



GLOBAL POSITIONING SYSTEMS (GPS)

ADJUDICATION WORKING GROUP (AWG) AND ROUGH ORDER OF MAGNITUDE (ROM) / IMPACT ASSESSMENT (IA) CHARTER

For

DEVELOPMENTAL & OPERATIONAL INTERFACE CONTROL DOCUMENTS

GP-03-001 Revision B

3 MAY 2019

JOHN C. CLAXTON, Col, USAF

Deputy Director, Global Positioning Systems Directorate

Headquarters
Space and Missile Systems Center (SMC)
Global Positioning Systems Directorate (SMC/GP)
483 North Aviation Boulevard
El Segundo, CA 90245-2808
U.S.A.

DISTRIBUTION STATEMENT A. Approved for Public Release. Distribution is unlimited.

DESTRUCTION NOTICE - For classified documents, follow the procedures in DoD 5220.22-M, *National Industrial Security Program Operating Manual*, chapter 5, section 7, or DoD 5200.1-R, *Information Security Program Regulation*, chapter 6, section 7. For unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

TABLE OF CONTENTS

- 1. INTRODUCTION 1
- 2. REFERENCE..... 1
- 3. DEFINITION 1
 - 3.1 Interface Documents..... 1
 - 3.1.1 Interface Specification (IS) 1
 - 3.2 Adjudication Working Group (AWG)..... 1
 - 3.2.1 Public Interface Control Working Group (ICWG) 2
 - 3.2.2 Interface Control Contractor (ICC)/Agency (ICA) 2
 - 3.2.3 Action Officer (AO) 2
- 4. RESPONSIBILITIES 3
 - 4.1 AWG Responsibilities..... 3
 - 4.1.1 AWG Functional Responsibilities 3
 - 4.1.2 AWG Meetings..... 3
- 5. DOCUMENTATION 7
 - 5.1 Interface Control Document (ICD)..... 7
 - 5.2 Request For Change (RFC)..... 7
 - 5.3 Request For Variance (RFV) 7
 - 5.4 Revision Notices 7
 - 5.4.1 Proposed Change Notice (PCN) 7
 - 5.4.2 Interface Revision Notice (IRN) 7
 - 5.5 Comment Resolution Matrix..... 7
 - 5.6 Minutes..... 7
 - 5.7 RFC/RFV Game Plan (Schedule) 7
 - 5.8 Letter of Exception..... 7
 - 5.9 Intellectual Property Rights 8
 - 5.10 Security Classification and Special Handling Markings..... 8
 - 5.11 Release of Documentation 8
- 6. PROCEDURES 9
 - 6.1 ICD Development and Approval Process 9
 - 6.2 Approval Authority 11
 - 6.3 ICD Change Control Process 12
 - 6.3.1 Out-of-Scope Changes 13
 - 6.3.1.1 Change Proposal Flow Process 13
 - 6.4 Problem Resolution Process 14
 - 6.5 ROM and Impact Assessment Process 14
 - 6.5.1 ROM/IA 30-Day Contractor Response Mandate 14
- 7. ACRONYMS..... 17

ATTACHMENT 1: DOCUMENTATION AND OTHER GUIDELINES

A1.1.PREPARATION OF GPS ICDs 18
 A1.1.1 Document Titles..... 18
 A1.1.2 Document Numbers..... 18
 A1.1.3 Title and Revision Block Format..... 18
 A1.1.4 Technical Format and Content..... 18
 A1.1.4.1 Page Numbers..... 18
 A1.1.4.2 Figure and Table Numbers 18
 A1.1.4.3 Commercial and Government Entity (CAGE) Code 18
 A1.1.5 Drawing Format..... 18
 A1.1.6 ICD Key Participants..... 18
A1.2 Revision Notices 18
A1.3 AWG Action Items/Plans..... 18
 A1.3.1 RFC/RFV Game Plan (Schedule)..... 19
A1.4 ROM/Impact Assessment Request..... 20

TABLES

Table 1 AWG Functional Responsibilities..... 4
Table 2 Approval Authority 11

FIGURES

Figure 1 GPS TBCMP Flow Chart..... 15
Figure 2 ICD Change Control Process 16
Figure A1-1 Sample ICD Cover Sheet..... 21
Figure A1-2 Sample PCN/IRN Cover Sheet..... 22
Figure A1-3 Sample Game Plan Format 23
Figure A1-4 Sample ROM/Impact Assessment Request 24

1. INTRODUCTION. This charter outlines the procedures and requirements associated with the Adjudication Working Group (AWG) and Rough Order of Magnitude (ROM) / Impact Assessment (IA) in the overarching Global Positioning Systems (GPS) Technical Baseline Configuration Management Process (TBCMP). Refer to Figure 1 (pg. 13) for a high level flow chart of the GPS TBCMP. It applies to interface responsible contractors/organizations, government agencies (e.g. the Department of Defense (DoD), Department of Transportation (DOT)), and other contractors/organizations involved in the development, deployment, and operation of GPS assets. These assets pertain to the Space Segment (SS), Control Segment (CS), and User Segment (US).

2. REFERENCES

GPS Technical Baseline Configuration Management Process (TBCMP) Plan.

GPOI 62-1801. GPS Change Control Board (CCB) Operating Instruction.

MIL-STD-961E. DOD Standard Practice, Defense and Program-Unique Specifications and Format Content.

3. DEFINITION

3.1 Interface Documents. Interfaces are documented in Interface Control Documents (ICDs). ICDs shall be the formal means of establishing, defining, and controlling interfaces and for documenting detailed interface design information for the GPS Program Office. The ICD typically exists between Configuration Items (CIs) to establish and specify interface definition and design. CIs are the contractual responsibility of development, production, and sustainment contractors, who are under the management of their respective government agency program offices.

3.1.1. Interface Specification (IS). An IS is a specific type of ICD that identifies interface requirements. Historically, an IS specifies a single government office/agency as the only necessary and required approval authority for the document, however IS may contain multiple signatories as approval authorities. The procedure and the process for development, control, and maintenance is same for both an ICD and IS. The term ICD can be used generically to refer to both ICD and IS.

3.2 Adjudication Working Group (AWG). The AWG shall consist of a government assigned Action Officer (AO), Interface Control Contractor (ICC)/Agency (ICA) assigned Responsible Engineer (RE), government agencies/organizations, and other non-government entities that contribute to define, develop, implement, impact, and maintain an interface. The AO and RE are co-chairs in the AWG, fulfilling responsibilities outlined in Table 1. AWGs shall be established to facilitate interface definition, design, control, and to address and resolve interface issues and problems that cannot be resolved through associate contractor daily working procedures. Furthermore, AWGs shall be established to assist management and technical entities with planning, scheduling and executing interface activities. The AWG shall serve as a forum to develop and provide interface requirements, as well as focus on interface detail

definition and issues. Each affected government agency, contractor, and other organization shall assign an AWG representative. Attendance and participation in any AWG meeting or activity is dependent on the interface issue(s) to be resolved. AWG representatives shall have the technical competency and authority to commit their respective organizations to technical, planning and schedule positions within the constraints of applicable contracts or agreements.

A primary function of the AWG is to ensure compatibility between interfacing CIs. Whenever compatibility cannot be attained in the AWG arena, the issues, contractors'/organizations' positions, impacts for each course of action, and the AWG chairperson's recommendation shall be forwarded to the GPS Engineering Review Board (ERB) for disposition.

3.2.1 Public Interface Control Working Group (ICWG). AWGs for documents that are publicly releasable shall be referred to as Public ICWGs, which are structured the same as the AWG but with a few additional requirements. The additional requirements include coordinating meetings and documents through available public media such as the www.GPS.gov internet website. Formal announcements regarding Public ICWGs shall be coordinated with the designated government OPR and distributed through the Federal Register.

3.2.2 Interface Control Contractor (ICC)/Agency (ICA). The GPS Program Office will determine if an ICC or government ICA is needed to support ICD development and maintenance. The ICC/ICA is a contractor (or an organization) that has technical or contractual responsibility for the CI on its respective side of the interface. The ICC may be a contractor responsible for a major CI involved in a particular interface or an independent contractor with systems engineering or integrating responsibility for the system. An ICC for an ICD will be identified in specific contracts. The ICC/ICA will have the responsibility of designating a Responsible Engineer (RE) to co-chair the related AWG with the assigned government AO.

3.2.3 Action Officer (AO). A representative assigned by the sponsoring government office who is responsible for the development and coordination of a proposed change or variance. Provides necessary leadership of the proposed change; such as involving appropriate stakeholders, developing an effective change solution, and coordinating CCB approval and contract implementation by the identified need date.

4. RESPONSIBILITIES

4.1 AWG Responsibilities. The AWG shall serve as forum for: exchanging interface data, identifying and resolving interface problems, establishing and documenting interface agreements, and assessing interface impact of design changes.

4.1.1 AWG Functional Responsibilities. Table 1 presents the responsibilities of the ICC/ICA, AO, and other AWG members (e.g. subject matter experts, government system engineers of impacted programs). The ICC/ICA has prime responsibility for all activities, while the AO, impacted organizations, and other AWG members have collateral and supportive responsibility where indicated. In addition:

- a. The ICC/ICA, in collaboration and with the assistance of supporting agencies, contractors, and AWG members, will maintain and ensure compatibility of ICDs to the operational GPS constellation or with a future-planned constellation.
- b. The ICC/ICA shall: prepare, maintain, and update ICDs; prepare, coordinate, and process proposed changes to ICDs; co-chair and conduct AWG meetings; prepare and distribute agendas prior to meetings; publish meeting minutes; prepare and submit the ICDs or IRNs that have been coordinated/approved by the AWG to the procuring activity for ERB and CCB approval.
- c. If significant problems cannot be resolved at the AWG level, the ICC/ICA shall coordinate with the government AO to elevate the problems to the GPS ERB for disposition.
- d. AWG members shall participate to: identify interfaces and interface requirements; prepare, review, and evaluate ICDs; prepare, review, and evaluate proposed changes to ICDs; plan and schedule required activities; resolve open issues and action items.

4.1.2 AWG Meetings. AWG meetings shall be convened to establish interface definitions, develop interface control plans, resolve interface problems between participants, and coordinate other interface control activities. Any AWG member may propose and request an AWG meeting to address specific subjects that require discussion and agreement by multiple organizations. The request will be submitted to the ICC/ICA and the government OPR.

Table 1. AWG Functional Responsibilities			
AWG Functional Responsibilities	Interface Control Contractor / Agency	Action Officer (AO)	Other Members
1. Provide materials and services to support interface management	X	X	As Required
2. Request procuring activity direction, as needed, to support AWG activities	X		
3. Provide AWG direction as needed		X	
4. Assign responsibilities to AWG Representatives	X		
5. Develop schedules for ICD preparation	X	X	
6. Establish and exercise administrative control of ICDs	X		
7. Request AWG Meeting	X	X	X
8. Schedule and Conduct AWG			
a. Coordinate and document AWG actions and updates	X		
b. Issue AWG meeting agenda five days prior to meeting	X		
c. Participate in and support AWG meeting	X	X	X
d. Assist in resolution of interface questions and problems	X	X	X
e. Issue AWG meeting minutes within 10 calendar days following the meeting	X		
f. Follow-up on coordination requests to ensure timely submittal of responses	X		
g. Identify to the procuring activity any persistent obstacles to concurrence and recommend actions	X		

UNCLASSIFIED

h. Prepare submittals to procuring activity for consideration of issues that cannot be resolved at AWG level. Document issues, positions and recommend solutions	X		
9. Develop ICDs using Attachment 1 as a guide.			
a. Identify interface requirements & other necessary design/definition information	X	X	X
b. Establish complete interface technical requirements	X	X	X
c. Review interface characteristics with AWG representatives	X	X	X
d. Determine problems/issues and assign action items	X		
e. Maintain cognizance of program schedule information relevant to interfaces	X	X	
f. Disseminate ICD program schedule information to assure timeliness of activity in support of program goals	X	X	
10. Identify and evaluate changes to ICDs			
a. Implement ICD changes in accordance with the change control processes of this charter	X	X	
b. Identify change requirements	X	X	X
c. Evaluate changes for interface impact	X	X	X
d. Determine if change is in-scope/out-of-scope of contracts	X	X	
e. Request procuring activity direction for out- of-scope changes	X		
f. Prepare and submit issues that cannot be resolved at AWG level to procuring activity	X		
g. Coordinate companion change schedules of submittals to support earliest associate contractor need dates	X	X	
h. Prepare and process PCN/ICD Revisions	X		

UNCLASSIFIED

11. Obtain ICD final approval and release document(s)			
a. Finalize ICD to reflect technically resolved issues	X		
b. Obtain approval signature(s) on CCB approved IRN/ ICD (with Configuration Management Team (CMT) support)	X	X	As Required
c. Release and distribute approved ICD or IRN	X	X	
d. Assure released ICDs are listed in system level documents	As Required	X	
e. Maintain ICD files	X		
12. Review AWG charter periodically and recommend additions / changes	X	X	X
13. Recommend to the procuring activity additional interfaces that require documentation and control	X		

5. DOCUMENTATION

5.1 Interface Control Document (ICD). An ICD shall be the formal means of establishing, defining and controlling interfaces, and for documenting detailed interface design definitions for the GPS program. Attachment 1 of this document provides a guide in preparing ICDs.

5.2 Request for Change (RFC). Request for Change is a term used to identify a proposed modification/change to any control document within the technical baseline. A RFC following the technical baseline change management process is the only way to alter the technical baseline.

5.3 Request for Variance (RFV). A departure from a particular requirement(s) of an item's current approved configuration documentation for a specific number of units or a specified period of time.

5.4 Revision Notices. Updates to ICDs shall be initiated and specified via a Proposed Change Notice and Interface Revision Notice.

5.4.1 Proposed Change Notice (PCN). Requested changes to an approved ICD shall be specified via a PCN. PCNs are used for AWG coordination and review. As a proposed document, the PCN is used to coordinate the technical details/definition of the interface change being proposed.

5.4.2 Interface Revision Notice (IRN). After the PCN is coordinated with the AWG and finalized by the ICC/ICA, an IRN is created. Afterwards, the IRN is submitted to the GPS ERB and CCB for technical and programmatic approval (respectively). An IRN is reviewed to determine if the GPS Program Office will commit to making the proposed change a part of the technical and contractual baseline(s).

5.5 Comment Resolution Matrix (CRM). A Comment Resolution Matrix will be used to document and submit all comments against the latest released version of a PCN/IRN/ICD, as well as to provide disposition of each comment.

5.6 Minutes. Minutes will include a complete list of attendees and provide a summary of the meeting's discussion, to include any issues and action items addressed, along with any decisions made at the AWG meeting.

5.7 RFC/RFV Game Plan (Schedule). A Game Plan is a documented schedule that identifies problems and outlines a plan of action to resolve these problems. For operational ICDs, the resolution plan should cite other ICDs/interfaces impacted by the planned action and identify associated PCNs. Game Plan(s) will be closed out by the ICC/ICA upon satisfactory resolution of the subject problem. (See Figure A.1-3 for an example of a Game Plan)

5.8 Letter of Exception (LOE). The LOE delineates items that are out-of-scope of a contract by paragraph number with specific description and rationale. ICC/ICA will use the LOE to identify items that are not part of their approval of the IRN/ICD.

UNCLASSIFIED

5.9 Intellectual Property Rights. ICCs shall mark their interface input data consistent with the terms and conditions of their contracts. Sensitive markings shall only appear on that portion of the input data. Competition Sensitive Data shall be controlled by the ICC/ICA such as not to disseminate the information to other competing contractors under any circumstances or other non-government members of the working group without prior permission of the originating contractor or the GPS Program Office. Concerned parties may enter into a non-disclosure agreement.

Upon incorporation of Intellectual Property into a draft or formal ICD by the ICC/ICA, data within the ICD will not be considered or marked as such. Intellectual Property provided by a competing contractor to support preparation of the ICD shall retain its markings and control regardless of the use of some or all Intellectual Property Data in the ICD. Intellectual Property Data will not be released under the Freedom of Information Act (exemption 5) or otherwise until after award of the initial production of contract of the UE, SS, or Full Scale Development of the CS. Intellectual Property shall not be construed as Proprietary or Limited Rights data.

5.10 Security Classification and Special Handling Markings. The security classification level of ICDs and revision notices shall be consistent with the latest version of the Navstar GPS Security Classification Guide.

5.11 Release of Documentation. Distribution and release of ICDs and revision notices with limited distribution shall be under the control of the GPS Program Office.

6. PROCEDURES

6.1 ICD Development and Approval Process. ICDs shall be prepared to define and control interface requirements and detail interface design. The ICCs/ICAs responsible for interfacing systems/segments/CIs shall develop ICDs jointly with the procuring activity, other AWG members, and any identified stakeholders. The following identifies some of the necessary procedures in this development.

- a. The GPS Program Office shall assign a unique document title and number for each required ICD.
- b. The GPS Program Office shall identify and designate an ICC/ICA responsible for the development of an ICD.
- c. Designated ICC/ICA, with the procuring activity, shall identify and establish an AWG.
- d. ICC/ICA shall develop the ICD with AWG input, in accordance with the applicable contract, utilizing Attachment 1 of this charter as a guide.
- e. Designated ICC/ICA shall distribute the draft PCN to each AWG participant and government agency/contractor as identified in the established AWG membership. For Public ICWGs, the designated ICC/ICA shall coordinate with the government AO to send out an announcement through the Federal Register.
- f. Each recipient of an ICD, shall review the ICD and document their findings, by the given suspense date in accordance with the change proposal's urgency level, in a CRM to be submitted to the ICC/ICA, with recommendations for changes or approval.
- g. Designated ICC/ICA shall respond to all comments contained via CRM in a timely manner, not to exceed 30 calendar days.
- h. ICC/ICA shall coordinate and conduct any needed AWG (or delta-AWG) meetings.
- i. ICC/ICA shall develop, publish, and distribute an agenda scheduling an AWG meeting. ICC/ICA shall prepare, maintain, and distribute Game Plans for the development of ICDs. Game Plans should be reviewed and updated weekly (if necessary). Attachment 1 provides further guideline regarding AWG action items.
- j. Open issues that cannot be resolved by the AWG will be forwarded to the GPS ERB with AWG co-chair recommendations concerning issue resolution.
- k. Upon resolution of all open issues, ICC/ICA shall finalize the ICD.
- l. The AWG co-chairs (RE or AO) shall obtain appropriate AWG approval and forward the final AWG approved ICD to the SE&I CMT for GPS ERB review and approval.
- m. The CMT shall release and distribute the CCB approved ICD(s) to the GPS Technical

UNCLASSIFIED

Library and identified stakeholders (as necessary).

When coordinated and finalized by the AWG, an ICD represents a formal agreement that:

- a.** System performance will be supported by proper allocation of requirements across or at the interface(s).
- b.** The designs of the interfacing configuration items or facilities are consistent with the requirements specified by the ICD.
- c.** The interfacing design requirements and detailed interface design definitions are functionally, physically, and environmentally compatible with one another.
- d.** No ICD design change that affects interface compatibility will be made without the affected participants formally agreeing upon these changes. AWG member non-concurrence will be coordinated to the GPS ERB for disposition.

6.2 Approval Authority. Each RFC (or RFV) is categorized into one of two approval authorities as defined in Table 2. The Approval Authority designation for each RFC/RFV reflects the scope of the documents included, determines who in the GPS Directorate approves the RFC/RFV, and determines the required stakeholders. The RE, in association with the CMT, determines the proposed approval authority for the RFC using the Document Impact Matrix (DIM) as a guide.

Approval Authority	Descriptions
ENT (Enterprise)	Proposed Change (or Variance) affects multiple Segments’ Technical Baseline(s), prime contractor documentation or external agencies outside of the GPS Directorate
LL (Lower Level)	Proposed Change affects one Segment’s Technical Baseline or prime contractor documentation Note: Refer to TBCMP Plan Chapter 3 for lower level processing

Table 2. Approval Authority

A Proposed Change is modification to a program's technical baseline or the documents that define that baseline. Impacts to the prime contractor’s documentation can include contractor derived segment specifications, interfaces, engineering drawings, models, and software/hardware/firmware implementations—which must be reviewed against the latest DIM to determine whether it is an Enterprise or Lower Level (LL) change. There may also be additional impacts identified to products that are not part of the technical baseline. A Variance is a departure from a particular requirement(s) of an item’s current approved configuration documentation for a specific number of units or a specified period of time. This term is the current term that encompasses the legacy terms deviation and waiver as those terms are defined in MIL-STD-973.

An RFC is an ENT if the GPS technical baseline change/variance affects: 1) multiple segments or external agencies outside of the GPS Directorate; or 2) Any prime contractor documentation. Examples of external agencies outside of the GPS Directorate include, but are not limited to the: Air Force Research Laboratory, Air Force Satellite Control Network, the Positioning, Navigation and Timing Program Office, and International Partners such as the Canadian Department of National Defence. For any changes affecting external agencies, the Joint Configuration Review Board chair can delegate approval authority to the LL when only that Segment is impacted.

A Lower Level change/variance impacts one GPS Segment’s contractual baseline. Approval authority is delegated to the LL CCB Chair.

UNCLASSIFIED

6.3 ICD Change Control Process. This process is outlined in Figure 2. Proposed changes to an approved ICD shall be specified via a PCN, resulting in an IRN or revised ICD following ERB approval. The designated ICC/ICA shall maintain and update their respective ICDs. The following identifies some of the necessary procedures in this development.

- a. The GPS Program Office shall identify and designate an ICC/ICA responsible for the maintenance and update of the ICD.
- b. The ICC/ICA shall maintain and update AWG membership.
- c. Any AWG member may submit PCN inputs to the ICC/ICA. PCN inputs received by the ICC/ICA shall be distributed to all AWG members for consideration by the ICC/ICA. If necessary, the ICC/ICA and government AO will convene an AWG meeting to address any issues that arise in conjunction with the proposed changes.
- d. ICC/ICA shall develop and prepare PCNs with AWG input utilizing Attachment 1 of this charter as a guide.
- e. ICC/ICA shall coordinate and distribute PCNs to each AWG member, and government agencies as identified in the established AWG membership. For Public ICWGs, the designated ICC/ICA shall also coordinate with the GPS Requirements Section to send a formal announcement through the Federal Register.
- f. Each recipient of a PCN shall review the PCN by the given suspense date in accordance with the change proposal's urgency level and document their findings in a CRM to be submitted to the ICC/ICA, with recommendations for changes or approval.
- g. Identified stakeholders shall review all PCNs and evaluate for impact to the interface, interfacing CIs, as well as impact to other CIs and ICDs. Once impacts are identified, the change to an ICD shall be classified as either in or out-of-scope. In-scope changes are those, which have no impact on contractual technical requirements, cost, and schedule. Out-of-scope changes are those that have a contractual impact, and are often associated with a change proposal. Impacted contractors shall use LOE to document out-of-scope items and submit the LOE to the ICC/ICA.
- h. ICC/ICA shall evaluate and respond to all comments contained in a CRM by the determined suspense date in accordance with the change's urgency level.
- i. ICC/ICA and the government AO shall evaluate submitted LOE(s) and provide preliminary assessment of contractor-submitted exceptions. If necessary and feasible, the ICC/ICA will prepare a revised PCN/ICD, with AWG meeting/input as required, to eliminate the scope issues that prompted the LOE.
- j. The AWG co-chairs shall act as mediator to resolve all PCN/ICD problem areas. ICC/ICA shall coordinate and conduct any needed AWG meetings to discuss and resolve problem areas. If resolution cannot be achieved at this level, the issue will be forwarded to the GPS ERB with recommendations concerning issue resolution.

UNCLASSIFIED

k. Upon resolution of all open issues, the ICC/ICA shall obtain appropriate AWG approval and shall prepare an IRN from the finalized AWG-approved PCN (See Figure A1-2 for an example of a PCN/IRN cover page).

l. The IRN shall be forwarded to SE&I Configuration Management Team for GPS ERB and CCB approval.

m. ICC/ICA shall release and distribute the CCB approved IRN to AWG members.

6.3.1 Out-of-Scope Changes.

a. ICC/ICA shall coordinate any LOE with the impacted program(s) and request a procurement contracting officer letter (PCOL) be sent to the respective contractor(s) for initial assessment of cost and schedule impact.

b. In response to the request, the contractor(s) shall submit initial cost and schedule impact assessment for the out-of-scope items.

c. All ICD changes that require contractual action shall be implemented using change proposals, e.g. Engineering Change Proposals (ECPs), Task Change Proposals (TCPs), or Contract Change Proposals (CCPs).

6.3.1.1 Change Proposal Flow Process. The following paragraphs discuss general policies and procedures regarding change proposal development:

a. Change proposals impacting an ICD shall undergo preliminary coordination by SE&I prior to submittal to the procuring activity.

b. The “Date by Which Contractual Authority is Needed,” or Authority to Proceed (ATP) date, is the primary factor in establishing the preparation and processing schedule for any prospective change. This ATP date must be defensible and documented in the RFC/RFV Change Control Data Package (CCDP) with the applicable need date and driver event.

c. The contractor originating a change proposal should provide attached PCN rationale for revised ICDs, so that the respective program(s) can determine the degree of impact (if any) of the proposed change.

d. All contractors shall interchange information by PCNs, semi-final or final versions of their change proposals (excluding cost and other proprietary information), and obtain mutual concurrence prior to submittal to the procuring activity.

e. Final coordination of change proposals shall be accomplished prior to the GPS ERB.

f. Formal copies of all change proposals (in the form of a PCN) shall be sent to the GPS Program Office and identified stakeholders

- g. After a contractor submits a PCN for approval, other contractors have 30 calendar days to indicate concurrence or non-concurrence via the ROM/IA request process

6.4 Problem Resolution Process. Interface problems that cannot be resolved at the contractors' level shall be referred to the AWG for resolution. The AWG co-chairs shall coordinate with the appropriate government office and refer problems that cannot be resolved at the AWG level, including any LOEs, to the GPS ERB (and CCB if necessary). For any problems/issues forwarded to the ERB, the working group chairperson will provide viable alternative solutions and an impact assessment for each course of action. The GPS Program Office will assess the problem, review alternative solutions as provided, and provide appropriate guidance or direction.

6.5 Rough Order of Magnitude (ROM)/Impact Assessment (IA) Process. At the GPS ERB, the AO may request approval from the GPS ERB Chair to skip the ROM/IA and proceed directly to CCB. The GPS ERB Chair, along with the impacted PM(s), will determine if a ROM/IA is required for each change, prior to entering the GPS CCB. The GPS ERB Chair grants authorization to proceed for ROM/IA, upon approval. The AO reviews the requested ROM/IA with impacted program(s) during impacted LLB(s) (as requested) prior to meeting with the GPS CCB. ENT RFCs require GPS Directorate cost impacts review and approval. Lower Level CCB approval is required for SEG RFCs with an informational only brief provided to the GPS Enterprise CCB.

The PCO, for each impacted program and in conjunction with the PM, issues a ROM/IA and IRNs to the applicable prime contractors, as required. If there is a required ROM/IA, the PM generates a letter requesting this information and assigns a Segment POC. This letter must possess a response due date, which is typically prior to the planned GPS CCB (with sufficient margin, so that if funding is required, availability may be determined prior to the GPS CCB). The letter is then reviewed by the PCO and sent to the impacted contractor along with the ERB approved IRNs. If a contractor does not provide their response prior to GPS CCB, the proposed change may be rescheduled depending on a GPS CCB Chair decision. In conjunction with the receipt of the ROM/IA from the contractor, the impacted PM(s) coordinates with GPS Contracting and Program Control Divisions to provide an applicable Comprehensive Cost and Requirement (CCAR ID) number, if required.

In addition to the contractor's ROM/IA, if there are any RFC/RfV findings such as a technical error not matching the IRN, this will require a return to ERB and resubmittal of the ROM/IA request to the contractor. The ERB Chair may be consulted for exception(s) to this policy, on a case-by-case basis.

6.5.1 ROM/IA 30-Day Contractor Response Mandate. Current programs direct contractors to provide ROM/IA responses between 30-60 days after the request is submitted. For all future contracts (as of the date of this approved Charter), each PM (4-ltr) and respective PCO shall develop RFP/contractual language (or provide necessary direction) not to exceed 30 days for contractor(s) to return ROM/IA responses. The ERB or CCB chair may waive this requirement on a case-by-case basis (as necessary). Although discretionary for contracts awarded prior to this approved Charter, PM(s) are strongly encouraged to enforce this 30-day mandate for their respective program(s).

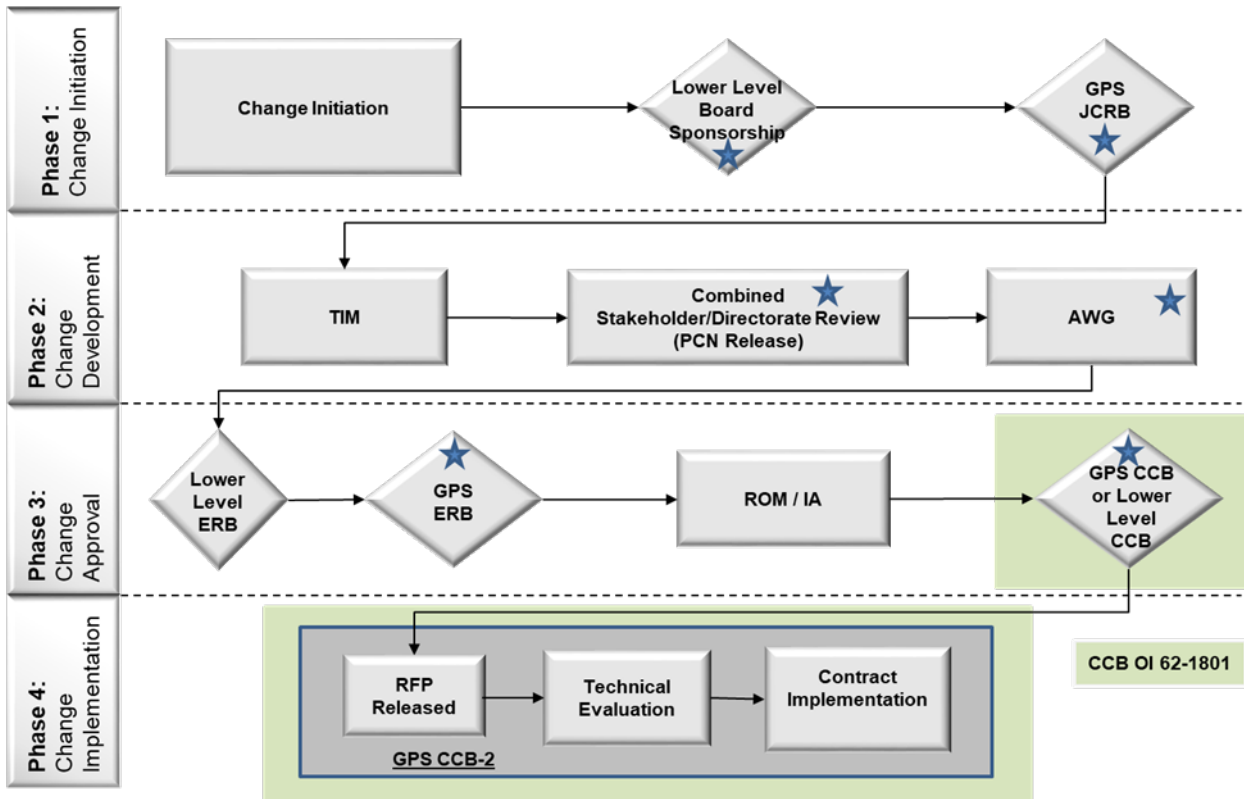


Figure 1. GPS TBCMP Flowchart

Note: The process steps tagged as the 1st to 7th Event(s) are denoted by a “★” and described in TBCMP Plan, Table 24, Process Steps. The associated Roles & Responsibilities are further described in Table 1, TBCMP Plan Chapter 4 and GPOI 62-1801 CCB Operating Instruction Chapter 4.

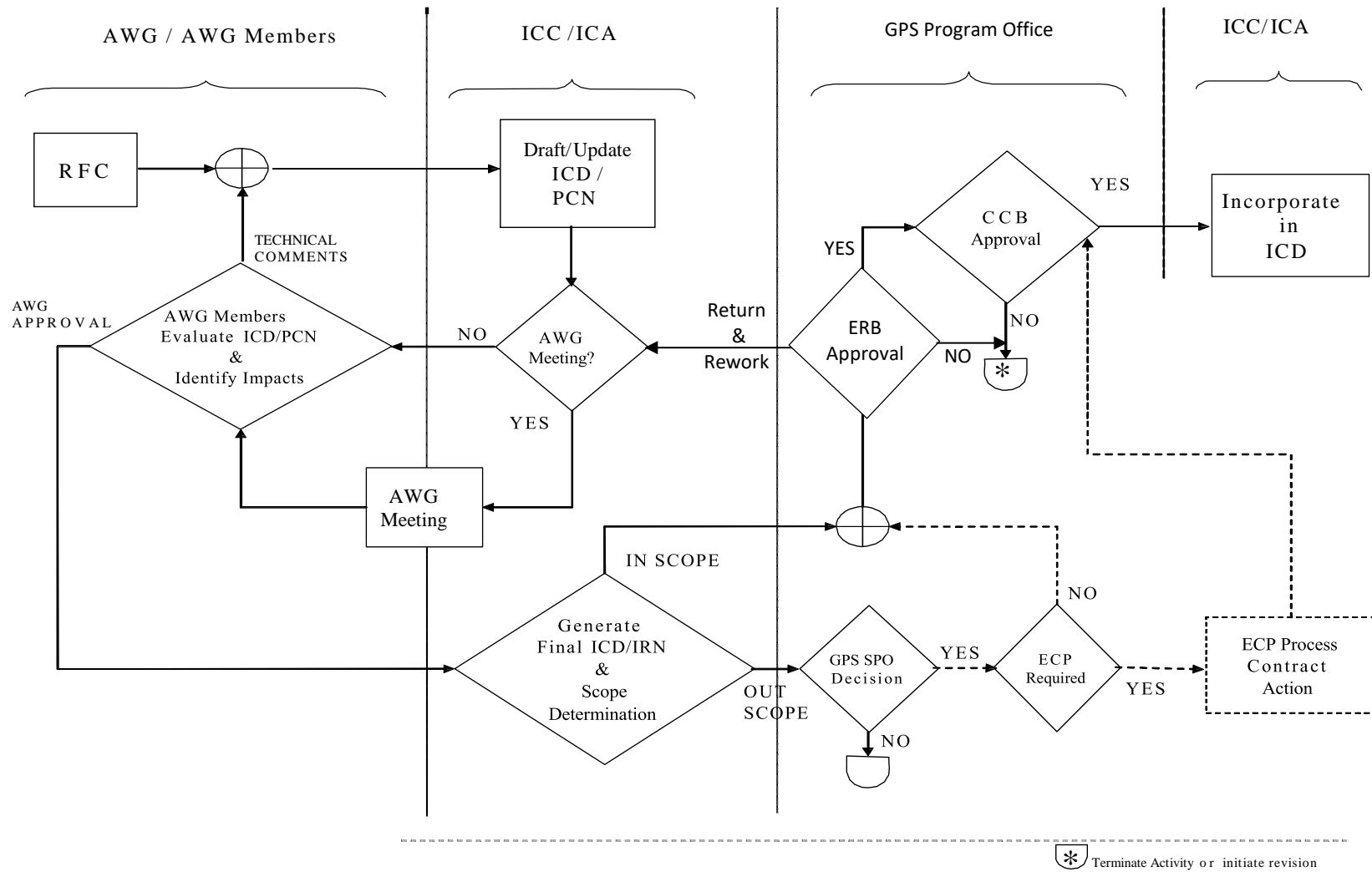


Figure 2. ICD Change Control Process

7. ACRONYMS

ANSI	American National Standards Institute
AO	Action Officer
ATP	Authority to Proceed
AWG	Adjudication Working Group
CAGE	Commercial and Government Entity
CCB	Configuration Control Board
CCDP	Change Control Data Package
CCP	Contract Change Proposal
CI	Configuration Item
CM	Configuration Management
CMT	Configuration Management Team
CS	Control Segment
CRM	Comment Resolution Matrix
DoD	Department of Defense
ECP	Engineering Change Proposal
ERB	Engineering Review Board
GPS	Global Positioning System
ICA	Interface Control Agency
ICC	Interface Control Contractor
ICD	Interface Control Document
ICWG	Interface Control Working Group
IRN	Interface Revision Notice
IS	Interface Specification
ISO	International Organization for Standardization
KTR	Contractor
LOE	Letter of Exception
OPR	Office of Primary Responsibility
PCN	Proposed Change Notice
PCO	Procurement Contracting Officer
PCOL	PCO Letter
PM	Program Manager
POC	Point of Contact
RE	Responsible Engineer
RFC	Request for Change
RFV	Request for Variance
ROM/IA	Rough Order of Magnitude / Impact Assessment
SE&I	Systems Engineering and Integration
SMC	Space and Missile Systems Center
SPI	Single Process Initiative
SPO	System Program Office
SS	Space Segment
TBCMP	Technical Baseline Configuration Management Process
TCP	Task Change Proposal
US	User Segment

**ATTACHMENT 1
DOCUMENTATION AND OTHER GUIDELINES**

A1.1 PREPARATION OF GPS ICDs. This section provides format and content guidelines to be considered in preparation of GPS ICDs.

A1.1.1 Document Titles. The title should be a concise description of the interface(s) or function(s) involved.

A1.1.2 Document Numbers. All ICD numbers shall be preceded by the acronym “ICD”/”IS.” The SE&I Configuration Management Team assigns the ICD number.

A1.1.3 Title and Revision Block Format. The title and revision block page for GPS ICDs should be as illustrated in Figure A1-1.

A1.1.4 Technical Format and Content. MIL-STD-961E will be used as guidance for preparing ICD page numbers, numbering of tables and figures, and formatting Commercial and Government Entity (CAGE) codes. Please note that the GPS technical baseline adheres to MIL-STD-961E in many aspects, but does deviate intentionally in some areas. For example, IRNs issued by the GPS Program Office contain only WAS/IS text and do not show inline changes to the baselined ICD in its entirety. It is common practice for GPS technical documents to have up to 5 unincorporated changes before a published ICD UpRev.

A1.1.4.1 Page Numbers. All pages are numbered consecutively with Arabic numbers at the bottom center of each page.

A1.1.4.2 Figure and Table Numbers. Figures are to be numbered with Arabic numbers, tables numbered with Roman numerals, and tables or figures to appear immediately after their reference in a paragraph or compiled at the end of the ICD.

A1.1.4.3 Commercial and Government Entity (CAGE) Code. Preparing activity CAGE Code shall appear on the cover page.

A1.1.5 Drawing Format. Where drawings are needed, either American National Standards Institute (ANSI), International Organization for Standardization (ISO), or Single Process Initiative (SPI) contractor drawing standards are acceptable as long as the information needed to ensure operability and compatibility of the interface is provided in understandable and usable form.

A1.1.6 ICD Key Participants. A section can be provided in an ICD that reflects the key organizations involved in the preparation, review, and approval of the ICD.

A1.2 REVISION NOTICES. Figure A1-2 provides an example PCN/IRN cover page.

A1.3. AWG ACTION ITEMS/PLANS. AWGs will establish ground rules for handling AWG

action items. The following ground rules are provided as a guide:

- a.** Any AWG member may originate an AWG action item to be considered and finalized by the AWG chairperson.
- b.** The AWG will document interface problems that require some type of AWG action. Each ICC/ICA may develop their own documentation method for use in their respective AWG.
- c.** The originator of a particular action item will record the following: originator information and problem information if known. The problem description should include supporting data, e.g. related problem impacts, subsystems and associated interfaces that will/may be affected, and level of urgency.
- d.** In coordination with the AO, the ICC/ICA will provide government POC information for each action item and will identify those responsible for problem resolution.
- e.** In coordination with those responsible for problem resolution, the ICC/ICA will define a plan of action and provide the necessary information and schedule information in the RFC/RFV Game Plan.
- f.** The AWG co-chairs, if applicable, will determine and provide the disposition information.
- g.** The ICC/ICA will ensure that the date is kept current as additional information is updated in the RFC/RFV Game Plan and CCDP (as necessary).
- h.** The action organization(s) will report status in accordance with the plan of action.
- i.** The action item will be closed once the problem is resolved, and after the resolution is documented, reviewed and approved by the AWG co-chairs. All parties involved will be notified when the action item is finally closed.
- j.** In the event that an action item cannot be resolved by the AWG, the problem will be forwarded to the GPS ERB (or CCB if necessary).
- k.** The ICC/ICA will be responsible for maintaining up-to-date files and documentation of all AWG activities. The ICC/ICA will receive, record, and update action items, coordinate appropriate action(s), produce status reports, and distribute copies of such reports to all AWG members.

A1.3.1 RFC/RFV Game Plan (Schedule). In coordination with the GPS Program Office, the ICC/ICA is responsible for maintaining a consolidated schedule of all planned ICD action, including PCNS, IRNs, revisions and TBCMP events.

- a.** An example Game Plan is shown in Figure A1-3. Each ICC/ICA may develop their

own documentation method for use in their respective AWG.

b. Game Plans shall be reviewed weekly and updated as needed.

A1.4. ROM/IA Request. Figure A1-4 provides a sample ROM/IA Request. In coordination with the ICC/ICA, the PM or delegated Action Officer shall work with the CMT, RE, and PCO to:

- a. Generate an email requesting a ROM/IA information and suspense date, as outlined in Figure A1-4.
- b. Request ROM/IA for the applicable program(s). See impacted programs and allocation of the Compliance/Reference documents per the current DIM.
- c. Ensure classified document(s) have been sent from the GPS Tech Library via secure mailing, fax or SIPRNet.
- d. Ensure access location to documents is provided.

FOR OFFICIAL USE ONLY (or appropriate classification marking) (SAMPLE)

AUTHORITY	DESCRIPTION	DATE
N/A	Description	DD-MMM-YYYY
<p>DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited</p>		
APPROVALS		
Authorized By: Person A		Checked By: Person B
AUTHORIZED SIGNATURES	REPRESENTING	DATE
	GPS Directorate Space & Missile Systems Center (SMC) - LAAFB	
INTERFACE SPECIFICATION		
UNLESS OTHERWISE SPECIFIED: NUMBERS ARE REPRESENTED IN DECIMAL FORM.	Interface Control Contractor: Contractor Address	
	TITLE: Title	
THIS DOCUMENT SPECIFIES TECHNICAL REQUIREMENTS AND NOTHING HEREIN CONTAINED SHALL BE DEEMED TO ALTER THE TERMS OF ANY CONTRACT OR PURCHASE ORDER BETWEEN ALL PARTIES AFFECTED	SIZE A	CODE IDENT 66RP1
	SCALE: N/A	REV: Letter

Figure A1-1. Sample ICD Cover Sheet

CHANGE NOTICE		
Affected Document: <Insert Base Doc #> Rev X	IRN/SCN Number XXX-XXXX-XXX	Date: DD-MMM-YYYY
Authority: RFC-XXXXX	Proposed Change Notice XXXXXXXX-RFCXXX	Date: DD-MMM-YYYY
CLASSIFIED BY:		
DECLASSIFY ON:		
Document Title:		
RFC Title:		
Reason For Change (Driver):		
Description of Change:		
Authored By: RE: <Insert Name>		Checked By: RE: <Insert Name>
AUTHORIZED SIGNATURES	REPRESENTING	DATE
	GPS Directorate Space & Missile Systems Center (SMC) – LAAFB	
See Next Page		
See Next Page		
See Next Page		
See Next Page		
See Next Page		
Document Markings Verify with CM		
THIS DOCUMENT SPECIFIES TECHNICAL REQUIREMENTS AND NOTHING HEREIN CONTAINED SHALL BE DEEMED TO ALTER THE TERMS OF ANY CONTRACT OR PURCHASE ORDER BETWEEN ALL PARTIES AFFECTED.		Interface Control Contractor: Company Address
		CODE IDENT 66RP1

Figure A1-2 Sample PCN/IRN Cover Sheet

UNCLASSIFIED



RFC-00374
2018 Public Document Proposed Changes
 Change Type 4

Last Update: 2018-08-20

GPS Gov't POC:

Tech Lead POC:

Test Engr POC:

SMEs:

CM:

Sponsor: GPE

Document Information				Technical Issues and Way Forward							
Initial CCB Cycle: 1A		Current CCB Cycle: 1A		Actions			Planned	Forecast	Actual		
Driver Event (Defined by Program Manager)				1	RFC Generated	16 Feb 18	15 Feb 18	15 Feb 18			
2018 Public ICWG				2	Division/IPT Sponsorship - Present at LL ERB	14 Mar 18	14 Mar 18	14 Mar 18			
Contract Need Date (Milestone +/- days, defined by program manager)				3	JCRB Approval	19 Mar 18	19 Mar 18	19 Mar 18			
22 Jan 2019				4	TBMWG Status		N/A	N/A			
Signatories				5	Kickoff TIM	04 Apr 18	04 Apr 18	04 Apr 18			
SMC/GP, United States Coast Guard, Navigation Center (USCG/NAVCEN), Department of Transportation (DOT), Federal Aviation Administration (FAA), AFSPC/50 OG				6	Release PIRN/PSCN for Stakeholder Review (30d prior to ICD / Spec WGs)	01 May 18	01 May 18	01 May 18			
Stakeholders (required reviewers including prime contractors)				7	PIRN/PSCN Comments Due	01 Jun 18	15 Jun 18	15 Jun 18			
GPE - Engineering and Integration, GPA - Army, GPC - Civil Applications, GPG - Ground Segment, GPN - Navy, GPL - Sustainment, GPT - Transition, GPV4 - Space Segment, GPV4 - Space Segment, Aerospace Corp. (FFRDC), AFSPC/50 OG, AFSPC/ASM, SE&I, IIR/IIR-M Prime: Lockheed Martin, GCS Prime: Lockheed Martin, GPSIII Prime: Lockheed Martin, OCX Prime: Raytheon, ADAP Prime: Raytheon System Limited (RSL), DAGR Prime: Rockwell Collins, MAG2K Prime: Raytheon, GB-GRAM Prime: Rockwell Collins, SMPS Prime: BAH, MCEU Prime: Lockheed Martin, IIA/IIF On-Orbit Prime: Boeing, MGUE Primes, Sandia USNDS Ground, NASA, COps Prime: Lockheed Martin, MITRE				8	ICWG/SWG	09 Aug 18	09 Aug 18	09 Aug 18			
Affected ICDs/Specifications:				9	SMC/GP ERB	17 Oct 18	17 Oct 18				
Item	ICD/Spec. #	Proposed PIRN/PSCN/REV	Final IRN/SCN/REV	10	Impact Assessment / ROM Request Sent to Contractors	21 Oct 18	22 Oct 18				
1	ICD-GPS-	ICD		11	Division / IPT CCB	07 Jan 19	07 Jan 19				
2	IS-GPS-705E	IS705E_RFC374		12	SMC/GP CCB	14 Jan 19	14 Jan 19				
3	IS-GPS-200J	IS200J_RFC374		Key for Game Plan Actions: <table border="1" style="float: right;"> <tr> <td style="background-color: #0070C0; color: white;">Completed</td> <td style="background-color: #92D050; color: white;">Not Late</td> <td style="background-color: #FFC000; color: white;">Late</td> </tr> </table> <p style="text-align: right; color: red; font-size: small;">Issues with this Game Plan Action</p>					Completed	Not Late	Late
Completed	Not Late	Late									
4	ICD-GPS-240B	ICD240B_RFC374									
5	ICD-GPS-870C	ICD870C_RFC374									
6	IS-GPS-800E	IS800E_RFC374									
Affected Contracts (From BML/DIM) NOTE: all programs listed may not apply to every affected document.				Problem Statement:							
Documents not being processed:				The following 2 topics were deferred from the 2017 Public ICWG and will now be resolved by this RFC.							
ICD/Spec. #	Rationale	CCB Cycle	Removed by	1. Currently the Operational Advisories (OAs) that are published and archived contain plane/slot descriptions that are not in the constellation definition provided to the public in the Standard Positioning Service (SPS) Performance Standard (PS). The OA does not have the capability to correctly publish information regarding fore/aft position since moving to the 24+3 constellation with three expanded slots. In addition, the Points of Contact of the OA are not represented in a way that allows for efficient updates. This is a continuation of RFC-351, which was CCB-approved on 8-Jan-2018.							
ICD-GPS-240B	We decided not to impact ICD-GPS-240. ICD-GPS-240 is supposed to become obsolete once OCX rolls out so no updates are needed.		Philip Kwan	2. The linkage between different timing systems is not properly captured in the current technical baseline. With the current documentation, CNAV users will calculate the wrong UT1 time immediately following a leap second change. This affects user applications that require high precision pointing, requirement. Documents affected: IS-GPS-200, IS-GPS-705, IS-GPS-800, The topic was part of RFC-354, which will be superseded due to the inclusion of this topic in this RFC.							
Other Affected Contracts not listed in the BML/DIM				The following topic resolves 3 document clean-up related activities:							
General Notes:				3. a) Signal-in-space topics need clarification, as identified by the public in past Public ICWGs. Documents affected: IS-GPS-200 and IS-GPS-705. b) There were some administrative errors found during the UpRev process of the public documents. c) Contractor signatories are required for government-controlled documents. (Pre-RFCs 718, 819, 857, 861)							
9-Aug-18: Govt ICWG held on 9-Aug.				Proposed Solution:							
26-Jul-18: Awaiting few more responses (GPN, GPGN, MCEU,). Preparing for the ICWG.				1. Modify the OA as agreed to in ICD-GPS-240 and ICD-GPS-870.							
11-Jul-18: No change				2. The proposed changes to the impacted technical baseline documents would correctly calculate UT1 during a leap second transition.							
15-Jun-18: Directorate/Stakeholder Review period is over. Still waiting on several responses. Comments were due: 15 Jun				3. a) Provide clarity for the list of signal-in-space topics identified by the public in documents IS-GPS-200 and IS-GPS-705. b) Clean up identified administrative changes in all public documents. c) Remove required contractor signatories from government-controlled documents.							
7-May-18: ICD-GPS-240 was added back to the RFC; review materials released.				Key Technical Challenges:							
1-May-18: Released for Routine Directorate Review.											
27-Mar-18: RFC-354A was superseded by RFC-374 at the 19-MAR JCRB.											
Working Data Location:											
LA AFB Livelink RFC Folders											

UNCLASSIFIED

Figure A1-3 Sample RFC/RfV Game Plan (Schedule)

EMAIL FROM <SE&I CMT> TO <IMPACTED PMs/AOs/PCOs/BUYERs>

SUBJECT: ACTION: ROM Request RFC-349 - 2017 Public Document Clean-Up

Sir/Ma'am,

1. Please coordinate with PM and request ROM for your applicable program. See impacted programs and allocation of the Compliance/Ref documents per program in table below.
2. Please reply with the KTR due date. CMT will coordinate with the PCO and the RE. Note: CCB is 8 Jan 2018. Response due date should be NLT 19 Dec 2017 for those programs which require 60 days.
3. Classified Processing - None.

Access to documents - <https://smclivelink.losangeles.af.mil/XXXXX>

RFC Number	Program/ Affected Contract	ICD/ Spec Number	SE&I CM ROM Request Date	Requesting PCOL Number	PCOL Date	ROM Due Date
RFC349 2017 Public Document Clean-Up	IRM	IRN-IS-200H-006	19-Oct-17			
	IA/IF On-On Orbit	IRN-IS-200H-006 IRN-705D-005	19-Oct-17			
	GPSIII	IRN-IS-200H-006 IRN-705D-005	19-Oct-17			
	GPSIII FOP	IRN-IS-200H-006 IRN-705D-005	NA	NA	NA	NA
	GCS	IRN-IS-200H-006	19-Oct-17			
	OCX	IRN-IS-200H-006 IRN-705D-005	19-Oct-17			
	COps	IRN-IS-200H-006	19-Oct-17			
	MCEU	IRN-IS-200H-006 (REF)	NA Ref Only	NA Ref Only	NA Ref Only	NA Ref Only
	SMPS	IRN-IS-200H-006 IRN-705D-005	19-Oct-17			
	USNDS	IRN-IS-200H-006	NA	NA	NA	NA
	MGUE FA8807-12-C- 0011	IRN-IS-200H-006	19-Oct-17			
	MGUE FA8807-12-C- 0012	IRN-IS-200H-006	19-Oct-17			
	MGUE FA8807-12-C- 0013	IRN-IS-200H-006	19-Oct-17			
	GBCFIAM MAGR2K DAGR	IRN-IS-200H-006	NA	NA	NA	NA

Figure A1-4 Sample ROM/IA Request