DECISION NO. NJ85-3031

Oilostatic Mainlines and Transportation Pipe Lines

Class A: Backhoe; Cranes (all types); Draglines; Front-end Loaders (5 yds. and over); Gradalls; Scooper (Loader and Shovel); Koehring and Trench Machines.

Class B: "A" Frame; Backhoe (combination Hoe Loader); Boring and Drilling Machines; Ditching Machine, small; Ditchwitch or similar type; Fork Lifts; Front End Loaders (2 yds. and over but less than 5 yds.); Graders, finish (fine); Hydraulic Cranes, 10 tons and under (over 10 tons - Crane rate applies); Side Booms; and Winch Trucks (hoisting).

Class C: Backfiller; Brooms and Sweepers; Bulldozers; Compressors (2 or 3 in battery); Front-end Loaders (under 2 yds.); Generators; Giraffe Grinders; Graders and Motor Patrols; Mechanic; Pipe Bending Machine (power); Tractors; Water and Sprinkler Trucks, Welder and Repair Mechanic

Class D: Compressor (single); Dope Pots (Mechanical with or without pump); Dust Collectors; Farm Tractors; Pumps (4 in. suction and over); Pumps (2 or less than 4 in. suction); Pumps; Diesel Engine and Hydraulic (Immaterial or power); Welding Machines; Gas or Electric Converters of any type, single; Welding Machines, gas or electric converters of any type, 2 or 3 in Battery multiple Welders; Wellpoint Systems (including installation and maintenance).

Class E: Oiler, Grease, gas, fuel and Supply Trucks and Tire Repair and Maintenance.

Class F: Helicopter Pilot.

TRUCK DRIVERS ZONES DESCRIPTIONS

Zone 1: Bergen, Hudson, Passaic Counties.

Zone 2: Essex, Morris, Sussex, and Union (Remainder of County) Counties.

Zone 3: Hunterdon, Middlesex, Somerset, Union (up to Wood Avenue South of Cranford), and Warren Counties.

DECISION NO. NJ85-3031

TRUCK DRIVERS

Group 1: Mechanic Helper,

Group 2: Drivers on the following type vehicles: Straight Dumps, Flats, Floats, Pickups, Container Haulers, Fuel, Water Sprinkler, road Oil, Stringer, Bead, Hot Pass, Bus Dumpcrete, Transit Mixers, Agitator Mixer, Half Truck, Winch Truck, Side-O-Matic, Dynamite, Powder, X-ray, Welding, Skid, Jeep, Station Wagon, Stringer, A-frame, All Dual Purpose Trucks, Trucks with mechanical tailgates, Asphalt Distributor, Batch Trucks, Seeding, Mulching, Fertilizer, Air Compressor Trucks (intransit), Parts Chaser, Escort, Scissor, Hi-lift, Telescope, Concrete Breaker, Gin Pole, Stone, Sand, Asphalt Distributor and Spreader, Nipper, Fuel Trucks (drivers on Fuel Trucks including handling of hose and nozzle-entire unit), Team Drivers, Vacuum or Vac-all Trucks (entire unit), Skid Truck (debris container - entire unit), Concrete Mobile Trucks (entire unit), Expediter (parts chaser), Beltcrete Trucks, Pumpcrete Trucks, Line Truck, Reel Truck, Wreckers, Utility Trucks, Tack Trucks, Warehousemen, Warehouse Parts-men, Yardmen, Lift Truck in Warehouse, Helper when required on Lift Truck in Warehouse, Warehouse Clerk, Parts Man, Material Checker, Receivers, Shippers, Binning Men (materials), Cardex Man, Helper when required on Broyhill Coal Tar Epoxy Truck and Asphalt and Bituminous Distributor Truck, Drivers on the following type vehicles: Broyhill Coal Tar Epoxy Trucks, Little Ford Bituminous Distributor, Slurry Seal Truck or vehicle, Thiokol Track Master Pickup (Swamp Cat Pickup); Bucket Loader Dump Truck and any rubbertired Tractor used in pulling and towing Farm Wagons and Trailers of any discription, similar type vehicles, Off-site and On-site Repair Shop.

Group 3: Drivers on straight 3-axle materials: Trucks and Floats.

Group 4: Drivers on all Euclid type vehicles: Euclids, International Harvesters, Waboos, Caterpillar, Koehring, Tractors and Wagons, Dumpsters, Straight, Bottom, Rear and Side Dumps, Carry-alls and Scarpers (not self loading, loading over the top); Water Sprinkler Trailers; Water Pulls and similar types of vehicles; Drivers on Tractors and Trailer type vehicles: Flat, Floats, I-Beams, Low Beds, Water Sprinkler, Bituminous Transit Mix, Road Oil, Fuel, Bottom Dump Hopper, Rear Dump, Office, Shanty, Epoxy, Asphalt, Agitator Mixer, Mulching, Stringer, Seeding, Fertilizing Pole, Spread, Bituminous Distributor, Water Pulls (entire unit)(Tractor Trailer), Reel Trailer, and similar types of vehicles

Group 5: Winch Trailers Drivers.

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federal register

Friday
August 2, 1985

Part III

Department of Transportation

Federal Aviation Administration

14 CFR Part 71

Proposed Establishment of Airport Radar Service Areas

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Airspace Docket Nos. 85-AWA-2 and 85-AWA-3]

Proposed Establishment of Airport Radar Service Areas

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking.

SUMMARY: This notice proposes to establish Airport Radar Service Areas (ARSA) at 22 locations. Each location is a public or military airport at which a nonregulatory Terminal Radar Service Area (TRSA) is currently in effect. Establishment of each ARSA would require that pilots maintain two-way radio communication with air traffic control (ATC) while in the ARSA. Implementation of ARSA procedures at each of the affected locations would reduce the risk of midair collision and promote the efficient control of air traffic in terminal areas. The proposed locations are set forth under "Docket Number and Comment Closing Date for Proposed ARSA Locations" below.

DATES: Comments must be received on or before November 1, 1985, for Airspace Docket No. 85-AWA-2, and on or before December 1, 1985, for Airspace Docket No. 85-AWA-3.

ADDRESSES: Send comments on the proposal in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket [AGC-204], Airspace Docket No. (specific number), 800 Independence Avenue, SW., Washington, D.C. 20591.

Official dockets may be examined in the Rules Docket, weekdays, except Federal holidays, between 8:30 a.m. and 5:00 p.m. The FAA Rules Docket is located in the Office of the Chief Counsel, Room 916, 800 Independence Avenue, SW., Washington, D.C.

Informal dockets may also be examined during normal business hours at the office of the Regional Air Traffic Division.

FOR FURTHER INFORMATION CONTACT: Paul C. Smith, Airspace and Air Traffic Rules Branch (ATO-230), Airspace-Rules and Aeronautical Information Division, Air Traffic Operations Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591; telephone: (202) 426-8783.

SUPPLEMENTARY INFORMATION:

Comments Invited

This notice involves 22 locations organized into two groups. Each group is assigned a separate docket number and comment period. The locations included in each docket are listed alphabetically under "Docket Number and Comment Closing Date For Proposed Area Locations" below. The closing dates of the comment periods have been spaced at intervals of 30 days. This phasing of the comment periods limits the number of locations subject to a comment closing data at any given time and thereby provides a greater opportunity for public comment, especially for those commenters with an interest in more than one proposed location. Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments that provide the factual basis for supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposals. Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposals. Communications should identify the specific airspace docket reference and be submitted in triplicate to the address listed above. Commenters wishing the FAA to acknowledge receipt of their comments on this notice must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Airspace Docket No. (specific number.)" The postcard will be date/time stamped and returned to the commenter. All communications received before the specified closing dates for comments will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in the light of comments received. All comments submitted will be available for examination in the Rules Docket both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the appropriate docket.

Availability of NPRM's

Any person may obtain a copy of this Notice of Proposed Rulemaking (NPRM) by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Information Center, APA-430, 800 Independence Avenue, SW., Washington, D.C. 20591, or by calling (202) 426-8058. Communications must identify the notice number of this NPRM. Persons interested in being placed on a mailing list for future NPRM's should also request a copy of Advisory Circular No. 11-2 which describes the application procedure.

Docket Number and Comment Closing Date for Proposed ARSA Locations

Airspace Docket No. 85-AWA-2—Comments for this docket must be received on or before November 1, 1985.

Burbank-Glendale-Pasadena Airport, CA
El Toro Marine Corps Air Station, Santa Ana, CA
Greensboro-High Point-Winston-Salem Regional Airport, NC
James M. Cox Dayton International Airport, OH
Lubbock International Airport, TX
March Air Force Base, CA
Norton Air Force Base, CA
Ontario International Airport, CA
Portland International Airport, OR
Tinker Air Force Base, OK
Will Rogers World Airport, Oklahoma City, OK

Airspace Docket No. 85-AWA-3—Comments for this docket must be received on or before December 1, 1985.

Daytona Beach Regional Airport, FL
Des Moines Municipal Airport, IA
El Paso International Airport, TX
Eppley Airfield, Omaha, NE
Fort Lauderdale-Hollywood International Airport, FL
Jacksonville International Airport, FL
Norfolk International Airport, VA
Offutt Air Force Base, NE
Orlando International Airport, FL
Palm Beach International Airport, FL
Richard Evelyn Byrd International Airport, Richmond, VA

Meeting Procedures

In addition to seeking written comments on these proposals, the FAA will hold informal airspace meetings for all proposed ARSA locations in order to receive additional input with respect to the proposals. The schedule of times and places of the hearings is listed in Appendix A. In some instances, meetings on adjacent ARSA locations are combined in one proceeding for the convenience of the public. Also, an effort has been made not to schedule meetings at the same time on separate locations in the same region, so that commenters will be able to attend all meetings in which they may have an interest. Persons who plan to attend any of the meetings should be aware of the following procedures to be followed:

(a) The meetings will be informal in nature and will be conducted by the designated representative of the Administrator. Each participant will be given an opportunity to make a presentation.

(b) The dates, times, and places for each meeting are listed in Appendix A. There will be no admission fee or other charge to attend and participate. The meetings will be open to all persons on a space-available basis. The FAA representative may accelerate the agenda to enable early adjournment if the progress of any meeting is more expeditious than planned.

(c) The meetings will not be recorded. A summary of the comments made at each meeting will be filed in the docket.

(d) Position papers or other handout material relating to the substance of the meeting may be accepted at the discretion of the FAA representative. Participants submitting handout materials should present an original and two copies to the presiding officer for approval before distribution. If approved by the presiding officer, there should be an adequate number of copies provided for futher distribution to all participants.

(e) Statements made by FAA participants at the meetings should not be taken as expressing a final FAA position.

Agenda

Presentation of Meeting Procedures
FAA Presentation of Proposal
Public Presentations and Discussion.

Background

On April 22, 1982, the National Airspace Review (NAR) plan was published in the **Federal Register** (47 FR 17448). The plan encompassed a review of airspace use and procedural aspects of the ATC system. Among the main objectives of the NAR were the improvement of the ATC system by increasing efficiency and reducing complexity. In its review of terminal airspace, NAR Task Group 1-2 concluded that TRSA's should be replaced. Four types of airspace configurations were considered as replacement candidates, of which Model B, since redesignated ARSA, was the consensus recommendation.

In response, the FAA published NAR Recommendation 1-2.2.1, "Replace Terminal Radar Service Areas with Model B Airspace and Service" in Notice 83-9 (July 28, 1983; 48 FR 34286) proposing the establishment of ARSA's at the Robert Mueller Municipal Airport, Austin, TX, and the Port of Columbus International Airport, Columbus, OH. ARSA's were designated at these airports on a temporary basis by SFAR No. 45 (October 28, 1983; 48 FR 50038) in order to provide an operational confirmation of the ARSA concept for potential application on a national basis.

Following a confirmation period of more than a year, the FAA adopted the NAR recommendation and on February 27, 1985, issued a final rule (50 FR 9252; March 6, 1985) defining an ARSA and establishing air traffic rules for operation within such an area. Concurrently, by separate rulemaking action, ARSA's were permanently established at the Austin, TX, and Columbus, OH, airports and also at the Baltimore/Washington International Airort, Baltimore, MD (50 FR 9250; March 6, 1985). The FAA has stated that future notices would propose ARSA's for other airports at which TRSA procedures were in effect.

Related Rulemaking

This notice proposes ARSA designations at 22 of the locations identified as candidates for an ARSA in the preamble to Amendment No. 71-10 (50 FR 9252). Fourteen candidates were previously proposed in Airspace Docket No. 85-AWA-1 (50 FR 27528). Other candidate locations will be proposed in future notices published in the **Federal Register.**

The Current Situation at the Proposed ARSA Location

A TRSA is currently in effect at each of the locations at which ARSA's are proposed in this notice. A TRSA consists of the airspace surrounding a designated airport where ATC provides radar vectoring, sequencing, and separation for all aircraft operating under instrument flight rules (IFR) and for participating aircraft operating under visual flight rules (VFR). TRSA airspace and operating rules are not established by regulation, and participation by pilots operating under VFR is voluntary, although pilots are urged to participate. This level of service is known as Stage III and is provided at all locations identified as TRSA's. The NAR task group recommended the replacement of most TRSA's with ARSA's.

A number of problems with the TRSA program were identified by the task group. The task group stated that because there are different levels of service offered within the TRSA, users are not always sure of what restrictions or privileges exist, or how to cope with them. According to the task group, there is a feeling shared among users that TRSA's are often poorly defined, are generally dissimilar in dimensions, and encompass more area than is necessary or desirable. There are other users who believe that the voluntary nature of the TRSA does not adequately address the problems associated with nonparticipating aircraft operating in relative proximity to the airport and associated approach and departure courses. There is strong advocacy among user organzations that terminal radar facilities should provide all pilots the same service, in the same way, and, to the extent feasible, within standard size airspace designations.

Certain provisions of FAR Section 91.87 add to the problem identified by the task group. For example, aircraft operating under VFR to or from a satellite airport within the airport traffic area of the primary airport are excluded from the two-way radio communications requirement of Section 91.87. This condition is acceptable until the volume and density of traffic at the primary airport dictates further action.

The Proposals

The FAA is considering amendments to § 71.501 of Part 71 of the Federal Aviation Regulations (14 CFR Part 71) to establish ARSA's at 22 locations. Each location is a public or military airport at which a nonregulatory TRSA is currently in effect. The proposed locations are set forth under "Docket Number and Comment Closing Date for Proposed Area Locations," above, and depicted on charts in Appendix B to this notice.

The FAA has published a final rule (50 FR 9252; March 6, 1985) which defines ARSA and prescribes operating rules for aircraft, ultralight vehicles, and parachute jump operations in airspace designated as an ARSA.

The final rule provides in part that any aircraft arriving at any airport in an ARSA or flying through an ARSA, prior to entering the ARSA must: (1) Establish two-way radio communications with the ATC facility having jurisdiction over the area, and (2) while in the ARSA, maintain two-way radio communications with that ATC facility. For aircraft departing from the primary airport within the ARSA, two-way radio communications must be maintained with the ATC facility having jurisdiction over the area. For aircraft departing a satellite airport within the ARSA, two-way radio communications must be established as soon as practicable after takeoff with the ATC facility having jurisdiction over the area, and thereafter maintained while operating within the ARSA.

All aircraft operating within an ARSA are required to comply with all ATC clearances and instructions and any FAA arrival or departure traffic pattern for the airport of intended operation. However, the rule permits ATC to authorize appropriate deviations to any of the operating requirements of the rule when safety considerations justify the deviation or more efficient utilization of the airspace can be attained. Ultralight vehicle operations and parachute jumps in an ARSA may only be conducted under the terms of an ATC authorization.

The FAA adopted the NAR task group recommendation that each ARSA be of the same airspace configuration insofar as practicable. The standard ARSA consists of airspace within 5 nautical miles of the primary airport extending from the surface to an altitude of 4,000 feet above that airport's elevation, and that airspace between 5 and 10 nautical miles from the primary airport from 1,200 feet above the surface to an altitude of 4,000 feet above that airport's elevation. Proposed deviation from the standard has been necessary at some airports due to adjacent regulatory airspace, international boundaries, topography, or unusual operational requirements.

Definitions, operating requirements, and specific airspace designations applicable to ARSA may be found in 14 CFR Part 71, §§ 71.14 and 71.501 and Part 91, §§ 91.1 and 91.88.

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore—(1) is not a "major rule" under Executive Order 12291; and (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Regulatory Evaluation

The FAA has conducted a detailed Regulatory Evaluation of the proposed ARSA implementation program which is included in the regulatory docket. The methodology and major findings of that evaluation are presented below.

a. *Costs.* Costs which potentially may result from the ARSA program fall into the following categories:

(1) Air traffic controller staffing, controller training, and facility equipment costs incurred by the FAA.

(2) Costs associated with the revision of charts, notification of the public, and pilot education.

(3) Additional operating costs for circumnavigating or flying over the ARSA.

(4) Potential delay costs resulting from operations within an ARSA rather than a TRSA.

(5) The need for some operators to purchase radio transceivers.

(6) Miscellaneous costs.

Each of these cost factors is discussed further below:

(1) Air traffic controller staffing, controller training, and facility equipment costs incurred by the FAA.

For the sites proposed in this notice the FAA does not expect to incur any additional air traffic controller staffing costs, controller training costs, or facility equipment costs. FAA believes that the additional traffic which will participate in radar services at ARSA's can be accommodated at current authorized staffing levels. Participation in TRSA's is already quite high, and the greater flexibility afforded controllers through the reduced separation standards will enable them to handle the additional traffic without requiring additional personnel beyond present authorizations. FAA expects to train its controller force in ARSA procedures during regularly scheduled briefing sessions. Airports where TRSA's are currently in operation already have automated terminal radar systems installed. Therefore, FAA does not expect to incur any additional training or equipment procurement costs. Essentially, the FAA is modifying its terminal radar procedures in the ARSA program in a manner which will make more efficient use of existing resources, and consequently does not expect to incur any appreciable implementation costs.

(2) Costs associated with the revision of charts, notification of the public, and pilot education.

Chart revisions of the type required to depict an ARSA are made routinely during charting cycles, and are considered an ordinary cost of doing business. Therefore, the FAA does not expect to incur any additional charting costs as a result of the ARSA program. Further, pilots will obtain charts depicting ARSA's as they are published during these charting cycles. Because pilots are required to use current charts, they also will not incur any additional costs.

Much of the need to provide public notification and pilot education about ARSA procedures will be met as a part of this rulemaking proceeding during the informal public meetings which will be held for each proposed ARSA location. However, once the decision has been made to establish an ARSA through a final rule issued in this proceeding, the FAA will distribute a Letter to Airmen to all pilots residing in the vicinity of ARSA sites explaining the operation and configuration of the ARSA finally adopted. The FAA will also issue an Advisory Circular explaining ARSA's. The total one-time cost of distributing Letters to Airmen and the Advisory Circular is estimated to be approximately $50,000 for the entire ARSA program. The prorated one-time cost for those airports being considered in this rulemaking is approximately $8,000.

(3) Additional operating costs for circumnavigating or overflying an ARSA.

FAA anticipates that some pilots who currently transit a TRSA without establishing radio communications or participating in radar services will choose to avoid the mandatory participation airspace of an ARSA rather than participate. Delay costs will be incurred by these pilots equal to the additional aircraft variable operating cost and the value of lost crew and passenger time resulting from the deviation. Many pilots will elect to overfly the ARSA, and although this will not result in any appreciable delay, an additional fuel burn will result from the need to temporarily climb above the 4,000 feet AGL ceiling of the ARSA (which will be offset somewhat by the descent).

The unit delay costs used throughout this regulatory evaluation to develop total annual costs are presented in Table A. For those aircraft expected to overfly the ARSA rather than deviate around it, FAA estimates that a single-engine piston airplane will burn about an additional half gallon of fuel, a multi-engine piston airplane will burn about one additional gallon, and that the price of aviation gasoline is approximately $2.00 per gallon.

TABLE 1.—AVERAGE AIRCRAFT VARIABLE OPERATING COSTS AND VALUE OF PASSENGER TIME USED TO ESTIMATE ANNUAL DELAY COSTS[1]

[1984 dollars]

Aircraft type (abbreviation)	Aircraft hourly variable operating cost[2]	Average number of passengers (pax)/total hourly value of time[3]	Total hourly delay costs
Single-engine piston (SEP).	$39.22	2 pax/$44.42	$83.64
Multi-engine piston (MEP).	118.07	3 pax/$66.63	184.70
Multi-engine turboprop (METP).	354.32	3 pax/$66.63	420.95
Executive Jet (EXJ).	1,036.64	4 pax/$88.84	1,125.48
Air Carrier (AC)	2,588.77	90 pax/$1998.90	4,587.67
Helicopter (HELI)	138.27	3 pax/$66.63	204.90
Military Jet (MILJ)	1,853.67		1,853.67
Military Helicopter (MILH).	195.14		195.14

TABLE 1.—AVERAGE AIRCRAFT VARIABLE OPERATING COSTS AND VALUE OF PASSENGER TIME USED TO ESTIMATE ANNUAL DELAY COSTS[1]—Continued

[1984 dollars]

Aircraft type (abbreviation)	Aircraft hourly variable operating cost[2]	Average number of passengers (pax)/total hourly value of time[3]	Total hourly delay costs
Military Transport (MILTRP)[4].	1,994.79		1,994.79

[1] One minute average delay per day=6.083 hours delay per year. Delay time estimates for aircraft which alter flight paths to avoid the ARSA are based upon average cruising speeds of 120 KTS for single-engine piston, 190 KTS for multi-engine piston, 225 KTS for executive jets, and 110 KTS for helicopters.

[2] Aircraft variable operating costs include crew salaries for all aircraft except single and multi-engine piston.

[3] Based upon $22.21 per hour average value of passenger time.

[4] Variable operating cost of air carrier 4-engine turboprop transport used as proxy for military transport.

Source: *Economic Values for Evaluation of Federal Aviation Administration Investment and Regulatory Programs*, FAA Office of Aviation Policy and Plans, September 1981 (Report #FAA-APO-81-3 and revision #APO-84-3). Values have been adjusted for inflation and are expressed in 1984 dollars.

The Office of Aviation Policy and Plans (APO) requested ATC personnel at each of the proposed ARSA sites to estimate, based upon their familiarity with local traffic patterns, the number of daily flights which might circumnavigate or overfly the ARSA. Air Traffic Operations Service personnel also provided input on these estimates. The estimated number of daily flights affected, extent of deviation, and type of aircraft, are presented for each site in Tables 2A and 2B, which follow at the end of this section and summarize the various potential impacts of establishing an ARSA for each site. FAA estimates that the total annual circumnavigation and overflight costs for the candidate ARSA sites proposed in this notice will be approximately $420 thousand.

(4) Delay costs resulting from operations within an ARSA rather than a TRSA.

FAA recognizes that the potential exists for delay to develop at some locations following establishment of an ARSA because of the additional traffic which the radar facilities will be handling. However, FAA believes that the greater flexibility afforded controllers in handling traffic as a result of the reduced separation standards will keep delay problems to a minimum. Those that do occur will be transitional in nature, diminishing as facilities gain operating experience with ARSA's and learn how to tailor procedures and resources to take fullest advantage of the efficiencies which an ARSA will permit. Followup studies of the Austin and Columbus lead sites, completed by the FAA Office of Aviation Policy and Plans (APO) and by Engineering & Economics Research Inc. (EER), both indicated that delay was not a significant problem (the clearance delivery delay attributable to the ARSA at Austin was later alleviated through procedural changes and a redistribution of personnel).[1] Nevertheless, the FAA has attempted to estimate delay costs which might temporarily result from establishing ARSA's at the airports being considered in this proposal. These delay estimates should be regarded as the worst case situation which might follow the initial establishment of an ARSA. ATC personnel at each of the proposed sites, as well as Air Traffic Operations Service personnel, provided estimates of three categories of delay, *in comparison to the existing TRSA*, which might result from the ARSA: clearance delivery and/or departure delay for aircraft departures, sequencing delay during peak periods for arriving aircraft, and delay in establishing radar contact before entering the ARSA which might result from frequency congestion, controller overload, or greater participation of nontransponder equipped aircraft.

The estimated number of daily flights affected, duration of delay, and type of aircraft, are presented for each site in Tables 2A and 2B. FAA estimates that the total annual delay costs for the candidate ARSA sites proposed in this notice will be approximately $960 thousand.

(5) The need for some operators to purchase communications avionics. Because of the requirement that radio communications be maintained in the mandatory participation airspace of the ARSA, some operators who previously could operate without radios from satellite airports located within that portion of the proposed ARSA which will extend down to the surface will find it necessary to install two-way radios. FAA expects that the costs resulting from these aircraft will be minimal because in most instances the proposed ARSA provides airspace exclusions and cutouts for satellite airports within 5 nautical miles of the ARSA center. However, in a few instances, operators of nonradio equipped (NORDO) aircraft will need to install radios. FAA estimates that the average total cost of equipping a NORDO aircraft with an inexpensive 720 channel transceiver, including installation, is approximately $2,300. The annual expense to an aircraft operator who financed the cost over a four-year period at a 15 percent interest rate would be $751. NORDO aircraft are shown in the "Miscellaneous" column of Tables 2A and 2B for those proposed sites where ATC personnel have identified locally based aircraft which might be affected. FAA estimates that the total annual radio installation costs for affected aircraft at the candidate ARSA sites will be approximately $4,500.

(6) Miscellaneous costs.

At some proposed ARSA locations, special situations might exist where establishment of an ARSA could impose certain costs on users of that airspace. The exclusions in most cases will alleviate adverse impacts on local-fixed based operators and airport operators, but ATC personnel at the proposed ARSA sites have attempted to identify where such potential problems may exist. For example, at some locations replacing a TRSA with an ARSA may necessitate relocating a student practice area further away from the flight school airport, and additional operating costs will be incurred traveling the greater distance to and from the practice area. Other miscellaneous operations which might be affected include glider and ultralight operations.

These impacts would be indicated in the "Miscellaneous" column of Tables 2A and 2B for sites where they have been identified. However, no such impacts are anticipated at any of the candidate ARSA sites proposed in this notice. Respondents are requested to comment upon any special local operations which might be affected by an ARSA either during the public meetings or through written comments submitted to the docket.

[1] *Analysis of the Impact of the Airport Radar Service Area (ARSA)*, FAA Office of Aviation Policy and Plans, November 1984 (Report #FAA-APO-85-1); and *National Airspace Review—Airport Radar Service Area Operational Confirmation Report*, Engineering & Economics Research, Inc. (EER), Report No. DOT/FAA/AT-84/2, October 1984.

TABLE 2A.—ESTIMATED AVERAGE DAILY FLIGHT DEVIATIONS, OVERFLIGHTS, DELAY AND MISCELLANEOUS IMPACTS FOR PROPOSED ARSA SITES

[Docket 85-AWA-2]

Site name	Daily flight deviations (NM) or overflights (OV)	Daily clearance delivery and/or departure delay	Daily arrival sequencing delay	Daily radar contact delay	Miscellaneous
Burbank	38 SEP/10 MEP/2 EXJ—1 min. (2 to 4 NM).	0	0	7 SEP/2 MEP/1 EXJ—1 min (60 times per year).	0
El Toro Marine Corps Air Station.	50 SEP—5 NM	0	25 SEP—7 min	3 SEP—0.5 min	0
Greensboro	3 SEP—10 NM	0	0	0	0
James M. Cox (Dayton)	20 SEP—11 NM	4 SEP/1 MEP/5 AC—1 min	4 SEP/1 MEP—2 min	8 SEP/2 MEP—2 min	0
Lubbock	0	0	0	0	0
March Air Force Base	0	Primary: 0; Satellite: 3 SEP—3 min.	0	0	0
Norton Air Force Base	0	0	0	0	0
Ontario	0	Primary: 2 SEP/3 MEP/1 AC—0.25 min.; Satellite: 25 SEP—3 min.	6 SEP/10 MEP/1 EXJ/3 AC—0.4 min.	Primary: 5 SEP/3 MEP—2 min.; Satellite: 18 SEP/12 MEP—2 min.	0
Portland (Oregon)	0	0	0	0	0
Tinker Air Force Base	3 SEP—4 NM	0	1 MILTRP/3 MILJ—3 min	0	0
Will Rogers (Oklahoma City)	3 SEP/2 MEP—3 NM	0	0	0	0

NOTE.—Aircraft abbreviations from Table 1.

TABLE 2B.—ESTIMATED AVERAGE DAILY FLIGHT DEVIATIONS, OVERFLIGHTS, DELAY AND MISCELLANEOUS IMPACTS FOR PROPOSED ARSA SITES

[Docket 85-AWA-3]

Site name	Daily flight deviations (NM) or overflights (OV)	Daily clearance delivery and/or departure delay	Daily arrival sequencing delay	Daily radar contact delay	Miscellaneous
Daytona Beach	15 SEP/5 MEP—8.5 NM	0	0	20 SEP/10 MEP—2 min	0
Des Moines	0	0	0	0	0
El Paso	0	0	0	0	0
Eppley Airfield (Omaha)	10 SEP/5 MEP—3 NM	0	15 SEP/5 MEP/5 EXJ—1.5 min.	15 SEP/5 MEP/5 EXJ—1.5 min.	0
Fort Lauderdale	10 SEP/5 MEP—10 NM	0	0	0	0
Jacksonville	15 SEP/5 MEP—12.5 NM	0	0	10 SEP/5 MEP—4 min	6 NORDO
Norfolk	4 SEP/4 MEP—OV 4 SEP/3 MEP—5 NM	4 SEP/4 MEP—2.5 min	0	20 SEP/20 MEP—3 min	0
Offutt Air Force Base	0	0	0	0	0
Orlando	0	0	0	10 SEP/5 MEP—7.5 min	0
Palm Beach	20 SEP/11 MEP—5 NM	0	0	0	0
Richard Evelyn Byrd International (Richmond)	6 SEP—5 NM	0	0	0	Relocation of New Kent County (W96) VFR practice area required. However, alternative locations are closer than present area to W96. No cost.

NOTE.—Aircraft abbreviations from Table 1.

Overall total annual costs, by cost category, of establishing ARSA's at the airports proposed in this notice are summarized in Table 3 below. The maximum total annual cost of establishing ARSA's at these sites, if an ARSA is established at each site proposed, is estimated to be approximately $1.4 million. However, this maximum is expected to diminish significantly as controllers and pilots gain experience in ARSA operations. Delay will be reduced, and in many cases, traffic will ultimately flow more smoothly and expeditiously than in existing TRSA's.

Table 3.—Maximum Annual Costs of Establishing ARSA's at Proposed Sites (1984 Dollars)

1. FAA controller and equipment costs	$0
2. Chart revision, pilot education (one time)	8,000
3. Circumnavigation and overflight	420,000
4. Departure, sequencing, and radar contact delay	959,500
5. Radio transceivers/miscellaneous	4,500
Total costs	1,392,000

b. *Benefits.* Much of the benefit which will result from the ARSA program is nonquantifiable, and will result from simplifying and standardizing ARSA configurations and operating procedures. The standardization and simplicity of the ARSA concept is expected to alleviate many of the problems identified by the NAR task group. In addition, once experience has been gained in ARSA operations, traffic is expected to move more efficiently and expeditiously than it currently does within a TRSA.

Although many of the benefits of the ARSA program are nonquantifiable, FAA has attempted to make some preliminary estimates of the savings in time and money which might be realized as a result of the greater flexibility allowed air traffic controllers in handling traffic within an ARSA. These estimated savings may or may not offset the delay which some sites anticipate after the initial establishment of an ARSA, but are expected to eventually provide overall time savings which exceed delay as controllers gain experience with ARSA operating procedures. ATC personnel at Columbus, OH, and Austin, TX, where ARSA's have been in operation for approximately a year and a half, report that this has been their experience.

To develop these estimates of savings, FAA used procedures similar to those discussed in the previous section for estimating delay costs. Local ATC personnel, together with the Air Traffic Operations Service, estimated for each candidate ARSA site the number of daily operations and the types of aircraft involved which might save time, *in comparison to operations within a*

TRSA, as a result of the reduced separation standards of the ARSA.

FAA estimates that the total annual value of time savings for the candidate ARSA sites proposed in this notice will be approximately $332 thousand. (The unit costs used to estimate the value of time savings are the same as those used to estimate delay costs presented in Table 1.)

Some of the benefits of the ARSA program cannot be specifically attributed to individual candidate airports, but rather will result from the overall improvements in terminal area ATC procedures realized as ARSA's are implemented throughout the country. Establishment of ARSA's at the sites proposed in this notice will contribute to these overall improvements.

ARSA's have the potential for reducing the number of near midair collisions (NMAC's). In its 1984 study of midair and near midair collison data, the Office of Aviation Safety found that approximately 15 percent of reported NMAC's occurred in TRSA airspace.[2] The study found that about half of all NMAC's occurred at altitudes between 1,000 and 5,000 feet, that over 85 percent of NMAC's occurred when visibility was 5 miles or greater, and that the largest number of NMAC reports are associated with IFR operators under radar control conflicting with VFR traffic during VFR flight conditions below 12,500 feet. Further, the majority of reported NMAC's occurring within or in the near vicinity of TRSA's involve either an air carrier or military aircraft as one of the aircraft (which partially reflects the practice of air carrier and military pilots to report NMAC incidents, when they do occur, more frequently than general aviation pilots). The mandatory participation requirements of the ARSA may help alleviate such conflicts where they currently are occurring in TRSA airspace. Further, the EER and APO studies of the ARSA confirmation sites (see note 1) indicate that NMAC's may be reduced by approximately 35 to 40 percent.

Although no quantifiable benefits can be attributed to a reduction in near midair collisions, near midair and actual midair collisions result from similar causal factors, and a reduction in near midair collisions suggests that a reduction in actual midair collisions, which can involve substantial losses, may also be expected as a result of the ARSA program.

The APO study of the ARSA confirmation sites (note 1) included a detailed analysis to determine if a reduction in midair collision risk might result from replacing a TRSA with an ARSA. The collision risk analysis was based upon the experience at the Columbus confirmation site, where recorded radar data were available, and focused on conditions of fairly heavy VFR activity because the ARSA will affect procedures used to handle VFR traffic in the terminal radar area. The analysis determined that there was no compression of traffic in the airspace immediately around, under, and over the ARSA, and in the absence of compression, the mandatory participation requirement for all aircraft operating within the ARSA resulted in a 75 percent reduction in midair collision risk. Further, even under the pessimistic assumption that the changes in separation standards would completely eliminate the effectiveness of controller-initiated avoidance maneuvers, and the pilot would only have the benefit of radar traffic advisories, the study found that the mandatory pilot participation required in the ARSA still provided a 63 percent reduction in midair collision risk in comparison to the TRSA.

FAA has examined National Transportation Safety Board midair collision accident records for the period between January 1978 and October 1984. This review indicated that approximately one to two midair collisions occurred per year throughout the United States which either could have been prevented, or the probability of their occurrence would have been greatly reduced, had an ARSA, rather than a TRSA, been in effect where these accidents occurred. Because the circumstances observed at the Columbus confirmation site may not necessarily be found at other TRSA locations, the 75 percent reduction in midair collision risk measured at Columbus may not be achieved at other ARSA sites. Therefore, the FAA conservatively estimates that implementation of the ARSA program nationally may result in an average reduction in midair collision risk of only 50 percent at TRSA locations that are replaced with ARSA's.

Reducing by 50 percent the one to two midair collisions per year where an ARSA could have made a difference would result in the prevention of one midair collision nationally every one to two years. The quantifiable benefits of preventing a midair collision can range from less than $100 thousand, resulting from the prevention of a minor accident between general aviation aircraft, to quantifiable benefits of as much as $100 million to $300 million, resulting from the prevention of a midair collision involving an air carrier aircraft and numerous fatalities. Establishment of ARSA's at the sites proposed in this notice will contribute to this improvement in safety.

c. *Comparison of Costs and Benefits.* A direct comparison of the costs and benefits of this proposal is difficult for a number of reasons. Many of the benefits of the proposal are nonquantifiable, especially those associated with simplification and standardization of terminal airspace procedures. Further, it is difficult to specifically attribute the standardization benefits, as well as the safety benefits, to individual candidate ARSA sites. Finally, until more experience has been gained with ARSA operations, estimates of both the efficiency improvements resulting in time savings to aircraft operators, and the potential delays resulting from mandatory participation, will be quite preliminary.

ATC personnel at some facilities anticipate that the process will go very smoothly, delays will be minimal, and that efficiency gains will be realized from the start. Other sites anticipate that delay problems will dominate the initial adjustment period. Both the Austin and Columbus confirmation sites went through initial adjustment periods, but not experience almost no delay as a result of ARSA procedures. Baltimore-Washington is currently progressing along a similar learning curve.

FAA believes these adjustment problems will only be temporary, and that once established, the ARSA program will result in an overall improvement in efficiency in terminal area operations at those airports where ARSA's are established. These overall gains which FAA expects for the group of candidate ARSA sites proposed in this notice typify the benefits which FAA expects to achieve nationally from the ARSA program. These benefits will be achieved without any additional controller staffing or radar equipment costs to the FAA.

In addition to these operational efficiency improvements, establishment of the proposed ARSA sites will contribute to a reduction in midair collisions. The quantifiable benefits of this safety improvement could range from less than $100 thousand, to as much as $300 million, for each accident prevented.

[2] *Selected Statistics Concerning Near Midair and Midair Collisions*, FAA Office of Aviation Safety—Safety Analysis Division (ASF-200), August 31, 1984. The data base used in this study is currently under revision to correct problems in reporting procedures which have recently been identified. Although the total numbers of reported NMAC's have been revised upward, the relative distribution of incidents which occur in various operating environments has not changed significantly.

For these reasons, FAA expects that establishment of the ARSA sites proposed in this notice will produce long term, ongoing benefits which will exceed their costs, which are essentially transitional in nature.

International Trade Impact Analysis

This proposed regulation will only affect terminal airspace operating procedures at selected airports within the United States. As such, it will have no affect on the sale of foreign aviation products or services in the United States, nor will it affect the sale of United States aviation products or services in foreign countries.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by government regulations. The RFA requires agencies to review rules which may have "a significant economic impact on a substantial number of small entities."

The small entities which could be potentially affected by implementation of the ARSA program are the fixed-base operators, flight schools, agricultural operators and other small aviation businesses located at satellite airports within 5 nautical miles of the ARSA center. If the mandatory participation requirement were to extend down to the surface at these airports, where under current regulations participation in the TRSA and radio communication with ATC is voluntary, operations at these airports might be altered, and some business could be lost to airports outside of the ARSA core. FAA has proposed to exclude almost every satellite airport located within the 5-nautical-mile ring to avoid adversely impacting their operations, and to simplify coordinating ATC responsibilities between the primary and satellite airports. In some cases, the same purposes will be achieved through Letters of Agreement between ATC and the affected airports which establish special procedures for operating to and from these airports. In this manner, FAA expects to virtually eliminate any adverse impact on the operations of small satellite airports which potentially could result from the ARSA program.

Further, because the FAA expects that any delay problems which may initially develop following implementation of an ARSA will be transitory, and because the airports which will be affected by the ARSA program represent only a small proportion of all the public use airports in operation within the United States, small entities of any type which use aircraft in the course of their business will not be adversely impacted.

For these reasons, the FAA certifies that the proposed regulation will not result in a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required under the terms of the RFA.

ICAO Considerations

As part of these proposals relates to navigable airspace outside the United States, this notice is submitted in consonance with the International Civil Aviation Organization (ICAO) International Standards and Recommended Practices.

Applicability of International Standards and Recommended Practices by the Air Traffic Operations Service, FAA, in areas outside domestic airspace of the United States is governed by Article 12 of, and Annex 11 to, the Convention on International Civil Aviation, which pertains to the establishment of air navigational facilities and services necessary to promoting the safe, orderly, and expeditious flow of civil air traffic. Their purpose is to ensure that civil flying on international air routes is carried out under uniform conditions designed to improve the safety and efficiency of air operations.

The International Standards and Recommended Practices in Annex 11 apply in those parts of the airspace under the jurisdiction of a contracting state, derived from ICAO, wherein air traffic services are provided and also whenever a contracting state accepts the responsibility of providing air traffic services over high seas or in airspace of undetermined sovereignty. A contracting state accepting such responsibility may apply the International Standards and Recommended Practices in a manner consistent with that adopted for airspace under its domestic jurisdiction.

In accordance with Article 3 of the Convention on International Civil Aviation, Chicago, 1944, state aircraft are exempt from the provisions of Annex 11 and its Standards and Recommended Practices. As a contracting state, the United States agreed by Article 3(d) that its state aircraft will be operated in international airspace with due regard for the safety of civil aircraft.

Since these actions involve, in part, the designation of navigable airspace outside the United States, the Administrator is consulting with the Secretary of State and the Secretary of Defense in accordance with the provisions of Executive Order 10854.

List of Subjects in 14 CFR Part 71

Airport radar service areas, Airspace, Navigation (air).

The Proposed Amendments

Accordingly, pursuant to the authority delegated to me, the Federal Aviation Administration proposes to amend Part 71 of the Federal Aviation Regulations (14 CFR Part 71) as follows:

1. The authority citation for Part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised, Pub. L. 97–449, January 12, 1983); 14 CFR 11.69.

Airspace Docket No. 85–AWA–2

2. Section 71.501 is amended as follows:

Burbank-Glendale-Pasadena Airport, CA—[New]

That airspace extending upward from the surface to and including 4,800 feet MSL within a 5-mile radius of the Burbank-Glendale-Pasadena Airport (lat. 34°12'02" N., long. 118°21'27" W.) excluding a 1.5-mile radius around Whiteman Airport (lat. 34°15'35" N., long. 118°24'45" W.) and that airspace within a 10-mile radius of the Burbank-Glendale-Pasadena Airport extending upward from 3,000 feet MSL to and including 4,800 feet MSL, but excluding that airspace from the 345°T(331°M) bearing from the Burbank-Glendale-Pasadena Airport clockwise to the 055° T (041° M) bearing from the Burbank-Glendale-Pasadena Airport, and that airspace that overlies the Los Angeles, CA, Terminal Control Area.

El Toro MCAS, Santa Ana, CA—[New]

That airspace extending upward from the surface to and including 4,400 feet MSL within a 5-mile radius of the El Toro Marine Corps Airport (lat. 33°40'18" N., long. 117°43'30" W.) excluding that airspace west of a line extending from a point on the 255°T(241°M) bearing from the airport on the 5-mile arc to a point on the 335°T(321°M) bearing from the airport on the 5-mile arc, excluding the west/northwest arc from the 213°T(227°M) bearing from the airport clockwise to the 303°T(317°M) bearing from the airport and that airspace extending upward 2,500 feet MSL to and including 4,400 feet MSL within a 10-mile radius of the El Toro Marine Corps Airport from the 076°T(090°M) bearing from the airport clockwise to the 134°T(148°M) bearing from the airport and that airspace extending upward from 1,900 feet MSL to and including 4,400 feet MSL within a 10-mile radius of the El Toro Marine Corps Airport from the 134°T(148°M) bearing from the airport clockwise to the 158°T(172°M) bearing from the airport and that airspace extending upward from 2,500 feet MSL to and including 4,400 feet MSL from the 158°T(172°) bearing from the airport clockwise to the 336°T(350°M) bearing from the airport and that airspace which overlies the Tustin Marine Corps Airport from 2,500 feet MSL to and including 4,400 feet MSL west of a line drawn from the 213°T(227°M) bearing from the airport to the 303°T(317°M) bearing from the airport where the line bisects the 5-mile radius.

Greensboro-High Point-Winston-Salem Regional Airport, NC—[New]

That airspace extending upward from the surface to and including 5,000 feet MSL within a 5-mile radius of the Greensboro-High Point-Winston-Salem Regional Airport (lat. 36°05'47" N., long. 79°56'21" W.), and that airspace extending upward from 2,100 feet MSL to 5,000 feet MSL within a 10-mile radius of the Greensboro-High Point-Winston-Salem Regional Airport.

James M. Cox Dayton International Airport, OH—[New]

That airspace extending upward from the surface to and including 5,000 feet MSL within a 5-mile radius of the James M. Cox Dayton International Airport (lat. 39°54'04" N., long. 84°13'12" W.), and that airspace extending upward from 2,100 feet MSL to and including 5,000 feet MSL within a 10-mile radius from the James M. Cox Dayton International Airport from the 062°T(066°M) bearing from the airport clockwise to the 147°T(151°M) bearing from the airport and that airspace extending upward from 2,200 feet MSL to and including 5,000 feet MSL within a 10-mile radius of the James M. Cox Dayton International Airport from the 147°T(151°M) bearing from the airport clockwise to the 062°T(066°M) bearing from the airport.

Lubbock International Airport, TX—[New]

That airspace extending upward from the surface to and including 7,300 feet MSL within a 5-mile radius of Lubbock International Airport (lat. 33°39'49" N., long. 101°49'20" W.), and that airspace extending upward from 4,500 feet MSL to 7,300 feet MSL within a 10-mile radius of the airport.

March AFB, CA—[New]

That airspace extending upward from the surface to and including 5,500 feet MSL within a 5-mile radius of March AFB (lat. 33°52'51" N., long. 117°15'31" W.), and that airspace within a 10-mile radius of March AFB extending upward from 3,900 feet MSL to and including 5,500 feet MSL to the points where the 10-mile arc from March AFB meets a 10-mile arc from Norton AFB, CA, Airport Radar Service Area (lat. 34°05'43" N., long. 117°9'55" W.).

Norton AFB, CA—[New]

That airspace extending upward from the surface to and including 5,500 feet MSL within a 5-mile radius of Norton AFB (lat. 33°52'51" N., long. 117°15'31" W.) excluding that airspace within a 1.5-mile radius of Redlands Airport (lat. 34°05'00" N., long. 117°09'55" W.), and that airspace extending upward from 4,500 feet MSL to 5,500 feet MSL within a 10-mile radius of Norton AFB from the 101°T(087°M) bearing from the airport clockwise to the 196°T(182°M) bearing from the airport to the points where the 10-mile arc from the airport joins a 10-mile arc from March AFB, CA, (lat. 33°52'51" N., long. 117°15'31" W.) Airport Radar Service Area (ARSA), and that airspace extending upward from 2,700 feet MSL to and including 5,500 feet MSL from the 196°T(182°M) bearing from the airport to Foothill Boulevard, and to the point where the 10-mile arc from Norton AFB joins a 10-mile arc from the Ontario International Airport, CA, ARSA (lat. 34°03'26" N., long. 117°36'29" W.).

Ontario International Airport, CA—[New]

That airspace extending upward from the surface to and including 5,500 feet MSL within a 5-mile radius of Ontario International Airport (lat. 34°03'26" N., long. 117°36'29" W.) excluding that airspace within a 1.5-mile radius of Cable Airport (lat. 34°06'50" N., long. 117°41'20" W.), and that airspace within a 2.5-mile radius of the Chino Airport (lat. 33°58'30" N., long. 117°38'00" W.), and that airspace within a 10-mile radius of the Ontario International Airport extending upward from 2,700 feet MSL to and including 5,500 feet MSL to the point where the 10-mile arc from Ontario joins a 10-mile arc from Norton AFB, CA, Airport Radar Service Area (lat. 34°05'43" N., long. 117°09'55" W.), excluding that airspace north of Foothill Boulevard.

Portland International Airport, OR—[New]

That airspace extending upward from the surface to and including 4,000 feet MSL within a 5-mile radius of Portland International Airport (lat. 45°35'20" N., long. 122°35'47" W.) excluding that airspace within a 1-mile radius of the Evergreen Airport (lat. 45°37'20" N., long. 122°31'15" W.), and that airspace from the 003°T(344°M) bearing from Evergreen Airport clockwise to the 105°T(084°M) bearing from Evergreen Airport, and excluding that airspace within a .5-mile radius of the Pearson Airpark (lat. 45°37'17" N., long. 122°39'22" W.), and that airspace from the 351°T(332°M) bearing from the Pearson Airport clockwise to the 028°T(009°M) bearing from the Pearson Airport below 1,100 feet MSL, and that airspace extending upward from 2,000 feet MSL to and including 4,000 feet MSL within a 10-mile radius of the Portland International Airport from the 004°T(345°M) bearing from the airport clockwise to the 093°T(074°M) bearing from the airport, and that airspace extending upward from 1,700 feet MSL to 4,000 feet MSL within a 10-mile radius of the airport from the 093 093°T(074°M) bearing from the airport clockwise to the 196°T(177°M) bearing from the airport, and that airspace extending upward from 2,300 feet MSL to and including 4,000 feet MSL within a 10-mile radius of the airport from the 196°T(177°M) bearing from the airport, clockwise to the 268°T(249°M) bearing from the airport, and that airspace extending upward from 1,800 feet MSL to and including 4,000 feet MSL within a 10-mile radius of the airport from the 288°T(249°M) bearing from the airport clockwise to the 004°T(345°M) bearing from the airport.

Tinker AFB, OK—[New]

That airspace extending upward from the surface to and including 5,300 feet MSL within a 5-mile radius of the Tinker AFB (lat. 35°25'06" N., long. 97°23'18" W.), and that airspace extending upward from 2,500 feet MSL to and including 5,300 feet MSL within a 10-mile radius of the Tinker AFB, excluding the airspace designated as the Will Rogers World Airport, OK, Airport Radar Service Area.

Will Rogers World Airport, Oklahoma City, OK—[New]

That airspace extending upward from the surface to and including 5,300 feet MSL within a 5-mile radius of the Will Rogers World Airport (lat. 35°23'35" N., long. 97°36'02" W.) excluding the airspace within a 1-mile radius of Downtown Airpark (lat. 35°26'57" N., long. 97°31'58" W.) and that airspace extending upward from 2,500 feet MSL to 5,300 feet MSL within a 10-mile radius of the Will Rogers World Airport, excluding that airspace designated as the Tinker AFB, OK, Airport Radar Service Area.

Airspace Docket No. 85–AWA–3

Daytona Beach Regional Airport, FL—[New]

That airspace extending upward from the surface to and including 4,000 feet MSL within a 5-mile radius of the Daytona Beach Regional Airport (lat. 29°10'51" N., long. 81°03'22" W.), and that airspace extending upward from 1,200 feet MSL to 4,000 feet MSL within a 10-mile radius of Daytona Beach Regional Airport.

Des Moines Muncipal Airport, IA—[New]

That airspace extending upward from the surface to and including 5,000 feet MSL within a 5-mile radius of the Des Moines Municipal Airport (lat. 41°32'06" N., long. 93°39'38" W.), and that airspace extending upward from 2,200 feet MSL to 5,000 feet MSL within a 10-mile radius of the Des Moines Municipal Airport.

El Paso International Airport, TX—[New]

That airspace extending upward from the surface to and including 8,000 feet MSL within a 5-mile radius of the El Paso International Airport (lat. 31°48'24" N., long. 106°22'38" W.) excluding that airspace west of long. 106°27'00" W., and that airspace within Mexico, and that airspace extending upward from 5,200 feet MSL to 8,000 feet MSL within a 10-mile radius of El Paso International Airport, excluding that airspace west of long. 106°27'00" W., and that airspace within Mexico. This airport radar service area is effective during the specific days and times established in advance by a Notice to Airmen. The effective dates and times established will thereafter be continuously published in the Airport/Facility Directory.

Eppley Airfield, Omaha, NE—[New]

That airspace extending upward from the surface to and including 5,000 feet MSL within a 5-mile radius of the Omaha Eppley Airfield (lat. 41°18'04" N., long. 95°53'36" W.); and that airspace extending upward from 2,500 feet MSL to 5,00 feet MSL within a 10-mile radius of the Eppley Airfield, excluding that portion which overlies the Offutt AFB, NE, Airport Radar Service Area.

Fort Lauderdale-Hollywood International Airport, FL—[New]

That airspace extending upward from the surface to and including 4,000 feet MSL within a 5-mile radius of the Fort Lauderdale-Hollywood International Airport (lat. 26°04'19" N., long. 80°09'13" W.) from a point where it joins the Miami, FL, Terminal Control Area (TCA) to the southwest, clockwise to a point where it joins the Miami, FL, TCA to the southeast and that airspace extending upward from 1,200 feet MSL to 4,000 feet MSL within a 10-mile radius of the Fort Lauderdale-Hollywood International Airport from a point where it joins the Miami, FL, TCA to the southwest clockwise to a point where it joins the Miami, FL, TCA to the southeast.

Jacksonville International Airport, FL—[New]

That airspace extending upward from the surface to and including 4,000 feet MSL within a 5-mile radius of the Jacksonville International Airport (lat. 30°29'33" N., long. 81°41'24" W.), and that airspace extending upward from 1,200 feet MSL to 4,000 feet MSL within a 10-mile radius of the Jacksonville International Airport.

Norfolk International Airport, VA—[New]

That airspace extending upward from the surface to and including 4,000 feet MSL within a 5-mile radius of the Norfolk International Airport (lat. 36°53'40" N., long. 76°12'06" W.) excluding that airspace within the Norfolk NAS, VA, Control Zone below 2,000 feet MSL, and that airspace extending upward from 1,200 feet MSL to and including 4,000 feet MSL from a line extending from lat. 36°49'00" N., long. 76°09'00" W.; to lat. 36°43'00" N., long. 76°12'00" W.; clockwise to a line extending from lat. 36°56'00" N., long. 76°00'00" W.; to lat. 36°49'00" N., long. 76°09'00" W., excluding that airspace within the Norfolk NAS Control Zone below 2,000 feet MSL and that airspace within the Hampton Roads, VA, Control Zone below 2,500 feet MSL.

Offutt AFB, NE—[New]

That airspace extending upward from the surface to and including 5,000 feet MSL within a 5-mile radius of the Offutt AFB (lat. 41°07'06" N., long. 95°54'42" W.) excluding a 1-mile radius of the South Omaha (Papillion) Airport (41°09'30" N., long. 96°00'30" W.) and that airspace extending upward from 2,500 feet MSL to 5,000 feet MSL within a 10-mile radius of the Offutt AFB excluding that portion which overlies the Eppley Airfield, Omaha, NE, Airport Radar Service Area.

Orlando International Airport, FL—[New]

That airspace extending upward from the surface to and including 4,100 feet MSL within a 5-mile radius of the Orlando International Airport (lat. 28°25'54" N., long. 81°19'29" W.), and that airspace extending upward from 1,300 feet MSL to 4,100 feet MSL within a 10-mile radius of the Orlando International Airport.

Palm Beach International Airport, FL—[New]

That airspace extending upward from the surface to and including 4,000 feet MSL within a 5-mile radius of the Palm Beach International Airport (lat. 26°40'58" N., long. 80°05'45" W.) excluding that airspace within a 1-mile radius north of the Palm Beach County Airport (lat. 26°35'36" N., long. 80°05'09" W.), and that airspace extending upward from 1,200 feet MSL to 4,000 feet MSL within a 10-mile radius of the Palm Beach International Airport.

Richard Evelyn Byrd International Airport, Richmond, VA—[New]

That airspace extending upward from the surface to and including 4,200 feet MSL within a 5-mile radius of Richard Evelyn Byrd International Airport (lat. 37°30'18" N., long. 77°19'12" W.), and that airspace extending upward from 1,400 feet MSL to 4,200 feet MSL within a 10-mile radius of Richard Evelyn Byrd International Airport.

Issued in Washington, D.C., on July 25, 1985.

James Burns, Jr.,

Acting Manager, Airspace-Rules and Aeronautical Information Division.

Appendix 1—Public Meeting Schedule

The schedule for the informal airspace meetings is as follows:

Airspace Docket No. 85-AWA-2

Burbank-Glendale-Pasadena Airport, CA, ARSA
Date: September 25, 1985
Time: 7:00 p.m.
Location: The Van Nuys Air National Guard Theatre, 8030 Balboa Boulevard, Van Nuys, CA

El Toro MCAS, Santa Ana, CA, ARSA
Date: September 18, 1985
Time: 7:00 p.m.
Location: Ramada Inn, 1331 E. Katella Avenue, Anaheim, CA

Greensboro-High Point-Winston-Salem Regional Airport, NC, ARSA
Date: October 23, 1985
Time: 7:00 p.m.
Location: Guilford Technical Community College, Williams Health Careers Building, Jamestown, NC

James M. Cox Dayton International Airport, OH, ARSA
Date: September 25, 1985
Time: 7:00 p.m.
Location: Wright State University, Old Man Hall, Room 109, Dayton, OH

Lubbock International Airport, TX, ARSA
Date: October 10, 1986
Time: 7:30 p.m.
Location: New Terminal Building Conference Room Lubbock International Airport, 6000 North Quirt, Lubbock, TX

March AFB, CA, ARSA
Date: September 11, 1985
Time: 7:00 p.m.
Location: Upland High School Auditorium, 565 W. 11th Street, Upland, CA

Norton AFB, CA, ARSA
Date: September 11, 1985
Time: 7:00 p.m.
Location: Upland High School Auditorium, 565 W. 11th Street, Upland, CA

Ontario International Airport, CA, ARSA
Date: September 11, 1985
Time: 7:00 p.m.
Location: Upland High School Auditorium, 565 W. 11th Street, Upland CA

Portland International Airport, OR, ARSA
Date: September 9, 1985
Time: 6:30 p.m.
Location: Clark County College, Portland, OR

Tinker AFB, OK, ARSA
Date: October 1, 1985
Time: 7:00 p.m.
Location: The Center, 5901 North May Avenue, Oklahoma City, OK

Will Rogers World Airport, Oklahoma City, OK, ARSA
Date: October 1, 1985
Time: 7:00 p.m.
Location: The Center, 5901 North May Avenue, Oklahoma City, OK

Airspace Docket No. 85-AWA-3

Daytona Beach Regional Airport, FL, ARSA
Date: September 25, 1985
Time: 7:00 p.m.
Location: Daytona Beach Community College Conference Center, Building 16

Des Moines Municipal Airport, IA, ARSA
Date: October 2, 1985
Time: 7:00 p.m.
Location: Best Western Airport Inn, 1810 Army Post Road, Des Moines, IA

El Paso International Airport, TX, ARSA
Date: October 2, 1985
Time: 7:00 p.m.
Location: Holiday Inn—Airport, The Fountain Room, 6655 Gateway West, El Paso, TX

Eppley Airfield, Omaha, NE, ARSA
Date: October 9, 1985
Time: 7:00 p.m.
Location: Eppley Airfield Conference Center, Platte Ballroom, 3rd Level Skywalk, Eppley Airfield, Omaha, NE

Fort Lauderdale-Hollywood International Airport, FL, ARSA
Date: September 9, 1985
Time: 7:30 p.m.
Location: State Department of Transportation Building, 780 SW 24th Street, Fort Lauderdale, FL

Jacksonville International Airport, FL, ARSA
Date: September 26, 1985
Time: 7:30 p.m.
Location: Army National Guard Armory, Craig Airport, Jacksonville, FL

Norfolk International Airport, VA, ARSA
Date: October 10, 1985
Time: 7:00 p.m.
Location: Piedmont Aviation Conference Room, General Aviation Terminal Building, Norfolk International Airport, VA

Offutt AFB, NE, ARSA
Date: October 9, 1985
Time: 7:00 p.m.
Location: Eppley Airfield Conference Center, Platte Ballroom, 3rd Level Skywalk, Eppley Airfield, Omaha, NE

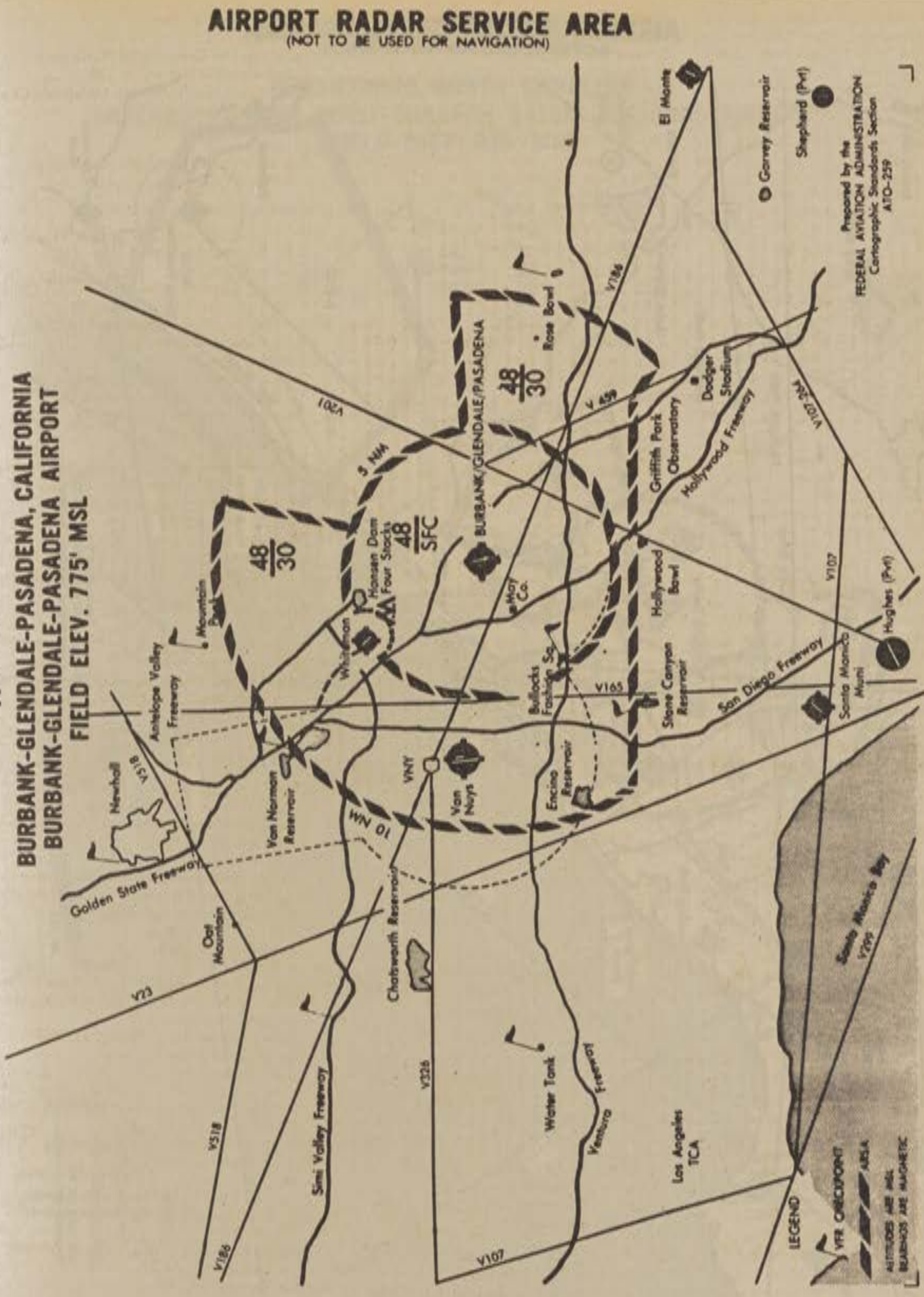
Orlando International Airport, FL, ARSA
Date: September 24, 1985
Time: 7:00 p.m.
Location: Valencia Community College, West Campus, Building 4, Room 120, 1800 South Kirkman Road, Orlando, FL

Palm Beach International Airport, FL, ARSA
Date: September 10, 1985
Time: 7:00 p.m.
Location: West Palm Beach Junior College Auditorium, 4200 Congress Avenue, Lake Worth, FL

Richard Evelyn Byrd International Airport, Richmond, VA, ARSA
Date: October 16, 1985
Time: 7:30 p.m.
Location: Holiday Inn—Airport, 5203 Williamsburg Road, Richmond, VA

BILLING CODE 4910-13-M

Appendix 2


AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
BURBANK-GLENDALE-PASADENA, CALIFORNIA
BURBANK-GLENDALE-PASADENA AIRPORT
FIELD ELEV. 775' MSL
48
30
48
SFC
48
30
5 NM
10 NM
BURBANK/GLENDALE/PASADENA
Van Nuys
VNY
Whiteman
Hansen Dam Four Stacks
Rose Bowl
Griffith Park Observatory
Dodger Stadium
Hollywood Freeway
Hollywood Bowl
Stone Canyon Reservoir
San Diego Freeway
Santa Monica Muni
Hughes (Pvt)
Encino Reservoir
Van Norman Reservoir
Newhall
Golden State Freeway
Antelope Valley Freeway
Oat Mountain
Chatsworth Reservoir
Simi Valley Freeway
Water Tank
Ventura Freeway
Los Angeles TCA
Santa Monica Bay
El Monte
Garvey Reservoir
Shepherd (Pvt)
V23
V518
V186
V328
V107
V165
V201
V459
V299
LEGEND
VFR CHECKPOINT
ARSA
ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC
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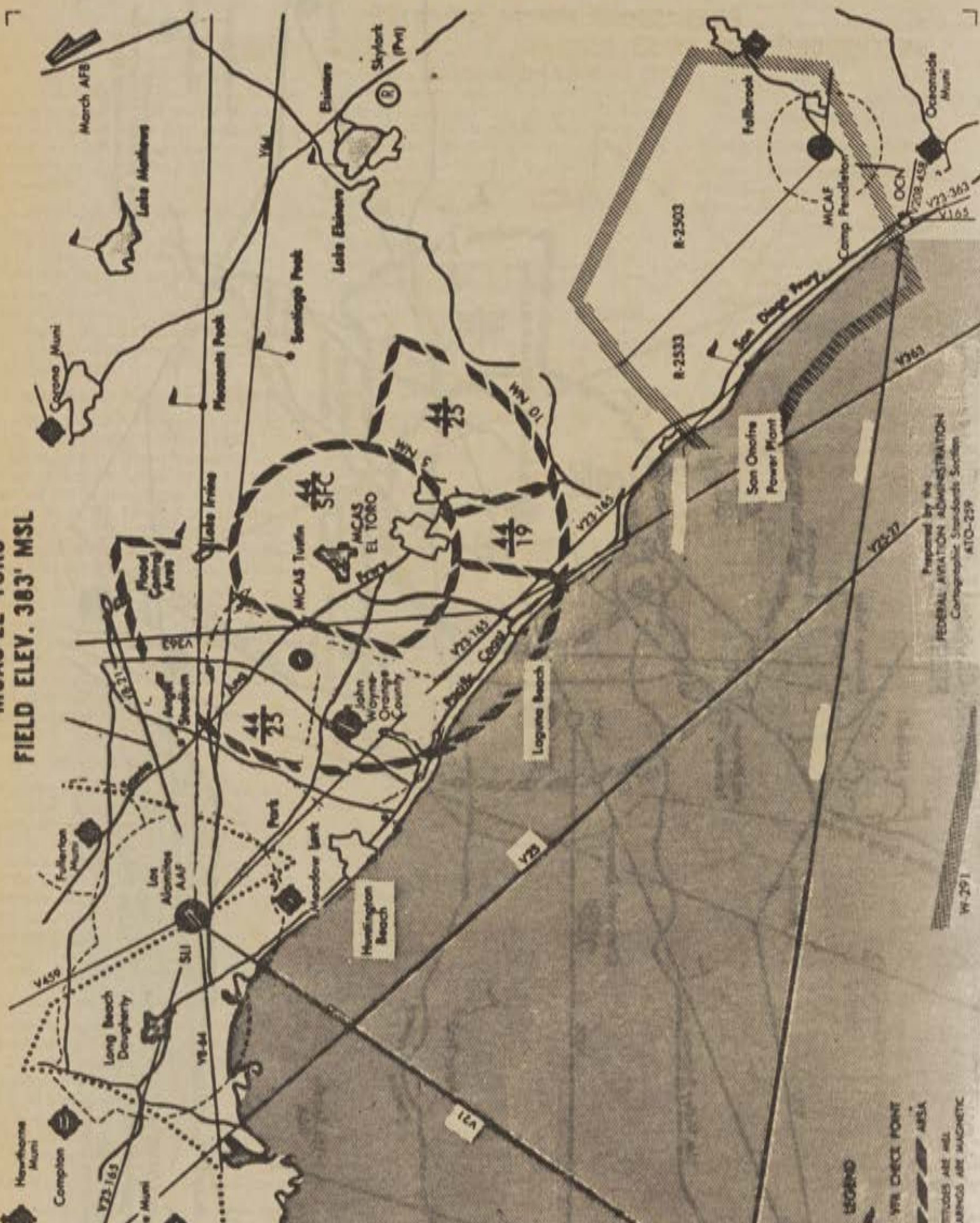
Cartographic Standards Section
ATO-259

AIRPORT RADAR SERVICE AREA

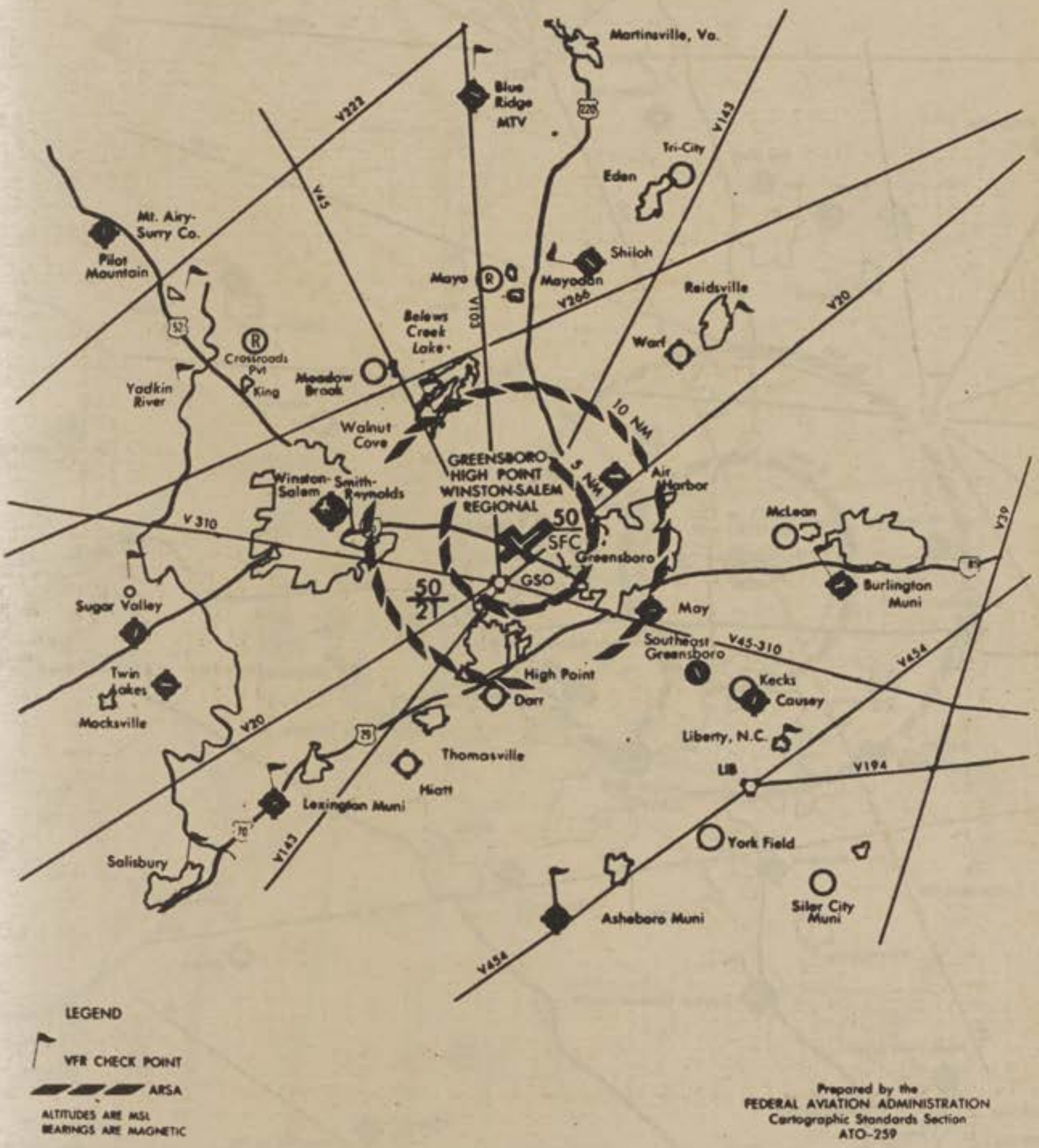
(NOT TO BE USED FOR NAVIGATION)

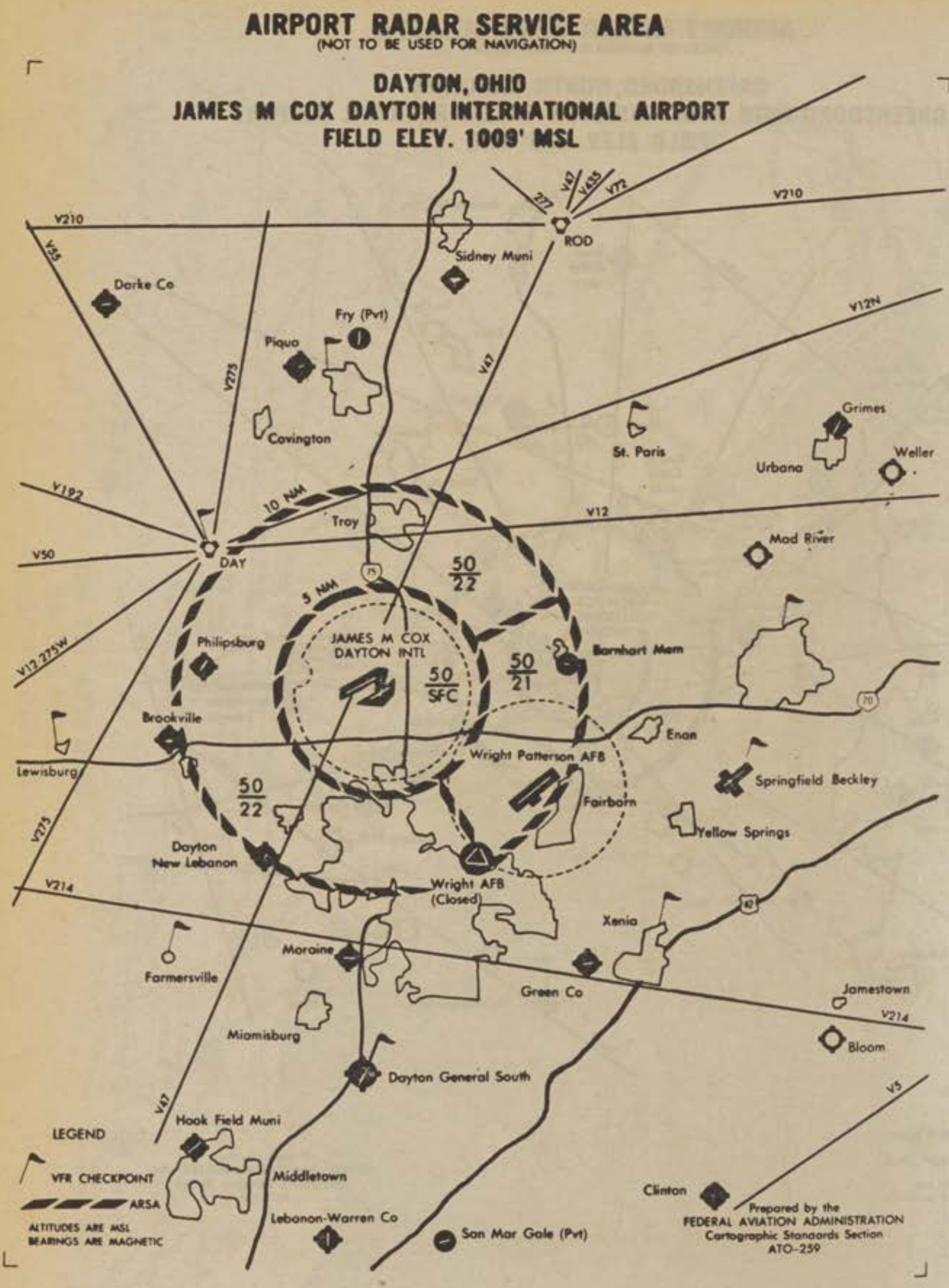


AIRPORT RADAR SERVICE AREA

(NOT TO BE USED FOR NAVIGATION)

GREENSBORO, NORTH CAROLINA
GREENSBORO-HIGH POINT-WINSTON SALEM REGIONAL AIRPORT
FIELD ELEV. 926' MSL




AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
DAYTON, OHIO
JAMES M COX DAYTON INTERNATIONAL AIRPORT
FIELD ELEV. 1009' MSL
V210
V35
Darke Co
Piqua
Fry (Pvt)
Sidney Muni
ROD
V47
V433
V72
277
V210
V275
Covington
V12N
St. Paris
Grimes
Urbana
Weller
V192
10 NM
Troy
V12
Mad River
V50
DAY
50
22
5 NM
JAMES M COX
DAYTON INTL
50
SFC
50
21
Barnhart Mem
V12 275W
Philipsburg
Brookville
Enan
Lewisburg
Wright Patterson AFB
Springfield Beckley
Fairborn
50
22
Yellow Springs
V275
Dayton
New Lebanon
Wright AFB
(Closed)
V214
Xenia
Farmersville
Moraine
Green Co
Jamestown
V214
Miamisburg
Bloom
Dayton General South
V5
V47
Hook Field Muni
LEGEND
VFR CHECKPOINT
ARSA
ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC
Middletown
Clinton
Lebanon-Warren Co
San Mar Gale (Pvt)
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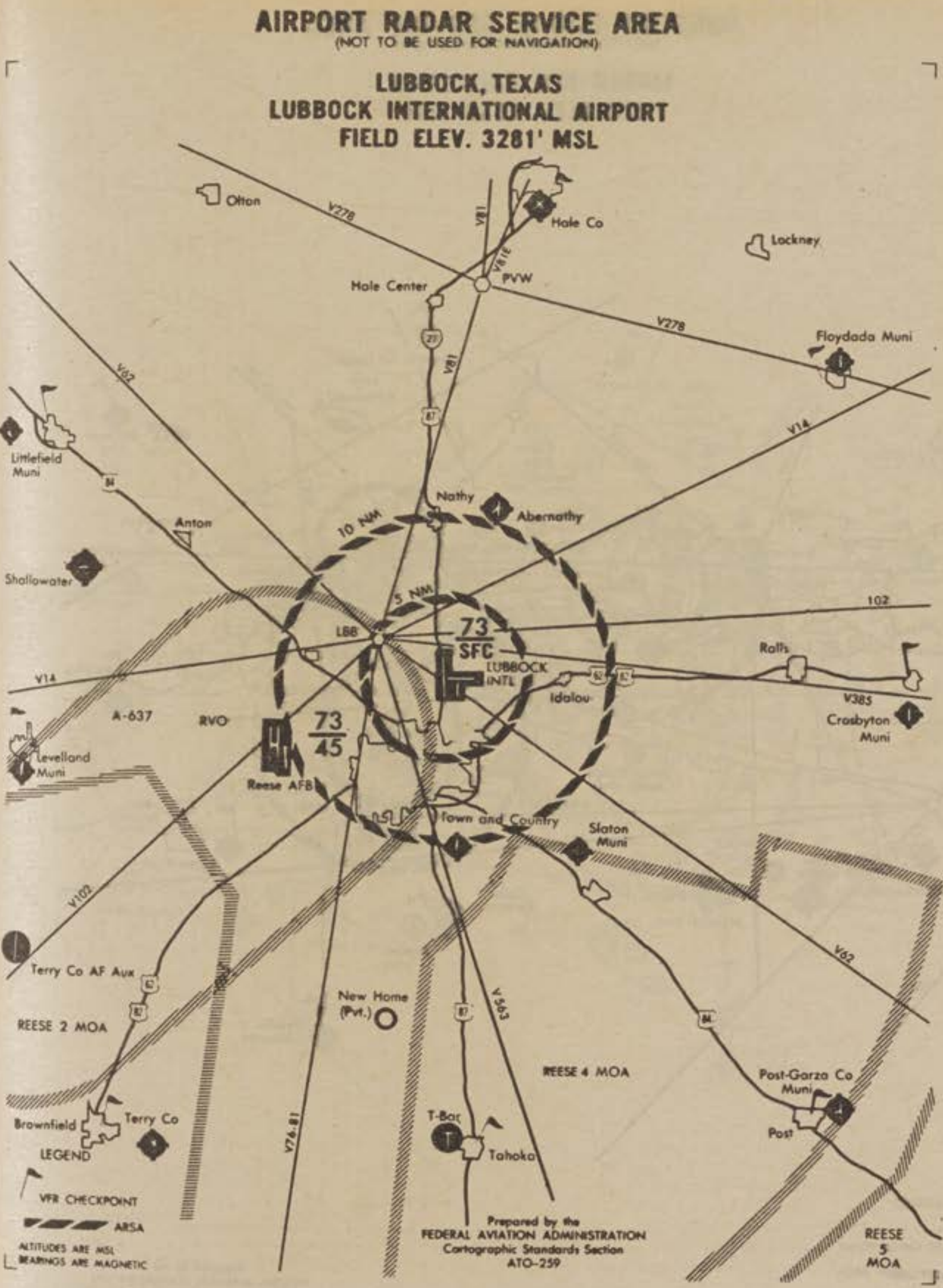
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
LUBBOCK, TEXAS
LUBBOCK INTERNATIONAL AIRPORT
FIELD ELEV. 3281' MSL
Olton
V278
V81
Hale Co
V81E
PVW
Hale Center
Lockney
V278
Floydada Muni
V62
V14
Littlefield Muni
Nathy
Abernathy
10 NM
Anton
Shallowater
5 NM
102
LBB
73
SFC
LUBBOCK INTL
Ralls
V14
Idalou
V385
Crosbyton Muni
A-637
RVO
73
45
Levelland Muni
Reese AFB
Town and Country
Slaton Muni
V102
V62
Terry Co AF Aux
New Home (Pvt.)
V563
REESE 2 MOA
REESE 4 MOA
Post-Garza Co Muni
Post
Brownfield
Terry Co
T-Bar
Tahoka
V76-81
LEGEND
VFR CHECKPOINT
ARSA
ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC
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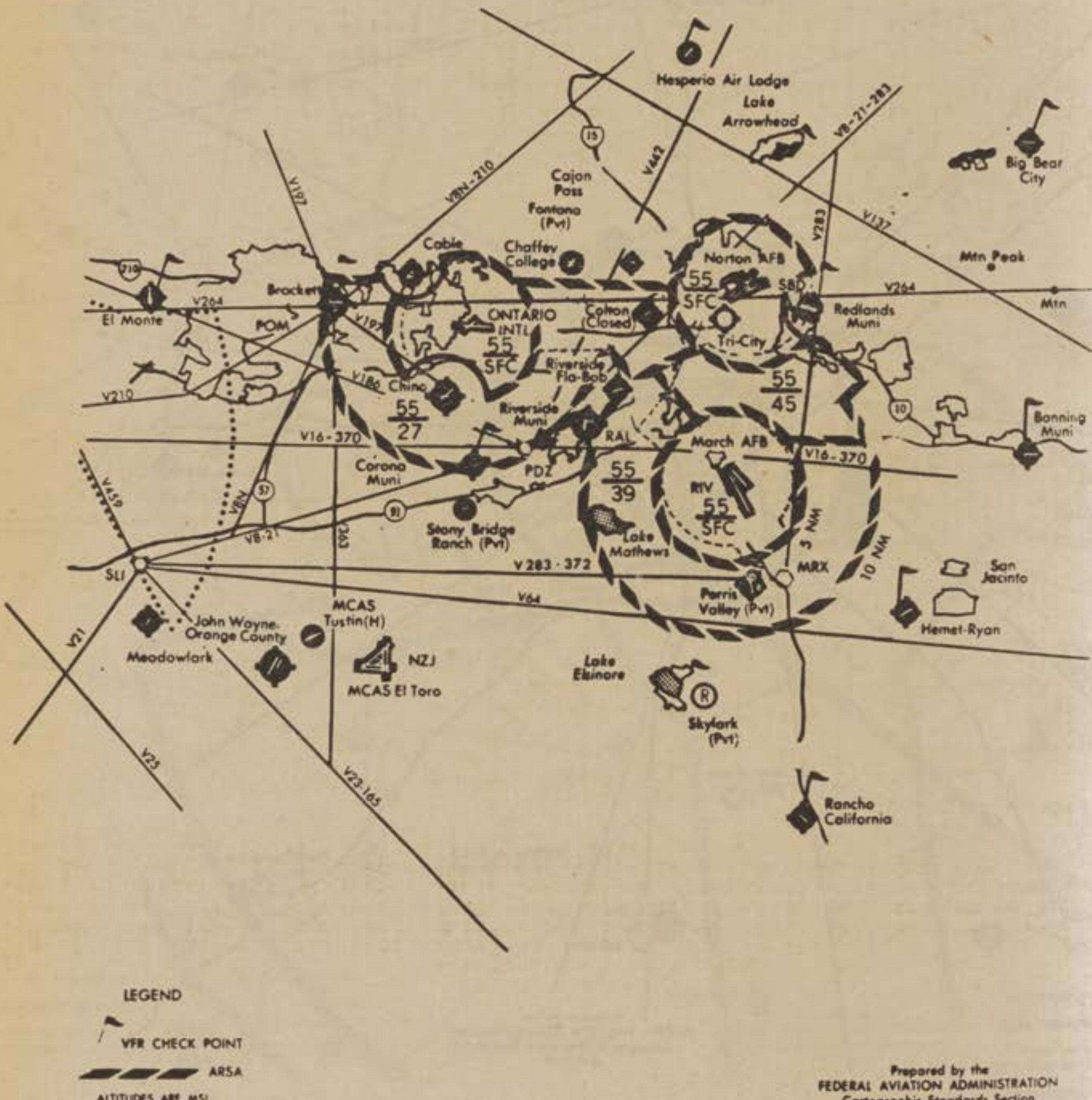
REESE 5 MOA

AIRPORT RADAR SERVICE AREA

(NOT TO BE USED FOR NAVIGATION)

MARCH AFB, CALIFORNIA
FIELD ELEV. 1538' MSL



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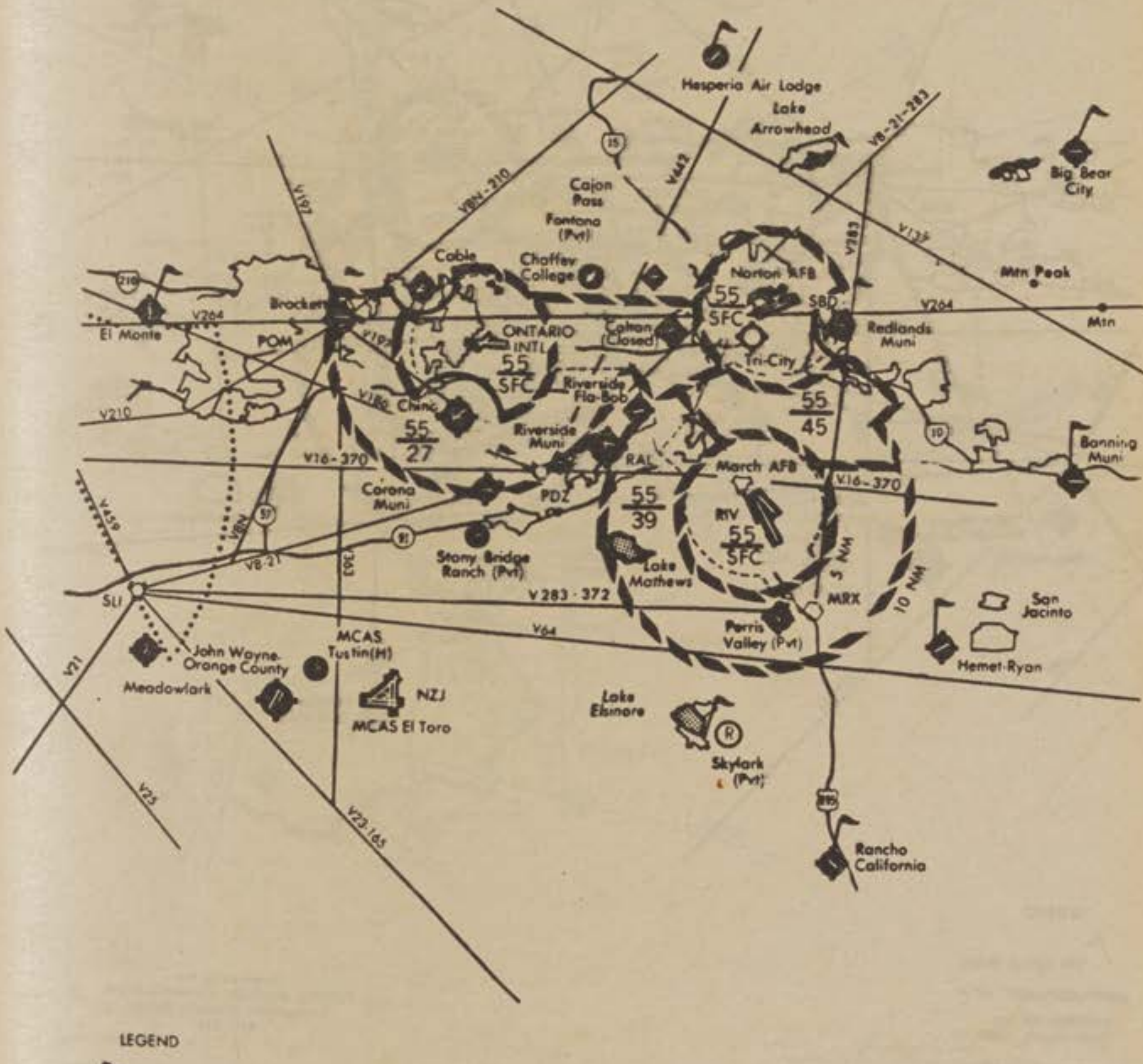
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

NORTON AFB, CALIFORNIA
FIELD ELEV. 1157' MSL



LEGEND

VFR CHECK POINT

ARSA

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BEARINGS ARE MAGNETIC

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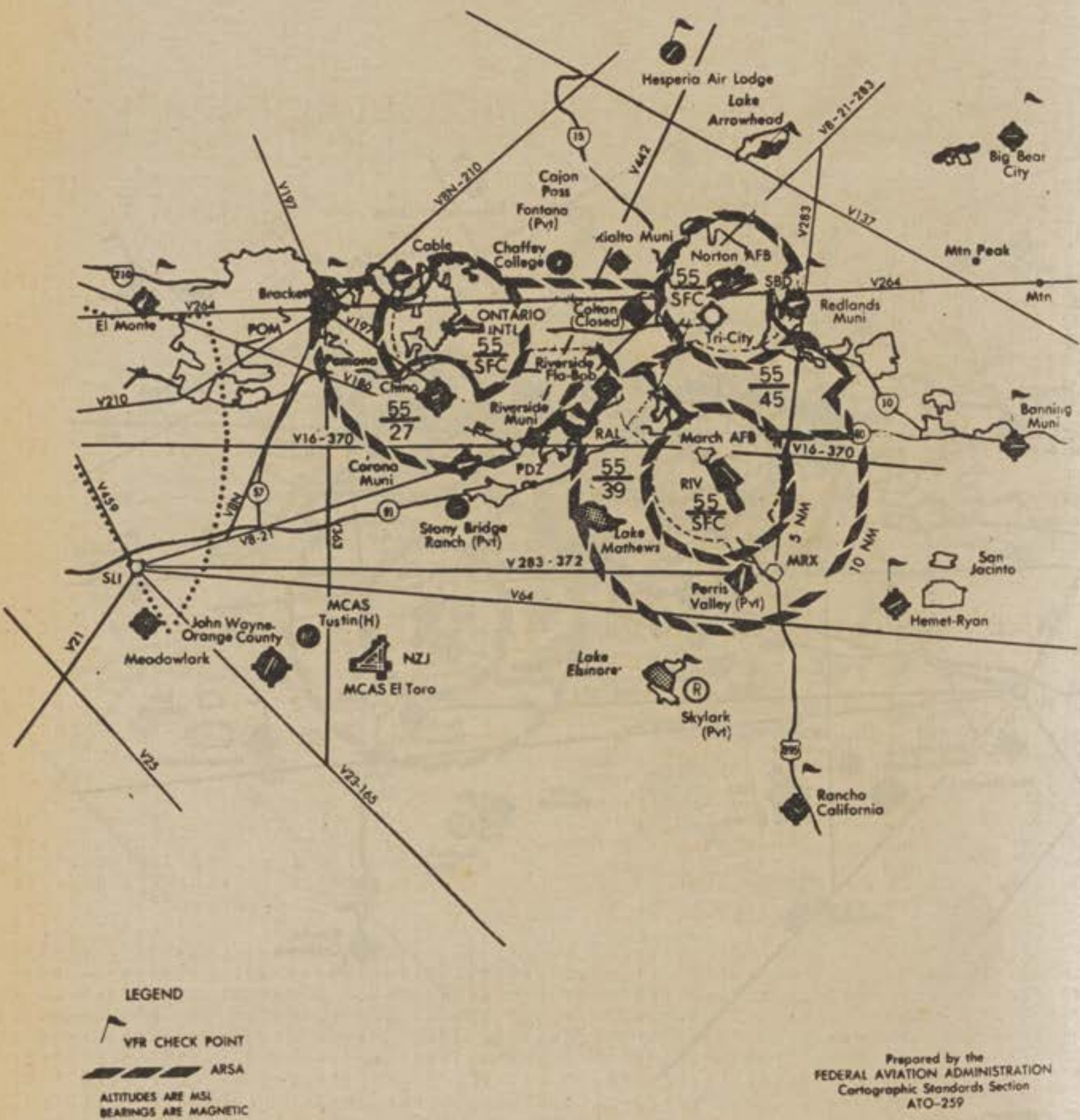
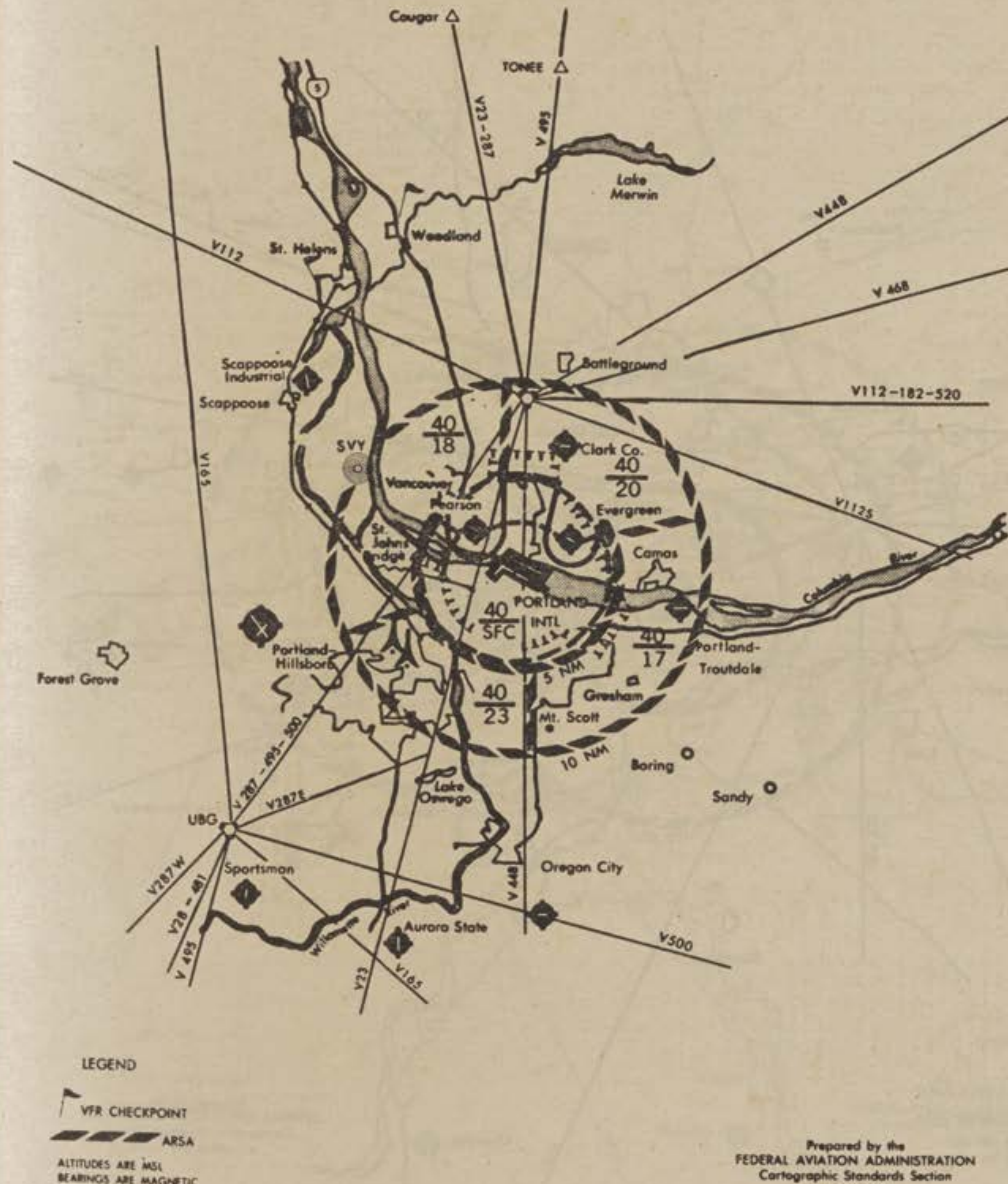
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

ONTARIO, CALIFORNIA
ONTARIO INTERNATIONAL AIRPORT
FIELD ELEV. 952' MSL



AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

PORTLAND, OREGON
PORTLAND INTERNATIONAL AIRPORT
FIELD ELEV. 26' MSL



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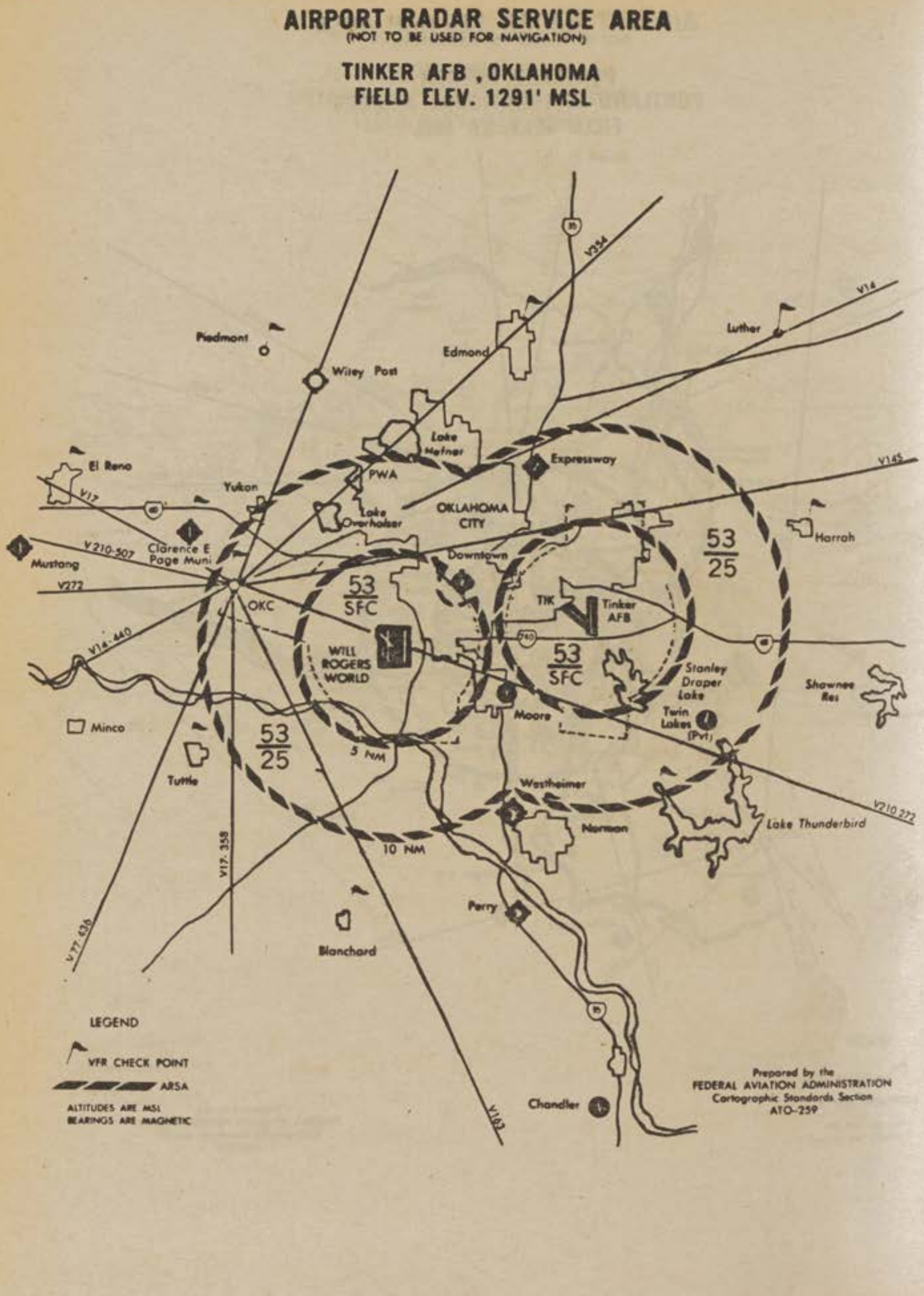
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
TINKER AFB, OKLAHOMA
FIELD ELEV. 1291' MSL
V354
V14
Luther
Piedmont
Edmond
Wiley Post
Lake Hefner
Expressway
V145
El Reno
PWA
Yukon
V17
Lake Overholser
OKLAHOMA CITY
Harrah
V210-507
Clarence E Page Muni
Mustang
Downtown
53
25
V272
53
SFC
OKC
TIK
Tinker AFB
V14-440
WILL ROGERS WORLD
53
SFC
Stanley Draper Lake
Shawnee Res
Twin Lakes (Pvt)
Moore
Minco
53
25
5 NM
Tuttle
Westheimer
V210 272
Lake Thunderbird
Norman
10 NM
V17, 358
Perry
V77 436
Blanchard
LEGEND
VFR CHECK POINT
ARSA
ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC
Chandler
V163
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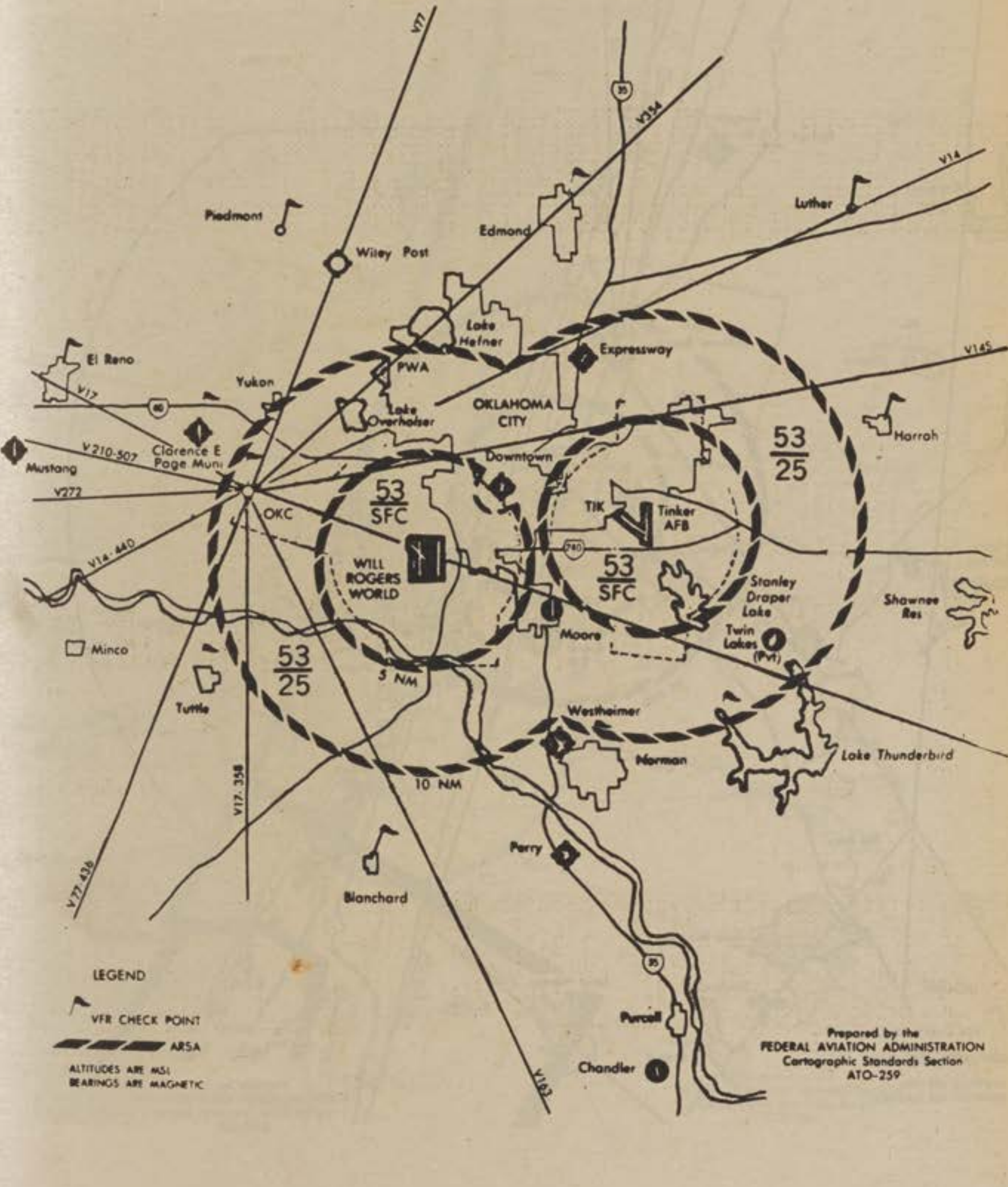
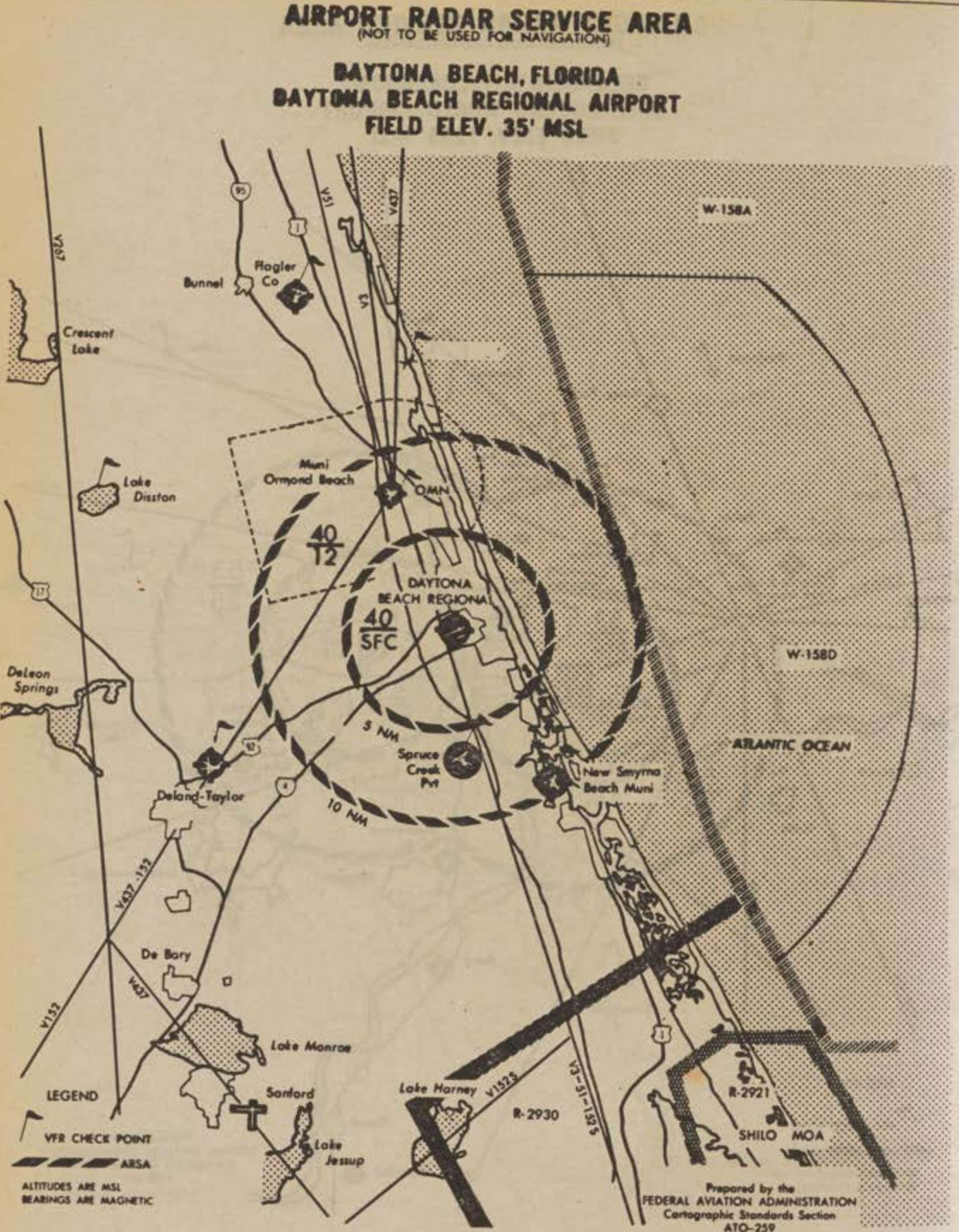
ATO-259

AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

OKLAHOMA CITY, OKLAHOMA
WILL ROGERS WORLD AIRPORT
FIELD ELEV. 1295' MSL




AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
DAYTONA BEACH, FLORIDA
DAYTONA BEACH REGIONAL AIRPORT
FIELD ELEV. 35' MSL
W-158A
W-158D
ATLANTIC OCEAN
Bunnel
Flagler Co
Crescent Lake
Lake Disston
Muni Ormond Beach
OMN
40/12
DAYTONA BEACH REGIONAL
40/SFC
DeLeon Springs
Deland-Taylor
5 NM
10 NM
Spruce Creek Pvt
New Smyrna Beach Muni
V267
V51
V437
V3
V437-152
V152
De Bary
Lake Monroe
Sanford
Lake Jessup
Lake Harney
V152S
R-2930
V3-51-152S
R-2921
SHILO MOA
LEGEND
VFR CHECK POINT
ARSA
ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC
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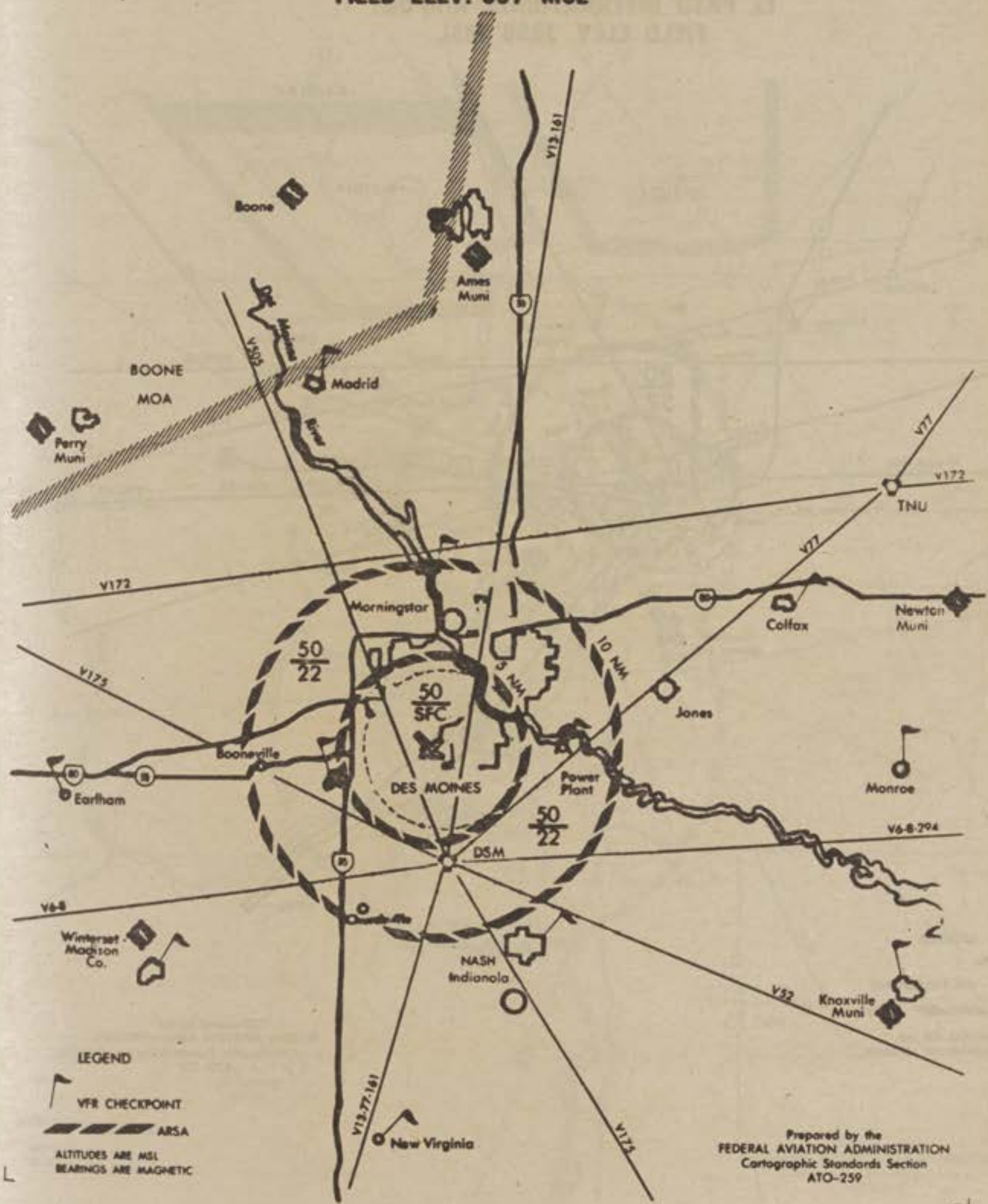
ATO-259

AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

DES MOINES, IOWA
DES MOINES MUNI AIRPORT
FIELD ELEV. 957' MSL



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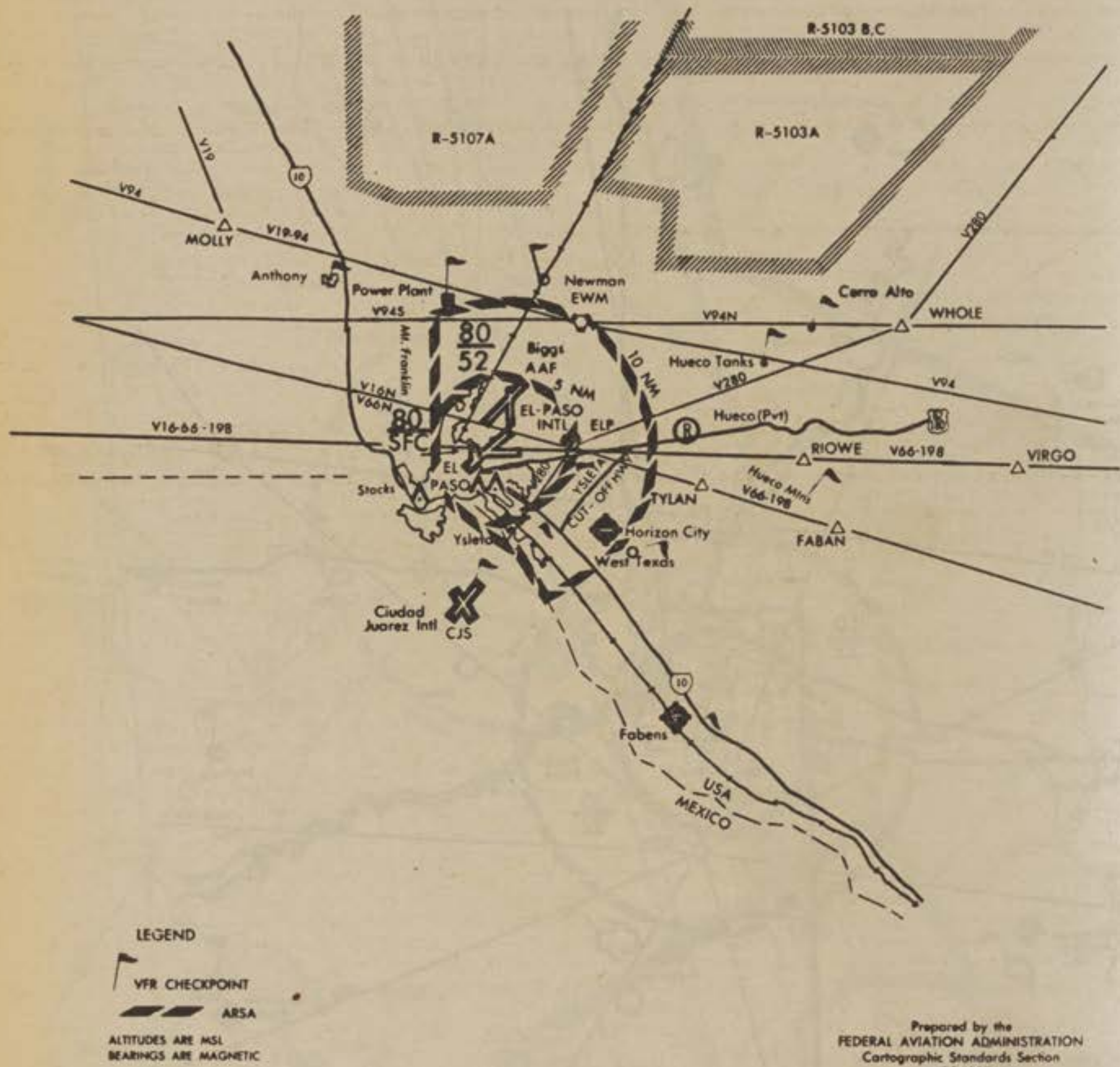
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

EL PASO, TEXAS
EL PASO INTERNATIONAL AIRPORT
FIELD ELEV. 3956' MSL



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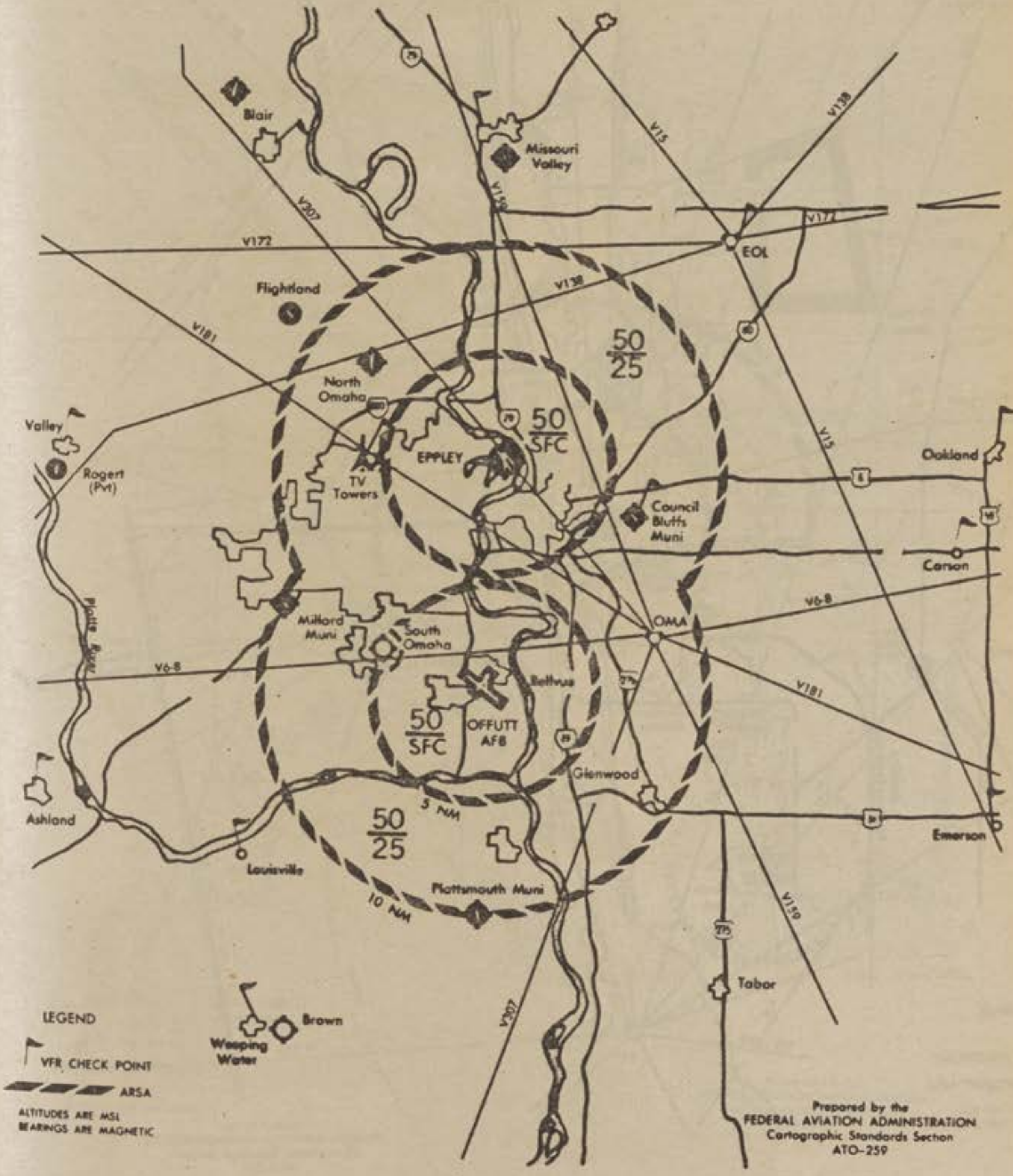
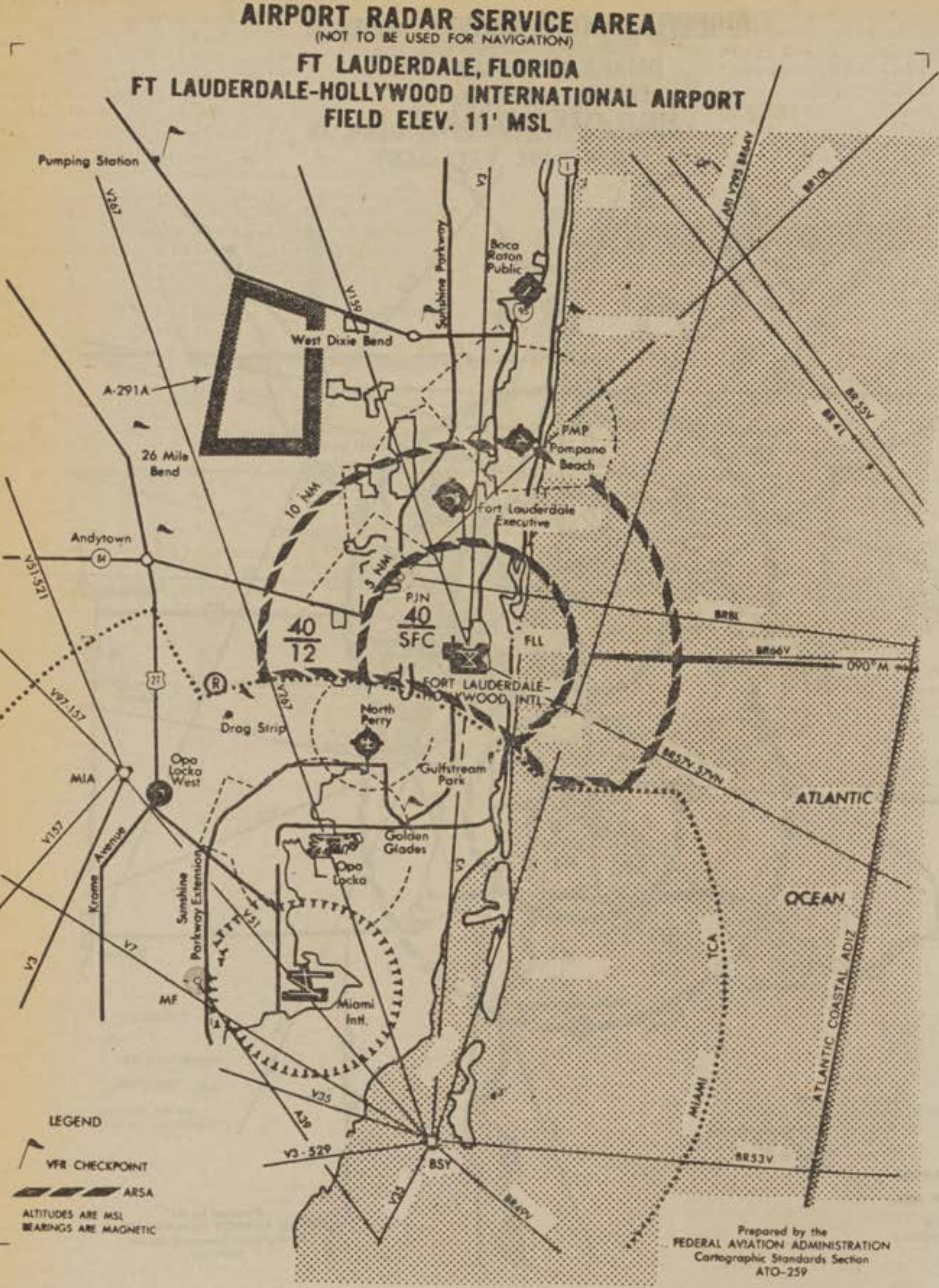
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
OMAHA, NEBRASKA
EPPLEY AIRFIELD
FIELD ELEV. 983' MSL




AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
FT LAUDERDALE, FLORIDA
FT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT
FIELD ELEV. 11' MSL
Pumping Station
West Dixie Bend
A-291A
26 Mile Bend
Andytown
Boca Raton Public
Sunshine Parkway
PMP
Pompano Beach
Fort Lauderdale Executive
10 NM
5 NM
PJN
40/12
40/SFC
FLL
FORT LAUDERDALE-HOLLYWOOD INTL
090° M
North Perry
Drag Strip
Opa Locka West
MIA
Gulfstream Park
Golden Glades
Opa Locka
Krome Avenue
Sunshine Parkway Extension
Miami Intl.
MF
BSY
ATLANTIC
OCEAN
MIAMI TCA
ATLANTIC COASTAL ADIZ
LEGEND
VFR CHECKPOINT
ARSA
ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC
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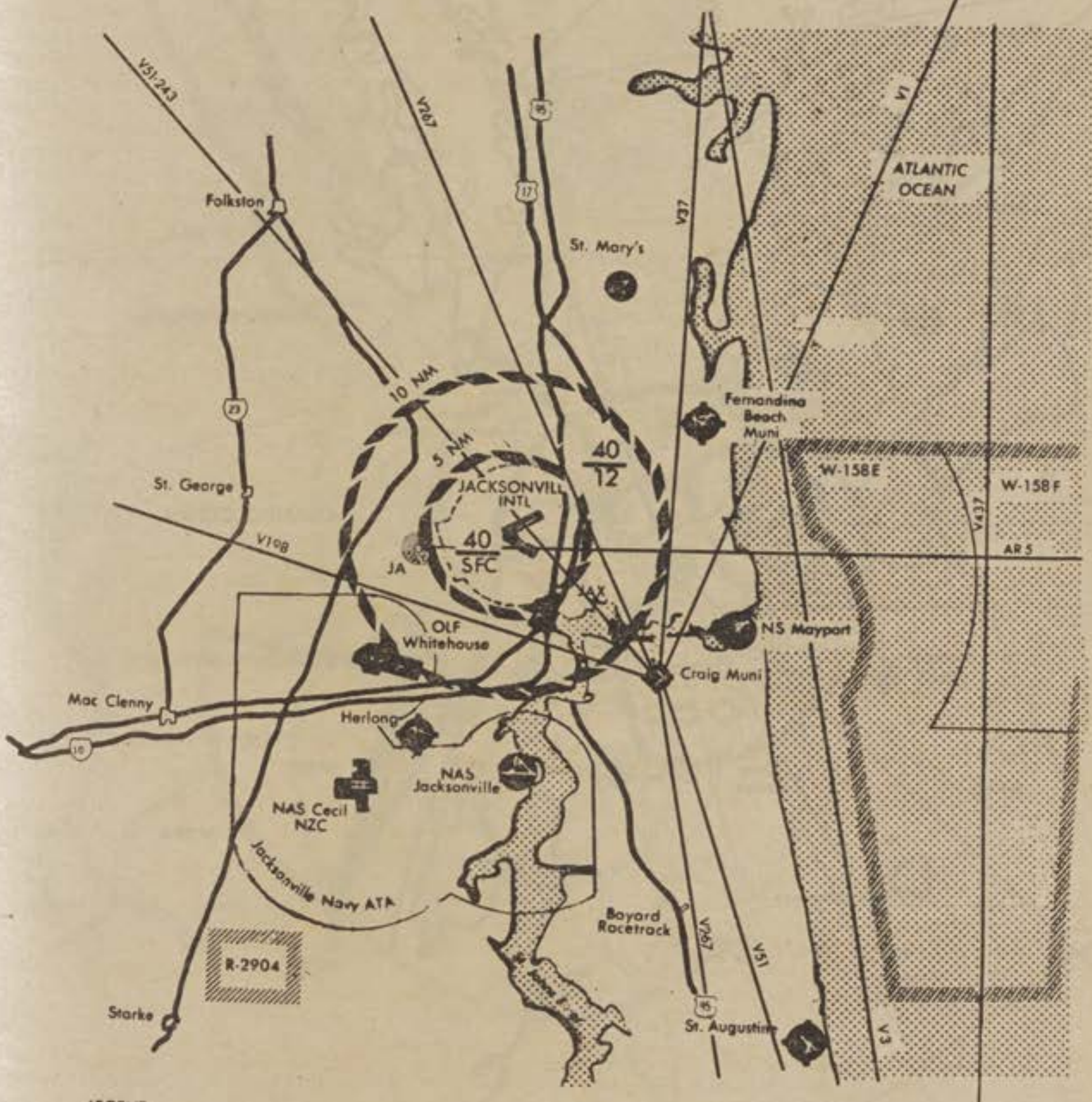
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

JACKSONVILLE, FLORIDA
JACKSONVILLE INTERNATIONAL AIRPORT
FIELD ELEV. 30' MSL



LEGEND

VFR CHECKPOINT

ARSA

ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC

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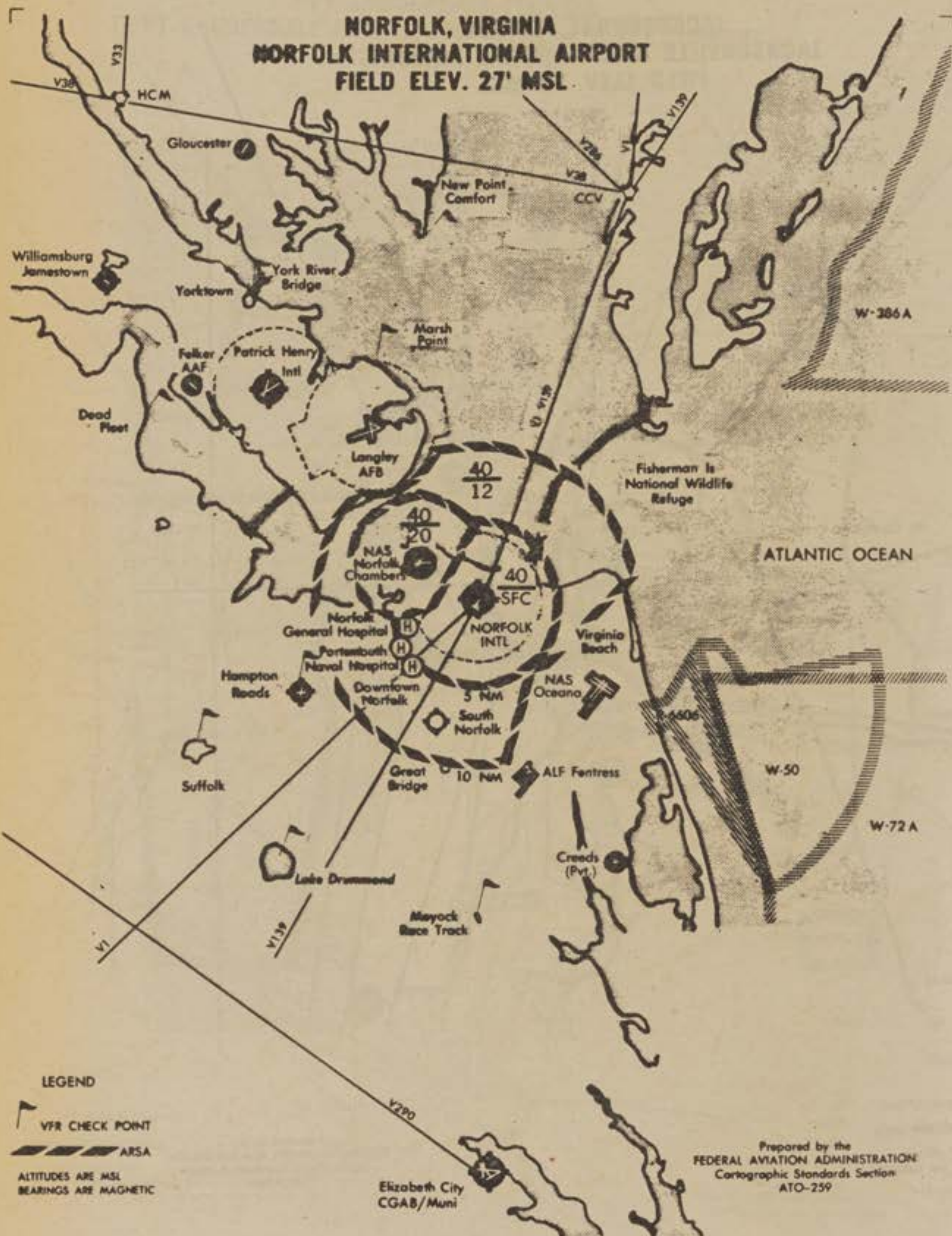
AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

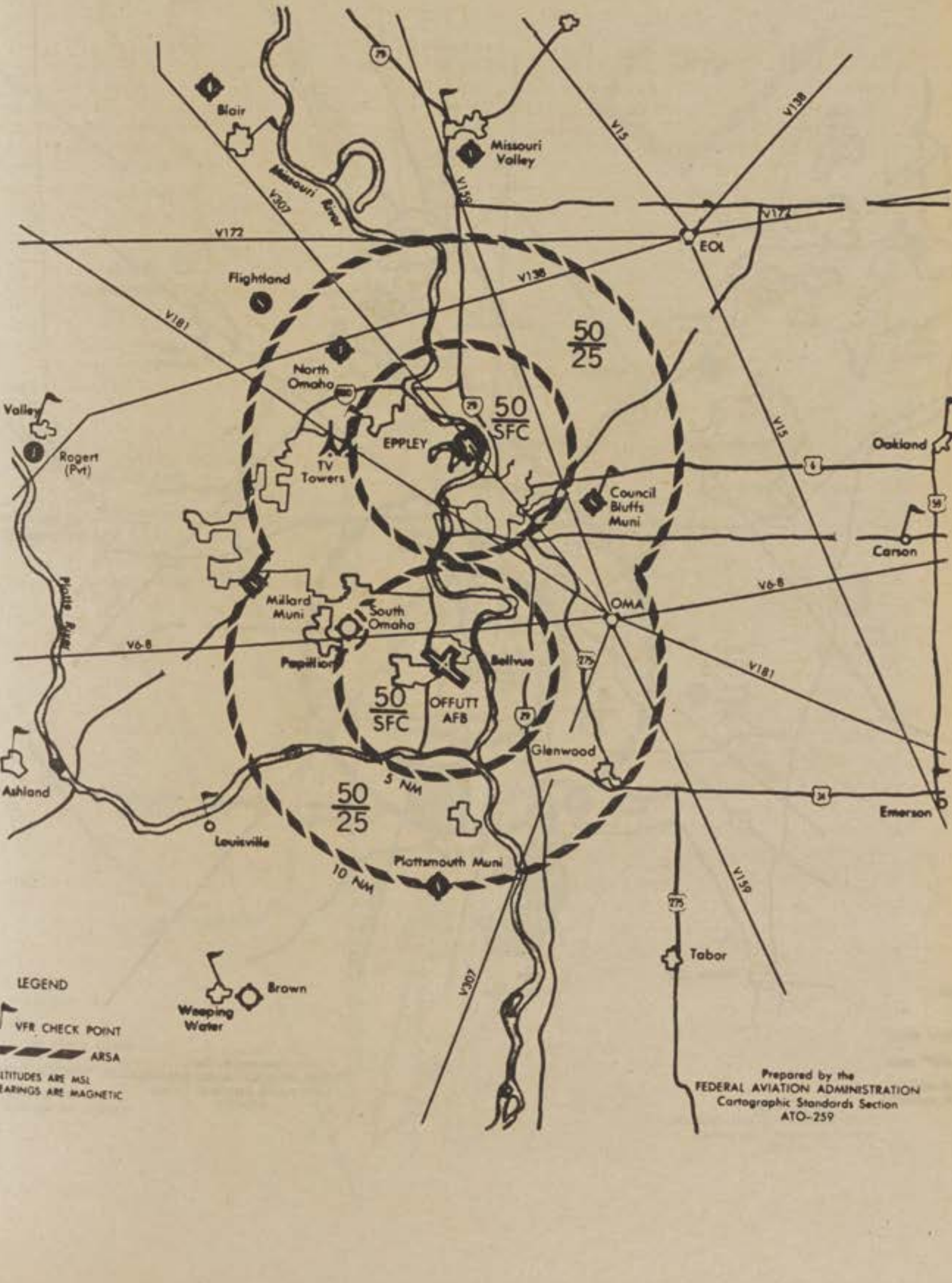
NORFOLK, VIRGINIA
NORFOLK INTERNATIONAL AIRPORT
FIELD ELEV. 27' MSL



AIRPORT RADAR SERVICE AREA

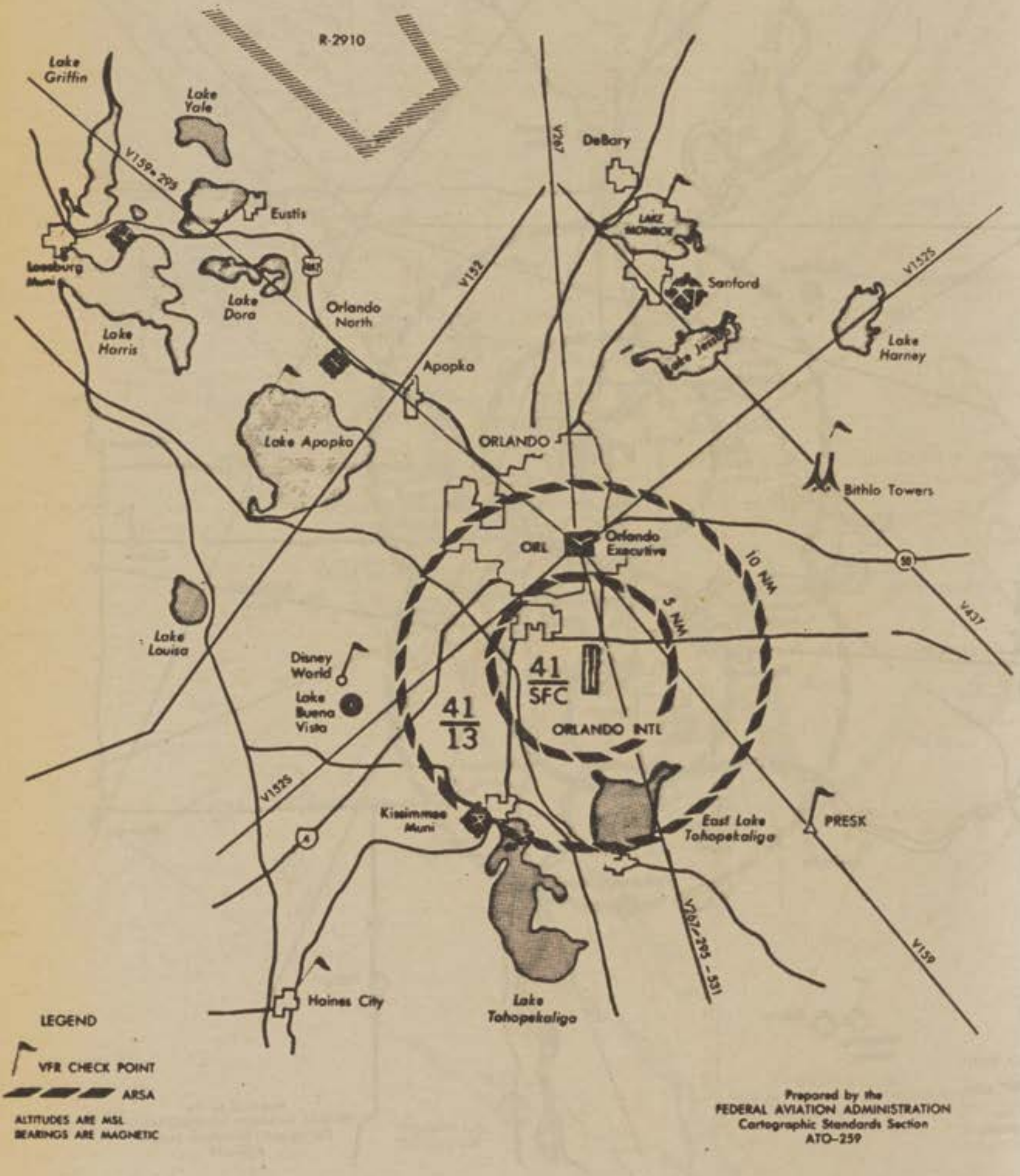
(NOT TO BE USED FOR NAVIGATION)

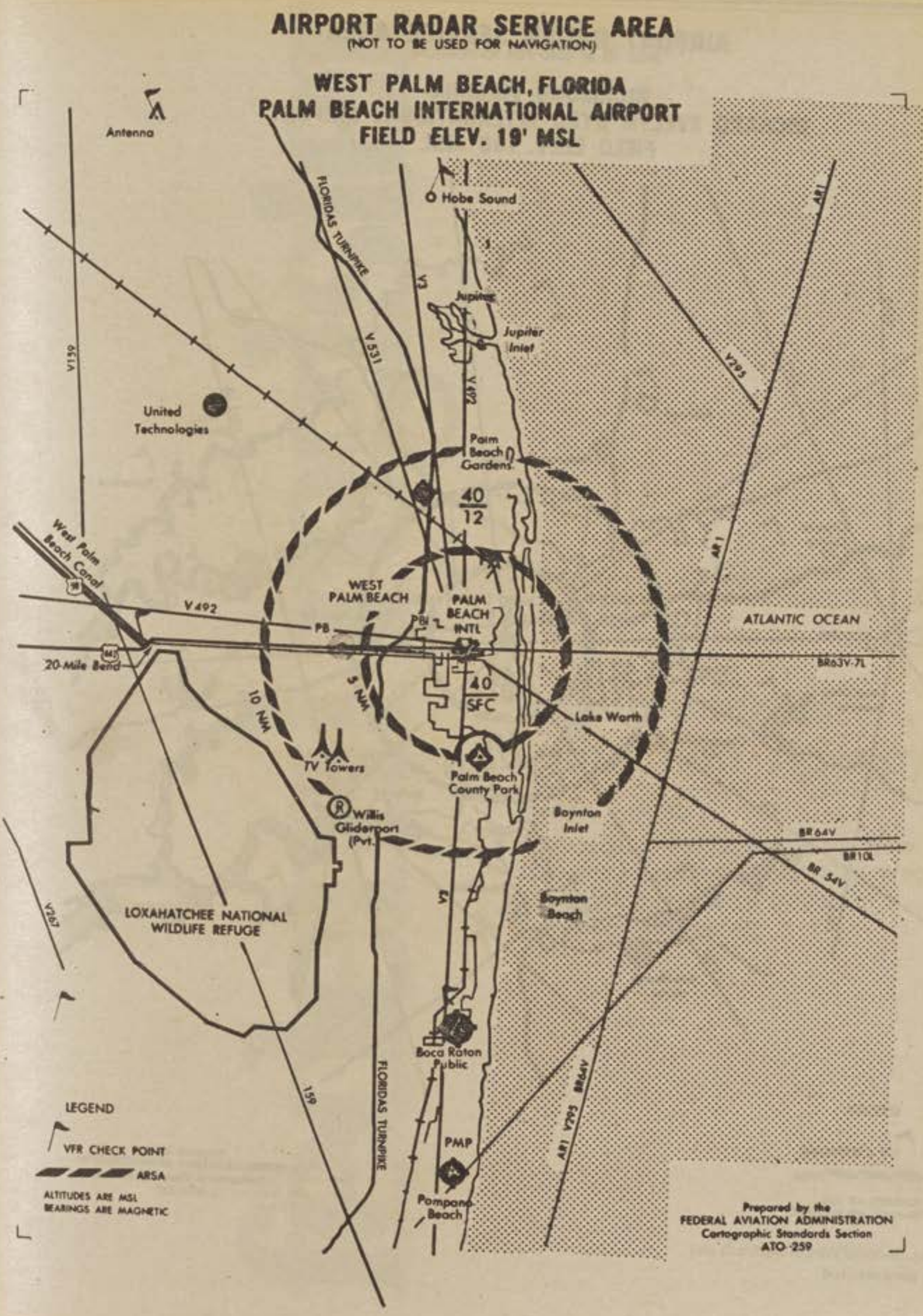
OFFUTT AFB, NEBRASKA
FIELD ELEV. 1048' MSL



AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)

ORLANDO, FLORIDA
ORLANDO INTERNATIONAL AIRPORT
FIELD ELEV. 96' MSL




AIRPORT RADAR SERVICE AREA
(NOT TO BE USED FOR NAVIGATION)
WEST PALM BEACH, FLORIDA
PALM BEACH INTERNATIONAL AIRPORT
FIELD ELEV. 19' MSL
Antenna
Hobe Sound
FLORIDAS TURNPIKE
Jupiter
Jupiter Inlet
V3
V531
V492
V159
V295
AR1
United Technologies
Palm Beach Gardens
40
12
West Palm Beach Canal
WEST PALM BEACH
PALM BEACH INTL
PBI
PB
V492
20-Mile Bend
ATLANTIC OCEAN
BR63V-7L
40
SFC
10 NM
5 NM
Lake Worth
TV Towers
Palm Beach County Park
Willis Gliderport (Pvt.)
Boynton Inlet
BR64V
BR10L
BR 54V
Boynton Beach
LOXAHATCHEE NATIONAL WILDLIFE REFUGE
V267
Boca Raton Public
FLORIDAS TURNPIKE
159
PMP
Pompano Beach
AR1 V295 BR64V
LEGEND
VFR CHECK POINT
ARSA
ALTITUDES ARE MSL
BEARINGS ARE MAGNETIC
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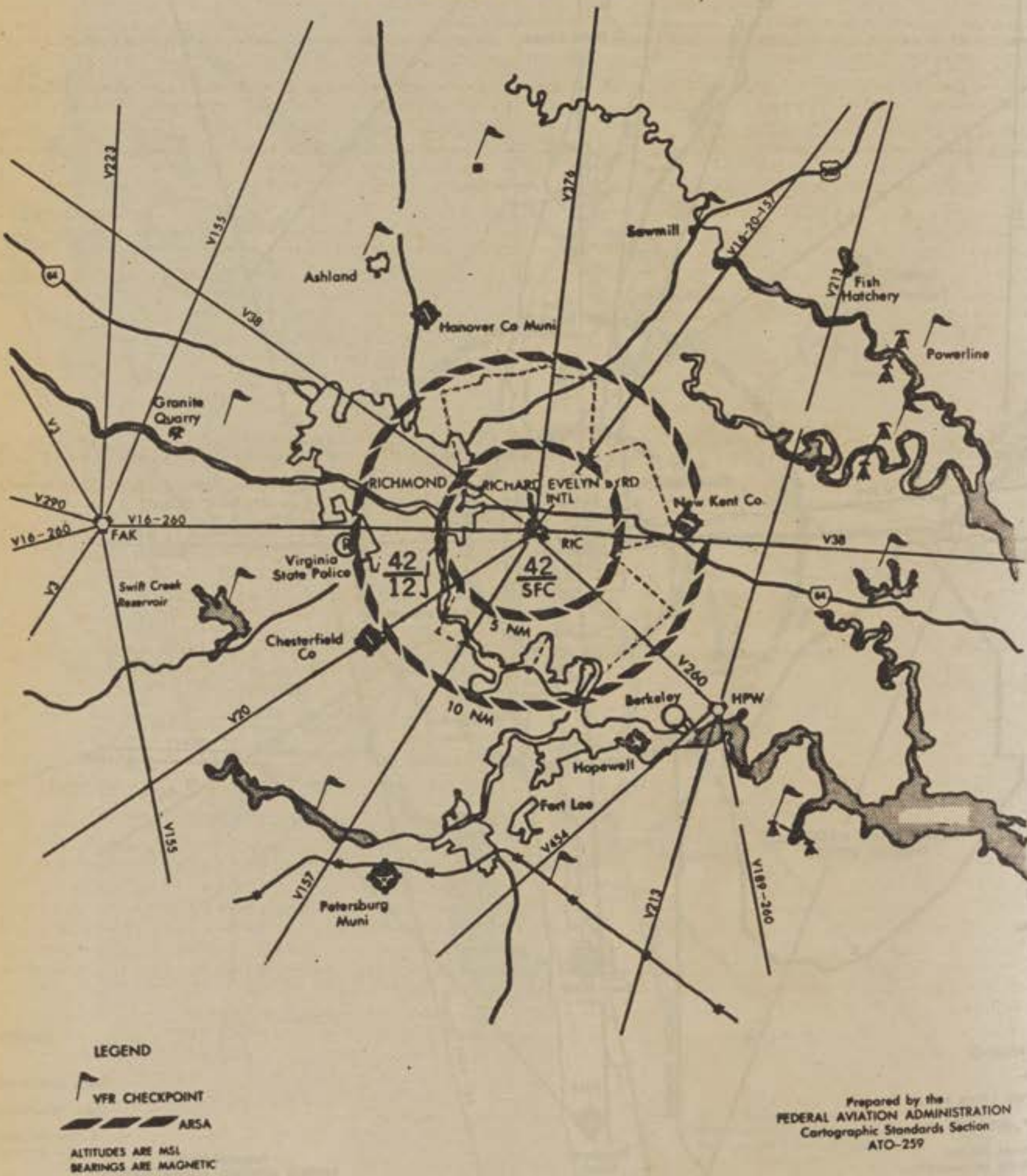
AIRPORT RADAR SERVICE AREA

(NOT TO BE USED FOR NAVIGATION)

RICHMOND, VIRGINIA
RICHARD EVELYN BYRD INTERNATIONAL AIRPORT
FIELD ELEV. 168' MSL



[FR Doc. 85-18032 Filed 8-1-85; 8:45 am]

BILLING CODE 4910-13-C

federal register

Friday
August 2, 1985

Part IV

Environmental Protection Agency

40 CFR Part 60

Standards of Performance for New Stationary Sources; Residential Wood Combustion; Advance Notice of Proposed Rulemaking

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[AD-FRL-2834-3]

Standards of Performance for New Stationary Sources; Residential Wood Combustion

AGENCY: Environmental Protection Agency (EPA).

ACTION: Advance Notice of Proposed Rulemaking.

SUMMARY: This notice announces EPA's plans to develop new source performance standards for the control of particulate matter from residential wood combustion (RWC) devices. The purpose of this advance notice is to advise the public that regulatory activities are being initiated and to solicit information that would aid in standards development.

DATE: *Comments.* Comments must be received by September 3, 1985.

ADDRESS: *Docket.* A docket has been established for public comments. Send comments to Central Docket Section (LE-131), West Tower Lobby, Gallery 1, Waterside Mall, 401 M Street, SW., Washington, D.C. 20460, Attention: Docket A-84-49. Comments should be submitted in duplicate if possible.

FOR FURTHER INFORMATION CONTACT: Mr. Kenneth R. Durkee or Mr. Jeffrey A. Telander, Industrial Studies Branch (MD-13), Emission Standards and Engineering Division, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-5595.

SUPPLEMENTARY INFORMATION:

Background

As of the end of 1983, there were an estimated 10.6 million RWC units in use. As referred to here, RWC units consist of freestanding woodstoves and fireplace inserts and do not include open fireplaces. Annual sales of new RWC units are projected to continue at approximately 1 million units per year. According to information published by the Department of Energy, roughly 60 percent of the RWC units are used as a primary source of heat while 40 percent are used as a secondary source of heat (with oil/gas as the primary source).

Actual emissions from RWC vary greatly depending upon the design and operation of the combustion device plus the type and condition of the fuel. However, data clearly indicate that particulate matter (PM) which includes polycyclic organic matter (POM), carbon monoxide (CO), and hydrocarbon (HC) emissions are substantial from RWC appliances. These appliances, unlike open fireplaces, contain an enclosed firebox where the air supply can be easily controlled, thus controlling the rate of wood combustion. To obtain desired heat outputs at low burn rates, the combustion process is "starved" of air (and thus oxygen). However, less oxygen not only slows the burn rate, but can also prevent complete combustion, causing significant emissions of products of incomplete combustion such as PM, CO, HC, and POM.

Presently, RWC contributes the following estimated annual emissions: PM—2.7 million tons, including POM—20,000 tons; CO—7.4 million tons; HC—62,000 tons. If the sales of RWC units continue at 1 million units each year, annual emissions are estimated to increase by the following amounts if not controlled: PM—216,000 tons, including POM—1,600 tons; CO—584,000 tons; HC—5,000 tons. Thus, by the year 2005, uncontrolled annual emissions from RWC units are estimated to total the following amounts: PM—7 million tons; CO—19 million tons; HC—159,000 tons; and POM—52,000 tons.

More than 80 percent of the PM emissions from RWC are smaller than 2.5 micrometers and almost all are less than 10 micrometers. Particulate matter of this size is considered respirable (they penetrate to the tracheo-bronchial and aveolar regions of the lung). Deposition in this region of the lung is of concern because the body may take years to remove the particles and repair the damage they cause. Exposure can increase coughing and chest discomfort, aggravate cardiovascular diseases, and may increase the adverse health effects of gaseous air pollutants.

Significant air quality problems are caused by RWC in localities where the number of wood burning devices are high. Emissions from RWC are a growing problem throughout all areas of the country where wood supplies are abundant. In fact, several areas are currently violating national ambient air quality standards (NAAQS) for PM and CO due to RWC. One study of ambient total suspended particulate (TSP) levels at seven sites in Oregon, Washington, and Idaho during the winter of 1980-81 estimated that during periods of high pollution in these communities, RWC was responsible for between 66 and 84 percent of the small respirable particulates (particles smaller than 2.5 micrometers).

Several areas in the Rocky Mountain region also are experiencing air quality problems partly or wholly attributable to RWC. These include Denver, Colorado; several ski resort communities in Colorado; and Missoula, Montana.

In Missoula, Montana, emissions inventory and direct sampling methods were used to determine that RWC was responsible for 54 percent of PM emissions and 39 percent of CO emissions during the winter. Also, an estimated 68 to 76 percent of the smaller, respirable particulates were found to be attributable to RWC. Surveys and modeling studies in Bangor, Maine; Chattanooga, Tennessee; and the State of New Hampshire suggest significant emissions and high air quality impacts due to RWC. In addition the following metropolitan areas have similar ambient air quality problems due to RWC: Medford, Oregon; Juneau, Alaska; Reno, Nevada; and Albuquerque, New Mexico.

The vast majority of the areas that are experiencing air quality problems due to RWC are urban areas. Thus, large numbers of people are being directly exposed to residential wood pollutants which are emitted at ground level.

Control Technology

There are two types of technology, noncatalytic and catalytic, that can be utilized to control emissions from RWC. The term "noncatalytic" refers to RWC units that have secondary combustion chambers or other stove modifications designed to control emissions. Secondary combustion can be achieved by mixing unburned gases from the primary combustion area with additional oxygen at a temperature sufficient to ignite the mixture or sustain burning. The emission reduction performance of RWC units equipped with secondary combustion controls can be highly variable. Performance varies with the burn cycle and operator attention.

The term "catalytic" refers to a RWC unit that is equipped with a catalytic combustor. The catalyst used on the combustor is a thin metal coating (usually platinum, palladium, or a combination) that allows nearly all the hydrocarbons and other flammable products in the smoke to burn at a temperature much lower than usual. In contrast to noncatalytic RWC units, a catalytic unit is most efficient at low firing rates. In addition, researchers have found that catalysts increase the thermal efficiency of a conventional RWC unit by 20-30 percent. This results in the user having to burn less wood in order to obtain the same amount of heat and, therefore, lowering fuel costs. Also, the catalyst greatly reduces creosote accumulation in the flue, thus reducing the potential for chimney fires. The frequency of chimney cleaning is, therefore, also reduced which translates into additional cost savings.

Research has shown that RWC devices are generally operated at low burn rates, and it is at these burn rates that the largest amount of pollutants are produced. Research has shown that both catalytic and noncatalytic control technology are capable of reducing PM including POM, CO, and HC. Data from tests conducted on RWC devices equipped with noncatalytic control technology indicate that this technology is capable of controlling PM emissions at medium and high burn rates. Unfortunately, this control technology does not appear to be capable of controlling PM emissions at low burn rates. On the other hand, RWC devices equipped with catalytic control devices appear to control PM emissions over all burn rates. There is some concern about catalyst longevity. However, catalyst manufacturers are continuing their development efforts; and presently one catalyst manufacturer is producing a catalyst for which they offer a prorated 6-year limited warranty with 2 years free replacement. This particular catalyst has an expected operational life of about 12,000 hours.

The cost increase of incorporating catalytic or noncatalytic control technology into new RWC devices is estimated to be approxiamtely $200–$300 per unit. Replacement costs for catalytic combustors are estimated to be $50–$100.

Regulatory Activity

Regulations of varying stringency have been or are being adopted by some local and State governments. Certain communities require curtailment of wood burning when an air stagnation advisory is declared, whereas other communities have voluntary burning restrictions. In July 1984, the State of Oregon issued regulations which require all new RWC devices (free standing and fireplace inserts) sold in the State after June 1986 to meet the following PM emission standards: noncatalytic—15 grams of particulate per hour; catalytic 6 grams of particulate per hour. Oregon's Department of Environmental Quality (DEQ) estimates this represents approximately 50 percent particulate emission reduction when compared to conventional RWC devices. This standard changes on July 1, 1988, to the following: noncatalytic—9 grams per hour; catalytic—4 grams per hour. According to Oregon's DEQ, this standard represents approximately 80 percent particulate emission reduction when compared to conventional RWC devices. Compliance with this regulation is voluntary until June 1986. Oregon's regulation requires the manufacturer of RWC devices to have a representative of each model they wish to sell in Oregon tested by a laboratory accredited by the State. Thus far, Oregon has accredited one in-State laboratory and is in the process of reviewing an application from an out-of-State laboratory. Presently, Oregon has certified nine stove models, six noncatalytic and three catalytic.

Other States are also considering establishing emission limits. For example, the Colorado legislature has authorized the State Environmental Commission to establish statewide emission standards for RWC units. In addition, Massachusetts is considering regulating emissions from RWC devices.

Test Methods

Presently, there is no universally accepted method to measure emissions from a RWC unit. While developing emission limits for RWC units, Oregon also developed a test method. This test method is called Oregon Method 7. The EPA is currently using a modified Method 5 for research efforts to investigate emissions from RWC devices. A description of the modified method 5 sampling procedure is included in the docket. The American Society for Testing and Materials (ASTM) is in the process of developing a test method for RWC units which is slated to be released during the summer of 1985 on a provisional status.

Regulatory Approach

The EPA has concluded that a program to establish a Federal standard for RWC units is warranted and has begun gathering existing information on emissions, control technologies, test methods, certification procedures, and costs. The Agency is considering an expedited standards development approach based on the available data. The Agency will consider various emission limits, test methods, and certification procedures, including those of the State of Oregon. This approach has a number of advantages, foremost of which is achieving emission reductions up to 2 years sooner than under the Agency's traditional standard-development process. At a current sales rate of about 1 million units per year, this would mean control for an additional 2 million units and additional reduction in PM emissions of about 216,000 tons/yr. Other advantages include encouraging quicker development of more effective control techniques, quicker public awareness and education on the impacts and benefits of control and less cost to develop a standard. The EPA believes that the available emission control information is adequate to develop and set PM standards for new fireplace inserts and freestanding RWC units.

The more traditional standard-setting approach would include reference test method development, emission measurements with the test method, evaluation of the effectiveness of catalysts over long-term use, and a more detailed economic analysis. More specifically, in contrast to the expedited approach, the Agency would develop a test method and conduct its own independent testing of RWC units to quantify emissions and determine performance of control technology. The EPA-conducted tests with a single test method would quantify other pollutants in addition to PM, such as HC, and CO, and the ability to reduce these with different control techniques, on a consistent and repeatable basis. Test data on more types of units, reflecting the diversity of design, could be gathered as well as possibly expanding the scope of the standards to also include furnaces and fireplaces. More data on catalyst longevity would be available for consideration in setting the standard. A more comprehensive economic analysis could be performed by gathering more information on the economics that affect manufacturers and users of RWC units, thus enabling EPA to analyze a greater number of structural and usage subcategories for the RWC source category.

As noted above, the Agency believes that such a lengthy and detailed standard-development program is not needed for wood combustion units because an adequate data base for standards appears to be available. Developing standards on this basis is not expected to disrupt the availability of wood combustion units to the consumer; it is recognized, however, that a standard, whether developed rapidly or over a longer schedule, may result in the need for some manufacturers to redesign their products or to discontinue sales.

The two approaches involve important trade-offs. The Agency has made a preliminary decision to pursue the expedited approach, but is soliciting comments on the relative advantages and disadvantages of each. In several months, the Agency will make a final decision on the standard-setting approach to this source category, based on the amount and quality of available test data, environmental impacts of earlier control, applicability of control techniques and test methods, implementation and enforcement considerations, cost of developing and implementing standards, and information and data gathered as a result of this notice.

The Agency is also seeking information and data on the technical, cost, economic, implementation, and benefits aspects of regulating RWC units. Of technical interest are emission and performance data for catalytic and noncatalytic control technologies during the entire operating cycle of the units. This includes catalyst longevity and emission reduction capabilities for particulates, carbon monoxide, and organics over several heating seasons, types or catalysts and configurations, causes of catalyst degradation, specific guarantees and conditions by catalyst manufacturers, operating and physical factors (such as air flow, humidity, type of wood, etc.) that affect combustion and pollutant formation, and design criteria for RWC units that incorporate either catalyst or noncatalyst control technology. The Agency seeks information and data on the accuracy, reproducibility, and comparability among all existing particulate test methods, including Oregon Method 7, the ASTM method, and the EPA Modified Method 5 and their ability to rank stoves according to their emission of PM including POM, and hydrocarbons. The EPA is interested in cost increases to the manufacturer and consumer of applying the various emission control techniques to RWC units. In addition, the EPA is interested in the cost benefit to consumers due to reduced wood consumption, reduced creosote formation, and greater operational safety. Other costs of interest are those related to emission testing, standards implementation, and enforcement. To analyze the economic impacts, EPA is soliciting the following information on businesses that manufacture and/or sell RWC units: firm sizes (employment, annual sales, and number of plants); production capacity and capacity utilization over the last few years; age and remaining lifetime of plants; how production line changes needed to produce controlled units would be financed; competitiveness of the market, and whether firms compete for sales in small geographic areas or in a national market; the mix of imported and domestic materials used in manufacturing the units; how many units are exported; and what prices firms charge (list and discounted prices and shipping costs). The EPA also is soliciting the following economic information on consumers: geographical distribution (for climate data); type of consumer (residential, commercial); how the consumer uses RWC units (primary or supplemental heat, water heating, cooking); alternative heating sources available to the user; initial capital and operating costs; time and money spent obtaining and perparing fuel, and cleaning the units; operating hours during each season of the year; and how much wood is consumed each season. Also of interest is information regarding the practicality of implementation of any regulations for RWC units, including catalyst availability, standards enforcement, certification, and labelling on units. Finally, the Agency is soliciting information on the beneficial aspects of RWC regulation, including impacts on emissions, visibility, odor, ozone formation, mortality, morbidity, agriculture, materials, indoor air quality, and the benefits or reduced creosote formation (thus fewer chimney fires and cleaning), and improved heating efficiency of the units.

The Agency does not intend that the proposed rulemaking preclude State and local control agencies from developing their own emission control regulations and certification procedures for RWC units. To assist State air pollution control agencies and others interested in control of RWC emissions, the Agency will share the information obtained through responses to this notice or obtained from other sources.

The Agency is aware that there are systems available which allow catalytic combustors to be retrofitted to existing RWC units. However, not all RWC units are capable of being retrofitted due to the many different unit designs, space limitations, and potential conflicts with existing safety regulations and building codes. Also, there are questions concerning the stove-to-stove performance of retrofit catalysts due to issues regarding flame impingement and the inability to optimize that catalyst inlet configuration on retrofit applications. Furthermore, the Agency believes that it would not be feasible to administer and enforce a regulation for retrofit of existing stoves on a national basis. Implementation of such a regulation would require that over 10 million existing stoves in private residences be located. In addition, each unit would have to be evaluated to determine if a retrofit system would be compatible. Enforcement and administration of a program for retrofitting existing stoves on a national basis would be resource intensive and extremely difficult to implement. Therefore, development of a standard for existing units is not being considered at this time. In the future, in order to provide guidance to State and local agencies, the Agency may develop a guideline document on retrofitting catalytic, or other controls, to existing units. Therefore, the Agency is soliciting comments on this issue and on the availability, applicability, safety aspects, and performance of retrofit control technology and the costs associated with retrofitting existing units.

Miscellaneous

A regulatory flexibility analysis under 5 U.S.C. 601, et seq., is not required for this notice. This notice would not impose any new regulatory requirements, nor would it impose any additional costs. This notice is also considered nonmajor under Executive Order 12291.

List of Subjects in 40 CFR Part 60

Air pollution control, Intergovernmental relations, Paper and paper products industry, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: July 25, 1985.

Lee M. Thomas,

Administrator.

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