



Advisory Circular

AC173-1

Instrument Flight Procedure - Application For Certification

**Initial Issue
01 March 2018**

GENERAL

Civil Aviation Advisory Circulars contain information about standards, practices, and procedures that the Director has found to be an Acceptable Means of Compliance (AMC) with the associated rule.

An AMC is not intended to be the only means of compliance with a rule, and consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices, or procedures are found to be acceptable they will be added to the appropriate Advisory Circular.

An Advisory Circular may also include Guidance Material (GM) to facilitate compliance with the rule requirements. Guidance material must not be regarded as an acceptable means of compliance.

PURPOSE

This Advisory Circular provides an acceptable means of compliance with Civil Aviation Rule Part 173.

RELATED RULES

This Advisory Circular relates specifically to Civil Aviation Rule 173.51, 173.51(b), 173.53, 173.67, and 173.71.

CHANGE NOTICE

This is the initial issue of AC173-1.

Table of Contents

Introduction	2
Certification Requirements	2
The Certification and Approval Process	2
Personnel requirements	2
Training and Checking.....	3
Resource requirements	3
Management of Records	3
Safety Management Systems.....	4
Exposition requirements	4
APPENDIX A – THE FIVE PHASE PROCESS IFP DESIGN ORGANISATION	
CERTIFICATION	6
A1 - PRE-APPLICATION PHASE FLOW CHARTS	6
A2- FORMAL APPLICATION PHASE FLOW CHARTS	7
A3- DOCUMENT EVALUATION PHASE FLOW CHARTS	8
A4- DEMONSTRATION & INSPECTION PHASE FLOW CHARTS	9
A5- CERTIFICATION PHASE FLOW CHARTS	10

Introduction

CAR Part 173 applies to certification of Instrument Flight Procedure Service Organisations that exist to provide instrument procedure design services. These procedure design organisations are private companies that offer their services for a fee and usually under a contract. Before any such organisation can offer their services in Papua New Guinea, they must apply for certification under CAR Part 173 and be deemed acceptable to enter the aviation system in Papua New Guinea.

This certification is required for any organisation or individual that seeks to design, certify and/or maintain Instrument flight procedures. The rule requires, among other things, that form CA 173/01 be completed and lodged with the CASA at least ninety (90) days before the date on which the service provider intends to commence operations.

Alternatively, the form can be downloaded from the CASA website, www.casapng.gov.pg/

Certification Requirements

The Certification and Approval Process

The following certification and approval process provides for a continuous interaction, from the applicant's initial enquiry to the issue or denial of the requested certificate by the Civil Aviation Safety Authority (CASA PNG). It ensures that the applicant's proposed programmes, systems, arrangements, facilities, documentation, personnel and intended methods of compliance are thoroughly reviewed, evaluated, and tested.

There are five phases in the process for Instrument Flight Procedure Service Organisation certification. Each phase is described in sufficient detail to provide a general understanding of the entire process. During certification, the process is followed in sequence in the order indicated below. In order to move to the next phase the preceding phase must be completed successfully. *(Refer to Appendix A – Flow chart on the Five phase process)*



Personnel requirements

1. Performance of flight procedure design
In accordance with CAR 173.51(2)(ii), the Senior person shall have a duty to ensure that any flight procedure design covered by the approval is performed as prescribed in –
(a) ICAO Document 9906-AN/472 The Quality Assurance Manual for Flight Procedure Design, as amended.
2. Minimum requirements for Senior person

Senior person to certify instrument flight procedures

- (a) Training — have successfully completed an ICAO PANS-OPS training course, or a training course accepted by the Director as an equivalent, for the design of instrument flight procedures.
- (b) Experience in application of instrument flight procedures — have at least 10 years' experience in the application of instrument flight procedures through experience gained in air traffic control, as a flight crew member on IFR operations, in operational control of IFR operations, or other experience accepted by the Director as equivalent.
- (c) Experience in design of instrument flight procedures — at least 2 years' experience designing instrument flight procedures which must include—
 - 1) under supervision by a procedure designer whose qualifications are accepted by the Director, the design of at least 3 instrument flight procedures of the type that the person is to be authorised to certify; or
 - 2) for a new instrument flight procedure type, experience accepted by the Director in designing or certifying similar instrument flight procedure types.

Training and Checking

1. Training and checking personnel

CAR 173.51(b), 173.52 training and checking personnel shall meet the requirements prescribed in ICAO Document 9906-AN/472 Volume II Flight Procedure Design Training, as amended.

2. Training programme

CAR 173.52 the holder's training programme shall be as prescribed in ICAO Document 9906-AN/472 Volume II Flight Procedure Design Training, as amended.

CAR 173.52 the following will be considered in order to determine whether a training programme can be considered as an approved training programme –

- (a) an appropriate syllabus as prescribed in ICAO Document 9906-AN/472 Volume II Flight Procedure Design Training, as amended.
 - (b) appropriately qualified and experienced course lecturers;
 - (c) adequate course duration;
 - (d) the provider or institution.
 - (e) sufficient evidence exists that the training was completed satisfactorily;
3. Recurrent training
- The duration between recurrent training.

Resource requirements

1. Procedures for data and database

CAR 173.53, procedures to be put into effect shall be as prescribed by ICAO Document 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information.

Management of Records

1. Records to be kept

CAR 173.67, the following documents shall be kept

- (a) electronic design files – indefinitely
- (b) design reports – indefinitely
- (c) superseded charts - indefinitely
- (d) internal safety management reviews- indefinitely
- (e) training file – indefinitely

Safety Management Systems

A safety management system is required as an integral part of the designer's operations to satisfy CAR 173.69. PNG Advisory Circular 100-1 may be used to provide information and guidance relating to safety management system procedures. PNG AC 100-1 can be downloaded from the CASA website, www.casapng.gov.pg/

Exposition requirements

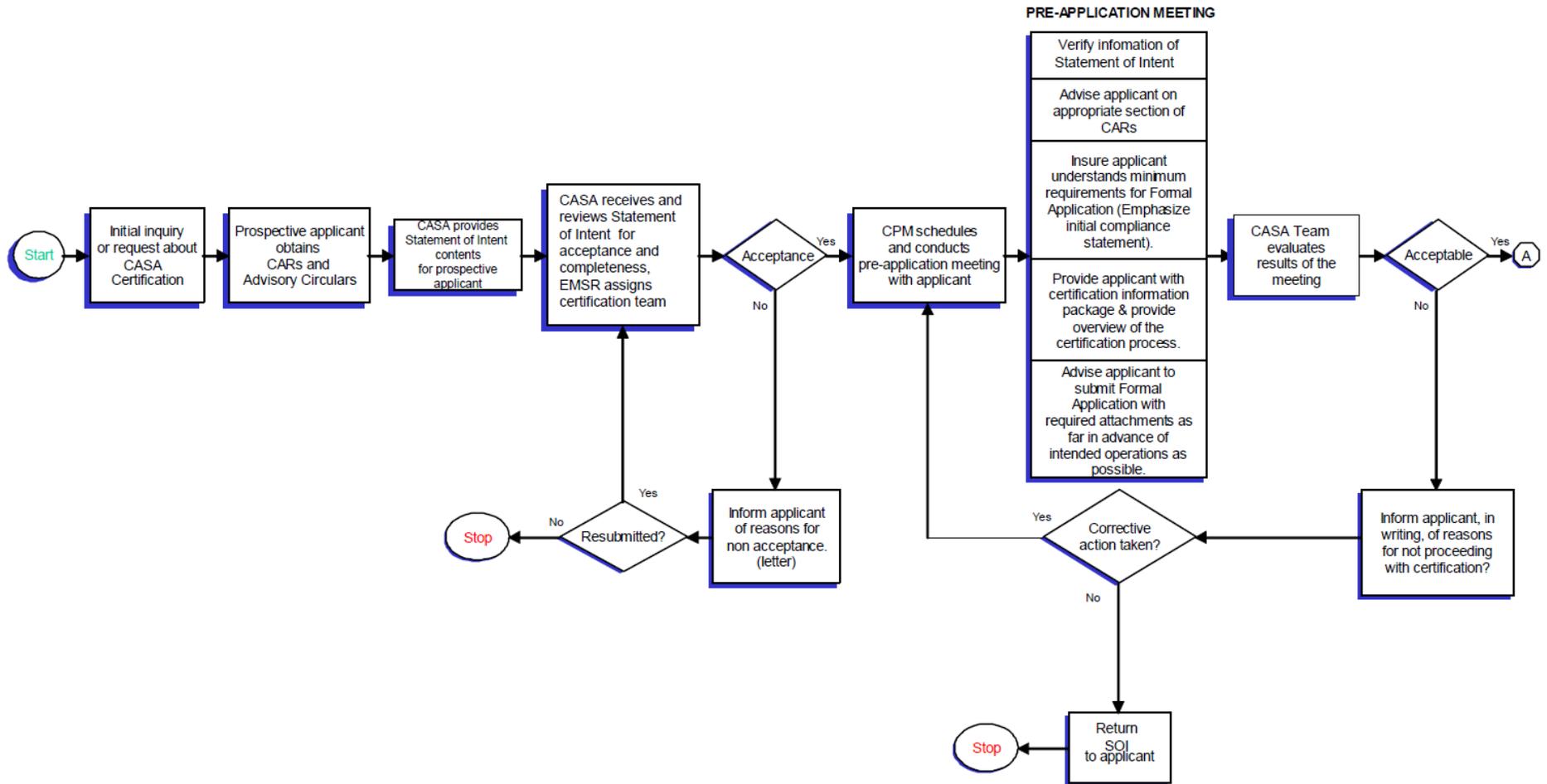
The information referred to in CAR 173.73 and the information referred to in CAR 173 Matrix which must be contained in the operations manual of the applicant, shall include the following:

1. a table of contents based on the items in the manual, indicating the page number on which each item begins;
2. a description of the designer's organisational structure and a statement setting out the functions that the designer performs, or proposes to perform under CAR 173;
3. a description of the chain of command established, or proposed to be established, by the designer and a statement of the duties and responsibilities of any supervisory positions within the organisational structure;
4. a statement showing how the designer determines the number of operational staff required including the number of operational supervisory staff;
5. a list of the design services that the designer provides, or proposes to provide;
6. a statement, for each design service, that identifies the location from where the service is provided, or proposed to be provided;
7. a statement of the responsibilities and functions for each position;
8. a description of the arrangements made or proposed to be made by the designer to ensure that it has, and will continue to receive, the information necessary for providing the service;
9. a description of the arrangements made or proposed to be made by the designer to ensure that it has, and will continue to be able to provide, information in connection with its design services to another person whose functions reasonably require that information;
10. a description of the designer's record keeping system;
11. a statement detailing any agreement entered into by the designer in relation to the provision of a design service provided by another party;
12. a copy of the document that sets out the designer's safety management system;
13. a description of the processes and documentation used to present to staff the relevant standards, rules and procedures contained in ICAO Doc 8168 and this document, and any of the designer's site-specific instructions for the provision of design services;
14. a description of the processes and documentation used to provide operational instructions to staff;
15. a description of the procedures to be followed to ensure all operational staff are familiar with any operational changes that have been issued since they last performed operational duties;
16. a description of the designer's training and checking program;
17. a description of the procedures to be used in commissioning new facilities, equipment and services;
18. a description of the procedures to be used to ensure that designs are completed in accordance with the drafting conventions contained in this document;

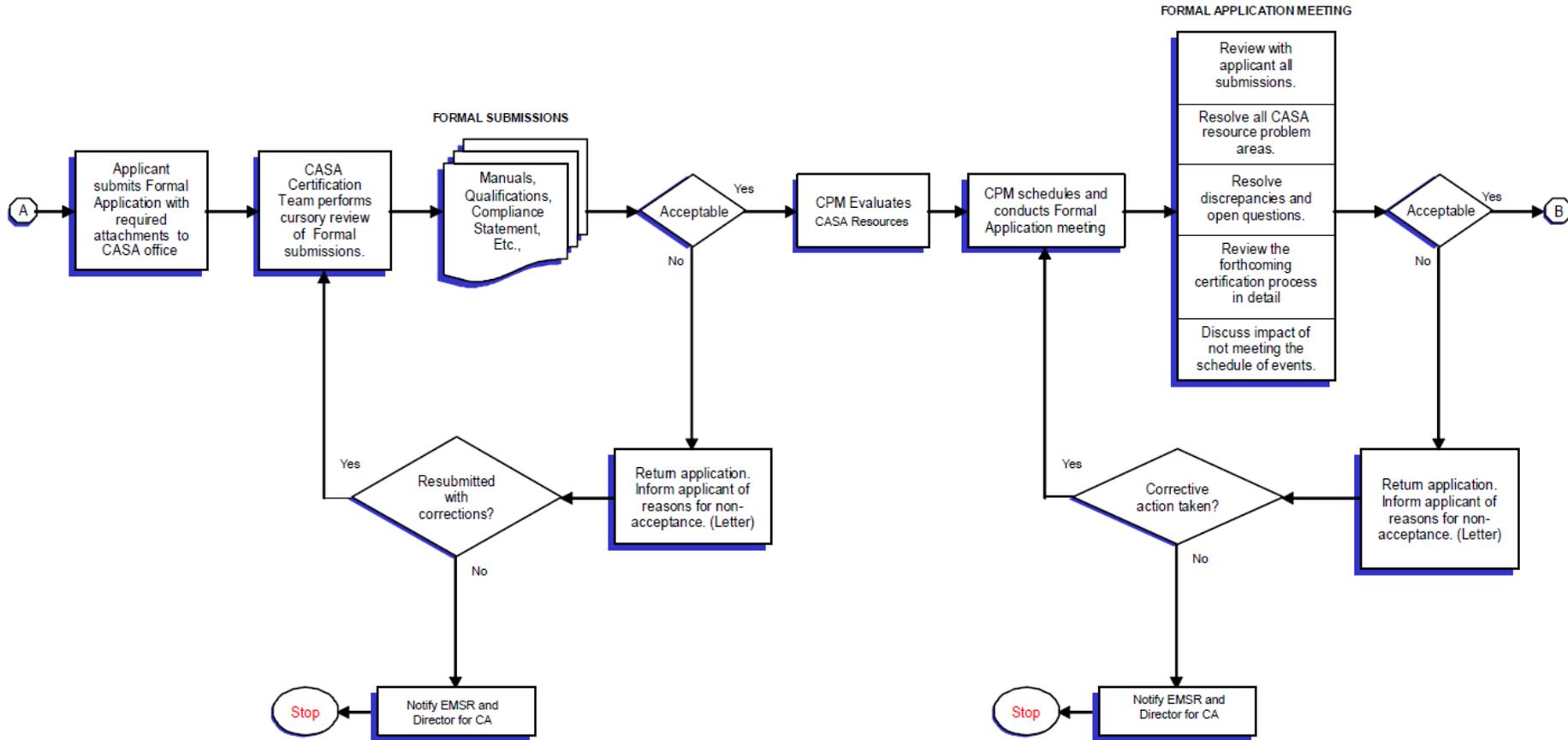
19. a description of the format(s) that will be used for the issue of completed designs for publication;
20. a description of the procedures to be used to ensure that all equipment, including software is operated in accordance with the manufacturer's operating instructions and manuals;
21. the safety management system of the designer;
22. a description of the procedures to be used to conduct environmental assessments;
and
23. the procedures to be followed for revising the operations manual.

APPENDIX A – THE FIVE PHASE PROCESS IFP DESIGN ORGANISATION CERTIFICATION

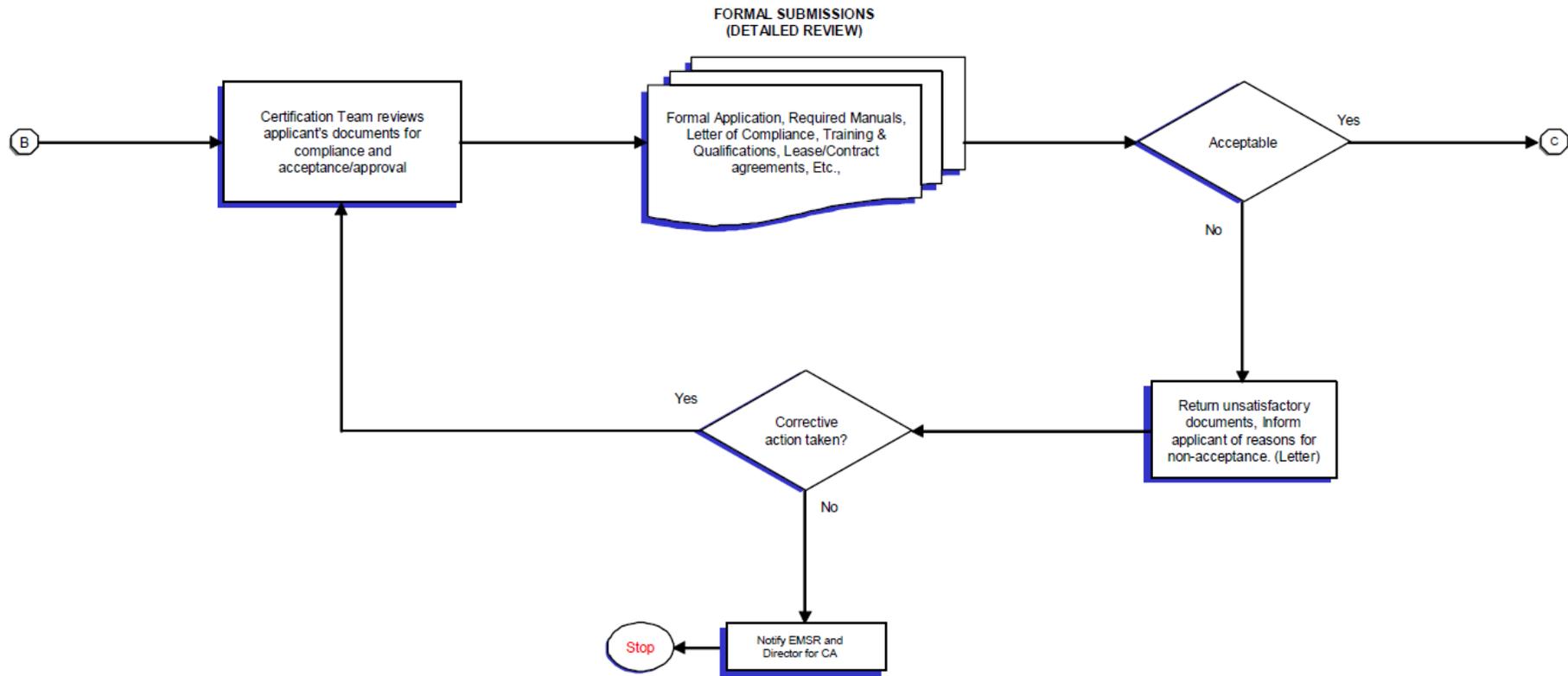
A1 - PRE-APPLICATION PHASE FLOW CHARTS



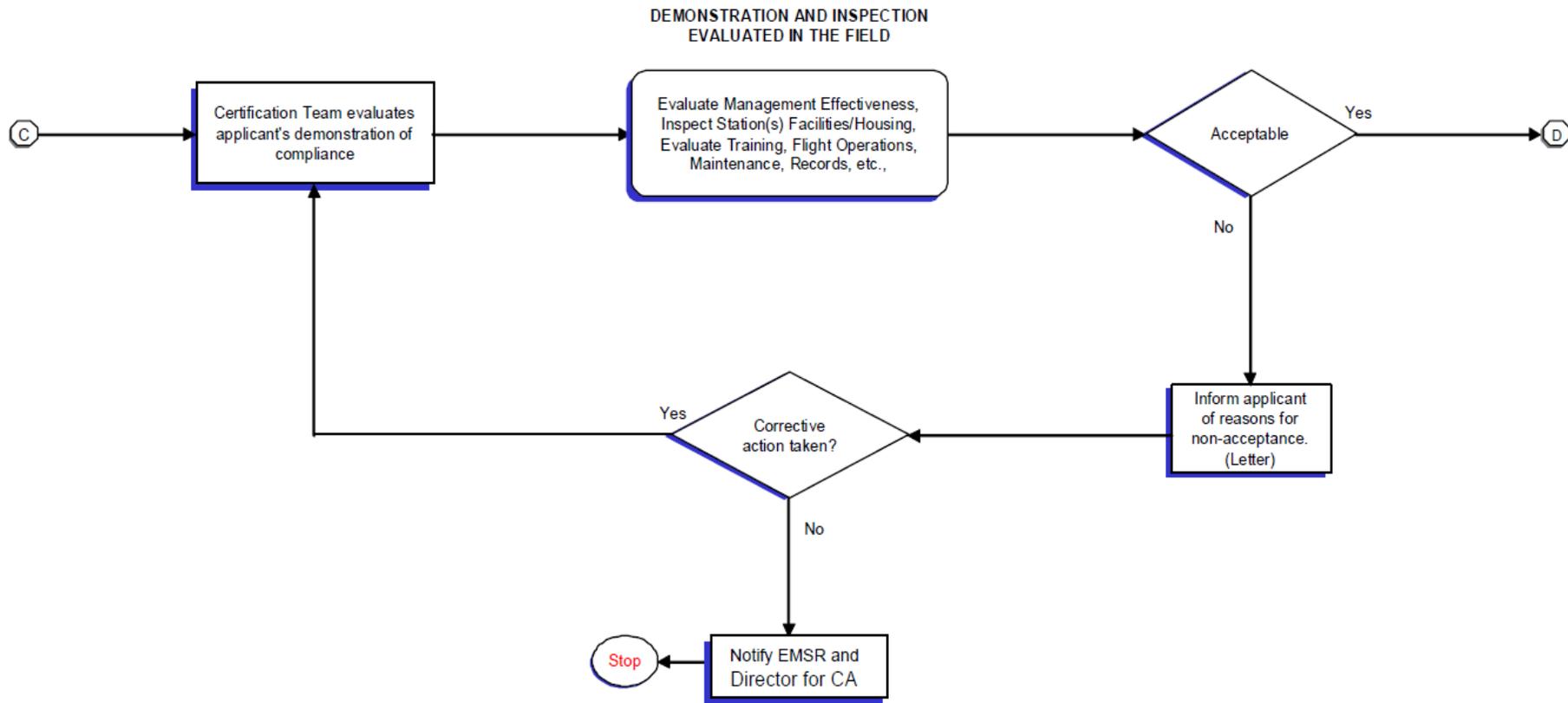
A2- FORMAL APPLICATION PHASE FLOW CHARTS



A3- DOCUMENT EVALUATION PHASE FLOW CHARTS



A4- DEMONSTRATION & INSPECTION PHASE FLOW CHARTS



A5- CERTIFICATION PHASE FLOW CHARTS

FINAL CERTIFICATION ACTIONS

