.

The CCB shall be held as required to accommodate the change activity within each group.

A3.3.1. Attendance. Core members or designee attendance is mandatory.

A3.3.2. Meeting Notice/Agenda. Project manager provide a copy of their final briefing/presentation to the CCB Executive Secretariat according to organizational guidelines.

A3.3.2.1. The CCB Executive Secretariat shall provide a meeting notice, including an agenda, to each CCB member according to organizational guidelines. Each member reviews the agenda and determines their organization's position on each proposed item.

A3.4. Additional Information.

A3.4.1. Out of Cycle CCBs. The Project Manager shall obtain approval from the Chief Engineer on all emergency/urgent Change Request Packages before contacting the CCBES to schedule the out of cycle CCB. The CCBES will complete any necessary actions and

schedule the urgent CCB with all board members. Out of cycle CCBs will be kept to an absolute minimum. Extraordinary circumstances and a full justification will be required prior to obtaining a walk-through disposition on an effort. The disposition of out of cycle CCB items/efforts will be included in the agenda of the next available/designated CCB meeting as an informational item.

A3.4.1.1. Out of cycle Change Request Packages shall meet emergency/urgent criteria such as, but not limited to, safety of flight conditions and critical flight test schedule. Because of their limited processing time, these changes may be scheduled for a CCB after the agenda has been published.

A3.4.1.2. If CCB is scheduled within the next 48 hours, then the Project Manager will walk the change package around for coordination review prior to the CCB.

A3.4.1.2.1. If a CCB is not scheduled within 48 hours, then the Project Manager will either walk the change item package around for coordination or call an emergency CCB. Upon the coordinated recommendation, change will be presented to the CCB Chair or designated representative for signing.

A3.4.2. CCB Conduct. The CCBES takes a roll call of CCB members. Once all members are present and accounted for, the meeting is then turned over to the CCB Chairperson for administrative comments and review of open action items. The CCB chairman shall review the information to be presented and ensure that all opinions are adequately addressed. CCB members provide their recommendation for the disposition of the action (including any outstanding issues) to the CCB Chairperson. The CCB Chairperson shall then determine the overall weapon system program position for the matter being considered.

A3.4.3. Weapon System Coordination. The Project Manager and Chief Engineer shall apply a sound decision philosophy in the review of the Change Review Package to determine if other commodities/end items/systems are impacted. The SPM/PGM/SCM and Chief Engineer shall be invited to the CCB by the CCBES if the Change Request package has a significant impact to the commodity/end item/system performance (e.g., critical safety items, logistics decisions that drive changes to the weapon system TO, processes, changes to the Interface Control Document, safety, capability, etc.)

A3.5. Suggested CCB Presentation Considerations.

A3.5.1. Modification, ECP, Waiver and Deviation Change Requests. This information may be tailored as required for the type of change requests. The brief is generally no more than 10-12 slides using organizational CCB slide Template and should provide the following information.

A3.5.1.1. Change Type: (Mod, ECP, WAIVER, DEVIATION).

System affected

Permanent or temporary change

Requirement/Direction

A3.5.1.2. Project Manager: (should go on Title slide).

A3.5.1.3. Description /Purpose: (what, why, benefits, aircraft effectivity, pictures, diagrams, how will performance of system be measured, etc.).

Is this a new capability or does this replace an existing capability?

Does proposed change resolve a known or newly discovered discrepancy?

For software modifications list all change requests, problem reports, etc that were considered and the ones selected for the mod.

Applicable pictures/diagrams

A3.5.1.4. Cost of Action.

Source for Funding

Funding Type (s)

Estimated Cost

Funded or unfunded requirement

A3.5.1.5. Schedule.

Expected Contract Award Date

Expected Fielding Date (number of months ARO)

Milestone schedule

A3.5.1.6. Impacts.

Production Effectivity:

Retrofit Effectivity:

Does this change impact other programs in any way? Is this change contingent on any other actions?

Return On Investment (ROI) –

Return On Reliability (ROR) – (increase in MTBF, MTBM, reduction in TNMCM, etc.)

Identify interfaces affected by the new requirement

Specs/ICD changes

Identify interface/integration issues

Address all known areas of impact

If proposed change is software, has version been installed, tested and accredited with appropriate organization? If so, where, on what systems and what were the findings?

Key Performance Parameters and Technical Performance Measures

Critical Program Information (CPI)

A3.5.1.7. Risk.

Technical and safety risks will be evaluated IAW MIL-STD-882 and Airworthiness Certification Circular No. 5.

Cost and schedule risk will be evaluated using AFMCPAM 63-101.

A risk analysis summary worksheet such as the one shown in the CCB Checklist should be used to identify the risks associated with the elements listed in block 10 of the CCB Checklist and will be used as part of the overall technical, safety, cost, schedule, and program risks.

A3.5.1.8. Deliverables.

Address GFE/GFI if applicable.

List all Hardware, Software and Documentation deliverables.

Discuss delivery impact if applicable.

A3.5.1.9. Logistics.

Maintenance Planning

Manpower/Personnel

Support Equipment

Technical and TCTO Data

Training/Training Support

Packaging/Handling/Storage/ Transportation

Computer Resource Support

Design Interface

Supply Support

Facilities

Method of Implementation: (TCTO, Preferred Spare, etc.)

Modification Performed by: (Field, CFT, DFT, Contractor, etc.)

A3.5.1.10. Testing.

Discuss Test Requirements, Lead Test Org, success criteria and asset availability.

Discuss Test Activity with Results, RTO, etc

A3.5.1.11. OSS&E.

Critical Safety Item Identification and Management

Interfaces to other programs

Environmental and Occupational Health Impact

System Safety Impact Assessment

Air Worthiness Certification and other required certifications?

Weight and balance, safety of flight, electrical, etc

A3.5.1.12. Summary/Recommendation.

Do you recommend approval or disapproval? If disapproved, WHY?

Any constraints/limitations for approval? (Examples: Do not operate during take-off or landing, any EMI/EMC concerns, cargo load limits, flight envelope limitations, etc.)

A3.5.2. ECO, New Drawings and Flight Manual Performance Chart Change Requests.

This information may be tailored as required for the type of change request. The brief is generally no more than 1-2 slides using organizational CCB slide template and should provide the following information

Engineer

Affected Drawing(s)

Description/Purpose (drawing correction, design change, etc)

Method of Implementation (TCTO, Preferred Spared, etc)

Impacts (Tech Data other than drawing(s), Programs/Mods, etc)

A3.6. Process Flow Diagram.

Figure A3.1. Phase I – Requirement Initiation

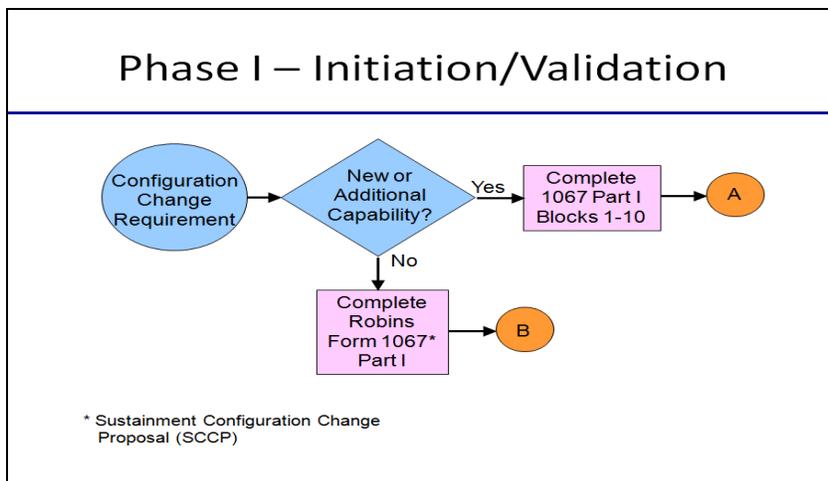


Figure A3.2. Phase II – Requirement Validation

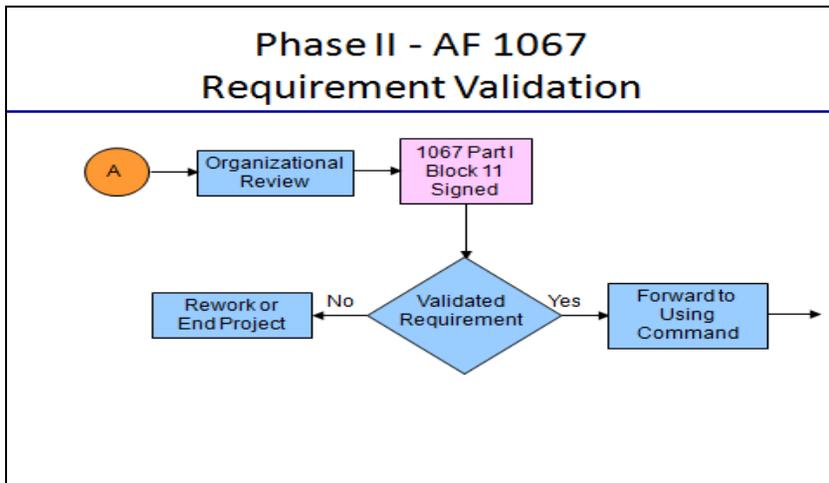


Figure A3.3. Phase II – Requirement Validation (Continued)

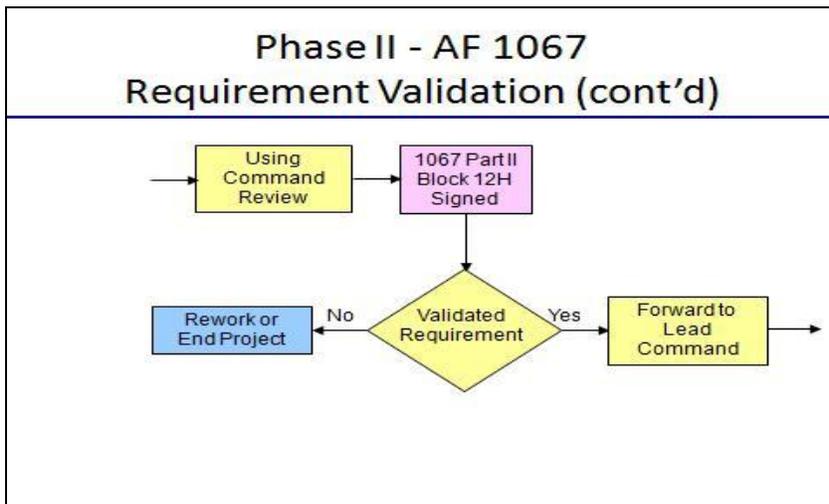


Figure A3.4. Phase II – Requirement Validation (Continued)

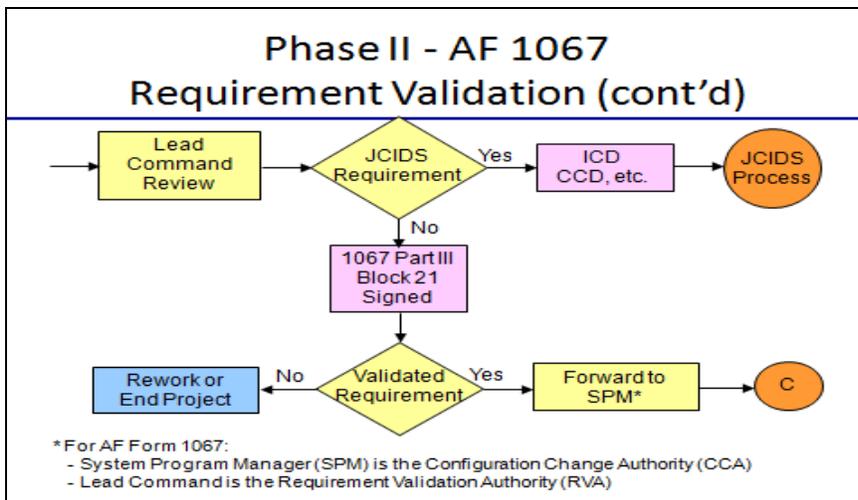


Figure A3.5. Phase II – WR-ALC Requirement Validation

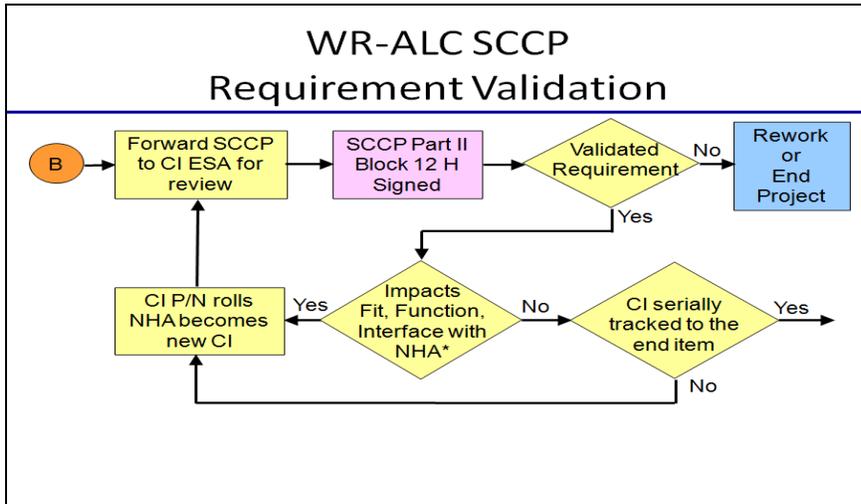


Figure A3.6. – WR-ALC/SCCP Requirement Validation

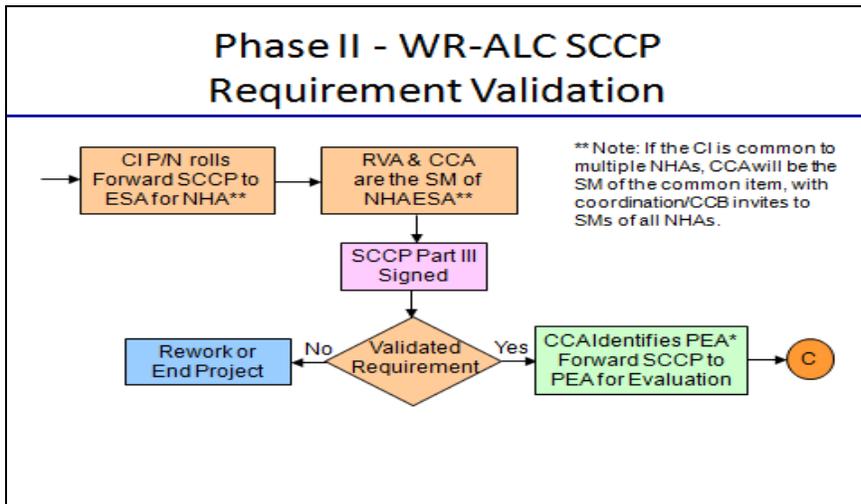


Figure A3.7. – Phase III Feasibility and Concept Exploration

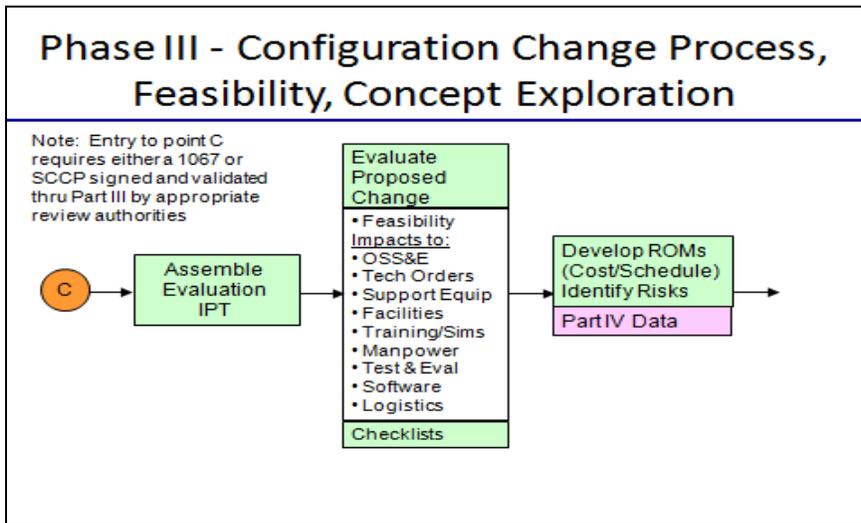


Figure A3.8. Phase III – Feasibility and Cost Review

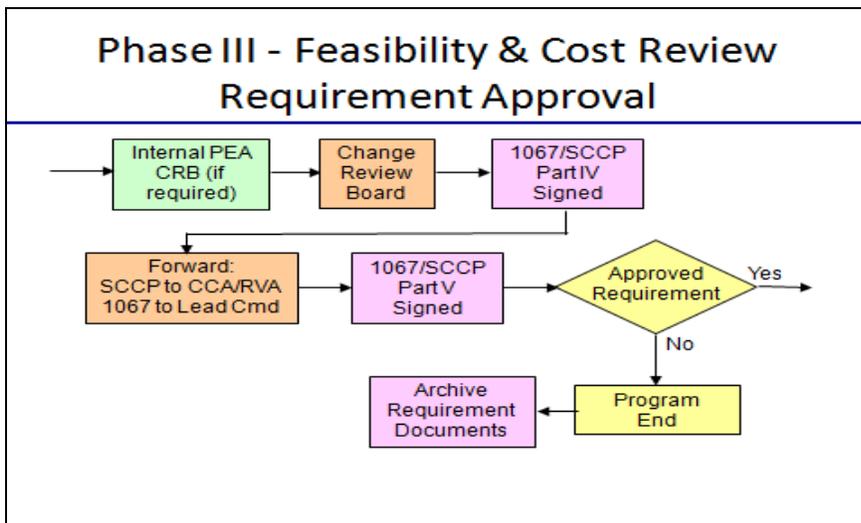


Figure A3.9. Phase IV – Budgeting and Funding

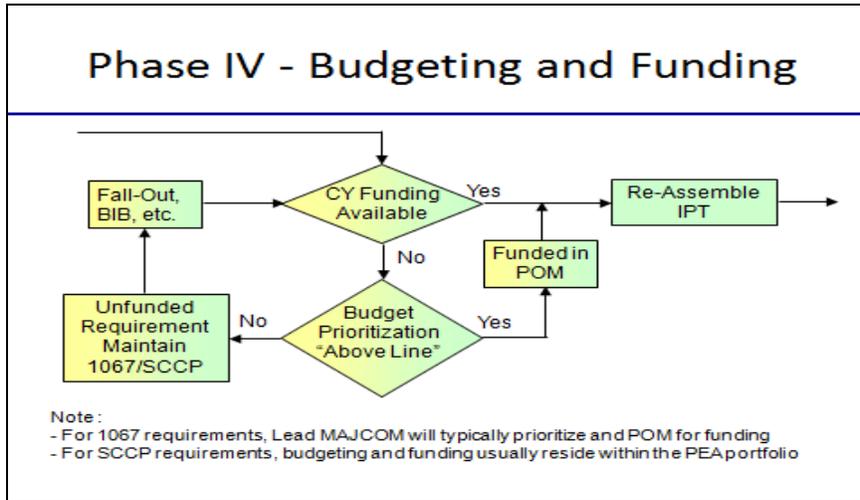


Figure A3.10. Phase V – Program Refinement and Execution

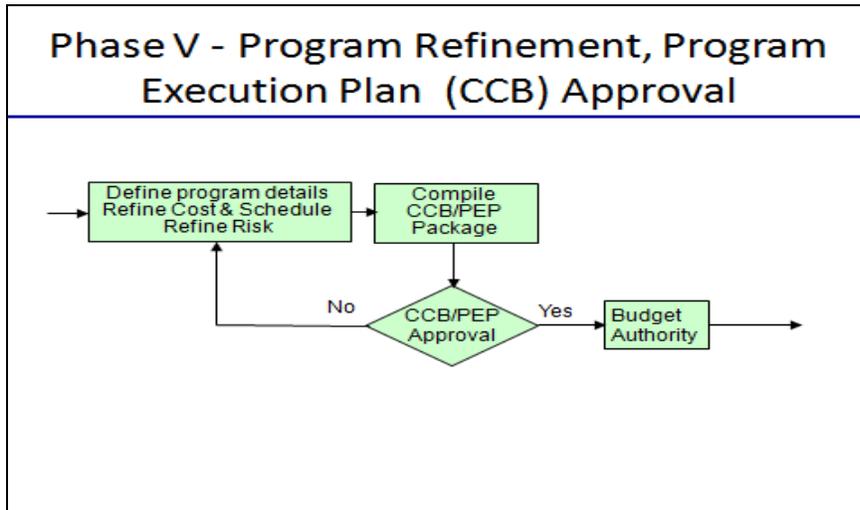
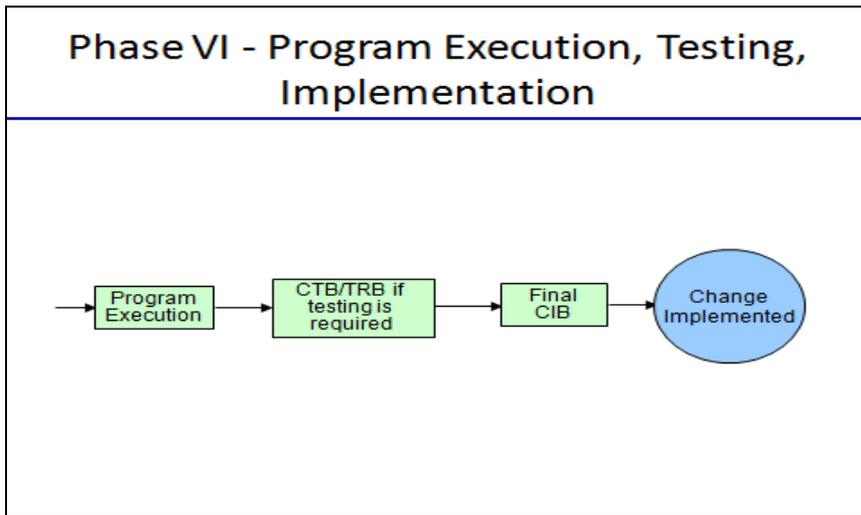


Figure A3.11. – Phase VI – Execution, Testing, Implementation



Attachment 4

WR-ALC MASTER CCB CHECKLIST INSTRUCTIONS

A4.1. Introduction. The WR-ALC Configuration Control Checklist ensures the preparation, evaluation, coordination and management of proposed changes, and deviations to affected configuration items of WR-ALC weapon systems' configuration management baseline. The configuration management process seeks to ensure changes are cost effective, timely, required and do not adversely impact WR-ALC weapon systems.

A4.2. Description. The checklist addresses the six major phases broken down into 26 flow blocks. It provides guidance on the type of information required to initiate, evaluate, develop a complete CCB package and render a decision for a proposed change. The information contained in the flowchart provides a guideline but is not all inclusive nor an exhaustive list of the actions that may be required. The checklist may be accessed at WR-ALC/EN website at <https://org.eis.afmc.af.mil/sites/FOWRALC/en/Configuration> Control Board CCB/MASTER CCB CHECKLIST.xls

A4.3. Functionality. The Checklist contains the team member responsible for completing each block or phase. The responsible member checks off the appropriate block in preparing the data to complete each Phase. Each line must be checked Yes, No or N/A to complete the block and phase. The N/A column should be marked if a block or subtask/question does not apply. Comments concerning a checklist item may be entered into the column titled "OPR." When the team member completes their area of responsibility, the checklist is returned to the respective point of contact (POC). The PM files the completed checklist in the CCB folder.

A4.4. Master CCB Checklist Block Numbering Instructions. The block numbering system below matches the process steps shown in the Master CCB Checklist.

BLOCK 1 - Originator Prepares Change Request

The Originator is the entry point for all change requests.

NOTE: Originator can be anyone from the field or a contractor/government representative. Inputs are made via an AF Form 1067, Requests for Deviation/Waiver, Engineering Change Proposals (ECP), Engineering Change Orders (ECO)/New Drawings, Design Change Notices (DCN), Flight Manual changes that impact performance charts, AFMC Form 230/231s, Equipment Certifications or any other change request documents.

BLOCK 2 – Change Requirement Document

The Originator submits the change request to the designated weapon system's CCBES for tracking in the organization's configuration tracking system.

BLOCK 3 – Receipt of Change Request

The CCBES receives the change request from the originator, logs the change request into the organization's configuration tracking system, and assigns a case number. The CCBES initiates a Configuration Control Board tracking folder and notifies the originator that the change request is in process.

BLOCK 4 – Valid Change Request Documentation

The CCBES ensures the change request documents are properly validated. A change request is considered valid if it is signed IAW the following:

Table A4.1. Change Request Table

Change Request	Validation Signature
AF Form 1067	Part 3 by Lead Command
Requests for Deviation/Waiver	In the Appropriate Government Activity Block
Engineering Change Proposal	In the Appropriate Government Activity Block
Engineering Change Order/New Drawings	Government engineering supervisor (Block 14)
Design Change Notice	In the Appropriate Government Activity Block
Flight Manual Changes to Performance Charts	Flight Manual Manager
AFMC Form 230/231	Government Manager/Engineer
Equipment Certifications	Commodity Program Manager/Lead Command
Other Change Request Documents	As Appropriate

Other documentation as listed in Section 2.4.2.1.1. may also be required to evaluate a change request.

BLOCK 5 – Validate Requirement

If the CCBES determines the change documentation has not been properly validated, then coordination will occur after the originator provides the necessary information (refer to Block 4).

BLOCK 6 – Assign Project Manager/Engineer

The CCBES obtains the name of the Project Manager/Engineer from the respective supervisor whom should be assigned to the Change Request package. The CCBES forwards the Change Request package to the Project Manager/Engineer, assigns a suspense date, and updates the configuration tracking system.

BLOCK 7 – Review Requirement

The Project Manager/Engineer is responsible for: reviewing the Change Request package; validating the need for CCB review; determining if Form, Fit, Function, or Interface (F3I) is impacted (see definitions); and determines if all supporting documentation necessary for evaluation has been submitted. The Project Manager determines if sufficient data has been provided for the Integrated Product Team (IPT) to begin its evaluation. This data shall include but is not limited to the following:

Design Requirements (i.e. deficiencies to be corrected, new capabilities, etc.); Qualification Requirements; Performance Requirements (Key Performance Parameters; Technical Performance Measures, and Specification Requirements); Safety Requirements.

BLOCK 8 - Requirement Defined Decision

The Project Manager/Engineer assembles a project folder if sufficient information has been provided in the change requirement document. If insufficient data has been submitted, then the Project Manager/Engineer will return the Change Request package to the CCBES who will request additional information from the originator (see Block 5).

BLOCK 9 - Assemble Evaluation Team

The Project Manager/Engineer shall establish an IPT comprised of functionals from the following disciplines: engineering, finance, contracting, equipment specialist, program management, logistics management, technical order management, engineering data management specialist, safety, and any other discipline required to complete the checklist described in Block 10.

BLOCK 10 – Evaluate Proposed Change

The IPT uses the topics listed in block ten of the Master CCB Checklist to conduct a detailed review of the proposed change. These topics illustrate the type of information necessary for the IPT to make a recommendation to the System Program Manager as to their disposition of the proposed change and are not all inclusive.

Note: The data used to substantiate the topics listed under block ten shall be maintained within the project folder.

BLOCK 11 - Risks Identified and Quantified

The Project Manager and IPT should identify all known risks and propose mitigation/acceptance solutions. Refer to MIL-STD-882, AFMC PAMPHLET 63-101 and Airworthiness Certification Circular No. 5 for more information on risk management.

BLOCK 12 – Cost and Schedule

The Project Manager develops the Budgetary Cost Information (BCI) and proposed schedule if required. Considerations should be made for economic growth factors (i.e. inflation) in all out year projections. For software block cycle updates, the Consolidated Asset Management System (CAMS) software cost elements should be completed. If the requirement is not a programmed change then the Project Manager submits an unfunded requirement.

The IPT identifies funds type, requests budget estimates/ROMs from contractors, and develops a government cost estimate. After receipt of contractor's budget estimates/ROMs, the IPT performs a cost analysis review. The IPT also includes the following schedules as part of an

integrated master schedule: configuration management process, change development, testing, technical data, and fielding.

NOTE: The cost and schedule estimates provided by the Project Manager should be realistic and executable for the projected FY of implementation. Typically cost estimates/schedules are needed for an AF Form 1067, ECPs, and S/W changes.

BLOCK 13 – Consolidate Information

The Project Manager consolidates all information (e.g. BCI, 1067, Risk Assessment, etc.) and prepares the documentation for the CCBES who coordinates Lead/Using Command review as applicable (e.g., ECOs, drawing changes, small ECPs may not require Lead/Using Command coordination).

NOTE: An optional pre-CCB or IPT management review may be conducted at this point. The purpose of a pre-review is: to provide visibility to the Chief Engineer/SPM; to direct the IPT to address issues that might not have been considered; and/or to initiate sustainment actions that might delay CCB approval. Some Change Request packages (e.g., ECOs, drawing changes, ECPs, etc. that were not initiated by the Lead/Using Command as a requirement) may not require BCI and or Lead/Using Command coordination (Blocks 12-18).

BLOCK 14 – Cost Analysis/Review

The information consolidated in block thirteen should be forwarded to the Lead/Using Command. For software block cycle updates, Consolidated Asset Management System (CAMS) software cost elements need to be developed and documented.

BLOCK 15 – Lead Command/Using Command Decision

The Project Manager determines if the Change Request Package should be reviewed by the Lead Command, Using Command, or both. The project manager forwards the Change Request Package to the CCBES for coordination with the appropriate command.

BLOCK 16 – Using Command Review

CCBES forwards the Change Request package to the Using Command.

BLOCK 17 – Lead Command Review

CCBES forwards the Change Request package to the Lead Command.

BLOCK 18 – Lead/Using Command Response Received

Upon receipt of Lead/Using Command's feedback, the CCBES will update the organization's configuration tracking system and advise the Project Manager as follows:

Lead/Using Command Approval: CCBES will notify the Project Manager that Lead/Using Command concurrence was obtained.

Lead/Using Command disapproval: CCBES will notify the Project Manager that assigned Action Items were received and the Project Manager will resolve all open issues before approval/authorization is given and work the corrective actions.

BLOCK 19 – Update of Change Request Package

The Project Manager ensures the Change Request Package reflects the Lead/Using Command's feedback and identifies the elements required for the CCB package. The CCB package may require elements such as:

Cover Letter [As Required (i.e. Summary, Routing, Case Number)]

CCB Checklist

Change document (e.g., AF Form 1067 w/ Part IV completed, AFMC Form 518, DD Form 1692, etc.)

Modification Proposal Analysis

Risk Assessment Work Sheet

CCB Briefing Charts

Other Supporting Documentation (e.g., Coordination Documentation, Market Research, etc.)

BLOCK 20 - Assembles Package

The Project Manager assembles the final CCB package and forwards it to the CCB Executive Secretariat. The CCB Briefing Charts developed by the Project Manager should be based upon the standard CCB Briefing Chart template. The standard CCB Briefing Charts are considered a minimum requirement and additional charts/information may be required.

BLOCK 21 – CCB Package Preparation

The CCBES receives the CCB package from the Project Manager and develops the CCB agenda.

BLOCK 22 – CCB Package Readiness Review

The CCBES reviews the final CCB package for accuracy and completeness.

BLOCK 23 – Distribute CCB Package for Review

The CCBES distributes the CCB package to all CCB members for review. The CCB Briefing Charts and agenda are required to be distributed to the CCB members at least five working days prior to the scheduled CCB. Additional information from the CCB package may be distributed if necessary.

BLOCK 24 – Set Up CCB Meeting

The CCBES schedules a CCB meeting for all CCB members with an interest in the Change Package. The CCBES ensures the meeting location is reserved and that any necessary equipment (audio,visual,Telecon,VTC,etc) is available.

Note: The CCB and Flight Readiness Review Board (FRRB) can be held together for Temporary Modifications and other programs as approved by Chief Engineer.

BLOCK 25 – Obtain SPM/PGM CCB Decision

The CCB is the functional review of the proposed change. The Project Manager briefs the Change Request to the CCB. The SPM or the delegated CCB Chair, under the Board's advisement, provides the final disposition to the Project Manager for the CCB package.

BLOCK 26 – Publish Minutes

Within five working days of the completion of the CCB, the CCBES publishes and distributes the CCB minutes and attendance listing to the CCB members and other applicable organizations. The CCB minutes should capture the CCB Chair's decisions and be reviewed/signed by the presiding CCB Chair prior to distribution. The CCBES archives a complete copy of the CCB package and updates the organization's configuration tracking system.