

Subpart D—Commercial Pilots

§ 61.111 Eligibility requirements: general.

To be eligible for a commercial pilot certificate, a person must—

(a) Be at least 18 years of age, or 17 years of age in the case of a free balloon class rating only;

(b) Be able to read, speak, and understand the English language, or except in the case of a lighter-than-air rating of the free balloon class, have such operating limitations on his pilot certificate as are necessary for the safe operation of aircraft, to be removed when he shows that he can read, speak, and understand the English language;

(c) In the case of an applicant for other than a glider or free balloon rating, hold at least a second-class medical certificate issued under Part 67 of this chapter during the preceding 12 months;

(d) In the case of an applicant for a glider rating, certify that he has no known physical defect that makes him unable to pilot a glider;

(e) In the case of an applicant for a free balloon class rating, hold at least a third-class medical certificate issued under Part 67 of this chapter; and

(f) Comply with the sections of this Part that apply to the rating he seeks.

§ 61.113 Aeronautical knowledge.

(a) An applicant for a commercial pilot certificate, except for a lighter-than-air rating of the free balloon class, must pass a written test on—

(1) The regulations in this chapter relating to the privileges and limitations of a commercial pilot, the general operating and air traffic rules, and the rules of the National Transportation Safety Board governing accident reporting;

(2) Meteorology, including recognizing basic weather conditions and trends, and acquiring and using weather information furnished by the U.S. Weather Bureau, such as hourly sequence reports, terminal forecasts, winds aloft reports, and reading and interpreting weather maps;

(3) Navigation, including pilotage and—

(i) For an airplane rating, dead reckoning, using instruments and radio aids to air navigation, proper radio frequency

utilization, radiotelephone procedures and techniques, flight planning, emergency procedures, preflight and inflight services for pilots, and Notices to Airmen;

(ii) For a rotorcraft rating or lighter-than-air rating, airship class, dead reckoning, and using instruments and radio aids to air navigation; and

(iii) For a glider rating, using navigational instruments; and

(4) Principles of safe flight operations, including flight theory, operating and maintaining airplanes, rotorcraft, gliders, or lighter-than-air aircraft, as the case may be, and (except for glider rating) general safety practices and procedures for emergencies and critical situations.

(b) An applicant for a commercial pilot certificate (lighter-than-air, airship class) must pass the written test prescribed in paragraph (a) of this section before taking the flight test required by § 61.129(a). However, an applicant who holds a heavier-than-air commercial pilot certificate is required to pass only that part of the test relating to instruments and the general servicing and operation of airships, or, if he also holds an instrument rating, he is required to pass only that part relating to the general servicing and operation of airships.

[(c) An applicant for a commercial pilot certificate (lighter-than-air, free balloon class), other than a certificate issued under § 61.130(d), must pass a written test on the following:]

(1) So much of §§ 91.1 to 91.9 and Subpart B of Part 91 of this chapter as relate to his certificate.

(2) Prevailing weather conditions in the United States that are met in flying and the forecasting thereof.

(3) Analyzing weather maps and sequence reports furnished by the United States Weather Bureau.

(4) Practical air navigation problems using maps.

(5) Navigation by terrain and by dead reckoning, including using instruments and other aids to navigation in visual contact flying.

(6) The general operation of free balloons.

§ 61.115 Airplane rating: aeronautical experience.

(a) *Flight time.* An applicant for a commercial pilot certificate (airplane) must have at least 200 hours of flight time, including at least—

(1) 100 hours of flight time in powered aircraft, including 50 hours in airplanes of which at least 15 hours were solo;

(2) 100 hours of flight time as pilot in command, including—

(i) 50 hours of cross-country, each flight including a landing more than 25 miles from the place of departure;

(ii) Takeoffs and landings from at least two different airports under two-way radio instruction from an airport control tower; and

(iii) One cross-country flight of at least 350 miles including landings at three points, one of which is at least 150 miles from the place of departure;

(3) 20 hours of flight instruction in airplanes, including at least—

(i) 10 hours of flight instruction in operating an airplane by referring solely to flight instruments, including at least 5 hours of flight instruction from a flight instructor with an instrument rating on his flight instructor certificate, and the remaining hours, if any, from a flight instructor with an airplane rating on his flight instructor certificate; and

(ii) 10 hours of flight instruction from a flight instructor with an airplane rating on his flight instructor certificate in operating an airplane in other procedures and maneuvers required for the commercial pilot flight test, in addition to any flight instruction received before his private pilot certificate was issued to him.

The holder of a commercial pilot certificate who did not meet the requirements of subparagraph (3)(i) of this paragraph, and whose certificate was endorsed to that effect, is entitled to have that endorsement removed if he presents written evidence showing that he has met those requirements and has passed the skill test prescribed by § 61.117(c).

(b) *ICAO requirements.* If an applicant for a commercial pilot certificate has not had at least 5 hours of flight time at night, includ-

ing at least 10 takeoffs and 10 landings as pilot in command and as the only manipulator of the controls, his pilot certificate will be endorsed as follows:

"Holder does not meet the night flight requirements of ICAO."

Whenever he presents satisfactory written evidence that he has met this ICAO requirement, he is entitled to a new certificate without the endorsement.

§ 61.117 Airplane rating: aeronautical skills.

(a) *Practical test.* An applicant for a commercial pilot certificate (airplane) must pass a practical test on the procedures and maneuvers listed in paragraph (b) of this section. The test is given in four phases, an oral operational test, basic techniques, precision maneuvers, and cross-country flight.

(b) *Procedures and maneuvers.* The applicant must perform the following procedures and maneuvers competently:

(1) *Phase I—oral operational test:*

(i) Airplane registration, airworthiness, and equipment documents.

(ii) Airplane logbooks and airworthiness inspection reports.

(iii) Airplane performance, range, and operation.

(iv) Airplane loading, including fuel, oil, and baggage capacities.

(v) Airplane line check.

(vi) Use of radio for voice communication.

(2) *Phase II—basic techniques:*

(i) Preflight operations.

(ii) Taxiing.

(iii) Takeoffs and landings including—

(a) A slip to a landing, if a three-control airplane is used;

(b) Crosswind takeoff and landing;

(c) Short field takeoff and power approach and landing;

(d) Soft field takeoff and landing;

(e) Wheel landings in a tailwheel-type airplane, or stall landings in a tri-cycle-type airplane; and

(f) Three accuracy landings within 200 feet beyond a designated mark (which may be integrated with any three of the landings required by subparagraphs (a) through (e)).

- (iv) Airport traffic patterns.
- (v) Forced landings (single-engine only) and simulated emergencies.
- (vi) Emergency operation of airplane equipment.
- (vii) Engine-out emergencies, if a multiengine airplane is used, including—
 - (a) Engine-out minimum control speed demonstration;
 - (b) Use of engine-out best rate-of-climb speed;
 - (c) Maneuvering with one engine out (feathered if possible, otherwise cut off and windmilling);
 - (d) Effect on engine-out performance of failure to feather, extension of gear

and flaps, and various combinations of these; and

- (e) Approach and landing with one engine set to zero thrust, or the drag of a feathered propeller, as applicable.

(3) *Phase III—precision maneuvers:*

- (i) Gliding spirals about a point on the ground.
- (ii) Three consecutive shallow on-pylon eights.
- (iii) Three consecutive steep on-pylon eights.
- (iv) One right and one left 720° steep power turn.
- (v) Lazy eights.
- (vi) Chandelles.
- (vii) Maneuvering at minimum controllable airspeed.

(viii) Stalls from all normally anticipated flight attitudes with and without power.

(4) *Phase IV—cross-country flight.*

- (i) Cross-country flight planning.
- (ii) Cross-country flying.
- (iii) Cross-country flying emergencies.
- (iv) Use of radio aids to VFR navigation.
- (v) Two-way communications.

(c) *Instrument flight.* In addition, during Phase IV of the practical test, the applicant must demonstrate in simulated instrument flight his ability to safely control an aircraft manually solely by reference to instruments, including the following:

(1) Recovery from a well-developed power-on moderate turn spiral in a medium banked attitude.

(2) Recovery from a high angle climb in a turn.

(3) Standard rate turns of 180° and 360° duration to within $\pm 10^\circ$ and $\pm 20^\circ$, respectively, of proper heading and ± 150 feet of altitude.

(4) Maximum safe performance climbing turns of 180° duration followed by continued straight climb to predetermined altitude requiring not less than one minute straight climb performed within ± 10 knots of airspeed and $\pm 10^\circ$ of proper heading.

(5) Two consecutive descending 90° turns using normal approach power for reducing altitude performed within $\pm 10^\circ$ of proper heading and at completion of first 90° turn continue straight descent for 1 minute, then complete second 90° descending turn and continue straight descent for 1½ minutes.

(6) Straight and level flight performed within $\pm 10^\circ$ of proper heading, 100 feet of altitude and 10 knots of airspeed.

§ 61.119 Rotorcraft rating: aeronautical experience.

(a) An applicant for a commercial pilot certificate (rotorcraft) must have at least 150 hours of flight time, including at least—

- (1) 100 hours in powered aircraft, including 50 hours in rotorcraft of which at least 15 hours were solo;
- (2) 100 hours as pilot in command, including 20 hours of cross-country; and

(3) 10 hours of flight instruction, from an appropriately rated flight instructor, in rotorcraft [in procedures and maneuvers required for the commercial pilot flight test.]

(b) A commercial pilot certificate (rotorcraft) issued under this Part to a pilot who either does not have at least 200 hours of flight time or has not graduated from an approved commercial rotorcraft pilot training course, will be endorsed as follows:

“Holder does not meet the flight time requirements of ICAO.”

Whenever he presents satisfactory written evidence that he has met this ICAO requirement, he is entitled to a new certificate without the endorsement.

§ 61.121 Rotorcraft rating: aeronautical skill.

(a) An applicant for a commercial pilot certificate (rotorcraft) must pass the applicable practical test on the procedures and maneuvers listed in paragraph (b) or (c) of this section. The test for a helicopter class rating is given in two phases, basic techniques and precision maneuvers. The test for a gyroplane class rating is given in four phases; oral operational test, basic techniques, precision maneuvers, and cross-country.

(b) The applicant for a helicopter class rating must perform the following procedures and maneuvers competently:

(1) *Phase I—basic techniques:*

- (i) Preflight check and oral equipment test.
- (ii) Preflight operations.
- (iii) Taxiing (in helicopter equipped to taxi on the surface).
- (iv) Normal takeoffs and landings.
- (v) Crosswind takeoffs and landings.
- (vi) High altitude takeoffs and roll-on landings.
- (vii) Climbs and descents.

(viii) Emergencies, including autorotative approaches (landing optional, as appropriate).

(2) *Phase II—precision maneuvers:*

- (i) Hovering upwind, downwind, and crosswind.
- (ii) Pattern flying with constant and with changing headings.

- (iii) Hovering turns—180° and 360°, right and left.
 - (iv) S turns.
 - (v) Turns with medium banks.
 - (vi) Rapid decelerations (quick stops).
- (c) The applicant for a gyroplane class rating must perform the following procedures and maneuvers competently:

(1) *Phase I—oral operational test:*

- (i) Gyroplane registration, airworthiness, and equipment documents.
- (ii) Gyroplane logbooks and airworthiness inspection records.
- (iii) Gyroplane performance, range, and operation (from Gyroplane Flight Manual).
- (iv) Gyroplane loading, including fuel, oil, and baggage capacities.
- (v) Gyroplane line check.
- (vi) Use of radio for voice communication (may be simulated when necessary).

(2) *Phase II—basic techniques:*

- (i) Preflight operations.
- (ii) Taxiing or sailing and docking.
- (iii) At least three takeoffs with three accuracy landings beyond and within 100 feet of a mark, including:

- (a) Crosswind takeoff and landing.
- (b) Short field takeoff and power approach and landing.
- (c) Soft field takeoff and landing (jump takeoff, if the gyroplane has this capability).
- (iv) Roll-on landing and full flare landing.
- (v) Airport traffic patterns.
- (vi) Forced landings (single-engine only) and simulated emergencies.
- (vii) Emergency operation of gyroplane equipment.

(3) *Phase III—precision maneuvers:*

- (i) Gliding spirals about a point on the ground.
- (ii) One right and one left 720° steep power turn (bank not more than 45° at steepest point).
- (iii) Entry and recovery from high rates of descent with and without power (recovery to be completed not lower than 300 feet above the surface).
- (iv) Maneuvering at minimum level flight airspeed.

(4) *Phase IV—cross-country flight:*

- (i) Cross-country flight planning.
- (ii) Cross-country flying.
- (iii) Cross-country emergencies (lost, weather, overheating engine, power failure, etc.).
- (iv) Use of radio aids to VFR navigation.

§ 61.123 Glider rating: aeronautical experience.

An applicant for a commercial pilot certificate (glider) must have at least 25 hours of flight time, including at least—

- (a) 20 hours of flight time in gliders;
- (b) 2 hours of flight instruction (from an appropriately rated flight instructor or a commercial glider pilot) [in procedures and maneuvers required for the commercial pilot flight test];
- (c) 100 flights in gliders as pilot in command; and
- (d) 25 glider flights each of which includes a 360° turn.

§ 61.125 Glider rating: aeronautical skill.

(a) *General.* An applicant for a commercial pilot certificate (glider) must pass a practical test on the procedures and maneuvers listed in paragraph (b) of this section. The test is given in two phases, basic techniques and special maneuvers.

(b) *Procedures and maneuvers.* The applicant must perform the following procedures and maneuvers competently:

(1) *Phase I—basic techniques:*

- (i) Preflight check and oral equipment test.
- (ii) Preflight operations.
- (iii) Auto, pulley, or winch tow.
- (iv) Airplane tow; above, below, and to one side of slipstream.

(v) 180° approaches to landings in the direction of the prescribed traffic pattern flow, landing within 100 feet beyond a designated line or mark.

(2) *Phase II—special maneuvers:*

- (i) Three-turn spirals, right and left, with bank at least 45°.
- (ii) Stalls and slow flight (must be demonstrated in a glider).

§ 61.127 Lighter-than-air rating (airship class): aeronautical experience.

An applicant for a commercial pilot certificate (lighter-than-air, airship class) must have at least 200 hours of flight time at the controls of an airship including—

- (a) At least 5 hours within the 60 days before the date he applies;
- (b) At least 50 hours as pilot in command;
- (c) At least 10 hours of cross-country;
- (d) At least 10 hours at night;
- (e) At least 20 hours of instrument instruction and practice in flight, including, when approved by the Administrator, not more than 10 hours of instruction and practice under simulated conditions not in flight; and
- (f) In place of not more than 50 hours of the 200-hour total flight requirement, an equal or greater amount of flight time as a crew-member, upon approval by the Administrator.

§ 61.128 Lighter-than-air (free balloon class) rating: aeronautical experience.

[(a) An applicant for a commercial pilot certificate (lighter-than-air, free balloon class), other than a certificate issued under § 61.130(c) or § 61.130(d), must have at least 2 ascents averaging 2 hours in duration, substantiated by a logbook, including 6 ascents under the supervision of an appropriately rated private or commercial pilot, 1 ascent in control to an altitude of 10,000 feet under that supervision, and 1 solo ascent.

[(b) An applicant for a commercial pilot certificate (lighter-than-air, free balloon class) issued under § 61.130(c), must have made at least 8 ascents averaging 1 hour in duration, substantiated by a logbook, including 6 ascents under the supervision of an appropriately rated private or commercial pilot, 1 ascent in control to an altitude of 5,000 feet, and 1 solo ascent.]

§ 61.129 Lighter-than-air rating (airship class): aeronautical and radio skills.

(a) An applicant for a commercial pilot certificate (lighter-than-air, airship class) must—

- (1) Exercise reasonable judgment in performing flight maneuvers by complying with §§ 91.1 through 91.9 and Subpart B of Part 91 of this chapter, avoiding critical situations that require corrective action by

the person giving the test to maintain safe operations, and observing accepted good operating practices for flight conditions encountered; and

(2) Pass a flight test on the following maneuvers:

- (i) Ground handling and mooring.
- (ii) Preflight check.
- (iii) Runups.
- (iv) Takeoffs.
- (v) Ascents.
- (vi) Turns (right and left) and figure eights.
- (vii) Precision turns (180° and 360°).
- (viii) Straight and level flight.
- (ix) Climbing turns.
- (x) Diving turns.
- (xi) Descents.
- (xii) Inflight ETA computations.
- (xiii) Radio operation and tuning.
- (xiv) Radio orientation.
- (xv) Beam bracketing and tracking.
- (xvi) Locating cone of silence.
- (xvii) Traffic control and approach procedure.
- (xviii) Landings (positive and negative static balance).

(b) In performing the maneuvers required by subparagraph (a)(2) of this section that involve radio skills, the applicant need not follow final approach procedures for airplanes. He may elect to consider his initial approach as a final approach and go directly to the airport, if that procedure does not require more than 90° of turn over the station. He may make his orientation and approach using either LF or VHF range facilities.

§ 61.130 Lighter-than-air rating (free balloon class): aeronautical skill.

(a) An applicant for a commercial pilot certificate (lighter-than-air, free balloon class) must successfully perform the following maneuvers:

- (1) Ground handling and mooring.
- (2) Preflight checks.
- (3) Takeoffs.
- (4) Ascents.
- (5) Descents.
- (6) Landings (positive static balance).
- (7) Show his ability to satisfactorily pilot and maneuver a free balloon in solo flight.

(b) The applicant must show his ability to exercise reasonable judgment in the flight maneuvers required by paragraph (a) of this section by complying with Part 91 of this chapter, avoiding critical situations, and observing accepted good operating practices for the flight conditions encountered.

[(c) An applicant who meets the requirements of paragraphs (a) and (b) of this section, and the requirements of §§ 61.113(c) and 61.128(b), may obtain a commercial pilot certificate with lighter-than-air category and free balloon class ratings limited to "Hot Air Balloons (with or without Airborne Heater) Only". Upon meeting the requirements of § 61.128(a), that limitation may be removed.

[(d) An applicant who meets the requirements of paragraphs (a) and (b) of this section, but who does not meet the requirements of §§ 61.113(c) and 61.128(a) or (b) may obtain a commercial pilot certificate with lighter-than-air category and free balloon class ratings limited to "Hot Air Balloons (without Airborne Heater) Only". Upon meeting the requirements of §§ 61.113(c) and 61.128(b), that limitation, or a limitation to "Hot Air Balloons Only", may be removed, and a "Hot Air Balloons (with or without Airborne Heater) Only" limitation obtained under paragraph (c) of this section. Upon meeting the requirements of §§ 61.113(c) and 61.128(a), the limitations under this paragraph or paragraph (c) of this section may be removed.]

§ 61.131 General privileges and limitations.

(a) Subject to § 61.16 and paragraphs (b) and (c) of this section, a commercial pilot may act as pilot in command of an aircraft that is carrying passengers or property for compensation or hire, and may, for compensation or hire act as pilot in command of an aircraft.

(b) A commercial pilot (lighter-than-air; airship class) may give flight instruction in aircraft of the airship or free balloon class.

[(c) Unless his certificate is issued under § 61.130(c) or § 61.130(d), or limited to "Hot Air Balloons Only", a commercial pilot (lighter-than-air, free balloon class) may act as pilot in command of, and give flight instruction in, a free balloon. A commercial pilot (lighter-than-air, free balloon class) whose certificate is issued under § 61.130(c),

may act as pilot in command of, and give flight instruction in, only hot air balloons with or without an airborne heater. A commercial pilot (lighter-than-air, free balloon class) whose certificate is issued under § 61.130(d), or is limited to "Hot Air Balloons Only", may act as pilot in command of, and give flight instruction in, only a hot air balloon without an airborne heater.]

Subpart E—Airline Transport Pilots

§ 61.141 Eligibility requirements: general.

To be eligible for an airline transport pilot certificate, a person must—

- (a) Be at least 23 years of age;
- (b) Be of good moral character;
- (c) Be able to read, write, and understand the English language and speak it without accent or impediment of speech that would interfere with two-way radio conversation;
- (d) Be a high school graduate, or its equivalent in the Administrator's opinion, based on the applicant's general experience and aeronautical experience, knowledge, and skill;
- (e) Have a first-class medical certificate issued under Part 67 of this chapter within the 6 months before the date he applies; and
- (f) Comply with the sections of this Part that apply to the rating he seeks.

§ 61.143 Airplane rating: aeronautical knowledge.

An applicant for an airline transport pilot certificate with an airplane rating must, after meeting the requirements of §§ 61.141 (except paragraph (a) thereof) and 61.145, pass a written test on—

(a) The sections of this Part relating to airline transport pilots and Part 121, subpart C of Part 65, and §§ 91.1 through 91.9 and subpart B of Part 91 of this chapter, and so much of Parts 21 and 25 of this chapter as relate to the operations of air carrier aircraft;

(b) The fundamentals of air navigation and use of formulas, instruments, and other navigational aids, both in aircraft and on the ground, that are necessary for navigating aircraft by instruments;

(c) The general system of weather collection and dissemination;

(d) Weather maps, weather forecasting, and weather sequence abbreviations, symbols, and nomenclature;

(e) Elementary meteorology, including knowledge of cyclones as associated with fronts;

(f) Cloud forms;

(g) Department of Commerce Weather Bureau Circular N, "Manual of Surface Observations", as amended;

(h) Weather conditions, including icing conditions and upper-air winds, that affect aeronautical activities;

(i) Air navigation facilities used on Federal airways, including rotating beacons, course lights, radio ranges, and radio marker beacons;

(j) Information from airplane weather observations and meteorological data reported from observations made by pilots on air carrier flights;

(k) The influence of terrain on meteorological conditions and developments, and their relation to air carrier flight operations;

(l) Radio communication procedure in aircraft operations; and

(m) Basic principles of loading and weight distribution and their effect on flight characteristics.

§ 61.145 Airplane rating: aeronautical experience.

(a) An applicant for an airline transport pilot certificate with an airplane rating must hold a commercial pilot certificate or a foreign airline transport pilot or commercial pilot license without limitations, issued by a member state of ICAO, or he must be a pilot in an Armed Force of the United States whose military experience qualifies him for a commercial pilot certificate under § 61.31 of this Part.

(b) An applicant must have had—

(1) At least 250 hours of flight time as pilot in command, or as copilot performing the duties and functions of a pilot in command under the supervision of a pilot in

command, or any combination thereof, at least 100 hours of which were cross-country time and 25 hours of which were night flight time; and

(2) At least 1200 hours of flight time as a pilot within the 8 years before the date he applies, including at least—

(i) 5 hours within the 60 days before the date he applies;

(ii) 500 hours of cross-country flight time;

(iii) 100 hours of night flight time; and

(iv) 75 hours of actual or simulated instrument time, at least 50 hours of which were in actual flight.

Flight time used to meet the requirements of subparagraph (1) of this paragraph may also be used to meet the requirements of subparagraph (2) of this paragraph.

(c) If an applicant with less than 250 hours of pilot-in-command time otherwise meets the requirements of paragraph (b)(1) of this section, his certificate will be endorsed "Holder does not meet the pilot-in-command flight experience requirements of ICAO", as prescribed by article 39 of the "Convention on International Civil Aviation". Whenever he presents satisfactory written evidence that he has accumulated the 250 hours of pilot-in-command time, he is entitled to a new certificate without the endorsement.

§ 61.147 Airplane rating: aeronautical skill.

(a) An applicant for an airline transport pilot certificate with a single-engine or multi-engine class rating or an additional type rating must pass a practical test that includes the items set forth in Appendix A of this Part. The FAA inspector or designated examiner may modify any required maneuver where necessary for the reasonable and safe operation of the airplane being used and, unless specifically prohibited in Appendix A, may combine any required maneuvers and may permit their performance in any convenient sequence.

(b) Whenever an applicant for an airline transport pilot certificate does not already have an instrument rating he shall, as part of the oral part of the practical test, comply with § 61.87(c), and, as part of the flight part, perform each additional maneuver required by

§ 61.87(c)(2) that is appropriate to the airplane type and not required in Appendix A of this Part.

(c) Unless the Administrator requires certain or all maneuvers to be performed, the person giving a flight test for an airline transport pilot certificate or additional airplane class [or type] rating may, in his discretion, waive any of the maneuvers for which a specific waiver authority is contained in Appendix A of this Part if a pilot being checked—

(1) Is employed as a pilot by a Part 121 certificate holder; and

(2) Within the preceding six calendar months, has successfully completed that certificate holder's approved training program for the airplane type involved.

§ 61.151 Rotorcraft rating: aeronautical knowledge.

(a) An applicant for an airline transport pilot certificate with a rotorcraft category and a gyroplane class rating, or a rotorcraft category and a helicopter class rating limited to VFR only must pass a written test on—

(1) So much of this chapter as relates to air carrier rotorcraft operations;

(2) Rotorcraft design, components, systems and performance limitations;

(3) Basic principles of loading and weight distribution and their effect on rotorcraft flight characteristics;

(4) Air traffic control systems and procedures relating to rotorcraft;

(5) Procedures for operating rotorcraft in potentially hazardous meteorological conditions; and

(6) Flight theory as applicable to rotorcraft.

(b) In addition to the requirements of paragraph (a) of this section, an applicant for an airline transport pilot certificate with a rotorcraft category and helicopter class rating not limited to VFR must pass a written test on the items listed under paragraphs (b) through (m) of § 61.143.

§ 61.153 Rotorcraft rating: aeronautical experience.

(a) An applicant for an airline transport pilot certificate with a rotorcraft rating must hold a commercial pilot certificate, or its equivalent as determined by the Administrator.

(b) In addition, such an applicant must have had at least 1200 hours of flight time as a pilot within the 8 years before the date he applies including at least—

(1) 5 hours in rotorcraft within the 60 days before that date;

(2) 500 hours of cross-country flight time;

(3) 100 hours at night, including at least 15 hours in rotorcraft; and

(4) 200 hours in rotorcraft, including at least 75 hours as pilot in command or as second in command performing the duties and functions of a pilot in command under the supervision of a pilot in command, or any combination thereof.

(c) In addition to the requirements of paragraphs (a) and (b) of this section, an applicant for an airline transport pilot certificate with a rotorcraft category and a helicopter class rating not limited to VFR must have at least 75 hours of instrument time under actual or simulated instrument conditions of which at least 50 hours were completed in flight with at least 25 hours in helicopters as pilot in command, or as second in command performing the duties and functions of a pilot in command under the supervision of a pilot in command, or any combination thereof.

§ 61.155 Rotorcraft rating: aeronautical skill.

(a) An applicant for an airline transport pilot certificate with a rotorcraft category and a gyroplane class rating or a rotorcraft category and helicopter class rating limited to VFR must show his ability to satisfactorily pilot rotorcraft by performing at least the following:

(1) Normal takeoffs and landings, cross-wind landings, climbs and climbing turns, steep turns, maneuvering at minimum speed, rapid descent, and quick stops;

(2) Simulated emergency procedures, including failure of an engine or other component or system, fire, ditching, evacuation, and operating emergency equipment;

(3) Approach and landing with simulated one engine inoperative in multiengine helicopters or in autorotation in single engine helicopters; and

(4) Any other maneuvers considered necessary to show his ability.

[(b) An applicant for an airline transport pilot certificate with a rotorcraft category and a helicopter class rating not limited to VFR must perform the maneuvers set forth in this paragraph and if he has not obtained a certificate under paragraph (a) of this section, must perform any additional maneuvers required in that paragraph:

[(1) Equipment test (oral).

[(2) Preflight check.

[(3) Taxiing, or sailing and docking.

[(4) Runups.

[(5) Takeoffs.

[(6) Climbs and climbing turns (not required if applicant holds a helicopter instrument rating and a certificate under paragraph (a) of this section).

[(7) Maneuvers at slow speed.

[(8) Airport traffic pattern.

[(9) Accuracy approaches and spot landings (single-engine rating only).

[(10) Landing technique.

[(11) Cross-wind takeoff.

[(12) Traffic control procedure.

[(13) Steep turns.

[(14) Timed turns (not required if applicant holds a helicopter instrument rating).

[(15) Recovery from unusual attitudes.

[(16) Use of radio equipment.

[(17) Orientation.

[(18) Beam bracketing.

[(19) Cone (station) identification.

[(20) Instrument approach procedures.

[(21) Missed approach procedures.

[(22) Use of directional radio.

[(23) Rapid descent.

[(24) Engine(s)-out procedure (multi-engine rating only).

[(25) Maneuvering with engine(s)-out (multiengine rating only).

[(26) Maneuvering for landing at weather minimums.

[(27) Takeoff and landing with simulated engine(s) failure (multiengine rating only).

[(28) Emergencies.

[(29) Smoothness and coordination.

[(30) Judgment.

[The maneuvers described in subparagraphs 6, 7, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, and 25 of this paragraph must be performed solely by reference to instruments. The FAA flight in-

spector conducting the test may require the maneuvers described in subparagraphs 6, 14, and 15 to be performed on a partial panel.】

(c) The holder of an airline transport pilot certificate with a rotorcraft category and helicopter class rating who applies for an additional helicopter type rating must show his ability to satisfactorily pilot the type helicopter for which he seeks a rating by performing the maneuvers listed in paragraph (a) of this section for a rating limited to VFR only, or the maneuvers listed in paragraph (b) of this section for a rating not limited to VFR.

【(d) Any maneuver required by this section may be modified by the examining inspector as necessary for the reasonable and safe operations of the rotorcraft being used.】

§ 61.157 Additional category ratings.

(a) *Rotorcraft category and gyroplane class rating or helicopter class rating limited to VFR only.* The holder of an airline transport pilot certificate (airplane rating) who applies for a rotorcraft category and gyroplane class rating, or a rotorcraft category and helicopter class rating limited to VFR only must meet the applicable requirements of §§ 61.151 and 61.155 and—

(1) Have at least 100 hours, including at least 15 hours at night, of rotorcraft flight time as pilot in command or as second in command performing the duties and functions of a pilot in command under the supervision of a pilot in command who holds an airline transport pilot certificate with an

appropriate rotorcraft rating, or any combination thereof; or

(2) Complete a training program conducted by a certificated air carrier or other approved agency requiring at least 75 hours of rotorcraft flight time as pilot in command, second in command, or as flight instruction from an appropriately rated [FAA certificated] flight instructor or an airline transport pilot, or any combination thereof, including at least 15 hours of night flight time.

(b) *Rotorcraft category and helicopter class rating not limited to VFR.* The holder of an airline transport pilot certificate (airplane rating) who applies for a rotorcraft category and helicopter class rating not limited to VFR must meet the applicable requirements of §§ 61.151, 61.153, and 61.155.

(c) *Airplane rating.* The holder of an airline transport pilot certificate (rotorcraft rating) who applies for an airplane rating, must comply with §§ 61.143 through 61.147 and—

(1) Have at least 100 hours, including at least 15 hours at night, of airplane flight time as pilot in command or as second in command performing the duties and functions of a pilot in command under the supervision of a pilot in command who holds an airline transport pilot certificate with an appropriate airplane rating, or any combination thereof; or

(2) Complete a training program conducted by a certificated air carrier or other approved agency requiring at least 75 hours of airplane flight time as pilot in command, second in command, or as flight instruction from an appropriately rated [FAA certificated] flight instructor or an airline transport pilot, or any combination thereof, including at least 15 hours of night flight time.

§ 61.161 Tests.

(a) Each applicant for an airline transport pilot certificate must pass each practical and theoretical test to the satisfaction of the Administrator. The minimum passing grade in each subject is 70 percent. Each flight maneuver is graded separately. Other tests are graded as a whole.

(b) Information collected incidentally to such a test shall be treated as a confidential matter by the persons giving the test and by employees of the FAA.

§ 61.163 Instruction in air transportation service.

An airline transport pilot may instruct other pilots in air transportation service in aircraft of the category, class, and type for which he is rated. However, he may not instruct for more than 8 hours in one day nor more than 36 hours in any 7-day period. He may instruct under this section only in aircraft with functioning dual controls. Unless he has a flight instructor certificate, an airline transport pilot may instruct only as provided in this section.

§ 61.165 General privileges and limitations.

An airline transport pilot has the privileges of a commercial pilot with an instrument rating. The holder of a commercial pilot certificate who qualifies for an airline transport pilot certificate retains the ratings on his commercial pilot certificate, but he may exercise only the privileges of a commercial pilot with respect to them.

Subpart F—Flight Instructors

§ 61.170 Eligibility requirements: general.

To be eligible for a flight instructor certificate with an airplane, rotorcraft, or glider category rating, or an instrument rating, a person must hold a pilot rating in that category of aircraft; or an instrument rating or airline transport pilot certificate, as appropriate, and meet the aeronautical knowledge, experience, and skill requirements of this subpart.

§ 61.171 Aeronautical knowledge.

An applicant for a flight instructor certificate must pass a written test on—

(a) The fundamentals of flight instruction; and

(b) The performance and analysis of flight training maneuvers appropriate to the instructor rating sought.

§ 61.172 Aeronautical experience.

An applicant for a flight instructor certificate must hold a current—

(a) Airline transport pilot certificate;

(b) Commercial pilot certificate without ICAO instrument or night flight limitations endorsement; or

(c) Private pilot certificate and—

(1) Meet the aeronautical knowledge, experience, and skill requirements for the issue of a commercial pilot certificate appropriate to the category of aircraft in which he desires to give flight instruction; and

(2) Meet the ICAO commercial pilot night flight requirements if he seeks an airplane category rating.

§ 61.173 Aeronautical skill.

An applicant for a flight instructor certificate must perform the following procedures and maneuvers with regard to the giving of flight instruction appropriate to the rating sought:

(a) *Phase I—Oral and preflight tests.*

(1) Flight instructor procedures and responsibilities.

(2) Factors, conditions, and principles which control the learning process.

(3) Essential elements, objectives, and limitations of a lesson plan.

(4) Preparation of a lesson plan for flight instruction for a presolo student who has had little flight instruction or a lesson plan including the use of flight instruments, radio aids, and IFR flight clearances if the applicant is seeking an instrument rating. The lesson planned under Phase I is conducted under paragraph (b) of this section, with the examining FAA inspector acting as the student.

(b) *Phase II—Flight test.* The applicant must perform any of the following maneuvers (appropriate to the rating sought) as may be requested by the FAA inspector.

(1) *Airplane:*

(i) Normal Operations.

Preflight operations

Radio communications

Taxiing or sailing and docking

Normal takeoffs and landings

Straight and level flight

Medium turns

Steep turns

Climbs and climbing turns

Descents, with and without power,
in straight flight and in turns

(ii) Ground Reference Maneuvers.

Crosswind takeoffs and landings

Short-field takeoffs and landings

Soft-field takeoffs and landings

Full-stall landings (nosewheel type airplanes)

Wheel landings (tailwheel-type airplanes)

Power approaches

Accuracy approaches and spot landings

S turns across a road

Turns about a point

Pattern eights

Rectangular courses and airport traffic patterns

Slips

(iii) Coordination Maneuvers.

720° power turns

Gliding spirals

Stalls and slow flight

Chandelles

Lazy eights

Pylon eights

(iv) Emergency Operations.

Forced landings

Flight emergencies

Emergency operation of aircraft equipment

Engine-out emergencies (if multi-engine airplane is used)

Control of airplane by reference to flight instruments

(v) Cross-Country Navigation.

Dead reckoning

Pilotage

Radio navigation

(vi) Spins. (The inspector may accept a logbook record of spin flight instruction in lieu of a demonstration. Such a record must indicate that the applicant has demonstrated satisfactory entries and recoveries from spins in both directions, and shall be certified by the flight instructor who conducted the flight instruction.)

(2) *Rotorcraft (if helicopter used):*

(i) Normal Operations.

Preflight operations

Taxiing

Vertical takeoff to hover

- Vertical landing from hover
- Normal departures from a hover
- Normal approaches to a hover
- Medium banked turns
- (ii) Precision Maneuvers.
 - Hovering; upwind, crosswind, and downwind
 - Hovering turns
 - Pattern flying, with constant and with changing headings
 - S turns (at 500' altitude)
 - Rapid decelerations (quick stops)
- (iii) Special Operations.
 - Simulated high-altitude takeoff
 - Roll-on landing
 - Crosswind takeoffs and landings
- (iv) Emergencies.
 - Emergency operation of equipment
 - Autorotative landings, both to touchdown and with power recovery
 - Loss of lift at altitude
 - Engine failure in a hover
- (3) *Rotorcraft (if gyroplane used):*
 - (i) Normal Operations.
 - Preflight operations
 - Taxiing or sailing and docking
 - Normal takeoff and landing
 - Airport traffic patterns
 - Use of radio for voice communications
 - (ii) Precision Maneuvers.
 - Turns about a point (45° bank at steepest point)
 - Gliding spirals about a point on the ground
 - Right and left 720° power turns
 - Maneuvering at minimum level flight airspeed
 - Accuracy approaches and spot landings
 - (iii) Special Operations.
 - Soft-field takeoff and landing (jump takeoff if gyroplane has this capability)
 - Roll-on landing and full flare landing
 - Short-field takeoff and power approach and landing
 - Entry and recovery from high rates of descent with and without power (recovery to be completed not lower than 300 feet above the surface)
- (iv) Emergencies.
 - Forced landings (single engine only) and simulated emergencies
 - Emergency operation of gyroplane equipment
- (v) Cross-Country Flight.
 - Cross-country flight planning
 - Cross-country flying
 - Cross-country flying emergencies
 - Use of radio aids to VFR navigation
 - Two-way radio communication
- (4) *Glider:*
 - (i) Preflight operations
 - (ii) Aircraft tow
 - (iii) Auto or winch tow
 - (iv) Stalls and slow flight
 - (v) Accuracy 180° approaches and landings
 - (vi) Spins. (The inspector may accept a logbook record of spin flight instruction in gliders or light airplanes in lieu of a demonstration. Such a record must indicate that the applicant has demonstrated satisfactory entries and recoveries from spins in both directions, and shall be certified by the flight instructor who conducted the flight instruction.)
 - (vii) Spirals
- (5) *Instrument:*
 - (i) IFR Flight Planning.
 - Preparing and IFR flight log
 - Preparing and filing an instrument flight plan
 - Evaluating aircraft performance, range, and fuel requirements
 - Use and limitations of required instruments and equipment
 - (ii) IFR Flight Maneuvers.
 - Straight and level flight
 - Turns, climbs, and descents
 - Maneuvering at approach speeds, and stalls
 - Steep turns
 - Recovery from unusual attitudes
 - (iii) Engine-out Maneuvers. (If test is taken in multiengine airplane.)
 - (iv) En Route Procedures.
 - Copy and read-back of instrument flight plans

Radio navigation, VOR, ADF, or LF ranges
 Radio orientation
 IFR emergencies, including use of partial panel

- (v) Terminal Area Operation.
 Holding procedures
 Missed approach procedure
 Use of radar vectors and DF steers
 Compliance with departure and approach control instructions

(vi) Standard Instrument Approach to authorized minimums (not more than 500 feet and 1 mile).

ILS
 VOR
 ADF
 LF range

§ 61.174 Flight instructor records.

Each certificated flight instructor shall—

(a) Sign each person's logbook for each period of flight instruction that he has given that person;

(b) Record the name of each person to whom he has given flight instruction or whose student pilot certificate he has endorsed as well as the date and type of each flight instruction period or endorsement;

(c) Record the name of each person for whom he has signed a recommendation for a written or practical test under this part, the kind of test, and the date of recommendation; and

(d) Keep each record required by paragraphs (b) and (c) of this section separately, or in his logbook, for at least three years.

§ 61.175 Flight instructor ratings on pilot certificates.

A person who has a flight instructor rating endorsed on his pilot certificate may not exercise the privileges of that rating, but may be issued a flight instructor certificate if he passes the appropriate tests prescribed in § 61.173.

§ 61.176 Limited flight instructor certificates.

The holder of an expired limited flight instructor certificate may be issued a flight instructor certificate with the ratings previously held on his limited flight instructor certificate, if he passes the appropriate tests prescribed in § 61.173.

§ 61.177 Renewal of flight instructor certificates.

An applicant for the renewal of a flight instructor certificate must pass the practical test prescribed in § 61.173. However, if the applicant's certificate has not expired at the time application is made for renewal, the Administrator may, based upon the flight instruction record of the applicant, limit the test to those items that he finds are necessary to determine the continued competency of the applicant.

§ 61.178 Additional flight instructor ratings.

(a) The holder of a flight instructor certificate who applies for an additional rating on that certificate must—

(1) Hold a pilot rating in that category of aircraft, or an instrument rating or airline transport pilot certificate, as appropriate to the rating sought; and

(2) Pass the written and practical tests prescribed by §§ 61.171(b) and 61.173.

[(b) The holder of a flight instructor certificate with a "Gliders Only" rating must also show by satisfactory evidence that he has passed the written test prescribed by § 61.171(a).]

§ 61.179 [Deleted.]

§ 61.180 Limitations.

(a) A certificated flight instructor may endorse a student pilot certificate for solo flight only if he determines that the holder has

complied with § 61.63 or 61.71, as applicable, and is otherwise able to make solo flights.

(b) A certificated flight instructor may endorse a student pilot certificate for solo cross-country flight only if he determines that the holder has complied with section 61.65, 61.67, or 61.69, as applicable, and is otherwise able to make solo cross-country flights.

(c) A certificated flight instructor may endorse a student pilot certificate for solo flight in a different make or model of aircraft only if he determines that the holder can make solo flights safely in that aircraft.

(d) A certificated flight instructor may not authorize a student pilot to operate an aircraft in solo flight without first endorsing his student pilot certificate, unless it has previously been endorsed for that privilege by a certificated flight instructor.

[(e) A certificated flight instructor may endorse a student pilot logbook for solo or solo cross-country flight under § 61.73(c), (d), or (e) only if he determines that the student pilot

has complied with the applicable requirements, and if he has performed the following as applicable:

[(1) Given the flight check to the student pilot as provided in § 61.73(c);

[(2) Given the flight instruction to the student pilot, and found him competent for solo flight, as provided in § 61.73(d); or

[(3) Reviewed the student pilot's pre-flight preparation and planning or given the specified flight instruction, when one of these is prescribed, and determined that the student pilot is competent to make the specified solo cross-country flight or flights, as provided in § 61.73(e).]

[(f)] A certificated flight instructor may not give more than eight hours of flight instruction a day nor more than 36 hours in any seven-day period.

The reporting and/or record-keeping requirements contained herein have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

TITLE 14—Aeronautics and Space
Chapter I—Federal Aviation Administration
Department of Transportation
Subchapter E—Airspace

**Part 71—Designation of Federal Airways, Controlled Airspace,
and Reporting Points**

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Part 71—Designation of Federal Airways, Controlled Airspace, and Reporting Points

Subpart A—General

§ 71.1 Applicability.

(a) The airspace assignments described in Subparts B and C are designated as Federal airways.

(b) The airspace assignments described in Subparts B through I are designated as control areas, the continental control area, control zones, transition areas, positive control areas, and reporting points, as described in the appropriate subpart.

§ 71.3 Classification of Federal airways.

Federal airways are classified as follows:

(a) Colored Federal airways:

- (1) Green Federal airways.
- (2) Amber Federal airways.
- (3) Red Federal airways.
- (4) Blue Federal airways.

(b) VOR Federal airways.

§ 71.5 Extent of Federal airways.

(a) Each Federal airway is based on a centerline that extends from one navigational aid or intersection to another navigational aid (or through several navigational aids or intersections) specified for that airway.

(b) Unless otherwise specified in Subpart B or C—

(1) Each Federal airway includes the airspace within parallel boundary lines 4 miles each side of the centerline. Where an airway changes direction, it includes that airspace enclosed by extending the boundary lines of the airway segments until they meet;

(2) Where the changeover point for an airway segment is more than 51 miles from either of the navigational aids defining that segment, and—

(i) The changeover point is midway between the navigational aids, the airway

includes the airspace between lines diverging at angles of 4.5° from the centerline at each navigational aid and extending until they intersect opposite the changeover point; or

(ii) The changeover point is not midway between the navigational aids, the airway includes the airspace between lines diverging at angles of 4.5° from the centerline at the navigational aid more distant from the changeover point, and extending until they intersect with the bisector of the angle of the centerlines at the changeover point; and between lines connecting these points of intersection and the navigational aid nearer to the changeover point;

(3) Where an airway terminates at a point or intersection more than 51 miles from the closest associated navigational aid it includes the additional airspace within lines diverging at angles of 4.5° from the centerline extending from the associated navigational aid to a line perpendicular to the centerline at the termination point;

(4) Where an airway terminates, it includes the airspace within a circle centered at the specified navigational aid or intersection having a diameter equal to the airway width at that point. However, an airway does not extend beyond the domestic/oceanic control area boundary.

(c) Unless otherwise specified in Subpart B or C—

[(1) Each Federal airway includes that airspace extending upward from 700 feet above the surface of the earth to, but not including, 18,000 feet MSI, except that Federal airways for Hawaii have no upper limits. Variations of the lower limits of an

airway are expressed in digits representing hundreds of feet above the surface (AGL) or mean sea level (MSL) and, unless otherwise specified, apply to the segment of an airway between adjoining navigational aids or intersections; and

(2) The airspace of a Federal airway within the lateral limits of a transition area has a floor coincident with the floor of the transition area.

(d) One or more alternate airways may be designated between specified navigational aids or intersections along each VOR Federal airway described in Subpart C. Unless otherwise specified, the centerline of an alternate VOR Federal airway and the centerline of the corresponding segment of the main VOR Federal airway are separated by 15°.

(e) A Federal airway does not include the airspace of a prohibited area.

§ 71.7 Control areas.

Control areas consist of the airspace designated in Subparts B, C, and E, but do not include the continental control area. Unless otherwise designated, control areas include the airspace between a segment of a main VOR Federal airway and its associated alternate segments with the vertical extent of the area corresponding to the vertical extent of the related segment of the main airway.

§ 71.9 Continental control area.

The continental control area consists of the airspace of the 48 contiguous states, the District of Columbia, and Alaska south of lat. 68°00'00" N., excluding the Alaska peninsula west of long. 160°00'00" W., at and above 14,500 MSL, but does not include—

(a) The airspace less than 1,500 feet above the surface of the earth; or

(b) Prohibited and restricted areas, other than restricted area military climb corridors and the restricted areas listed in Subpart D of this Part.

[§ 71.11 Control zones.

[The control zones listed in Subpart F of this Part consist of controlled airspace which extends upward from the surface of the earth and terminates at the base of the continental

control area. Control zones that do not underlie the continental control area have no upper limit. A control zone may include one or more airports and is normally a circular area with a radius of 5 miles and any extensions necessary to include instrument approach and departure paths.]

§ 71.13 Transition areas.

The transition areas listed in Subpart G of this Part consist of controlled airspace extending upward from 700 feet or more above the surface of the earth when designated in conjunction with an airport for which an approved instrument approach procedure has been prescribed; or from 1,200 feet or more above the surface of the earth when designated in conjunction with airway route structures or segments. Unless otherwise specified, transition areas terminate at the base of the overlying controlled airspace.

§ 71.15 Positive control areas.

The positive control areas listed in Subpart H of this Part consist of controlled airspace within which there is positive control of aircraft.

§ 71.17 Reporting points.

(a) The reporting points listed in Subpart I of this Part consist of geographic locations, in relation to which the position of an aircraft must be reported in accordance with § 91.125 of this chapter.

(b) Unless otherwise designated, each reporting point applies to all directions of flight. In any case where a geographical location is designated as a reporting point for less than all airways passing through that point, or for a particular direction of flight along an airway only, it is so indicated by including the airways or direction of flight in the designation of geographical location.

(c) Unless otherwise specified, place names appearing in the reporting point descriptions indicate VOR or VORTAC facilities identified by those names.

§ 71.19 Bearings; radials; miles.

(a) All bearings and radials in this Part are true, and are applied from point of origin.

(b) Except as otherwise specified and ex-

cept that mileages for Federal airways are stated as nautical miles, all mileages in this Part are stated as statute miles.

Subpart B—Colored Federal Airways

§ 71.101 Designation.

The airspace assignments described in this subpart are designated as colored Federal airways.*

§ 71.103 Green Federal airways.

§ 71.105 Amber Federal airways.

§ 71.107 Red Federal airways.

§ 71.109 Blue Federal airways.

Subpart C—VOR Federal Airways

§ 71.121 Designation.

The airspace assignments described in this subpart are designated as VOR Federal airways. Unless otherwise specified, place names appearing in the descriptions indicate VOR or VORTAC navigational facilities identified by those names.*

§ 71.123 Domestic VOR Federal airways.

§ 71.125 Alaskan VOR Federal airways.

§ 71.127 Hawaiian VOR Federal airways.

Subpart D—Continental Control Area

§ 71.151 Restricted areas included.

The airspace of the following restricted areas at or above 14,500 feet MSL and 1,500 feet or more above the surface of the earth is continental control area.*

Subpart E—Control Areas and Control Area Extensions

§ 71.161 Designation of control areas associated with jet routes outside the continental control area.

Unless otherwise specified, the airspace centered on each of the following jet route segments has a vertical extent identical to that of a jet route and a lateral extent identical to that of a Federal airway and is designated as a control area. Unless otherwise specified, the place names appearing in the descriptions indicate VOR or VORTAC facilities identified by those names.*

§ 71.163 Designation of additional control areas.

Unless otherwise specified, each control area designated below has a lateral extent identical to that of a Federal airway and extends upward from 700 feet (until designated from 1,200 feet or more) above the surface of the earth, except that the airspace of a control area within the lateral limits of a transition area has a floor coincident with the floor of the transition area.*

§ 71.165 Designation of control area extensions.

Unless otherwise specified, each control area extension designated below extends upward from 700 feet above the surface of the earth, except that the airspace of a control area extension within the lateral limits of a transition area has a floor coincident with that of the transition area.*

Subpart F—Control Zones

§ 71.171 Designation.

The parts of airspace described below are designated as control zones.*

Subpart G—Transition Areas

§ 71.181 Designation.

The parts of airspace described below are designated as transition areas.*

Subpart H—Positive Control Areas

§ 71.193 Designation of positive control areas.

The parts of airspace described below are designated as positive control areas.*

Subpart I—Reporting Points

§ 71.201 Designation.

The locations described in this subpart are designated as reporting points.*

§ 71.203 Domestic low altitude reporting points.

The reporting points listed below are designated at all altitudes up to but not including 18,000 feet MSL.*

§ 71.207 Domestic high altitude reporting points.

The reporting points listed below are designated at all altitudes from 18,000 feet MSL to Flight Level 450, inclusive.*

§ 71.209 Other domestic reporting points.

The reporting points listed below are designated at all altitudes.*

§ 71.211 Alaskan low altitude reporting points.

The reporting points listed below are designated up to but not including 18,000 feet MSL.*

§ 71.213 Alaskan high altitude reporting points.

The reporting points listed below are designated at 18,000 feet MSL to Flight Level 450.*

§ 71.215 Hawaiian reporting points.

The reporting points listed below are designated at all altitudes.*

*The airspace descriptions in this Part are published in the Federal Register. Due to their complexity and length, they will not be included in this publication of Part 71.