

AIP
AERONAUTICAL INFORMATION PUBLICATION
UNITED STATES OF AMERICA

(TWENTY-FIRST EDITION DATED 10 MARCH 2011)

AMENDMENT 1

25 August 2011

CONSULT NOTAM FOR LATEST INFORMATION

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIP Amendment 1
Page Control Chart
25 August 2011

REMOVE PAGES	DATED	INSERT PAGES	DATED
GEN 0.1-3	10 MAR 11	GEN 0.1-3	25 AUG 11
GEN 0.4-1 through GEN 0.4-3	10 MAR 11	GEN 0.4-1 through GEN 0.4-3	25 AUG 11
GEN 1.2-3	10 MAR 11	GEN 1.2-3	10 MAR 11
GEN 1.2-4	10 MAR 11	GEN 1.2-4	25 AUG 11
GEN 1.6-1	10 MAR 11	GEN 1.6-1	25 AUG 11
GEN 1.6-2	10 MAR 11	GEN 1.6-2	10 MAR 11
GEN 1.7-1 through GEN 1.7-103	10 MAR 11	GEN 1.7-1 through GEN 1.7-107	25 AUG 11
GEN 2.2-3 and GEN 2.2-4	10 MAR 11	GEN 2.2-3 and GEN 2.2-4	25 AUG 11
GEN 2.3-1	10 MAR 11	GEN 2.3-1	25 AUG 11
GEN 3.1-1 and GEN 3.1-2	10 MAR 11	GEN 3.1-1 and GEN 3.1-2	25 AUG 11
GEN 3.2-1	10 MAR 11	GEN 3.2-1	25 AUG 11
GEN 3.2-2	10 MAR 11	GEN 3.2-2	10 MAR 11
GEN 3.2-5 and GEN 3.2-6	10 MAR 11	GEN 3.2-5 and GEN 3.2-6	25 AUG 11
GEN 3.2-7	10 MAR 11	GEN 3.2-7	10 MAR 11
GEN 3.2-8	10 MAR 11	GEN 3.2-8	25 AUG 11
GEN 3.2-13	10 MAR 11	GEN 3.2-13	25 AUG 11
GEN 3.5-17	10 MAR 11	GEN 3.5-17	10 MAR 11
GEN 3.5-18	10 MAR 11	GEN 3.5-18	25 AUG 11
ENR 0.4-1 through ENR 0.4-3	10 MAR 11	ENR 0.4-1 through ENR 0.4-3	25 AUG 11
ENR 1.1-29 and ENR 1.1-30	10 MAR 11	ENR 1.1-29 and ENR 1.1-30	25 AUG 11
ENR 1.1-43 through ENR 1.1-52	10 MAR 11	ENR 1.1-43 through ENR 1.1-52	25 AUG 11
ENR 1.5-9	10 MAR 11	ENR 1.5-9	10 MAR 11
ENR 1.5-10	10 MAR 11	ENR 1.5-10	25 AUG 11
ENR 1.5-11 through ENR 1.5-16	10 MAR 11	ENR 1.5-11 through ENR 1.5-16	25 AUG 11
ENR 1.5-17	10 MAR 11	ENR 1.5-17	25 AUG 11
ENR 1.5-18	10 MAR 11	ENR 1.5-18	10 MAR 11
ENR 1.5-39	10 MAR 11	ENR 1.5-39	10 MAR 11
ENR 1.5-40	10 MAR 11	ENR 1.5-40	25 AUG 11
ENR 1.5-67	10 MAR 11	ENR 1.5-67	10 MAR 11
ENR 1.5-68	10 MAR 11	ENR 1.5-68	25 AUG 11
ENR 1.5-69	10 MAR 11	ENR 1.5-69	25 AUG 11
ENR 1.5-70	10 MAR 11	ENR 1.5-70	10 MAR 11
ENR 1.10-3	10 MAR 11	ENR 1.10-3	10 MAR 11
ENR 1.10-4	10 MAR 11	ENR 1.10-4	25 AUG 11
ENR 1.10-5 and ENR1.10-6	10 MAR 11	ENR 1.10-5 and ENR1.10-6	25 AUG 11
ENR 1.12-3 through ENR 1.12-7	10 MAR 11	ENR 1.12-3 through ENR 1.12-8	25 AUG 11
ENR 1.15-1	10 MAR 11	ENR 1.15-1	10 MAR 11

REMOVE PAGES	DATED	INSERT PAGES	DATED
ENR 1.15-2	10 MAR 11	ENR 1.15-2	25 AUG 11
ENR 1.15-3 and ENR 1.15-4	10 MAR 11	ENR 1.15-3 and ENR 1.15-4	25 AUG 11
ENR 1.15-5	10 MAR 11	ENR 1.15-5	25 AUG 11
ENR 1.15-6	10 MAR 11	ENR 1.15-6	10 MAR 11
ENR 1.19-5	10 MAR 11	ENR 1.19-5	25 AUG 11
ENR 1.19-6	10 MAR 11	ENR 1.19-6	10 MAR 11
ENR 5.2-1	10 MAR 11	ENR 5.2-1	10 MAR 11
ENR 5.2-2	10 MAR 11	ENR 5.2-2	25 AUG 11
ENR 5.7-13	10 MAR 11	ENR 5.7-13	10 MAR 11
ENR 5.7-14	10 MAR 11	ENR 5.7-14	25 AUG 11
ENR 6.1-7	10 MAR 11	ENR 6.1-7	25 AUG 11
AD 0.4-1 through AD 0.4-4	10 MAR 11	AD 0.4-1 through AD 0.4-4	25 AUG 11
AD 1.1-19	10 MAR 11	AD 1.1-19	25 AUG 11
AD 1.1-20	10 MAR 11	AD 1.1-20	10 MAR 11
AD 1.1-27	10 MAR 11	AD 1.1-27	10 MAR 11
AD 1.1-28	10 MAR 11	AD 1.1-28	25 AUG 11
AD 2-1 through AD 2-450	10 MAR 11	AD 2-1 through AD 2-454	25 AUG 11
I-1 through I-8	10 MAR 11	I-1 through I-8	25 AUG 11

NOTE-

The Twenty-first edition of this publication was released with a footer that reads "Twentieth Edition." For all intents and purposes, the material published herein, and the Amendments that follow, comprise the **Twenty-first** edition. For consistency and to avoid further confusion, the [footers on the] Amendments within this edition will **not** be adjusted. Therefore, please refer to the header of each page to determine the effective date.

4. Service to Contact in Case of Detected AIP Errors or Omissions

4.1 In the compilation of the AIP, care has been taken to ensure that the information contained therein is accurate and complete. Any errors and omissions which may be detected, as well as any correspondence concerning the Aeronautical Information Publication, should be referred to:

Aeronautical Navigation Products (AeroNav)
Air Traffic Control Products and Publications Team,
(AJV-362)
Federal Aviation Administration
SSMC-4, Station #5601
1305 East-West Highway
Silver Spring, MD 20910-3281

5. Subscription Information

5.1 The AIP is offered for sale on a subscription basis from:

Aeronautical Navigation Products (AeroNav)
Logistics Group, AJV-372
Federal Aviation Administration
10201 Good Luck Road
Glenn Dale, MD 20769-9700
Telephone: 1-800-638-8972 (Toll free within U.S.)
301-436-8301
301-436-6829 (FAX)
e-mail: 9-AMC-Chartsales@faa.gov

The AIP may be ordered via the internet at:
<http://bookstore.gpo.gov>

GEN 0.4 Checklist of Pages

PAGE	DATE
PART 1 – GENERAL (GEN)	
GEN 0	
0.1-1	10 MAR 11
0.1-2	10 MAR 11
0.1-3	25 AUG 11
0.2-1	10 MAR 11
0.4-1	25 AUG 11
0.4-2	25 AUG 11
0.4-3	25 AUG 11
0.6-1	10 MAR 11
GEN 1	
1.1-1	10 MAR 11
1.1-2	10 MAR 11
1.1-3	10 MAR 11
1.1-4	10 MAR 11
1.2-1	10 MAR 11
1.2-2	10 MAR 11
1.2-3	10 MAR 11
1.2-4	25 AUG 11
1.2-5	10 MAR 11
1.2-6	10 MAR 11
1.2-7	10 MAR 11
1.2-8	10 MAR 11
1.2-9	10 MAR 11
1.3-1	10 MAR 11
1.3-2	10 MAR 11
1.3-3	10 MAR 11
1.4-1	10 MAR 11
1.4-2	10 MAR 11
1.4-3	10 MAR 11
1.4-4	10 MAR 11
1.5-1	10 MAR 11
1.6-1	25 AUG 11
1.6-2	10 MAR 11
1.7-1	25 AUG 11
1.7-2	25 AUG 11
1.7-3	25 AUG 11
1.7-4	25 AUG 11
1.7-5	25 AUG 11
1.7-6	25 AUG 11
1.7-7	25 AUG 11
1.7-8	25 AUG 11
1.7-9	25 AUG 11
1.7-10	25 AUG 11
1.7-11	25 AUG 11
1.7-12	25 AUG 11
1.7-13	25 AUG 11

PAGE	DATE
1.7-14	25 AUG 11
1.7-15	25 AUG 11
1.7-16	25 AUG 11
1.7-17	25 AUG 11
1.7-18	25 AUG 11
1.7-19	25 AUG 11
1.7-20	25 AUG 11
1.7-21	25 AUG 11
1.7-22	25 AUG 11
1.7-23	25 AUG 11
1.7-24	25 AUG 11
1.7-25	25 AUG 11
1.7-26	25 AUG 11
1.7-27	25 AUG 11
1.7-28	25 AUG 11
1.7-29	25 AUG 11
1.7-30	25 AUG 11
1.7-31	25 AUG 11
1.7-32	25 AUG 11
1.7-33	25 AUG 11
1.7-34	25 AUG 11
1.7-35	25 AUG 11
1.7-36	25 AUG 11
1.7-37	25 AUG 11
1.7-38	25 AUG 11
1.7-39	25 AUG 11
1.7-40	25 AUG 11
1.7-41	25 AUG 11
1.7-42	25 AUG 11
1.7-43	25 AUG 11
1.7-44	25 AUG 11
1.7-45	25 AUG 11
1.7-46	25 AUG 11
1.7-47	25 AUG 11
1.7-48	25 AUG 11
1.7-49	25 AUG 11
1.7-50	25 AUG 11
1.7-51	25 AUG 11
1.7-52	25 AUG 11
1.7-53	25 AUG 11
1.7-54	25 AUG 11
1.7-55	25 AUG 11
1.7-56	25 AUG 11
1.7-57	25 AUG 11
1.7-58	25 AUG 11
1.7-59	25 AUG 11
1.7-60	25 AUG 11

PAGE	DATE
1.7-61	25 AUG 11
1.7-62	25 AUG 11
1.7-63	25 AUG 11
1.7-64	25 AUG 11
1.7-65	25 AUG 11
1.7-66	25 AUG 11
1.7-67	25 AUG 11
1.7-68	25 AUG 11
1.7-69	25 AUG 11
1.7-70	25 AUG 11
1.7-71	25 AUG 11
1.7-72	25 AUG 11
1.7-73	25 AUG 11
1.7-74	25 AUG 11
1.7-75	25 AUG 11
1.7-76	25 AUG 11
1.7-77	25 AUG 11
1.7-78	25 AUG 11
1.7-79	25 AUG 11
1.7-80	25 AUG 11
1.7-81	25 AUG 11
1.7-82	25 AUG 11
1.7-83	25 AUG 11
1.7-84	25 AUG 11
1.7-85	25 AUG 11
1.7-86	25 AUG 11
1.7-87	25 AUG 11
1.7-88	25 AUG 11
1.7-89	25 AUG 11
1.7-90	25 AUG 11
1.7-91	25 AUG 11
1.7-92	25 AUG 11
1.7-93	25 AUG 11
1.7-94	25 AUG 11
1.7-95	25 AUG 11
1.7-96	25 AUG 11
1.7-97	25 AUG 11
1.7-98	25 AUG 11
1.7-99	25 AUG 11
1.7-100	25 AUG 11
1.7-101	25 AUG 11
1.7-102	25 AUG 11
1.7-103	25 AUG 11
1.7-104	25 AUG 11
1.7-105	25 AUG 11
1.7-106	25 AUG 11
1.7-107	25 AUG 11

PAGE	DATE
GEN 2	
2.1-1	10 MAR 11
2.1-2	10 MAR 11
2.2-1	10 MAR 11
2.2-2	10 MAR 11
2.2-3	25 AUG 11
2.2-4	25 AUG 11
2.2-5	10 MAR 11
2.3-1	25 AUG 11
2.4-1	10 MAR 11
2.5-1	10 MAR 11
2.6-1	10 MAR 11
2.6-2	10 MAR 11
2.6-3	10 MAR 11
2.6-4	10 MAR 11
2.6-5	10 MAR 11
2.6-6	10 MAR 11
2.6-7	10 MAR 11
2.7-1	10 MAR 11
GEN 3	
3.1-1	25 AUG 11
3.1-2	25 AUG 11
3.1-3	10 MAR 11
3.1-4	10 MAR 11
3.1-5	10 MAR 11
3.2-1	25 AUG 11
3.2-2	10 MAR 11
3.2-3	10 MAR 11
3.2-4	10 MAR 11
3.2-5	25 AUG 11
3.2-6	25 AUG 11
3.2-7	10 MAR 11
3.2-8	25 AUG 11
3.2-9	10 MAR 11
3.2-10	10 MAR 11
3.2-11	10 MAR 11
3.2-12	10 MAR 11
3.2-13	25 AUG 11
3.3-1	10 MAR 11
3.3-2	10 MAR 11
3.3-3	10 MAR 11
3.3-4	10 MAR 11
3.3-5	10 MAR 11
3.3-6	10 MAR 11
3.3-7	10 MAR 11
3.3-8	10 MAR 11
3.3-9	10 MAR 11
3.3-10	10 MAR 11
3.3-11	10 MAR 11
3.3-12	10 MAR 11

PAGE	DATE
3.3-13	10 MAR 11
3.3-14	10 MAR 11
3.3-15	10 MAR 11
3.3-16	10 MAR 11
3.3-17	10 MAR 11
3.4-1	10 MAR 11
3.4-2	10 MAR 11
3.4-3	10 MAR 11
3.4-4	10 MAR 11
3.4-5	10 MAR 11
3.4-6	10 MAR 11
3.4-7	10 MAR 11
3.4-8	10 MAR 11
3.4-9	10 MAR 11
3.4-10	10 MAR 11
3.4-11	10 MAR 11
3.4-12	10 MAR 11
3.4-13	10 MAR 11
3.4-14	10 MAR 11
3.4-15	10 MAR 11
3.4-16	10 MAR 11
3.4-17	10 MAR 11
3.4-18	10 MAR 11
3.4-19	10 MAR 11
3.4-20	10 MAR 11
3.4-21	10 MAR 11
3.4-22	10 MAR 11
3.4-23	10 MAR 11
3.4-24	10 MAR 11
3.5-1	10 MAR 11
3.5-2	10 MAR 11
3.5-3	10 MAR 11
3.5-4	10 MAR 11
3.5-5	10 MAR 11
3.5-6	10 MAR 11
3.5-7	10 MAR 11
3.5-8	10 MAR 11
3.5-9	10 MAR 11
3.5-10	10 MAR 11
3.5-11	10 MAR 11
3.5-12	10 MAR 11
3.5-13	10 MAR 11
3.5-14	10 MAR 11
3.5-15	10 MAR 11
3.5-16	10 MAR 11
3.5-17	10 MAR 11
3.5-18	25 AUG 11
3.5-19	10 MAR 11
3.5-20	10 MAR 11
3.5-21	10 MAR 11

PAGE	DATE
3.5-22	10 MAR 11
3.5-23	10 MAR 11
3.5-24	10 MAR 11
3.5-25	10 MAR 11
3.5-26	10 MAR 11
3.5-27	10 MAR 11
3.5-28	10 MAR 11
3.5-29	10 MAR 11
3.5-30	10 MAR 11
3.5-31	10 MAR 11
3.5-32	10 MAR 11
3.5-33	10 MAR 11
3.5-34	10 MAR 11
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3.5-36	10 MAR 11
3.5-37	10 MAR 11
3.5-38	10 MAR 11
3.5-39	10 MAR 11
3.5-40	10 MAR 11
3.5-41	10 MAR 11
3.5-42	10 MAR 11
3.5-43	10 MAR 11
3.5-44	10 MAR 11
3.5-45	10 MAR 11
3.5-46	10 MAR 11
3.5-47	10 MAR 11
3.5-48	10 MAR 11
3.5-49	10 MAR 11
3.5-50	10 MAR 11
3.5-51	10 MAR 11
3.5-52	10 MAR 11
3.5-53	10 MAR 11
3.5-54	10 MAR 11
3.5-55	10 MAR 11
3.5-56	10 MAR 11
3.5-57	10 MAR 11
3.5-58	10 MAR 11
3.5-59	10 MAR 11
3.5-60	10 MAR 11
3.5-61	10 MAR 11
3.5-62	10 MAR 11
3.5-63	10 MAR 11
3.5-64	10 MAR 11
3.5-65	10 MAR 11
3.5-66	10 MAR 11
3.5-67	10 MAR 11
3.5-68	10 MAR 11
3.5-69	10 MAR 11
3.5-70	10 MAR 11
3.5-71	10 MAR 11

PAGE	DATE
3.5-72	10 MAR 11
3.5-73	10 MAR 11
3.5-74	10 MAR 11
3.5-75	10 MAR 11
3.5-76	10 MAR 11
3.5-77	10 MAR 11
3.5-78	10 MAR 11
3.5-79	10 MAR 11
3.5-80	10 MAR 11
3.5-81	10 MAR 11
3.5-82	10 MAR 11
3.5-83	10 MAR 11
3.5-84	10 MAR 11
3.5-85	10 MAR 11
3.6-1	10 MAR 11
3.6-2	10 MAR 11

PAGE	DATE
3.6-3	10 MAR 11
3.6-4	10 MAR 11
3.6-5	10 MAR 11
3.6-6	10 MAR 11
3.6-7	10 MAR 11
3.6-8	10 MAR 11
3.6-9	10 MAR 11
3.6-10	10 MAR 11
3.6-11	10 MAR 11
3.6-12	10 MAR 11
3.6-13	10 MAR 11
3.6-14	10 MAR 11
3.6-15	10 MAR 11
3.6-16	10 MAR 11
3.6-17	10 MAR 11
3.6-18	10 MAR 11

PAGE	DATE
3.6-19	10 MAR 11
3.6-20	10 MAR 11
3.7-1	10 MAR 11
3.7-2	10 MAR 11
GEN 4	
4.1-1	10 MAR 11
4.2-1	10 MAR 11

GEN 0.5 List of Hand Amendments to the AIP – Not applicable

TBL GEN 1.2-1

Required by	General Declaration	*Passenger Manifest	Cargo Manifest
Customs Agriculture	1	0	1
Plant and Quarantine	1	0	1
Immigrations	1	0	1
Public Health	1	0	0
Total	4	0	3
*See paragraph 2.4 in GEN 1.3			

2.3 Public Health Measures Applied to Aircraft

2.3.1 At airports without Public Health Service Quarantine staff, the Customs, Immigration, or Agriculture Officer present will represent the Public Health Service.

2.3.2 No public health measures are required to be carried out with respect to aircraft entering U.S. territory except that disinfection of an aircraft may be required if it has left a foreign area that is infected with insect-borne communicable disease and the aircraft is suspected of harboring insects of public health importance. Disinfection is defined as: “The operation in which measures are taken to kill the insect vectors of human disease present in carriers and containers.”

2.3.3 Disinfection shall be the responsibility of the air carrier and shall be subject to monitoring by the Director of the Public Health Service.

2.3.4 Disinfection of the aircraft shall be accomplished immediately after landing and blocking. The cargo compartment shall be disinfected before the mail, baggage, and other cargo are discharged and the rest of the aircraft shall be disinfected after passengers and crew deplane.

2.3.5 Disinfection shall be performed with an approved insecticide in accordance with the manufacturer’s instructions. The current list of approved insecticides and sources may be obtained from the Division of Quarantine, Center for Prevention Services, Centers for Disease Control, Atlanta, GA 30333.

2.3.6 All food and potable water taken on board an aircraft at any airport and intended for human consumption thereon shall be obtained from sources

approved in accordance with Title 21, Code of Federal Regulations, Parts 1240 and 1250.

2.3.7 Aircraft inbound or outbound on an international flight shall not discharge over the U.S. any excrement or waste water or other polluting materials. Arriving aircraft shall discharge such matter only at servicing areas approved under regulations cited in paragraph 2.3.6 above.

2.3.8 Aircraft on an international voyage, which are in traffic between U.S. airports, shall be subject to inspection when there occurs on board, among passengers or crew, any death, or any ill person, or when illness is suspected to be caused by insanitary conditions.

3. Nonscheduled, Noncommon Carriage Flights

3.1 General

3.1.1 Nonscheduled, noncommon carriage flights are transportation services for remuneration or hire that are not offered to the general public.

3.1.2 Nonscheduled flights in transit across the territory of the U.S. or landing for reasons other than the purposes of loading and unloading passengers, cargo or mail (nonrevenue flights) which are registered in a State which is a member of the International Civil Aviation Organization (ICAO) may do so without the necessity of obtaining prior permission, provided passengers are not permitted to leave the airport during stopover or provided that each stopover does not exceed 24 hours. Stopovers which do exceed 24 hours are permitted only in those cases where a transfer of passengers, property or mail to another aircraft is necessary for the safety of the aircraft, passengers, property, or crew. Stopovers for the pleasure or convenience of passengers are not included in the transit authority.

3.1.3 Nonscheduled flights landing in the territory of the U.S. for reasons of loading or unloading passengers, cargo or mail (revenue flights), must obtain prior permission from the DOT/OST, Office of International Aviation (X-40), at least 15 days prior to the flight. All permission requests must include:

3.1.3.1 Name and address of applicant.

3.1.3.2 Aircraft make, model, and registration or identification marks.

3.1.3.3 Country in which the aircraft is registered.

3.1.3.4 Name and address of registered owner of aircraft.

3.1.3.5 Type of flight(s) (passenger, cargo, or agricultural or industrial operation).

3.1.3.6 Purpose of flight(s).

3.1.3.7 Date of the flight(s).

3.1.3.8 Routing of the flight(s).

3.1.3.9 Number of flights.

3.1.3.10 Name of charterer.

3.1.3.11 Charter price.

3.1.4 Applications should be made on DOT/OST, Office of International Aviation Form 4509; however, if time does not permit, applications by telegram will be accepted as long as they include the information described above. Telegraphic applications must include a prepaid voucher sufficient to allow a sixty word reply. The permit must be carried aboard the aircraft during flight over U.S. territory.

3.2 The following commercial air operations require preflight authorization from X-40:

3.2.1 Agricultural and industrial operations which include, but are not limited to, such services as crop dusting, pest control, pipeline patrols, mapping, surveying, banner towing, or skywriting.

3.2.2 Occasional and infrequent planeload charter flights carrying persons or property to and/or from the U.S. The number of these flights that may be performed is limited to six in any calendar year. Foreign civil aircraft are not permitted to transport persons or property or mail for compensation or hire between points wholly within the U.S.

3.2.3 Continuing cargo operations for one or more contractors. Applicants may be authorized to serve up to 10 different contractors in a 12-month period; however, authorization may be granted only if it is clear that the service is not in common carriage and the carrier and contractor enter into a contract which provides for (a) continuing cargo operations for a period of at least 6 months; (b) an absolute or minimum number of flights or volume of cargo to be transported; and (c) a guarantee by the contractor to the carrier to pay for the minimum number of flights to be performed or volume of cargo to be transported whether or not he/she uses the capacity. Continuing

cargo operations wholly within the U.S. cannot be authorized.

3.2.4 Persons wishing to operate foreign civil aircraft from, to, or within the U.S. other than as described in this Section may request permission to perform those services by filing an application with X-40. The application should include the information described above in this section. Permission to perform these services may be granted if X-40 finds that the service is consistent with applicable law and is in the interest of the public of the U.S.

3.2.5 Nonscheduled flights in transit across the territory of the U.S. or landing with or without purposes of loading and unloading passengers, cargo or mail (revenue or nonrevenue flights) which are registered in a State which is not a member of the International Civil Aviation Organization (ICAO) must obtain prior permission from X-40 at least 15 days prior to the flight. All permission requests must include the same information as requested in paragraph 3.1.3. (See also paragraph 1.5).

3.3 Documentary Requirements for Clearance of Aircraft

3.3.1 Same requirements as for scheduled flights; in addition, Customs Form 178 must be filled out for all private aircraft arrivals.

4. Private Flights

4.1 Procedures

4.1.1 Private aircraft that operate to, from, within, or transit territorial airspace of the United States must meet special security requirements in effect through Special Notices pursuant to 14 CFR Section 99.7, Special Security Instructions.

REFERENCE-

FAA Notices to Airmen (NOTAMS), Special Notices, at (http://www.faa.gov/pilots/flt_plan/notams/).
International Flight Information Manual for U.S. Prohibitions, Restrictions, and Notices, at (http://www.faa.gov/air_traffic/publications/ifim/).

4.1.2 If an operator intends to carry out a private flight in transit across the territory of the U.S. with intermediate landing, the operator must provide advance notice of arrival to U.S. Customs officials at or nearest the first intended landing. Custom officials, upon notification, will notify the necessary Immigration, Public Health, and Agriculture officials. Advance notice must be received in sufficient time to enable the officials designated to inspect the aircraft

GEN 1.6 Summary of National Regulations and International Agreements/Conventions

1. Summary of National Regulations

1.1 Air regulations for the U.S. and areas under its jurisdiction are published in Title 14 of the U.S. Code of Federal Regulations (CFR) Parts 1-199, entitled the Federal Aviation Administration, Department of Transportation. It is essential that persons engaged in air operations in the U.S. airspace be acquainted with the relevant regulations. Copies of the 14 CFR parts may be purchased from the:

Superintendent of Documents
U.S. Government Printing Office
Attn: New Orders
P.O. Box 979050
St. Louis, MO 63197-9000
Telephone: 202-512-1800

The Code of Federal Regulations is available electronically at:

<http://www.gpoaccess.gov/nara/index.html>.

1.2 The following is a partial list of Federal Aviation Regulations and their respective subject matter:

TBL GEN 1.6-1

14 CFR Part No.	Title
1	Definitions and abbreviations
11	General rulemaking procedures
13	Investigative and enforcement procedures
21	Certification procedures for products and parts
23	Airworthiness standards: normal, utility, acrobatic, and commuter category airplanes
25	Airworthiness standards: transport category airplanes
27	Airworthiness standards: normal category rotorcraft
29	Airworthiness Standards: transport category rotorcraft
31	Airworthiness standards: manned free balloons
33	Airworthiness standards: aircraft engines

14 CFR Part No.	Title
35	Airworthiness standards: propellers
36	Noise standards: aircraft type and airworthiness certification
39	Airworthiness directives
43	Maintenance, preventive maintenance, rebuilding, and alteration
45	Identification and registration marking
47	Aircraft registration
49	Recording of aircraft titles and security documents
61	Certification: Pilots, flight instructors, and ground instructors
63	Certification: Flight crewmembers other than pilots
65	Certification: Airmen other than flight crewmembers
67	Medical standards and certification
71	Designation of Class A, B, C, D, and E airspace areas; airways; routes; and reporting points
73	Special use airspace
77	Objects affecting navigable airspace
91	General operating and flight rules
93	Special air traffic rules and airport traffic patterns
95	IFR altitudes
97	Standard instrument approach procedures
99	Security control of air traffic
101	Moored balloons, kites, unmanned rockets, and unmanned free balloons
103	Ultralight vehicles
105	Parachute jumping
107	Airport security
108	Airplane operator security
109	Indirect air carrier security
119	Certification: Air carriers and commercial operators
121	Operating requirements: Domestic, flag, and supplemental operations

14 CFR Part No.	Title
125	Certification and operations: Airplanes having a seating capacity of 20 or more passengers or a maximum payload capacity of 6,000 pounds or more
129	Operations: Foreign air carriers and foreign operations of U.S. registered aircraft engaged in common carriage
133	Rotorcraft external load operations
135	Operating requirements: Commuter and on-demand operations
137	Agricultural aircraft operations
139	Certification and operations: Land airports serving certain air carriers
141	Pilot schools
142	Training centers
145	Repair stations
147	Aviation maintenance technician schools
150	Airport noise compatibility planning
151	Federal aid to airports
152	Airport aid program
155	Release of airport property from surplus property disposal restrictions

14 CFR Part No.	Title
156	State block grant pilot program
157	Notice of construction, alteration, activation, and deactivation of airports
158	Passenger facility charges (PFCs)
161	Notice and approval of airport noise and access restrictions
169	Expenditure of Federal funds for nonmilitary airports or air navigation facilities thereon
170	Establishment and discontinuance criteria for air traffic control services and navigational facilities
171	Non-Federal navigation facilities
183	Representatives of the Administrator
185	Testimony by employees and production of records in legal proceedings, and service of legal process and pleadings
187	Fees
189	Use of Federal Aviation Administration communications system
191	Protection of sensitive security information
198	Aviation insurance

GEN 1.7 Differences From ICAO Standards, Recommended Practices and Procedures

NOTE-

See GEN 1.6 for the availability of Title 14 of the U.S. Code of Federal Regulations Parts 1-199.

ANNEX 1 – PERSONNEL LICENSING	
Chapter 1	Definitions and General Rules Concerning Licences
Chapter I Reference Definition	Though the term “error management” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA training publications.
Chapter I Reference Definition	Through the term “competency unit” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA regulations and publications.
Chapter I Reference Definition	Though the term “airmanship” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA regulations and publications.
Chapter I Reference Definition	The United States does not require the training organizations to have a quality assurance system as outlined in ICAO Annex 1, Appendix 2, Item 4.
Chapter I Reference Definition	Though the term “performance criteria” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA regulations and publications.
Chapter I Reference Definition	Though the term “quality system” is not specifically defined in the U.S. regulations, it is amply implemented in FAA policy publications.
Chapter I Reference Definition	Through the term “competency element” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA regulations and publications.
Chapter I Reference Definition	Through the term “airship,” the US also requires that it be “steerable.”
Chapter I Reference Definition	Though the term “threat management” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA publications.
Chapter I Reference Definition	Though the term “credit” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA regulations and publications.
Chapter I Reference Definition	Though the term “competency” is not specifically defined in the U.S. regulations, it is amply implemented in the FAA regulations and publications.
Chapter 1 Reference 1.2.5.2	The maximum validity allowed for non-FAA air traffic controllers (required to hold an FAA Second-Class airman medical certificate) is 12 months. The maximum validity allowed for FAA air traffic controllers is 24 months for those under age 40 who work at FAA terminals or centers. U.S. free balloon and glider pilots are not required to hold medical certificates but are prohibited from operating during periods of medical deficiency.
Chapter 1 Reference 1.2.5.2.2	U.S. commercial pilots engage in single-crew commercial air transport operations carrying passengers have a 12-month validity on their assessments regardless of age.
Chapter 1 Reference 1.2.5.2.3	U.S. commercial pilots have a 12 month validity on their medical assessments regardless of age.
Chapter 1 Reference 1.2.5.2.4	The maximum validity on non-FAA air traffic controllers (required to hold a second-class airman medical certificate) is 12 months. The maximum validity for FAA Terminal and Center personnel over age 40 is 12 months. Free balloon and glider pilots are not required to hold a medical certificate but are prohibited from operating during periods of medical deficiency.

Chapter 1 Reference 1.2.5.2.5	U.S. private pilots who have passed their 50 th birthday have a 24-month validity on their medical assessments. U.S. free balloon and glider pilots are not required to hold medical certificates but are prohibited from operating during periods of medical deficiency.
Chapter 1 Reference 1.2.5.2.6	The United States does not defer medical examinations.
Chapter 2	Licences and Ratings for Pilots
Chapter 2 Reference 2.1.9.2	The FAA only allows pilots to log SIC flight experience in an aircraft that requires an SIC by type design or by an operational requirement.
Chapter 2 Reference 2.1.9.3	SIC experience (hours) may only be used towards obtaining an Airline Transport Pilot certificate with an Airplane rating. Then, only 1/3 of the SIC time may be applied, with a maximum allowable 500 hrs as SIC.
Chapter 2 Reference 2.2.3	United States student pilots must meet the requirements of an FAA Third-Class medical certificate which are equivalent to ICAO Class 2 with exceptions specified in Chapter 6 under 6.4.2.6; 6.4.2.6.1; 6.4.2.6.2; 6.4.2.9.1; 6.4.3.2.3; 6.4.3.4; and 6.4.3.4.1.
Chapter 2 Reference 2.3.1.4	United States private pilots must meet the requirements of an FAA Third-Class medical certificate which are equivalent to ICAO Class 2 with exceptions specified in Chapter 6 under 6.4.2.6; 6.4.2.6.1; 6.4.2.6.2; 6.4.2.9.1; 6.4.3.2.3; 6.4.3.4; and 6.4.3.4.1.
Chapter 2 Reference 2.4.1.4	United States commercial pilots must meet the requirements of an FAA Second-Class medical certificate which are equivalent to ICAO Class 1 with exceptions specified in Chapter 6 under 6.3.2.6.2; 6.3.2.9.2; 6.3.3.4; 6.3.3.4.1; 6.3.4.1.1; and 6.3.4.1.2.
Chapter 2 Reference 2.5.1.1	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.1.2	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.1.3.1	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.1.3.2	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.1.4	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.2.1	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.2.2	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.2.3	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.3.1	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.3.2	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.3.3	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.4.1	The United States has no 14 CFR provisions for MPL.
Chapter 2 Reference 2.5.4.2	The United States has no 14 CFR provisions for MPL. However, the FAA could approve a part 141 special curriculum or part 142 training curriculum for operators wanting to train persons to meet the ICAO MPL requirements.

Chapter 2 Reference 2.6.1.1	The United States has a minimum age is 23.
Chapter 2 Reference 2.6.1.4	U.S. airline transport pilots must meet the requirements of an FAA First-Class Medical Certificate which are equivalent to ICAO Class 1 with exceptions specified in Chapter 6 under 6.3.2.6.2; 6.3.2.9.2; 6.3.3.4; 6.3.3.4.1; 6.3.4.1.1; and 6.3.4.1.2.
Chapter 2 Reference 2.6.5.1.1.	The United States requires 1500 hrs of total flight experience, but only 250 hours PIC need to be in Powered-lift.
Chapter 2 Reference 2.7.1.3.1	U.S. private pilots who hold an airplane instrument rating are not required to comply with ICAO Class 1 hearing standards. U.S. hearing requirements for FAA First- and Third-Class medical certificates are equivalent to ICAO Class 1 with exceptions specified in 6.3.4.1.1 and 6.3.4.1.2.
Chapter 2 Reference 2.7.1.3.2	U.S. private pilots are not required to comply with ICAO Class 1 physical, mental and visual requirements to hold an airplane instrument rating.
Chapter 2 Reference 2.8.2.2	The United States has no 14 CFR provisions for MPL. However, the FAA could approve a part 141 special curriculum or a part 142 training curriculum for operators wanting to train persons to meet the ICAO MPL requirements.
Chapter 2 Reference 2.9.1.5	U.S. glider pilots are not required to hold a medical certificate but are prohibited from operating during periods of medical deficiency.
Chapter 2 Reference 2.10.1.5	U.S. free balloon pilots are not required to hold a medical certificate but are prohibited from operating during periods of medical deficiency.
Chapter 3	Licences for Flight Crew Members other than Licences for Pilots
Chapter 3 Reference 3.2.1.5	U.S. flight navigators must meet the requirements of an FAA Second-class medical certificate which, though not identical, meet the intent of ICAO Class 1.
Chapter 3 Reference 3.2.1.5	U.S. flight navigators must meet the requirements of an FAA Second-Class medical certificate which are equivalent to ICAO Class 1 with exceptions specified in Chapter 6 under 6.3.2.6.2; 6.3.2.9.2; 6.3.3.4; 6.3.3.4.1; 6.3.4.1.1; and 6.3.4.1.2.
Chapter 3 Reference 3.3.1.5	U.S. flight engineers must meet the requirements of an FAA Second-Class medical certificate which are equivalent to ICAO Class 1 with exceptions specified in Chapter 6 under 6.3.2.6.2; 6.3.2.9.2; 6.3.3.4; 6.3.3.4.1; 6.3.4.1.1; and 6.3.4.1.2.
Chapter 4	Licences and Ratings for Personnel other than Flight Crew Members
Chapter 4 Reference 4.2.1.3	The United States does not require 4 years of experience to qualify to take the written examination for a mechanic's airframe and powerplant license.
Chapter 4 Reference 4.2.2.3.1	The United States endorses the certification privileges on the licence.
Chapter 4 Reference 4.2.2.4	The United States does not allow an approved maintenance organization to appoint non-licensed personnel to exercise the privileges of 4.2.2 within the U.S.
Chapter 4 Reference 4.3.1.4	Non-FAA air traffic controllers must meet the requirements of an FAA Second-Class medical certificate which, though not identical, meet the intent of ICAO Class 3.
Chapter 4 Reference 4.4.1.1	The United States requires that an applicant be at least 18 years of age.
Chapter 4 Reference 4.4.1.3	Intentionally left blank
Chapter 4 Reference 4.6.1.1	The United States requires the applicant shall not be less than 23 years of age.
Chapter 4 Reference 4.6.1.3.2	The United States permits the applicant to have two years of experience in the last three years.
Chapter 5	Specifications for Personnel Licences

Chapter 5 Reference 5.1.3	The United States only issues certificates in the English language.
Chapter 6	Medical Provisions for Licencing
Chapter 6 Reference 6.2.3.2	The United States uses a variety of methods for testing visual acuity that meet the intent of ICAO Recommended Practice. Illumination levels are set by manufactured standards.
Chapter 6 Reference 6.3.1.2	An FAA first-class medical certificate is required when exercising the privileges of an airline transport pilot and an FAA second-class medical certificate is required when exercising the privileges of a commercial pilot, a flight engineer, or a flight navigator.
Chapter 6 Reference 6.3.2.6	Electrocardiography is not required for airline transport pilots at first issue unless the individual is age 35 or older and not for commercial pilots unless clinically indicated.
Chapter 6 Reference 6.3.2.6.1	Electrocardiography is required in re-examination of airline transport pilot applicants over the age of 40 every 12 months. Electrocardiography is not specifically required for commercial pilots unless clinically indicated.
Chapter 6 Reference 6.3.2.6.2	Electrocardiography is required in re-examination of airline transport pilot applicants over the age of 40 every 12 months. Electrocardiography is not specifically required for commercial pilots unless clinically indicated.
Chapter 6 Reference 6.3.2.9.1	Chest radiography is not specifically required unless clinically indicated.
Chapter 6 Reference 6.3.3.4	The demonstration of compliance with the visual requirements to be made with only one pair of correcting lenses is not specifically required.
Chapter 6 Reference 6.3.3.2.3	The demonstration of compliance with visual acuity by providing a full ophthalmic report is not required.
Chapter 6 Reference 6.3.3.4.1	A requirement that a second pair of near-correction spectacles be kept available when exercising the privileges of the license is not established.
Chapter 6 Reference 6.3.4.1.1	Applicants are not required to demonstrate normal hearing against a background noise that reproduces or simulates the masking properties of flight deck noise upon speech and beacon signals.
Chapter 6 Reference 6.3.4.1.2	Applicants are not required to take a practical hearing test.
Chapter 6 Reference 6.4.1.1	U.S. free balloon and glider pilots are not required to hold a medical certificate but are prohibited from operating during periods of medical deficiency.
Chapter 6 Reference 6.4.1.2	U.S. free balloon and glider pilots are not required to hold a medical certificate but are prohibited from operating during periods of medical deficiency.
Chapter 6 Reference 6.4.2.6	Electrocardiography for applicants for third-class airman (private pilot) medical certification is not required at first issue unless clinically indicated.
Chapter 6 Reference 6.4.2.6.1	Routine electrocardiography for applicants for FAA third-class airman (private pilot) medical certification is not required unless clinically indicated.
Chapter 6 Reference 6.4.2.6.2	Electrocardiography for applicants for FAA third-class airman (private pilot) medical certification is not required at first issue unless clinically indicated.

Chapter 6 Reference 6.4.2.9.1	Chest radiography for private pilots is not specifically required unless clinically indicated.
Chapter 6 Reference 6.4.3.2.3	The demonstration of compliance with visual acuity by providing a full ophthalmic report is not required.
Chapter 6 Reference 6.4.3.4	The demonstration of compliance with the visual requirements to be made with only one pair of corrective lenses is not specifically required.
Chapter 6 Reference 6.4.3.4.1	A requirement that a second pair of near-correction spectacles be kept available when exercising the privileges of the license is not established.
Chapter 6 Reference 6.5.2.6	Electrocardiography is required for FAA air traffic controllers at first issue but not for non-FAA ATCs unless clinically indicated.
Chapter 6 Reference 6.5.2.6.1	Electrocardiography is required for FAA ATCs but not for non-FAA ATCs unless clinically indicated.
Chapter 6 Reference 6.5.3.2.3	The demonstration of compliance with visual acuity by providing a full ophthalmic report is not required.
Chapter 6 Reference 6.5.3.4	The demonstration of compliance with the visual requirements to be made with only pair of corrective lenses is not required.
Chapter 6 Reference 6.5.3.4.1	A requirement that a second pair of near-correction spectacles be kept available when exercising the privileges of the license is not established.
Chapter 6 Reference 6.5.4.1.2	Applicants are not required to take a practical hearing test.

ANNEX 2 – RULES OF THE AIR	
Chapter 1	Definitions
Advisory Airspace	Advisory service available in terminal areas and Class C outer area
Aerodrome control tower	In the U.S., an “aerodrome control facility” is referred to as a “tower” or “airport traffic control tower”; “aerodrome control” is referred to as “airport traffic control service.”
Aerodrome Traffic Zone	There are no more Control Zones (Airport Traffic Zones) or Airport Traffic Areas (ATA). In the 7110.65, PCG, Controlled Airspace covers the defined dimensions of airspace. Class D was formerly the ATA (normally a 5NM radius around the airport). The old Control Zones were extensions of the ATA to encompass (ILS) Approach Paths.
Airborne collision avoidance	The U.S. uses “traffic alert collision avoidance system (TCAS).” TCAS is an airborne collision avoidance system based on radar beacon signals and operates independent of ground–based equipment. TCAS–I generates traffic advisories only. TCAS–II generates traffic advisories and resolution (collision avoidance) advisories in the vertical plane.
Airborne Collision Avoidance System (ACAS)	The U.S. uses “traffic alert collision avoidance system (TCAS).” TCAS is an airborne collision avoidance system based on radar beacon signals and operates independent of ground – based equipment. TCAS – I generates traffic advisories only. TCAS – II generates traffic advisories and resolution (collision avoidance) advisories in the vertical plane.
Air–ground Control Radio Station	FAA Pilot Controller Glossary, as amended by GENOT 5/55 (10/4/05) defines (in part) Flight Service Station (FSS) as “air traffic facilities which provide pilot briefing, en route communications and VFR search and rescue services, assist lost aircraft and aircraft in emergency situations, relay ATC clearances, originate Notices to Airmen, broadcast aviation weather and NAS information and receive and process IFR flight plans,...provide enroute flight advisory service (Flight Watch), (and) issue airport advisories.” In the FAA, Flight Service Stations perform most air traffic air–to–ground radio functions other than the separation of aircraft.
Air–taxiing	The U.S. uses “hover taxi” for this maneuver above 100 feet above ground level (AGL) and “air taxi” below 100 feet AGL.
Area control service	The U.S. does not use the term “area control service” to indicate controlled flight in controlled areas.
Area control centre	The U.S. equivalent facility for an Area Control Centre (ACC) is an Air Route Traffic Control Center (ARTCC).
ATS route	In U.S. domestic airspace, the term “ATS route” is not used. Routes in the U.S. include VOR airways, jet routes, substitute routes, and off–airway routes. The U.S. also uses instrument departure procedures (DPs) and standard terminal arrivals (STARs).
Controlled airspace	The U.S. terms for controlled airspace have different parameters than for ICAO.
Current Flight Plan	FAA Pilot Controller Glossary (PCG) defines flight plan as “specified information relating to the intended flight of an aircraft that is filed orally or in writing with an FSS or an ATC facility.” The Pilot Controller Glossary makes a specific distinction between current flight plan and filed flight plans, defining filed flight plans as “filed...without any subsequent changes or clearances.” Therefore, the PCG definition of flight plan includes changes brought about by clearances or amendments
Danger area	The term “danger area” is not used within the U.S. or any of its possessions or territories.
Estimated off–block time	The U.S. uses the term “estimated departure time” for domestic operations.
Flight information centre	The U.S. does not operate flight information centers (FICs). In the U.S., the services provided by FICs are performed by air traffic control (ATC) facilities, automated flight service stations (AFSSs), and rescue coordination centers (RCCs).
Ground Visibility	The U.S. defines Ground Visibility as: Prevailing horizontal visibility near the earth’s surface as reported by the United States National Weather Service or an accredited observer.

Instrument meteorological conditions	The U.S. air traffic service units use the phrase “IFR conditions.”
Level	The U.S. uses “altitude” or “flight level” rather than “level” and “cruising altitude” rather than “cruising level.” The term “level” is not used to mean “height,” “altitude,” or “flight level.” The U.S. only uses flight level at FL 180 and above
Movement area	In the U.S., the term “movement area” means “the runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing, hover taxiing, air-taxiing, take-off and landing of aircraft, exclusive of loading ramps and parking areas. At those airport/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.” The U.S. does not use an all-inclusive term to denote the movement area plus loading ramps and parking areas of an airport, nor does the U.S. use the term “maneuvering area” in any related context.
Repetitive flight plan (RPL)	The U.S. uses the term “stored flight plan” for domestic operations.
Terminal control area	In the U.S., “terminal control area” has been replaced by “Class B airspace/area.” Standard IFR services are provided to IFR aircraft operating in Class B airspace. Class B airspace CFR 14 part 71.41, exceeds TCA with more restrictive airman’s qualifications and aircraft certifications.
Total estimated elapsed time	The U.S. uses “estimated time en route” for domestic operations.
Traffic Avoidance Advice	The U.S. uses the term Traffic Advisory
Transition altitude	In U.S. domestic airspace, “transition altitude,” “layer” and “level” are not used; however, in the U.S., flight levels begin at FL 180 where the reference datum of 29.92 inches of mercury is used as the constant atmospheric pressure. Below FL 180, altitudes are based on barometric pressure readings. QNH and QFE altimeter settings are not provided in domestic U.S. airspace.
Visibility	The U.S. defines Visibility as: The ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night. Visibility is reported as statute miles, hundreds of feet, or meters. The U.S. identifies the following classes of visibility: Flight Visibility, Ground Visibility, Prevailing Visibility, Runway Visibility Value, and Runway Visual Range.
Visual meteorological conditions	The U.S. air traffic service units use the phrase “VFR conditions.”
Chapter 2	Applicability of the Rules of the Air
2.2	See difference under “Movement area.”
2.5	Except in an emergency, no pilot of a civil aircraft may allow a person who appears to be intoxicated or who demonstrates by manner or physical indications that the individual is under the influence of drugs (except a medical patient under proper care) to be carried in that aircraft.
Chapter 3	General Rules
3.1.8	In addition, aircraft shall not be flown in formation flight when passengers are carried for hire.
3.2 Note	See difference under “Movement area.”
3.2.2.6.1	See difference under “Movement area.”
3.2.3.2 d)	The U.S. national regulations do not require aircraft on the movement area of an airport, whose engines are running, to display lights which indicate that fact from sunset to sunrise.

3.2.5	<p>Unless otherwise authorized or required by ATC, no person may operate an aircraft within a Class B, C, or D surface area except for the purpose of landing at, or taking off from, an airport within that area.</p> <p>In addition, in the case of a helicopter approaching to land, avoid the flow of fixed-wing aircraft.</p> <p>In addition, no person may, within a Class B, C, or D surface area operate an aircraft to, from, or on an airport having a control tower operated by the U.S. unless two-way radio communications are maintained between that aircraft and the control tower.</p>
3.3.1.2	<p>In the U.S., ATC flight plans are not required for VFR flight in Class C, D, or E airspace.</p>
3.3.1.2.1 d)	<p>Requirements pertaining to filing flight plans for flights operating across U.S. borders and for identification purposes are described in 14 CFR Part 91 (Section 91.84) and Part 99.</p>
3.3.1.2.2	<p>The U.S. requires that domestic flight plans be submitted at least 30 minutes before departure. For international flights, the U.S. recommends that they be transmitted so that they are received by ATC authorities in each Flight Information Region (FIR) to be entered, at least 2 hours prior to entry, unless otherwise provided in that State's requirements.</p>
3.6.1	<p>Air traffic control clearances are not needed for VFR flight in U.S. Class C, D, or E airspace.</p>
3.6.2.4	<p>When meteorological conditions fall below the minimum specified for en route VFR flights, the pilot of the aircraft shall not continue his/her flight in such conditions, except in emergency, beyond the extent necessary to return to his/her departure point or to the nearest suitable landing point.</p>

3.6.5.2 (Communicati on Failure)	<p>Two-way Radio Communications Failure</p> <p>a. It is virtually impossible to provide regulations and procedures applicable to all possible situations associated with two-way radio communications failure. During two-way radio communications failure, when confronted by a situation not covered in the regulation, pilots are expected to exercise good judgment in whatever action they elect to take. Should the situation so dictate they should not be reluctant to use the emergency action contained in 14 CFR Section 91.3(b)</p> <p>b. Whether two-way communications failure constitutes an emergency depends on the circumstances, and in any event, it is a determination made by the pilot. 14 CFR Section 91.3(b) authorizes a pilot to deviate from any rule in Subparts A and B to the extent required to meet an emergency.</p> <p>c. In the event of two-way radio communications failure, ATC service will be provided on the basis that the pilot is operating in accordance with 14 CFR Section 91.185. A pilot experiencing two-way communications failure should (unless emergency authority is exercised) comply with 14 CFR Section 91.185 quoted below</p> <p>1. General. Unless otherwise authorized by ATC, each pilot who has two-way radio communications failure when operating under IFR shall comply with the rules of this section.</p>
3.6.5.2.2	<p>In the event of two-way communications failure in the U.S., ATC service is predicated on pilot compliance with the provisions of 14 CFR Part 91 (Section 91.185). If the failure occurs in IMC, or if VFR cannot be complied with, each pilot is to continue the flight according to the following:</p> <p>Route</p> <ul style="list-style-type: none">a) By the route assigned in the last ATC clearance received;b) If being radar vectored, by the direct route from the point of failure to the fix, route, or airway specified in the vector clearance;c) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; ord) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan. <p>Altitude – At the HIGHEST of the following altitudes or flight levels FOR THE ROUTE SEGMENT BEING FLOWN:</p> <ul style="list-style-type: none">a) The altitude or flight level assigned in the last ATC clearance received;b) The minimum altitude/flight level as prescribed for IFR operations; orc) The altitude or flight level ATC has advised may be expected in a further clearance. <p>IFR conditions – If the failure occurs in IFR conditions, or if subparagraph 2 above cannot be complied with, each pilot shall continue the flight according to the following:</p> <ul style="list-style-type: none">(a) Route.<ul style="list-style-type: none">(1) By the route assigned in the last ATC clearance received;(2) If being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance;(3) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or(4) In the absence of an assigned route of a route that ATC has advised may be expected in a further clearance by the route filed in the flight plan.(b) Altitude. At the HIGHEST of the following altitudes or flight levels FOR THE ROUTE SEGMENT BEING FLOWN:<ul style="list-style-type: none">(1) The altitude or flight level assigned in the last ATC clearance received;(2) The minimum altitude (converted, if appropriate) to minimum flight level as prescribed in 14 CFR Section 91.121(c) for IFR operations; or(3) The altitude or flight level ATC has advised may be expected in a further clearance.

Basic VFR Weather Minimums

Airspace	Flight Visibility	Distance from Clouds
Class A	Not Applicable	Not Applicable
Class B	3 statute miles	Clear of Clouds
Class C	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal
Class D	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal
Class E Less than 10,000 feet MSL	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal
At or above 10,000 feet MSL	5 statute miles	1,000 feet below 1,000 feet above 1 statute mile horizontal
Class G 1,200 feet or less above the surface (regardless of MSL altitude).		
Day, except as provided in Section 91.155(b)	1 statute mile	Clear of clouds
Night, except as provided in Section 91.155(b)	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal
More than 1,200 feet above the surface but less than 10,000 feet MSL.		
Day	1 statute mile	500 feet below 1,000 feet above 2,000 feet horizontal
Night	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal
More than 1,200 feet above the surface and at or above 10,000 feet MSL.	5 statute miles	1,000 feet below 1,000 feet above 1 statute mile horizontal

Chapter 4	Visual Flight Rules
4.1 and Table 4–1	There is no Class F airspace in the U.S. Basic VFR weather minimums are listed in the table above.
4.1 a)	Except as otherwise authorized by the appropriate air traffic control unit for special VFR flights within Class B, C, D, or E surface areas, no person may operate an aircraft under VFR when the flight visibility is less, or at a distance from clouds that is less than that prescribed for the corresponding altitude and class of airspace in the table above.
4.1 b)	Class G Airspace: Notwithstanding the provisions of paragraph a) of this section, the following operations may be conducted in Class G airspace below 1,200 feet above the surface: 1) Helicopter. A helicopter may be operated clear of clouds if operated at a speed that allows the pilot adequate opportunity to see any air traffic or obstruction in time to avoid collision. 2) Airplane. When the visibility is less than 3 statute miles but not less than 1 statute mile during night hours, an airplane may be operated clear of clouds if operated in an airport traffic pattern within one-half mile of the runway.

4.1 c)	Except as provided in 4.2, no person may operate an aircraft under VFR within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport when the ceiling is less than 1,000 feet.
4.1 d)	Except as provided in 4.2, no person may take-off or land an aircraft, or enter the traffic pattern area of an airport under VFR, within the lateral boundaries of the surface area of Class B, Class C, Class D, or Class E airspace designed for an airport: <ol style="list-style-type: none"> 1) unless ground visibility at that airport is at least 3 statute miles; or 2) if ground visibility is not reported at that airport, unless flight visibility during landing or takeoff, or while operating in the traffic pattern is at least 3 statute miles.
4.2	In the U.S., no person may operate an aircraft beneath the ceiling under VFR within the lateral boundaries of controlled airspace designated to the surface for an airport when the ceiling is less than 1,000 feet. No person may take-off or land an aircraft (other than a helicopter) under special VFR (SVFR) unless ground visibility is at least 1 statute mile or if ground visibility is not reported, unless flight visibility is at least 1 statute mile. The U.S. restricts the ceiling to 1,000 ft. and ground visibility of 3 miles and greater.
4.2 a)	When an appropriate ATC clearance has been received, the special weather minimums in this section apply to the operation of an aircraft in a Class B, C, D, or E surface area under VFR. <ol style="list-style-type: none"> 1) No person may operate an aircraft in a Class B, C, D, or E surface area under VFR except clear of clouds; 2) No person may operate an aircraft (other than a helicopter) in a Class B, C, D or E surface area under VFR unless flight visibility is at least 1 statute mile; 3) No person may take-off or land an aircraft (other than a helicopter) at any airport in a Class B, C, D or E surface area under VFR: <ol style="list-style-type: none"> a) unless ground visibility at that airport is at least 1 statute mile; or b) if ground visibility is not reported at that airport, unless flight visibility during landing or take-off is at least 1 statute mile.
4.3	The U.S. does not prohibit VFR flight between sunset and sunrise.
4.4	In the U.S., VFR flight is not permitted within Class A airspace designated in 14 CFR Part 71 unless otherwise authorized by ATC. In the U.S., an ATC clearance is needed for VFR flight only in Class B airspace area. The U.S. limits VFR flights up to FL 180.
4.5	The U.S. limits VFR flights up to FL 180.
4.6	In addition, anywhere, an altitude allowing, if a power unit fails, an emergency landing without due hazard to persons or property on the surface.
4.7	In addition, grid tracks are not used to determine cruising altitudes in polar areas. True tracks are used to determine cruising levels above FL 230 in the area north of Alaska bounded by the true North Pole to 72°00'00"N, 141°00'00"W; to 72°00'00"N, 158°00'00"W; to 68°00'00"N, 168°58'23"W; to point of beginning. The U.S. has named this area the Anchorage Arctic CTA/FIR for national reference purposes.
4.8	In U.S. Class C and D airspace/areas, an ATC clearance is not required for VFR flights.
Chapter 5	Instrument Flight Rules
5.1.2	In the U.S., minimum altitudes for IFR flights are 2,000 feet above the highest obstacle within a horizontal distance of 4 nautical miles from the course to be flown in mountainous terrain and 1,000 feet above the highest obstacle within a horizontal distance of 4 nautical miles from the course to be flown in non-mountainous terrain.
5.2.2	See difference under paragraph 4.7.
5.3.1	See difference under paragraph 4.7.

Further differences which exist by virtue of the fact that the Annex contains no comparable standards for the U.S. national regulations.	<p>1) The regulations covering the selection and use of alternate airports in respect to ceiling and visibility minima, require that:</p> <p>Unless otherwise authorized by the FAA Administrator, no person may include an alternate airport in an IFR flight plan unless current weather forecasts indicate that, at the estimated time of arrival at the alternate airport, the ceiling and visibility at that airport will be at or above the alternate airport weather minima.</p>
	<p>2) Operation under IFR in Class A, B, C, D, or E airspace malfunction reports:</p> <p>a) The pilot-in-command of each aircraft operated in Class A, B, C, D or E airspace under IFR shall report as soon as practical to ATC any malfunctions of navigational, approach, or communication equipment occurring in flight.</p> <p>b) In each report the pilot-in-command shall include:</p> <ol style="list-style-type: none">1) aircraft identification.2) equipment affected.3) degree to which the capability of the pilot to operate under IFR in the ATC system is impaired; and4) nature and extent of assistance desired from ATC.
	<p>3) When an aircraft has been cleared to maintain “VFR conditions on top,” the pilot is responsible to fly at an appropriate VFR altitude, comply with VFR visibility and distance from cloud criteria, and to be vigilant so as to see and avoid other aircraft.</p>
	<p>4) Aircraft speed:</p> <p>a) Unless otherwise authorized by the FAA Administrator, no person may operate an aircraft below 10,000 feet MSL at an indicated airspeed of more than 250 kt (288 m.p.h.).</p> <p>b) Unless otherwise authorized or required by ATC, no person may operate an aircraft within Class B, C, or D surface area at an indicated airspeed of more than 200 kt (230 m.p.h.). This paragraph 4b) does not apply to operations within Class B airspace. Such operations shall comply with paragraph 4a) of this section.</p> <p>c) No person may operate an aircraft in the airspace underlying Class B airspace, or in a VFR corridor designated through Class B airspace, at an indicated airspeed of more than 200 kt (230 m.p.h.).</p> <p>d) If the minimum safe airspeed for any operation is greater than the maximum speed prescribed in this section, the aircraft may be operated at that minimum speed.</p>

<p>5) Operating rules and pilot and equipment requirements for flight in Class B airspace.</p> <p>a) Operating rules. No person may operate an aircraft within Class B airspace except in compliance with the following rules:</p> <p>1) No person may operate an aircraft within Class B airspace unless that person has received an appropriate authorization from ATC prior to operation of that aircraft in that area.</p> <p>2) Unless otherwise authorized by ATC, each person operating a large turbine engine-powered airplane to or from a primary airport shall operate at or above the designated floors while within the lateral limits of the Class B airspace.</p> <p>3) Any person conducting pilot training operations at an airport within Class B airspace shall comply with any procedures established by ATC for such operations in Class B airspace.</p> <p>b) Pilot requirements. No person may take off or land a civil aircraft at an airport within Class B airspace or operate a civil aircraft within Class B airspace unless:</p> <p>1) The pilot-in-command holds at least a private pilot certificate; or</p> <p>2) The aircraft is operated by a student pilot who has met the requirements (14 CFR Part 61 (Section 61.95)).</p> <p>c) Communications and navigation requirements. Unless otherwise authorized by ATC, no person may operate an aircraft within Class B airspace unless that aircraft is equipped with:</p> <p>1) For IFR operations, an operable VOR or TACAN receiver, and</p> <p>2) For all operations, an operable two-way radio capable of communications with ATC on appropriate frequencies for that Class B airspace.</p> <p>d) Transponder requirements. No person may operate an aircraft in Class B airspace unless the aircraft is equipped with the applicable operating transponder and automatic altitude reporting equipment.</p>
<p>6) Operating rules and pilot and equipment requirements for operating in Class C airspace.</p> <p>a) General. For the purpose of this section, the primary airport is the airport designated in 14 CFR Part 71, for which the Class C airspace is designated. A satellite airport is any other airport within the Class C airspace.</p> <p>b) Deviations. An operator may deviate from any provisions of this section under the provisions of an ATC authorization issued by the ATC facility giving jurisdiction of the Class C airspace. ATC may authorize a deviation on a continuing basis or for an individual flight, as appropriate.</p> <p>c) Arrivals and overflights. No person may operate an aircraft in Class C airspace unless two-way radio communication is established with the ATC facility having jurisdiction over the Class C airspace prior to entering that area and is thereafter maintained with the ATC facility having jurisdiction over the Class C airspace while within that area.</p> <p>d) Departures. No person may operate an aircraft within Class C airspace except as follows:</p> <p>1) From the primary airport or satellite airport with an operating control tower, unless two-way radio communication is established and maintained with the control tower, and thereafter as instructed by ATC while operating in the Class C airspace.</p> <p>2) From a satellite airport without an operating control tower, unless two-way radio communication is established as soon as practical after departing and thereafter maintained with the ATC facility having jurisdiction over the Class C airspace.</p> <p>e) Traffic patterns. No person may take off or land an aircraft at a satellite airport within Class C airspace except in compliance with FAA arrival and departure traffic patterns.</p> <p>f) Equipment requirements. Unless otherwise authorized by the ATC facility having jurisdiction over the Class C airspace, no person may operate an aircraft within Class C airspace unless that aircraft is equipped with the applicable equipment specified in 14 CFR Part 91 (Section 91.215).</p>

	<p>7) Except for persons operating gliders below the floor of Class A airspace, no person may operate an aircraft in Class B, C, D, or E airspace of the 48 contiguous States and the District of Columbia above 10,000 feet MSL, excluding that airspace at and below 2,500 feet AGL, unless that aircraft is equipped with an operable radar beacon transponder having at least a Mode 3/A 4096-code capability, replying to Mode 3/A interrogation with the code specified by ATC, and automatic altitude reporting equipment having a Mode C capability that automatically replies to Mode C interrogations by transmitting pressure altitude information in 100-foot increments.</p> <p>8) Compliance with ATC clearances and instructions:</p> <ul style="list-style-type: none">a) When an ATC clearance has been obtained, no pilot-in-command may deviate from that clearance, except in an emergency, unless an amended clearance is obtained. A pilot-in-command may cancel an IFR flight plan if that pilot is operating in VFR weather conditions outside of Class A airspace. If a pilot is uncertain of the meaning of an ATC clearance, the pilot shall immediately request clarification from ATC.b) Except in an emergency, no person may operate an aircraft contrary to an ATC instruction in an area in which ATC is exercised.c) Each pilot-in-command who, in an emergency, deviates from an ATC clearance or instruction shall notify ATC of that deviation as soon as possible.d) Each pilot-in-command who is given priority by ATC in an emergency shall submit a detailed report of that emergency within 48 hours to the manager of that ATC facility, if requested by ATC.e) Unless otherwise authorized by ATC, no person operating an aircraft may operate that aircraft according to any clearance or instruction that has been issued to the pilot of another aircraft for radar ATC purposes.
Appendix 1	Signals
4.1.1	<p>The flashing white signal to aircraft in flight, meaning “land at this aerodrome and proceed to apron” is not used in the United States.</p> <p>In addition, the alternating red and green signal to aircraft on the ground or in flight means exercise extreme caution.</p>

PANS – RAC – DOC 4444	
There are several substantive differences between the U.S. procedures and those of ICAO, in addition to some minor variations in detail which are not considered significant. These differences are the result of initiatives and/or refinements which the U.S. has effected in the interest of improving the safety and efficiency of air traffic services.	
Part I	Definitions
Airborne collision avoidance system	The U.S. uses traffic alert and collision avoidance system (TCAS).
AIRMET information	In the U.S., AIRMET stands for Airman’s Meteorological Information which is in-flight weather advisories issued only to amend the area forecast concerning weather phenomena which are of operational interest to all aircraft and potentially hazardous to aircraft having limited capability because of lack of equipment, instrumentation, or pilot qualifications. AIRMETs concern weather of less severity than that covered by SIGMETs or convective SIGMETs. AIRMETs cover moderate icing, moderate turbulence, sustained winds of 30 kt or more at the surface, widespread areas of ceilings less than 1,000 feet and/or visibility less than 3 miles, and extensive mountain obscurement.
Air-report	The U.S. does not normally use the term “air-report.” Pilot weather reports (PIREPs), position, and operational reports are used. PIREPs include reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, volcanic eruptions and volcanic ash clouds, and other conditions pertinent to flight safety. They may include information on ceilings, visibility, thunderstorms, icing of light degree or greater, wind shear and its effect on airspeed, or volcanic ash clouds, but do not usually include air temperature.
Air-taxiing	In the U.S., the term “hover taxi” is sometimes used to indicate the ICAO term “air-taxiing.” Additionally, in the U.S., air taxi is used to indicate certain commercial aircraft operations. For those operations, usually a special call sign is used, or the prefix “Tango” is added to the aircraft call sign.
ALERFA	The U.S. does not use the code words ALERFA, DETRESFA, and INCERFA to designate an alert phase, a distress phase, or an uncertainty phase in domestic airspace. The U.S. uses information request (INREQ) and alert notice (ALNOT) in domestic airspace.
Area control service	The U.S. does not use the term “area control service” to indicate controlled flight in controlled areas.
ATS route	In U.S. domestic airspace, the term “ATS route” is not used. Routes in the U.S. include VOR airways, jet routes, substitute routes, off-airway routes, RNAV routes and colored airways. The U.S. also uses instrument departure procedures (DPs), and standard terminal arrivals (STARs).
Automatic dependent surveillance (ADS)	The U.S. has not yet published ATS procedures for the use of Automatic Dependent Surveillance (ADS).
Control zone	The U.S. uses “surface area” in place of the ICAO term “control zone.” Surface area is defined as the airspace contained by the lateral boundary of the Class B, C, D or E airspace designated for an airport that begins at the surface and extends upward.
Controlled airspace	The U.S. uses the following definition of controlled airspace found in 14 CFR Section 1.1: “Controlled airspace means an airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.”
Cruising level	The U.S. uses the term “cruising altitude.”
Decision altitude	Approach with vertical guidance (VNAV).
DETRESFA	See ALERFA.
Flight information centre	In the U.S., the services provided by flight information centers (FICs) are conducted by air traffic control (ATC) facilities, automated flight service stations (AFSSs), and rescue coordination centers (RCCs).

Glide path	The U.S. uses “glideslope” rather than “glide path” although the terms are sometimes interchangeable. For the U.S., a glideslope provides vertical guidance for aircraft during approach and landing.
Holding point	The U.S. uses “holding fix” rather than “holding point.”
Holding procedure	In the U.S., a hold procedure is also used during ground operations to keep aircraft within a specified area or at a specified point while awaiting further clearance from air traffic control.
INCERFA	See ALERFA.
Level	The U.S. uses “altitude” or “flight level” rather than “level.”
Movement area	In the U.S., the “movement area” is equivalent to the ICAO “maneuvering area” which does not include parking areas.
Pilot-in-Command	Designated by operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.
Slush	In the U.S., “slush” is not used as a weather phenomena.
Standard instrument arrival (STAR)	The U.S. uses the acronym STAR to define a standard terminal arrival.
Standard instrument departure (SID)	The U.S. uses the term departure procedure (DP) in lieu of SID.
Stopway	The U.S. does not define a stopway as a rectangular area.
Taxi-holding position	In the U.S., “line up and wait” means taxi onto the departure runway in take-off position and hold while the ICAO “taxi-holding position” or “taxi-holding point” is a designated position that provides adequate clearance from a runway.
Terminal control area	In the U.S., the term “terminal control area” has been replaced by “Class B airspace.” Standard IFR services should be provided to IFR aircraft operating in Class B airspace.
Track	The U.S. uses the term “course” instead of “track.”
Transition altitude, transition layer, and transition level	In U.S. domestic airspace, transition altitude, layer, and level are not used. U.S. flight levels begin at FL 180 where a barometric altimeter setting of 29.92 inches of mercury is used as the constant atmospheric pressure. Below FL 180, altitudes are based on barometric pressure readings.
Visibility	Definitions are different.
Visual approach	In the U.S., aircrews may execute visual approaches when the pilot has either the airport or the preceding aircraft in sight and is instructed to follow it.
Part IV	General Provisions
3.2.1.1	Transfer of control points vary depending on numerous factors.
3.2.1.3	Transfer of control varies.
3.3.1a	The U.S. does not “release” aircraft. Handoff is used.
4.1	In the U.S., flight information and alerting services are provided by ATC facilities, AFSSs, and RCCs.
5.7.5.1	The flight crew shall read back to the air traffic controller safety-related parts of ATC clearances.
6.1.5	Mach speeds at or above 7,600 Meters (FL 250).
6.3.6	Only minor speed reductions of 20 knots should be used on intermediate or final approach.
6.3.7	Speed control after 7KM (4NM) should not be applied.
8, 8.4	The U.S. uses a flight plan format different from the ICAO model discussed in Appendix 2. The U.S. ATS facilities will transmit ICAO repetitive flight plans (RPLs) even though a different format is used for stored flight plans.

9.3	ATS units are not required to advise a pilot who has canceled an IFR flight plan that IMC conditions are likely to be encountered along the route of flight; however, if a pilot informs a controller of a desire to change from IFR to VFR, the controller will request that the pilot contact the appropriate AFSS.
10.2.2	Standard IFR services should be provided to IFR aircraft operating in Class B airspace. U.S. Class B airspace includes a speed restriction of 250 kt indicated airspeed or less.
10.2.3	U.S. ATS controllers do not normally include clearance for transonic acceleration in their ATC clearances.
12.1.1, 12.1.1.1, 12.2	In U.S. domestic airspace, transition altitude, layer, and level are not used. U.S. flight levels begin at FL 180 where a barometric altimeter setting of 29.92 inches of mercury is used as the constant atmospheric pressure. Below FL 180, altitudes are based on barometric pressure readings. QNH and QFE altimeter settings are not provided in domestic U.S. airspace.
13.1	In the U.S., the word “heavy” is used in all communications with or about heavy jet aircraft in the terminal environment. In the en route environment, “heavy” is used in all communications with or about heavy jet aircraft with a terminal facility, when the en route center is providing approach control service, when the separation from a following aircraft may become less than five miles by approved procedure, and when issuing traffic advisories.
13.4.1	Flight Progress Strips shall be retained for at least 30 days.
14.3, 14.4	The U.S. has not yet published ATS procedures for the use of Automatic Dependent Surveillance (ADS).
15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 16	The U.S. does not normally use the term “air-report.” Pilot weather reports (PIREPs), position, and operational reports are used. PIREPs include reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, volcanic eruptions and volcanic ash clouds, and other conditions pertinent to flight safety. They may include information on ceilings, visibility, thunderstorms, icing of light degree or greater, wind shear and its effect on airspeed, or volcanic ash clouds, but do not usually include air temperature.
18	The U.S. has procedures for a duplicate aircraft identification watch and notification to airline operators but does not publish national procedures for on-the-spot temporary changes to aircraft call signs in accordance with ICAO guidelines.
19	The U.S. uses traffic alert and collision avoidance system (TCAS). U.S. controllers are not to issue control instructions that are contrary to the TCAS resolution advisory (RA) procedure that a crew member advises is being executed.
Part V	Separation Methods and Minima
	Remark: The U.S. does not use the term “area control service” to indicate controlled flight in controlled areas.
1.1	In U.S. airspace, only conflict resolution (not separation) is provided between IFR and VFR operations. Separation is provided between IFR and Special VFR (SVFR) aircraft only within the lateral boundaries of Class B, C, D, or E control zones (the U.S. term is surface areas) below 10,000 feet MSL.
3.4.1	U.S. rules allow assignment of altitude to second aircraft after first aircraft has been issued climb/descent and is observed or reports leaving that altitude.
5.2	Whenever the other aircraft concerned are within 5 minutes flying time of the holding area.
8	The U.S. uses the term “course” instead of “track.” “Reciprocal” courses are sometimes referred to as “opposite” courses. The wording of the definitions for U.S. <i>same</i> , <i>crossing</i> , or <i>opposite/reciprocal</i> courses differs from the ICAO worded definitions, but the intent appears to be the same.
8.2.1.1, 8.3.1.1.1	The U.S. uses 22 kt instead of 20 kt and 44 kt instead of 40 kt.
8.4.1	The U.S. does not conduct direct pilot-controller high frequency (HF) communications. The U.S. is establishing direct pilot-controller data link communications where HF is currently being used.

14.1	In U.S. Class A and B airspace, separation is provided for all aircraft. In U.S. Class C airspace, separation is provided between IFR and SVFR aircraft; conflict resolution is provided between IFR and VFR operations.
17.3	In the U.S., if the communications failure occurs in IFR conditions, or if VFR cannot be complied with, each pilot shall continue the flight according to the following requirements: <u>Route</u> <ul style="list-style-type: none"> a) By the route assigned in the last ATC clearance received; b) If being radar vectored, by the direct route from the point of failure to the fix, route, or airway specified in the vector clearance; c) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or d) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan. <u>Altitude</u> – At the highest of the following altitudes or flight levels for the route segment being flown: <ul style="list-style-type: none"> a) The altitude or flight level assigned in the last ATC clearance received; b) The minimum altitude as prescribed in 14 CFR Part 91 (Section 91.121(c)) for IFR operations; or c) The altitude or flight level ATC has advised may be expected in a further clearance.
Part VI	Separation in the Vicinity of Aerodromes
5.7.1	Arriving aircraft – delay of 10 minutes or more.
5.8.1	Onward clearance time.
7.3.1.2	Parallel approaches, separate radar controllers
7.3.2.9	PAOAS Criteria.
7.3.2.9	45 degree track.
7.3.2.10	Both controllers are advised when visual separation is applied.
7.3.5.3	SRA
9	In the U.S., aircrews may execute visual approaches when the pilot has either the airport or the preceding aircraft in sight and is instructed to follow it. A contact approach is one wherein an aircraft on an IFR flight plan, having an air traffic control authorization, operating clear of clouds with at least 1 mile flight visibility and a reasonable expectation of continuing to the destination airport by visual reference in those conditions, may deviate from the instrument approach procedure and proceed to the destination airport by visual reference to the surface. This approach will only be authorized when requested by the pilot and the reported ground visibility at the destination airport is at least 1 statute mile.
15	Except where a “runway use” program is in effect, in the U.S. the runway used will be the one most nearly aligned with the wind when 5 kt or more, or the “calm wind” runway when less than 5 kt unless use of another runway will be operationally advantageous or is requested by a pilot.
Part VII	Aerodrome Control Service
2.2	When neither communications nor radar contact can be established for 30 minutes (or prior, if appropriate), U.S. controllers will consider an aircraft overdue and will initiate overdue aircraft procedures including reporting to the ARTCC or AFSS.
5.3.1.1.2	Taxi clearance.
6.1.2	In the U.S., airport lighting is not used for en route navigation.
8.4.3	Takeoff clearance shall include the designator of the runway.
9.3.1	Landing clearance shall include the designator of the runway.
10.3	In the U.S., “line up and wait” means taxi onto the departure runway in takeoff position and hold while the ICAO “taxi–holding position” or “taxi–holding point” is a designated position that provides adequate clearance from a runway.

10.5, 10.5.1	In the U.S., the term “hover taxi” is sometimes used to indicate the ICAO term “air-taxiing.” In the U.S., air-taxiing is the preferred method for helicopter movements on airports provided ground operations/conditions permit.
11.2.1	In the U.S., for movements of other than aircraft traffic (i.e., vehicles, equipment, and personnel), steady green means cleared to cross, proceed, go; flashing green is not applicable; flashing white means return to starting point on airport; and alternating red and green means a general warning signal to exercise extreme caution.
11.2.2	U.S. controllers do not normally flash runway or taxiway lights.
15.1, 15.2	In the U.S., landing clearance to a succeeding aircraft in a landing sequence need not be withheld if the controller observes the positions of the aircraft and determines that prescribed runway separation will exist when the aircraft crosses the landing threshold. Controllers issue traffic information to the succeeding aircraft if it has not previously been reported.
16	ICAO aircraft wake turbulence categories (heavy, medium, light) and FAA weight classes (heavy, large, small) differ. Also, for landing aircraft, wake turbulence separation is defined differently. The U.S. makes special provisions for any aircraft landing behind a B-757 (4 miles for a large aircraft behind or 5 miles for a small aircraft behind).
17	<p>Special VFR operations may be conducted in the U.S. under the following weather minimums and requirements below 10,000 feet MSL within the airspace contained by the upward extension of the lateral boundaries of the controlled airspace designated to the surface for an airport. These minimums and requirements are found in 14 CFR Section 91.157.</p> <p>Special VFR operations may only be conducted:</p> <ol style="list-style-type: none"> (1) With an ATC clearance; (2) Clear of clouds; (3) Except for helicopters, when flight visibility is at least 1 statute mile; and (4) Except for helicopters, between sunrise and sunset (or in Alaska, when the sun is 6 degrees or more below the horizon) unless: <ol style="list-style-type: none"> (i) The person being granted the ATC clearance meets the applicable requirements for instrument flight; and (ii) The aircraft is equipped as required in 14 CFR Sec. 91.205(d). <p>No person may take off or land an aircraft (other than a helicopter) under special VFR:</p> <ol style="list-style-type: none"> (1) Unless ground visibility is at least 1 statute mile; or (2) If ground visibility is not reported, unless flight visibility is at least 1 statute mile.
Part VIII	Radar Services
6.5.2	The U.S. has not implemented cold temperature corrections to the radar minimum vectoring altitude chart.
7.4.4.1	See Part VII, Aerodrome Control Service, 16.
7.6	U.S. ATIS units do not accept aircraft speeds in metric terms nor do they use the term “minimum clean speed.” The U.S. does use phrases such as “maintain maximum forward speed” or “maintain slowest practical speed.”
9.3.5, 9.3.6	The U.S. normally uses “glideslope” rather than “glide path” although they are sometimes interchangeable. For the U.S., a glideslope provides vertical guidance for aircraft during approach and landing.
Part IX	Flight Information and Alerting Service
1.3.2	See Part IV, General Provision, 15.1.
1.3.7	The U.S. does not have special procedures for the transmission of information to supersonic aircraft.
1.4.1, 1.4.2, 1.4.3	Class F airspace is not used in the U.S. Traffic advisories are provided in Class C airspace and, workload permitting, in Class D, Class E, and Class G airspace.
2.1.2, 2.1.3, 2.2.1	The U.S. does not use “operations normal” or “QRU” messages. U.S. controllers are not normally familiar with the term “uncertainty phase.”

Part X	Co-ordination
3.2.10	See Part IV, General Provision, 14.3.
3.3.1.1, 3.3.2.1	Except for a VFR aircraft practicing an instrument approach, an IFR approach clearance in the U.S. automatically authorizes the aircraft to execute the missed approach procedure depicted for the instrument approach being flown. No additional coordination is normally needed between the approach and en route controllers. Once an aircraft commences a missed approach, it may be radar vectored.
Part XI	Air Traffic Services Messages
1.3	The existing U.S. ATS automation system does not process logical acknowledgment messages (LAMs).
4.2.2.2.1	See Part IV, General Provision, 8.
4.2.3.1, 4.2.3.6, 4.2.4, 4.2.5.1, 4.2.5.4	See 1.3, above.
4.2.5.5	See Part IV, General Provision, 15.1.
4.3.1.2.1	In the U.S., traffic information messages include the position of the traffic (aircraft concerned).
4.3.2.2.1, 4.3.2.3.5	U.S. controllers do not use the term “CAVOK.” However, the ceiling/sky condition, visibility, and obstructions to vision may be omitted if the ceiling is above 5,000 feet and the visibility is more than 5 miles.
4.3.2.2.1, 4.3.2.3.2, 4.3.2.3.3	U.S. controllers do not give wind speed, visibility, or RVR/RVV values in metric terms. RVR values are given in 100– or 200–foot increments while RVV values are given in 1/4–mile increments.
4.3.2.3.1	In the U.S., the criteria for a variable wind is wind speed greater than 6 kt and direction varies by 60 degrees or more. If the wind is ≥ 1 kt but ≤ 6 kt, the wind direction may be replaced by “VRB” followed by the speed or reported as observed. “VRB” would be spoken as “wind variable at <speed>.”
4.3.2.3.3.1	RVR values between 400m and 800m in increments of 50m.
4.3.2.3.4.1	For weather phenomena, the U.S. uses “ice crystals” instead of “diamond dust” and does not use the term “dust devils.”
4.3.2.3.4.2	Additionally, the U.S. uses “supercooled” (or freezing) and “partial” as descriptors for weather phenomena.
4.3.2.3.5	In the U.S., CLR is used at automated stations for SKC when no clouds below 12,000 feet are reported. SCT indicates cloud coverage between 3–4 oktas; FEW indicates cloud coverage >0 but ≤ 2 oktas.
4.3.2.3.5.1	Abbreviation NSC.
4.3.2.3.6	In the U.S., since the Celsius scale is not as finely graduated as the Fahrenheit scale, the hourly temperature and dew point to the nearest tenth of a degree will be encoded in the additive data section of METAR remarks.
4.3.2.3.7	In the U.S., an “A” precedes the altimeter which is given in inches of mercury.
Part XII	Phraseologies
2.3	In the U.S., “proceed” or “hold” may be used for aircraft or equipment/vehicle/personnel operations, while “taxi” and “cleared” should only be used as appropriate for aircraft instructions.
2.4 2.7	In the U.S., conditional clearances are not usually issued. However, traffic that may affect the clearance is usually issued to the aircraft with the clearance. Restricted clearances may also be issued.
2.5, 2.6, 2.7, 2.8	In the U.S., pilots may acknowledge some clearances, instructions, or other information by using “wilco,” “roger,” “affirmative,” or other words or remarks. If the pilot reads back information, the controller should ensure the readback is correct or make corrections as appropriate.
2.8, 3.1.1 3.1.2	The U.S. uses “altitude” or “flight level” rather than “level”; and “cruising altitude” rather than “cruising level.” The term “level” is not used to mean “height,” “altitude,” or “flight level” in the U.S. The U.S. sometimes uses “altitude” to mean “altitude” or “flight level.”

3.1.1, 3.1.2	U.S. ATS units do not normally accept aircraft speeds or altitudes in metric terms nor do they use the term “minimum clean speed.” The U.S. does not use the term “level” in lieu of “flight level” or “altitude.” The U.S. also uses the phrases “maintain the highest/lowest practical speed” and “increase or reduce to a specified speed or by a specified number of knots.”
3.1.2	See Part IX, Flight Information and Alerting Service, 1.3.7. Also, the term “step climb” is not used in the U.S. The word “immediately” is used only when expeditious compliance is required to avoid an imminent situation. Instead of “maintain own separation and VMC ‘from,’ ‘above,’ or ‘below’ . . .,” U.S. controllers say “maintain visual separation ‘from’ that traffic.” For TCAS resolution advisories in the U.S., pilots would advise “clear of conflict, returning to . . .”
3.1.2a,ii	To and maintain block (level) to (level).
3.1.4	See Part IV, General Provision, 18.
3.1.6	See Part XI, ATS Messages, 4.3.2.2.1.
3.1.6	See Part IV, General Provision, 12.1.
3.1.6 Note 2	“Midpoint” and “rollout” may be omitted.
3.1.9i	Temperature issued with Braking Action.
3.2.1	The U.S. uses the phraseology “rest of route remains unchanged.”
3.3.1	Instead of “track,” U.S. controllers would advise pilots to “fly a (degree) bearing/azimuth from/to (fix) until (time)” or “until reaching (fix or altitude),” and if required, “before proceeding on course.”
3.4.7	See Part IV, General Provision, 12.1.
3.4.8	See Part VII, Aerodrome Control Service, 10.3. Also, U.S. controllers do not use the term “backtrack.”
3.4.11	The U.S. does not have additional phraseology to stop a take-off after an aircraft has commenced take-off roll.
3.4.13	See 3.3.1, above.
3.4.14	See Part IV, General Provision, 12.1.
3.4.16	The U.S. does not use the term “low pass” for a clearance.
4.1.1	U.S. controllers do not use the phrases “identified” or “not identified [position]” to replace “radar contact [position].”
4.1.3	U.S. controllers do not say “closing [slowly (or quickly)] [from the left (or from the right)]” nor “heading is good” nor “rate of descent is good” nor do they give “(number) meters left (or right) of course or too high or too low.” In case of elevation failure, U.S. controllers advise “no glidepath information available . . .” instead of “elevation element unserviceable . . .”
4.1.5	The U.S. does not use the phraseology “Start and stop all turns on the command ‘now’.”
4.1.5c	Start and stop all turns on the command “NOW.”
4.1.6	See 3.1.1, above.
4.1.10	U.S. controllers say “radar service terminated” not “radar control terminated.” U.S. controllers do not say “will shortly lose identification” or “identification lost.”
4.1.11	The U.S. does not use the same phraseology for secondary radar failures. The U.S. does use (name of facility) beacon interrogator inoperative/malfunctioning. Primary radar failure is covered where secondary radar service is still available with the note that traffic advisories available on radar transponder aircraft only.
4.2.1	U.S. controllers would use “airport” rather than “field.”
4.2.2	In the U.S., pilots are not told “you will intercept (radio aid or track) (distance) from (significant point or touchdown).” Neither are pilots informed “closing from left (or right) [report established]” nor “this turn will take you through (aid) [reason]” nor “taking you through (aid) [reason].” Also, see 3.1.1, above.
4.2.3	U.S. ATS units use “course” rather than “track.”

4.2.3	The U.S. uses the phraseology for a traffic alert in lieu of the phrase “to avoid traffic”; however, the sense of urgency is the same as the word “immediately” is used by both PANS ATM and FAA.
4.2.4.1	U.S. controllers say “this will be a P–A–R/surveillance approach to runway (number) or airport/runway (number) or airport/heliport.” U.S. controllers do not say “approach completed . . .” U.S. controllers say “your missed approach procedure is (missed approach procedure)” and, if needed, “execute missed approach.”
4.2.4.2	For PAR approaches, U.S. controllers say “begin descent” and for surveillance approaches, U.S. controllers say “descend to your minimum descent altitude.”
4.2.4.4	The wheels down check is only done by U.S. military ATS units; the phraseology is “check wheels down” for military tower controllers and “wheels should be down” for military ATS radar units.
4.2.4.5	Although U.S. controllers say “go around,” they do not say “continue visually or go around.” In that case, they would say “if runway, approach/runway lights, not in sight, execute missed approach” or “if not visual, (advise you) execute missed approach.” Also, see 4.2.4.1, above.
4.2.5.1	See 4.2.4.1, above.
4.2.5.3	See Part VIII, Radar Services, 9.3.5 and 4.1.3, above.
4.2.5.4	See 4.1.3 and 4.2.4.2, above.
4.2.5.7	See 4.2.4.1, above.
4.2.5.8	See 4.2.4.5, above.
4.3.3	When a transponder appears inoperative or malfunctioning, U.S. controllers would instruct “. . . reset transponder, squawk” or “. . . your transponder appears inoperative/malfunctioning, reset, squawk . . .”
4.3.6, 4.3.8	U.S. controllers do not say “squawk Charlie.” U.S. controllers may ask a pilot to “ident” or “squawk standby” or “squawk low/normal” or “squawk MAYDAY on 7700” or “squawk altitude.”
4.3.9	For aircraft above FL 180, U.S. controllers would say, “confirm using two niner niner two as your altimeter setting, verify altitude” or “stop altitude squawk” “stop altitude squawk; altitude differs by (number) feet.” U.S. controllers would not say “stop squawk Charlie.”
4.3.10	See 4.3.6, above.
4.3.11, 4.3.12	See 4.3.9, above.
4.3.13	U.S. controllers would say “verify at (altitude)” and/or “verify assigned altitude.”
6.1.1	U.S. controllers would issue MEA/MVA/MOCA/MIA instead of QNH.
Part XIV	Procedures Related to Emergencies, Communication Failure and Contingencies
3	The U.S. has organized this material from the perspective of the controller. ICAO has outlined information the pilot can expect to provide.
4.3	The U.S. uses 2,000 feet above the highest obstacle and for separation from other aircraft, 1,000 feet above or 2,000 feet below and 5 miles. This includes VFR aircraft.
6.1	The U.S. does not have a section pertaining to emergency separation.
6.3	As previously covered in past differences, the U.S. uses TCAS. U.S. orders speak to controller actions when advised of an aircraft responding to a resolution alert (RA).
Appendix 1	Instructions for Air-reporting by Voice Communications
AIREP Form of Air-report	See Part IV, General Provision, 15.1.

Appendix 2	Flight Plan
	See Part IV, General Provision, 8.
2.2 (Item 15)	U.S. ATS units do not accept cruising speeds nor filed altitudes/flight levels in metric terms. The U.S. accepts filed Mach Number expressed as M followed by 3 figures.
2.2 (Item 18)	The U.S. requires filed FIR boundary designators and accumulated estimated elapsed times to such points or FIR boundaries in the sequence and form as prescribed in 2.2, Item 18 of Doc 4444, Appendix 2.
Appendix 3	ATS Messages
1.1.1	See Part XI, ATS Messages, 1.3.
1.6.2	See Part XII, Phraseologies, 2.8.
1.8.1 (Field Type 3), (Field Type 15), and (Field Type 18).	See Part XI, ATS Messages. 1.3. See Appendix 2, Flight Plan, 2.2 (Item 15) and 2.2 (Item 18).
2.1, 2.4.5, 2.5	See Part XI, ATS Messages 1.3.
Attachment B	This section now appears in the Air Traffic Services Planning Manual (Doc 9426).
3.2 (Item 15)	See Appendix 2, Flight Plan, 2.2 (Item 15).
3.2 (Item 18)	See Appendix 2, Flight Plan, 2.2 (Item 18).

ANNEX 3 – METEOROLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION	
PART I (Core SARPs)	
Chapter 2	General Provisions
2.1.5	The United States has its own standards on the qualifications and training of meteorological personnel providing service for international air navigation.
2.2	The United States has not instituted an ISO 9000 series of quality assurance standards for meteorological services. This difference is applicable to other subsequent paragraphs in 2.2.
2.3.3	There are no provisions to notify the meteorological office of flight schedules, delays, or cancellation of flights.
Chapter 3	World Area Forecast System and Meteorological Offices
3.4.2 g)	United States MWO's do not supply information received concerning the accidental release of radioactive material into the atmosphere to associated ACC/FIC.
Chapter 4	Meteorological Observations and Reports
4.3.2 a)	The United States does not issue local routine reports or local special reports. This difference is applicable to subsequent paragraphs that relate to the provision of local routine and special reports in Annex 3.
4.5.1 d)	This field is also used to denote a correction to the METAR/SPECI by "COR". This difference is also applicable to Table A3–2, METAR and SPECI.
4.6.2.1	The United States reports visibility in statute miles. This is also applicable to Table A3–5, Ranges and resolution for numerical elements included in METAR and SPECI. This difference is also applicable to Table A3–2, METAR and SPECI.
4.6.3.3	RVR values in the METAR/SPECI code forms are reported in feet (FT). This is also applicable to Table A3–5, Ranges and resolution for numerical elements included in METAR and SPECI. This difference is also applicable to Table A3–2, METAR and SPECI.
4.6.3.4	U.S. practice is to report only the touchdown zone in the METAR. This difference is also applicable to Table A3–2, METAR and SPECI.
4.6.7	The United States provides atmospheric pressure in inches of mercury. This is also applicable to Table A3–5, Ranges and resolution for numerical elements included in METAR and SPECI.
Chapter 5	Aircraft observations and reports
5.5	Urgent Pilot Reports (UUA) are used in lieu of Special Aircraft observations, to include Hail (GR, GS), Low Level Wind Shear (within 2000ft of surface), severe icing, severe extreme turbulence, tornado, funnel cloud or water spout (FC), and volcanic eruption and/or volcanic ash. In addition, Route Pilot Reports and UAA identify the location of the weather phenomenon by NAVAIDS.
Chapter 6	Forecasts
6.3	Landing forecasts are provided by the TAF.
6.3.3	The United States does not provide trend forecasts as part of the METAR or SPECI. This difference is also applicable to Table A3–2, METAR and SPECI. This difference is also applicable to App 4 Sec 2 that defines 'Criteria Related to Trend Forecasts'.
6.4	Takeoff forecasts are provided by the TAF. This difference is also applicable to App 4 Sec 3, 'Criteria Related to Forecasts for Take–Off'.

6.5	<p>The United States provides an Area Forecast (FA) in place of a GAMET. AIRMETs are issued every 6 hours on a scheduled basis. The FA and AIRMET are valid from the surface to FL450. The FA and AIRMET formats differ from Table A5–4 and Table 6–1. Specifically, the FA are issued three times a day in the United States, with the exception of Alaska and Hawaii where they are issued four times a day. They are valid for a 12–hour period beginning 1 hour after issuance and have an 18–hour outlook.</p> <p>This is also applicable to Part 1: 7.2, Part II, Appendix 5: 4, Part II, Appendix 6:2.1, and Part II, Appendix 8: 4.1.2 (use of templates.)</p>
Chapter 7	SIGMET and AIRMET Information, Aerodrome Warnings and Wind Shear Warnings
7.2.3	United States practice is to issue an AIRMET every six hours on a scheduled basis. The United States is developing capabilities to issue an AIRMET on a scheduled basis every 3 hours, which would exceed the SARP standard that an AIRMET is not to be issued more than every 4 hours.
7.4.1	<p>The United States does not provide wind shear warnings. The United States believes wind shear alerts are timelier to flight crews in landing and takeoff than wind shear warnings and thus provide a greater level of safety. In addition, the information is duplicative in nature in that wind shear warnings could be delayed while wind shear alerts are provided via automated systems that allow for immediate data link to flight crews through ATS systems.</p> <p>This difference is also applicable to App 6: 6.2.</p>
Chapter 9	Service for operators and flight crew members
9.2.3 & 9.2.4	United States meteorological offices have no means to communicate directly to flight crews if there is a divergence in the forecast from what is provided in the flight document folder.
9.3.3	United States meteorological offices have no means to provide updates to flight document folders or to contact the operator.
PART II	APPENDICES and ATTACHMENTS
APPENDIX 3	Technical specifications related to meteorological observations and reports
2.2	The United States does not use the term CAVOK in meteorological reports. This difference is also applicable to Table A3–2, METAR and SPECI.
2.3.1 c)	The U.S. does not prepare SPECI for changes in air temperature.
2.3.2 a)	U.S. practices require SPECI for wind shift when wind direction changes by 45 degrees or more in less than 15 minutes and the wind speed is 10 knots or more throughout the wind shift.
2.3.2 b)	U.S. practices do not require SPECI for increases of mean surface wind speed.
2.3.2 c)	U.S. practices require SPECI for squall, where squall is defined as a strong wind characterized by a sudden onset in which the wind speed increases at least 16 knots and is sustained at least 22 knots or more for at least one minute.
2.3.2d)	U.S. practices do not require SPECI for wind direction changes based on local criteria.
2.3.2f)	SPECI are not prepared for the equivalents in feet of 150, 350, or 600 meters. United States military stations may not report a SPECI based on RVR.
2.3.2 g/h)	<p>Practices do not require SPECI for the onset, cessation, or change in intensity of:</p> <ul style="list-style-type: none"> – freezing fog. – moderate or heavy precipitation (including showers thereof). – low drifting dust, sand or snow. – blowing dust, sand or snow (including snowstorm). – duststorm. – sandstorm.

2.3.2 i) and j)	The United States provides a SPECI when a layer of clouds or obscurations aloft is present below 1000 ft and no layer aloft was reported below 1000 ft in the preceding report. A SPECI is also reported when the ceiling decreases or increases at these markers: 3000, 1500, 1000, 500ft or lowest published instrument approach procedures. SPECI is made when the ceiling (rounded off to reportable values) forms or dissipates below, decreases to less than, or if below, increases to equal or exceed: 3,000 feet, 1,500 feet, 1,000 feet, 500 feet or lowest standard instrument approach procedure minimum published in the National Ocean Survey (NOS) <i>U.S. Terminal Procedures</i> . If none published, then 200 feet.
4.1.1.2	The United States does not provide wind representatives for specific runways but does provide a wind representative for the airport.
4.1.3.1 b)	The United States provides a 2–minute average wind observation for the METAR/SPECI.
4.1.5.2b)	The wind direction may be considered variable if, during the 2–min evaluation period, the wind speed is 6 KT or less. Also, the wind direction shall be considered variable if, during the 2–min evaluation period, it varies by 60 deg or more when the wind speed is greater than 6 KT.
4.1.5.2c)	United States practices define wind gust as rapid fluctuations in wind speed with a variation of 10 knots or more between peaks and lulls. Wind speed data for the most recent 10 minutes is examined and a gust, the maximum instantaneous wind speed during that 10–minute period, is reported if the definition above is met during that period.
4.2.4.4	The United States does not report the lowest visibility in lieu of prevailing visibility. The United States always reports prevailing visibility and does not report lowest visibility if the lowest visibility is different from prevailing visibility
4.2.4.5	The United States does not use “NDV”, no direction variations can be given for visibility. This difference is also applicable to Table A3–2, METAR and SPECI
4.3.6.1	The United States reports RVR in increments of 100 feet up to 1,000 feet, increments of 200 feet from 1,000 feet to 3,000 feet, and increments of 500 feet above 3,000 feet to 6,000 feet.
4.3.6.5b), 4.3.6.6	The United States reports RVR for a single designated runway in the METAR/SPECI. RVR tendency is not reported. This difference is also applicable to Table A3–2, METAR and SPECI.
4.4	The following weather elements are augmented manually at designated automated stations observation sites: FC, TS, GR, GS, and VA. At selected airports, additional present weather elements may be provided. With the exception of volcanic ash, present weather is reported when prevailing visibility is less than 7 statute miles or considered operationally significant. Volcanic ash is always reported when observed.
4.4.2.6	The practice with respect to the proximity indicator VC is between 5 to 10 statute miles from the point of observation with the exception of precipitation for which the VC indicates > 0 to 10 statute miles from the point of observation.
4.5.4	<p>The United States reports only up to 3 layers at automated sites and up to 6 layers at manual sites. Cloud layer amounts are a summation of layers at or below a given level, utilizing cumulative cloud amount. In addition, at automated sites, which are unstaffed, cloud layers above 12,000 ft are not reported. At staffed automated sites, clouds above 12,000 ft may be augmented. CAVOK and NSC are not used.</p> <p>In addition, the United States does not use “///” when cloud type can not be observed; “NCD” when no clouds are detected; or “/////” for CB or TCU when not detected by automated observing systems.</p> <p>In the United States the symbol “///”, when used in the cloud section of the METAR, refers to a mountain station where the layer is below the station level. This difference is also applicable to Table A3–2, METAR and SPECI.</p>
4.8	<p>The United States has a Remarks Section that provides similar information.</p> <p>This difference is also applicable to Table A3–2, METAR and SPECI.</p>

4.8.1.4	Wind shear is not included in the METAR/SPECI code form in the U.S remarks. This difference is also applicable to Table A3–2, METAR and SPECI.
4.8.1.5	Sea–surface temperature, the state of the sea and state of the runway are not provided in the METAR/SPECI code form in the U.S. remarks. This difference is also applicable to Table A3–2, METAR and SPECI.
APPENDIX 4	Technical specifications related to aircraft observations and reports
3.1.4	The United States MWOs do not issue special air reports.
APPENDIX 5	Technical specifications related to forecasts
1.2.2	Forecast visibility increments used consist of 1/4 mile from 0 (zero) to 1 mile, 1/2 mile from 1 to 2 miles, and 1 mile above 2 miles. Note: miles are statute miles.
1.2.3	Practices require forecast of non–convective low–level wind shear within 2,000 feet of the ground in the Optional Group. The forecast consists of WS (wind shear); heights of the wind shear in hundreds of feet; and wind speed and direction above the wind shear height, using METAR and TAF coding regulations.
1.2.4	The United States does not use CAVOK and NSC in the TAF. This difference is also applicable to Table A5–1, Template for TAF. The non–application of the use of NSC also applies to App 5. 1.3.1 i)
1.3.1 e)	Change groups and amendment criteria below 1/2 statute mile (800 meters) are not used. This difference is also applicable to Table A5–1, Template for TAF.
1.3.1 j)	The 100–foot (30 meter) change group and amendment criterion is not used. This difference is also applicable to Table A5–1, Template for TAF.
1.3.2	The United States does not use the change indicator “BECMG”. This difference is also applicable to Table A5–1, Template for TAF and to other subsequent sections including 1.3.3 and 1.3.4 where BECMG is referenced.
1.4	The United States does not use “PROB 40” in the TAF. “PROB 30” will not be used in the first nine (9) hours of every TAF’s valid period, including amendments. This difference is also applicable to Table A5–1, Template for TAF. Note also that Military TAFs do not use the “PROB” groups.
4.1 i)	Practice is not to include thunderstorms information in Area Forecasts. See difference filed for Part I 6.6 that the United States does not provide the GAMET but does provide an Area Forecast.
4.3	U.S. practices do require reporting of ISOL, OCNL or FREQ in accordance with the guidance on the use of the terms given in App 6. The United States reports “isolated” (ISOL) when the phenomena affect an area less than approximately 3,000 square miles or are widely separated in time, and widespread (WDSPR) to mean more than 50 percent of the area.
APPENDIX 6	Technical specifications related to SIGMET and AIRMET information, aerodrome warnings and wind shear warnings and alerts
1.1.3	SIGMET messages in the CONUS use VORs in place of lat/long and do not reference FIRs. SIGMETs are issued by alphanumeric series, e.g., Kilo 1, 2, 3 etc. In the conterminous U.S., convective SIGMETs are issued in lieu of SIGMETs for convection. They are issued as hourly bulletins for the East, Central, and Western United States and thus they do not indicate the FIR. Connective SIGMETs have an outlook section. This difference is also applicable to Table A6–1, Template for SIGMET and AIRMET messages.
1.1.4	Convective SIGMETs for the conterminous U.S. are issued with the non–standard WMO Header designator “WST” and use a lower criteria. Practices are to issue a SIGMET for mountain wave only when accompanied by severe turbulence. In addition, the U.S. does not issue a SIGMET for radioactive clouds. This difference is also applicable to Table A6–1, Template for SIGMET and AIRMET messages.

2.1.2, 2.1.3	AIRMETs in the conterminous U.S. are issued as bulletins for the East, West, and Central U.S. in conjunction with area forecast turbulence, icing, and ceiling and visibility, and thus do not comply with template for FIR or series numbering format. This difference is also applicable to Table A6–1, Template for SIGMET and AIRMET messages.
2.1.4	AIRMET in the conterminous U.S. on a routine schedule for icing, turbulence, sustained surface winds, ceiling/visibility and convection. Practices do not include use of ISOL, OCNL or FRQ. This difference is also applicable to Table A6–1, Template for SIGMET and AIRMET messages. The U.S. does not include cloud amount or type in AIRMET.
4.2.1	U.S. practices do require reporting of ISOL, OCNL or FREQ in accordance with the guidance on the use of the terms given in App 6. The United States reports “isolated” (ISOL) when the phenomena affect an area less than approximately 3,000 square miles or are widely separated in time, and widespread (WDSPR) to mean more than 50 percent of the area.
5.1, 5.1.3	The United States does provide for tsunamis in the aerodrome warning. The U.S. issues airport warning messages similar to the ICAO format (Table A6–2, Template for aerodrome warnings) only at selected airports based on a bilateral agreement between the airport authority and the NWS Forecast Office.

ANNEX 4 – AERONAUTICAL CHARTS	
Chapter 1	Definitions
Air taxiway	The U.S. does not depict defined surfaces for air-taxiing of helicopters.
Danger area	The term “danger area” will not be used in reference to areas within the U.S. or in any of its possessions or territories.
Final approach and take-off area (FATO)	The U.S. does not depict final approach and take-off areas (FATOs).
Helicopter stand	The U.S. does not use this term.
Prohibited area Restricted area	<p>The U.S. will employ the terms “prohibited area” and “restricted area” substantially in accordance with the definitions established and, additionally, will use the following terms: “Alert area.”</p> <p>Airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.</p> <p>“Controlled firing area.” Airspace wherein activities are conducted under conditions so controlled as to eliminate the hazards to nonparticipating aircraft and to ensure the safety of persons and property on the ground.</p> <p>“Warning area.” Airspace which may contain hazards to nonparticipating aircraft in international airspace.</p> <p>“Maneuvering area.” This term is not used by the U.S.</p> <p>“Military operations area (MOA).” An MOA is an airspace assignment of defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.</p> <p>“Movement area.” Movement area is defined by the U.S. as the runways, taxiways, and other areas of an airport which are utilized for taxiing, take-off, and landing of aircraft, exclusive of loading ramp and parking areas.</p>
Touchdown and lift-off area (TLOF)	The U.S. does not use this term.
Chapter 1.1	Definitions
Aerodrome reference point	Airport Reference Point is the approximate geometric center of all usable runway surfaces.
Airway	Airways are Class E airspace.
Area Minimum Altitude	Off Route Obstruction Clearance Altitude (OROCA) used.
Arrival Routes	Arrival routes are also identified on Standard Terminal Arrival (STAR).
Clearway	Obstacle and terrain may not extend above specified limits in a Clearway.
Displaced Threshold	Displaced threshold is located at other than the designated beginning of the runway.
Final Approach	Final approach begins at the final approach fix or point and extends to the airport or the point where a circle-to-land maneuver or a missed approach is executed.
Flight Level	Flight level is related to a reference datum of 29.92 inches of mercury.
Glide Path	Glideslope is used instead of glide path.
Helicopter Stand	Helipad is used vice helicopter stand.
Instrument Approach Procedure	Instrument approach procedure begins at the initial approach point vice defined arrival route.

Intermediate Approach Segment	Intermediate approach segment is that segment between the intermediate fix or point and the final approach fix.
Minimum obstacle clearance altitude (MOCA)	MOCA also assures acceptable navigational signal coverage within 22 NM of a VOR.
Minimum sector altitude	Minimum Sector Altitude is centered on the navigation facility upon which the procedure is predicated.
Missed approach point	Missed approach point based on acquiring the required visual reference.
Missed approach procedure	Missed approach procedure is conducted when the approach cannot be completed to a landing.
Movement Area	Movement area also includes areas used by helicopters in taxiing. It does not include loading ramps or parking areas.
Obstacle	Obstacles may include terrain and objects of natural growth.
Obstacle clearance altitude (OCA) or Obstacle clearance height (OCH)	Decision Altitude and Decision Height used vice Obstacle Clearance Altitude and Obstacle Clearance Height.
Obstacle free zone	Obstacle Free Zone also includes airspace above runway surface.
Precision approach procedure	MLS also included as a Precision approach procedure.
Procedure turn	Procedure turn is used only on intermediate approach segment or final approach course.
Prohibited area	Permission of the using agency is required before using Prohibited airspace.
Terminal arrival altitude (TAA)	Terminal Arrival Areas defined by the extension of the IAF legs and the intermediate segment course.
Touchdown zone	Touchdown zone is the first 3000 feet of the runway beginning at the threshold.
Track	Track is the actual flight path of the aircraft over the surface of the earth.
Vectoring	Vectoring based on use of radar.
Visual approach procedure	Visual approach procedure is conducted on an IFR flight plan which authorizes the pilot to proceed visually and clear of clouds to the airport.
Chapter 1.2	Applicability
1.2.2	Charts vary in their conformance to ICAO Standards.
1.2.2.1	Charts vary in their conformance to ICAO Recommended Practices.
Chapter 2	General Specifications
2.1	The titles of charts produced by the U.S. are not those provided for in Annex 4.
2.1.7	Charts are True North oriented except as indicated.
2.1.8	Sheet size of charts varies dependent on chart type.

2.2.1	The marginal note layouts, in some cases, differ from those set forth in Appendices 1, 5, and 6.
2.3.1	Marginal note layouts vary by chart type
2.4	Symbols do not universally conform to Appendix 2.
2.4.1	Visibility distances are expressed in statute miles and fractions thereof.
2.4.4	Conversion scale (meters/feet) is not shown on Radio Navigation Charts.
2.5.4	Linear dimensions are expressed in feet.
2.5.7	Conversion scales are not universally used.
2.6.2	Some charts have no linear scale.
2.9.2	Abbreviations used are from FAA Order 7340.1, not ICAO Doc 8400.
2.11	Color schemes differ by chart series.
2.12.2	Hypsometric tints differ by chart series.
2.12.3.1	Unreliable spot elevations are shown with an “x” preceding the value.
2.14.1	Vertical limits of airspace are not shown.
2.18.3.1	Julian Calendar is also used.
Chapter 3	Aerodrome Obstacle Chart – ICAO Type A (Operating Limitations)
3.1	The U.S. produces an Airport Obstruction Chart which covers the basic requirements called for by Aerodrome Obstruction Chart – ICAO Type A.
3.2.1	Availability of chart is not dependent on provision of other charts.
3.2.2	Notification is not made when chart is not required.
3.3.2	Linear dimensions are expressed in feet.
3.6	Country name is not used.
3.8.1.3	Obstacles shown only in relation to FAR 77
3.8.3.1	Only total pavement distance is shown
Chapter 4	Aerodrome Obstacle Chart – ICAO Type B
4.1	The U.S. produces an Airport Obstruction Chart which covers the basic requirements called for by Aerodrome Obstruction Chart – ICAO Type B.
4.2.1	Availability of chart is not dependent on provision of other charts
4.3.2	Linear dimensions are shown in feet.
4.6	Country name is not used
Chapter 5	Aerodrome Obstacle Chart – ICAO Type C
5.8.1	The navigation grid on U.S. Aircraft Position Chart 3097 comprises lines parallel to 54° West Meridian and the navigation grid on U.S. Aircraft Position Chart 3096 comprises lines parallel to 92° West Meridian. These changes to the ICAO Standard were made to provide navigation grid lines vertical to a great circle projection base.
Chapter 6	Precision Approach Terrain Chart – ICAO
6.9.1.1	Only outbound magnetic bearings from VOR facilities and inbound magnetic bearings to low/medium frequency radio navigation facilities are shown.

Chapter 7	En Route Chart – ICAO
7.1	Simplified versions are not included in the AIP.
7.6.2	Off Route Obstruction Clearance Altitude (OROCA) is shown.
7.9.3.1.1	Coordinates are shown in degrees, minutes and hundredths of minutes. DME antenna elevation is not shown. Vertical limits of airspace are shown in tabulated data form. RNP type designation is not shown. Coordinates of significant points are not shown. Bearings are shown to the nearest degree and distances to the nearest mile. Logon address is not shown.
7.9.3.1.1 1) and 5)	The U.S. depicts geographic positions in degrees and minutes to the hundredth of a degree.
Chapter 8	Area Chart – ICAO
8.1	Area charts produced only where the amount of detail required results in congestion of information on an IFR Enroute Low Altitude chart.
8.3.1	Departure and Arrival routes are not shown.
8.9.1	Only airports shown are those with hard surface runways of 3000 feet or longer and/or with an Instrument Approach Procedure.
8.9.3	Off Route Obstruction Clearance Altitude (OROCA) is shown.
8.9.3.1.1 1) and 6)	The U.S. depicts geographic positions in degrees and minutes to the hundredth of a degree.
8.9.4.1.1	Coordinates are shown in degrees, minutes and hundredths of minutes. DME antenna elevation is not shown. Vertical limits of airspace are shown in tabulated data form. Terminal routings are not shown. Coordinates of significant points are not shown. Bearings are shown to the nearest degree and distances to the nearest mile. Minimum vectoring altitudes are not shown. Logon address is not shown.
Chapter 9	Standard Departure Chart – Instrument (SID) – ICAO
9.2	Charts are provided only when a procedure has been established.
9.3.1	Charts covering continental U.S. between latitudes 24° and 52° North are based on standard parallels at 33° and 45° and between latitudes 52° and 72° North on standard parallels at 55° and 65°.
9.3.2	Charts are not generally drawn to scale.
9.3.3	Scale bar is not shown.
9.4.1	The U.S. uses a sheet numbering system which differs from the index in Appendix 7.
9.4.2	Parallels and meridians are not shown.
9.4.3	Graduation marks are not shown.
9.5	Procedure route is identified in accordance with FAA Order 8260.46
9.6.1	Culture and topography are not shown.
9.6.2	Relief is not shown.
9.8.3.2*	The elevation of the highest point on any sheet is not always cleared of hypsometric tinting.
9.9.1.2	Secondary airports are shown only when designated.
9.9.2	Danger areas are not shown. Vertical limits are not shown.
9.9.3.1	Minimum Sector Altitude is not shown.
9.9.3.1.1 2d) and 3)	The U.S. depicts geographic positions in degrees and minutes to the hundredth of a degree.
9.9.3.2	Area minimum altitudes are not shown.

9.9.4.1.1	Coordinates for NAVAIDs and Significant Points are shown in degrees, minutes and hundredths of minutes. Bearings are shown to the nearest degree and distances to the nearest mile. DME antenna elevation is not shown. Obstacles are depicted textually with position and height, and without regard for penetration of OIS. Minimum vectoring altitudes are not shown.
9.10.1	Heliports are not shown.
Chapter 10	Standard Arrival Chart – Instrument (STAR) – ICAO
10.2	Charts are provided only when a procedure has been established.
10.3.2	Charts are not generally drawn to scale.
10.3.3	Scale bar is not shown.
10.4.2	Parallels and meridians are not shown.
10.4.3	Graduation marks are not shown.
10.5	Procedure route is identified in accordance with FAA Order 7100.9
10.6.1	Culture and topography are not shown.
10.6.2	Relief is not shown.
10.8.3.2*	The elevation of the highest point on any sheet is not always cleared of hypsometric tinting.
10.9.1.1	Airports are shown by symbol vice pattern.
10.9.1.2	Secondary airports are shown only when designated.
10.9.2	Danger areas are not shown. Vertical limits are not shown.
10.9.3.1	Minimum Sector Altitude is not shown.
10.9.3.1.1 2d) and 3)	The U.S. depicts geographic positions in degrees and minutes to the hundredth of a degree.
10.9.3.2	Area minimum altitudes are not shown.
10.9.4.1.1	Bearings are shown to the nearest degree and distances to the nearest mile. Coordinates for NAVAIDs and Significant Points are shown in degrees, minutes and hundredths of minutes. DME antenna elevation is not shown. Minimum vectoring altitudes are not shown.
Chapter 11	Instrument Approach Chart – ICAO
11.3.3	Scale is not shown.
11.3.3.1	Distance circle is centered on NAVAID used for final approach segment, except when location of the airport, radio aid to navigation and/or procedure pattern necessitates that the ring be centered on other facilities or geographical points for better portrayal of the instrument approach procedure.
11.3.3.2	Distance between components and between last component and runway shown.
11.4	Sheet size is 8.25 inches by 5.375 inches
11.5.2	Graduation marks are not shown.
11.7.1	Culture information is not shown. Topographic information is not named. Hydrographic features are shaded.
11.7.2	Terrain charting criteria does not include approach gradient steeper than optimal due to terrain.
11.7.3	Terrain is not charted if Std 11.7.2 is not met.
11.8.1	Magnetic variation is shown only in areas of compass instability and on charts North of 67 degrees of latitude.
11.9.3	Grid meridian is not shown.
11.10.1.1	Abandoned airports are not shown
11.10.2.2	Obstacles that are the determining factor for an OCA/OCH are not necessarily shown.
11.10.2.7	Obstacle free zones are not shown.
11.10.3	Vertical limits are not shown.

11.10.4.3	The U.S. does not depict geographic position of the final approach fix. Geographic coordinates are not shown.
11.10.5	Terminal arrival areas are shown vice terminal arrival altitude.
11.10.6.1	Arrowed, dashed line is shown vice arrowed, dotted line. Times required for the procedure are not shown. Magnetic bearings to the airport from the final approach NAVAID are not shown. Circling prohibitions are indicated by textual note vice graphic boundaries.
11.10.6.2	Distance to airport from final approach NAVAID is not shown.
11.10.6.3	Arrows are not shown on procedure track line except to indicate heading changes. Missed approach segment is shown by arrowed, dashed line. Arrowed, dashed line is used for other segments vice arrowed, dotted line. Times required for the procedure are not shown. Intermediate approach fix/point is not shown where no course reversal is authorized. Distance between components is shown vice a distance scale.
11.10.6.4	Parentheses are not shown.
11.10.6.5	Ground profile and shaded altitude blocks are not shown.
11.10.7.1	Procedure landing minima are shown vice aerodrome operating minima.
11.10.7.2	Decision Altitude/Height (DA/H) shown vice OCA/H.
11.10.8.2	Altitude/height table is not shown.
11.10.8.3	Altitude/height table is not shown.
11.10.8.4	Rate of descent table is not shown.
11.10.8.5	Descent gradient is not shown. Parentheses are not shown
11.10.8.6	Reference datum height is not shown. Descent angle shown to the nearest hundredth of a degree.
11.10.8.8	Cautionary note is dependent on multiple criteria.
11.10.9	Geographical coordinates are not shown. Fix formation bearings shown to the nearest degree. Mileages are shown to the nearest mile. Descent angles are not shown.
Chapter 12	Visual Approach Chart – ICAO
12.1	Charts provide visual arrival routes and altitudes.
12.2	Chart provided only when visual approach procedure has been established.
12.2.1	Stopways are not indicated.
12.3.3	Charts are shown at scale of 1:250,000
12.4	Sheet size is 8.25 inches by 5.375 inches.
12.5.2	Graduation marks are not shown
12.5.5.2.1	The datum (MSL) is stated in the Instrument Approach Chart legend, not on the chart.
12.6.2	Runway threshold elevations are not shown.
12.7.1.1	Place names are not shown.
12.8	Magnetic variation is shown only in areas of compass instability and on charts North of 67 degrees of latitude.
12.9.3	Grid meridian is not shown.
12.10.1.1	Abandoned airports are not shown
12.10.1.2	Airport elevation is not shown
12.10.2.3	Height of obstacle above Mean Sea Level is shown.
12.10.2.3.1	Parentheses are not shown.
12.10.3	Danger areas are not shown. Vertical limits are not shown.
12.10.4	Control zones and Traffic zones are not shown. Vertical limits are not shown.

12.10.5.3	VASI, MEHT, and angle of displacement are not shown.
Chapter 13	Aerodrome/Heliport Chart – ICAO
13.1	Airport Diagrams are developed for complex runway and taxiway layouts and to provide information for updating computer based navigation systems. Helicopter movement is supported only with the location of helipads.
13.3.1	Scale varies to allow depiction of one whole degree of latitude and longitude.
13.3.2	Latitude and longitude graticules are shown vice linear scale.
13.6.1	Latitude and longitude graticules are shown vice geographical coordinates. Elevations for runway ends, parking areas, and the airport are shown. Clearways are not shown. Parking areas and ramps are shown with their designations and without details. Taxiways and identification only are shown. Standard taxi routes are not shown. Boundaries of air traffic service are not shown. RNR observation sites are not shown. Approach and runway lighting are not shown. VASI systems are not shown. VOR checkpoint and frequency are not shown. Logon address is not shown.
13.6.1.d Surface type for heliports.	The U.S. does not show “type of surface for heliports.”
13.6.2 Elevated helidecks, etc.	The U.S. does not show “surface level, elevated, or helidecks.” Helicopter pads only are shown. Touchdown and liftoff areas are not shown. Final approach and takeoff areas are not shown. Safety areas are not shown. Clearways are not shown. Visual aids are not shown. Declared distances are not shown.
Chapter 14	Aerodrome Ground Movement Chart – ICAO
14.6.1 c)	The U.S. does not depict geographic positions of aircraft stands.
14.6.1 f)	The U.S. does not depict taxiway centerline points.
Chapter 16	World Aeronautical Chart – ICAO 1:1 000 000
16.3.1	Linear scales are shown in the following order: nautical miles, statute miles, kilometers.
16.4.3	Charts are folded in eleven vertical panels and one horizontal fold.
16.4.4	Sheet lines are shown on Title Panel chart index.
16.4.5	ICAO has not been notified of chart sheet lines.
16.5.1	Standard parallels are for each 8 degrees and are shown 1 degree and 20 minutes in from the Northern and Southern edges of the chart. Charts are not produced above 80 degrees latitude.
16.5.2	Distance between parallels is 1 degree. Above 56 degrees North, latitude graduation marks are shown only on every even degree of longitude. Distance between longitude meridians is 1 degree. Above 64 degrees North, meridian graduation marks are shown every 5 minutes.
16.5.3.1	Lengths of interval marks are as follow: 1 minute – .045 inches; 5 minutes – .065 inches; 10 minutes – .10 inches on both sides.
16.6	Chart numbering is indicated on Title Panel chart index.
16.7.2.1	Railroads are not shown within outlined populated areas.
16.7.2.2	Tunnels, if possible, are shown wherever they exist.
16.7.3.1	Roads are shown for radar and visual value and for distinct configurations that provide visual checkpoint value.
16.7.3.2	Roads are not shown within outlined populated areas.
16.7.9.2	Coordinates shown to the nearest minute.
16.7.9.3	Halo effect only shown for elevation value.
16.7.10.1	Notes will read ‘Relief data incomplete’ or ‘Limits of reliable relief information.’
16.7.10.2	Unreliable spot elevations are shown with an ‘x’ preceding the value.
16.7.12.1	Wooded areas are not shown.

16.7.13	Date of topographic information is not shown.
16.8.2	Date of isogonic information is shown in the chart legend.
16.9.2.1	Only airports published in the National Flight Data Digest are charted. They may be omitted if in congested areas or if airports with better facilities are nearby.
16.9.2.2	Other than hard surface runways are shown by symbol.
16.9.3.1	Obstacles greater than 200 feet are shown. Obstacles 200 feet or less may be shown.
16.9.4	Alert Areas, Military Operating Areas and Warning Areas are also shown.
16.9.5.1	Class D airspace and Class E (surface) airspace are not shown.
16.9.6	NAVAIDs without voice capability are shown with their frequency underlined.
16.9.7.1	Only aeronautical ground lights that operate continuously are shown.
16.9.9.2	Only marine lights that operate year round, with a range of at least 10 NM, and are omnidirectional are shown.
Chapter 17	Aeronautical Chart – ICAO 1:500 000
17.3.1	Linear scales are shown in the following order: nautical miles, statute miles, kilometers.
17.4.3	Charts are folded in eleven vertical panels and one horizontal fold.
17.4.4	Relationship of chart to WAC series is not shown.
17.5.4.1	The 10 minute interval mark is .10 inches on both sides of the graticule line.
17.6.1.1	Relationship of chart to WAC series is not shown.
17.7.2.2	Tunnels, if possible, are shown wherever they exist. Prominent tunnels are shown pictorially.
17.7.3.1	Roads are shown for radar and visual value and for distinct configurations that provide visual checkpoint value.
17.7.3.2	Roads are not shown within outlined populated areas. Dual lane highways are shown within large scale insets.
17.7.9.2	Coordinates are shown to the nearest minute.
17.7.9.3	Halo effect is only shown for elevation value.
17.7.10.1	Notes will read ‘Relief data incomplete’ or ‘Limits of reliable relief information.’
17.7.10.2	Unreliable spot elevations are shown with an ‘x’ preceding the value.
17.7.12.1	Wooded areas are not shown.
17.7.13	Date of topographic information is not shown.
17.8.2	Date of isogonic information is shown in the chart legend.
17.9.2.1	Only airports published in the National Flight Data Digest are charted. They may be omitted if in congested areas or if airports with better facilities are nearby.
17.9.2.2	Other than hard surface runways are shown by symbol.
17.9.2.3	Only abandoned airports with at least a 3000 feet hard surface runway and with landmark value are shown.
17.9.3.1	Obstacles greater than 200 feet are shown. Obstacles 200 feet or less may be shown.
17.9.4	Alert Areas, Military Operations Areas, and Warning Areas are also shown.
17.9.6	NAVAIDs without voice capability are shown with their frequency underlined.
17.9.7.1	Only aeronautical ground lights that operate continuously are shown.
17.9.7.2	Only marine lights that operate year round, with a range of at least 10 NM, and are omnidirectional are shown.

Appendix 2	ICAO Chart Symbols
No. 21	Tidal flats are shown in brown stipple over the blue open water tint.
No. 45	Rocks awash are shown by a six-armed symbol as adopted by the International Hydrographic Bureau.
No. 54, 61	Spaces between sides of bridge and road or railroad symbols are filled solid.
No. 70	Oil or gas fields are shown with an oil well derrick symbol.
No. 77	Ruins are shown by a solid square, properly annotated.
No. 94	<p>The runway surface indicator (letter H) and the lighting indicator (letter L) are not normally used on high altitude Radio Navigation Charts. Only those airports with a minimum of 5,000 feet hard-surfaced runways are shown.</p> <p>The letter H is not used on low altitude Radio Navigation Charts. All airports depicted have hard-surfaced runways, excepting that where the letter "S" follows the runway length, the runway surface is soft.</p> <p>On Visual Navigation Charts of the 1:500 000 scale, a miniature runway layout depiction indicates airports with hard-surfaced runways at least 1,500 feet long.</p>
No. 110	Aerodrome traffic zones are termed "SURFACE AREAS" in U.S. usage. These are all of standard dimensions. Limits are not shown, but airports at which SURFACE AREAS have been established are indicated by a color-coded airport symbol.
No. 113	Limits of advisory areas are shown on Radio Navigation Charts with a crenellated line. This depiction is indicated in the legend as the border of an Air Route Traffic Control Center (ARTCC).
No. 116	The nomenclature "non-compulsory" is used instead of "on request" for appropriate position reporting points.
No. 127	Isogonic lines are shown on Radio Navigation Charts only as short sections of continuous lines extending inward from the neat lines.
*Indicates ICAO Recommended Practice.	

ANNEX 5 – UNITS OF MEASUREMENT TO BE USED IN AIR–GROUND COMMUNICATIONS

General Statement: Most of the individual SI quantities and measurement units listed in the Annex are not commonly used in routine international air operations. Although most U.S. national standards and practices do not specifically utilize the SI units, the SI units of measurement are acceptable and not prohibited from use by U.S. regulations. Under the present operational practices, these differences are not significant and are identified in U.S. Aeronautical Information and Technical Publications. In accordance with Article 38 of the Convention, the U.S. wishes to file the enclosed Notice of Differences to Annex 5, Fourth Edition, as amended by Amendment 13. Only those differences recognized as necessary for the safety or regularity of international air navigation and required for day-to-day operations in U.S. airspace are listed separately in this notification. In addition, we do not support the establishment of dates for planning purpose for termination of the use of bar, knot, nautical mile, and foot. (Chapter 4, Table 4–1) Until sufficient operational analysis identifies and resolves the safety issues, the establishment of termination dates for use of the bar, knot, nautical mile, and foot is unacceptable.

Reference: Table 3–4, Chapter 3, Annex 5, Fourth Edition, as Amended by Amendment 13.

Chapter 3	Standard application of units of measurement
3.2.2 Table 3–3 Table 3–4	Table 3–4 Ref 1.12, runway length and Ref 1.13 runway visual range, unit of measure is in feet. Table 3–4 Ref 1.16, visibility unit of measure is statute miles (SM). Table 3–4 Ref 3.2, altimeter setting, unit of measure is reported as inches of mercury. Table 3–4, Ref 3.3, atmospheric pressure, unit of measure is in inches of mercury.

Chapter 3.3 (Table 3–4)

Ref. No.	Quantity	Unit (SI)	Differences as of 5 January 1988
1.4	distance (short)	meter	foot
1.12	runway length	meter	foot
1.13	runway visual range	meter	foot
1.15	time	hour and minute, the day of 24 hours beginning at midnight UTC	Time may be given in local time
1.16	visibility	kilometer	statute mile and fraction
2.12	mass (weight)	kilogram	pound (lb)
3.2	altimeter setting	hectopascal	inches of mercury
6.7	temperature	°C	C° except Fahrenheit used for surface air and dew point temperature
10.1	absorbed dose	Gy	rd
10.2	absorbed dose rate	Gy/s	rd/s
10.4	dose equivalent	Sv	rem
10.5	radiation exposure	C/kg	R
10.6	exposure rate	C/kg·s	R/s

All non–SI alternative units listed in this table will continue to be utilized where permitted. (1.1, 1.3, 1.5, 1.7, 4.1, 4.7, 4.15, 4.16)

Attachment B	Guidance on the application of System of Units (SI)
5.4.2	Specifications differ from Attachment B, Style and usage, Para 5.4 Numbers. Comma is not acceptable as a decimal marker. Comma is used to separate digits in groups of three.

ANNEX 6 – OPERATION OF AIRCRAFT	
Part I	
Chapter 1	Definitions
Chapter 1 Reference Definition	For CAT I, the United States requires a decision height of not less than 200 feet and either visibility of not less than one-half mile or a runway visual range of 2400 (RVR) 1800 feet with operative touchdown zone and runway center line lights. CAT II provide approaches to minima of less than 200 feet decision height/2400 feet runway visual range to as low as 100 feet decision height/1200 feet runway visual range. CAT IIIB the criteria are the same as Appendix 6, however, the runway visual range is expressed in feet and less than 700 feet (200m) but no less than 150 feet (50m).
Chapter 2	Applicability
Chapter 2 Reference 2.1.1	The U.S. does not give operational credit to EFVS on a head down display.
Chapter 2 Reference 2.2.1.2	In the U.S., while straight-in instrument approach procedures using EFVS may be conducted in visibility conditions that are less than that specified for an approach using “natural vision,” the U.S. regulations do not provide lower minima. The minima for CAT I ILS, APV, and non-precision approaches using EFVS remains the same whether the approach is conducted using natural vision or conducted using EFVS. If natural vision is used to operate below DA/MDA, then U.S. regulations require that the flight visibility observed by the pilot from the cockpit be less than what is prescribed in the instrument approach procedure. If EFVS is used, then the enhanced flight visibility observed by using the EFVS cannot be less than that prescribed by the instrument approach procedure. EFVS simply provides another means of operating visually in the visual segment between DA/MDA down to 100 ft. above touchdown zone elevation.
Chapter 2 Reference 2.3.1.2	U.S. regulations only permit operational credit for EFVS on a HUD or an equivalent display. An equivalent display is a display that provides EFVS sensor imagery and aircraft flight symbology on some type of “head up” presentation, such as a head mounted, etc. The U.S. does not give operational credit to EFVS on a head down display. U.S. regulations currently do not require a repeater display for the non-flying pilot.
Chapter 2 Reference 2.4.1	U.S. regulations do not require training for Part 91 operators (except for Part 91 Subpart K operators), nor do they address recency of experience for those operators. Training is required, however, for Parts 121, 125, 129, 135, and 91 Subpart K operators.
Chapter 3	General
Chapter 3 Reference 3.2.9	The U.S. does not mandate a safety management system.
Chapter 3 Reference 3.3.5	The U.S. currently does not have an SMS requirement.
Chapter 3 Reference 3.3.6	The U.S. Flight Quality Assurance Program is a voluntary program.
Chapter 3 Reference 3.3.7	The U.S. Flight Quality Assurance Program is a voluntary program.
Chapter 3 Reference 3.3.9	The U.S. currently does not have an SMS requirement.
Chapter 4	Flight Operations
Chapter 4 Reference 4.2.2.3	U.S. regulations exempt a single pilot in a 9-or-less seating configuration operation from having a maintenance manual. Rather, U.S. regulations (CFR 135.411) require a single pilot to comply with the maintenance requirements in CFR 91 and 43 in lieu of a maintenance manual or program.
Chapter 4 Reference 4.2.10.1	The U.S. does not require single engine aeroplanes, commuter and on-demand operators to maintain fuel and oil records.

Chapter 4 Reference 4.2.10.2	For multiengine aeroplanes, commuter and on-demand operators are required to maintain fuel and oil records as part of the load manifest for 30 days rather than 3 months. For single engine aeroplanes, commuter and on-demand operators are not required to maintain fuel and oil records.
Chapter 4 Reference 4.2.11.5	The U.S. does not have a requirement to main cosmic radiation dose records.
Chapter 4 Reference 4.3.2	For multiengine, aeroplanes, commuter and on-demand operators are required to maintain fuel and oil records as part of the load manifest for 30 days rather than 3 months. For single engine aeroplanes, commuter and on-demand operators are not required to maintain fuel and oil records.
Chapter 4 Reference 4.3.4.1.2	When determine the distance to a take-off alternate, the united States does not require commuter and on demand operators to calculate engine inoperative configurations, but does require tha the alternate must be within one-hour flying time (at normal cruising speed, in still air) of the aerodrome of departure.
Chapter 4 Reference 4.3.6.3.1	The United States does not require fuel to execute the approach and a missed approach at the destination airport. The United States requires an addition 10% reserve for Flag and Supplemental operations. For commuter and on-demand operations 45 minutes fuel is required after flying to the alternate rather than ICAO Standard of 30 minutes at 1,500 feet.
Chapter Reference 4.3.6.3.2	The fuel reserve requirements for commuter and on-demand operations are expressed in terms of flight time and do not include a specific altitude requirement.
Chapter 4 Reference 4.3.6.4	Except for ETOPS operations, the U.S. does not require operators to compute fuel requirements for loss of pressurization.
Chapter 4 Reference 4.3.8.2	The U.S. requires descent within four minutes to 14,000 ft not 13,000 ft, in the event of loss of pressurization. For commuter and on-demand operations, the descent altitude is 15,000 ft.
Chapter 4 Reference 4.9.2	The U.S. allows turbo-jets that are certificated for single pilot operations.
Chapter 5	Aeroplane performance operating limitations
Chapter 5 Reference 5.2.8.1	The United States does not have specific regulations that require the loss of Runway length be considered due to alignment of the airplane prior to takeoff. However, the United States does within its aircraft certification regulations require aircraft performance be determined by using the point on the runway where takeoff is started when computing takeoff distance. This same criteria is used when computing runway available for accelerate/stop distance. Accounting for runway loss due to alignment is done within each air carrier's approved operations manual.
Chapter 5 Reference 5.4.1	The U.s. does not require turbine engine reliability to have a power loss rate of less than 1 per 100,000 engine hours, a radio altimeter, two attitude indicators, airborne weather radar, a certified navigation system to identify aerodromes as forced landing areas, or an engine fire warning system.
Chapter 5 Reference 5.4.2	The U.S. does not require an automatic trend monitoring system on aeroplanes certificated after 1 January 2005.
Chapter 6	Aeroplane instruments, equipment and flight documents
Chapter 6 Reference 6.17.2	The U.S. does not require an ELT unless operated over water or remote areas.
Chapter 6 Reference 6.17.3	The U.S. does not require an ELT unless operated over water or remote areas.
Chapter 6 Reference 6.17.4	The U.S. does not require an ELT unless operated over water or remote areas.
Chapter 6 Reference 6.17.5	The U.S. does not require an ELT unless operated over water or remote areas.

Chapter 6 Reference 6.19.2	The U.S. does not require pressure altitude information with a resolution of 25 feet or better.
Chapter 6 Reference 6.19.3	The U.S. does not require pressure altitude information with a resolution of 25 feet or better.
6.2.2.2 Chapter 6 Rec.	The United States does not specifically require a universal precaution kit.
6.2.2.2 Chapter 6 Rec. <i>Note</i>	The United States does not specifically require the following items to be carried in a first-aid kit: antiemetic, antacid, burn dressing, tweezers, or thermometers.
6.2.2.2 Chapter 6 Rec. <i>Note</i>	The United States does not specifically require the following items to be carried in an emergency medical kit: adrenocortical steroid, antiemetic, diuretic, emergency tracheal catheter, medication for postpartum bleeding, oral beta blocker, thermometer, umbilical cord clamp, urinary catheter, venous catheter.
Chapter 6 Reference 6.3.1.2	The United States does not classify FDRs as “type I” or “type II,” rather the United States requires that specific data parameters must be recorded on certain aeroplanes considering the original type certification dates of the aeroplane.
Chapter 6 Reference 6.3.5.1	The United States does not require flight data recorders that record the referenced parameters for all aircraft meeting this weight criterion. For turbine engine powered aeroplanes having a seating capacity of 10-19 seats that were registered in the U.S. prior to 11 October 1991 are exempt from this requirement.
Chapter 6 Reference 6.4.1	The U.S. does not require a time piece.
Chapter 6 Reference 6.4.2	The United States does not require aeroplanes on VFR flights, when operated as controlled flights, to be equipped in accordance with the requirements for aeroplanes operated under instrument flight rules.
Chapter 6 Reference 6.5.1	Seaplanes are not required to have equipment for making the sound signals prescribed in the International Regulations for Preventing Collision at Sea. Seaplanes are not required to be equipped with sea anchor.
Chapter 6 Reference 6.5.3.1	The United States defines extended over water operations for aircraft other than helicopters as an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline.
Chapter 6 Reference 6.12	The United States does not require equipment to measure cosmic radiation.
Chapter 6 Reference 6.15.6	The U.S. does not require ground prox systems for piston powered airplanes.
Chapter 6 Reference 6.17.7	The U.S. does not require an ELT for scheduled air carrier operations conducted by scheduled operations, unless the scheduled operation is operated over water or remote areas. The U.S. only requires one ELT on flights over water or remote areas.
Chapter 6 Reference 6.17.8	The U.S. does not require an ELT for scheduled air carrier operations conducted by scheduled operations, unless the scheduled operation is operated over water or remote areas. The U.S. only requires one ELT on flights over water or remote areas.
Chapter 6 Reference 6.17.9	The U.S. does not require an ELT for scheduled air carrier operations conducted by scheduled operations, unless the scheduled operation is operated over water or remote areas. The U.S. only requires one ELT on flights over water or remote areas.
Chapter 6 Reference 6.17.10	The U.S. does not require an ELT for scheduled air carrier operations conducted by scheduled operations, unless the scheduled operation is operated over water or remote areas. The U.S. only requires one ELT on flights over water or remote areas.
Chapter 6 Reference 6.17.11	The U.S. does not require an ELT for scheduled air carrier operations conducted by scheduled operations, unless the scheduled operation is operated over water or remote areas. The U.S. only requires one ELT on flights over water or remote areas.

Chapter 6 Reference 6.18.3	The United States does not require all piston engine airplanes to have TCAS.
Chapter 6 Reference 6.19.2	The U.S. does not require pressure altitude information with a resolution of 25 feet or better.
Chapter 6 Reference 6.19.3	The U.S. does not require pressure altitude information with a resolution of 25 feet or better.
Chapter 6 Reference 6.20	The United States does not require crewmembers on flight deck duty to communicate through boom or throat microphones below the transition level/altitude.
Chapter 6 Reference 6.22	The U.S. requires an autopilot for IFR passenger operations, not for VFR or cargo operations. A) The U.S. does not require a boom microphone. B) The U.S. requires charts be available and used.
Chapter 7	Aeroplane communication and navigation equipment
Chapter 7 Reference 7.2.7	The U.S. will publish guidance for compliance with this regulation.
Chapter 8	Aeroplane Maintenance
Chapter 8 Reference 8.1.3	The person signing the maintenance release must have a CFR 65 certificate.
Chapter 8 Reference 8.4.2	The United States requires that records of work be retained until the work is repeated, superseded by other work or for one year after the work is performed, but does not require the records be retained after the unit has been permanently withdrawn from service.
Chapter 8 Reference 8.7.1.1	Left Intentionally Blank
Chapter 8 Reference 8.7.3.4	The U.S. currently does not have an SMS requirement.
Chapter 8 Reference 8.7.3.5	The U.S. currently does not have an SMS requirement.
Chapter 9	Aeroplane flight crew
Chapter 9 Reference 9.4.2.1	The U.S. does not have currency requirements for cruise relief pilots.
Chapter 9 Reference 9.4.2.2	The U.S. does not have currency requirements for cruise relief pilots.
Chapter 9 Reference 9.4.3.2	The United States requires air carrier pilots “before beginning a flight become familiar with all available information concerning the flight.” It does not require the pilot to demonstrate this knowledge.
Chapter 9 Reference 9.4.3.5	The U.S. does not restrict operators from using a pilot as a pilot-in-command on a route where the pilot has not, within the preceding 12 months, made at least one trip between the terminal points of that route as a pilot member of the flight crew, or as an observer on the flight deck except for special areas and airports.
Chapter 9 Reference 9.4.3.6	The U.S. does not have an area/route 12 month currency requirement for pilots in command, except for special areas and airports.
Chapter 9 Reference 9.4.4.1	For PICs, the U.S. requires 1 proficiency checks per 12 months and either proficiency check or an approved simulator training course, for SICs, the U.S. requires 1 proficiency check each 24 months and another proficiency check or an approved simulator training course every 12 months.
Chapter 9 Reference 9.4.5.2	The U.S. does not require specific experience requirements for single pilot operations at night or during IFR operations.
Chapter 13	Security

Chapter 13 Reference 13.6.1	The United States is currently developing regulations.
Attachment J	Head-up displays (HUD) and enhanced vision system (EVS)
Attachment J, Introduction – terminology for EVS	The U.S. uses the term Enhanced Flight Vision System (EFVS) to mean a system that qualifies for operational credit. The term EFVS means a system that does not qualify for operational credit.
Attachment J, Introduction – EVS and lower minima	In the U.S., while straight-in instrument approach procedures using EFVS may be conducted in visibility conditions that are less than that specified for an approach using “natural vision,” the U.S. regulations do not provide lower minima. The minima for CAT I ILS, APV, and non-precision approaches using EFVS remains the same whether the approach is conducted using natural vision or conducted using EFVS. If natural vision is used to operate below DA/MDA, then U.S. regulations require that the flight visibility observed by the pilot from the cockpit be less than what is prescribed in the instrument approach procedure. If EFVS is used, then the enhanced flight visibility observed by using the EFVS cannot be less than that prescribed by the instrument approach procedure. EFVS simply provides another means of operating visually in the visual segment between DA/MDA down to 100 ft. above touchdown zone elevation.
PART II	
Section I	General
Chapter 1 Reference Definition	Total vertical error (TVE)-- The United States does not have a corresponding defined term.
Chapter 1 Reference Definition	Altimetry system error (ASE)-- The United States does not have a corresponding defined term.
Chapter 1 Reference Definition	Target Level of Safety (TLS) -- The United States does not have a corresponding defined term.
Section II	General Aviation Operations
Chapter 2 Reference 2.1.1.5	The pilot-in-command is not required to have available on board the aeroplane information concerning search and rescue services.
Chapter 2 Reference 2.2.3.2	Intentionally left blank.
Chapter 2 Reference 2.2.3.4.2	The United States does not require a destination alternate aerodrome when the weather at the aerodrome of intended landing is forecast to have a ceiling of at least 2,000 ft (600 m) and a visibility of at least 3 miles (4.8 km). In addition, standard alternate aerodrome minima are prescribed 600 ft (185 m) ceiling and 2 miles (3.2 km) visibility for precision approaches, and 800 ft (243 m) ceiling and 2 miles (3.2 km) visibility for non-precision approaches.
Chapter 2 Reference 2.2.3.4.3	In addition to the Standard prescribed in Annex 6, Part II, 4.6.4, the U.S. prohibits a pilot from taking of a US registered large or turbine-powered multi-engine general aviation aeroplane if there is frost, snow, or ice adhering to critical systems, components, and surfaces of the aircraft.
Chapter 2 Reference 2.2.3.7.1	The United States has no provisions concerning aircraft refueling with passengers on board.
Chapter 2 Reference 2.2.3.7.2	The United States has no provisions concerning aircraft refueling with passengers on board.
Chapter 2 Reference 2.4.2.3	The United States does not require airplanes on all flights to be equipped with ground air signal codes for search and rescue purposes.
Chapter 2 Reference 2.4.2.4	The United States requires all airplanes manufactured after December 12, 1986 to be equipped with a shoulder harness for crew member seats, in addition to the seat belt. For small civil airplanes manufactured after July 18, 1978, a shoulder harness and seat belt are required for the front seats only, which include the flight crew.

Chapter 2 Reference 2.4.2.5.1	The United States does not require break-in point markings.
Chapter 2 Reference 2.4.2.5.2	The United States does not require break-in point markings.
Chapter 2 Reference 2.4.3.2	The United States does not require airplanes on VFR flights, when operated as controlled flights, to be equipped in accordance to the requirements for aircraft operated under instrument flight rules.
Chapter 2 Reference 2.4.4.1	The United States does not require all seaplanes on all flights to be equipped with one life jacket or equivalent individual floatation device for each person on board; equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea; and anchor or a sea anchor (drogue).
Chapter 2 Reference 2.4.5	Airplanes operated over land areas designated as areas in which search and rescue would be especially difficult are not required to be equipped with signaling devices or life-saving equipment. The United States does not designate areas in which search and rescue would be especially difficult, and therefore does not require such additional equipment.
Chapter 2 Reference 2.4.8	Airplanes operated under visual flight rules at night are not required to be equipped with c) to f) a) a turn and slip indicator; b) an altitude indicator (artificial horizon); c) a heading indicator (directional gyroscope); d) a means of indicating whether the supply of power to the gyroscopic instruments is adequate; 3) a sensitive pressure altimeter; f) a means of indicating the outside air temperature; g) a timepiece with a sweep second hand; h) an airspeed indicating system with a means of preventing malfunctioning due to condensation or icing; i) a rate-of-climb and descent indicator; j) a landing light; k) illumination for flight instruments and equipment; l) lights in passenger compartments; and m) a flashlight (electric torch) for each crew member station.
Chapter 2 Reference 2.4.11.2	Ground proximity warning systems are not required on general aviation aircraft, including turbine-engine airplanes with a take-off mass greater than 5700 kg or capable of carrying more than nine passengers.
Chapter 2 Reference 2.4.11.3	Ground proximity warning systems are not required on general aviation aircraft, including turbine-engine airplanes with a take-off mass greater than 5700 kg or capable of carrying more than nine passengers.
Chapter 2 Reference 2.4.11.4	Ground proximity warning systems are not required on general aviation aircraft, including turbine-engine airplanes with a take-off mass greater than 5700 kg or capable of carrying more than nine passengers.
Chapter 2 Reference 2.5.1.1	Except when operating under controlled flight, airplanes operated at night are not required to have radio communications equipment capable of conducting two-way communications. United States requirements for radio communications equipment are based upon the type of airspace in which the operation occurs, and not on the time of the day.
Chapter 2 Reference 2.5.1.2	When more than one radio communications equipment unit is required, the United States has no provision that each unit be independent of any other.
Chapter 2 Reference 2.5.1.4	Except when operating under controlled flight, airplanes on extended flights over water or on flights over underdeveloped land are not required to have radio communications equipment capable of conducting two-way communications.
Chapter 2 Reference 2.5.2.1	The United States has no provisions concerning requirement aircraft navigation instruments enabling a flight to proceed in accordance with a flight plan, prescribed RNP types, or the air traffic services provided. The United States does not specify a minimum distance between landmark references used by flight operating under visual flight rules.
Chapter 2 Reference 2.5.2.6	Though the FAA does not have RVSM operational reporting requirements, it does have a quality assurance requirement in 14 CFR appendix G Sections 2,3, and 4. In addition, RVSM operational deviation may be noted by FAA ATC and reported the FAA Office of Aviation Safety for disposition as deem appropriate.

Chapter 2 Reference 2.5.2.8	Airplanes are not required to have navigation equipment to ensure that in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment will enable the aeroplane to proceed in accordance with Annex 6, Part II, 2.2.1. to 7.2.3.
Chapter 2 Reference 2.6.2.2.	The FAA established Title 14 Code of Federal Regulations section 43.10, which speaks to the disposition of parts, removed from type-certificated products. After April 15, 2002, each person who removes a life-limited part from a type certificated product must ensure that the part is controlled using: a record keeping system; tag or record attached to part; non-permanent marking; permanent marking; or segregation.
Chapter 2 Reference 2.7.2.2	Only pilot operating aircraft with TCAS under 14 CFR parts 91 (subpart K), 121, and 135 are required to having on the use of TCAS.
Section III	Large and Turbojet Aeroplanes
Chapter 3 Reference 3.6.3.1.4	The United States limits this requirement to multiengine, turbine-power or rotor craft with a seating configuration of ten or more seats.
Chapter 3 Reference 3.6.3.3.1	The United States does not base requirements for flight data recorders on aircraft mass, but on passenger and engine configuration.
Chapter 3 Reference 3.6.3.10	The United States does not have a specific regulation that requires operational checks and evaluations of recordings from the flight data recorder and cockpit voice recorder to ensure continued serviceability of the recorders. However, the United States does require this maintenance function be carried out as part of the instructions for continued airworthiness.
PART III	
Section I	General
Chapter 1 Reference Definition	Take-off decision point (TDP)-- The United States does not define this term.
Chapter 1 Reference Definition	Defined point before landing (DPBL)-- The United States does not define this term.
Chapter 1 Reference Definition	For CAT 1,the U.S. requires a decision height of not less than 200 feet and either visibility of not less than one-half mile or a runway visual range of 24000 feet (RVR) 1800 feet with operative touchdown zone and runway center line lights. CAT II provide approaches to minima of less than 200 feet decision heigh/2400 feet runway visual range to as low as 100 feet decision height/1200 feet runway visual range. CAT III B the criteria are the same as Appendix 6, however, the runway visual range is expressed in feet and less than 700 feet (200m) but not less than 150 feet (50 m).
Chapter 1 Reference Definition	Hostile environment -- The U.S. does not define this term.
Chapter 1 Reference Definition	Non-hostile environment – The U.S. does not define this term.
Chapter 1 Reference Definition	Operations in performance Class 3 – The U.S. does not define this term.
Chapter 1 Reference Definition	Integrated survival suit – The U.S. does not define this term.
Chapter 1 Reference Definition	Elevated heliport – The United States does not define this term in its rules. However, the United States does contain definitions in the listed documents.
Chapter 1 Reference Definition	Congested hostile environment – The U.S. does not define this term.
Chapter 1 Reference Definition	En-route phase – The United States does not define this term in its rules. However, the United States does contain definition in the listed documents.
Chapter 1 Reference Definition	Defined point after take-off (DPATO)-- The United States does not define this term in its rules.
Chapter 1 Reference Definition	Operations in performance Class 2—The United States does not define this term.

Chapter 1 Reference Definition	Approach and landing phase – helicopters -- For CAT 1, the U.S. requires a decision height of not less than 200 feet and either visibility of not less than one-half mile or a runway visual range of 24000 feet (RVR) 1800 feet with operative touchdown zone and runway center line lights. CAT II provide approaches to minima of less than 200 feet decision height/2400 feet runway visual range to as low as 100 feet decision height/1200 feet runway visual range. CAT III B the criteria are the same as Appendix 6, however, the runway visual range is expressed in feet and less than 700 feet (200m) but not less than 150 feet (50 m).
Chapter 1 Reference Definition	Take-off and initial climb phase – The United States does not define this term in its rules. However, the United States does contain definitions in the listed documents.
Chapter 1 Reference Definition	Alternate heliport – The U.S. does not define this term.
Chapter 1 Reference Definition	Non-congested hostile environment – The U.S. does not define this term.
Chapter 1 Reference Definition	Operations in performance Class 1 – The U.S. does not define this term.
Section II	International Commercial Air Transport
Chapter 1 Reference 1.1.5	The pilot-in-command is not required to have available on board the helicopter essential information concerning search and rescue services.
Chapter 1 Reference 1.3.6	The U.S. currently does not have an SMS requirement.
Chapter 2 Reference 2.2.3.1	Intentionally left blank.
Chapter 2 Reference 2.2.4.2	Intentionally left blank
Chapter 2 Reference 2.2.9.1	Helicopter operators are not required to maintain fuel and oil records showing that the requirements of 2.3.6 have been met.
Chapter 2 Reference 2.2.9.2	Helicopter operators are not required to keep fuel and oil records for three months, though there is a requirement that load manifests be retained for 30 days.
Chapter 2 Reference 2.2.12	Intentionally left blank
Chapter 2 Reference 2.3.2	The pilot-in-command is not required to ensure that all persons on board are aware of the location and general manner of use of the principal emergency equipment carried for collective use.
Chapter 2 Reference 2.3.2	The United States requires that flight preparation forms must be retained for 30 days, not three months.
Chapter 2 Reference 2.3.3.2	The United States does not require that the operations manual describe the contents and use of the operational flight plan, but does require establishing procedures for locating each flight.
Chapter 2 Reference 2.3.4.4	Intentionally left blank
Chapter 2 Reference 2.3.6.2.	Intentionally left blank
Chapter 2 Reference 2.3.6.3	The fuel requirements for commuter and on demand operations are expressed in terms of flight time and do not include a specific altitude requirement.
Chapter 2 Reference 2.3.6.3.1	The United States does not require IFR helicopter operations to maintain a specific altitude above a destination.
Chapter 2 Reference 2.3.6.3.2	Fuel reserves for IFR helicopter operations is 30 minutes at normal cruise speed beyond the alternate heliport.
Chapter 2 Reference 2.3.6.3.3	The U.S. has no provisions addressing when a suitable alternate is unavailable. If the destination weather so requires, an alternate must be specified and 30 minute fuel reserved must be carried.
Chapter 2 Reference 2.3.6.4	The operations manual does not include procedures for loss of pressurization and other contingencies.
Chapter 2 Reference 2.3.7	The United States does not prohibit refueling with passengers on board while the engine is operating.
Chapter 2 Reference 2.3.8.1	The United States does not require oxygen at all times for passengers experiencing cabin pressure altitudes above 13,000 ft (620hPa). Oxygen for all passengers is not required until 15,000 ft (4,572m).

Chapter 2 Reference 2.3.8.2	The United States does not require oxygen at all times for passengers experiencing cabin pressure altitudes above 13,000 ft (620hPa). Oxygen for all passengers is not required until 15,000 ft (4,572m).
Chapter 2 Reference 2.4	The pilot-in-command is not specifically required, prior to commencing a flight, to be satisfied that any load carried is safely secured.
Chapter 2 Reference 2.4.1.3	The United States does not utilize a 1,000 ft minimum for non-precision approaches
Chapter 2 Reference 2.6.2.2	The United States allows for meteorological conditions at the estimated time of arrival and for one hour after the estimated time of arrival, not two hours.
Chapter 2 Reference 2.6.3.2	The United States allows the continuation of an approach regardless of the reported weather.
Chapter 2 Reference 2.8.3.1	The United States does not require that a specific altitude above the alternate be maintained.
Chapter 2 Reference 2.8.3.2	The United States does not require that a specific altitude above the alternate be maintained.
Chapter 2 Reference 2.8.4	The U.S. does not require that the procedures for loss of pressurization, where applicable, or failure of one power-unit while en route, be part of the required fuel and oil computations.
Chapter 2 Reference 2.9.1	Oxygen supply requirement applies to crew members at altitudes between 12,500 ft (3,810 m) and 14,000 ft (4,267m) longer than 30 minutes and anytime above 14,000ft. For passenger, the requirement applies above 15,000 ft (4,572m).
Chapter 2 Reference 2.9.2	The U.S. does not require that a flight to be operated with pressurized helicopter carry a sufficient quantity of stored breathing oxygen to supply all the crew members and a proportion of the passengers, as is appropriate to the circumstances of the flight being undertaken, in the event of loss of pressurization, for any period that the atmospheric pressure in any compartment occupied by them would be less than 700hPa.
Chapter 2 Reference 2.10	The U.S. requirement for use of breathing oxygen by flight crew members applies only to altitudes above 14000 ft (4,267m).
Chapter 2 Reference 2.11	During an emergency, the pilot-in-command is not required to ensure that all persons on board the aircraft are instructed in emergency procedures.
Chapter 2 Reference 2.13	The U.S. does not govern this information in a rule. The AIM and AC61-23A covers this information.
Chapter 2 Reference 2.14	The pilot-in-command is not specifically required to discontinue a flight beyond the nearest suitable aerodrome when flight crew member's capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness, and lack of oxygen.
Chapter 2 Reference 2.18.1	The U.S. has no provisions regarding aircraft refueling while passengers are on board or are embarking or disembarking.
Chapter 2 Reference 2.18.2	The U.S. has no provisions for ensuring two-way communications when refueling while passengers are on board or are embarking or disembarking.
Chapter 3 Reference 3.1.1	US does not specify or restrict helicopter operations based on performance, class or category. (See definition of performance class in Annex 6, Part III, Section 1).
Chapter 3 Reference 3.1.3	US does not specify or restrict helicopter operations based on performance, class or category. (See definition of performance class in Annex 6, Part III, Section 1).
Chapter 3 Reference 3.2.1	The United States does not specify or restrict helicopter operations based on performance class or category (see definition of Performance Class in Annex 6, Part III, Section 1)
Chapter 3 Reference 3.2.7	US does not require the helicopter weight limitations found I n3.2.7 a), c), and d).
Chapter 4 Reference 4.1.2	US does not require carriage of a copy of the air operator's certificate.
Chapter 4 Reference 4.1.3.2	The US does not require helicopters to be equipped with ground-air signal codes for search and rescue purposes.
Chapter 4 Reference 4.1.3.3	The U.S. requires only helicopters manufactured after September 16, 1992 to be equipped with a safety belt and shoulder harness for each occupant's seat.
Chapter 4 Reference 4.1.4.1	The United States does not require break-in points.
Chapter 4 Reference 4.1.4.2	The United States does not require break-in points.

Chapter 4 Reference 4.2.2	a) first aid equipment is not required on helicopters b) US has no provisions that fire extinguishers, when discharge, will not cause dangerous contamination of the air within the helicopter c) (3) US has no provisions for a safety harness device to prevent interference with flight controls should a pilot become incapacitated.
Chapter 4 Reference 4.2.2.1	Landing lights that are at least trainable in the vertical plane are not required for night operations.
Chapter 4 Reference 4.2.4.1	The US does not require marking of break-in points.
4.2.2 Chapter 4 Rec.	Normal and transport category rotorcraft are not specifically required to be equipped with medical supplies.
Chapter 4 Reference 4.2.4.2	The U.S. does not require marking of break-in points.
Chapter 4 Reference 4.3.2.3	Life-saving rafts are not required on helicopters operating on flights over water.
Chapter 4 Reference 4.3.2.4	Life-saving rafts are not required on helicopters operating on flights over water.
Chapter 4 Reference 4.3.2.5	Life-saving rafts are not required on helicopters operating on flights over water.
Chapter 4 Reference 4.3.2.6	Life-saving rafts are not required on helicopters operating on flights over water.
Chapter 4 Reference 4.3.6	The US requires cockpit voice recorders in all multi-engine, turbine-powered rotorcraft with a passenger seating configuration of twenty or more seats, and in all multi-engine, turbine-powered rotorcraft with a passenger seating configuration of six or more and for which two pilots are required by certification of operating rules.
Chapter 4 Reference 4.4	Helicopters operated over land areas designated as areas in which search and rescue would be especially difficult are not required to be equipped with signaling devices or life-saving equipment. The U.S. does not designate areas in which search and rescue would be especially difficult and therefore does not require such additional equipment.
Chapter 4 Reference 4.4.2	Helicopters flown over water in passenger operations are not required to be certified for ditching but only to be equipped with flotation devices.
Chapter 4 Reference 4.5.2.1	B) and C) Life saving rafts and pyrotechnic devices are only required for extended over-water operations. That is in respect to helicopters in operations over water with a horizontal distance of more than 50 NM from the nearest shore line and more than 50 NM from an off-shore heliport structure.
Chapter 4 Reference 4.5.2.3	The U.S. does not specify or restrict helicopter operations based on performance, class, or category.
Chapter 4 Reference 4.5.2.4	The U.S. does not specify or restrict helicopter operations based on performance class or category. (See definition of Performance Class in Annex 6, Part III, Section 1).
Chapter 4 Reference 4.5.2.6	The U.S. does not require that at least 50 per cent of the life rafts should be deployable by remote control.
Chapter 4 Reference 4.5.2.7	The U.S. does not require that rafts which are not deployable by remote control be equipped with some means of mechanically assisted deployment.
Chapter 4 Reference 4.5.2.8	The U.S. does not require helicopters, for which the individual certificate of airworthiness was first issued before January 1, 1991 to comply with the provisions of 4.5.2.6 and 4.5.2.7 no later than December 31, 1992.
Chapter 4 Reference 4.6	The U.S. does not require helicopters to carry a specific document attesting noise certification. However, the helicopter's type certificate is the de facto document that the helicopter complied with the noise certification requirements at the time it received FAA type certification.
Chapter 4 Reference 4.6	Helicopters operated over land areas designated as areas in which search and rescue would be especially difficult are not required to be equipped with signaling devices or life-saving equipment. The U.S. does not designate areas in which search and rescue would be especially difficult and therefore does not require additional equipment.
Chapter 4 Reference 4.9.1	The U.S. requires transponders only in certain airspace.
Chapter 4 Reference 4.9.2	The U.S. requires transponders only in certain airspace.
Chapter 4 Reference 4.10	Airborne weather radar for all passenger carrying helicopters is not required. The U.S. only requires helicopters with a seating configuration of ten seats or more to be equipped with airborne thunderstorm detection equipment.

Chapter 4 Reference 4.11	The U.S. does not require helicopters to carry a specific document attesting noise certification. However, the helicopter's type certificate is the de facto document that the helicopter complied with the noise certification requirements at the time it received FAA type certification.
Chapter 4 Reference 4.13	The U.S. requires transponders only in certain airspace.
Chapter 4 Reference 4.14	The U.S. does not require crew members flight deck duty to communicate through boom or throat microphone.
Chapter 5 Reference 5.1.1	Except when operating under controlled flight, helicopters are not required to have radio communications for night operators.
Chapter 5 Reference 5.1.2	The U.S. does not require that the radio communications equipment specified in 5.1.1 be independent of the other or others to the extent that failure in my any one will not result in failure of any other.
Chapter 5 Reference 5.1.4	Except when operating under controlled flight, helicopters on extended flights over water or on flights over underdeveloped land are not required to have radio communications equipment.
Chapter 5 Reference 5.2.1	The U.S. has no provision that visual landmarks used in VFR be located at least every 60 NM (110km).
Chapter 5 Reference 5.2.1	The United does not require a helicopter to be provided with navigation equipment in accordance with RNP types for navigation with the United States. However, the United States does provide information and operations specifications for IFR operating requirements when U.S. operators and aircraft conduct operations in the European Airspace Designated for Basic Area Navigation (RNP-5 and 10).
Chapter 5 Reference 5.2.3	The U.S. does not require redundant navigation equipment.
Chapter 6 Reference 6.1.1	All United States helicopters used in commercial air transport are certified as commuter or on demand operations. Maintenance on United States commuter and on demand helicopters may be performed by either an approved maintenance organization, a certified mechanic, or by persons under the supervisions of a certified mechanic.
Chapter 6 Reference 6.2.2	The U.S. requires that records of work must be retained until the work is repeated, superseded by other work, or for one year after the work is performed.
Chapter 6 Reference 6.3.1	The U.S. does not require an operator's maintenance training program to include training in knowledge and skills related to human performance.
Chapter 6 Reference 6.4.2	The U.S. requires that records of work be retained until the work is repeated, superseded by other work for one year after the work is performed, but does not require the records be retained after the until has been permanently withdrawn from service.
Chapter 6 Reference 6.8.2	The U.S. requires that records of work must be retained until the work is repeated, superseded by other work, or for one year after the work is performed.
Chapter 7 Reference 7.4.2.2	Helicopter pilots are not required to demonstrate to the operator an adequate knowledge of the specific areas described in 7.4.3.2
Chapter 7 Reference 7.5	The U.S. practice is to require a spare set of correcting lenses only when a flight crew member's defective visual acuity necessitates a limitation on the pilot's medical certificate.
Chapter 9 Reference 9.4.1	The load manifest (the U.S. equivalent to the journey logbook) does not contain items for time of departure and arrival, nature of flight, incidents, or signature of person in charge.
Chapter 9 Reference 9.4.2	Entries in the load manifest (the U.S. equivalent of the journey logbook) are not required to be made in ink or indelible pencil.
Chapter 9 Reference 9.4.3	The U.S. requires that load manifest (the U.S. equivalent of the journey logbook) be held for 30 days, not six months.
Chapter 9 Reference 9.5	The U.S. does not require that an operator keep a list of the emergency and survival equipment carried on board any of their helicopters engaged in international air navigation.
Chapter 11 Reference 11.1	A checklist containing procedures to be followed in searching for a suspected bomb is not required to be aboard the aircraft. The U.S. requires that crew members be trained in dealing with explosives that may be on board an aircraft, but this does not necessarily include training on how to search for an explosive.
Chapter 11 Reference 11.2.1	The U.S. does not require an operator to establish and maintain a training program that enables crew members to act in the most appropriate manner to minimize the consequences of acts of unlawful interference.

Chapter 11 Reference 11.2.2	The U.S. does not require an operator to establish and maintain a training program that enables crew members to act in the most appropriate manner to minimize the consequences of acts of unlawful interference.
Chapter 11 Reference 11.3	The pilot-in-command is not required to submit, without delay, a report of an act of unlawful interference to the designated local authority.
Section III	International General Aviation
	Intentionally left blank

ANNEX 7 – AIRCRAFT NATIONALITY AND REGISTRATION MARKS	
3.3.1 and 4.2.1	The marks on wing surfaces are not required.
3.2.5 and Section 8	Identification plates are not required on unmanned, free balloons.
4.2.2	The minimum height of marks on small (12,500 lb or less), fixed-wing aircraft is 3 inches when none of the following exceeds 180 knots true airspeed: (1) design cruising speed; (2) maximum operating limit speed; (3) maximum structural cruising speed; and (4) if none of the foregoing speeds have been determined for the aircraft, the speed shown to be the maximum cruising speed of the aircraft.
Section 6	A centralized registry of unmanned free balloons is not maintained. Operators are required to furnish the nearest ATC facility with a prelaunch notice containing information on the date, time, and location of release, and the type of balloon. This information is not maintained for any specified period of time.

ANNEX 8 – AIRWORTHINESS OF AIRCRAFT	
PART II Procedures for Certification and Continued Airworthiness	
Chapter 4	Continued Airworthiness of Aircraft
4.2.3 (d)	This provision requires the State of Registry to address mandatory continuing airworthiness information from the State of Design. The U.S. does not generally issue Airworthiness Directives for non–type certificated aircraft. This includes foreign aircraft that are U.S.–registered, but operate under experimental rather than standard airworthiness certificates.
PART III Aeroplanes	
Part IIIA	
Chapter 4	Design and Construction
4.1.6 (b), 4.1.6 (g), 4.1.6 (h), 4.1.6 (i)	The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Chapter 8	Instruments and Equipment
8.4.1	ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, color, fields of coverage and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for subsequent maneuver necessary to avoid a collision. The FAA has no such requirement.
8.4.2 (b)	This provision addresses the lights’ affect on outside observers in reference to “harmful dazzle.” The U.S. regulations do not address the affect of aircraft lights on outside observers. However, visibility to other pilots and the lights’ affect on the flight crew is addressed.
Chapter 9	Operating Limitations and Information
9.3.5	The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Chapter 11	Security
11.2, 11.3, 11.4	With the exception of the door required by 11.3, the United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Part IIIB	
Large Aeroplane Certification	
D.2 (b)	The United States does not have a specific requirement for physical separation of systems. However, physical separation is considered in the means of compliance to various regulations such as 25.1309, 25.901(c) and 25.903(d). The FAA has begun to work in an effort to amend U.S. regulations with the purpose of eventually meeting the intent of these provisions.
D.2 (f)	The provision requires lavatory fire protection systems (detection and suppression) for all airplanes covered by Part IIIB. U.S. regulations only require lavatory fire protection systems for airplanes with 20 or more passengers.
D.2 (g)	Paragraph D.2.g.1 of the ICAO standard requires a fire suppression system for each cargo compartment accessible to a crewmember in a passenger–carrying airplane. U.S. requirements permit manual fire fighting in an accessible cargo compartment by a crewmember or members for an all–passenger–carrying airplane or a passenger–cargo combination carrying airplane. Additionally, the FAA does not have specific requirements to consider the effects of explosions or incendiary devices.

D.2 (h)	The United States does have provisions to protect against possible instances of cabin depressurization. However, the FAA does not have specific requirements to consider the effects of explosions or incendiary devices.
D.2 (i)	The United States does not have similar requirements and has begun work in an effort to amend the U.S. regulations to explicitly address the effects of explosions or incendiary devices.
D.5.	While there are no specific electrical bonding requirements in the FARs, U.S. regulations address lightning and system requirements. The FARs do not address the protection of those persons coming into contact with an airplane on the ground or in the water.
F.4.1	ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, color, fields of coverage and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for subsequent maneuver necessary to avoid a collision. The U.S. has no such requirement.
F.4.2 (b)	This provision addresses the lights’ affect on outside observers in reference to “harmful dazzle.” The U.S. regulations do not address the affect of aircraft lights on outside observers. However, visibility to other pilots and the lights’ affect on the flight crew is addressed.
F.5.	U.S. regulations do not address electromagnetic interference from external sources. High Intensity Radiated Fields (HIRF) are addressed by Special Conditions but only for flight critical systems, not flight essential systems.
G.3.5.	The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
K.2, K.3.1, K.3.2, K.4	With respect to K.1 and K.3, the United States does not have any specific requirements. With respect to K.2 the FAA has no current requirements with respect to the flight crew compartment bulkhead. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
PART IV Helicopters	
Part IVA	
Chapter 2	
Flight	
2.2.3.1, 2.2.3.1.1 – 2.2.3.1.4	These provisions address take-off performance data for all classes of helicopters and require that this performance data include the take-off distance required. However, the United States has adopted the requirements only for Category A helicopters.
Chapter 6	
Rotor and Power Transmissions Systems and Powerplant Installation	
6.7	This provision requires that there be a means for restarting a helicopter’s engine at altitudes up to a declared maximum altitude. In some cases the FAA does not require demonstration of engine restart capability. Since there is a different level of certitude for transport and normal category helicopters in the United States, the engine restart capability is only required for Category A and B helicopters (14 CFR Part 29) and Category A normal helicopters (14 CFR Part 27).
Chapter 7	
Instruments and Equipment	
7.4.2	This provision addresses the need to switch off or reduce the intensity of the flashing lights. The United States has minimum acceptable intensities that are prescribed for navigation lights and anti-collision lights. No reduction below these levels is possible.
7.4.2 (b)	This provision addresses the lights’ affect on outside observers in reference to “harmful dazzle.” The U.S. regulations do not address the affect of aircraft lights on outside observers. However, visibility to other pilots and the lights’ affect on the flight crew is addressed.
PART V Lighting and Marking	
I.5 (e)	The United States does not have a requirement similar to I.5(e). 14 CFR part 23 does not address the impact of fuel spillage on emergency lighting systems.

PART VII Propellers	
Sub-Part B	Design and Construction
B.2	U.S. Regulations do not require a failure analysis.
Sub-Part C	Test and Inspections
C.2 (c)	U.S. Regulations do not contain bird impact or lightning strike requirements.

ANNEX 9 – FACILITATION	
*The list of differences include Guam, Puerto Rico, and the U.S. Virgin Islands. The status of implementation of Annex 9 in Guam with respect to public health quarantine is not covered in the list of differences.	
Chapter 2	Entry and Departure of Aircraft
2.3	Written crew baggage declaration is required in certain circumstances, and a special Embarkation/Disembarkation Card is required for most alien crew members.
2.4	A General Declaration for all inbound and for outbound flights with commercial cargo are required. However, the General Declaration outbound flights with commercial cargo shall not be required if the declaratory statement is made on the air cargo manifest. No declaration is required for outbound flights without commercial cargo if Customs clearance is obtained by telephone.
Remarks	19 CFR 122
2.4.1	Each crew member must be listed showing surname, given name, and middle initial.
2.4.4	The signing or stamping of the General Declaration protects the carrier by serving as proof of clearance.
2.5	The crew list is required by statute.
2.7	There is a statutory requirement for the Cargo Manifest.
2.8	In order to combat illicit drug smuggling, the U.S. requires the additional following information: the shipper’s and the consignee’s name and address, the type of air waybills, weight, and number of house air waybills. The manifest submitted in electronic form may become legally acceptable in the future. However, until the compliance rate for the automated manifest is acceptable, the U.S. must be able to require the written form of the manifest.
Remarks	19 CFR 122.48
2.9	Nature of goods information is required.
2.10	Stores list required in all cases but may be recorded on General Declaration in lieu of a separate list.
2.17	A cargo manifest is required except for merchandise, baggage and stores arriving from and departing for a foreign country on the same through flight. “All articles on board which must be licensed by the Secretary of State shall be listed on the cargo manifest.” “Company mail shall be listed on the cargo manifest.”
2.18	Traveling general declaration and manifest, crew purchases and stores list as well as a permit to proceed are required under various conditions when aircraft arrive in the U.S. from a foreign area with cargo shown on the manifest to be traveling to other airports in the U.S. or to foreign areas.
2.21	There is a statutory requirement that such changes can only be made prior to or at the time of formal entry of the aircraft.
2.25	The U.S. does not support the use of insecticides in aircraft with passengers present. Pesticides registered for such use should not be inhaled. In effect, the passenger safety issue has precluded the use of such insecticides in the presence of passengers since 1979.
2.35	Advance notice is required of the number of citizens and aliens on board (non–scheduled flights only).
2.40	A copy of the contract for remuneration or hire is required to be a part of the application in the case of non–common carrier operations.
2.41	Single inspection is accorded certain aircraft not by size of aircraft but rather by type of operation. Loads (cargo) of an agricultural nature require inspection by a plant or animal quarantine inspector.
2.41c	Fees are charged for services provided in connection with the arrival of private aircraft (nonscheduled aircraft).
Chapter 3	Entry and Departure of Persons and Their Baggage
3.3	Medical reports are required in some cases.

Remarks	8 CFR 212.7 and INA 234
3.4	Documents such as visas with certain security devices serve as identity documents.
3.4.1	The U.S. has not standardized the personal identification data included in all national passports to conform with the recommendation in Doc 9303.
3.5.6	U.S. passport fees exceed the cost of the operation.
3.5.7	U.S. allows separate passports for minor dependents under the age of 16 entering the U.S. with a parent or legal guardian.
3.7	The U.S. has a pilot program that allows nationals of certain countries which meet certain criteria to seek admission to the U.S. without a visa for up to 90 days as a visitor for pleasure or business.
Remarks	22 CFR 41.112(d) INA 212(d)(4), INA 238, 8 CFR 214.2(c) INA 217
	The law permits visa waivers for aliens from contiguous countries and adjacent islands or in emergency cases. Visas are also waived for admissible aliens arriving on a carrier which is signatory to an agreement assuring immediate transit of its passengers provided they have a travel document or documents establishing identity, nationality, and ability to enter some country other than the U.S.
3.8	The U.S. charges a fee for visas.
3.8.3	Duration of stay is determined at port of entry.
Remarks	INA 217
3.8.4	A visitor to the U.S. cannot enter without documentation.
Remarks	INA 212(a) (26)
3.8.5	Under U.S. law, the duration of stay is determined by the Immigration Authorities at the port of entry and thus cannot be shown on the visa at the time of issuance.
3.10	Embarkation/Disembarkation Card does not conform to Appendix 4 in some particulars.
3.10.1	The operator is responsible for passengers' presentation of completed embarkation/disembarkation cards.
Remarks	8 CFR 299.3
3.10.2	Embarkation/Disembarkation cards may be purchased from the U.S. Government, Superintendent of Documents.
Remarks	8 CFR 299.3
3.14.2	The U.S. fully supports the electronic Advance Passenger Information (API) systems. However, the WCO/IATA Guideline is too restrictive and does not conform to the advancements in the PAXLIST EDIFACT international standard.
3.15	U.S. Federal Inspection Services' officials see individuals more than once.
3.16	Written baggage declarations by crew members are required in some instances.
3.17.1	The U.S. uses a multiple channel system rather than the dual channel clearance system.
3.23, 3.23.1	Statute requires a valid visa and passport of all foreign crew members.
3.24, 3.24.1, 3.25, 3.25.1, 3.25.2, 3.25.3	Crew members, except those eligible under Visa Waiver Pilot Program guidelines, are required to have valid passports and valid visas to enter the U.S.
Remarks	INA 212(a) (26), INA 252 and 253, 8 CFR 214.1(a), 8 CFR 252.1(c)
3.26, 3.27, 3.28, 3.29	Passports and visas are required for crew and non–U.S. nationals to enter the U.S.
3.33	Does not apply to landing card.
3.35	Law requires that the alien shall be returned to the place whence he/she came. Interpretation of this provision requires that he/she be returned to the place where he/she began his/her journey and not only to the point where he/she boarded the last–used carrier.
3.35.1	Law requires that certain aliens be deported from the U.S. at the expense of the transportation line which brought them to the U.S.
3.36	Statute provides for a fine if a passenger is not in possession of proper documents.

3.39.3	NOTE: The U.S. considers security for individuals in airline custody to be the carrier’s responsibility.
3.40.2	Annex 9 recommends that fines and penalties be mitigated if an alien with a document deficiency is eventually admitted to the country of destination.
3.43	Operator can be held responsible for some detention costs.
Chapter 4	Entry and Departure of Cargo and Other Articles
4.20	The Goods Declaration as defined by the Kyoto Convention serves as the fundamental Customs document rather than the commercial invoice.
4.40	Aircraft equipment and parts, certified for use in civil aircraft, may be entered duty-free by any nation entitled to most-favored nation tariff treatment. Security equipment and parts, unless certified for use in the aircraft, are not included.
4.41	Customs currently penalizes the exporting carrier for late filing of Shipper’s Export Declarations (SEDs) and inaccuracies on bills of lading with respect to the SEDs.
4.42	Regulations require entry of such items, most of which are dutiable by law.
4.44	Certain items in this category are dutiable by law.
4.48	Carriers are required to submit new documentation to explain the circumstances under which cargo manifest is not unladen. No penalty is imposed if the carrier properly reports this condition.
4.50	The procedures for adding, deleting, or correcting manifest items require filing a separate document.
4.55	The U.S. requires a transportation in-bond entry or a special manifest bonded movement for this type of movement.
Chapter 5	Traffic Passing Through the Territory of a Contracting State
5.1	Such traffic must be inspected at airports where passengers are required to disembark from the aircraft and no suitable sterile area is available.
5.2	Passports and visas are waived for admissible aliens arriving on a carrier which is signatory to an agreement assuring immediate transit of its passengers provided they have a travel document or documents establishing identity, nationality, and ability to enter some country other than the U.S.
5.3	Such traffic must be inspected at airports where no suitable sterile area is available.
5.4	Passports and visas are waived for admissible aliens arriving on a carrier which is signatory to an agreement assuring immediate transit of its passengers provided they have a travel document or documents establishing identity, nationality, and ability to enter some country other than the U.S.
5.4.1	Passengers will not be required to obtain and present visas if they will be departing from the U.S. within 8 hours of arrival or on the first flight thereafter departing for their destination.
5.8	Examination of transit traffic is required by law. Transit passengers without visas are allowed one stopover between the port of arrival and their foreign destination.
5.9	Passports and visas are required generally for transit passengers who are remaining in the U.S. beyond 8 hours or beyond the first available flight to their foreign destinations.
Chapter 6	International Airports – Facilities and Services for Traffic
6.3.1	Procedures involving scheduling committees raise a number of anti-trust problems under U.S. law.
6.33	Sterile physical facilities shall be provided, and in-transit passengers within those areas shall be subject to immigration inspection at any time.
Remarks	OI 214.2(c)
6.34	The U.S. inspects crew and passengers in transit.
6.36	The U.S. inspects crew and passengers in transit.

6.56	Operators of aircraft are statutorily required to pay overtime charges for federal inspections conducted outside normal scheduled hours of operation. This requirement places aircraft operators in a less favorable position than operators of highway vehicles and ferries who are statutorily exempt from such charges.
Chapter 8	Other Facilitation Provisions
8.1	Separate bonds are required.
8.3.2	Visas are issued by the Department of State and are not issued at ports of entry.

ANNEX 10 – AERONAUTICAL TELECOMMUNICATIONS	
ANNEX 10 – VOLUME 1 – RADIO NAVIGATION AIDS	
PART I	
Chapter 3	Specifications for Radio Navigation Aids
3.1.2.1.1	Remote control and monitoring is implemented at all ILS installations for CAT II and III. Most, but not all, CAT I installations are monitored. A–CAT II and III; C– CAT I
3.1.4.1, 3.1.4.2, 3.1.4.3	The U.S. does not require such equipage for aircraft. The United States does not require such equipage for aircraft. Interference from FM broadcast signals will not adversely affect aircraft navigation and communications systems in the United States airspace
3.1.7.3.1 c)	When necessary to achieve coverage to the edges of the localizer course, the U.S. authorizes coverage over a greater distance than that specified in 3.1.7.3.1 c); i.e., up to 1,200 meters (4,000 feet) along the localizer course centerline.
3.3.8.1, 3.3.8.2, 3.3.8.3	The U.S. does not require such equipage for aircraft. The United States does not require such equipage for aircraft. Interference from FM broadcast signals will not adversely affect aircraft navigation and communications systems in the United States airspace.
3.5.5.4.1.	DME interrogator accuracy specified in this paragraph is not included in FAA avionics requirements.
3.7.3.4.4.3	Current satellite contract calls for –150dBW under the conditions specified in 3.7.3.4.4.3. Difference is greater signal power than called for in Annex 10.
PART II	
Chapter 4	
4.1.5.2	In the U.S., the shortage of communications channels, compared with the total operational requirement, has resulted in the geographical separation between facilities working on the same frequency being considerably less (up to 50 percent reduction) than the Standard defined for such separation.
ANNEX 10 – VOLUME II – COMMUNICATION PROCEDURES INCLUDING THOSE WITH PANS STATUS	
Chapter 3	General Procedures for the International Aeronautical Telecommunication Service
3.2.2, 3.2.3	US regulations do not have any specific procedures for closing down international aeronautical stations. All international aeronautical stations in the U.S. operate continuously (24 hours a day and seven days a week)
3.3.2	Class B traffic, including reservation messages pertaining to flights scheduled to depart within 72 hours, shall not be acceptable for transmission over U.S. Government operated AFTN circuits, except in those cases where it has been determined by the U.S. that adequate non–government facilities are not available.
Chapter 4	
4.4.2	In the Caribbean Region, U.S. industry–operated AFTN terminals will continue to accept messages in both ICAO and non–ICAO formats. The U.S. now accepts only messages in ICAO format from other states, including the Caribbean Region.
Chapter 5	Aeronautical Mobile Service – Voice Communications
5.1.5	US regulations do not require pilots to wait 10 seconds before making a second call. US regulations only require "a few seconds" instead of "10 seconds".
5.2.1.3.1.1	The U.S. will use the term "hundred" in stating altitude numbers by radiotelephone. Whole hundreds will be spoken as follows: 400 – "Four hundred" 4,500 – "Four thousand five hundred"

5.2.1.3.1.2	The U.S. will use the term “point” in lieu of “decimal” in stating frequencies: 126.55 MHz – “One two six point five five” 8,828.5 MHz – “Eight eight two eight point five”
5.2.1.6.1	Air route traffic control centers will use “center” rather than “control” in their radiotelephone identification. Example: “Washington Center.” Approach control service units will use “approach control” or “departure control” rather than “approach” in their radiotelephone identification. Example: “Washington Approach Control” or “Washington Departure Control.” Aerodrome control towers will use “ground control” or “clearance delivery” rather than “tower” in their radiotelephone identification, where appropriate, to identify ground control services. Example: “Washington Ground Control” or “Washington Clearance Delivery.”
5.2.1.6 5.2.1.6.2.1.1 5.2.1.6.2.2.1	U.S. procedures allow abbreviation of only Type a) call signs and limit abbreviation to not less than three characters following the first character of the registration marking or the manufacturer of the aircraft. Also, the U.S. does not use call signs comprised of aircraft operating agency telephony designators in combination with aircraft registration markings (Type b).
Remarks	To facilitate understanding, examples (5.2.1.6) should follow rather than precede corresponding provisions which govern them (5.2.1.6.2.1.1 and 5.2.1.6.2.2.1).
5.2.2.1.1.1 5.2.2.1.1.2	The U.S. Federal Aviation Regulations do not require that a continuous airborne guard on VHF121.5 MHz be maintained.
5.2.2.7.1.2	US regulations do not specifically require pilots to send a message twice preceded with the phrase “TRANSMITTING BLIND”. US regulations provides general procedures which allow pilots to make blind transmissions in case of emergency.
5.2.2.7.1.3.2	US regulations do not specifically require pilots to make a blind transmission preceded by “TRANSMITTING BLIND DUE TO RECEIVER FAILURE” with respect to the continuation of the flight of the aircraft. US regulations provide general procedures which allow pilots to make appropriate blind transmissions.
5.2.2.7.2.1, 5.2.2.7.2.2	US regulations do not specifically require aeronautical stations to get assistance from other aircraft in case of communications failure. US regulations require aeronautical stations to use “all appropriate means” available to re-establish communications with aircraft.
5.2.2.7.2.3	US regulations do not specifically require aeronautical stations to send blind transmissions. US regulations require aeronautical stations to use “all appropriate means” available to re-establish communications with aircraft.
5.2.2.7.2.4	US regulations do not provide this specific standard. US regulations require aeronautical stations to use “all appropriate means” available to re-establish communications with aircraft.
5.2.2.7.3.1	US regulations do not specifically require pilots to make a blind transmission preceded by “TRANSMITTING BLIND DUE TO RECEIVER FAILURE”. US regulations provide general procedures which allow pilots to make appropriate blind transmissions.
ANNEX 10 – VOLUME III – COMMUNICATION SYSTEMS	
PART I – DIGITAL DATA COMMUNICATION SYSTEMS	
Chapter 1	Definitions
ATN Directory Services	The FAA has not implemented the DIR as part of the AMHS Extended Service. The Basic Service AMHS has been implemented.
ATN Security Services	The ATN Security Service can be implemented as part of the AMHS Extended Service.

Authentication	This is a part of ATN Security Services of the ATN DIR/AMHS Extended Service that has not been implemented.
Security Management	This is a part of ATN Security Services capability of the ATN DIR/AMHS Extended Service that has not been implemented.
Chapter 3	Aeronautical Telecommunication Network
3.2.1	The Ground-to-Ground ATN service based on OSI has been implemented (AMHS) but not Air-to-Ground.
3.2.2	ATN Ground-to-Ground service does not support sections a) 4) APC, c), e), f) and g)
3.2.3	FAA ATN currently does not support these services.
3.3.1	FAA ATN service does not support a) ATS to aircraft and c) AOC.
3.4.1.4, 3.4.16, 3.4.19, 3.4.32	The FAA ATN only supports AMHS (ground service).
Chapter 4	
4.2.1.2 4.2.1.3	In the U.S., AMSS terminals <u>shall have</u> the capability of operating in the frequency bands 1544–1559 MHz and 1645.5–1660.5 MHz bands. (NOTE: Use of the band 1544–1545/1645.5–1646.5 MHz by the mobile satellite service is limited to distress and safety.)
PART II	
2.3.3.1 2.3.3.2 2.3.3.3	The U.S. does not require such equipage for aircraft.
ANNEX 10 – VOLUME IV – SURVEILLANCE AND COLLISION AVOIDANCE SYSTEMS	
Chapter 3	Surveillance Systems
3.1.1.7.13	SPI required to be transmitted for 18 +/- 1 second. US regulations are more stringent than ICAO.
3.1.2.6.5.2	In the request to downlink, Annex 10 assigns bits 0 to 7, many of them are reserved. The FAA Order 6365.1A implements this requirement assigning bits 0 and 1 and the bits 2 through 15 are not assigned.
3.1.2.10.4.3.3	Annex 10 requires "If antenna selection is based on signal level, it shall be carried out at all signal levels between MTL and –21 dBm." The RTCA MOPS for Mode S transponders, DO–181c, does not specify the range of signal levels over which the antenna selection must correctly be accomplished. FAA Order 6365.1A paragraph 5.5.1 addresses the issue of antenna selection. However, the TSO standard conferred upon manufacturers does not require implementation.
3.1.2.11.3	The US National Standard for the Mode S Beacon System, FAA Order 6365.1A, paragraph 6.3 requires – When the interrogator transmitter is not transmitting an interrogation, its output does not exceed –5 dBm effective radiated power at any frequency. This requirement exceeds the ICAO SARPs frequency of interest 960 to 1215 MHz.
Chapter 4	Airborne Collision Avoidance System
4.1	US documentation contains the following definition for TA: Information given to the pilot pertaining to the position of another aircraft in the immediate vicinity. The information contains no suggested maneuver. The ICAO SARPs considers this a potential threat. The TAs are issued to show all nearby traffic. TCAS does not determine by a test or analysis that some of these aircraft may be a potential threat. Information given to the pilot pertaining to the position of another aircraft in the immediate vicinity. The information contains no suggested maneuver.
4.2.3.3	The TSO–C118 (RTCA DO–197) implements this requirement. However, requirement of limiting Mode S power to the level of Mode A/C (paragraph 4.2.3.4) is not implemented.
4.3.1.1.1	Specifies a nominal cycle of 1 second
4.3.2.1.2	The US specifies a false track probability of less than 1.2% for Mode A/C and less than 0.1% for Mode S.

4.3.2.2.2 4.3.2.2.2.2 4.3.2.2.2.2.2 4.3.2.2.2.2.3	TCAS II Version 6.04A Enhanced Interference Limiting Algorithms won't comply with these sections of the standards and recommended practices (SARPs). See remark below.
4.3.5.1	TCAS II Version 6.04A Enhanced won't comply because it has a 3-second coordination delay. See remark below.
4.3.5.3	TCAS II Version 6.04A Enhanced does not comply since the section implies a requirement for reversals in some instances in encounters between two TCAS II-equipped aircraft. See remark below.
4.3.5.4	TCAS II Version 6.04A Enhanced does not comply since the section explicitly requires reversal of coordinated resolution advisories (RAs) under some circumstances. See remark below.
4.3.5.5	TCAS II Version 6.04A Enhanced does not comply since it contains a dormancy requirement, does not have 5-second targets, and only has surveillance of $\pm 3,000$ feet in altitude. See remark below.
4.3.8.4.2.2.1 4.3.8.4.2.2.1.1	TCAS II Version 6.04A Enhanced has different RA Report formats in DF = 20, 21 replies. See remark below.
4.3.8.4.2.2.1.3	TCAS II Version 6.04A Enhanced has different RA Report formats in DF = 20, 21 replies. See remark below. US documentation contains an additional requirement After an RA has been terminated: by TCAS, it is still required to be reported by the Mode S transponder for 18±1 seconds.
4.3.8.4.2.2.1.4 4.3.8.4.2.2.1.5 4.3.8.4.2.2.1.6 4.3.8.4.2.2.1.6.1 4.3.8.4.2.2.1.6.2 4.3.8.4.2.2.1.6.3	TCAS II Version 6.04A Enhanced has different RA Report formats in DF = 20, 21 replies. See remark below.
4.3.8.4.2.2.2 4.3.8.4.2.2.3	TCAS Version 6.04 Enhanced has different Data Link Capability format in DF = 20, 21 replies. See remark below.
4.3.8.4.2.3.2.3	TCAS Version 6.04 Enhanced has different Data Link Capability format in DF = 20, 21 replies. See remark below. The US uses "don't descend" vs. "do not pass below" and "Don't climb" vs. "do not pass above"
4.3.8.4.2.3.2.5	Limited to TCAS with horizontal on-board resolution equipment
4.3.8.4.2.3.2.7	Limited to TCAS with horizontal on-board resolution equipment
4.3.8.4.2.3.4 4.3.8.4.2.3.4.1 4.3.8.4.2.3.4.2 4.3.8.4.2.3.4.3 4.3.8.4.2.3.4.4	TCAS II Version 6.04A Enhanced RA does not meet the Broadcast format specified in these sections. See remark below.
4.3.8.4.2.3.4.5	TCAS II Version 6.04A Enhanced RA does not meet the Broadcast format specified in these sections. See remark below. The US specifies a different bit coding scheme. The US has implemented the AID code. The bit pattern documented in the RTCA document is in the bit order as received from the control head. The Annex 10 SARPs show the bit order of the RF transmission.
4.3.8.4.2.3.4.6	TCAS II Version 6.04A Enhanced RA does not meet the Broadcast format specified in these sections. See remark below.
4.3.8.4.2.4.2.1 4.3.8.4.2.4.2.3 4.3.8.4.2.4.2.4	TCAS II Version 6.04A Enhanced has a different Coordination Reply format in DF = 16 replies. See remark below.

Remark	The U.S. does not require TCAS II Version 7 (ACAS II) equipage in its National Airspace System.
4.3.9.3.1	The US specifies 10 ft or less.
ACAS	The US uses the term Traffic Alert and Collision Avoidance System (TCAS). The difference of terminology does not impact interoperability of the systems.
ANNEX 10 – VOLUME V – AERONAUTICAL RADIO FREQUENCY SPECTRUM UTILIZATION	
Chapter 2	Distress frequencies
2.1.2	Emergency locator transmitters (ELT) installed on or after 1 January 2002 do not have to operate on both 406 MHz and 121.5 MHz in the US.
2.1.3	Effective date of 1 January 2005 for emergency locator transmitters to operate on both 406 MHz and 121.5 MHz was not met in the US.
Chapter 4	Utilization of frequencies above 30 MHz
4.1.1.1	The 121.5 MHz aeronautical emergency channel guard-band is reduced to 25 kHz. In the U.S. this 121.5 MHz channel is protected on either side by a single 25 kHz channel centered on frequencies 121.475 MHz and 121.525 MHz. The other four (4) guard band channels, centered on frequencies 121.425 MHz, 121.450MHz, 121.550MHz, and 121.575MHz are utilized to transmit weather information on simplex operations (ground-to-air only) using 25kHz channels. The maximum transmit power of the ground-based equipment is limited to 2.5 W. The ground-based equipment must also meet specific output spectral masks (defined as ± 25 kHz -33 dBm $- 33$ dBm; ± 50 kHz -45 dBm $- 45$ dBm; ± 75 kHz -47 dBm)
4.1.2.1	The minimum frequency separation of 8.33 KHz has not been adopted in the US.
4.1.2.2.1	Mandatory carriage of 8.33 KHz equipment has not been established in the US.
4.1.2.2.2	8.33 KHz radios are not safeguarded with respect to its suitability for AM(R)S in the US
4.1.2.2.3	FAA has not issued a mandatory carriage of VDL Mode 3 and VDL Mode 4.
4.1.2.2.3.1	FAA has not issued a mandatory carriage of VDL Mode 3.
4.1.2.2.4	No provision to safeguard VDL Mode 3 and Mode 4 with respect to its suitability for AM(R)S currently exists in the US.
4.1.3.1.6	The US does not require aircraft flying within the US airspace to meet one of the characteristics dealing with the FM interference immunity performance.
4.1.3.2.1	The frequency 123.45 MHz is not designated for air-to-air communications in the US airspace.
4.1.3.2.2	The frequency 123.45 MHz is not designated for air-to-air communications in remote and oceanic areas within the US airspace.
4.1.4.2	The US does not require aircraft flying within the US airspace to meet one of the characteristics dealing with the FM interference immunity performance.
4.2.3	The US does not follow the VOR assignment priority as defined in Section 4.2.3.

ANNEX 11 – AIR TRAFFIC SERVICES	
Chapter 1	Definitions
Accepting Unit	The term "receiving facility" is used.
Advisory Airspace	Advisory service is provided in terminal radar service areas and the outer area associated with class C airspace areas as well as Class E airspace.
Advisory Route	Advisory service is provided in terminal radar service areas and the outer area associated with class C airspace areas as well as Class E airspace.
ACAS	Traffic Alert and Collision Avoidance System (TCAS) – An airborne collision avoidance system based on radar beacon signals which operates independent of ground-based equipment. 14 CFR 1.1 further defines and breaks down TCAS into TCAS 1 – provides traffic advisories 2 – provides traffic advisories and resolution advisories in the vertical plane and 3 – provides traffic advisories and resolution advisories in the vertical and horizontal planes.
AIRMET	FAA Pilot Controller Glossary defines (in part) AIRMET as "In-flight weather advisories issued only to amend the area forecast concerning weather phenomena which are of operational interest to all aircraft and potentially hazardous to aircraft having limited capability because of lack of equipment instrumentation or pilot qualifications...." The ICAO definition of AIRMET narrows the purpose of the advisory to "low-level aircraft operations", where the FAA has a more broad definition to encompass "all aircraft and ... aircraft having limited capability..." Also, ICAO uses the term "forecast ... for the flight information region" where the FAA uses "area forecast". Difference in character (terminology) for area forecast. FAA uses AIRMETs for broader purpose.
Air traffic control unit	The U.S. uses the term "air traffic control facility". (i.e. En Route, Terminal, or Flight Service)
Air traffic services reporting office	FAA Pilot Control Glossary defines (in part) Flight Service Stations (FSS) as "air traffic facilities which provide pilot briefing, en route communications and VFR search and rescue services, assist lost aircraft in emergency situations, relay ATC clearances, originate notices to airmen, broadcast aviation weather and NAS information, receive and process IFR flight plans...." FSS's are available to receive any reports concerning air traffic services as well as accept and file flight plans.
Air traffic services unit	The U.S. uses "Air Route Traffic Control Center".
Air-taxiing	U.S. uses "hover taxi" for this maneuver above 100 feet above ground level (AGL) and "air taxi" below 100 feet AGL.
Airborne collision avoidance	The U.S. uses "traffic alert collision avoidance system (TCAS)." TCAS is an airborne collision avoidance system based on radar beacon signals and operates independent of ground-based equipment. TCAS-1 generates traffic advisories only. TCAS-II generates traffic advisories and resolution (collision avoidance) advisories in the vertical plane.
Airway	A Class E airspace area established in the form of a corridor, the centerline of which is defined by radio navigational aids.
Alert Phase	Alert – a notification to a position that there is an aircraft-to-aircraft or aircraft-to-airspace conflict as detected by automated problem detection.
Altitude	Height above ground level (AGL), mean sea level (MSL) or indicate altitude.
Apron Management Service	Ground control or ramp control provide the same service. There is no formal definition in the Pilot Controller Glossary.

Area Control Centre	The U.S. uses the terms “Traffic Control Center”, “Radar Approach Control Facility”, and “Tower” to define a facility that provides air traffic control service to aircraft operating on IFR flight plans within controlled airspace and principally during the en route phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to VFR aircraft.
Area Control Service	Air Traffic Control – A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.
Controlled flight	The US uses the term “IFR Clearance”.
Control Zone	The US uses the term “Surface Area”. Surface area is airspace contained by the lateral boundary of the Class B, C, D, or E airspace designated for an airport that begins at the surface and extends upward.
Cruising Level	Cruising Altitude – an altitude or flight level maintained during en route level flight. This is a constant altitude and should not be confused with a cruise clearance.
Downstream Clearance	Same as air traffic control clearance. Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.
Flight Information Centre	In the US, flight information service and alerting service are often provided by flight service stations.
Level	The term “altitude” is used.
Manoeuvring Area	Any locality either on land, water, or structures, including airports/heliports and intermediate landing fields, which is used, or intended to be used, for the landing and takeoff of aircraft whether or not facilities are provided for the shelter, servicing, or for receiving or discharging passengers or cargo.
Meteorological office	No PCG definition. However FSSs perform this duty.
Movement Area	The runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.
Pilot-in-command	The person who has final authority for the operation and safety of the flight has been designated as pilot in command before or during the flight and hold the appropriate category, class and type rating for the flight.
Traffic avoidance advice	US uses the term “Safety Alert”
Traffic information	US uses the term “Traffic Advisory”
Waypoint	A predetermined geographical position used for route/instrument approach definition, progress reports, published VFR routes, visual reporting points or points for transitioning and/or circumnavigating controlled and/or special use airspace, that is defined relative to a VORTAC station or in terms of latitude/longitude coordinates.
Chapter 2	General

2.3.2	Annex 11, paragraph 2.3.2 directs the flight information service to accomplish objective d) of para 2.2, “to provide advice and information for the safe and efficient conduct of flight.” Details on procedures to accomplish this objective are contained in FAA Order 7210.3, Part 4, Flight Service Stations. Specific procedures for accomplishing this objective are contained in FAA Order 7110.10, Flight Services. Also, the FAA Pilot Controller Glossary defines Flight Service Stations as “air traffic facilities which provide pilot briefing, en route communications and VFR search and rescue services, assist lost aircraft and aircraft in emergency situations, relay ATC clearances, originate Notices to Airmen, broadcast aviation weather and NAS information, receive and process IFR flight plans, and monitor NAVAIDs. In addition, at selected locations, FSSs provide En Route Flight Advisory Service (Flight Watch), take weather observations, issue airport advisories, and advise Customs and Immigration of transborder flights.
2.5.2.2.1	FAA uses the generic term “controlled airspace” and “surface areas”
2.5.2.2.1.1	FAA also provides this service in Class E.
2.5.2.2.2	Annex 11, paragraph 2.3.2 directs the flight information service to accomplish objective d) of para 2.2, ”to provide advice and information for the safe and efficient conduct of flight.” Details on procedures to accomplish this objective are contained in FAA Order 7210.3, Part 4, Flight Service Stations. Specific procedures for accomplishing this objective are contained in FAA Order 7110.10, Flight Services. Also, the FAA Pilot Controller Glossary defines Flight Service Stations as ”air traffic facilities which provide pilot briefing, en route communications and VFR search and rescue services, assist lost aircraft and aircraft in emergency situations, relay ATC clearances, originate Notices to Airmen, broadcast aviation weather and NAS information, receive and process IFR flight plans, and monitor NAVAIDs. In addition, at selected locations, FSSs provide En Route Flight Advisory Service (Flight Watch), take weather observations, issue airport advisories, and advise Customs and Immigration of transborder flights.
2.6	The Class F airspace is not used in the designation of U.S. airspace.
2.6.1	The U.S. has chosen not to use Class F airspace.
2.9	Converting the present U.S. system for identifying ATS routes and significant points to conform to the provisions of amended paragraphs 2.9 – 2.9.2, 2.11 – 2.11.3, Appendix 1 and Appendix 2 is an effort of considerable magnitude and complexity. The U.S. has an ongoing program to accomplish the conversion, but it is estimated that a period of 2 to 5 years will be required for full compliance.
2.10.3.2.2	Class E–5 700/1200–foot airspace areas are used for transitioning aircraft to/from the terminal or en route environment.
2.10.3.3	En Route Domestic Airspace Areas consist of Class E airspace that extends upward from a specified altitude to provide controlled airspace in those areas where there is a requirement to provide IFR en route ATC services but the Federal airway structure is inadequate. En Route Domestic Airspace Areas may be designated to serve en route operations when there is a requirement to provide ATC service but the desired routing does not qualify for airway designation. Offshore/ Control Airspace Areas are locations designated in international airspace (between the U.S. 12–mile territorial limit and the CTA/FIR boundary, and within areas of domestic radio navigational signal or ATC radar coverage) wherein domestic ATC procedures may be used for separation purposes.
2.10.5.1	A Class D airspace area shall be of sufficient size to: 1. Allow for safe and efficient handling of operations. 2. Contain IFR arrival operations while between the surface and 1,000 feet above the surface, and IFR departure operations while between the surface and 1,000 feet above the surface, and IFR departure operations while between the surface and the base of adjacent controlled airspace.

2.10.5.2	A Class D airspace area shall be of sufficient size to: 1. Allow for safe and efficient handling of operations. 2. Contain IFR arrival operations while between the surface and 1,000 feet above the surface, and IFR departure operations while between the surface and the base of adjacent controlled airspace. Size and shape may vary to provide for 1 and 2. The emphasis is that a Class D area shall be sized to contain the intended operations.
2.10.5.3	Refer to Surface Areas
2.11	Converting the present U.S. system for identifying ATS routes and significant points to conform to the provisions of amended paragraphs 2.9 – 2.9.2, 2.11 – 2.11.3, Appendix 1 and Appendix 2 is an effort of considerable magnitude and complexity. The U.S. has an ongoing program to accomplish the conversion, but it is estimated that a period of 2 to 5 years will be required for full compliance.
2.25.5	No time is issued prior to taxi for take-off. Time checks are given to the nearest quarter minute.
2.27.5	Process is described in the FAA Safety Management System Manual and the FAA Order 1100.161.
Appendix 1 Appendix 2	Converting the present U.S. system for identifying ATS routes and significant points to conform to the provisions of amended paragraphs 2.9 – 2.9.2, 2.11 – 2.11.3, Appendix 1 and Appendix 2 is an effort of considerable magnitude and complexity. The U.S. has an ongoing program to accomplish the conversion, but it is estimated that a period of 2 to 5 years will be required for full compliance.
Chapter 3	Air Traffic Control Service
3.2	Air Route Traffic Control Facilities (ARTCC) are used instead of Area Control Service, and Terminal Control Facilities instead of Approach Control Service.
3.3.3 Exception Clause	Clearances may be issued to conduct flight in VFR conditions without a pilot request if the clearance would result in noise abatement benefits or when a pilot conducts a practice instrument approach.
3.6.2.4	The U.S does not specify notification of 2-way communication. The accepting unit shall not alter the clearance of an aircraft that has not yet reached the transfer of control point without the prior approval of the transferring unit.
3.7.3.1	Air crews are not required to read back clearances, only to acknowledge receipt of clearances.
3.7.3.1.1	Air crews are not required to read back clearances, only to acknowledge receipt of clearances.
3.7.4.3	4–3–8. COORDINATION WITH RECEIVING FACILITY Coordinate with the receiving facility before the departure of an aircraft if the departure point is less than 15 minutes flying time from the transferring facility’s boundary unless an automatic transfer of of data between automated systems will occur, in which case the flying time requirement may be reduced to 5 minutes or replaced with a mileage from the boundary parameter when mutually agreeable to both facilities.
3.7.4.4	4–4–5. CLASS G AIRSPACE Include routes through Class G airspace only when requested by the pilot. NOTE–1. Flight plans filed for random RNAV routes through Class G airspace are considered a request by the pilot. 2. Flight plans containing MTR segments in/through Class G airspace are considered a request by the pilot. Air Traffic Control Clearance means an authorization by air traffic control within controlled airspace.
Chapter 4	Flight Information Service
4.2.2	No Class F airspace. Collision Hazard information is provided between known traffic to aircraft in Class G airspace.
4.2.2 b)	No provision is made for the issuance of collision hazard information to flights operating in Class G airspace.
4.3.4.4 h) 4.3.4.8	The U.S. requires that the current altimeter setting be included in the ATIS broadcast. Information contained in a current ATIS broadcast, the receipt of which has been acknowledged by an aircraft, is not included in a directed transmission to the aircraft unless requested by the pilot.
4.3.5 4.3.6 4.3.7	The order in which information is listed in ATIS broadcast messages is not mandated and certain elements are regarded as optional.
Chapter 6	Air Traffic Services Requirements for Communications

6.1.1.4 6.2.2.3.8	The US uses a 45 day retention period.
6.2.3.6	The US has a 45 day or longer retention period, with some exceptions. US en route facilities using system analysis recording tapes as their radar retention media shall retain radar data for 15 days. Facilities using a teletype emulator or console printout must be retained for 30 days unless they are related to an accident or incident. A facility using a console typewriter printout take-up device may retain the printout on the spool for 15 days after the last date on the spool. If a request is received to retain data information following an accident or incident, the printout of the relative data will suffice and the tape/disc may then be returned to service through the normal established rotational program.
6.3.1.3	The US has a 45 day or longer retention period except that those facilities utilizing an analog voice recorder system shall retain voice recordings for 15 days.
6.4.1.2	The US retains surveillance data recordings for 45 days or longer when they are pertinent to an accident or incident investigation, except that en route facilities using system analysis recording tapes as their radar retention media (regardless of the type of voice recorder system being used) shall retain voice recordings for 15 days and those facilities using an analog voice recorder system shall retain voice recordings for 15 days. FAA's Air Traffic Control System Command Center shall retain voice recordings for 15 days.
Chapter 7	Air Traffic Services Requirements for Information
7.1.5	The term "communication station" is not used but the flight information is passed.
7.6	Temporary Flight Restrictions (TFRs) are the mechanism that would be implemented in such cases.
Appendix 1	Principles Governing the Identification of RNP Types and the Identification of ATS Routes Other Than Standard Departure and Arrival Routes
	See 2.9, above.
2.2.1	Routes designated to serve aircraft operating from 18,000 MSL up to and including FL 450 are referred to as "jet routes" and are designated with the letter "J" followed by a number of up to three digits.
Appendix 2	Principles Governing the Establishment and Identification of Significant Points
	See 2.9, above.
2.1	The U.S. will not comply with this guidance in naming the Missed Approach Point (MAP) located at the landing threshold.
Appendix 4	ATS Airspace Classifications
	It should be noted that the term "Class B airspace" as used in the U.S. is more restrictive than that specified by ICAO. Flights within Class B Airspace in the U.S. must be operated in accord with the provisions of 14 CFR Part 91 (Section 91.90).
	Speed restrictions do not necessarily apply to aircraft operating beyond 12 NM from the coast line within the U.S. Flight Information Region, in offshore Class E airspace below 10,000 feet MSL. However, in airspace underlying a Class B airspace area designated for an airport, or in a VFR corridor designated through such a Class B airspace area, pilots are expected to comply with the 200 knot speed limit specified in 14 CFR Part 91 (Sections 91.117(c) and 91.703). This difference will allow airspeed adjustments exceeding 250 knots, thereby improving air traffic services, enhancing safety and expediting air traffic movement.

ANNEX 12 – SEARCH AND RESCUE

There are no reportable differences between U.S. regulations and the Standards and Recommended Practices contained in this Annex.

ANNEX 13 – AIRCRAFT ACCIDENT INVESTIGATION	
Chapter 5	Investigation
5.12	<p>The full exchange of information is vital to effective accident investigation and prevention. The U.S. supports, in principle, measures that are intended to facilitate the development and sharing of information. The laws of the U.S. require the determination and public reporting of the facts, circumstances, and probable cause of every civil aviation accident. This requirement does not confine the public disclosure of such information to an accident investigation. However, the laws of the U.S. do provide some protection against public dissemination of certain information of a medical or private nature.</p> <p>Also, U.S. law prohibits the disclosure of cockpit voice recordings to the public and limits the disclosure of cockpit voice recording transcript to that specific information which is deemed pertinent and relevant by the investigative authority. However, U.S. Courts can order the disclosure of the foregoing information for other than accident investigation purposes. The standard for determining access to this information does not consider the adverse domestic or international effects on investigations that might result from such access.</p>
5.25 h)	<p>Investigative procedures observed by the U.S. allow full participation in all progress and investigation planning meetings; however, deliberations related to analysis, findings, probable causes, and safety recommendations are restricted to the investigative authority and its staff. However, participation in these areas is extended through timely written submissions, as specified in paragraph 5.25 i).</p>
5.26 b)	<p>The U.S. supports, in principle, the privacy of the State conducting the investigation regarding the progress and the findings of that investigation. However, the laws of the U.S. facilitate the public disclosure of information held by U.S. government agencies and U.S. commercial business. The standard for determining public access to information requested from a U.S. government agency or a commercial business does not consider or require the expressed consent of the State conducting the investigation.</p>
Chapter 6	Reporting
6.13	<p>The U.S. supports the principle of not circulating, publishing, or providing access to a draft report or any part thereof unless such a report or document has already been published or released by the State which conducted the investigation. However, the laws of the U.S. facilitate the public disclosure of information held by government agencies and commercial business. The U.S. government may not be able to restrict public access to a draft report or any part thereof on behalf of the State conducting the investigation. The standard for determining public access to information requested from a U.S. government agency or a commercial business does not consider or require the expressed consent of the State conducting an investigation.</p>

ANNEX 14 – AERODROMES	
VOLUME 1 – AERODROME DESIGN AND OPERATIONS	
Chapter 1	General
1.2.1	Airports in the U.S. are for the most part owned and operated by local governments and quasi–government organizations formed to operate transportation facilities. The Federal Government provides air traffic control, operates and maintains NAVAIDs, provides financial assistance for airport development, certifies major airports, and issues standards and guidance for airport planning, design, and operational safety. There is general conformance with the Standards and Recommended Practices of Annex 14, Volume I. At airports with scheduled passenger service using aircraft having more than nine seats, compliance with standards is enforced through regulation and certification. At other airports, compliance is achieved through the agreements with individual airports under which Federal development funds were granted; or, through voluntary actions.
1.3.1 1.3.2 1.3.3 1.3.4	In the U.S., the Airport Reference Code is a two–component indicator relating the standards used in the airport’s design to a combination of dimensional and operating characteristics of the largest aircraft expected to use the airport. The first element, Aircraft Approach Category, corresponds to the ICAO PANS–OPS approach speed groupings. The second, Airplane Design Group, corresponds to the wingspan groupings of code element 2 of the Annex 14, Aerodrome Reference Code. See below:

TBL GEN 1.7–1
Airport Reference Code (ARC)

Aircraft Approach Category	Approximate Annex 14 Code Number
A	1
B	2
C	3
D	4
E	–
Airplane Design Group	Corresponding Annex 14 Code Letter
I	A
II	B
III	C
IV	D
V	E
VI	F (proposed)

EXAMPLE: AIRPORT DESIGNED FOR B747–400 ARC D–V.

Chapter 2	Aerodrome Data
2.2.1	The airport reference point is recomputed when the ultimate planned development of the airport is changed.
2.9.6 2.9.7	Minimum friction values have not been established to indicate that runways are “slippery when wet.” However, U.S. guidance recommends that pavements be maintained to the same levels indicated in the ICAO Airport Services Manual.
2.11.3	If inoperative fire fighting apparatus cannot be replaced immediately, a NOTAM must be issued. If the apparatus is not restored to service within 48 hours, operations shall be limited to those compatible with the lower index corresponding to operative apparatus.
2.12 e)	Where the original VASI is still installed, the threshold crossing height is reported as the center of the on–course signal, not the top of the red signal from the downwind bar.

Chapter 3	Physical Characteristics
3.1.2*	The crosswind component is based on the ARC: 10.5 kt for AI and BI; 13 kt for AII and BII; 16 kt for AIII, BIII and CI through DIII; 20 kts for AIV through DVI.
3.1.9*	Runway widths (in meters) used in design are shown in the table below:

Width of Runway in Meters

Aircraft Approach Category	Airplane Design Group					
	I	II	III	IV	V	VI
A	18 ¹	23 ¹	---	---	45	60
B	18 ¹	23 ¹	---	---	45	60
C	30	30	30 ²	45	45	60
D	30	30	30 ²	45	45	60

¹The width of a precision (lower than ³/₄ statute mile approach visibility minimums) runway is 23 meters for a runway which is to accommodate only small (less than 5,700 kg) airplanes and 30 meters for runways accommodating larger airplanes.

²For airplanes with a maximum certificated take-off mass greater than 68,000 kg, the standard runway width is 45 meters.

3.1.12*	Longitudinal runway slopes of up to 1.5 percent are permitted for aircraft approach categories C and D except for the first and last quarter of the runway where the maximum slope is 0.8 percent.
3.1.18*	Minimum and maximum transverse runway slopes are based on aircraft approach categories as follows: For categories A and B: 1.0 – 2.0 percent C and D: 1.0 – 1.5 percent
3.2.2	The U.S. does not require that the minimum combined runway and shoulder widths equal 60 meters. The widths of shoulders are determined independently.
3.2.3*	The transverse slope on the innermost portion of the shoulder can be as high as 5 percent.
3.3.3 3.3.4* 3.3.5*	A strip width of 120 meters is used for code 3 and 4 runways for precision, nonprecision, and non-instrumented operations. For code 1 and 2 precision runways, the width is 120 meters. For non-precision/visual runways, widths vary from 37.5 meters up to 120 meters.
3.3.9*	Airports used exclusively by small aircraft (U.S. Airplane Design Group I) may be graded to distances as little as 18 meters from the runway centerline.
3.3.14*	The maximum transverse slope of the graded portion of the strip can be 3 percent for aircraft approach categories C and D and 5 percent for aircraft approach categories A and B.
3.3.15*	The U.S. does not have standards for the maximum transverse grade on portions of the runway strip falling beyond the area that is normally graded.
3.3.17*	Runways designed for use by smaller aircraft under non-instrument conditions may be graded to distances as little as 18 meters from the runway centerline (U.S. Airplane Design Groups I and II).
3.4.2*	For certain code 1 runways, the runway end safety areas may be only 72 meters.
3.7.1* 3.7.2*	The U.S. does not provide Standards or Recommended Practices for radio altimeter operating areas.
3.8.3*	The U.S. specifies a 6 meter clearance for Design Group VI airplanes.
3.8.4*	The taxiway width for Design Group VI airplanes is 30 meters.
3.8.5*	The U.S. also permits designing taxiway turns and intersections using the judgmental oversteering method.

3.8.7*	Minimum separations between runway and taxiway centerlines, and minimum separations between taxiways and taxilanes and between taxiway/taxilanes and fixed/moveable objects are shown in the tables that follow. Generally, U.S. separations are larger for non-instrumented runways, and smaller for instrumented runways, than the Annex. Values are also provided for aircraft with wingspans up to 80 meters.
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Minimum Separations Between Runway Centerline and Parallel Taxiway/Taxilane Centerline

Operation	Aircraft Approach Category	Airplane Design Group						
		I ¹	I	II	III	IV	V	VI
Visual runways and runways with not lower than 3/4-statute mile (1,200 meters) approach visibility minimums	A and B	150 feet 45 meters	225 feet 67.5 meters	240 feet 72 meters	300 feet 90 meters	400 feet 120 meters	--	--
Runways with lower than 3/4-statute mile (1,200 meters) approach visibility minimums	A and B	200 feet 60 meters	250 feet 75 meters	300 feet 90 meters	350 feet 105 meters	400 feet 120 meters	--	--
Visual runways and runways with not lower than 3/4-statute mile (1,200 meters) approach visibility minimums	C and D	--	300 feet 90 meters	300 feet 90 meters	400 feet 120 meters	400 feet 120 meters	400 ² feet 120 ² meters	600 feet 180 meters
Runways with lower than 3/4-statute mile (1,200 meters) approach visibility minimums	C and D	--	400 feet 120 meters	400 feet 120 meters	400 feet 120 meters	400 feet 120 meters	400 ² feet 120 ² meters	600 feet 180 meters

¹These dimensional standards pertain to facilities for small airplanes exclusively.

²Corrections are made for altitude: 120 meters separation for airports at or below 410 meters; 135 meters for altitudes between 410 meters and 2,000 meters; and, 150 meters for altitudes above 2,000 meters.

Minimum Taxiway and Taxilane Separations:

	Airplane Design Group					
	I	II	III	IV	V	VI
Taxiway centerline to parallel taxiway/taxilane centerline	69 feet 21 meters	105 feet 32 meters	152 feet 46.5 meters	215 feet 65.5 meters	267 feet 81 meters	324 feet 99 meters
Fixed or movable object	44.5 feet 13.5 meters	65.5 feet 20 meters	93 feet 28.5 meters	129.5 feet 39.5 meters	160 feet 48 meters	193 feet 59 meters
Taxilane centerline to parallel taxilane centerline	64 feet 19.5 meters	97 feet 29.5 meters	140 feet 42.5 meters	198 feet 60 meters	245 feet 74.5 meters	298 feet 91 meters
Fixed or movable object	39.5 feet 12 meters	57.5 feet 17.5 meters	81 feet 24.5 meters	112.5 feet 34 meters	138 feet 42 meters	167 feet 51 meters

3.8.10*	Line-of-sight standards for taxiways are not provided in U.S. practice, but there is a requirement that the sight distance along a runway from an intersecting taxiway must be sufficient to allow a taxiing aircraft to safely enter or cross the runway.
3.8.11*	Transverse slopes of taxiways are based on aircraft approach categories. For categories C and D, slopes are 1.0–1.5 percent; for A and B, 1.0–2.0 percent.
3.11.5	The runway centerline to taxi-holding position separation for code 1 is 38 meters for non-precision operations and 53 meters for precision. Code 3 and 4 precision operations require a separation of 75 meters, except for “wide bodies,” which require 85 meters.

Dimensions and Slopes for Protective Areas and Surfaces

	Precision Approach	Non-precision Instrument Approach			Visual Runway	
	All runways	All runways ^a	Runways other than utility ^b	Utility runways ^d	Runways other than utility	Utility runways
Width of inner edge	305 meters	305 meters	152 meters	152 meters	152 meters	76 meters ^c
Divergency (each side)	15 percent	15 percent	15 percent	15 percent	10 percent	10 percent
Final width	4,877 meters	1,219 meters	1,067 meters ^c	610 meters	475 meters ^c	381 meters ^c
Length	15,240 meters	3,048 meters ^c	3,048 meters ^c	1,524 meters ^c	1,524 meters ^c	1,524 meters ^c
Slope: inner 3,049 meters	2 percent	2.94 percent ^c	2.94 percent ^c	5 percent ^c	5 percent ^c	5 percent ^c
Slope: beyond 3,048 meters	2.5 percent ^c					

^aWith visibility minimum as low as 1.2 km; ^bwith visibility minimum greater than 1.2 km; ^ccriteria less demanding than Annex 14 Table 4–1 dimensions and slopes. ^dUtility runways are intended to serve propeller-driven aircraft having a maximum take-off mass of 5,570 kg.

Chapter 4	Obstacle Restriction and Removal
4.1	Obstacle limitation surfaces similar to those described in 4.1–4.20 are found in 14 CFR Part 77.
4.1.21	A balked landing surface is not used.
4.1.25	The U.S. does not establish take-off climb obstacle limitation areas and surface, <i>per se</i> , but does specify protective surfaces for each end of the runway based on the type of approach procedures available or planned. The dimensions and slopes for these surfaces and areas are listed in the table above.
4.2	The dimensions and slopes of U.S. approach areas and surfaces are set forth in the above table. Aviation regulations do not prohibit construction of fixed objects above the surfaces described in these sections.
4.2.1	Primary surface is also used as a civil airport imaginary surface. Primary surface is a surface longitudinally centered on a runway. U.S. uses the width of the primary surface of a runway as prescribed in 14 CFR Part 77.25 for the most precise approach existing or planned for either end of that runway.
4.2.8	The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end.
4.2.9	Approach surfaces are applied to each end of each runway based upon the type of approach available or planned for that runway end.
4.2.10, 4.2.11	Any proposed construction of or alteration to an existing structure is normally considered to be physically shielded by one or more existing permanent structure(s), natural terrain, or topographic feature(s) of equal or greater height if the structure under consideration is located within the lateral dimensions of any runway approach surface but would not exceed an overall height above the established airport elevation greater than that of the outer extremity of the approach surface, and located within, but would not penetrate, the shadow plane(s) of the shielding structure(s).
4.2.12	The basic principle in applying shielding guidelines is whether the location and height of the structures are such that aircraft, when operating with due regard for the shielding structure, would not collide with that structure.
4.2.16	The size of each imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end.
4.2.17	Approach surfaces are applied to each end of each runway based upon the type of approach available or planned for that runway end.
Chapter 5	Visual Aids for Navigation

5.2.1.7*	The U.S. does not require unpaved taxiways to be marked.
5.2.2.2*	The U.S. does not require a runway designator marking for unpaved runways.
5.2.2.4	Zeros are not used to precede single–digit runway markings. An optional configuration of the numeral 1 is available to designate a runway 1 and to prevent confusion with the runway centerline.
5.2.4.2* 5.2.4.3*	Threshold markings are not required, but sometimes provided, for non–instrument runways that do not serve international operations.
5.2.4.5	The current U.S. standard for threshold designation is eight stripes, except that more than eight stripes may be used on runways wider than 45 meters. After 1 January 2008, the U.S. standard will comply with Annex 14.
5.2.4.6	The width and spacing of threshold stripes will comply with Annex 14 after 1 January 2008.
5.2.4.10	When a threshold is temporarily displaced, there is no requirement that runway or taxiway edge markings, prior to the displaced threshold, be obscured. These markings are removed only if the area is unsuitable for the movement of aircraft.
5.2.5.2 5.2.5.3*	Aiming point markings are required on precision instrument runways and code 3 and 4 runways used by jet aircraft.
5.2.5.4	The aiming point marking commences 306 meters from the threshold at all runways.
5.2.6.3	The U.S. pattern for touchdown zone markings, when installed on both runway ends, is only applicable to runways longer than 4,990 feet. On shorter runways, the three pair of markings closest to the runway midpoint are eliminated.
5.2.6.4	The U.S. standard places the aiming point marking 306 meters from the threshold where it replaces one of the pair of three stripe threshold markings. The 306 meters location is used regardless of runway length.
5.2.6.5*	Touchdown zone markings are not required at a non–precision approach runway, though they may be provided.
5.2.7.4*	Runway side stripe markings on a non–instrument runway may have an over–all width of 0.3 meter.
5.2.8.3	Taxiway centerline markings are never installed longitudinally on a runway even if the runway is part of a standard taxi route.
5.2.9.5*	The term “ILS” is used instead of CAT I, CAT II, CAT III.
5.2.11.4 5.2.11.5* 5.2.11.6*	Check–point markings are provided, but the circle is 3 meters in diameter, and the directional line may be of varying width and length. The color is the yellow used for taxiway markings.
5.2.12	Standards for aircraft stand markings are not provided.
5.2.13.1*	Apron safety lines are not required although many airports have installed them.
5.2.14.1	The U.S. does not have standards for holding position markings on roadways that cross runways. Local traffic control practices are used.
5.3.1.1 5.3.1.2*	The U.S. does not have regulations to prevent the establishment of non–aviation ground lights that might interfere with airport operations.
5.3.1.3 5.3.1.4	New approach lighting installations will meet the frangibility requirements. Some existing non–frangible systems may not be replaced before 1 January 2005.
5.3.2.1* 5.3.2.2* 5.3.2.3*	There is no requirement for an airport to have emergency runway lighting available if it does not have a secondary power source. Some airports do have these systems, and there is an FAA specification for these lights.
5.3.3.1 5.3.3.3	Only airports served by aircraft having more than 30 seats are required to have a beacon, though they are available at many others.
5.3.3.6	Although the present U.S. standard for beacons calls for 24–30 flashes per minute, some older beacons may have flash rates as low as 12 flashes per minute.
5.3.3.8	Coded identification beacons are not required and are not commonly installed. Typically, airport beacons conforming to 5.3.3.6 are installed at locations served by aircraft having more than 30 seats.

5.3.4.1	While the U.S. has installed an approach light system conforming to the specifications in 5.3.4.10 through 5.3.4.19, it also provides for a lower cost system consisting of medium intensity approach lighting and sequenced flashing lights (MALSF) at some locations.
5.3.4.2	In addition to the system described in 5.3.4.1, a system consisting of omnidirectional strobe lights (ODALS) located at 90 meters intervals extending out to 450 meters from the runway threshold is used at some locations.
5.3.4.10 through 5.3.4.19	The U.S. standard for a precision approach category I lighting system is a medium intensity approach lighting system with runway alignment indicator lights (MALSR). This system consists of 3 meters barrettes at 60 meters intervals out to 420 meters from the threshold and sequenced flashing lights at 60 meters intervals from 480 meters to 900 meters. A crossbar 20 meters in length is provided 300 meters from the threshold. The total length of this system is dependent upon the ILS glide path angle. For angles 2.75° and higher, the length is 720 meters.
5.3.4.16 5.3.4.31	The capacitor discharge lights can be switched on or off when the steady-burning lights of the approach lighting system are operating. However, they cannot be operated when the other lights are not in operation.
5.3.4.20	The U.S. standard for a precision approach category II and III lighting system has a total length dependent upon the ILS glide path angle. For angles 2.75° and higher, the length is 720 meters.
5.3.5.1 5.3.5.3 5.3.5.4	Visual approach slope indicator systems are not required for all runways used by turbojets except runways involved with land and hold short operations that do not have an electronic glideslope system.
5.3.5.2	In addition to PAPI and APAPI systems, VASI and AVASI type systems remain in service at U.S. airports with commercial service. Smaller general aviation airports may have various other approach slope indicators including tri-color and pulsating visual approach slope indicators.
5.3.5.27	The U.S. standard for PAPI allows for the distance between the edge of the runway and the first light unit to be reduced to 9 meters for code 1 runways used by nonjet aircraft.
5.3.5.42	The PAPI obstacle protection surface used is as follows: The surface begins 90 meters in front of the PAPI system (toward the threshold) and proceeds outward into the approach zone at an angle 1 degree less than the aiming angle of the third light unit from the runway. The surface flares 10 degrees on either side of the extended runway centerline and extends 4 statute miles from its point of origin.
5.3.8.4	The U.S. permits the use of omnidirectional runway threshold identification lights.
5.3.13.2	The U.S. does not require the lateral spacing of touchdown zone lights to be equal to that of touchdown zone marking when runways are less than 45 meters wide. The lateral distance between the markings is 22 meters when installed on runways with a width of 45 meters or greater. The distance is proportionately smaller for narrower runways. The lateral distance between touchdown zone lights is nominally 22 meters but may be reduced to 20 meters to avoid construction problems.
5.3.14	The U.S. has no provision for stopway lights.
5.3.15.1 5.3.15.2*	Taxiway centerline lights are required only below 183 meters RVR on designated taxi routes. However, they are generally recommended whenever a taxiing problem exists.
5.3.15.3 8.2.3	Taxiway centerline lights are not provided on runways forming part of a standard taxi route even for low visibility operations. Under these conditions, the taxi path is coincident with the runway centerline, and the runway lights are illuminated.
5.3.15.5	Taxiway centerline lights on exit taxiways presently are green. However, the new U.S. standard which is scheduled to be published by 1 January 98 will comply with the alternating green/yellow standard of Annex 14.
5.3.15.7*	The U.S. permits an offset of up to 60 cm.
5.3.16.2 8.2.3	Taxiway edge lights are not provided on runways forming part of a standard taxi route.

5.3.17.1 5.3.17.2* 5.3.17.3 5.3.17.4* 5.3.17.5*	Stop bars are required only for runway visual range conditions less than a value of 183 meters at taxiway/runway intersections where the taxiway is lighted during low visibility operations. Once installed, controlled stop bars are operated at RVR conditions less than a value of 350 meters.														
5.3.17.6	Elevated stop bar lights are normally installed longitudinally in line with taxiway edge lights. Where edge lights are not installed, the stop bar lights are installed not more than 3 meters from the taxiway edge.														
5.3.17.9	The beamspread of elevated stop bar lights differs from the in-pavement lights. The inner isocandela curve for the elevated lights is ± 7 horizontal and ± 4 vertical.														
5.3.17.12	The U.S. standard for stop bars, which are switchable in groups, does not require the taxiway centerline lights beyond the stop bars to be extinguished when the stop bars are illuminated. The taxiway centerline lights which extend beyond selectively switchable stop bars are grouped into two segments of approximately 45 meters each. A sensor at the end of the first segment re-illuminates the stop bar and extinguishes the first segment of centerline lights. A sensor at the end of the second segment extinguishes that segment of centerline lights.														
5.3.18.1*	Taxiway intersection lights are also used at other hold locations on taxiways such as low visibility holding points.														
5.3.18.2	Taxiway intersection lights are collocated with the taxiway intersection marking. The marking is located at the following distances from the centerline of the intersecting taxiway: <table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Airplane Design Group</th> <th style="text-align: left;">Distance</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>13.5 meters</td> </tr> <tr> <td>II</td> <td>20 meters</td> </tr> <tr> <td>III</td> <td>28.5 meters</td> </tr> <tr> <td>IV</td> <td>39 meters</td> </tr> <tr> <td>V</td> <td>48.5 meters</td> </tr> <tr> <td>VI</td> <td>59 meters</td> </tr> </tbody> </table>	Airplane Design Group	Distance	I	13.5 meters	II	20 meters	III	28.5 meters	IV	39 meters	V	48.5 meters	VI	59 meters
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5.3.19.1 5.3.19.2*	Runway guard lights are required only for runway visual range conditions less than a value of 350 meters.														
5.3.19.4 5.3.19.5	Runway guard lights are placed at the same distance from the runway centerline as the aircraft holding distance, or within a few feet of this location.														
5.3.19.12	The new U.S. standard for in-pavement runway guard lights complies with Annex 14. However, there may be some existing systems that do not flash alternately.														
5.3.20.4*	The U.S. does not set aviation standards for flood lighting aprons.														
5.3.21	The U.S. does not provide standards for visual docking guidance systems. U.S. manufacturers of these devices generally adhere to ICAO SARPS.														
5.3.23.1	The U.S. does not have a requirement for providing roadholding position lights during RVR conditions less than a value of 350 meters.														
5.4.1.2	Signs are often installed a few centimeters taller than specified in Annex 14, Volume 1, Table 5–4.														
5.4.1.5	Sign inscriptions are slightly larger, and margins around the sign slightly smaller, than indicated in Annex 14, Volume 1, Appendix 4.														
5.4.1.6	The sign luminance requirements are not as high as specified in Appendix 4. The U.S. does not specify a nighttime color requirement in terms of chromaticity.														
5.4.2.2 5.4.2.4 5.4.2.9 5.4.2.14 5.4.2.16	All signs used to denote precision approach holding positions have the legend “ILS.”														
5.4.2.6	U.S. practice uses the NO ENTRY sign to prohibit entry by aircraft only.														
5.4.2.8 5.4.2.10	The second mandatory instruction sign is usually not installed unless added guidance is necessary.														

5.4.2.15	Signs for holding aircraft and vehicles from entering areas where they would infringe on obstacle limitation surfaces or interfere with NAVAIDs are inscribed with the <i>designator of the approach</i> , followed by the letters “APCH”; for example, “15–APCH.”
5.4.3.13 5.4.3.15	U.S. practice is to install signs about 3 to 5 meters closer to the taxiway/runway (See Annex 14, Table 5–4).
5.4.3.16	The U.S. does not have standards for the location of runway exit signs.
5.4.3.24	A yellow border is used on all location signs, regardless of whether they are stand-alone or collocated with other signs.
5.4.3.26	U.S. practice is to use Pattern A on runway vacated signs, except that Pattern B is used to indicate that an ILS critical area has been cleared.
5.4.3.30*	The U.S. does not have standards for signs used to indicate a series of taxi-holding positions on the same taxiway.
5.4.4.4*	The inscription, “VOR Check Course,” is placed on the sign in addition to the VOR and DME data.
5.4.5.1*	The U.S. does not have requirements for airport identification signs, though they are usually installed.
5.4.6.1*	Standards are not provided for signs used to identify aircraft stands.
5.4.7.2	The distance from the edge of road to the road-holding position sign conforms to local highway practice.
5.5.2.2* 5.5.7.1*	Boundary markers may be used to denote the edges of an unpaved runway.
5.5.3	There is no provision for stopway edge markers.
Chapter 6	Visual Aids for Denoting Obstacles
6.1	Recommended practices for marking and lighting obstacles are found in FAA Advisory Circular 70/7460–1J, Obstruction Marking and Lighting.
6.1.3	Any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet (61m) above ground level or exceeds any obstruction standard contained in 14 CFR Part 77, should normally be marked and/or lighted.
6.2.1	This chapter provides recommended guidelines to make certain structures conspicuous to pilots during daylight hours. One way of achieving this conspicuity is by painting and/or marking these structures. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.
6.2.3*	The maximum dimension of the rectangles in a checkered pattern is 6 meters on a side.
6.2.7	Markers should be displayed in conspicuous positions on or adjacent to the structure so as to retain the general definition of the structure. They should be recognizable in clear air from a distance of at least 4,000 feet (1219m) and in all directions from which aircraft are likely to approach. Markers should be distinctively shaped, i.e., spherical or cylindrical, so they are not mistaken for items that are used to convey other information. They should be replaced when faded or otherwise deteriorated.
6.2.11	Flag markers should be displayed around, on top, or along the highest edge of the obstruction. When flags are used to mark extensive or closely grouped obstructions, they should be displayed approximately 50 feet (15m) apart. The flag stakes should be of such strength and height that they will support the flags above all surrounding ground, structures, and/or objects of natural growth.
6.2.12	Each side of the flag marker should be at least 2 feet (0.6m) in length. Standard does not specifically address mobile objects.
6.2.14	Color patterns. Flags should be colored as follows: solid, orange and white, and checkerboard. Standard does not specifically address mobile objects.

6.3.1	Obstruction lighting may be displayed on structures as follows: aviation red obstruction lights; medium intensity flashing white obstruction lights, high intensity flashing white obstruction lights, dual lighting, obstruction lights during construction, obstruction lights in urban areas, and temporary construction equipment lighting.
6.3.11	The height of the structure AGL determines the number of light levels. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.
6.3.13	When a structure lighted by a high intensity flashing light system is topped with an antenna or similar appurtenance exceeding 40 feet (12m) in height, a medium intensity flashing white light (L–865) should be placed within 40 feet (12m) from the tip of the appurtenance. This light should operate 24 hours a day and flash simultaneously with the rest of the lighting system.
6.3.14	The number of light units recommended depends on the diameter of the structure at the top.
6.3.16	Lights should be installed on the highest point at each end. At intermediate levels, lights should be displayed for each 150 feet (46m) or fraction thereof. The vertical position of these lights should be equidistant between the top lights and the ground level as the shape and type of obstruction will permit. One such light should be displayed at each outside corner on each level with the remaining lights evenly spaced between the corner lights.
6.3.17	Lights should be installed on the highest point at each end. At intermediate levels, lights should be displayed for each 150 feet (46m) or fraction thereof. The vertical position of these lights should be equidistant between the top lights and the ground level as the shape and type of obstruction will permit. One such light should be displayed at each outside corner on each level with the remaining lights evenly spaced between the corner lights.
6.3.18	Lights should be installed on the highest point at each end. At intermediate levels, lights should be displayed for each 150 feet (46m) or fraction thereof. The vertical position of these lights should be equidistant between the top lights and the ground level as the shape and type of obstruction will permit. One such light should be displayed at each outside corner on each level with the remaining lights evenly spaced between the corner lights.
6.3.19, 6.3.20	One or more light units is needed to obtain the desired horizontal coverage. The number of light units recommended per level (except for the supporting structures of catenary wires and buildings) depends upon the average outside diameter of the specific structure, and the horizontal beam width of the light fixture. The light units should be installed in a manner to ensure an unobstructed view of the system by a pilot approaching from any direction. The number of lights recommended is the minimum. The U.S. does not utilize Type A or Type B obstacle lights. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.
6.3.21* 6.3.22*	The effective intensity, for daylight–luminance background, of Type A high–intensity obstacle lights is 270,000 cd ± 25 percent. The effective intensity, for daylight–luminance background, of Type B high–intensity obstacle lights is 140,000 cd ± 25 percent.
6.3.22	The height of the structure AGL determines the number of light levels. The light levels may be adjusted slightly, but not to exceed 10 feet (3m) when necessary to accommodate guy wires and personnel who replace or repair light fixtures. If an adjacent object shields any light, horizontal placement of the lights should be adjusted or additional lights should be mounted on that object to retain or contribute to the definition of the obstruction. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.

<p>6.3.23, 6.3.24, 6.3.27, 6.3.29</p>	<p>Red obstruction lights are used to increase conspicuity during nighttime. The red obstruction lighting system is composed of flashing omni directional beacons (L–864) and/or steady burning (L–810) lights. When one or more levels is comprised of flashing beacon lighting, the lights should flash simultaneously.</p> <p>The U.S. does not utilize Type A, B, C, or D obstacle lights. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in</p>
<p>6.3.28</p>	<p>When objects within a group of obstructions are approximately the same overall height above the surface and are located a maximum of 150 feet (46m) apart, the group of obstructions may be considered an extensive obstruction. Install light units on the same horizontal plane at the highest portion or edge of prominent obstructions. Light units should be placed to ensure that the light is visible to a pilot approaching from any direction.</p>
<p>6.3.30, 6.3.31, 6.3.32</p>	<p>The medium intensity flashing white light system is normally composed of flashing omni directional lights. Medium intensity flashing white obstruction lights may be used during daytime and twilight with automatically selected reduced intensity for nighttime operation.</p> <p>The U.S. does not utilize Type A, B, or C obstacle lights. Medium intensity flashing white (L–865) obstruction lights may provide conspicuity both day and night. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of structures and overall layout of design.</p>
<p>6.3.35</p>	<p>Use high intensity flashing white obstruction lights during daytime with automatically selected reduced intensities for twilight and nighttime operations. When high intensity white lights are operated 24 hours a day, other methods of marking and lighting may be omitted.</p> <p>The U.S. does not utilize Type A obstacle lights. Lighting with high intensity (L–856) flashing white obstruction lights provides the highest degree of conspicuity both day and night. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.</p>
<p>Chapter 7</p>	<p>Visual Aids for Denoting Restricted Use Areas</p>
<p>7.1.2*</p>	<p>A “closed” marking is not used with partially closed runways. See 5.2.4.10, above.</p>
<p>7.1.4</p>	<p>Crosses with shapes similar to figure 7.1, illustration b) are used to indicate closed runways and taxiways. The cross for denoting a closed runway is yellow.</p>
<p>7.1.5</p>	<p>In the U.S. when a runway is permanently closed, only the threshold marking, runway designation marking, and touchdown zone marking need be obliterated. Permanently closed taxiways need not have the markings obliterated.</p>
<p>7.1.7</p>	<p>The U.S. does not require unserviceability lights across the entrance to a closed runway or taxiway when it is intersected by a night–use runway or taxiway.</p>
<p>7.4.4</p>	<p>Flashing yellow lights are used as unserviceability lights. The intensity is such as to be adequate to delineate a hazardous area.</p>
<p>Chapter 8</p>	<p>Equipment and Installations</p>
<p>8.1.5* 8.1.6* 8.1.7 8.1.8</p>	<p>A secondary power supply for non–precision instrument and non–instrument approach runways is not required, nor is it required for all precision approach runways.</p> <p>The U.S. does not provide secondary power specifically for take–off operations below 550 meters RVR.</p>
<p>8.2.1</p>	<p>There is no requirement in the U.S. to interleave lights as described in the Aerodrome Design Manual, Part 5.</p>
<p>8.2.3</p>	<p>See 5.3.15.3 and 5.3.16.2</p>
<p>8.7.2* 8.7.3 8.7.4*</p>	<p>Glide slope facilities and certain other installations located within the runway strip, or which penetrate obstacle limitation surfaces, may not be frangibly mounted.</p>

8.9.7*	A surface movement surveillance system is recommended for operations from 350 meters RVR down to 183 meters. Below 183 meters RVR, a surface movement radar or alternative technology is generally required.
Chapter 9	Emergency and Other Services
9.1.1	Emergency plans such as those specified in this section are required only at airports serving scheduled air carriers using aircraft having more than 30 seats. These airports are certificated under 14 CFR Part 139. In practice, other airports also prepare emergency plans.
9.1.12	Full-scale airport emergency exercises are conducted at intervals, not to exceed three years, at airports with scheduled passenger service using aircraft with more than 30 seats.
9.2.1	Rescue and fire fighting equipment and services such as those specified in this section are required only at airports serving scheduled air carriers in aircraft having more than 30 seats. Such airports generally equate to ICAO categories 4 through 9. Other airports have varying degrees of services and equipment.
9.2.3*	There is no plan to eliminate, after 1 January 2005, the current practice of permitting a reduction of one category in the index when the largest aircraft has fewer than an average of five scheduled departures a day.
9.2.4 9.2.5	The level of protection at U.S. airports is derived from the length of the largest aircraft serving the airport similar to the Annex's procedure, except that maximum fuselage width is not used. U.S. indices A–E are close equivalents of the Annex's categories 5–9. The U.S. does not have an equivalent to category 10.

Fire Extinguishing Agents and Equipment

Index	Aircraft length		Total minimum quantities of extinguishing agents		Minimum trucks	Discharge rate ¹
	More than	Not more than	Dry chemical	Water for protein foam		
A		27 meters	225 kg	0	1	See below
B	27 meters	38 meters	225 kg	5,700 L	1	See below
C	38 meters	48 meters	225 kg	5,700 L	2	See below
D	48 meters	60 meters	225 kg	5,700 L	3	See below
E	60 meters		225 kg	11,400 L	3	See below

¹Truck size
1,900 L but less than 7,600
7,600 L or greater

Discharge rate
at least 1,900 L per minute but not more than 3,800 L per minute
at least 2,280 L per minute but not more than 4,560 L per minute

9.2.10	The required firefighting equipment and agents by index are shown in the table above. The substitution equivalencies between complementary agents and foam meeting performance level A are also used for protein and fluoroprotein foam. Equivalencies for foam meeting performance level B are used only for aqueous film forming foams.
9.2.18*	There is no specific requirement to provide rescue equipment as distinguished from firefighting equipment.
9.2.19*	At least one apparatus must arrive and apply foam within 3 minutes with all other required vehicles arriving within 4 minutes. Response time is measured from the alarm at the equipment's customary assigned post to the commencement of the application of foam at the mid-point of the farthest runway.
9.2.29*	For ICAO category 6 (U.S. index B), the U.S. allows one vehicle.
9.4.4	At the present time, there is no requirement to perform tests using a continuous friction measuring device with self-wetting features. Some U.S. airports own these devices, while others use less formal methods to monitor build-up of rubber deposits and the deterioration of friction characteristics.
9.4.15	The standard grade for temporary ramps is 15 feet longitudinal per 1 inch of height (0.56 percent slope) maximum, regardless of overlay depth.
9.4.19	There is no U.S. standard for declaring a light unserviceable if it is out of alignment or if its intensity is less than 50 percent of its specified value.

*Indicates ICAO Recommended Practice

ANNEX 14 – AERODROMES	
VOLUME II – HELIPORTS	
Chapter 1	Definitions
Declared distances	The U.S. does not use declared distances (take-off distance available, rejected take-off distance available, or landing distance available) in designing heliports.
Final approach and take-off area (FATO)	The U.S. “take-off and landing area” is comparable to the ICAO FATO, and the U.S. “FATO” is more comparable to the ICAO TLOF. The U.S. definition for the FATO stops with “the take-off manoeuvre is commenced.” This difference in definition reflects a variation in concept. The rejected take-off distance is an operational computation and is not required as part of the design.
Helicopter stand	The U.S. does not use the term “helicopter stand.” Instead, the U.S. considers paved or unpaved aprons, helipads, and helidecks, all as helicopter parking areas; i.e., helicopter stands.
Safety area	The U.S. considers the safety area to be part of the take-off and landing area which surrounds the FATO and does not call for or define a separate safety area.
Touchdown and lift-off area (TLOF)	The U.S. differs in the definition by considering helipads and helidecks to be FATO. The U.S. does not define the load bearing area on which the helicopter may touch down or lift-off as a TLOF.
Chapter 2	Heliport Data
2.1 d)	The U.S. does not measure or report a safety area as a separate feature of a heliport.
2.2	The U.S. does not “declare” distances for heliports.
Chapter 3	Physical Characteristics
3.1.2	The U.S. does not distinguish between single-engine and multi-engine helicopters for the purposes of heliport design standards. Neither does the U.S. design or classify heliports on the basis of helicopter performance. The U.S. FATO dimensions are at least equal to the rotor diameter of the design single rotor helicopter and the area must be capable of providing ground effect. The U.S. does not have alternative design standards for water FATOs, elevated heliports, or helidecks.
3.1.3	The U.S. has a single gradient standard; i.e., 5 percent, except in fueling areas where the limit is 2 percent, which is applicable for all portions of heliports.
3.1.6 3.1.7* 3.1.8*	The U.S. does not require or provide criteria for clearways in its design standards. It does encourage ownership and clearing of the land underlying the innermost portion of the approach out to where the approach surface is 10.5 meters above the level of the take-off surface.
3.1.14 to 3.1.21	Safety areas are considered part of the take-off and landing area (or primary surface) in U.S. heliport design. The take-off and landing area of the U.S. design criteria, based on 2 rotor diameters, provides for the ICAO safety area; however, the surface does not have to be continuous with the FATO or be load bearing.
3.1.22	Taxiway widths are twice the undercarriage width of the design helicopter.
3.1.23	The U.S. requires 1.25 rotor diameters plus 2 meters of separation between helicopter ground taxiways.
3.1.24	The U.S. gradient standard for taxiways is a maximum of 5 percent.
3.1.32*	The U.S. sets no gradient standards for air taxiways.
3.1.33	The U.S. requires 1.5 rotor diameters of separation between hover or air taxiways.
3.1.34	The U.S. standards for air taxiways and air transit routes are combined as the standards for hover taxiways noted in paragraphs 3.1.23, 3.1.24 and 3.1.33.
3.1.35	The U.S. sets no maximum turning angle or minimum radius of turn on hover taxiways.
3.1.36	The U.S. gradient standard for aprons is a maximum of 5 percent except in fueling areas where it is 2 percent.
3.1.37	The U.S. criterion for object clearances is 1/3 rotor diameter or 3 meters, whichever is greater.
3.1.38	The U.S. standard for helipads (comparable to helicopter stands) is 1.5 times the undercarriage length or width, whichever is greater.

3.1.39	The U.S. standard for separation between FATO center and the centerline of the runway is 120 meters.
3.2.2	The U.S. does not apply either a performance related or an alternative design standard for elevated heliport facilities.
3.2.5 to 3.2.10	The U.S. does not use safety areas in its heliport design.
3.3 3.4	In the U.S., shipboard and relocatable off–shore helicopter “helideck” facilities are under the purview of the U.S. Coast Guard and utilize the International Maritime Organization (IMO) code. Fixed off–shore helideck facilities are under the purview of the Department of Interior based on their document 351DM2. Coastal water helideck facilities are under the purview of the individual affected States.
Chapter 4	Obstacle Restriction and Removal
4.1.1	The U.S. approach surface starts at the edge of the take–off and landing area.
4.1.2 a)	The U.S. approach surface width adjacent to the heliport take–off and landing area is a minimum of 2 rotor diameters.
4.1.2 b) 2)	The U.S. precision instrument approach surface flares from a width of 2 rotor diameters to a width of 1,800 meters at the 7,500 meters outer end. The U.S. does not use a note similar to the one that follows 4.1.4, as it does not differentiate between helicopter requirements on the basis of operational performance.
4.1.5	The outer limit of the U.S. transitional surfaces adjacent to the take–off and landing area is 76 meters from the centerline of the VFR approach/departure surfaces. The transitional surface width decreases to zero at a point 1,220 meters from the take–off and landing area. It does not terminate at an inner horizontal surface or at a predetermined height.
4.1.6	The U.S. transitional surfaces have a fixed width, 76 meters less the width of the take–off and landing area, from the approach centerline for visual operations and an outwardly flaring width to 450 meters for precision instrument operations. The U.S. does not use an inner horizontal surface nor terminate the transitional surfaces at a fixed/predetermined height.
4.1.7 b)	Since the U.S. includes the safety area in the take–off and landing area, the comparable elevation is at the elevation of the FATO.
4.1.9 through 4.1.20	The U.S. does not use the inner horizontal surface, the conical surface, or take–off climb surface described in these paragraphs or the note following paragraph 4.1.20 for heliport design.
4.1.21 through 4.1.25	The U.S. does not have alternative criteria for floating or fixed–in–place helidecks.
4.2	The U.S. has no requirement for a note similar to the one following the heading “Obstacle limitation requirements.”
4.2.1	The U.S. criteria does not require a take–off climb surface or a conical obstacle limitation surface to establish a precision instrument approach procedure.
4.2.2	The U.S. criteria does not require a take–off climb surface or a conical obstacle limitation surface to establish a non–precision instrument approach procedure.
4.2.3	The U.S. criteria does not require a take–off climb obstacle limitation surface to establish a non–instrument approach procedure.
4.2.4*	The U.S. has no requirement for protective surfaces such as an inner horizontal surface or a conical surface.
4.2.5	The U.S. does not have tables for heliport design comparable to the ICAO Tables 4–1 to 4–4.
4.2.6	The U.S. subscribes to the intent of this paragraph to limit object heights in the heliport protective surfaces but uses fewer surfaces with different dimensions for those surfaces.
4.2.7*	The U.S. subscribes to the intent of this paragraph but uses different dimensional surfaces.
4.2.8	The U.S. criterion requires that a heliport have at least one approach and departure route and encourages multiple approaches separated by arcs of 90 to 180 degrees.
4.2.9*	The U.S. has no requirement that a heliport’s approach surfaces provide 95 percent usability.

4.2.10	Since the U.S. does not differentiate between surface level and elevated heliports, the comments to paragraphs 4.2.1 through 4.2.5 above apply.
4.2.11	The U.S. has no requirement for a take-off climb surface. It does require at least one approach/departure surface and encourages that there be as many approaches as is practical separated by arcs of 90 to 180 degrees.
4.2.12 through 4.2.22	Since the U.S. does not have alternative design criteria for helidecks or shipboard heliports, there are no comparable U.S. protective surface requirements.
Tables 4–1, 4–2, 4–3, 4–4	The U.S. does not have tables comparable to the ICAO Tables 4–1 to 4–4.
Chapter 5	Visual Aids
5.2.1	The U.S. does not have criteria for markings to be used in defining winching areas.
5.2.3.3	The U.S. maximum mass markings are specified in 1,000 pound units rather than tonnes or kilograms.
5.2.4.3	The U.S. criterion requires FATO markers but is not specific on the number or spacing between markers.
5.2.4.4	The U.S. criteria for FATO markers is not dimensionally specific.
5.2.6	The U.S. does not require, or have criteria for, marking an aiming point.
5.2.7.1	The U.S. does not require specific criteria for marking floating or off-shore fixed-in-place helicopter or helideck facilities.
5.2.8	The U.S. does not require marking the touchdown area.
5.2.9	The U.S. does not have criteria for heliport name markings.
5.2.10	The U.S. does not have a requirement to mark helideck obstacle-free sectors.
5.2.12.2	The U.S. criterion places the air taxiway markers along the edges of the routes rather than on the centerline.
5.2.12.3	The U.S. criterion for air taxiway markers does not specify the viewing area or height to width ratio.
5.3.2.3	The U.S. heliport beacon flashes white-green-yellow colors rather than a series of timed flashes.
5.3.2.5*	The U.S. criteria is not specific on the light intensity of the flash.
5.3.3.3	The U.S. criterion specifies a 300 meters approach light system configuration. The light bars are spaced at 30 meters intervals. The first two bars of the configuration are single lights, the next two bars are two lights, then two bars with three lights, then two bars with four lights, and finally two bars with five lights.
5.3.3.4	The U.S. approach light system uses aimed PAR-56 lights.
5.3.3.6	The U.S. heliport approach light system does not contain flashing lights.
5.3.5.2 a)	The U.S. requires an odd number of lights, but not less than three lights per side.
5.3.5.2 b)	The U.S. requires a minimum of eight lights for a circular FATO and does not specify the distance between lights.
5.3.5.4*	The U.S. criteria does not specify light distribution.
5.3.6	The U.S. does not have specific criteria for aiming point lights.
5.3.8	The U.S. does not have standards for winching area lighting.
Chapter 6	Heliport Services
6.1*	The U.S. requirements for rescue and fire fighting services at certificated heliports are found in 14 CFR Part 139. Criteria for other heliports are established by the National Fire Protection Association (NFPA) pamphlets 403 or 418, or in regulations of local fire departments.

*Indicates ICAO Recommended Practice

ANNEX 15 – AERONAUTICAL INFORMATION SERVICES	
Chapter 2	Definitions
ASHTAM	The U.S. doesn't have a series of NOTAM called ASHTAM, although notification procedures are written on handling of Volcanic Ash activity.
Danger area	"Danger area" is not used in reference to areas within the U.S. or in any of its possessions or territories.
Integrated Aeronautical Information Package	The U.S. does not produce the entire information package. The U.S. does not use the term Integrated Aeronautical Information Package. The U.S. provides the elements contained in the ICAO Integrated Aeronautical Information Package individually from several different sources and not from a single source.
Maneuvering area	This term is not used by the U.S.
Movement area	The runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing/hover-taxiing, air-taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.
Pre-flight Information Bulletin (PIB)	The US does not use the term PIB. However, current NOTAM information is gathered and available through different sources.
Prohibited area Restricted area	The terms "prohibited area" and "restricted area" will be employed substantially in accordance with the definitions established. Additionally, the following terms will be used: Alert area. Airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft. Alert areas are depicted on aeronautical charts for the information of nonparticipating pilots. All activities within an alert area are conducted in accordance with Federal Aviation Regulations, and pilots of participating aircraft as well as pilots transiting the area are equally responsible for collision avoidance. Controlled firing area. Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons and property on the ground. Warning area. Airspace which may contain hazards to nonparticipating aircraft in international airspace. Military operations area (MOA). An airspace assignment of defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.
SNOWTAM	The US presents the information in a different manner via a NOTAM.
Chapter 3	General
3.1.7	Data is available, but not as an Integrated Aeronautical Information Package.
3.2.12	The US does not present the information in an integrated package. NFDC is responsible for the validation / verification procedures that ensure that quality requirements and traceability of aeronautical data are met.
3.3.1	The U.S. does not provide an Integrated Aeronautical Information Package. There is no single office for this function. This data can be obtained from different offices (NOTAM, Publications & NFDC)
3.3.5	The U.S. does not provide an Integrated Aeronautical Information Package. The U.S. does provide all of this information, but not from a single source. Information may be obtained from various offices, but not a single office.
3.3.6	The U.S. does not provide an Integrated Aeronautical Information Package. The U.S. provides the elements contained in the ICAO Integrated Aeronautical Information Package individually from several different sources and not from a single source.

3.6.1	The U.S. does not produce an Integrated Aeronautical Information Package. The individual elements of the ICAO Integrated Aeronautical Information are available in plain text.
3.6.6.3	The US does not use a nationality letter in the identification of Special Use Airspace (SUA). The US does not use the letter D for danger area.
3.7.2.2	The US utilizes Geoid–03 which is a component of the North American Vertical Datum of 1988 (NAVD 88).
Chapter 4	Aeronautical Information Publications (AIP)
4.1.3	The US does not produce an Aircraft Parking / Docking Chart.
4.2.8 4.3.4	The U.S. does not publish an aeronautical information regulation and control (AIRAC).
4.4 4.5	The U.S. does not issue AIP supplements. Corrections or changes from the latest amendments to the AIP are carried as NOTAMs.
Chapter 5	NOTAM
5.1.1.2	The U.S. does not routinely issue “trigger NOTAMs” referencing published material when an AIP amendment is issued.
5.1.1.4	FAA Order states at least 3 days (versus 7 days) notice required
5.2.1	The current U.S. system numbers international NOTAMs consecutively by the location in the A field. The U.S. routinely issues over 70,000 outgoing international NOTAMs each year. Only series A is used for international distribution. This precludes numbering the NOTAMs by the originator. The US does not utilize the ICAO format as noted in Appendix 6.
5.2.3	The U.S. periodically issues multipart NOTAMs which are transmitted as multiple telecommunication messages. The nature of the NOTAM material is such that it will not always fit in one message. The U.S. does not use the term SNOWTAM. Procedures for reporting snow, slush, ice and water are outlined in FAA Order 7930.2K.
5.2.4	The U.S. doesn’t have a series of NOTAM called ASHTAM, although notification procedures are written on handling of Volcanic Ash activity.
5.2.8.1	The monthly checklist of NOTAMs does not specifically reference printed publications, such as AIP amendments.
5.2.8.3	A monthly printed plain language summary of NOTAMs in force is not issued. The International NOTAM publication, issued biweekly, is not inclusive of all U.S. international NOTAMs.
5.3.2	The U.S. does not use the System NOTAM format at this time. The format used is based on the previous ICAO Class I format. See notes on Appendix 6 for details.
Chapter 6	Aeronautical Information Regulation and Control (AIRAC)
	See 4.2.8.

Chapter 8	Pre–Flight and Post–Flight Information
8.1.2.1 f)	NOTAMs relating to bird hazards are relayed as local NOTAM information and are not disseminated internationally. The information is available from the local flight service station during preflight briefing.
8.1.3	The FAA does not use PIBs, but does provide pertinent NOTAM information in plain language form every 28 days in a document called the Notices to Airmen Publication (NTAP).
8.2.2	The FAA provides all of this information, but not from a single source.
Appendix 1	Contents of Aeronautical Information Publication (AIP)
	The U.S. does not publish sunrise/sunset tables in the AIP.
GEN 3.1.3 4)	The U.S. does not publish pre–flight information bulletins (PIBs).
Appendix 2	SNOWTAM Format
	The U.S. does not use the SNOWTAM for issuance of winter weather information. Snow conditions are reported using our current international NOTAM format (Class D).
Appendix 3	ASHTAM Format
1.3	ASHTAM information will continue to be distributed as an International NOTAM.
2.1	The heading will not be entered as stated.
3	ASHTAM information will be distributed in U.S. International NOTAM format.
Appendix 6	NOTAM Format
	The U.S. is not prepared to transition to the System NOTAM format. NOTAMs are processed in the previous ICAO Class I format.
1.2 General	Multiple conditions, for a single location, may be reported in a NOTAM.
2 NOTAM numbering	The U.S. numbers NOTAMs consecutively by location, not by country of origin. Due to the volume of international NOTAMs generated by the U.S., the current U.S. numbering scheme is expected to continue.
3 Qualifiers	The current software will not accept the Item Q) qualifiers line.
5 Item B)	Item B) is currently issued as an eight digit date–time group. The U.S. also uses the initials “WIE” (with immediate effect) for NOTAMs that take effect immediately upon issuance. The U.S. does not include an Item B) in NOTAMCs. The assumption is that all cancellations take effect immediately when issued. While this date–time group could be added to NOTAMCs, the U.S. position is that it is unnecessary.
6 Item C)	Item C), like item B), is currently issued as an eight digit date–time group. The U.S. also uses the initials “UFN” (until further notice) for NOTAMs that have an uncertain duration.
8 Item E)	U.S. NOTAMs do not contain Item E) information for NOTAMCs. Remark: Item E) contains the NOTAM Code (Q–code) in addition to plain language and ICAO abbreviations.

ANNEX 16 – ENVIRONMENTAL PROTECTION	
VOLUME I – AIRCRAFT NOISE	
Reference: Part 36 of Title 14 of the United States Code of Federal Regulations	
Chapter 1	
1.7	Each person who applies for a type certificate for an airplane covered by 14 CFR Part 36, irrespective of the date of application for the type certificate, must show compliance with Part 36.
Chapter 2	
2.1.1	For type design change applications made after 14 August 1989, if an airplane is a Stage 3 airplane prior to a change in type design, it must remain a Stage 3 airplane after the change in type design regardless of whether Stage 3 compliance was required before the change in type design.
2.3.1 a)	Sideline noise is measured along a line 450 meters from and parallel to the extended runway centerline for two– and three–engine aircraft; for four–engine aircraft, the sideline distance is 0.35 NM.
2.4.2	Noise level limits for Stage 2 derivative aircraft depend upon whether the engine by–pass ratio is less than two. If it is, the Stage 2 limits apply. Otherwise, the limits are the Stage 3 limits plus 3 dB or the Stage 2 value, whichever is lower.
2.4.2.2 b)	Take–off noise limits for three–engine, Stage 2 derivative airplanes with a by–pass ratio equal to or greater than 2 are 107 EPNdB for maximum weights of 385,000 kg (850,000 lb) or more, reduced by 4 dB per halving of the weight down to 92 EPNdB for maximum weights of 28,700 kg (63,177 lb) or less. Aircraft with a by–pass ratio less than 2 only need meet the Stage 2 limits.
2.5.1	Trade–off sum of excesses not greater than 3 EPNdB and no excess greater than 2 EPNdB.
2.6.1.1	For airplanes that do not have turbo–jet engines with a by–pass ratio of 2 or more, the following apply: <ul style="list-style-type: none"> a) four–engine airplanes – 214 meters (700 feet); b) all other airplanes – 305 meters (1,000 feet). For all airplanes that have turbo–jet engines with a by–pass ratio of 2 or more, the following apply: <ul style="list-style-type: none"> a) four–engine airplanes – 210 meters (689 feet); b) three–engine airplanes – 260 meters (853 feet); c) airplanes with fewer than three engines – 305 meters (1,000 feet). The power may not be reduced below that which will provide level flight for an engine inoperative or that will maintain a climb gradient of at least 4 percent, whichever is greater.
Chapter 3	
3.1.1	For type design change applications made after 14 August 1989, if an airplane is a Stage 3 airplane prior to a change in type design, it must remain a Stage 3 airplane after the change in type design regardless of whether Stage 3 compliance was required before the change in type design.
3.3.1 a) 2)	The U.S. has no equivalent provision in 14 CFR Part 36.
3.3.2.2	A minimum of two microphones symmetrically positioned about the test flight track must be used to define the maximum sideline noise. This maximum noise may be assumed to occur where the aircraft reaches 305 meters (1,000 feet). 14 CFR Part 36 does not require symmetrical measurements to be made at each and every point for propeller–driven airplane sideline noise determination.
3.6.2.1 c)	Under 14 CFR Part 36, during each test take–off, simultaneous measurements should be made at the sideline noise measuring stations on each side of the runway and also at the take–off noise measuring station. If test site conditions make it impractical to simultaneously measure take–off and sideline noise, and if each of the other sideline measurement requirements is met, independent measurements may be made of the sideline noise under simulated flight path techniques. If the reference flight path includes a power cutback before the maximum possible sideline noise level is developed, the reduced sideline noise level, which is the maximum value developed by the simulated flight path technique, must be the certificated sideline noise value.

3.6.2.1 d)	14 CFR Part 36 specifies the day speeds and the acoustic reference speed to be the minimum approved value of $V_2 + 10$ kt, or the all–engines operating speed at 35 feet (for turbine–engine powered airplanes) or 50 feet (for reciprocating–engine powered airplanes), whichever speed is greater as determined under the regulations constituting the type certification basis of the airplane. The test must be conducted at the test day speeds ± 3 kt.
3.7.4	If a take–off test series is conducted at weights other than the maximum take–off weight for which noise certification is requested: a) at least one take–off test must be at or above that maximum weight; b) each take–off test weight must be within +5 or –10 percent of the maximum weight. If an approach test series is conducted at weights other than the maximum landing weight for which certification is requested: a) at least one approach test must be conducted at or above that maximum weight; b) each test weight must exceed 90 percent of the maximum landing weight. Total EPNL adjustment for variations in approach flight path from the reference flight path and for any difference between test engine thrust or power and reference engine thrust or power must not exceed 2 EPNdB.
Chapter 5	
5.1.1	Applies to all large transport category aircraft (as they do to all subsonic turbo–jet aircraft regardless of category). Commuter category aircraft, propeller–driven airplanes below 8,640 kg (19,000 lb) are subject to 14 CFR Part 36, Appendix F or to Appendix G, depending upon the date of completion of the noise certification tests.
Chapter 6	
6.1.1	Applies to new, all propeller–driven airplane types below 19,000 lb (8,640 kg.) in the normal, commuter, utility, acrobatic, transport, or restricted categories for which the noise certification tests are completed before 22 December 1988.
Chapter 8	
General	14 CFR Part 36 (Section 36.1 (h)) defines Stage 1 and Stage 2 noise levels and Stage 1 and Stage 2 helicopters. These definitions parallel those used in 14 CFR Part 36 for turbo–jets and are used primarily to simplify the acoustical change provisions in Section 36.11. 14 CFR Part 36 (Section 36.805(c)) provides for certain derived versions of helicopters for which there are no civil prototypes to be certificated above the noise level limits.
8.1.1 a)	Applicable to new helicopter types for which application for an original type certificate was made on or after 6 March 1988.
8.1.1 b)	Applicable only to “acoustical changes” for which application for an amended or supplemental type certificate was made on or after 6 March 1988.
8.4	14 CFR Part 36 Appendix H specifies a slightly different rate of allowable maximum noise levels as a function of helicopter mass. The difference can lead to a difference in the calculated maximum noise limits of 0.1 EPNdB under certain roundoff condition.
8.6.3.1 b)	Does not include the V_{NE} speeds.
8.7	14 CFR Part 36 Appendix H does not permit certain negative corrections. Annex 16 has no equivalent provision.
8.7.4	EPNL correction must be less than 2.0 EPNdB for any combination of lateral deviation, height, approach angle and, in the case of flyover, thrust or power. Corrections to the measured data are required if the tests were conducted below the reference weight. Corrections to the measured data are required if the tests were conducted at other than reference engine power.
8.7.5	The rotor speed must be maintained within one percent of the normal operating RPM during the take–off procedure.
8.7.8	The helicopter shall fly within $\pm 10^\circ$ from the zenith for approach and take–off, but within $\pm 5^\circ$ from the zenith for horizontal flyover.

Chapter 10	
General	Exception from acoustical change rule given for aircraft with flight time prior to 1 January 1955 and land configured aircraft reconfigured with floats or skis.
10.1.1	Applies to new, amended, or supplemental type certificates for propeller-driven airplanes not exceeding 8,640 kg (19,000 lb) for which noise certification tests have not been completed before 22 December 1988.
10.4	The maximum noise level is a constant 73 dBA up to 600 kg (1,320 lb). Above that weight, the limit increases at the rate of 1 dBA/75kg (1 dBA/165 lb) up to 85 dBA at 1,500 kg (3,300 lb) after which it is constant up to and including 8,640 kg (19,000 lb).
10.5.2, second phase, d)	For variable-pitch propellers, the definition of engine power is different in the second segment of the reference path. Maximum continuous installed power instead of maximum power is used.
Chapter 11	
11.1	14 CFR Part 36 Appendix J was effective 11 September 1992 and applies to those helicopters for which application for a type certificate was made on or after 6 March 1986.
11.4	14 CFR Part 36 Appendix J specifies a slightly different rate of allowable maximum noise levels as a function of helicopter mass. The difference can lead to a difference in the calculated maximum noise limits of 0.1 EPNdB under certain roundoff condition.
11.6	14 CFR Part 36 Appendix J prescribes a ±15 meter limitation on the allowed vertical deviation about the reference flight path. Annex 16 has no equivalent provision.
PART V	
General	No comparable provision exists in U.S. Federal Regulations. Any local airport proprietor may propose noise abatement operating procedures to the FAA which reviews them for safety and appropriateness.
Appendix 1	
General	Sections 3, 8, and 9 of Appendix 1 which contain the technical specifications for equipment, measurement and analysis and data correction for Chapter 2 aircraft and their derivatives differ in many important aspects from the corresponding requirements in Appendix 2 which has been updated several times. 14 CFR Part 36 updates have generally paralleled those of Appendix 2 of Annex 16. These updated requirements are applicable in the U.S. to both Stage 2 and Stage 3 aircraft and their derivatives.
2.2.1	A minimum of two microphones symmetrically positioned about the test flight track must be used to define the maximum sideline noise. This maximum noise may be assumed to occur where the aircraft reaches 305 meters (1,000 feet), except for four-engine, Stage 2 aircraft for which 439 meters (1,440 feet) may be used.
2.2.2	No obstructions in the cone defined by the axis normal to the ground and the half-angle 80° from the axis.
2.2.3 c)	Relative humidity and ambient temperature over the sound path between the aircraft and 10 meters above the ground at the noise measuring site is such that the sound attenuation in the 8 kHz one-third octave band is not greater than 12 dB/100 meters and the relative humidity is between 20 and 95 percent. However, if the dew point and dry bulb temperature used for obtaining relative humidity are measured with a device which is accurate to within one-half a degree Celsius, the sound attenuation rate shall not exceed 14 dB/100 meters in the 8 kHz one-third octave band.
2.2.3 d)	Test site average wind not above 12 kt and average cross-wind component not above 7 kt.
2.3.4	The aircraft position along the flight path is related to the recorded noise 10 dB downpoints.
2.3.5	At least one take-off test must be a maximum take-off weight and the test weight must be within +5 or -10 percent of maximum certificated take-off weight.
Appendix 2	
2.2.1	A minimum of two symmetrically placed microphones must be used to define the maximum sideline noise at the point where the aircraft reaches 305 meters.

2.2.2	When a multiple layering calculation is required, the atmosphere between the airplane and the ground shall be divided into layers. These layers are not required to be of equal depth, and the maximum layer depth must be 100 meters.
2.2.2 b)	14 CFR Part 36 specifies that the lower limit of the temperature test window is 36 degrees Fahrenheit (2.2 degrees Celsius). Annex 16 provides 10 degrees Celsius as the lower limit for the temperature test window. 14 CFR Part 36 does not specify that the airport facility used to obtain meteorological condition measurements be within 2,000 meters of the measurement site.
2.2.2 c)	14 CFR Part 36 imposes a limit of 14 dB/100 meters in the 8 kHz one-third octave band when the temperature and dew point are measured with a device which is accurate to within one-half a degree Celsius.
2.2.3	14 CFR Part 36 requires that the limitations on the temperature and relative humidity test window must apply over the whole noise propagation path between a point 10 meters above the ground and the helicopter. Annex 16 specifies that the limitations on the temperature and relative humidity test window apply only at a point 10 meters above the ground. 14 CFR Part 36 requires that corrections for sound attenuation must be based on the average of temperature and relative humidity readings at 10 meters and the helicopter. Annex 16 implies that the corrections for sound absorption are based on the temperature and relative humidity measured at 10 meters only.
3.2.6	No equivalent requirement.
3.4.5	For each detector/integrator the response to a sudden onset or interruption of a constant sinusoidal signal at the respective one-third octave band center frequency must be measured at sampling times 0.5, 1.0, 1.5, and 2.0 seconds after the onset or interruption. The rising responses must be the following amounts before the steady-state level: 0.5 seconds: 4.0 ± 1.0 dB 1.0 seconds: 1.75 ± 0.75 dB 1.5 seconds: 1.0 ± 0.5 dB 2.0 seconds: 0.6 ± 0.5 dB
3.4.5 (Note 1)	No equivalent provision in 14 CFR Part 36.
3.5.2	No equivalent requirement.
5.4	14 CFR Part 36 requires that the difference between airspeed and groundspeed shall not exceed 10 kt between the 10 dB down time period.
8.4.2	14 CFR Part 36 specifies a value of –10 in the adjustment for duration correction. Annex 16 specifies a value of –7.5.
9.1.2, 9.1.3	14 CFR Part 36 always requires use of the integrated procedure if the corrected take-off or approach noise level is within 1.0 dB of the applicable noise limit.
Appendix 6	
4.4.1	The microphone performance, not its dimensions, is specified. The microphone must be mounted 1.2 meters (4 feet) above ground level. A windscreen must be employed when the wind speed is in excess of 9 km/h (5 kt).
5.2.2 a)	Reference conditions are different. Noise data outside the applicable range must be corrected to 77 degrees F and 70 percent humidity.
5.2.2 c)	There is no equivalent provision in 14 CFR Part 36. Fixed-pitch propeller-driven airplanes have a special provision. If the propeller is fixed-pitch and the test power is not within 5 percent of reference power, a helical tip Mach number correction is required.

ANNEX 16 – ENVIRONMENTAL PROTECTION	
VOLUME II – AIRCRAFT ENGINE EMISSIONS	
Chapter 1	
	The U.S. currently has regulations prohibiting intentional fuel venting from turbojet, turbofan and turboprop aircraft, but we do not now have a regulation preventing the intentional fuel venting from helicopter engines.

ANNEX 17 – SECURITY – SAFEGUARDING INTERNATIONAL CIVIL AVIATION AGAINST ACTS OF UNLAWFUL INTERFERENCE

There are no reportable differences between U.S. regulations and the Standards and Recommended Practices contained in this Annex.

ANNEX 18 – THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR
Adopted by the ICAO Council 6/26/81
Effective Date: 1/1/83
Applicability Date: 1/1/84
(Note: Differences are to be filed with ICAO by 6/1/83).

PANS ATM Doc 4444	
There are several substantive differences between the U.S. procedures and those of ICAO, in addition to some minor variations in detail which are not considered significant. These differences are the result of initiatives and/or refinements which the U.S. has effected in the interest of improving the safety and efficiency of air traffic.	
PAN ATM Doc 4444 15th Edition	7110.65 S
CHAPTER 1	Definitions
Definitions	U.S. uses Word Meanings, Definitions (PG Glossary) and Abbreviations
Affirm	U.S. has no phraseology using “AFFIRM”. U.S. uses “ AFFIRMATIVE ” – “ Yes ”. ; or “ ACKNOWLEDGE ; or Roger, Wilco ”
Airborne Collision Avoidance System	The U.S. uses traffic alert and collision avoidance system (TCAS).
Aircraft	U.S. uses “ Aircraft ” to mean the airframe, crew members, or both.
AIRMET	In the U.S., AIRMET stands for Airman’s Meteorological Information which is in-flight weather advisories issued only to amend the area forecast concerning weather phenomena which are of operational interest to all aircraft and potentially hazardous to aircraft having limited capability because of lack of equipment, instrumentation, or pilot qualifications. AIRMETs concern weather of less severity than that covered by SIGMETs or convective SIGMETs. AIRMETs cover moderate icing, moderate turbulence, sustained winds of 30 kt or more at the surface, widespread areas of ceilings less than 1,000 feet and/or visibility less than 3 miles, and extensive mountain obscurement.
Air-report	The U.S. does not normally use the term “air-report.” Pilot weather reports (PIREPs), position, and operational reports are used. PIREPs include reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, volcanic eruptions and volcanic ash clouds, and other conditions pertinent to flight safety. They may include information on ceilings, visibility, thunderstorms, icing of light degree or greater, wind shear and its effect on airspeed, or volcanic ash clouds, but do not usually include air temperature.
Air-taxiing	In the U.S., the term “hover taxi” is sometimes used to indicate the ICAO term “air-taxiing.” In the U.S., air-taxiing is the preferred method for helicopter movements on airports provided ground operations/conditions permit. Additionally, in the U.S., air taxi is used to indicate certain commercial aircraft operations. For those operations, usually a special call sign is used, or the prefix “Tango” is added to the aircraft call sign.
ALERFA	The U.S. does not use the code words ALERFA, DETRESFA, and INCERFA to designate an alert.
Altitude	U.S. uses “ Altitude ” to mean indicated altitude mean sea level (MSL), flight level (FL), or both.
Approval Request	U. S. uses “ APREQ ”
Approved separation	U.S. uses “ Approved separation ” to mean separation in accordance with the applicable minima in this manual.
Area control service	The U.S. does not use the term “area control service” to indicate controlled flight in controlled areas.
ATS route	In U.S. domestic airspace, the term “ATS route” is not used. Routes in the U.S. include VOR airways, jet routes, substitute routes, off-airway routes, RNAV routes and colored airways. The U.S. also uses instrument departure procedures (DPs), and standard terminal arrivals (STARs).
Automatic Dependent Surveillance (ADS)	The U.S. has not yet published ATS procedures for the use of Automatic Dependent Surveillance (ADS).

Control zone	The U.S. uses “surface area” in place of the ICAO term “control zone.” Surface area is defined as the airspace contained by the lateral boundary of the Class B, C, D or E airspace designated for an airport that begins at the surface and extends upward.
Controlled airspace	The U.S. uses the following definition of controlled airspace found in 14 CFR Section 1.1: “Controlled airspace means an airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.”
Course, bearing, azimuth, heading, and wind direction	U.S. uses “ Course, bearing, azimuth, heading, and wind direction ” information and it shall always be magnetic unless specifically stated otherwise.
Cruising level	The U.S. uses the term “cruising altitude.”
Decision altitude	Approach with vertical guidance (VNAV).
DETRESFA	See ALERFA.
Expedite	U.S. uses “ EXPEDITE ” by ATC when prompt compliance is required to avoid the development of an imminent situation. Expedite climb/descent normally indicates to a pilot that the approximate best rate of climb/descent should be used without requiring an exceptional change in aircraft handling characteristics.
Flight information centre	In the U.S., the services provided by flight information centers (FICs) are conducted by air traffic control (ATC) facilities, automated flight service stations (AFSSs), and rescue coordination centers (RCCs).
Glide path	The U.S. uses “glideslope” rather than “glide path” although the terms are sometimes interchangeable. For the U.S., a glideslope provides vertical guidance for aircraft during approach and landing.
Holding procedure	In the U.S., a hold procedure is also used during ground operations to keep aircraft within a specified area or at a specified point while awaiting further clearance from air traffic control.
Holding point	The U.S. uses “holding fix” rather than “holding point.”
INCERFA	See ALERFA.
Kilometres	U.S. ATIS units do not accept aircraft speeds in metric terms nor do they use the term “minimum clean speed.” The U.S. does use phrases such as “maintain maximum forward speed” or “maintain slowest practical speed.”
Level	The U.S. uses “altitude” or “flight level” rather than “level.”
May or need not	U.S. uses “ May ” or “ need not ” means a procedure is optional .
Miles	U.S. uses “ Miles ” to mean nautical miles unless otherwise specified, and means statute miles in conjunction with visibility .
Minute	U.S. uses “ minute plus 30 seconds ”, except when time checks are given to the nearest quarter minute.
Movement area	In the U.S., the “movement area” is equivalent to the ICAO “maneuvering area” which does not include parking areas.
Pilot-in-Command	Designated by operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.
Plural	U.S. uses “ Plural words to include the singular ”.
Runway	U.S. uses “ Runway ”, which means the runway used by aircraft , and in discussions of separation standards is applicable to helipads with accompanying takeoff/ landing courses.
Shall	U.S. uses “ Shall ” or an action verb in the imperative sense, to mean a procedure is mandatory .
Should	U.S. uses “ Should ” to mean a procedure is recommended .
Singular	U.S. uses “ Singular words to include the plural ”.
Slush	In the U.S., “slush” is not used as a weather phenomenon.
Standard instrument arrival (STAR)	The U.S. uses the acronym STAR to define a standard terminal arrival.
Standard instrument departure (SID)	The U.S. uses the term departure procedure (DP) in lieu of SID.
Stand-by	U. S. uses “ STAND BY ” to mean the controller or pilot must pause for a few seconds, usually to attend to other duties of a higher priority. Also means to wait as in “stand by for clearance.” The caller should reestablish contact if a delay is lengthy. “Stand by” is not an approval or denial.
Stopway	The U.S. does not define a “stopway” as a rectangular area.

Taxi-holding position	In the U.S., “taxi into position and hold” means taxi onto the departure runway in take-off position and hold while the ICAO “taxi-holding position” or “taxi-holding point” is a designated position that provides adequate clearance from a runway.
Terminal control area	In the U.S., the term “terminal control area” has been replaced by “Class B airspace.” Standard IFR services should be provided to IFR aircraft operating in Class B airspace.
Time	U.S. when uses “ Time ” for ATC operational activities, is the hour and the minute in Coordinated Universal Time (UTC). Change to the next minute is made at the minute plus 30 seconds, except time checks are given to the nearest quarter minute
Track	The U.S. uses the term “course” instead of “track.”
Transition altitude, transition layer, and transition level	In U.S. domestic airspace, transition altitude, layer, and level are not used. U.S. flight levels begin at FL 180 where a barometric altimeter setting of 29.92 inches of mercury is used as the constant atmospheric pressure. Below FL 180, altitudes are based on barometric pressure readings.
Visibility	Definitions are different.
Visual Approach	In the U.S., aircrews may execute visual approaches when the pilot has either the airport or the preceding aircraft in sight and is instructed to follow it.
Will	U.S. uses “ Will ” means futurity, not a requirement for the application of a procedure.
CHAPTER 4	GENERAL PROVISIONS FOR AIR TRAFFIC SERVICES
4.13.4	Flight Progress Strips shall be retained for at least 15 days. (7110.3 3-4-4b)
4.3.2.1	Transfer of control points vary depending on numerous factors.
4.3.3.1	Transfer of control varies.
4.3.3.1a/ b	The U.S. does not “release” aircraft. Handoff is used.
4.4	In the U.S., flight information and alerting services are provided by ATC facilities, AFSSs, and RCCs.
4.5.6.2	U.S. ATS controllers do not normally include clearance for transonic acceleration in their ATC clearances.
4.5.7.3 LEVELS Except as provided for in Chapter 6, 6.3.2 and 6.5.1.5, use of standard departure and arrival clearances, instructions included in clearances relating to levels shall consist of the items specified in Chapter 11, 11.4.2.6.2.2. 4.10.4 Provision of altimeter setting information	In U.S. domestic airspace, transition altitude, layer, and level are not used. U.S. flight levels begin at FL180 where a barometric altimeter setting of 29.92 inches of mercury is used as the constant atmospheric pressure. Below FL 180, altitudes are based on barometric pressure readings. QNH and QFE altimeter settings are not provided in domestic U.S. airspace.
4.5.7.5	The flight crew shall read back to the air traffic controller safety-related parts of ATC clearances.
4.6.3.6	Only minor speed reductions of 20 knots should be used on intermediate or final approach.
4.6.3.7	Speed control after 7KM (4NM) should not be applied.
4.8.3	ATS units are not required to advise a pilot who has canceled an IFR flight plan that IMC conditions are likely to be encountered along the route of flight; however, if a pilot informs a controller of a desire to change from IFR to VFR, the controller will request that the pilot contact the appropriate AFSS.
4.9.2	In the U.S., the word “heavy” is used in all communications with or about heavy jet aircraft in the terminal environment. In the en route environment, “heavy” is used in all communications with or about heavy jet aircraft with a terminal facility, when the en route center is providing approach control service, when the separation from a following aircraft may become less than five miles by approved procedure, and when issuing traffic advisories.
4.11 POSITION REPORTING	The U.S. has different criteria to make position reports. 5 -1-12. POSITION REPORTING

4.11.4 Transmission of ADS-C reports	The U.S. has not yet published ATS procedures for the use of Automatic Dependent Surveillance- Contract (ADS-C).
4.12.2 Contents of routine air-reports 4.12.3 Contents of special air-reports	The U.S. does not normally use the term “air-report.” Pilot weather reports (PIREPs), position, and operational reports are used. PIREPs include reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, volcanic eruptions and volcanic ash clouds, and other conditions pertinent to flight safety. They may include information on ceilings, visibility, thunderstorms, icing of light degree or greater, wind shear and its effect on airspeed, or volcanic ash clouds, but do not usually include air temperature.
4.13.4	Flight Progress Strips shall be retained for at least 15 days. (7110.3 3-4-4b)
4.15 DATA LINK COMMUNICATIONS INITIATION PROCEDURES	The U.S. has not yet published ATS procedures for the use of Datalink
CHAPTER 5	SEPARATION METHODS AND MINIMA
5.2.1 General	In U.S. airspace, only conflict resolution (not separation) is provided between IFR and VFR operations. Separation is provided between IFR and Special VFR (SVFR) aircraft only within the lateral boundaries of Class B, C, D, or E control zones (the U.S. term is surface areas) below 10,000 feet MSL.
5.2.1 General	In U.S. Class A and B airspace, separation is provided for all aircraft. In U.S. Class C airspace, separation is provided between IFR and SVFR aircraft; conflict resolution is provided between IFR and VFR operations.
5.3.1 Vertical separation application 5.3.4 Vertical separation during climb or descent	U.S. rules allow assignment of altitude to second aircraft after first aircraft has been issued climb/descent and is observed or reports leaving that altitude. 7110.65 6-6-1. APPLICATION 6-6-2. EXCEPTIONS
5.4.2.2.1c/ d	The U.S. uses 22 kt instead of 20 kt and 44 kt instead of 40 kt.
5.4.2.1.5	The U.S. uses the term “course” instead of “track.” “Reciprocal” courses are sometimes referred to as “opposite” courses. The wording of the definitions for U.S. <i>same</i> , <i>crossing</i> , or <i>opposite/reciprocal</i> courses differs from the ICAO worded definitions, but the intent appears to be the same.
5.4.2.6.4.3.3 Conflict is resolved within a further 7 1/2 minutes.	U. S. 3. When an ADS-C periodic or waypoint change event report is overdue by <i>3 minutes</i> , the controller shall take action to obtain an ADS-C report. 4. If no report is received within <i>6 minutes</i> of the time the original report was due, the controller shall take action to apply another form of separation. 7110.65 8-9-3. LONGITUDINAL SEPARATION
CHAPTER 6	SEPARATION IN THE VICINITY OF AERODROMES
6.3.2.5 COMMUNICATION FAILURE 8.8.3.2 COMPLETE AIRCRAFT COMMUNICATION FAILURE 15.3 AIR-GROUND COMMUNICATIONS FAILURE	In the U.S., if the communications failure occurs in IFR conditions, or if VFR cannot be complied with, each pilot shall continue the flight according to the following requirements: Route a) By the route assigned in the last ATC clearance received; b) If being radar vectored, by the direct route from the point of failure to the fix, route, or airway specified in the vector clearance; c) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or d) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan. Altitude - At the highest of the following altitudes or flight levels for the route segment being flown: a) The altitude or flight level assigned in the last ATC clearance received; b) The minimum altitude as prescribed in 14 CFR Part 91 (Section 91.121(c)) for IFR operations; or c) The altitude or flight level ATC has advised may be expected in a further clearance.
6.3.3.3	Arriving aircraft - delay of 10 minutes or more. 7110.65 4-7-11 d 5
6.5.5.2	Onward clearance time. 7110.65 PG EXPECT FURTHER CLEARANCE (TIME)- The time a pilot can expect to receive clearance beyond a clearance limit

6.7.3.1.2 Whenever parallel approaches are carried out, separate controllers should be responsible for the sequencing and spacing of arriving aircraft to each runway	U.S. has no criteria for separate radar controllers in conducting Parallel approaches.
6.7.3.2.9	U.S. has no parallel approach obstacle assessment surfaces (PAOAS) Criteria.
6.7.3.2.9	U.S. has no criteria for a “45 degree track”.
6.7.3.2.10 a)	U.S. has no criteria for both controllers to be advised when visual separation is applied.
6.7.3.5.3 b)	U.S. has no surveillance radar approach (SRA)
6.7.3.5.3 c)	In the U.S., aircrews may execute visual approaches when the pilot has either the airport or the preceding aircraft in sight and is instructed to follow it. A contact approach is one wherein an aircraft on an IFR flight plan, having an air traffic control authorization, operating clear of clouds with at least 1 mile flight visibility and a reasonable expectation of continuing to the destination airport by visual reference in those conditions, may deviate from the instrument approach procedure and proceed to the destination airport by visual reference to the surface. This approach will only be authorized when requested by the pilot and the reported ground visibility at the destination airport is at least 1 statute mile.
CHAPTER 7	PROCEDURES FOR AERODROME CONTROL SERVICE
7.2 SELECTION OF RUNWAY-IN-USE	Except where a “runway use” program is in effect, in the U.S. the runway used will be the one most nearly aligned with the wind when 5 kt or more, or the “calm wind” runway when less than 5 kt unless use of another runway will be operationally advantageous or is requested by a pilot.
7.4.1.1 START-UP TIME PROCEDURES	U.S. has no start up procedures, taxi clearance.
7.6.3.2.3.2 <i>Light signal from aerodrome control</i>	In the U.S., for movements of other than aircraft traffic (i.e., vehicles, equipment, and personnel), steady green means cleared to cross, proceed, go; flashing green is not applicable; flashing white means return to starting point on airport; and alternating red and green means a general warning signal to exercise extreme caution.
7.6.3.2.3.3 Flashing runway or taxiway lights	U.S. controllers do not flash runway or taxiway lights to instruct aircraft to “vacate the runway and observe the tower for light signal.”
7.10.2 Clearance to land	In the U.S., landing clearance to a succeeding aircraft in a landing sequence need not be withheld if the controller observes the positions of the aircraft and determines that prescribed runway separation will exist when the aircraft crosses the landing threshold. Controllers issue traffic information to the succeeding aircraft if it has not previously been reported.
7.11.4 For the purpose of reduced runway separation, aircraft shall be classified as follows: Also <i>Chapter 4, Section 4.9 and Chapter 5, Section 5.8, respectively.</i>	ICAO aircraft wake turbulence categories (heavy, medium, light) and FAA weight classes (heavy, large, small) differ. Also, for landing aircraft, wake turbulence separation is defined differently. The U.S. makes special provisions for any aircraft landing behind a B-757 (4 miles for a large aircraft behind or 5 miles for a small aircraft behind).

<p>7.14 AUTHORIZATION OF SPECIAL VFR FLIGHTS</p>	<p>Special VFR operations may be conducted in the U.S. under the following weather minimums and requirements below 10,000 feet MSL within the airspace contained by the upward extension of the lateral boundaries of the controlled airspace designated to the surface for an airport. These minimums and requirements are found in 14 CFR Section 91.157.</p> <p>Special VFR operations may only be conducted:</p> <p>(1) With an ATC clearance;</p> <p>(2) Clear of clouds;</p> <p>(3) Except for helicopters, when flight visibility is at least 1 statute mile; and</p> <p>(4) Except for helicopters, between sunrise and sunset (or in Alaska, when the sun is 6 degrees or more below the horizon) unless:</p> <p>(i) The person being granted the ATC clearance meets the applicable requirements for instrument flight; and</p> <p>(ii) The aircraft is equipped as required in 14 CFR Sec. 91.205(d).</p> <p>No person may take off or land an aircraft (other than a helicopter) under special VFR:</p> <p>(1) Unless ground visibility is at least 1 statute mile; or</p> <p>(2) If ground visibility is not reported, unless flight visibility is at least 1 statute mile.</p>
<p>CHAPTER 8</p>	<p>ATS SURVEILLANCE SERVICES</p>
<p>8.6.5.2</p>	<p>The U.S. has not implemented cold temperature corrections to the radar minimum vectoring altitude</p>
<p>CHAPTER 9</p>	<p>FLIGHT INFORMATION SERVICE AND ALERTING SERVICE</p>
<p>9.1.3.7 TRANSMISSION OF INFORMATION TO SUPERSONIC AIRCRAFT</p>	<p>The U.S. does not have special procedures for the transmission of information to supersonic aircraft.</p>
<p>9.1.4.1.1</p>	<p>Class F airspace is not used in the U.S. Traffic advisories are provided in Class C airspace and, workload permitting, in Class D, Class E, and Class G airspace.</p>
<p>9.2.1.2</p>	<p>The U.S. does not use “operations normal” or “QRU” messages. U.S. controllers are not normally familiar with the term “uncertainty phase.”</p>
<p>CHAPTER 10</p>	<p>COORDINATION</p>
<p>10.1.3.1 DIVISION OF CONTROL</p>	<p>Except for a VFR aircraft practicing an instrument approach, an IFR approach clearance in the U.S. automatically authorizes the aircraft to execute the missed approach procedure depicted for the instrument approach being flown. No additional coordination is normally needed between the approach and en route controllers. Once an aircraft commences a missed approach, it may be radar vectored.</p>
<p>CHAPTER 11</p>	<p>AIR TRAFFIC SERVICES MESSAGES</p>
<p>11.1.2 Emergency messages</p>	<p>U.S. uses different emergency messages. 7110.10 T Chapter 8. Search and Rescue (SAR) Procedures for VFR Aircraft</p>
<p>11.4.2.3.6 LOGICAL ACKNOWLEDGEMENT MESSAGES (LAM)</p>	<p>The existing U.S. ATS automation system does not process logical acknowledgment messages (LAMs).</p>
<p>CHAPTER 12</p>	<p>PHRASEOLOGIES</p>
<p>12.3.1 General to require action when convenient m) WHEN READY (instruction);</p>	<p>U.S. does not use this phraseology. 7110.65 4-5-7. ALTITUDE INFORMATION PHRASEOLOGY CLIMB/ DESCEND AT PILOT’S DISCRETION 1. The pilot is expected to commence descent upon receipt of the clearance and to descend at the suggested rates specified in the AIM, 4-4-9, Adherence to Clearance, until reaching FL 280. At that point, the pilot is authorized to continue descent to FL 240 within the context of the term “at pilot’s discretion” as described in the AIM. f. When the “pilot’s discretion” portion of a climb/descent clearance is being canceled by assigning a new altitude, inform the pilot that the new altitude is an “amended altitude.” EXAMPLE- “American Eighty Three, amend altitude, descend and maintain Flight Level two six zero.”</p>
<p>12.3.1.2 2) TO AND MAINTAIN BLOCK (level) TO (level);</p>	<p>U.S. uses “maintain block (altitude) through (altitude). 7110.65 4-5-7. g. ALTITUDE INFORMATION</p>

<p>12.3.1.2 n) MAINTAIN OWN SEPARATION AND VMC [FROM (level)] [TO (level)]; o) MAINTAIN OWN SEPARATION AND VMC ABOVE (or BELOW, or TO) (level);</p>	<p>U.S. does not use “maintain own separation and VMC ‘from,’ ‘above,’ or ‘below’ . . . ,” U.S. controllers say “maintain visual separation ‘from’ that traffic.”</p>
<p>12.3.1.2 *t) CLEAR OF CONFLICT, RETURNING TO (assigned clearance);</p>	<p>TCAS resolution advisories in the U.S., pilots would advise “clear of conflict, returning to ...”</p>
<p>12.3.1.5 CHANGE OF CALL SIGN</p>	<p>U.S. has no phraseology or approved procedure to advise aircraft to change call signs. The U.S. has procedures for a duplicate aircraft identification watch and notification to airline operators but does not publish national procedures for on-the-spot temporary changes to aircraft call signs in accordance with ICAO guidelines.</p>
<p>12.3.1.6 TRAFFIC INFORMATION</p>	<p>In the U.S., traffic information messages include the position of the traffic (aircraft concerned).</p>
<p>12.3.1.7 a) METEOROLOGICAL CONDITIONS</p>	<p>In the U.S., the criterion for a variable wind is: wind speed greater than 6 kt and direction varies by 60 degrees or more. If the wind is >1 kt but <6 kt, the wind direction may be replaced by “VRB” followed by the speed or reported as observed. “VRB” would be spoken as “wind variable at <speed>.”</p>
<p>12.3.1.7 d)e)f) METEOROLOGICAL CONDITIONS</p>	<p>U.S. controllers do not give wind speed, visibility, or RVR/RVV values in metric terms. RVR values are given in 100- or 200-foot increments while RW values are given in Venule increments. 2-8-2. ARRIVAL/DEPARTURE RUNWAY VISIBILITY</p>
<p>12.3.1.7 j) METEOROLOGICAL CONDITIONS</p>	<p>U.S. controllers do not use the term “CAVOK.” However, the ceiling/sky condition, visibility, and obstructions to vision may be omitted if the ceiling is above 5,000 feet and the visibility is more than 5 miles.</p>
<p>12.3.1.10 g) AERODROME INFORMATION BRAKING ACTION REPORTED BY (aircraft type) AT (time) GOOD (or MEDIUM, or POOR)</p>	<p>U.S. use BRAKING ACTION terms “good,” “fair,” “poor,” “nil,” or combination of these terms. “Braking action fair to poor, reported by a heavy D-C Ten.”. 7110.65 3-3-4.</p>
<p>12.3.1.10 i) BRAKING ACTION [(location)] (measuring equipment used), RUNWAY (number), TEMPERATURE [MINUS] (number), WAS (reading) AT (time);</p>	<p>U.S. does not issue Temperature with Braking Action. 7110.65 3-3-4.</p>

12.3.2.2 INDICATION OF ROUTE AND CLEARANCE LIMIT	U.S. will issue a clearance “direct” to a point on the previously issued route. PHRASEOLOGY CLEARED DIRECT (fix). NOTE Clearances authorizing “direct” to a point on a previously issued route do not require the phrase “rest of route unchanged.” However, it must be understood where the previously cleared route is resumed. When necessary, “ rest of route unchanged ” may be used to clarify routing. 7110.65 4-4-1. ROUTE USE & 4-2-5. ROUTE OR ALTITUDE AMENDMENTS 3.
12.3.2.5 Emergency Descent	U.S. has no phraseology or instruction for emergency descent:
12.3.2.8 b) ADVISE IF ABLE TO CROSS (significant point) AT (time or level)	U.S. has no phraseology for “ADVISE IF ABLE”. U.S. does have phraseology “Advise if unable...”
12.3.4.7 n),o),p) BACKTRACT APPROVED	U.S. has no phraseology using ”BACKTRACT”. U.S. does use BACK-TAXI (7110.65) – A term used by air traffic controllers to taxi an aircraft on the runway opposite to the traffic flow. The aircraft may be instructed to back-taxi to the beginning of the runway or at some point before reaching the runway end for the purpose of departure or to exit the runway.
12.3.4.11 a), b) TAKE-OFF CLEARANCE 12.3.4.16 LANDING CLEARANCE	In U.S. runway number is specified after take off or landing clearance. Issue a take-off clearance in the following form: Phraseology: LEFT/RIGHT TURN OUT, CLEARED FOR TAKEOFF RUNWAY (number). Phraseology: CLEARED TO LAND RUNWAY (number).
12.3.4.11 TAKE-OFF CLEARANCE when take-off clearance has not been complied with c) Vacate 12.3.4.20 RUNWAY VACATING AND COMMUNICATIONS AFTER LANDING b	U.S. uses CLEAR OF THE RUNWAY a. Taxiing aircraft, which is approaching a runway, is clear of the runway when all parts of the U.S. uses aircraft are held short of the applicable runway holding position marking. b. A pilot or controller may consider an aircraft, which is exiting or crossing a runway, to be clear of the runway when all parts of the aircraft are beyond the runway edge and there are no restrictions to its continued movement beyond the applicable runway holding position marking. c. Pilots and controllers shall exercise good judgment to ensure that adequate separation exists between all aircraft on runways and taxiways at airports with inadequate runway edge lines or holding position markings.
12.3.4.11 TAKE-OFF CLEARANCE ... to cancel a take-off clearance e) HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF (reasons); ... to stop a take-off after an aircraft has	U.S. uses different phraseology to cancel a take off. 3-9-10. CANCELLATION OF TAKEOFF CLEARANCE PHRASEOLOGY CANCEL TAKEOFF CLEARANCE (reason). If circumstances require, cancel a previously issued take-off clearance and, when appropriate, inform the aircraft of the reason. Phraseology If a clearance to take off is cancelled: A. before the aircraft has started to roll — TAKE-OFF CLEARANCE CANCELLED; B. after the aircraft has started to roll — ABORT TAKEOFF.

<p>12.3.4.13 b) JOIN (position in circuit) (direction of circuit) (runway number) [SURFACE] WIND (direction and speed) (units) TEMPERATURE [MINUS] (number) QNH (or QFE) (number) [(units)] [TRAFFIC (detail)]</p>	<p>U.S. uses PHRASEOLOGY: ENTER LEFT/RIGHT BASE. STRAIGHT-IN. MAKE STRAIGHT-IN. STRAIGHT-IN APPROVED. RIGHT TRAFFIC. MAKE RIGHT TRAFFIC. RIGHT TRAFFIC APPROVED. CONTINUE. b. Runway in use. c. Surface wind. d. Altimeter setting. REFERENCE FAAO 7110.65, Current Settings, Para 2-7-1. e. Any supplementary information. f. Clearance to land. g. Requests for additional position reports. Use prominent geographical fixes which can be easily recognized from the air, preferably those depicted on sectional charts. This does not preclude the use of the legs of the traffic pattern as reporting points.</p>
<p>12.3.5.6 HANDOVER</p>	<p>U.S. does not use radar handover. 7110.65 5-4-3. METHODS PHRASEOLOGY HANDOFF/ POINT OUT/TRAFFIC (aircraft position) (aircraft ID),or (discrete beacon code point out only) (altitude, restrictions, and other appropriate information, if applicable). c. When receiving a handoff, point out, or traffic restrictions, respond to the transferring controller as follows: PHRASEOLOGY- (Aircraft ID) (restrictions, if applicable) RADAR CONTACT, or (aircraft ID or discrete beacon code) (restrictions, if applicable) POINT OUT APPROVED, or TRAFFIC OBSERVED,</p>
<p>12.3.5.7 Expedite Clearance</p>	<p>U.S. has no phraseology to expedite clearance.</p>
<p>12.4.1.1 IDENTIFICATION OF AIRCRAFT f) NOT IDENTIFIED [reason], [RESUME (or CONTINUE) OWN NAVIGATION]</p>	<p>U.S. controllers do not say “will shortly lose identification” or “identification lost.” 7110.65 5-6-2 PHRASEOLOGY RADAR CONTACT LOST (alternative instructions when required). PHRASEOLOGY-(Position with respect to course/fix along route).</p>
<p>12.4.2.1 VECTORING FOR APPROACH VECTORING FOR VISUAL APPROACH RUNWAY (number) REPORT FIELD (or RUNWAY) IN SIGHT</p>	<p>U.S. would use “airport or runway” rather than “field.” 7-4-2. VECTORS FOR VISUAL APPROACH PHRASEOLOGY- (ACID) FLY HEADING OR TURN RIGHT/LEFT HEADING (degrees) VECTOR FOR VISUAL APPROACH TO (airport name). PHRASEOLOGY 5-11-2. VISUAL REFERENCE REPORT “REPORT (runway, approach/runway lights or airport) IN SIGHT. REPORT WHEN ABLE TO PROCEED VISUALLY TO AIRPORT/HELIPORT.”</p>
<p>12.4.2.4.4 CHECKS CHECK GEAR DOWN [AND LOCKED]</p>	<p>U.S. uses “CHECK WHEELS DOWN”. 7110.65 2-1-24. WHEELS DOWN CHECK PHRASEOLOGY</p>
<p>12.4.2.5 PAR APPROACH</p>	<p>U.S. controllers say “this will be a P-A-R/surveillance approach to runway (number) or airport/runway (number) or airport/heliport.” U.S. controllers do not say “approach completed”. U.S. controllers say “your missed approach procedure is (missed approach procedure)” and, if needed, “execute missed approach.” For PAR approaches, U.S. controllers say “begin descent” and for surveillance approaches, U.S. controllers say “descend to your minimum descent altitude.” 7110.65 5-12-8. APPROACH GUIDANCE TERMINATION lights in sight and requested to or advised that he/she will proceed visually, and has been instructed to proceed visually, all PAR approach procedures shall be discontinued. d. Continue to monitor final approach and frequency. Pilots shall remain on final controller’s frequency until touchdown or otherwise instructed. 5-12-9. COMMUNICATION TRANSFER PHRASEOLOGY CONTACT (terminal control function) (frequency, if required) AFTER LANDING</p>

<p>12.4.3.12 TO REQUEST PRESSURE SETTING CHECK AND CONFIRMATION OF LEVEL 12.4.3.13 To REQUEST TERMINATION OF PRESSURE-ALTITUDE TRANSMISSION BECAUSE OF FAULTY OPERATION</p>	<p>U.S., for aircraft above FL 180, U.S. controllers would say, “confirm using two niner niner two as your altimeter setting, verify altitude” or “stop altitude squawk” “stop altitude squawk; altitude differs by (number) feet.” U.S. controllers would not say “stop squawk Charlie”. 7110.65 5-2-22. BEACON TERMINATION Inform an aircraft when you want it to turn off its transponder.</p>
<p>12.4.3.14 TO REQUEST LEVEL CONFIRM (level)</p>	<p>U.S. controllers would say “verify at (altitude)” and/or “verify assigned altitude.” 7110.65 5-2-17. 1. Issue the correct altimeter setting and confirm the pilot has accurately reported the altitude. PHRASEOLOGY- (Location) ALTIMETER (appropriate altimeter), VERIFY ALTITUDE.</p>
<p>12.6.1 Alerting phraseologies</p>	<p>U.S. controllers would issue MEA/MVA/MOCA/MIA instead of QNH. 7110.65</p>
<p>CHAPTER 15</p>	<p>PROCEDURES RELATED TO EMERGENICES, COMMUNICATION FAILURE AND CONTINGENCIES</p>
<p>15.1 Emergency procedures</p>	<p>When neither communications nor radar contact can be established for 30 minutes (or prior, if appropriate), U.S. controllers will consider an aircraft overdue and will initiate overdue aircraft procedures including reporting to the ARTCC or AFSS.</p>
<p>15.1.3 Unlawful interference and aircraft bomb threat</p>	<p>U.S. has difference updated. 5-2-13, Code Monitor Note 1. & 2. “10-2-6 HIJACKED AIRCRAFT 10-2-6. HIJACKED AIRCRAFT Hijack attempts or actual events are a matter of national security and require special handling. Policy and procedures for hijack situations are detailed in FAAO JO 7610.4, Special Operations. FAAO JO 7610.4 describes reporting requirements, air crew procedures, air traffic procedures and escort or interceptor procedures for hijack situations. REFERENCE FAAO JO 7610.4, Hijacked/Suspicious Aircraft Reporting and Procedures, Chapter 7. FAAO 7110.65, Code Monitor, Para 5-2-13.</p>
<p>15.4.1 Strayed VFR flights and VFR flights encountering adverse meteorological conditions</p>	<p>U.S. does not use the terms “strayed” or “unidentified” aircraft. 7110.65 10-3-1. OVERDUE AIRCRAFT</p>
<p>15.7.3 Procedures in regard to aircraft equipped with airborne collision avoidance systems (ACAS)</p>	<p>The U.S. uses traffic alert and collision avoidance system (TCAS). U.S. controllers are not to issue control instructions that are contrary to the TCAS resolution advisory (RA) procedure that a crew member advises is being executed. U.S. orders speak to controller actions when advised of an aircraft responding to a resolution alert (RA).</p>
<p>APPENDIX 1</p>	<p>INSTRUCTIONS FOR AIR-REPORTING BY VOICE COMMUNICATIONS</p>
<p>AIREP Form of Air-report</p>	<p>U.S. uses Pilot Reports (UAs), or Urgent Pilot Reports (UUAs).</p>
<p>APPENDIX 2</p>	<p>FLIGHT PLAN</p>
<p></p>	<p>Remark: The U.S. uses a flight plan format different from the ICAO model discussed in Appendix 2. The U.S. ATS facilities will transmit ICAO repetitive flight plans (RPLs) even though a different format is used for stored flight plans</p>
<p>A2-5 Wake</p>	<p>ICAO aircraft wake turbulence categories (heavy, medium, light) and FAA weight classes (heavy, large, small) differ. Also, for landing aircraft, wake turbulence separation is defined differently. The U.S. makes special provisions for any aircraft landing behind a B-757 (4 miles for a large aircraft behind or 5 miles for a small aircraft behind).</p>

A2-7 (Item 15)	U.S. ATS units do not accept cruising speeds nor filed altitudes/flight levels in metric terms. The U.S. accepts filed Mach Number expressed as M followed by 3 figures.
A2-7 (Item 15)	The U.S. requires filed FIR boundary designators and accumulated estimated elapsed times to such points or FIR boundaries in the sequence and form as prescribed in 2.2, Item 18 of Doc 4444, Appendix 2
APPENDIX 3	AIR TRAFFIC SERVICES MESSAGES
APPENDIX 4	AIR TRAFFIC INCIDENT REPORT
Appendix 4	U.S. has their accident/incident report in FAA Notice 8020.134
APPENDIX 5	CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC) MESSAGE SET
Appendix 5	U.S. has no CPDLC message set

PANS – OPS – 8168/611	
VOLUME 1	
PART III	
Table III-1-1 and Table III-1-2	The “Max speeds for visual maneuvering (Circling)” must not be applied to circling procedures in the U.S. Comply with the airspeeds and circling restrictions in ENR 1.5, paragraphs 11.1 and 11.6, in order to remain within obstacle protection areas. The table listed below shows aircraft categories with an associated maximum airspeed and distance to remain within from the end of runway.

Aircraft Category	Speeds for Circling (Kts)	Circling Area Maximum Radii from Runway Threshold (NM)
A	Speed less than 91 Knots	1.3
B	Speed 91 Knots or more but less than 121 Knots	1.5
C	Speed 121 Knots or more but less than 141 Knots	1.7
D	Speed 141 Knots or more but less than 166 Knots	2.3
E	Speed 166 Knots or more	4.5

PART IV	
1.2.1	The airspeeds contained in ENR 1.5 shall be used in U.S. CONTROLLED AIRSPACE.

PAN – ABC – DOC 8400

Differences between abbreviations used in U.S. AIP, International NOTAMs Class I and Class II, and Notices to Airmen Publication and ICAO PANS – ABC are listed in GEN 2.2. For other U.S. listings of abbreviations (contractions) for general use, air traffic control, and National Weather Service (NWS), which differ in some respects, see U.S. publication Contractions Handbook (DOT/FAA Order 7340.1). In addition, various U.S. publications contain abbreviations of terms used therein, particularly those unique to that publication.

INTST	intensity
IRU	Inertial Reference Unit
ISMLS	interim standard microwave landing system
J	
J-bar	jet runway barrier
K	
KHZ	kilohertz
L	
L	left (used only to designate rwys; e.g., rwy 12L)
ICAO:	L – left/runway identification/locator
LAT	latitude
LB	pounds (weight)
LCTD	located
LDA	localizer type directional aid
ICAO:	LDA – landing distance available LLZ – localizer
LGTD	lighted
LMM	compass locator at ILS middle marker
LNDG	landing
ICAO:	LDG – landing
LOC	localizer
ICAO:	LOC–localizer or locally or location or located
LOM	compass locator at ILS outer marker
LONG	longitude
LRCO	limited remote communications outlet
M	
MAA	maximum authorized altitude
MAG	magnetic
MAINT	maintain, maintenance
ICAO:	MNTN – maintain; MAINT – maintenance
MALS	medium intensity approach light system
MALSR	medium intensity approach light system with runway alignment indicator lights
MAP	missed approach point
ICAO:	MAP – aeronautical maps and charts
MAX	maximum
MCA	minimum crossing altitude
MDA	minimum descent altitude
MEA	minimum en route IFR altitude
MHZ	megahertz
MIN	minimum or minute
MIRL	medium intensity runway edge lights

MLS	microwave landing system
MM	middle marker ILS
MOCA	minimum obstruction clearance altitude
MRA	minimum reception altitude
MSA	minimum safe altitude
MSL	mean sea level
MUNI	municipal
N	
N	north
NA	not authorized
NATL	national
NAVAID	navigational aid
NDB	nondirectional radio beacon
NM	nautical mile(s)
NOPT	no procedure turn required
NR	number
O	
OBSTN	obstruction
ODALS	omnidirectional approach lighting system
OM	outer marker ILS
OPER	operate
OPN	operation
ICAO:	OPR – operator/operate/operative/operating/operational
ORIG	original
OTS	out of service
OVRN	overrun
P	
PAR	precision approach radar
PAT	pattern
PCN	pavement classification number
PERMLY	permanently
POB	persons on board
PPR	prior permission required
PROC	procedure
Q	
QUAD	quadrant
R	
R	right (used only to designate rwys; e.g., rwy 19R)
ICAO:	R – received (acknowledgement of receipt)/red/restricted area (followed by identification)/right (runway identification)

RADAR	radio detection and ranging
RAPCON	radar approach control (USAF)
RCAG	remote communications air/ground
RCLS	runway centerline lights system
ICAO:	RCL – runway centerline
RCO	remote communications outlet
RCV	receive
RCVG	receiving
REIL	runway end identifier lights
REQ	request
RNAV	area navigation
RRP	runway reference point
REL	runway entrance lights
RLLS	Runway Lead-in Light System
RSTRD	restricted
RTS	returned to service
RVR	runway visual range
RVRM	runway visual range midpoint
RVRR	runway visual range rollout
RVRT	runway visual range touchdown
RVV	runway visibility values
RWSL	runway status light
RWY	runway
ICAO:	RWY–runway
S	
S	runway weight bearing capacity for aircraft with single-wheel type landing gear
S	south
ICAO:	S – south/south latitude
SDF	simplified directional facility
SEC	second
SFC	surface
SFL	sequenced flashing lights
SI	straight-in approach
ICAO:	STA – straight-in approach
SM	statute mile(s)
SR	sunrise
SS	sunset
ICAO:	SS – sandstorm
SSALF	simplified short approach lighting system with sequenced flashers
SSALR	simplified short approach lighting system with runway alignment indicator lights

SSALS	simplified short approach lighting system
STOL	short take-off and landing runway
ICAO:	STOL – short takeoff and landing
SVC	service
ICAO:	SVC – service message
T	
T	true (after a bearing)
ICAO:	T – temperature
TAC	terminal area chart
TACAN	UHF navigational facility – omnidirectional course and distance information
ICAO:	TACAN – VHF tactical navigational aid
TAS	true air speed
ICAO:	TMA – TERMINAL CONTROL AREA
TCH	threshold crossing height
TFC	traffic
THL	takeoff hold lights
THR	threshold
THRU	through
ICAO:	THRU – through/I am connecting you to another switchboard
TKOF	take-off
TEMPRLY	temporarily
TMPRY	temporary/temporarily
ICAO:	TEMPO – Temporary/temporarily
TPA	traffic pattern altitude
TRACON	terminal radar approach control
TRML	terminal
TRSA	terminal radar service area
TSNT	transient
TWEB	transcribed weather broadcast
TWR	tower
TWY	taxiway
U	
UAS	Unmanned Aircraft System
UAVBL	unavailable
UHF	ultra high frequency
UNLGTD	unlighted
UNMON	unmonitored
UNSKED	unscheduled
UNUSBL	unusable

GEN 2.3 Chart Symbols

Aeronautical chart symbols are published in the Chart Users Guide published by Aeronautical Navigation Products (AeroNav).

Copies are available at the following address:

Aeronautical Navigation Products (AeroNav)
Logistics Group, AJV-372
Federal Aviation Administration
10201 Good Luck Road
Glenn Dale, MD 20769-9700
Telephone: 1-800-638-8972 (Toll free within U.S.)
301-436-8301
301-436-6829 (FAX)
e-mail: 9-AMC-Chartsales@faa.gov

GEN 3. SERVICES

GEN 3.1 Aeronautical Information Services

1. Aeronautical Information Service

1.1 The U.S. Aeronautical Information Service is the National Flight Data Center, which forms a part of the Air Traffic Airspace Management of the Federal Aviation Administration.

Postal Address:
Federal Aviation Administration
National Flight Data Center
800 Independence Avenue, SW.
Washington, D.C. 20591
Telephone: 202-267-9292
Telex: 892-562
Commercial Telegraphic Address: FAA WASH
AFTN Address: KRWAYAYX

1.2 The U.S. NOTAM office is located at the following address:

Postal Address:
Federal Aviation Administration
U.S. NOTAM Office
Air Traffic Control System Command Center
13600 EDS Drive
Herndon, VA 20171-3225
Telephone: 703-904-4557
Toll Free: 1-888-876-6826
Facsimile: 703-904-4437
Telex: 892-562
AFTN Address (Administrative):
KDCAYNYX
AFTN (NOTAM): KDZZNAXX

2. Area of Responsibility of AIS

2.1 The National Flight Data Center is responsible for the collection, validation, and dissemination of aeronautical information for the U.S. and areas under its jurisdiction for air traffic control purposes.

3. Aeronautical Publications

3.1 United States AIP

3.1.1 The AIP, issued in one volume, is the basic aeronautical information document published for

international use. It contains information of a lasting character, with interim updates published in various other publications. The AIP is available in English only and is maintained on a current basis by a 6-month amendment service.

3.2 NOTAM Publication

3.2.1 NOTAM information is published in booklet form every 28 days, entitled Notices to Airmen. This booklet disseminates aeronautical information of operational significance concerning airspace, procedures, and information concerning the status of both international and domestic airports and navigational aids.

3.3 Aeronautical Information Circulars

3.3.1 These circulars, called Advisory Circulars, contain information of general or technical interest relating to administrative or aviation matters which are inappropriate to either the AIP or the NOTAM. Advisory Circulars are available in English only. A checklist of outstanding circulars is issued annually.

3.4 En route Aeronautical Charts, En Route Supplements, Approach Procedure Charts, Regional Airport/Facility Directories

3.4.1 These publications, available in English only, contain specific information on airspace, airports, navigational aids, and flight procedures applicable to the regional areas of the U.S. and the territories and airspace under its jurisdiction. These publications are available by subscription only.

4. Distribution of Publications

4.1 The AIP subscriptions, including amendments, are made available to foreign aeronautical authorities on a reciprocal basis through the Federal Aviation Administration, AAT-30, 800 Independence Avenue, SW., Washington, D.C. 20591 upon request. Address corrections and changes in distribution to foreign aeronautical authorities are also accomplished through this office. See information in paragraph 1.2 for published NOTAMs.

4.2 Private paying subscriptions must be obtained for each separate AIP document from the:

Superintendent of Documents
U.S. Government Printing Office
P. O. Box 979050
St. Louis, MO 63197-9000
Telephone: 202-512-1800
Internet: <http://bookstore.gpo.gov>

4.3 Advisory Circulars are available, upon request, from the:

U.S. Department of Transportation
Subsequent Distribution Office
Ardmore East Business Center
3341 Q 75th Avenue
Landover, MD 20785

4.4 Domestic chart and chart products are available upon subscription from the:

Aeronautical Navigation Products (AeroNav)
Logistics Group, AJV-372
Federal Aviation Administration
10201 Good Luck Road
Glenn Dale, MD 20769-9700
Telephone: 1-800-638-8972 (Toll free within U.S.)
301-436-8301
301-436-6829 (FAX)
e-mail: 9-AMC-Chartsales@faa.gov

4.5 For the latest information regarding publication availability of world-wide products see the National Geospatial-Intelligence Agency (NGA) Web site: <https://www.nga.mil/ProductsServices/Aeronautical/Pages/default.aspx>

5. NOTAM Service

5.1 NOTAM Publication (Postal Distribution)

5.1.1 NOTAM publication distribution, by means of the Notices to Airmen publication, is in booklet form which contains a recapitulation of pertinent or permanent information of concern to airspace, facilities, services, and procedures which are of interest to both international and domestic civil aviation users. The information contained will eventually be published in either the U.S. AIP or in other publications for domestic use, as applicable. The Notices to Airmen publication will also contain information regarding temporary changes or unscheduled interruptions to flight procedures and

navigation aids or airport services, the duration of which is expected to last seven or more days. Distribution of the Notices to Airmen publication parallels NOTAM Class I and AIP distribution.

5.2 NOTAM Class I (Telecommunication Distribution)

5.2.1 NOTAM Class I distribution is used mainly for the notification of temporary information of timely significance such as unforeseen changes in services, facilities, airspace utilization, or any other emergency. Distribution is via telecommunications through the International NOTAM Office of the National Flight Data Center, in accordance with the following classifications:

5.2.1.1 International NOTAM. NOTAM containing full information on all airports, facilities and flight procedures available for use by international civil aviation. NOTAMs are given selected distribution to adjacent or appropriate International NOTAM Offices which require their exchange.

5.2.1.2 International Airspace NOTAM. NOTAM containing short term information pertaining to potentially hazardous international and domestic airspace utilization which is of concern to international flights. NOTAMs are given selected distribution to adjacent or appropriate International NOTAM Offices which require their exchange.

5.2.1.3 International Airspace NOTAM. NOTAM containing permanent changes-en route airway structure/aeronautical service and information of a general nature. NOTAMs are given selected distribution to adjacent or appropriate International NOTAM Offices which require their exchange.

5.2.1.4 International OMEGA and LORAN Facilities status of the OMEGA or LORAN Navigational Aid Facilities. NOTAMs are given selected distribution to adjacent or appropriate International NOTAM Offices which require their exchange.

5.2.1.5 Domestic NOTAM. NOTAM containing information of concern to aircraft other than those engaged in international civil aviation. Distribution is to local or national users only. (See ENR 1.10.)

5.2.2 Each NOTAM is assigned a four digit serial number which is followed by the location indicator for which the series is applicable. The serial numbers start with number 0001 at 0000 UTC on 1 July of each year. Each serial number is preceded by a letter:

5.2.2.1 "A" for NOTAM classification "1."

GEN 3.2 Aeronautical Charts

1. General

1.1 Civil aeronautical charts for the U.S. and its territories, and possessions are produced by Aeronautical Navigation Products (AeroNav), http://www.faa.gov/air_traffic/flight_info/aeronav which is part of FAA's Air Traffic Organization, Mission Support Services.

2. Obtaining Aeronautical Charts

2.1 Most charts and publications described in this chapter can be obtained by subscription or one-time sales from:

Aeronautical Navigation Products (AeroNav)
Logistics Group, AJV-372
Federal Aviation Administration
10201 Good Luck Road
Glenn Dale, MD 20769-9700
Telephone: 1-800-638-8972 (Toll free within U.S.)
301-436-8301
301-436-6829 (FAX)
e-mail: 9-AMC-Chartsales@faa.gov

2.2 Public sales of charts and publications are also available through a network of FAA chart agents primarily located at or near major civil airports. A listing of products, dates of latest editions and agents is available at the AeroNav Web site: http://www.faa.gov/air_traffic/flight_info/aeronav.

3. Selected Charts and Products Available

VFR Navigation Charts
IFR Navigation Charts
Planning Charts
Supplementary Charts and Publications
Digital Products

4. General Description of Each Chart Series

4.1 VFR Navigation Charts

4.1.1 Sectional Aeronautical Charts. Sectional Charts are designed for visual navigation of slow to medium speed aircraft. The topographic information consists of contour lines, shaded relief, drainage

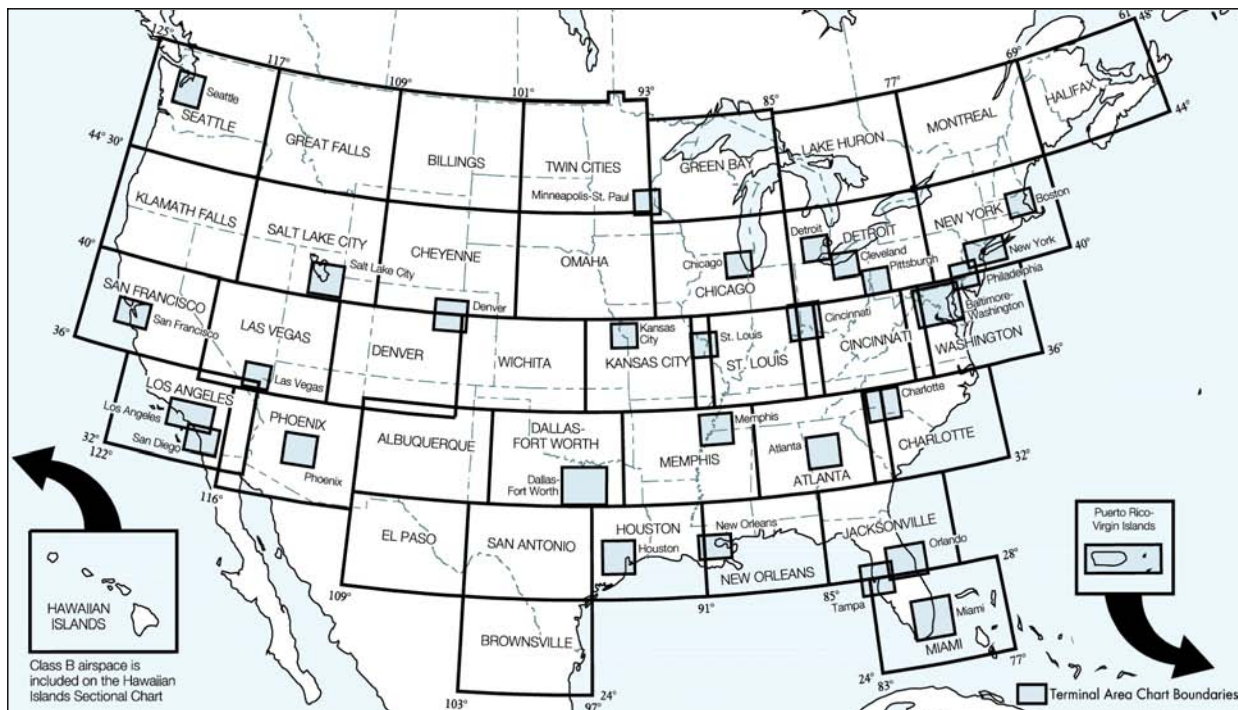
patterns, and an extensive selection of visual checkpoints and landmarks used for flight under VFR. Cultural features include cities and towns, roads, railroads, and other distinct landmarks. The aeronautical information includes visual and radio aids to navigation, airports, controlled airspace, special-use airspace, obstructions, and related data. Scale 1 inch = 6.86nm/1:500,000. 60 x 20 inches folded to 5 x 10 inches. Revised semiannually, except most Alaskan charts are revised annually. (See FIG GEN 3.2-1 and FIG GEN 3.2-11.)

4.1.2 VFR Terminal Area Charts (TAC). TACs depict the airspace designated as Class B airspace. While similar to sectional charts, TACs have more detail because the scale is larger. The TAC should be used by pilots intending to operate to or from airfields within or near Class B or Class C airspace. Areas with TAC coverage are indicated by a • on the Sectional Chart indexes. Scale 1 inch = 3.43nm/1:250,000. Charts are revised semiannually, except Puerto Rico-Virgin Islands which is revised annually. (See FIG GEN 3.2-1 and FIG GEN 3.2-11.)

4.1.3 World Aeronautical Charts (WAC). WACs cover land areas for navigation by moderate speed aircraft operating at high altitudes. Included are city tints, principal roads, railroads, distinctive landmarks, drainage patterns, and relief. Aeronautical information includes visual and radio aids to navigation, airports, airways, special-use airspace, and obstructions. Because of a smaller scale, WACs do not show as much detail as sectional or TACs, and therefore are not recommended for exclusive use by pilots of low speed, low altitude aircraft. Scale 1 inch = 13.7nm/ 1:1,000,000. 60 x 20 inches folded to 5 x 10 inches. WACs are revised annually, except for a few in Alaska and the Caribbean, which are revised biennially. (See FIG GEN 3.2-12 and FIG GEN 3.2-13.)

4.1.4 U.S. Gulf Coast VFR Aeronautical Chart. The Gulf Coast Chart is designed primarily for helicopter operation in the Gulf of Mexico area. Information depicted includes offshore mineral leasing areas and blocks, oil drilling platforms, and high density helicopter activity areas. Scale 1 inch = 13.7nm/1:1,000,000. 55 x 27 inches folded to 5 x 10 inches. Revised annually.

FIG GEN 3.2-1
Sectional and VFR Terminal Area Charts for the Conterminous U.S.,
Hawaii, Puerto Rico, and Virgin Islands



4.1.5 Grand Canyon VFR Aeronautical Chart.

Covers the Grand Canyon National Park area and is designed to promote aviation safety, flight free zones, and facilitate VFR navigation in this popular area. The chart contains aeronautical information for general aviation VFR pilots on one side and commercial VFR air tour operators on the other side.

4.1.6 Helicopter Route Charts. A three-color chart series which shows current aeronautical information useful to helicopter pilots navigating in areas with high concentrations of helicopter activity. Information depicted includes helicopter routes, four classes of heliports with associated frequency and lighting capabilities, NAVAIDs, and obstructions. In addition, pictorial symbols, roads, and easily identified geographical features are portrayed. Helicopter charts have a longer life span than other chart products and may be current for several years. All new editions of these charts are printed on a durable plastic material. Helicopter Route Charts are updated as requested by the FAA. Scale 1 inch = 1.71nm/1:125,000. 34 x 30 inches folded to 5 x 10 inches.

4.2 IFR Navigation Charts

4.2.1 IFR Enroute Low Altitude Charts (Conterminous U.S. and Alaska). Enroute low altitude charts provide aeronautical information for navigation under IFR conditions below 18,000 feet MSL. This four-color chart series includes airways; limits of controlled airspace; VHF NAVAIDs with frequency, identification, channel, geographic coordinates; airports with terminal air/ground communications; minimum enroute and obstruction clearance altitudes; airway distances; reporting points; special use airspace; and military training routes. Scales vary from 1 inch = 5nm to 1 inch = 20nm. 50 x 20 inches folded to 5 x 10 inches. Charts revised every 56 days. *Area charts* show congested terminal areas at a large scale. They are included with subscriptions to any conterminous U.S. Set Low (Full set, East or West sets). (See FIG GEN 3.2-2 and FIG GEN 3.2-4.)

4.2.3 U.S. Terminal Procedures Publication (TPP). TPPs are published in 24 loose-leaf or perfect bound volumes covering the conterminous U.S., Puerto Rico and the Virgin Islands. A Change Notice is published at the midpoint between revisions in bound volume format and is available on the internet for free download at the AeroNav web site. (See FIG GEN 3.2-10.) The TPPs include:

4.2.3.1 Instrument Approach Procedure (IAP) Charts. IAP charts portray the aeronautical data that is required to execute instrument approaches to airports. Each chart depicts the IAP, all related navigation data, communications information, and an airport sketch. Each procedure is designated for use with a specific electronic navigational aid, such as ILS, VOR, NDB, RNAV, etc.

4.2.3.2 Instrument Departure Procedure (DP) Charts. DP charts are designed to expedite clearance delivery and to facilitate transition between takeoff and en route operations. They furnish pilots' departure routing clearance information in graphic and textual form.

4.2.3.3 Standard Terminal Arrival (STAR) Charts. STAR charts are designed to expedite ATC arrival procedures and to facilitate transition between en route and instrument approach operations. They depict preplanned IFR ATC arrival procedures in graphic and textual form. Each STAR procedure is presented as a separate chart and may serve either a single airport or more than one airport in a given geographic area.

4.2.3.4 Airport Diagrams. Full page airport diagrams are designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and provide information for updating geodetic position navigational systems aboard aircraft. Airport diagrams are available for free download at the AeroNav website.

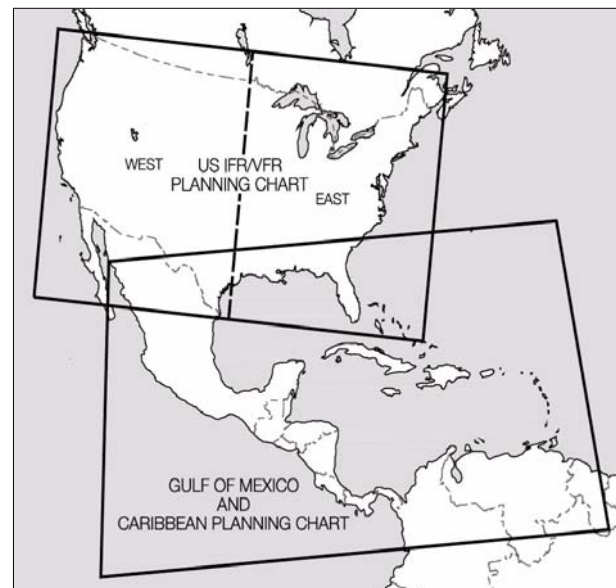
4.2.4 Alaska Terminal Procedures Publication. This publication contains all terminal flight procedures for civil and military aviation in Alaska. Included are IAP charts, DP charts, STAR charts, airport diagrams, radar minimums, and supplementary support data such as IFR alternate minimums, take-off minimums, rate of descent tables, rate of

climb tables and inoperative components tables. Volume is 5-3/8 x 8-1/4 inch top bound. Publication revised every 56 days with provisions for a Terminal Change Notice, as required.

4.3 Planning Charts

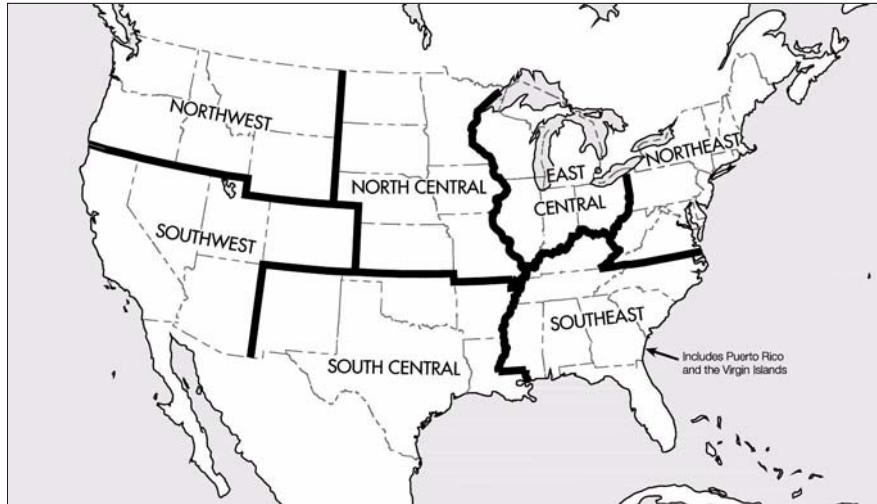
4.3.1 U.S. IFR/VFR Low Altitude Planning Chart. This chart is designed for preflight and en route flight planning for IFR/VFR flights. Depiction includes low altitude airways and mileage, NAVAIDs, airports, special use airspace, cities, times zones, major drainage, a directory of airports with their airspace classification, and a mileage table showing great circle distances between major airports. Scale 1 inch = 47nm/ 1:3,400,000. Chart revised annually, and is available either folded or unfolded for wall mounting. (See FIG GEN 3.2-6.)

FIG GEN 3.2-6
Planning Charts



4.3.2 Gulf of Mexico and Caribbean Planning Chart. This is a VFR planning chart on the reverse side of the *Puerto Rico – Virgin Islands VFR Terminal Area Chart*. Information shown includes mileage between airports of entry, a selection of special use airspace and a directory of airports with their available services. Scale 1 inch = 85nm/1:6,192,178. 60 x 20 inches folded to 5 x 10 inches. The chart is revised annually. (See FIG GEN 3.2-6.)

FIG GEN 3.2-7
Airport/Facility Directory Geographic Areas



4.3.3 Charted VFR Flyway Planning Charts. This chart is printed on the reverse side of selected TAC charts. The coverage is the same as the associated TAC. Flyway planning charts depict flight paths and altitudes recommended for use to bypass high traffic areas. Ground references are provided as a guide for visual orientation. Flyway planning charts are designed for use in conjunction with TACs and sectional charts and are not to be used for navigation. Chart scale 1 inch = 3.43nm/1:250,000.

4.4 Supplementary Charts and Publications

4.4.1 Airport/Facility Directory (A/FD). This 7-volume booklet series contains data on airports, seaplane bases, heliports, NAVAIDs, communications data, weather data sources, airspace, special notices, and operational procedures. Coverage includes the conterminous U.S., Puerto Rico, and the Virgin Islands. The A/FD shows data that cannot be readily depicted in graphic form; e.g., airport hours of operations, types of fuel available, runway widths, lighting codes, etc. The A/FD also provides a means for pilots to update visual charts between edition dates (A/FD is published every 56 days while sectional and Terminal Area Charts are generally revised every six months). The VFR Chart Update

Bulletins are available for free download from the AeroNav web site. Volumes are side-bound 5-3/8 x 8-1/4 inches.
(See FIG GEN 3.2-7.)

4.4.2 Supplement Alaska. This is a civil/military flight information publication issued by FAA every 56 days. It is a single volume booklet designed for use with appropriate IFR or VFR charts. The Supplement Alaska contains an airport/facility directory, airport sketches, communications data, weather data sources, airspace, listing of navigational facilities, and special notices and procedures. Volume is side-bound 5-3/8 x 8-1/4 inches.

4.4.3 Chart Supplement Pacific. This supplement is designed for use with appropriate VFR or IFR enroute charts. Included in this one-volume booklet are the airport/facility directory, communications data, weather data sources, airspace, navigational facilities, special notices, and Pacific area procedures. IAP charts, DP charts, STAR charts, airport diagrams, radar minimums, and supporting data for the Hawaiian and Pacific Islands are included. The manual is published every 56 days. Volume is side-bound 5-3/8 x 8-1/4 inches.

4.4.4 North Pacific Route Charts. These charts are designed for FAA controllers to monitor transoceanic flights. They show established intercontinental air routes, including reporting points with geographic positions. Composite Chart: scale 1 inch = 164NM/1:12,000,000. 48 x 41-1/2 inches. Area Charts: scale 1 inch = 95.9nm/1:7,000,000. 52 x 40-1/2 inches. All charts are shipped unfolded. Charts are revised every 56 days. (See FIG GEN 3.2-8.)

4.4.5 North Atlantic Route Chart. Designed for FAA controllers to monitor transatlantic flights, this 5-color chart shows oceanic control areas, coastal navigation aids, oceanic reporting points, and NAVAID geographic coordinates. Full Size Chart: scale 1 inch = 113.1nm/1:8,250,000. Chart is shipped flat only. Half Size Chart: scale 1 inch = 150.8nm/1:11,000,000. Chart is 29-3/4 x 20-1/2 inches, shipped folded to 5 x 10 inches only. Chart are revised every 56 days. (See FIG GEN 3.2-9.)

FIG GEN 3.2-8
North Pacific Oceanic Route Charts

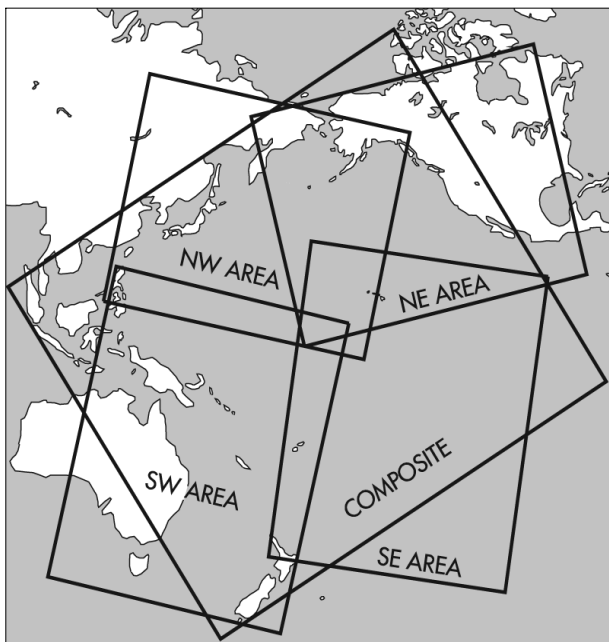
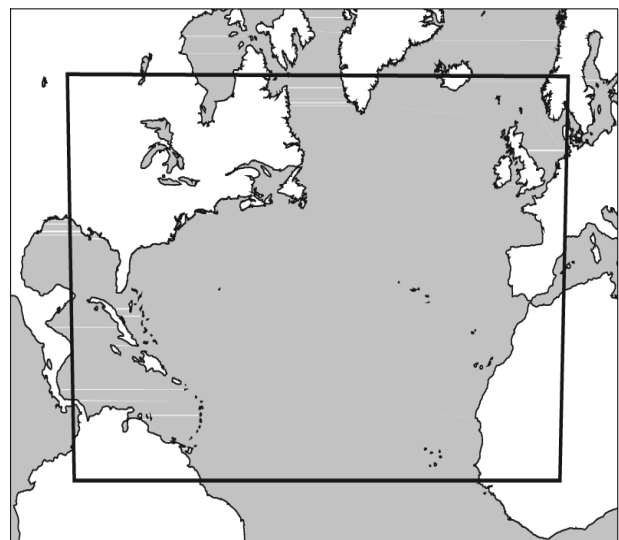


FIG GEN 3.2-9
North Atlantic Route Chart



4.4.6 Airport Obstruction Charts (OC). The OC is a 1:12,000 scale graphic depicting 14 CFR Part 77, *Objects Affecting Navigable Airspace* surfaces, a representation of objects that penetrate these surfaces, aircraft movement and apron areas, navigational aids, prominent airport buildings, and a selection of roads and other planimetric detail in the airport vicinity. Also included are tabulations of runway and other operational data.

4.4.7 FAA Aeronautical Chart User's Guide. A booklet designed to be used as a teaching aid and reference document. It describes the substantial amount of information provided on FAA's aeronautical charts and publications. It includes explanations and illustrations of chart terms and symbols organized by chart type. The users guide is available for free download at the AeroNav web site.

4.5 Digital Products

4.5.1 The Digital Aeronautical Information CD (DAICD). The DAICD is a combination of the NAVAID Digital Data File, the Digital Chart Supplement, and the Digital Obstacle File on one Compact Disk. These three digital products are no longer sold separately. The files are updated every 56 days and are available by subscription only.

4.5.1.1 The NAVAID Digital Data File. This file contains a current listing of NAVAIDs that are compatible with the National Airspace System. This file contains all NAVAIDs including ILS and its components, in the U.S., Puerto Rico, and the Virgin Islands plus bordering facilities in Canada, Mexico, and the Atlantic and Pacific areas.

4.5.1.2 The Digital Obstacle File. This file describes all obstacles of interest to aviation users in the U.S., with limited coverage of the Pacific, Caribbean, Canada, and Mexico. The obstacles are assigned unique numerical identifiers, accuracy codes, and listed in order of ascending latitude within each state or area.

4.5.1.3 The Digital Aeronautical Chart Supplement (DACS). The DACS is specifically designed to provide digital airspace data not otherwise readily available. The supplement includes a *Change Notice* for IAPFIX.dat at the mid-point between revisions. The *Change Notice* is available only by free download from the AeroNav website.

The DACS individual data files are:

ENHIGH.DAT: High altitude airways (conterminous U.S.)

ENLOW.DAT: Low altitude airways (conterminous U.S.)

IAPFIX.DAT: Selected instrument approach procedure NAVAID and fix data.

MTRFIX.DAT: Military training routes data.

ALHIGH.DAT: Alaska high altitude airways data.

ALLOW.DAT: Alaska low altitude airways data.

PR.DAT: Puerto Rico airways data.

HAWAII.DAT: Hawaii airways data.

BAHAMA.DAT: Bahamas routes data.

OCEANIC.DAT: Oceanic routes data.

STARS.DAT: Standard terminal arrivals data.

DP.DAT: Instrument departure procedures data.

LOPREF.DAT: Preferred low altitude IFR routes data.

HIPREF.DAT: Preferred high altitude IFR routes data.

ARF.DAT: Air route radar facilities data.

ASR.DAT: Airport surveillance radar facilities data.

4.5.2 The National Flight Database (NFD) (ARINC 424 [Ver 13 & 15]). The NFD is a basic digital dataset, modeled to an international standard, which can be used as a basis to support GPS navigation. Initial data elements included are: Airport and Helicopter Records, VHF and NDB Navigation aids, en route waypoints and airways. Additional data elements will be added in subsequent releases to include: departure procedures, standard terminal arrivals, and GPS/RNAV instrument approach procedures. The database is updated every 28 days. The data is available by subscription only and is distributed on CD-ROM or by ftp download.

4.5.3 Sectional Raster Aeronautical Charts (SRAC). These digital VFR charts are geo-referenced scanned images of FAA sectional charts. Additional digital data may easily be overlaid on the raster image using commonly available Geographic Information System software. Data such as weather, temporary flight restrictions, obstacles, or other geospatial data can be combined with SRAC data to support a variety of needs. Most SRACs are provided in two halves, a north side and a south side. The file resolution is 200 dots per inch and the data is 8-bit color. The data is provided as a GeoTIFF and distributed on DVD-R media. The root mean square error of the transformation will not exceed two pixels. SRACs DVDs are updated every 28 days and are available by subscription only.

5. National Geospatial–Intelligence Agency (NGA) Products

5.1 National Geospatial–Intelligence Agency (NGA) Products. For the latest information regarding publication availability visit the NGA Web site: <https://www.nga.mil/ProductsServices/Aeronautical/Pages/default.aspx>

5.1.1 Flight Information Publication (FLIP) Planning Documents

General Planning (GP)
Area Planning
Area Planning – Special Use Airspace –
Planning Charts

5.1.2 FLIP Enroute Charts and Chart Supplements

Pacific, Australasia, and Antarctica
United States – IFR and VFR Supplements
Flight Information Handbook
Caribbean and South America – Low Altitude
Caribbean and South America – High Altitude
Europe, North Africa, and Middle East –
Low Altitude
Europe, North Africa, and Middle East –
High Altitude
Africa
Eastern Europe and Asia
Area Arrival Charts

5.1.3 FLIP Instrument Approach Procedures (IAPs)

Africa
Canada and North Atlantic
Caribbean and South America
Eastern Europe and Asia
Europe, North Africa, and Middle East
Pacific, Australasia, and Antarctica
VFR Arrival/Departure Routes – Europe and Korea
United States

5.1.4 Miscellaneous DOD Charts and Products

Aeronautical Chart Updating Manual (CHUM)
DOD Weather Plotting Charts (WPC)
Tactical Pilotage Charts (TPC)
Operational Navigation Charts (ONC)
Global Navigation and Planning Charts (GNC)
Global LORAN–C Navigation Charts (GLCC)
LORAN–C Coastal Navigation Charts (LCNC)
Jet Navigation Charts (JNC) and Universal Jet
Navigation Charts (JNU)
Jet Navigation Charts (JNCA)
Aerospace Planning Charts (ASC)
Oceanic Planning Charts (OPC)
Joint Operations Graphics – Air (JOG–A)
Standard Index Charts (SIC)
Universal Plotting Sheet (VP–OS)
Sight Reduction Tables for Air Navigation (PUB249)
Plotting Sheets (VP–30)
Dial–Up Electronic CHUM

3.9.3.5.3 These SIGMETs are considered “wide-spread” because they must be either affecting or be forecasted to affect an area of at least 3,000 square miles at any one time. The International SIGMET is issued for 6 hours for volcanic ash events, 6 hours for hurricanes and tropical storms, and 4 hours for all other events. Like the domestic SIGMETs, International SIGMETs are also identified by an alphabetic designator from Alpha through Mike and are numbered sequentially until that weather phenomenon ends. The criteria for an International SIGMET are:

3.9.3.5.3.1 Thunderstorms occurring in lines, embedded in clouds, or in large areas producing tornadoes or large hail.

3.9.3.5.3.2 Tropical cyclones.

3.9.3.5.3.3 Severe icing.

3.9.3.5.3.4 Severe or extreme turbulence.

3.9.3.5.3.5 Dust storms and sandstorms lowering visibilities to less than 3 miles.

3.9.3.5.3.6 Volcanic ash.

EXAMPLE–

Example of an International SIGMET:

WSNT06 KKCI 022014
SIGA0F
KZMA KZNY TJZS SIGMET FOXTROT 3 VALID
022015/030015 KKCI– MIAMI OCEANIC FIR NEW
YORK OCEANIC FIR SAN JUAN FIR FRQ TS WI AREA
BOUNDED BY 2711N6807W 2156N6654W 2220N7040W
2602N7208W 2711N6807W. TOPS TO FL470. MOV NE
15KT. WKN. BASED ON SAT AND LTG OBS.
MOSHER

3.9.3.6 AIRMET (WA)

3.9.3.6.1 AIRMETs (WAs) are advisories of significant weather phenomena but describe conditions at intensities lower than those which require the issuance of SIGMETs. AIRMETs are intended for dissemination to all pilots in the preflight and en route phase of flight to enhance safety. AIRMET information is available in two formats: text bulletins (WA) and graphics (G–AIRMET). Both formats meet the criteria of paragraph 3.6.9.1 and are issued on a scheduled basis every 6 hours beginning at 0145 UTC during Central Daylight Time and at 0245 UTC during Central Standard Time. Unscheduled updates and corrections are issued as necessary. Each AIRMET Bulletin contains any current AIRMETs in effect and an outlook for conditions expected after the

AIRMET valid period. AIRMETs contain details about IFR, extensive mountain obscuration, turbulence, strong surface winds, icing, and freezing levels.

3.9.3.6.2 There are three AIRMETs: Sierra, Tango, and Zulu. After the first issuance each day, scheduled or unscheduled bulletins are numbered sequentially for easier identification.

3.9.3.6.2.1 AIRMET Sierra describes IFR conditions and/or extensive mountain obscurations.

3.9.3.6.2.2 AIRMET Tango describes moderate turbulence, sustained surface winds of 30 knots or greater, and/or nonconvective low–level wind shear.

3.9.3.6.2.3 AIRMET Zulu describes moderate icing and provides freezing level heights.

EXAMPLE–

Example of AIRMET Sierra issued for the Chicago FA area:

CHIS WA 131445
AIRMET SIERRA UPDT 2 FOR IFR AND MTN OBSCN
VALID UNTIL 132100.
AIRMET IFR...KY
FROM 20SSW HNN TO HNV TO 50ENE DYR TO20SSW
HNN
CIG BLW 010/VIS BLW 3SM PCPN/BR/FG. CONDS
ENDG BY 18Z.

AIRMET IFR...MN LS
FROM INL TO 70W YQT TO 40ENE DLH TO
30WNW DLH TO 50SE GFK TO 20 ENE GFK TO
INL
CIG BLW 010/VIS BLW 3SM BR. CONDS ENDG 15–
18Z.

AIRMET IFR...KS
FROM 30N SLN TO 60E ICT TO 40S ICT TO 50W
LBL TO 30SSW GLD TO 30N SLN
CIG BLW 010/VIS BLW 3SM PCPN/BR/FG. CONDS
ENDG 15–18Z.

AIRMET MTN OBSCN...KY TN
FROM HNN TO HNV TO GQO TO LOZ TO HNN
MTN OBSC BY CLDS/PCPN/BR. CONDS CONTG
BYD 21Z THRU 03Z.

EXAMPLE–

Example of AIRMET Tango issued for the Salt Lake City FA area:

SLCT WA 131445
AIRMET TANGO UPDT 2 FOR TURB VALID UNTIL
131200.
AIRMET TURB...MT

FROM 40NW HVR TO 50SE BIL TO 60E DLN TO
60SW YQL TO 40NW HVR
MOD TURB BLW 150. CONDS DVLPG 18–21Z.
CONDS CONTG BYD 21Z THRU 03Z.

AIRMET TURB....ID MT WY NV UT CO
FROM 100SE MLS TO 50SSW BFF TO 20SW BTY
TO 40SW BAM TO 100SE MLS
MOD TURB BTN FL310 AND FL410. CONDS
CONTG BYD 21Z ENDG 21–00Z.

AIRMET TURB...NV AZ NM CA AND CSTL WTRS
FROM 100WSW ENI TO 40W BTY TO 40S LAS TO
30ESE TBE TO INK TO ELP TO 50S TUS TO BZA
TO 20S MZB TO 150SW PYE TO 100WSW ENI
MOD TURB BTWN FL210 AND FL380. CONDS
CONTG BYD 21Z THRU 03Z.

....

EXAMPLE–

**Example of AIRMET Zulu issued for the San Francisco
FA area:**

SFOZ WA 131445
AIRMET ZULU UPDT 2 FOR ICE AND FRZLVL VALID
UNTIL 132100.
NO SGFNT ICE EXP OUTSIDE OF CNVTV ACT.

FRZLVL....RANGING FROM SFC–105 ACRS AREA
MULT FRZLVL BLW 080 BOUNDED BY 40SE
YDC–60NNW GEG–60SW MLP–30WSW BKE–
20SW BAM–70W BAM–40SW YKM–40E HUH–
40SE YDC
SFC ALG 20NNW HUH–30SSE HUH–60S SEA
50NW LKV–60WNWOAL–30SW OAL
040 ALG 40W HUH–30W HUH–30NNW SEA–40N
PDX–20NNW DSD
080 ALG 160NW FOT–80SW ONP–50SSW EUG
40SSE OED–50SSE CZQ–60E EHF–40WSW LAS

....

3.9.3.7 Graphical AIRMETs (G–AIRMETs)

3.9.3.7.1 G–AIRMETs found on the Aviation Weather Center webpage at <http://aviationweather.gov>, are graphical forecasts of en–route weather hazards valid at discrete times no more than 3 hours apart for a period of up to 12 hours into the future (for example, 00, 03, 06, 09, and 12 hours). Additional forecasts may be inserted during the first 6 hours (for example, 01, 02, 04, and 05). 00 hour represents the initial conditions, and the subsequent graphics depict the area affected by the particular hazard at that valid time. Forecasts valid at 00 through 06 hours correspond to the text AIRMET bulletin. Forecasts valid at 06 through 12 hours correspond to the text

bulletin outlook. G–AIRMET depicts the following en route aviation weather hazards:

3.9.3.7.1.1 Instrument flight rule conditions (ceiling <1000’ and/or surface visibility <3 miles)

3.9.3.7.1.2 Mountain obscuration

3.9.3.7.1.3 Icing

3.9.3.7.1.4 Freezing level

3.9.3.7.1.5 Turbulence

3.9.3.7.1.6 Low level wind shear (LLWS)

3.9.3.7.1.7 Strong surface winds.

3.9.3.7.2 G–AIRMETs are snap shots at discrete time intervals as defined above. The text AIRMET is the result of the production of the G–AIRMET but provided in a time smear for a 6hr valid period. G–AIRMETs provide a higher forecast resolution than text AIRMET products. Since G–AIRMETs and text AIRMETs are created from the same forecast “production” process, there exists perfect consistency between the two. Using the two together will provide clarity of the area impacted by the weather hazard and improve situational awareness and decision making.

Interpolation of time periods between G–AIRMET valid times: Users must keep in mind when using the G–AIRMET that if a 00 hour forecast shows no significant weather and a 03 hour forecast shows hazardous weather, they must assume a change is occurring during the period between the two forecasts. It should be taken into consideration that the hazardous weather starts immediately after the 00 hour forecast unless there is a defined initiation or ending time for the hazardous weather. The same would apply after the 03 hour forecast. The user should assume the hazardous weather condition is occurring between the snap shots unless informed otherwise. For example, if a 00 hour forecast shows no hazard, a 03 hour forecast shows the presence of hazardous weather, and a 06 hour forecast shows no hazard, the user should assume the hazard exists from the 0001 hour to the 0559 hour time period.

EXAMPLE–

See FIG GEN 3.5–8 for an example of the G–AIRMET graphical product.

3.9.3.8 Severe Weather Watch Bulletins (WWs) and Alert Messages (AWWs)

3.9.3.8.1 WWs define areas of possible severe thunderstorms or tornado activity. The bulletins are

PART 2 – EN ROUTE (ENR)

ENR 0.

- ENR 0.1 Preface – Not applicable
- ENR 0.2 Record of AIP Amendments – See GEN 0.2-1
- ENR 0.3 Record of AIP Supplements – Not applicable

ENR 0.4 Checklist of Pages

PAGE	DATE
PART 2 – EN ROUTE (ENR)	
ENR 0	
0.4-1	25 AUG 11
0.4-2	25 AUG 11
0.4-3	25 AUG 11
0.6-1	10 MAR 11
ENR 1	
1.1-1	10 MAR 11
1.1-2	10 MAR 11
1.1-3	10 MAR 11
1.1-4	10 MAR 11
1.1-5	10 MAR 11
1.1-6	10 MAR 11
1.1-7	10 MAR 11
1.1-8	10 MAR 11
1.1-9	10 MAR 11
1.1-10	10 MAR 11
1.1-11	10 MAR 11
1.1-12	10 MAR 11
1.1-13	10 MAR 11
1.1-14	10 MAR 11
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1.1-17	10 MAR 11
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1.1-24	10 MAR 11
1.1-25	10 MAR 11
1.1-26	10 MAR 11
1.1-27	10 MAR 11
1.1-28	10 MAR 11
1.1-29	25 AUG 11
1.1-30	25 AUG 11
1.1-31	10 MAR 11
1.1-32	10 MAR 11

PAGE	DATE
1.1-33	10 MAR 11
1.1-34	10 MAR 11
1.1-35	10 MAR 11
1.1-36	10 MAR 11
1.1-37	10 MAR 11
1.1-38	10 MAR 11
1.1-39	10 MAR 11
1.1-40	10 MAR 11
1.1-41	10 MAR 11
1.1-42	10 MAR 11
1.1-43	25 AUG 11
1.1-44	25 AUG 11
1.1-45	25 AUG 11
1.1-46	25 AUG 11
1.1-47	25 AUG 11
1.1-48	25 AUG 11
1.1-49	25 AUG 11
1.1-50	25 AUG 11
1.1-51	25 AUG 11
1.1-52	25 AUG 11
1.1-53	10 MAR 11
1.1-54	10 MAR 11
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1.1-67	10 MAR 11
1.1-68	10 MAR 11
1.1-69	10 MAR 11
1.1-70	10 MAR 11
1.1-71	10 MAR 11

PAGE	DATE
1.1-72	10 MAR 11
1.1-73	10 MAR 11
1.1-74	10 MAR 11
1.1-75	10 MAR 11
1.1-76	10 MAR 11
1.1-77	10 MAR 11
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1.1-80	10 MAR 11
1.1-81	10 MAR 11
1.2-1	10 MAR 11
1.3-1	10 MAR 11
1.4-1	10 MAR 11
1.4-2	10 MAR 11
1.4-3	10 MAR 11
1.4-4	10 MAR 11
1.4-5	10 MAR 11
1.4-6	10 MAR 11
1.4-7	10 MAR 11
1.4-8	10 MAR 11
1.4-9	10 MAR 11
1.4-10	10 MAR 11
1.4-11	10 MAR 11
1.4-12	10 MAR 11
1.4-13	10 MAR 11
1.4-14	10 MAR 11
1.4-15	10 MAR 11
1.4-16	10 MAR 11
1.5-1	10 MAR 11
1.5-2	10 MAR 11
1.5-3	10 MAR 11
1.5-4	10 MAR 11
1.5-5	10 MAR 11
1.5-6	10 MAR 11
1.5-7	10 MAR 11
1.5-8	10 MAR 11
1.5-9	10 MAR 11
1.5-10	25 AUG 11
1.5-11	25 AUG 11
1.5-12	25 AUG 11

PAGE	DATE
1.5-13	25 AUG 11
1.5-14	25 AUG 11
1.5-15	25 AUG 11
1.5-16	25 AUG 11
1.5-17	25 AUG 11
1.5-18	10 MAR 11
1.5-19	10 MAR 11
1.5-20	10 MAR 11
1.5-21	10 MAR 11
1.5-22	10 MAR 11
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1.5-35	10 MAR 11
1.5-36	10 MAR 11
1.5-37	10 MAR 11
1.5-38	10 MAR 11
1.5-39	10 MAR 11
1.5-40	25 AUG 11
1.5-41	10 MAR 11
1.5-42	10 MAR 11
1.5-43	10 MAR 11
1.5-44	10 MAR 11
1.5-45	10 MAR 11
1.5-46	10 MAR 11
1.5-47	10 MAR 11
1.5-48	10 MAR 11
1.5-49	10 MAR 11
1.5-50	10 MAR 11
1.5-51	10 MAR 11
1.5-52	10 MAR 11
1.5-53	10 MAR 11
1.5-54	10 MAR 11
1.5-55	10 MAR 11
1.5-56	10 MAR 11
1.5-57	10 MAR 11
1.5-58	10 MAR 11
1.5-59	10 MAR 11
1.5-60	10 MAR 11
1.5-61	10 MAR 11
1.5-62	10 MAR 11
1.5-63	10 MAR 11
1.5-64	10 MAR 11

PAGE	DATE
1.5-65	10 MAR 11
1.5-66	10 MAR 11
1.5-67	10 MAR 11
1.5-68	25 AUG 11
1.5-69	25 AUG 11
1.5-70	10 MAR 11
1.5-71	10 MAR 11
1.5-72	10 MAR 11
1.5-73	10 MAR 11
1.5-74	10 MAR 11
1.6-1	10 MAR 11
1.7-1	10 MAR 11
1.7-2	10 MAR 11
1.7-3	10 MAR 11
1.7-4	10 MAR 11
1.8-1	10 MAR 11
1.9-1	10 MAR 11
1.10-1	10 MAR 11
1.10-2	10 MAR 11
1.10-3	10 MAR 11
1.10-4	25 AUG 11
1.10-5	25 AUG 11
1.10-6	25 AUG 11
1.10-7	10 MAR 11
1.10-8	10 MAR 11
1.10-9	10 MAR 11
1.10-10	10 MAR 11
1.10-11	10 MAR 11
1.10-12	10 MAR 11
1.10-13	10 MAR 11
1.10-14	10 MAR 11
1.10-15	10 MAR 11
1.10-16	10 MAR 11
1.10-17	10 MAR 11
1.10-18	10 MAR 11
1.10-19	10 MAR 11
1.10-20	10 MAR 11
1.10-21	10 MAR 11
1.11-1	10 MAR 11
1.11-2	10 MAR 11
1.12-1	10 MAR 11
1.12-2	10 MAR 11
1.12-3	25 AUG 11
1.12-4	25 AUG 11
1.12-5	25 AUG 11
1.12-6	25 AUG 11
1.12-7	25 AUG 11
1.12-8	25 AUG 11
1.13-1	10 MAR 11
1.14-1	10 MAR 11
1.15-1	10 MAR 11

PAGE	DATE
1.15-2	25 AUG 11
1.15-3	25 AUG 11
1.15-4	25 AUG 11
1.15-5	25 AUG 11
1.15-6	10 MAR 11
1.15-7	10 MAR 11
1.15-8	10 MAR 11
1.16-1	10 MAR 11
1.16-2	10 MAR 11
1.16-3	10 MAR 11
1.17-1	10 MAR 11
1.18-1	10 MAR 11
1.19-1	10 MAR 11
1.19-2	10 MAR 11
1.19-3	10 MAR 11
1.19-4	10 MAR 11
1.19-5	25 AUG 11
1.19-6	10 MAR 11
1.19-7	10 MAR 11
1.19-8	10 MAR 11
ENR 2	
2-1	10 MAR 11
ENR 3	
3.1-1	10 MAR 11
3.2-1	10 MAR 11
3.3-1	10 MAR 11
3.4-1	10 MAR 11
3.5-1	10 MAR 11
3.5-2	10 MAR 11
3.5-3	10 MAR 11
ENR 4	
4.1-1	10 MAR 11
4.1-2	10 MAR 11
4.1-3	10 MAR 11
4.1-4	10 MAR 11
4.1-5	10 MAR 11
4.1-6	10 MAR 11
4.1-7	10 MAR 11
4.1-8	10 MAR 11
4.1-9	10 MAR 11
4.1-10	10 MAR 11
4.1-11	10 MAR 11
4.1-12	10 MAR 11
4.1-13	10 MAR 11
4.1-14	10 MAR 11
4.1-15	10 MAR 11
4.1-16	10 MAR 11
4.1-17	10 MAR 11
4.1-18	10 MAR 11
4.1-19	10 MAR 11

PAGE	DATE
4.1-20	10 MAR 11
4.1-21	10 MAR 11
4.1-22	10 MAR 11
4.1-23	10 MAR 11
4.1-24	10 MAR 11
4.1-25	10 MAR 11
4.1-26	10 MAR 11
4.1-27	10 MAR 11
4.1-28	10 MAR 11
4.1-29	10 MAR 11
4.1-30	10 MAR 11
4.1-31	10 MAR 11
4.1-32	10 MAR 11
4.1-33	10 MAR 11
4.1-34	10 MAR 11
4.1-35	10 MAR 11
4.1-36	10 MAR 11
4.1-37	10 MAR 11
4.1-38	10 MAR 11
4.1-39	10 MAR 11
4.1-40	10 MAR 11
4.1-41	10 MAR 11
4.1-42	10 MAR 11
4.2-1	10 MAR 11
ENR 5	
5.1-1	10 MAR 11
5.1-2	10 MAR 11
5.1-3	10 MAR 11
5.1-4	10 MAR 11
5.1-5	10 MAR 11
5.2-1	10 MAR 11
5.2-2	25 AUG 11
5.3-1	10 MAR 11
5.4-1	10 MAR 11
5.5-1	10 MAR 11
5.6-1	10 MAR 11
5.6-2	10 MAR 11
5.6-3	10 MAR 11
5.7-1	10 MAR 11
5.7-2	10 MAR 11
5.7-3	10 MAR 11
5.7-4	10 MAR 11
5.7-5	10 MAR 11
5.7-6	10 MAR 11
5.7-7	10 MAR 11
5.7-8	10 MAR 11
5.7-9	10 MAR 11
5.7-10	10 MAR 11
5.7-11	10 MAR 11

PAGE	DATE
5.7-12	10 MAR 11
5.7-13	10 MAR 11
5.7-14	25 AUG 11
5.7-15	10 MAR 11
ENR 6	
6.1-1	10 MAR 11
6.1-2	10 MAR 11
6.1-3	10 MAR 11
6.1-4	10 MAR 11
6.1-5	10 MAR 11
6.1-6	10 MAR 11
6.1-7	25 AUG 11
6.2-1	10 MAR 11
6.2-2	10 MAR 11
6.2-3	10 MAR 11
6.2-4	10 MAR 11
6.2-5	10 MAR 11
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6.2-12	10 MAR 11
6.2-13	10 MAR 11
6.2-14	10 MAR 11
6.2-15	10 MAR 11
6.2-16	10 MAR 11
6.2-17	10 MAR 11
6.2-18	10 MAR 11

PAGE	DATE
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ENR 0.5 List of Hand Amendments to the AIP – Not applicable

27.5.8 Pilots arriving or departing an uncontrolled airport that has automated weather broadcast capability (ASOS/AWSS/AWOS) should monitor the broadcast frequency, advise the controller that they have the “one-minute weather,” and state intentions prior to operating within the Class B, Class C, Class D, or Class E surface areas.

NOTE–

One-minute weather is the most recent one minute updated weather broadcast received by a pilot from an uncontrolled airport ASOS/AWSS/AWOS.

28. Pilot Responsibilities Upon Clearance Issuance

28.1 Record ATC Clearance. When conducting an IFR operation, make a written record of your ATC clearance. The specified conditions which are a part of your air traffic clearance may be somewhat different from those included in your flight plan. Additionally, ATC may find it necessary to ADD conditions, such as a particular departure route. The very fact that ATC specifies different or additional conditions means that other aircraft are involved in the traffic situation.

28.2 ATC Clearance/Instruction Readback. Pilots of airborne aircraft should read back *those parts* of ATC clearances and instructions containing altitude assignments, vectors, or runway assignments as a means of mutual verification. The read back of the “numbers” serves as a double check between pilots and controllers and reduces the kinds of communications errors that occur when a number is either “misheard” or is incorrect.

28.2.1 Include the aircraft identification in all readbacks and acknowledgments. This aids controllers in determining that the correct aircraft received the clearance or instruction. The requirement to include aircraft identification in all readbacks and acknowledgments becomes more important as frequency congestion increases and when aircraft with similar call signs are on the same frequency.

EXAMPLE–

“Climbing to Flight Level three three zero, United Twelve” or “November Five Charlie Tango, roger, cleared to land runway nine left.”

28.2.2 Read back altitudes, altitude restrictions, and vectors in the same sequence as they are given in the clearance/instruction.

28.2.3 Altitudes contained in charted procedures such as DPs, instrument approaches, etc., should not be read back unless they are specifically stated by the controller.

28.2.4 Initial read back of a taxi, departure or landing clearance should include the runway assignment, including left, right, center, etc. if applicable.

28.3 It is the responsibility of the pilot to accept or refuse the clearance issued.

29. IFR Clearance VFR–On–Top

29.1 A pilot on an IFR flight plan operating in VFR weather conditions, may request VFR–on–top in lieu of an assigned altitude. This would permit pilots to select an altitude or flight level of their choice (subject to any ATC restrictions).

29.2 Pilots desiring to climb through a cloud, haze, smoke, or other meteorological formation and then either cancel their IFR flight plan or operate VFR–on–top may request a climb to VFR–on–top. The ATC authorization shall contain either a top report or a statement that no top report is available, and a request to report reaching VFR–on–top. Additionally, the ATC authorization may contain a clearance limit, routing and an alternative clearance if VFR–on–top is not reached by a specified altitude.

29.3 A pilot on an IFR flight plan operating in VFR conditions may request to climb/descend in VFR conditions.

29.4 ATC may not authorize VFR–on–top/VFR conditions operations unless the pilot requests the VFR operation or a clearance to operate in VFR conditions will result in noise abatement benefits where part of the IFR departure route does not conform to an FAA approved noise abatement route or altitude.

29.5 When operating in VFR conditions with an ATC authorization to “maintain VFR–on–top” or “maintain VFR conditions,” pilots on IFR flight plans must:

29.5.1 Fly at the appropriate VFR altitude as prescribed in 14 CFR Section 91.159.

29.5.2 Comply with the VFR visibility and distance from cloud criteria in 14 CFR Section 91.155 (Basic VFR Weather Minimums).

NOTE–

See AIP, GEN 1.7, Annex 2, Rules of the Air, for a table showing basic VFR weather minimums.

29.5.3 Comply with instrument flight rules that are applicable to this flight; i.e., minimum IFR altitude, position reporting, radio communications, course to be flown, adherence to ATC clearance, etc. Pilots should advise ATC prior to any altitude change to ensure the exchange of accurate traffic information.

29.6 ATC authorization to “maintain VFR–on–top” is not intended to restrict pilots so that they must operate only above an obscuring meteorological formation (layer). Instead, it permits operation above, below, between layers or in areas where there is no meteorological obscuration. It is imperative that clearance to operate “VFR–on–top/VFR conditions” does not imply cancellation of the IFR flight plan.

29.7 Pilots operating VFR–on–top/VFR conditions may receive traffic information from ATC on other pertinent IFR or VFR aircraft. However, aircraft operating in Class B or Class C airspace and TRSAs shall be separated as required by FAA Order 7110.65, Air Traffic Control.

NOTE–

When operating in VFR weather conditions, it is the pilot’s responsibility to be vigilant so as to see and avoid other aircraft.

30. VFR/IFR Flights

30.1 A pilot departing VFR, either intending to or needing to obtain an IFR clearance en route, must be aware of the position of the aircraft and the relative terrain/obstructions. When accepting a clearance below the minimum en route altitude (MEA)/minimum IFR altitude (MIA)/minimum vector altitude (MVA)/off route obstruction clearance altitude (OROCA), pilots are responsible for their own terrain/obstruction clearance until reaching the MEA/MIA/MVA/OROCA. If the pilots are unable to maintain terrain/obstruction clearance, the controller should be advised and pilots should state their intentions.

NOTE–

OROCA is an off route altitude which provides obstruction clearance with a 1,000 foot buffer in nonmountainous terrain areas and a 2,000 foot buffer in designated mountainous areas within the U.S. This altitude may not provide signal coverage from ground based navigational aids, air traffic control radar, or communications coverage.

31. Adherence to Clearance

31.1 When air traffic clearance has been obtained under either the Visual or Instrument Flight Rules, the pilot in command of the aircraft shall not deviate from the provisions thereof unless an amended clearance is obtained. When ATC issues a clearance or instruction, pilots are expected to execute its provisions upon receipt. ATC, in certain situations, will include the word “IMMEDIATELY” in a clearance or instruction to impress urgency of an imminent situation, and expeditious compliance by the pilot is expected and necessary for safety. The addition of a VFR or other restriction; i.e., climb or descent point or time, crossing altitude, etc., does not authorize a pilot to deviate from the route of flight or any other provision of the ATC clearance.

31.2 When a heading is assigned or a turn is requested by ATC, pilots are expected to promptly initiate the turn, to complete the turn, and to maintain the new heading unless issued additional instructions.

31.3 The term “at pilot’s discretion” included in the altitude information of an ATC clearance means that ATC has offered the pilot the option to start climb or descent when the pilot wishes, is authorized to conduct the climb or descent at any rate, and to temporarily level off at any intermediate altitude as desired. However, once the aircraft has vacated an altitude, it may not return to that altitude.

31.4 When ATC has not used the term “AT PILOT’S DISCRETION” nor imposed any climb or descent restrictions, pilots should initiate climb or descent promptly on acknowledgement of the clearance. Descend or climb at an optimum rate consistent with the operating characteristics of the aircraft to 1,000 feet above or below the assigned altitude, and then attempt to descend or climb at a rate of between 500 and 1,500 fpm until the assigned altitude is reached. If at anytime the pilot is unable to climb or descend at a rate of at least 500 feet a minute, advise ATC. If it is necessary to level off at an intermediate altitude during climb or descent, advise ATC, except when leveling off at 10,000 feet MSL on descent, or 2,500 feet above airport elevation (prior to entering a Class C or Class D surface area), when required for speed reduction (14 CFR Section 91.117).

37.6 Radar Availability

37.6.1 FAA radar units operate continuously at the locations shown in the Airport/Facility Directory, and their services are available to all pilots, both civil and military. Contact the associated FAA control tower or ARTCC on any frequency guarded for initial instructions, or in an emergency, any FAA facility for information on the nearest radar service.

37.7 Transponder Operation

37.7.1 General

37.7.1.1 Pilots should be aware that proper application of these procedures will provide both VFR and IFR aircraft with a high degree of safety in the environment where high-speed closure rates are possible. Transponders substantially increase the capability of radar to see an aircraft, and the Mode C feature enables the controller to quickly determine where potential traffic conflicts may exist. Even VFR pilots who are not in contact with ATC will be afforded greater protection from IFR aircraft and VFR aircraft which are receiving traffic advisories. Nevertheless, pilots should never relax their visual scanning vigilance for other aircraft.

37.7.1.2 ATCRBS is similar to and compatible with military coded radar beacon equipment. Civil Mode A is identical to military Mode 3.

37.7.1.3 Civil and military transponders should be adjusted to the “on” or normal operating position as soon as practical and remain on during all operations, unless requested to change to “standby” by ATC. IN ALL CASES, WHILE IN CONTROLLED AIRSPACE, EACH PILOT OPERATING AN AIRCRAFT EQUIPPED WITH AN OPERABLE ATC TRANSPONDER, MAINTAINED IN ACCORDANCE WITH 14 CFR. SECTION 91.413, MUST OPERATE THE TRANSPONDER, INCLUDING MODE C IF INSTALLED, ON THE APPROPRIATE CODE OR AS ASSIGNED BY ATC. IN CLASS G AIRSPACE, THE TRANSPONDER SHOULD BE OPERATING WHILE AIRBORNE UNLESS OTHERWISE REQUESTED BY ATC.

37.7.1.4 If a pilot on an IFR flight elects to cancel the IFR flight plan prior to reaching destination, the pilot should adjust the transponder according to VFR operations.

37.7.1.5 If entering U.S. domestic controlled airspace from outside the U.S., the pilot should advise

on first radio contact with a U.S. radar ATC facility that such equipment is available by adding “transponder” to the aircraft identification.

37.7.1.6 It should be noted by all users of ATC transponders that the coverage they can expect is limited to “line of sight.” Low altitude or aircraft antenna shielding by the aircraft itself may result in reduced range. Range can be improved by climbing to a higher altitude. It may be possible to minimize antenna shielding by locating the antenna where dead spots are only noticed during abnormal flight attitudes.

37.7.1.7 Aircraft equipped with ADS–B (1090 ES or UAT) must operate the equipment in the transmit mode (on position) at all times while on any airport surface.

NOTE–

For a complete description of operating limitations and procedures, pilots of aircraft equipped with ADS–B should refer to AIP, Automatic Dependant Surveillance – Broadcast Services, ENR 1.1 Paragraph 46.

37.7.2 Transponder Code Designation

37.7.2.1 For ATC to utilize one or a combination of the 4096 discrete codes, FOUR DIGIT CODE DESIGNATION will be used; e.g., code 2100 will be expressed as TWO ONE ZERO ZERO. Due to the operational characteristics of the rapidly expanding automated ATC system, THE LAST TWO DIGITS OF THE SELECTED TRANSPONDER CODE SHOULD ALWAYS READ ‘00’ UNLESS SPECIFICALLY REQUESTED BY ATC TO BE OTHERWISE.

37.7.3 Automatic Altitude Reporting (Mode C)

37.7.3.1 Some transponders are equipped with a Mode C automatic altitude reporting capability. This system converts aircraft altitude in 100 foot increments to coded digital information which is transmitted together with Mode C framing pulses to the interrogating radar facility. The manner in which transponder panels are designed differs, therefore, a pilot should be thoroughly familiar with the operation of the transponder so that ATC may realize its full capabilities.

37.7.3.2 Adjust transponder to reply on the Mode A/3 code specified by ATC and, if equipped, to reply on Mode C with altitude reporting capability activated unless deactivation is directed by ATC or unless the installed aircraft equipment has not been

tested and calibrated as required by 14 CFR Section 91.217. If deactivation is required by ATC, run off the altitude reporting feature of your transponder. An instruction by ATC to “STOP ALTITUDE SQUAWK, ALTITUDE DIFFERS (number of feet) FEET,” may be an indication that your transponder is transmitting incorrect altitude information or that you have an incorrect altimeter setting. While an incorrect altimeter setting has no effect on the Mode C altitude information transmitted by your transponder (transponders are preset at 29.92), it would cause you to fly at an actual altitude different from your assigned altitude. When a controller indicates that an altitude readout is invalid, the pilot should initiate a check to verify that the aircraft altimeter is set correctly.

37.7.3.3 Pilots of aircraft with operating Mode C altitude reporting transponders should exact altitude/flight level to the nearest hundred foot increment when establishing initial contact with an ATC. Exact altitude/flight level reports on initial contact provide ATC with information that is required prior to using Mode C altitude information for separation purposes. This will significantly reduce altitude verification requests.

37.7.4 Transponder IDENT Feature

37.7.4.1 The transponder shall be operated only as specified by ATC. Activate the “IDENT” feature only upon request of the ATC controller.

37.7.5 Code Changes

37.7.5.1 When making routine code changes, pilots should avoid inadvertent selection of Codes 7500, 7600, or 7700 thereby causing momentary false alarms at automated ground facilities. For example when switching from Code 2700 to Code 7200, switch first to 2200 then 7200, NOT to 7700 and then 7200. This procedure applies to nondiscrete Code 7500 and all discrete codes in the 7600 and 7700 series (i.e., 7600–7677, 7700–7777) which will trigger special indicators in automated facilities. Only nondiscrete Code 7500 will be decoded as the hijack code.

37.7.5.2 Under no circumstances should a pilot of a civil aircraft operate the transponder on Code 7777. This code is reserved for military interceptor operations.

37.7.5.3 Military pilots operating VFR or IFR within restricted/warning areas should adjust their trans-

ponders to Code 4000, unless another code has been assigned by ATC.

37.7.6 Mode C Transponder Requirements

37.7.6.1 Specific details concerning requirements to carry and operate Mode C transponders, as well as exceptions and ATC authorized deviations from the requirements are found in 14 CFR Sections 91.215 and 99.12.

37.7.6.2 In general, the CFR requires aircraft to be equipped with Mode C transponders when operating:

a) At or above 10,000 feet MSL over the 48 contiguous states or the District of Columbia, excluding that airspace below 2,500 feet AGL.

b) Within 30 miles of a Class B airspace primary airport, below 10,000 feet MSL. Balloons, gliders, and aircraft not equipped with an engine driven electrical system are excepted from the above requirements when operating below the floor of Class A airspace and/or; outside of Class B airspace and below the ceiling of the Class B airspace (or 10,000 feet MSL, whichever is lower).

c) Within and above all Class C airspace up to 10,000 feet MSL.

d) Within 10 miles of certain designated airports from the surface to 10,000 feet MSL, excluding that airspace which is both outside Class D airspace and below 1,200 feet AGL. Balloons, gliders and aircraft not equipped with an engine driven electrical system are excepted from this requirement.

37.7.6.3 14 CFR Section 99.12 requires all aircraft flying into, within, or across the contiguous U.S. ADIZ be equipped with a Mode C or Mode S transponder. Balloons, gliders, and aircraft not equipped with an engine driven electrical system are excepted from this requirement.

37.7.6.4 Pilots shall ensure that their aircraft transponder is operating on an appropriate ATC assigned VFR/IFR code and Mode C when operating in such airspace. If in doubt about the operational status of either feature of your transponder while airborne, contact the nearest ATC facility or FSS and they will advise you what facility you should contact for determining the status of your equipment.

37.7.6.5 Inflight requests for “immediate” deviation from the transponder requirements may be approved by controllers only when the flight will continue IFR or when weather conditions prevent VFR descent and

continued VFR flight in airspace not affected by the CFR. All other requests for deviation should be made by contacting the nearest FSS or air traffic facility in person or by telephone. The nearest ARTCC will normally be the controlling agency and is responsible for coordinating requests involving deviations in other ARTCC's areas.

37.7.7 Transponder Operation Under Visual Flight Rules (VFR)

37.7.7.1 Unless otherwise instructed by an ATC Facility, adjust transponder to reply on Mode 3/A Code 1200 regardless of altitude.

37.7.7.2 Adjust transponder to reply on Mode C, with altitude reporting capability activated if the aircraft is so equipped, unless deactivation is directed by ATC or unless the installed equipment has not been tested and calibrated as required by 14 CFR Section 91.217. If deactivation is required and your transponder is so designed, turn off the altitude reporting switch and continue to transmit Mode C framing pulses. If this capability does not exist, turn off Mode C.

37.7.8 Radar Beacon Phraseology

37.7.8.1 Air traffic controllers, both civil and military, will use the following phraseology when referring to operation of the ATCRBS. Instructions by ATC refer only to Mode A/3 or Mode C operations and do not affect the operation of the transponder on other modes.

a) SQUAWK (number). Operate radar beacon transponder on designated code in Mode A/3.

b) IDENT. Engage the "IDENT" feature (military I/P) of the transponder.

c) SQUAWK (number) AND IDENT. Operate transponder on specified code in Mode A/3 and engage the "IDENT" (military I/P) feature.

d) SQUAWK STANDBY. Switch transponder to standby position.

e) SQUAWK LOW/NORMAL. Operate transponder on low or normal sensitivity as specified. Transponder is operated in "NORMAL" position unless ATC specified "LOW." ("ON" is used instead of "NORMAL" as a master control label on some types of transponders.)

f) SQUAWK ALTITUDE. Activate Mode C with automatic altitude reporting.

g) STOP ALTITUDE SQUAWK. Turn off altitude reporting switch and continue transmitting Mode C framing pulses. If your equipment does not have this capability, turn off Mode C.

h) STOP SQUAWK (mode in use). Switch off specified mode. (Use for military aircraft when the controller is unaware if a military service requires the aircraft to continue operating on another mode.)

i) STOP SQUAWK. Switch off transponder.

j) SQUAWK MAYDAY. Operate transponder in the emergency position. (Mode A Code 7700 for civil transponder. Mode 3 Code 7700 and emergency feature for military transponder.)

k) SQUAWK VFR. Operate radar beacon transponder on code 1200 in the MODE A/3, or other appropriate VFR code.

37.8 Emergency Operation

37.8.1 When an emergency occurs, the pilot of an aircraft equipped with a coded radar beacon transponder who desires to alert a ground radar facility to an emergency condition and who cannot establish communications without delay with an ATC facility may adjust the transponder to reply on Mode A/3, Code 7700.

37.8.2 Pilots should understand that they may not be within a radar coverage area and that, even if they are, certain radar facilities are not yet equipped to automatically recognize Code 7700 as an emergency signal. Therefore, they should establish radio communications with an ATC facility as soon as possible.

37.9 Radio Failure Operation

37.9.1 Should the pilot of an aircraft equipped with a coded radar beacon transponder experience a loss of two-way radio capability the pilot should:

37.9.1.1 Adjust the transponder to reply on MODE A/3, Code 7600.

37.9.1.2 Understand that the aircraft may not be in an area of radar coverage.

37.9.2 Pilots should understand that they may not be in an area of radar coverage. Also, many radar facilities are not presently equipped to automatically display Code 7600 and will interrogate 7600 only when the aircraft is under direct radar control at the time of radio failure. However, replying on Code 7700 first, increases the probability of early detection of a radio failure condition.

37.10 Radar Services

37.10.1 Safety Alert

37.10.1.1 A safety alert will be issued to pilots of aircraft being controlled by ATC if the controller is aware the aircraft is at an altitude which, in the controller's judgment, places the aircraft in unsafe proximity to terrain, obstructions, or other aircraft. The provision of this service is contingent upon the capability of the controller to have an awareness of situations involving unsafe proximity to terrain, obstructions, and uncontrolled aircraft. The issuance of a safety alert cannot be mandated, but it can be expected on a reasonable, though intermittent, basis. Once the alert is issued, it is solely the pilot's prerogative to determine what course of action, if any, will be taken. This procedure is intended for use in time critical situations where aircraft safety is in question. Noncritical situations should be handled via the normal traffic alert procedures.

37.10.2 Terrain/Obstruction Alert

37.10.2.1 Controllers will immediately issue an alert to the pilots of aircraft under their control when they recognize that the aircraft is at an altitude which, in their judgment, may be in unsafe proximity to terrain/obstructions. The primary method of detecting unsafe proximity is through Mode C automatic altitude reports.

EXAMPLE–

Low altitude alert, check your altitude immediately. The, as appropriate, MEA/MVA/MOCA in your area is (altitude) or, if past the final approach fix (nonprecision approach) or the outer marker or fix used in lieu of the outer marker (precision approach), the, as appropriate, MDA/DH (if known) is (altitude).

37.10.2.2 Terminal Automated Radar Terminal System (ARTS) IIIA, Common ARTS (to include ARTS IIIE and ARTS IIE) (CARTS), Micro En Route Automated Radar Tracking System (MEARTS), and Standard Terminal Automation Replacement System (STARS) facilities have an automated function which, if operating, alerts controllers when a tracked Mode C equipped aircraft under their control is below or is predicted to be below a predetermined minimum safe altitude. This function, called Minimum Safe Altitude Warning (MSAW), is designed solely as a controller aid in detecting potentially unsafe aircraft proximity to terrain/obstructions. The ARTS IIIA, CARTS, MEARTS, and STARS facility will, when MSAW is operating, provide MSAW monitoring for

all aircraft with an operating Mode C altitude encoding transponder that are tracked by the system and are:

- a) Operating on a IFR flight plan.
- b) Operating VFR and have requested MSAW monitoring.

37.10.2.3 Terminal AN/TPX–42A (number beacon decoder system) facilities have an automated function called Low Altitude Alert System (LAAS). Although not as sophisticated as MSAW, LAAS alerts the controller when a Mode C transponder equipped aircraft operating on a IFR flight plan is below a predetermined minimum safe altitude.

NOTE–

Pilots operating VFR may request MSAW or LAAS monitoring if their aircraft are equipped with Mode C transponders.

EXAMPLE–

Apache Three Three Papa requests MSAW/LAAS.

37.10.3 Aircraft Conflict Alert

37.10.3.1 Controllers will immediately issue an alert to the pilots of aircraft under their control if they are aware of an aircraft that is not under their control at an altitude which, in the controller's judgment, places both aircraft in unsafe proximity to each other. With the alert, when feasible, the controller will offer the pilot the position of the traffic if time permits and an alternate course(s) of action. Any alternate course of action the controller may recommend to the pilot will be predicated only on other traffic in the controller's jurisdiction.

EXAMPLE–

American Three, traffic alert, (position of traffic, if time permits), advise you turn right/left heading (degrees) and/or climb/descend to (altitude) immediately.

37.10.4 Radar Traffic Information Service (RTIS)

37.10.4.1 This is a service provided by radar ATC facilities. Pilots receiving this service are advised of any radar target observed on the radar display which may be in such proximity to the position of their aircraft or its intended route of flight that it warrants their attention. This service is not intended to relieve the pilot of the responsibility for continual vigilance to see and avoid other aircraft.

a) Purpose of this Service

1) The issuance of traffic information as observed on a radar display is based on the principle

of assisting and advising a pilot that a particular radar target's position and track indicates it may intersect or pass in such proximity to the intended flight path that it warrants the pilot's attention. This is to alert the pilot to the traffic, to be on the lookout for it, and thereby be in a better position to take appropriate action should the need arise.

2) Pilots are reminded that the surveillance radar used by ATC does not provide altitude information unless the aircraft is equipped with Mode C and the radar facility is capable of displaying altitude information.

b) Provisions of the Service

1) Many factors, such as limitations of the radar, volume of traffic, controller workload, and communications frequency congestion could prevent the controller from providing this service. Controllers possess complete discretion for determining whether they are able to provide or continue to provide this service in a specific case. The controller's reason against providing or continuing to provide the service in a particular case is not subject to question nor need it be communicated to the pilot. In other words, the provision of this service is entirely dependent upon whether controllers believe they are in a position to provide it. Traffic information is routinely provided to all aircraft operating on IFR flight plans except when the pilot declines the service, or the pilot is operating within Class A airspace. Traffic information may be provided to flights not operating on IFR Flight Plans when requested by pilots of such flights.

NOTE—

Radar ATC facilities normally display and monitor both primary and secondary radar when it is available, except that secondary radar may be used as the sole display source in Class A airspace, and under some circumstances outside of Class A airspace (beyond primary coverage and in en route areas where only secondary is available). Secondary radar may also be used outside Class A airspace as the sole display source when the primary radar is temporarily unusable or out of service. Pilots in contact with the affected ATC facility are normally advised when a temporary outage occurs; i.e., "primary radar out of service; traffic advisories available on transponder aircraft only." This means simply that only the aircraft which have transponders installed and in use will be depicted on ATC radar indicators when the primary radar is temporarily out of service.

2) When receiving VFR radar advisory service, pilots should monitor the assigned frequency at all times. This is to preclude controllers' concern for radio failure of emergency assistance to aircraft under the controller's jurisdiction. VFR radar advisory service does not include vectors away from conflicting traffic unless requested by the pilot. When advisory service is no longer desired, advise the controller before changing frequencies, then change your transponder code to 1200 if applicable. THE, as appropriate, MEA/MVA/MOCA IN YOUR AREA IS (altitude) or if past the final approach fix, THE, as appropriate, MDA/DH (if known) is (altitude). Except in programs where radar service is automatically terminated, the controller will advise the aircraft when radar is terminated.

NOTE—

Participation by VFR pilots in formal programs implemented at certain terminal locations constitutes pilot request. This also applies to participating pilots at those locations where arriving VFR flights are encouraged to make their first contact with the tower on the approach control frequency.

c) Issuance of Traffic Information. Traffic information will include the following concerning a target which may constitute traffic for an aircraft that is:

1) Radar identified.

(a) Azimuth from the aircraft in terms of the twelve hour clock.

(b) When rapidly maneuvering civil test or military aircraft prevent accurate issuance of traffic as in a) above, specify the direction from an aircraft's position in terms of the eight cardinal compass points (N, NE, E, SE, S, SW, W, NW). This method shall be terminated at the pilot's request.

(c) Distance from the aircraft in nautical miles.

(d) Direction in which the target is proceeding.

(e) Type of aircraft and altitude if known.

EXAMPLE—

Traffic 10 o'clock, 3 miles, west-bound (type aircraft and altitude, if known, of the observed traffic). The altitude may be known, by means of Mode C, but not verified with the pilot for accuracy. (To be valid for separation purposes by ATC, the accuracy of Mode C readouts must be verified. This is usually accomplished upon initial entry into the radar system by a comparison of the readout to pilot stated altitude, or the field elevation in the case of continuous readout being received from an aircraft on the airport.)

When necessary to issue traffic advisories containing unverified altitude information, the controller will issue the advisory in the same manner as if it were verified due to the accuracy of these readouts. The pilot may, upon receipt of traffic information, request a vector (heading) to avoid such traffic. The vector will be provided to the extent possible as determined by the controller provided the aircraft to be vectored is within the airspace under the jurisdiction of the controller.

2) Not radar identified

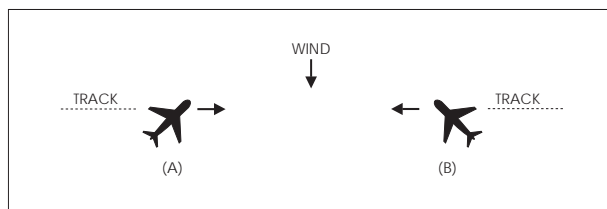
- (a) Distance and direction with respect to a fix.
- (b) Direction in which the target is proceeding.
- (c) Type of aircraft and altitude if known.

EXAMPLE-

Traffic 8 miles south of the airport northeastbound, (type aircraft and altitude if known).

(d) The examples depicted in FIG ENR 1.1-26 and FIG ENR 1.1-27 point out the possible error in the position of this traffic when it is necessary for a pilot to apply drift correction to maintain this track. This error could also occur in the event a change in course is made at the time radar traffic information is issued.

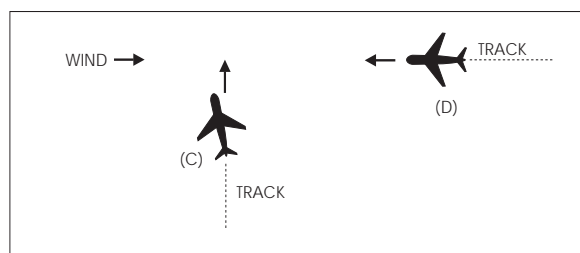
**FIG ENR 1.1-26
Induced Error in Position of Traffic**



EXAMPLE-

In FIG ENR 1.1-26, traffic information would be issued to the pilot of aircraft "A" as 12 o'clock. The actual position of the traffic as seen by the pilot of aircraft "A" would be one o'clock. Traffic information issued to aircraft "B" would also be given as 12 o'clock, but in this case, the pilot of "B" would see the traffic at 11 o'clock.

**FIG ENR 1.1-27
Induced Error in Position of Traffic**



EXAMPLE-

In FIG ENR 1.1-27, traffic information would be issued to the pilot of aircraft "C" as two o'clock. The actual position of the traffic as seen by the pilot of aircraft "C" would be three o'clock. Traffic information issued to aircraft "D" would be at an 11 o'clock position. Since it is not necessary for the pilot of aircraft "D" to apply wind correction (CRAB) to remain on track, the actual position of the traffic issued would be correct. Since the radar controller can only observe aircraft track (course) on the radar display, traffic advisories are issued accordingly, and pilots should give due consideration to this fact when looking for reported traffic.

37.11 Radar Assistance to VFR Aircraft

37.11.1 Radar equipped FAA ATC facilities provide radar assistance and navigation service (vectors) to VFR aircraft provided the aircraft can communicate with the facility, are within radar coverage, and can be radar identified.

37.11.2 Pilots should clearly understand that authorization to proceed in accordance with such radar navigational assistance does not constitute authorization for the pilot to violate Federal Aviation Regulations. In effect, assistance provided is on the basis that navigational guidance information issued is advisory in nature and the job of flying the aircraft safely remains with the pilot.

37.11.3 In many cases, controllers will be unable to determine if flight into instrument conditions will result from their instructions. To avoid possible hazards resulting from being vectored into IFR conditions, pilots should keep controllers advised of the weather conditions in which they are operating and along the course ahead.

37.11.4 Radar navigation assistance (vectors) may be initiated by the controller when one of the following conditions exist:

37.11.4.1 The controller suggests the vector and the pilot concurs.

37.11.4.2 A special program has been established and vectoring service has been advertised.

37.11.4.3 In the controller's judgment the vector is necessary for air safety.

37.11.5 Radar navigation assistance (vectors) and other radar derived information may be provided in response to pilot requests. Many factors, such as limitations of radar, volume of traffic, communications frequency, congestion, and controller workload could prevent the controller from providing it.

Controllers have complete discretion for determining if they are able to provide the service in a particular case. Their decision not to provide the service in a particular case is not subject to question.

38. Operational Policy/Procedures for Reduced Vertical Separation Minimum (RVSM) in the Domestic U.S., Alaska, Offshore Airspace and the San Juan FIR

38.1 Applicability and RVSM Mandate (Date/Time and Area)

38.1.1 Applicability. The policies, guidance and direction in this section apply to RVSM operations in the airspace over the lower 48 states, Alaska, Atlantic and Gulf of Mexico High Offshore Airspace and airspace in the San Juan FIR where VHF or UHF voice direct controller-pilot communication (DCPC) is normally available. Policies, guidance and direction for RVSM operations in oceanic airspace where VHF or UHF voice DCPC is not available and the airspace of other countries are posted on the FAA “RVSM Documentation” Webpage described in paragraph 38.3, Aircraft and Operator Approval Policy/Procedures, RVSM Monitoring and Databases for Aircraft and Operator Approval.

38.1.2 Mandate. At 0901 UTC on January 20, 2005, the FAA implemented RVSM between flight level (FL) 290-410 (inclusive) in the following airspace: the airspace of the lower 48 states of the United States, Alaska, Atlantic and Gulf of Mexico High Offshore Airspace and the San Juan FIR. (A chart showing the location of offshore airspace is posted on the Domestic U.S. RVSM (DRVSM) Webpage. See paragraph 38.3.) On the same time and date, RVSM was also introduced into the adjoining airspace of Canada and Mexico to provide a seamless environment for aircraft traversing those borders. In addition, RVSM was implemented on the same date in the Caribbean and South American regions.

38.1.3 RVSM Authorization. In accordance with 14 CFR Section 91.180, with only limited exceptions, prior to operating in RVSM airspace, operators and aircraft must have received RVSM authorization from the responsible civil aviation authority. (See paragraph 38.10, Procedures for Accommodation of Non-RVSM Aircraft.) If the operator or aircraft or both have not been authorized for RVSM operations, the aircraft will be referred to as a “non-RVSM”

aircraft. Paragraph 38.10 discusses ATC policies for accommodation of non-RVSM aircraft flown by the Department of Defense, Air Ambulance (Lifeguard) operators, foreign State governments and aircraft flown for certification and development. Paragraph 38.11, Non-RVSM Aircraft Requesting Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off, contains policies for non-RVSM aircraft climbing and descending through RVSM airspace to/from flight levels above RVSM airspace.

38.1.4 Benefits. RVSM enhances ATC flexibility, mitigates conflict points, enhances sector throughput, reduces controller workload and enables crossing traffic. Operators gain fuel savings and operating efficiency benefits by flying at more fuel efficient flight levels and on more user preferred routings.

38.2 Flight Level Orientation Scheme

Altitude assignments for direction of flight follow a scheme of odd altitude assignment for magnetic courses 000-179 degrees and even altitudes for magnetic courses 180-359 degrees for flights up to and including FL 410, as indicated in FIG ENR 1.1-28.

FIG ENR 1.1-28
Flight Level Orientation Scheme

Flight Level Orientation Scheme	
FL 430	←
FL 410	→
FL 400	←
FL 390	→
FL 380	←
FL 370	→
FL 360	←
FL 350	→
FL 340	←
FL 330	→
FL 320	←
FL 310	→
FL 300	←
FL 290	→

NOTE-
Odd Flight Levels: Magnetic Course 000-179 Degrees
Even Flight Levels: Magnetic Course 180-359 Degrees.

38.3 Aircraft and Operator Approval Policy/Procedures, RVSM Monitoring and Databases for Aircraft and Operator Approval

38.3.1 RVSM Authority. 14 CFR Section 91.180 applies to RVSM operations within the U.S. 14 CFR Section 91.706 applies to RVSM operations outside the U.S. Both sections require that the operator obtain authorization prior to operating in RVSM airspace. 14 CFR Section 91.180 requires that, prior to conducting RVSM operations within the U.S., the operator obtain authorization from the FAA or from the responsible authority, as appropriate. In addition, it requires that the operator and the operator’s aircraft comply with the standards of 14 CFR Part 91 Appendix G (Operations in RVSM Airspace).

38.3.2 Sources of Information. The FAA RVSM Website Homepage can be accessed at: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/rvsm/. The “RVSM Documentation” and “Domestic RVSM” webpages are linked to the RVSM Homepage. “RVSM Documentation” contains guidance and direction for an operator to obtain aircraft and operator approval to conduct RVSM operations. It provides information for DRVSM and oceanic and international RVSM airspace. It is recommended that operators planning to operate in Domestic U.S. RVSM airspace first review the following documents to orient themselves to the approval process.

38.3.2.1 Under “Area of Operations Specific Information,” the document, “Basic Operator Information on DRVSM Programs,” provides an overview of the DRVSM program and the related aircraft and operator approval programs.

38.3.2.2 In the “Getting Started” section, review the “RVSM Approval Checklist – U.S. Operators” or “RVSM Approval Checklist – Non–U.S. Operators” (as applicable). These are job aids or checklists that show aircraft/operator approval process events with references to related RVSM documents published on the website.

38.3.2.3 Under “Documents Applicable to All RVSM Approvals,” review “RVSM Area New to the Operator.” This document provides a guide for operators that are conducting RVSM operations in one or more areas of operation, but are planning to conduct RVSM operations in an area where they have

not previously conducted RVSM operations, such as the U.S.

38.3.3 TCAS Equipage. TCAS equipage requirements are contained in 14 CFR Sections 121.356, 125.224, 129.18 and 135.189. Part 91 Appendix G does not contain TCAS equipage requirements specific to RVSM, however, Appendix G does require that aircraft equipped with TCAS II and flown in RVSM airspace be modified to incorporate TCAS II Version 7.0 or a later version.

38.3.4 Aircraft Monitoring. Operators are required to participate in the RVSM aircraft monitoring program. The “Monitoring Requirements and Procedures” section of the RVSM Documentation Webpage contains policies and procedures for participation in the monitoring program. Ground-based and GPS-based monitoring systems are available for the Domestic RVSM program. Monitoring is a quality control program that enables the FAA and other civil aviation authorities to assess the in-service altitude-keeping performance of aircraft and operators.

38.3.5 Registration on RVSM Approvals Databases. The “Registration on RVSM Approvals Database” section of the RVSM Documentation Webpage provides policies/procedures for operator and aircraft registration on RVSM approvals databases.

38.3.5.1 Purpose of RVSM Approvals Databases. ATC does not use RVSM approvals databases to determine whether or not a clearance can be issued into RVSM airspace. RVSM program managers do regularly review the operators and aircraft that operate in RVSM airspace to identify and investigate those aircraft and operators flying in RVSM airspace, but not listed on the RVSM approvals databases.

38.3.5.2 Registration of U.S. Operators. When U.S. operators and aircraft are granted RVSM authority, the FAA Flight Standards office makes an input to the FAA Program Tracking and Reporting Subsystem (PTRS). The Separation Standards Group at the FAA Technical Center obtains PTRS operator and aircraft information to update the FAA maintained U.S. Operator/Aircraft RVSM Approvals Database. Basic database operator and aircraft information can be viewed on the RVSM Documentation Webpage by clicking on the appropriate database icon.

38.3.5.3 Registration of Non–U.S. Operators. Non–U.S. operators can find policy/procedures for

registration on the North American Approvals Registry and Monitoring Organization (NAARMO) database in the “Registration on RVSM Approvals Database” section of RVSM Documentation.

38.4 Flight Planning into RVSM Airspace

38.4.1 Operators that do not file the correct aircraft equipment suffix on the FAA or ICAO Flight Plan may be denied clearance into RVSM airspace. Policies for the FAA Flight Plan are detailed in subparagraph 38.4.3 below. Policies for the ICAO Flight Plan are detailed in subparagraph 38.4.4.

38.4.2 The operator will annotate the equipment block of the FAA or ICAO Flight Plan with an aircraft equipment suffix indicating RVSM capability only after the responsible civil aviation authority has determined that both the operator and its aircraft are RVSM-compliant and has issued RVSM authorization to the operator.

38.4.3 General Policies for FAA Flight Plan Equipment Suffix. TBL ENR 1.10–2, Aircraft Suffixes, allows operators to indicate that the aircraft has both RVSM and Advanced Area Navigation (RNAV) capabilities or has only RVSM capability.

38.4.3.1 The operator will annotate the equipment block of the FAA Flight Plan with the appropriate aircraft equipment suffix from TBL ENR 1.10–2.

38.4.3.2 Operators can only file one equipment suffix in block 3 of the FAA Flight Plan. Only this equipment suffix is displayed directly to the controller.

38.4.3.3 Aircraft with RNAV Capability. For flight in RVSM airspace, aircraft with RNAV capability, but not Advanced RNAV capability, will file “/W”. Filing “/W” will not preclude such aircraft from filing and flying direct routes in en route airspace.

38.4.4 Policy for ICAO Flight Plan Equipment Suffixes.

38.4.4.1 Operators/aircraft that are RVSM-compliant and that file ICAO flight plans will file “/W” in block 10 (Equipment) to indicate RVSM authorization and will also file the appropriate ICAO Flight Plan suffixes to indicate navigation and communication capabilities. The equipment suffixes in TBL ENR 1.10–2 are for use only in an FAA Flight Plan (FAA Form 7233–1).

38.4.4.2 Operators/aircraft that file ICAO flight plans that include flight in Domestic U.S. RVSM airspace must file “/W” in block 10 to indicate RVSM authorization.

38.4.5 Importance of Flight Plan Equipment Suffixes. The operator must file the appropriate equipment suffix in the equipment block of the FAA Flight Plan (FAA Form 7233–1) or the ICAO Flight Plan. The equipment suffix informs ATC:

38.4.5.1 Whether or not the operator and aircraft are authorized to fly in RVSM airspace.

38.4.5.2 The navigation and/or transponder capability of the aircraft (e.g., advanced RNAV, Transponder with Mode C).

38.4.6 Significant ATC uses of the flight plan equipment suffix information are:

38.4.6.1 To issue or deny clearance into RVSM airspace.

38.4.6.2 To apply a 2,000 foot vertical separation minimum in RVSM airspace to aircraft that are not authorized for RVSM, but are in one of the limited categories that the FAA has agreed to accommodate. (See paragraphs 38.10, Procedures for Accommodation of Non-RVSM Aircraft, and 38.11, Non-RVSM Aircraft Requesting Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off, for policy on limited operation of unapproved aircraft in RVSM airspace).

38.4.6.3 To determine if the aircraft has “Advanced RNAV” capabilities and can be cleared to fly procedures for which that capability is required.

38.5 Pilot RVSM Operating Practices and Procedures

38.5.1 RVSM Mandate. If either the operator or the aircraft or both have not received RVSM authorization (non-RVSM aircraft), the pilot will neither request nor accept a clearance into RVSM airspace unless:

38.5.1.1 The flight is conducted by a non-RVSM DOD, Lifeguard, certification/development or foreign State (government) aircraft in accordance with paragraph 38.10, Procedures for Accommodation of Non-RVSM Aircraft.

38.5.1.2 The pilot intends to climb to or descend from FL 430 or above in accordance with paragraph 38.11, Non-RVSM Aircraft Requesting

Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off.

38.5.1.3 An emergency situation exists.

38.5.2 Basic RVSM Operating Practices and Procedures. Appendix 4 of Guidance 91–RVSM contains pilot practices and procedures for RVSM. Operators must incorporate Appendix 4 practices and procedures, as supplemented by the applicable paragraphs of this section, into operator training or pilot knowledge programs and operator documents containing RVSM operational policies. Guidance 91–RVSM is published on the RVSM Documentation Webpage under “Documents Applicable to All RVSM Approvals.”

38.5.3 Appendix 4 contains practices and procedures for flight planning, preflight procedures at the aircraft, procedures prior to RVSM airspace entry, inflight (en route) procedures, contingency procedures and post flight.

38.5.4 The following paragraphs either clarify or supplement Appendix 4 practices and procedures.

38.6 Guidance on Severe Turbulence and Mountain Wave Activity (MWA)

38.6.1 Introduction/Explanation

38.6.1.1 The information and practices in this paragraph are provided to emphasize to pilots and controllers the importance of taking appropriate action in RVSM airspace when aircraft experience severe turbulence and/or MWA that is of sufficient magnitude to significantly affect altitude-keeping.

38.6.1.2 Severe Turbulence. Severe turbulence causes large, abrupt changes in altitude and/or

attitude usually accompanied by large variations in indicated airspeed. Aircraft may be momentarily out of control. Encounters with severe turbulence must be remedied immediately in any phase of flight. Severe turbulence may be associated with MWA.

38.6.1.3 Mountain Wave Activity (MWA)

a) Significant MWA occurs both below and above the floor of RVSM airspace, FL 290. MWA often occurs in western states in the vicinity of mountain ranges. It may occur when strong winds blow perpendicular to mountain ranges resulting in up and down or wave motions in the atmosphere. Wave action can produce altitude excursions and airspeed fluctuations accompanied by only light turbulence. With sufficient amplitude, however, wave action can induce altitude and airspeed fluctuations accompanied by severe turbulence. MWA is difficult to forecast and can be highly localized and short lived.

b) Wave activity is not necessarily limited to the vicinity of mountain ranges. Pilots experiencing wave activity anywhere that significantly affects altitude-keeping can follow the guidance provided below.

c) Inflight MWA Indicators (Including Turbulence). Indicators that the aircraft is being subjected to MWA are:

1) Altitude excursions and/or airspeed fluctuations with or without associated turbulence.

2) Pitch and trim changes required to maintain altitude with accompanying airspeed fluctuations.

3) Light to severe turbulence depending on the magnitude of the MWA.

3.3 STAR charts are published in the Terminal Procedures Publication (TPP) and are available on subscription from the National Aeronautical Charting Office.

3.4 RNAV STAR.

3.4.1 All public RNAV STARs are RNAV1. These procedures require system performance currently met by GPS or DME/DME/IRU RNAV systems that satisfy the criteria discussed in AC 90-100A, U.S. Terminal and En Route Area Navigation (RNAV) Operations. RNAV1 procedures require the aircraft's total system error remain bounded by ± 1 NM for 95% of the total flight time.

3.4.2 For procedures requiring GPS, if the navigation system does not automatically alert the flight crew of a loss of GPS, the operator must develop procedures to verify correct GPS operation.

4. Local Flow Traffic Management Program

4.1 This program is a continuing effort by the FAA to enhance safety, minimize the impact of aircraft noise, and conserve aviation fuel. The enhancement of safety and reduction of noise are achieved in this program by minimizing low altitude maneuvering of arriving turbojet and turboprop aircraft weighing more than 12,500 pounds and, by permitting departure aircraft to climb to high altitudes sooner, as arrivals are operating at higher altitudes at the points where their flight paths cross. The application of these procedures also reduces exposure time between controlled aircraft and uncontrolled aircraft at the lower altitudes in and around the terminal environment. Fuel conservation is accomplished by absorbing any necessary arrival delays for aircraft included in this program operating at the higher and more fuel efficient altitudes.

4.2 A fuel efficient descent is basically an uninterrupted descent (except where level flight is required for speed adjustment) from cruising altitude to the point when level flight is necessary for the pilot to stabilize the aircraft on final approach. The procedure for a fuel efficient descent is based on an altitude loss which is most efficient for the majority of aircraft being served. This will generally result in a descent gradient window of 250-350 feet per nautical mile.

4.3 When crossing altitudes and speed restrictions are issued verbally or are depicted on a chart, ATC

will expect the pilot to descend first to the crossing altitude and then reduce speed. Verbal clearances for descent will normally permit an uninterrupted descent in accordance with the procedure as described in paragraph 4.2 above. Acceptance of a charted fuel efficient descent (Runway Profile Descent) clearance requires the pilot to adhere to the altitudes, speeds, and headings depicted on the charts unless otherwise instructed by ATC. **PILOTS RECEIVING A CLEARANCE FOR A FUEL EFFICIENT DESCENT ARE EXPECTED TO ADVISE ATC IF THEY DO NOT HAVE RUNWAY PROFILE DESCENT CHARTS PUBLISHED FOR THAT AIRPORT OR ARE UNABLE TO COMPLY WITH THE CLEARANCE.**

5. Advance Information on Instrument Approaches

5.1 When landing at airports with approach control services and where two or more instrument approach procedures are published, pilots will be provided in advance of their arrival with the type of approach to expect or that they may be vectored for a visual approach. This information will be broadcast either by a controller or on ATIS. It will not be furnished when the visibility is three miles or better and the ceiling is at or above the highest initial approach altitude established for any low altitude instrument approach procedure for the airport.

5.2 The purpose of this information is to aid the pilot in planning arrival actions; however, it is not an ATC clearance or commitment and is subject to change. Pilots should bear in mind that fluctuating weather, shifting winds, blocked runway, etc., are conditions which may result in changes to approach information previously received. It is important that pilots advise ATC immediately if they are unable to execute the approach ATC advised will be used, or if they prefer another type of approach.

5.3 Aircraft destined to uncontrolled airports which have automated weather data with broadcast capability should monitor the ASOS/AWSS/AWOS frequency to ascertain the current weather for the airport. The pilot must advise ATC when he/she has received the broadcast weather and state his/her intentions.

NOTE-

1. ASOS/AWSS/AWOS should be set to provide one-minute broadcast weather updates at uncon-

trolled airports that are without weather broadcast capability by a human observer.

2. Controllers will consider the long line disseminated weather from an automated weather system at an uncontrolled airport as trend and planning information only and will rely on the pilot for current weather information for the airport. If the pilot is unable to receive the current broadcast weather, the last long-line disseminated weather will be issued to the pilot. When receiving IFR services, the pilot/aircraft operator is responsible for determining if weather/visibility is adequate for approach/landing.

5.4 When making an IFR approach to an airport not served by a tower or FSS, after the ATC controller advises “CHANGE TO ADVISORY FREQUENCY APPROVED,” you should broadcast your intentions, including the type of approach being executed, your position, and when over the final approach fix inbound (nonprecision approach) or when over the outer marker or the fix used in lieu of the outer marker inbound (precision approach). Continue to monitor the appropriate frequency (UNICOM, etc.) for reports from other pilots.

6. Approach Clearance

6.1 An aircraft which has been cleared to a holding fix and subsequently “cleared . . . approach” has not received new routing. Even though clearance for the approach may have been issued prior to the aircraft reaching the holding fix, ATC would expect the pilot to proceed via the holding fix (the last assigned route), and the feeder route associated with that fix (if a feeder route is published on the approach chart) to the initial approach fix (IAF) to commence the approach. **WHEN CLEARED FOR THE APPROACH, THE PUBLISHED OFF AIRWAY (FEEDER) ROUTES THAT LEAD FROM THE EN ROUTE STRUCTURE TO THE IAF ARE PART OF THE APPROACH CLEARANCE.**

6.2 If a feeder route to an IAF begins at a fix located along the route of flight prior to reaching the holding fix, and clearance for an approach is issued, a pilot should commence the approach via the published feeder route; i.e., the aircraft would not be expected to overfly the feeder route and return to it. The pilot is expected to commence the approach in a similar manner at the IAF, if the IAF for the procedure is located along the route of flight to the holding fix.

6.3 If a route of flight directly to the initial approach fix is desired, it should be so stated by the controller with phraseology to include the words “direct . . .,” “proceed direct” or a similar phrase which the pilot can interpret without question. If a pilot is uncertain of the clearance, immediately query ATC as to what route of flight is desired.

6.4 The name of an instrument approach, as published, is used to identify the approach, even though a component of the approach aid, such as the glideslope on an Instrument Landing System, is inoperative or unreliable. The controller will use the name of the approach as published, but must advise the aircraft at the time an approach clearance is issued that the inoperative or unreliable approach aid component is unusable, except when the title of the published approach procedures otherwise allows, for example, ILS or LOC.

6.5 The following applies to aircraft on radar vectors and/or cleared “direct to” in conjunction with an approach clearance:

6.5.1 Maintain the last altitude assigned by ATC until the aircraft is established on a published segment of a transition route, or approach procedure segment, or other published route, for which a lower altitude is published on the chart. If already on an established route, or approach or arrival segment, you may descend to whatever minimum altitude is listed for that route or segment

6.5.2 Continue on the vector heading until intercepting the next published ground track applicable to the approach clearance.

6.5.3 Once reaching the final approach fix via the published segments, the pilot may continue on approach to a landing.

6.5.4 If proceeding to an IAF with a published course reversal (procedure turn or hold-in-lieu of PT pattern), except when cleared for a straight in approach by ATC, the pilot must execute the procedure turn/hold-in-lieu of PT, and complete the approach.

6.5.5 If cleared to an IAF/IF via a NoPT route, or no procedure turn/hold-in-lieu of PT is published, continue with the published approach.

6.5.6 In addition to the above, RNAV aircraft may be issued a clearance direct to an Intermediate Fix followed by a straight-in approach clearance.

NOTE–

Refer to 14 CFR 91.175 (i).

7. Landing Priority

7.1 A clearance for a specific type of approach (ILS, MLS, ADF, VOR, or straight-in approach) to an aircraft operating on an IFR flight plan does not mean that landing priority will be given over other traffic. Traffic control towers handle all aircraft, regardless of the type of flight plan, on a “first-come, first-served” basis. Therefore, because of local traffic or runway in use, it may be necessary for the controller, in the interest of safety, to provide a different landing sequence. In any case, a landing sequence will be issued to each aircraft as soon as possible to enable the pilot to properly adjust the aircraft’s flight path.

8. Procedure Turn and Hold-in-lieu of Procedure Turn

8.1 A procedure turn is the maneuver prescribed when it is necessary to reverse direction to establish the aircraft inbound on an intermediate or final approach course. The procedure turn or hold-in-lieu-of-PT is a required maneuver when it is depicted on the approach chart, unless cleared by ATC for a straight-in approach. Additionally, the procedure turn or hold-in-lieu-of-PT is not permitted when the symbol “No PT” is depicted on the initial segment being used, when a RADAR VECTOR to the final approach course is provided, or when conducting a timed approach from a holding fix. The altitude prescribed for the procedure turn is a minimum altitude until the aircraft is established on the inbound course. The maneuver must be completed within the distance specified in the profile view. For a hold-in-lieu-of-PT the holding pattern should be flown as depicted and the specified leg length/timing must not be exceeded.

NOTE–

The pilot may elect to use the procedure turn or hold-in-lieu-of-PT when it is not required by the procedure, but must first receive an amended clearance from ATC. If the pilot is uncertain whether the ATC clearance intends for a procedure turn to be conducted or to allow for a straight-in approach, the pilot must immediately request clarification from ATC (14 CFR Section 91.123).

8.1.1 On U.S. Government charts, a barbed arrow indicates the maneuvering side of the outbound course on which the procedure turn is made. Headings are provided for course reversal using the 45 degree type procedure turn. However, the point at which the turn may be commenced and the type and rate of turn is left to the discretion of the pilot (limited by the charted remain within xx NM distance). Some of the options are the 45 degree procedure turn, the racetrack pattern, the teardrop procedure turn, or the 80 degree ↔ 260 degree course reversal. Racetrack entries should be conducted on the maneuvering side where the majority of protected airspace resides. If an entry places the pilot on the non-maneuvering side of the PT, correction to intercept the outbound course ensures remaining within protected airspace. Some procedure turns are specified by procedural track. These turns must be flown exactly as depicted.

8.1.2 Descent to the procedure turn (PT) completion altitude from the PT fix altitude (when one has been published or assigned by ATC) must not begin until crossing over the PT fix or abeam and proceeding outbound. Some procedures contain a note in the chart profile view that says “Maintain (altitude) or above until established outbound for procedure turn” (See FIG ENR 1.5–7). Newer procedures will simply depict an “at or above” altitude at the PT fix without a chart note (See FIG ENR 1.5–8). Both are there to ensure required obstacle clearance is provided in the procedure turn entry zone (See FIG ENR 1.5–9). Absence of a chart note or specified minimum altitude adjacent to the PT fix is an indication that descent to the procedure turn altitude can commence immediately upon crossing over the PT fix, regardless of the direction of flight. This is because the minimum altitudes in the PT entry zone and the PT maneuvering zone are the same.

8.1.3 When the approach procedure involves a procedure turn, a maximum speed of not greater than 200 knots (IAS) should be observed from first overheading the course reversal IAF through the procedure turn maneuver to ensure containment within the obstruction clearance area. Pilots should begin the outbound turn immediately after passing the procedure turn fix. The procedure turn maneuver must be executed within the distance specified in the profile view. The normal procedure turn distance is 10 miles. This may be reduced to a minimum of 5 miles where only Category A or helicopter aircraft

are to be operated or increased to as much as 15 miles to accommodate high performance aircraft.

8.1.4 A teardrop procedure or penetration turn may be specified in some procedures for a required course reversal. The teardrop procedure consists of departure from an initial approach fix on an outbound course followed by a turn toward and intercepting the inbound course at or prior to the intermediate fix or point. Its purpose is to permit an aircraft to reverse

direction and lose considerable altitude within reasonably limited airspace. Where no fix is available to mark the beginning of the intermediate segment, it shall be assumed to commence at a point 10 miles prior to the final approach fix. When the facility is located on the airport, an aircraft is considered to be on final approach upon completion of the penetration turn. However, the final approach segment begins on the final approach course 10 miles from the facility.

FIG ENR 1.5-7

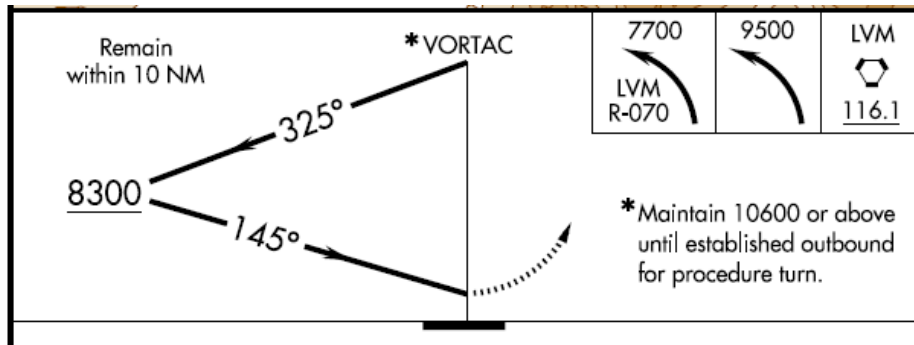
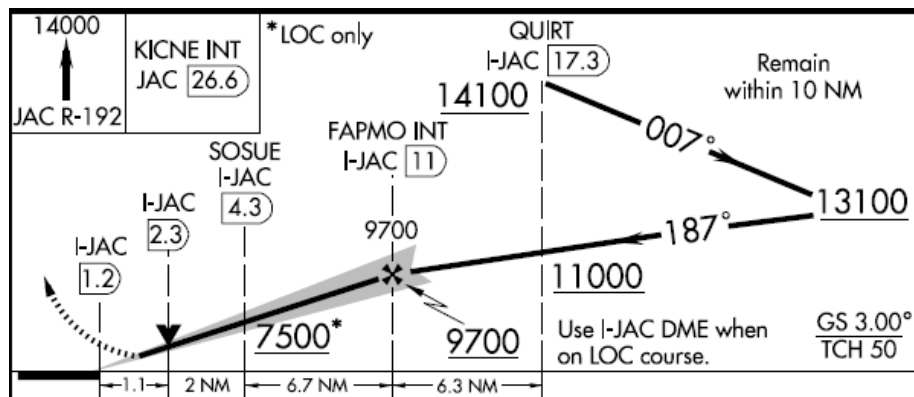


FIG ENR 1.5-8



8.1.5 A holding pattern in lieu of procedure turn may be specified for course reversal in some procedures. In such cases, the holding pattern is established over an intermediate fix or a final approach fix. The holding pattern distance or time specified in the profile view must be observed. For a hold-in-lieu-of-PT, the holding pattern direction must be flown as depicted and the specified leg length/timing must not be exceeded. Maximum holding airspeed limitations as set forth for all holding patterns apply. The holding pattern maneuver is completed when the aircraft is

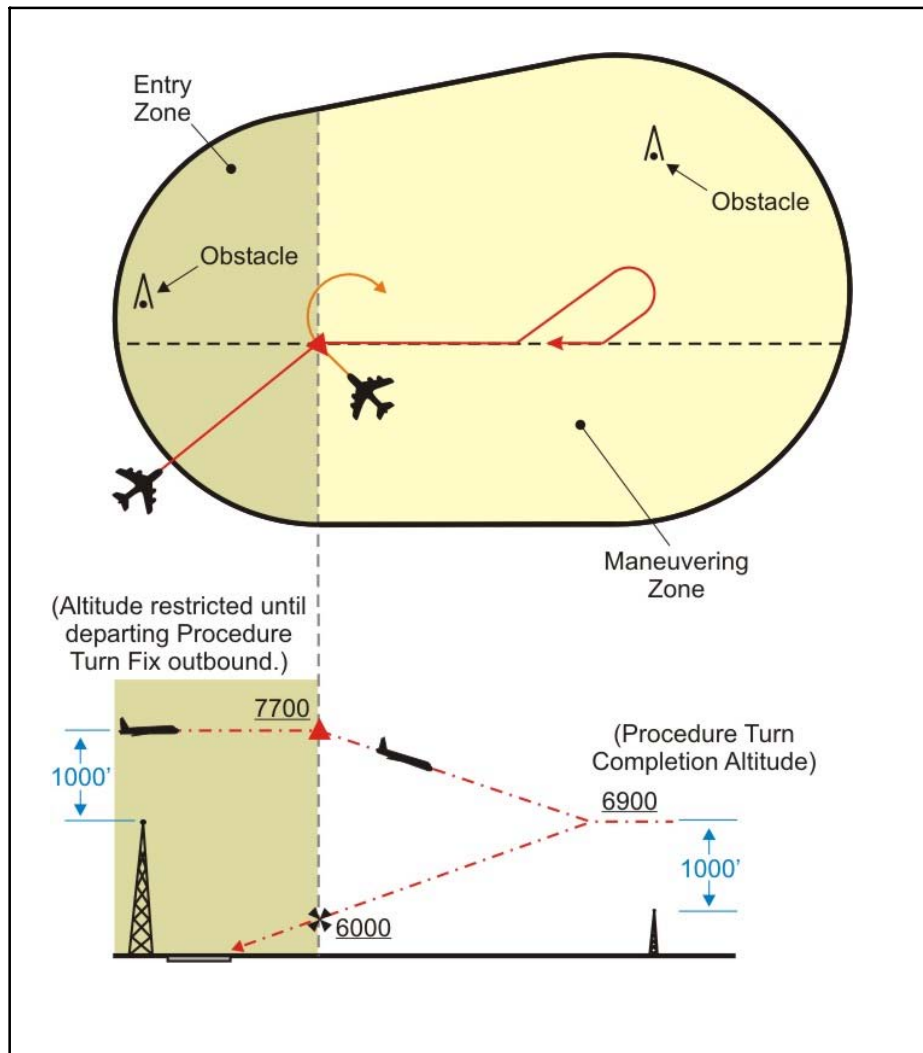
established on the inbound course after executing the appropriate entry. If cleared for the approach prior to returning to the holding fix, and the aircraft is at the prescribed altitude, additional circuits of the holding pattern are not necessary nor expected by ATC. If pilots elect to make additional circuits to lose excessive altitude or to become better established on course, it is their responsibility to so advise ATC upon receipt of their approach clearance.

NOTE-
Some approach charts have an arrival holding pattern depicted at the IAF using a “thin line” holding symbol. It is charted where holding is frequently required prior to starting the approach procedure so that detailed holding instructions are not required. The arrival holding pattern is not authorized unless assigned by Air Traffic Control. Holding at the same fix may also be depicted on the enroute chart. A hold-in-lieu of procedure turn is depicted by a “thick line” symbol, and is part of the instrument approach procedure as described in paragraph 8. (See U. S. Terminal Procedures booklets page G1 for both examples.)

approach can be made directly from a specified intermediate fix to the final approach fix. In such cases, the term “NoPT” is used with the appropriate course and altitude to denote that the procedure turn is not required. If a procedure turn is desired, and when cleared to do so by ATC, descent below the procedure turn altitude should not be made until the aircraft is established on the inbound course, since some NoPT altitudes may be lower than the procedure turn altitudes.

8.1.6 A procedure turn is not required when an

FIG ENR 1.5-9



8.2 Limitations on Procedure Turns

8.2.1 In the case of a radar initial approach to a final approach fix or position, or a timed approach from a holding fix, or where the procedure specifies NoPT, no pilot may make a procedure turn unless, when final approach clearance is received, the pilot so advises ATC and a clearance is received to execute a procedure turn.

8.2.2 When a teardrop procedure turn is depicted and a course reversal is required, this type turn must be executed.

8.2.3 When a holding pattern replaces a procedure turn, the holding pattern must be followed, except when RADAR VECTORING is provided or when NoPT is shown on the approach course. The recommended entry procedures will ensure the aircraft remains within the holding pattern's protected airspace. As in the procedure turn, the descent from the minimum holding pattern altitude to the final approach fix altitude (when lower) may not commence until the aircraft is established on the inbound course. Where a holding pattern is established in-lieu-of a procedure turn, the maximum holding pattern airspeeds apply.

NOTE–

See paragraph 1.3.2.1, Airspeeds.

8.2.4 The absence of the procedure turn barb in the plan view indicates that a procedure turn is not authorized for that procedure.

9. RNP SAAAR Instrument Approach Procedures

These procedures require authorization analogous to the special authorization required for Category II or III ILS procedures. Special aircraft and aircrew authorization required (SAAAR) procedures are to be conducted by aircrews meeting special training requirements in aircraft that meet the specified performance and functional requirements.

9.1 Unique characteristics of RNP SAAAR Approaches

9.1.1 RNP value. Each published line of minima has an associated RNP value. The indicated value defines the lateral and vertical performance requirements. A minimum RNP type is documented as part of the RNP SAAAR authorization for each operator

and may vary depending on aircraft configuration or operational procedures (e.g., GPS inoperative, use of flight director vice autopilot).

9.1.2 Curved path procedures. Some RNP approaches have a curved path, also called a radius-to-a-fix (RF) leg. Since not all aircraft have the capability to fly these arcs, pilots are responsible for knowing if they can conduct an RNP approach with an arc or not. Aircraft speeds, winds and bank angles have been taken into consideration in the development of the procedures.

9.1.3 RNP required for extraction or not. Where required, the missed approach procedure may use RNP values less than RNP–1. The reliability of the navigation system has to be very high in order to conduct these approaches. Operation on these procedures generally requires redundant equipment, as no single point of failure can cause loss of both approach and missed approach navigation.

9.1.4 Non-standard speeds or climb gradients. RNP SAAAR approaches are developed based on standard approach speeds and a 200 ft/NM climb gradient in the missed approach. Any exceptions to these standards will be indicated on the approach procedure, and the operator should ensure they can comply with any published restrictions before conducting the operation.

9.1.5 Temperature Limits. For aircraft using barometric vertical navigation (without temperature compensation) to conduct the approach, low and high-temperature limits are identified on the procedure. Cold temperatures reduce the glidepath angle while high temperatures increase the glidepath angle. Aircraft using baro VNAV with temperature compensation or aircraft using an alternate means for vertical guidance (e.g., SBAS) may disregard the temperature restrictions. The charted temperature limits are evaluated for the final approach segment only. Regardless of charted temperature limits or temperature compensation by the FMS, the pilot may need to manually compensate for cold temperature on minimum altitudes and the decision altitude.

9.1.6 Aircraft size. The achieved minimums may be dependent on aircraft size. Large aircraft may require higher minimums due to gear height and/or wingspan. Approach procedure charts will be annotated with applicable aircraft size restrictions.

9.2 Types of RNP SAAAR Approach Operations

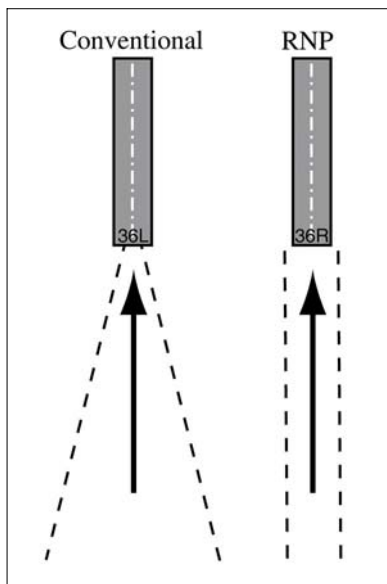
9.2.1 RNP Stand-alone Approach Operations.

RNP SAAAR procedures can provide access to runways regardless of the ground-based NAVAID infrastructure, and can be designed to avoid obstacles, terrain, airspace, or resolve environmental constraints.

9.2.2 RNP Parallel Approach (RPA) Operations.

RNP SAAAR procedures can be used for parallel approaches where the runway separation is adequate (See FIG ENR 1.5-10). Parallel approach procedures can be used either simultaneously or as stand-alone operations. They may be part of either independent or dependent operations depending on the ATC ability to provide radar monitoring.

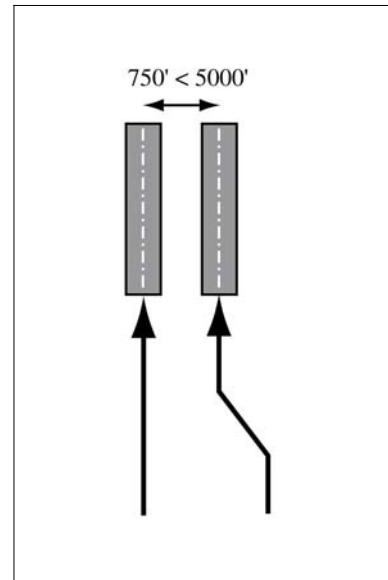
FIG ENR 1.5-10



9.2.3 RNP Parallel Approach Runway Transitions (RPAT) Operations.

RPAT approaches begin as a parallel IFR approach operation using simultaneous independent or dependent procedures. (See FIG ENR 1.5-11). Visual separation standards are used in the final segment of the approach after the final approach fix, to permit the RPAT aircraft to transition in visual conditions along a predefined lateral and vertical path to align with the runway centerline.

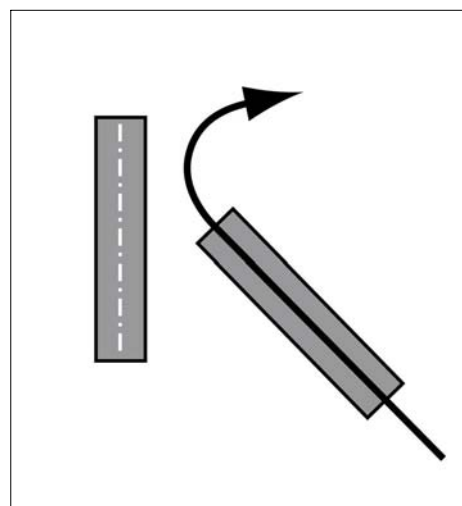
FIG ENR 1.5-11



9.2.4 RNP Converging Runway Operations.

At airports where runways converge, but may or may not intersect, an RNP SAAAR approach can provide a precise curved missed approach path that conforms to aircraft separation minimums for simultaneous operations (See FIG ENR 1.5-12). By flying this curved missed approach path with high accuracy and containment provided by RNP, dual runway operations may continue to be used to lower ceiling and visibility values than currently available. This type of operation allows greater capacity at airports where it can be applied.

FIG ENR 1.5-12



10. Side-step Maneuver

10.1 ATC may authorize a standard instrument approach procedure which serves either one of parallel runways that are separated by 1,200 feet or less followed by a straight-in landing on the adjacent runway.

10.2 Aircraft that will execute a side-step maneuver will be cleared for a specified approach procedure and landing on the adjacent parallel runway. Example, “cleared ILS runway 7 left approach, side-step to runway 7 right.” Pilots are expected to commence the side-step maneuver as soon as possible after the runway or runway environment is in sight. Compliance with minimum altitudes associated with stepdown fixes is expected even after the side-step maneuver is initiated.

NOTE—
Side-step minima are flown to a Minimum Descent Altitude (MDA) regardless of the approach authorized.

10.3 Landing minimums to the adjacent runway will be based on nonprecision criteria and therefore higher than the precision minimums to the primary runway, but will normally be lower than the published circling minimums.

11. Approach and Landing Minimums

11.1 Landing Minimums. The rules applicable to landing minimums are contained in 14 CFR Section 91.175. TBL ENR 1.5–2 may be used to convert RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 1800 RVR, use 2400 RVR with the resultant visibility of 1/2 mile.

TBL ENR 1.5–2
RVR Value Conversions

RVR	Visibility (statute miles)
1600	1/4
2400	1/2
3200	5/8
4000	3/4
4500	7/8
5000	1
6000	1 1/4

11.1.1 Aircraft approach category means a grouping of aircraft based on a speed of V_{REF} , if specified, or if V_{REF} is not specified, $1.3 V_{SO}$ at the maximum certified landing weight. V_{REF} , V_{SO} , and the maximum certified landing weight are those values as established for the aircraft by the certification authority of the country of registry. A pilot must use the minima corresponding to the category determined during certification or higher. Helicopters may use Category A minima. If it is necessary to operate at a speed in excess of the upper limit of the speed range for an aircraft’s category, the minimums for the higher category must be used. For example, an airplane which fits into Category B, but is circling to land at a speed of 145 knots, must use the approach Category D minimums. As an additional example, a Category A airplane (or helicopter) which is operating at 130 knots on a straight-in approach must use the approach Category C minimums. See the following category limits:

11.1.1.1 Category A: Speed less than 91 knots.

11.1.1.2 Category B: Speed 91 knots or more but less than 121 knots.

11.1.1.3 Category C: Speed 121 knots or more but less than 141 knots.

11.1.1.4 Category D: Speed 141 knots or more but less than 166 knots.

11.1.1.5 Category E: Speed 166 knots or more.

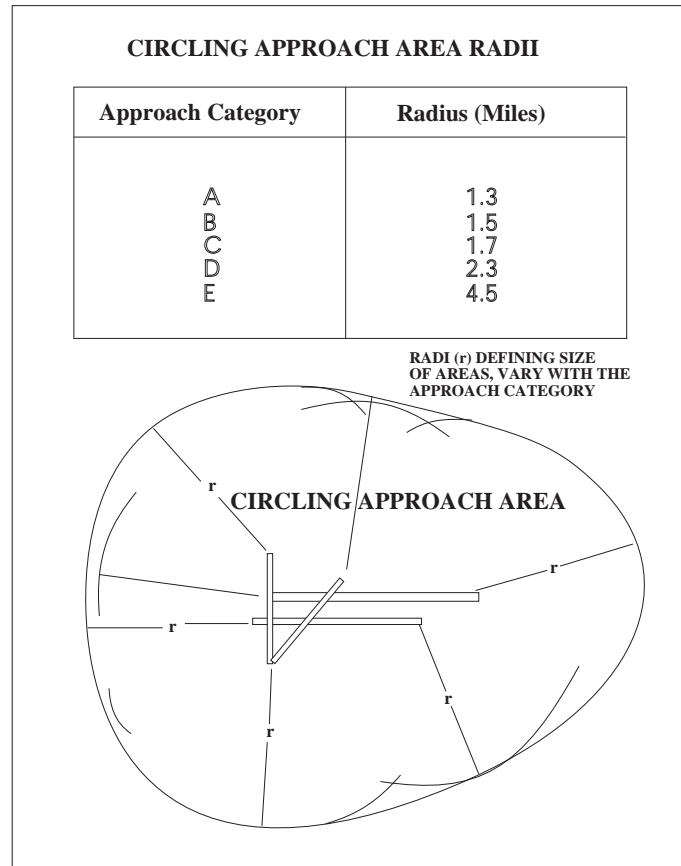
NOTE—
 V_{REF} in the above definition refers to the speed used in establishing the approved landing distance under the airworthiness regulations constituting the type certification basis of the airplane, regardless of whether that speed for a particular airplane is $1.3 V_{SO}$, $1.23 V_{SR}$, or some higher speed required for airplane controllability. This speed, at the maximum certificated landing weight, determines the lowest applicable approach category for all approaches regardless of actual landing weight.

11.2 Published Approach Minimums. Approach minimums are published for different aircraft categories and consist of a minimum altitude (DA, DH, MDA) and required visibility. These minimums are determined by applying the appropriate TERPS criteria. When a fix is incorporated in a nonprecision final segment, two sets of minimums may be published; one for the pilot that is able to identify the fix, and a second for the pilot that cannot. Two sets of minimums may also be published when a second altimeter source is used in the procedure. When a

nonprecision procedure incorporates both a step-down fix in the final segment and a second altimeter source, two sets of minimums are published to

account for the stepdown fix and a note addresses minimums for the second altimeter source.

FIG ENR 1.5–13
Final Approach Obstacle Clearance

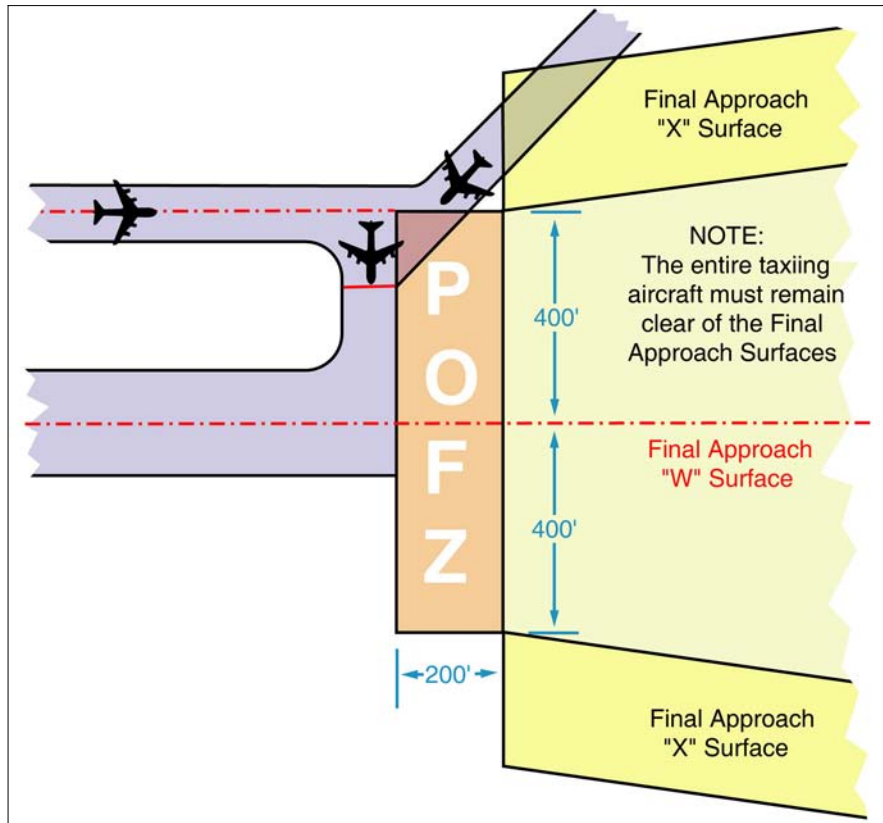


11.3 Obstacle Clearance. Final approach obstacle clearance is provided from the start of the final segment to the runway or missed approach point, whichever occurs last. Side-step obstacle protection is provided by increasing the width of the final approach obstacle clearance area.

11.3.1 Circling approach protected areas are defined by the tangential connection of arcs drawn from each runway end. The arc radii distance differs by aircraft approach category (see FIG ENR 1.5–13). Because of obstacles near the airport, a portion of the circling area may be restricted by a procedural note: e.g., “Circling NA E of RWY 17–35.” Obstacle clearance

is provided at the published minimums (MDA) for the pilot who makes a straight-in approach, side-steps, or circles. Once below the MDA the pilot must see and avoid obstacles. Executing the missed approach after starting to maneuver usually places the aircraft beyond the MAP. The aircraft is clear of obstacles when at or above the MDA while inside the circling area, but simply joining the missed approach ground track from the circling maneuver may not provide vertical obstacle clearance once the aircraft exits the circling area. Additional climb inside the circling area may be required before joining the missed approach track. See paragraph 27., Missed Approach, for additional considerations when starting a missed approach at other than the MAP.

FIG ENR 1.5-14
Precision Obstacle Free Zone (POFZ)



11.3.2 Precision Obstacle Free Zone (POFZ). A volume of airspace above an area beginning at the runway threshold, at the threshold elevation, and centered on the extended runway centerline. The POFZ is 200 feet (60m) long and 800 feet (240m) wide. The POFZ must be clear when an aircraft on a vertically guided final approach is within 2 nautical miles of the runway threshold and the reported ceiling is below 250 feet or visibility less than $\frac{3}{4}$ statute mile (SM) (or runway visual range below 4,000 feet). If the POFZ is not clear, the MINIMUM authorized height above touchdown (HAT) and visibility is 250 feet and $\frac{3}{4}$ SM. The POFZ is considered clear even if the wing of the aircraft holding on a taxiway waiting for runway clearance penetrates the POFZ; however, neither the fuselage nor the tail may infringe on the POFZ. The POFZ is applicable at all runway ends including displaced thresholds. (See FIG ENR 1.5-14.)

11.4 Straight-In Minimums are shown on the IAP when the final approach course is within 30 degrees of the runway alignment (15 degrees for GPS IAPs)

and a normal descent can be made from the IFR altitude shown on the IAP to the runway surface. When either the normal rate of descent or the runway alignment factor of 30 degrees (15 degrees for GPS IAPs) is exceeded, a straight-in minimum is not published and a circling minimum applies. The fact that a straight-in minimum is not published does not preclude pilots from landing straight-in if they have the active runway in sight and have sufficient time to make a normal approach for landing. Under such conditions and when ATC has cleared them for landing on that runway, pilots are not expected to circle even though only circling minimums are published. If they desire to circle, they should advise ATC.

11.5 Side-Step Maneuver Minimums. Landing minimums for a side-step maneuver to the adjacent runway will normally be higher than the minimums to the primary runway.

11.6 Circling Minimums. In some busy terminal areas, ATC may not allow circling and circling minimums will not be published. Published circling

NOTE—

Some GPS receiver installations inhibit GPS navigation whenever ANY ILS frequency is tuned. Pilots flying aircraft with receivers installed in this manner must wait until they are on the intermediate segment of the procedure prior to the PFAF (PFAF is the active waypoint) to tune the ILS frequency and must tune the ILS back to a VOR frequency in order to fly the GPS based missed approach.

12.11.3.2 Charting. There are charting differences between ILS, RNAV (GPS), and GLS approaches.

- a) The LAAS procedure is titled “GLS RWY XX” on the approach chart.
- b) The VDB provides information to the airborne receiver where the guidance is synthesized.
- c) The LAAS procedure is identified by a four alpha–numeric character field referred to as the RPI or approach ID and is similar to the IDENT feature of the ILS.
- d) The RPI is charted.
- e) Most RNAV(GPS) approach charts have had the GLS (NA) minima line replaced by an LPV line of minima.
- f) Since the concepts for LAAS and WAAS procedure publication have evolved, GLS will now be used only for LAAS minima, which will be on a separate approach chart.

12.11.4 Required Navigation Performance (RNP)

12.11.4.1 Pilots are advised to refer to the “TERMS/LANDING MINIMUMS DATA” (Section A) of the U.S. Government Terminal Procedures books for aircraft approach eligibility requirements by specific RNP level requirements.

12.11.4.2 Some aircraft have RNP approval in their AFM without a GPS sensor. The lowest level of sensors that the FAA will support for RNP service is DME/DME. However, necessary DME signal may not be available at the airport of intended operations. For those locations having an RNAV chart published with LNAV/VNAV minimums, a procedure note may be provided such as “DME/DME RNP–0.3 NA.” This means that RNP aircraft dependent on DME/DME to achieve RNP–0.3 are not authorized to conduct this approach. Where DME facility availability is a factor, the note may read “DME/DME RNP–0.3 Authorized; ABC and XYZ Required.” This means that ABC and XYZ facilities have been determined by flight inspection to be required in the

navigation solution to assure RNP–0.3. VOR/DME updating must not be used for approach procedures.

12.11.5 CHART TERMINOLOGY

12.11.5.1 Decision Altitude (DA) replaces the familiar term Decision Height (DH). DA conforms to the international convention where altitudes relate to MSL and heights relate to AGL. DA will eventually be published for other types of instrument approach procedures with vertical guidance, as well. DA indicates to the pilot that the published descent profile is flown to the DA (MSL), where a missed approach will be initiated if visual references for landing are not established. Obstacle clearance is provided to allow a momentary descent below DA while transitioning from the final approach to the missed approach. The aircraft is expected to follow the missed instructions while continuing along the published final approach course to at least the published runway threshold waypoint or MAP (if not at the threshold) before executing any turns.

12.11.5.2 Minimum Descent Altitude (MDA) has been in use for many years, and will continue to be used for the LNAV only and circling procedures.

12.11.5.3 Threshold Crossing Height (TCH) has been traditionally used in “precision” approaches as the height of the glide slope above threshold. With publication of LNAV/VNAV minimums and RNAV descent angles, including graphically depicted descent profiles, TCH also applies to the height of the “descent angle,” or glidepath, at the threshold. Unless otherwise required for larger type aircraft which may be using the IAP, the typical TCH is 30 to 50 feet.

12.11.6 The MINIMA FORMAT will also change slightly.

12.11.6.1 Each line of minima on the RNAV IAP is titled to reflect the level of service available; e.g., GLS, LPV, LNAV/VNAV, LP, and LNAV. CIRCLING minima will also be provided.

12.11.6.2 The minima title box indicates the nature of the minimum altitude for the IAP. For example:

- a) DA will be published next to the minima line title for minimums supporting vertical guidance such as for GLS, LPV or LNAV/VNAV.
- b) MDA will be published where the minima line was designed to support aircraft with only lateral guidance available, such as LNAV or LP. Descent below the MDA, including during the missed

approach, is not authorized unless the visual conditions stated in 14 CFR Section 91.175 exist.

c) Where two or more systems, such as LPV and LNAV/VNAV, share the same minima, each line of minima will be displayed separately.

12.11.7 Chart Symbology changed slightly to include:

12.11.7.1 Descent Profile. The published descent profile and a graphical depiction of the vertical path to the runway will be shown. Graphical depiction of the RNAV vertical guidance will differ from the traditional depiction of an ILS glide slope (feather) through the use of a shorter vertical track beginning at the decision altitude.

a) It is FAA policy to design IAPs with minimum altitudes established at fixes/waypoints to achieve optimum stabilized (constant rate) descents within each procedure segment. This design can enhance the safety of the operations and contribute toward reduction in the occurrence of controlled flight into terrain (CFIT) accidents. Additionally, the National Transportation Safety Board (NTSB) recently emphasized that pilots could benefit from publication of the appropriate IAP descent angle for a stabilized descent on final approach. The RNAV IAP format includes the descent angle to the hundredth of a degree; e.g., **3.00 degrees**. The angle will be provided in the graphically depicted descent profile.

b) The stabilized approach may be performed by reference to vertical navigation information provided by WAAS or LNAV/VNAV systems; or for LNAV-only systems, by the pilot determining the appropriate aircraft attitude/groundspeed combination to attain a constant rate descent which best emulates the published angle. To aid the pilot, U.S. Government Terminal Procedures Publication charts publish an expanded Rate of Descent Table on the inside of the back hard cover for use in planning and executing precision descents under known or approximate groundspeed conditions.

12.11.7.2 Visual Descent Point (VDP). A VDP will be published on most RNAV IAPs. VDPs apply only to aircraft utilizing LP or LNAV minima, not LPV or LNAV/VNAV minimums.

12.11.7.3 Missed Approach Symbology. In order to make missed approach guidance more readily understood, a method has been developed to display

missed approach guidance in the profile view through the use of quick reference icons. Due to limited space in the profile area, only four or fewer icons can be shown. However, the icons may not provide representation of the entire missed approach procedure. The entire set of textual missed approach instructions are provided at the top of the approach chart in the pilot briefing. (See FIG ENR 1.5–23.)

12.11.7.4 Waypoints. All RNAV or GPS stand-alone IAPs are flown using data pertaining to the particular IAP obtained from an onboard database, including the sequence of all WPs used for the approach and missed approach, except that step down waypoints may not be included in some TSO-C-129 receiver databases. Included in the database, in most receivers, is coding that informs the navigation system of which WPs are fly-over (FO) or fly-by (FB). The navigation system may provide guidance appropriately – including leading the turn prior to a fly-by WP; or causing overflight of a fly-over WP. Where the navigation system does not provide such guidance, the pilot must accomplish the turn lead or waypoint overflight manually. Chart symbology for the FB WP provides pilot awareness of expected actions. Refer to the legend of the U.S. Terminal Procedures books.

12.11.7.5 TAAs are described in subparagraph 12.4, Terminal Arrival Area (TAA). When published, the RNAV chart depicts the TAA areas through the use of “icons” representing each TAA area associated with the RNAV procedure (See FIG ENR 1.5–23). These icons are depicted in the plan view of the approach chart, generally arranged on the chart in accordance with their position relative to the aircrafts arrival from the en route structure. The WP, to which navigation is appropriate and expected within each specific TAA area, will be named and depicted on the associated TAA icon. Each depicted named WP is the IAF for arrivals from within that area. TAAs may not be used on all RNAV procedures because of airspace congestion or other reasons.

12.11.7.6 Hot and Cold Temperature Limitations. A minimum and maximum temperature limitation is published on procedures which authorize Baro-VNAV operation. These temperatures represent the airport temperature above or below which Baro-VNAV is not authorized to LNAV/VNAV minimums. As an example, the limitation will read: “Uncompensated Baro-VNAV NA below -8°C ($+18^{\circ}\text{F}$) or above 47°C (117°F).” This information will be found

that you confirm a takeoff clearance rather than mistake another aircraft's clearance for your own.

32.7 When ATC issues intersection “line up and wait” and takeoff clearances, the intersection designator will be used. If ATC omits the intersection designator, call ATC for clarification.

EXAMPLE–

Aircraft: “Cherokee 234AR, Runway 24L at November 4, line up and wait.”

32.8 If landing traffic is a factor during line up and wait operations operations, ATC will inform the aircraft in position of the closest traffic that has requested a full–stop, touch–and–go, stop–and–go, or an unrestricted low approach to the same runway. Pilots should take care to note the position of landing traffic. ATC will also advise the landing traffic when an aircraft is authorized to “line up and wait” on the same runway.

EXAMPLE–

Tower: “Cessna 234AR, Runway 24L, line up and wait. Traffic a Boeing 737, six mile final.”

Tower: “Delta 1011, continue, traffic a Cessna 210 holding in position Runway 24L.”

NOTE–

ATC will normally withhold landing clearance to arrival aircraft when another aircraft is in position and holding on the runway.

32.9 Never land on a runway that is occupied by another aircraft, even if a landing clearance was issued. Do not hesitate to ask the controller about the traffic on the runway and be prepared to execute a go–around.

NOTE–

Always clarify any misunderstanding or confusion concerning ATC instructions or clearances. ATC should be advised immediately if there is any uncertainty about the ability to comply with any of their instructions.

33. Departure Restrictions, Clearance Void Times, Hold for Release, and Release Times

33.1 ATC may assign departure restrictions, clearance void times, hold for release, and release times, when necessary, to separate departures from other traffic or to restrict or regulate the departure flow.

33.1.1 Clearance Void Times. A pilot may receive a clearance, when operating from an airport without

a control tower, which contains a provision for the clearance to be void if not airborne by a specific time. A pilot who does not depart prior to the clearance void time must advise ATC as soon as possible of his or her intentions. ATC will normally advise the pilot of the time allotted to notify ATC that the aircraft did not depart prior to the clearance void time. This time cannot exceed 30 minutes. Failure of an aircraft to contact ATC within 30 minutes after the clearance void time will result in the aircraft being considered overdue and search and rescue procedures initiated.

NOTE–

1. *Other IFR traffic for the airport where the clearance is issued is suspended until the aircraft has contacted ATC or until 30 minutes after the clearance void time or 30 minutes after the clearance release time if no clearance void time is issued.*

2. *Pilots who depart at or after their clearance void time are not afforded IFR separation and may be in violation of 14 CFR Section 91.173 which requires that pilots receive an appropriate ATC clearance before operating IFR in Class A, B, C, D, and E airspace.*

EXAMPLE–

Clearance void if not off by (clearance void time) and, if required, if not off by (clearance void time) advise (facility) not later than (time) of intentions.

33.1.2 Hold for Release. ATC may issue “hold for release” instructions in a clearance to delay an aircrafts departure for traffic management reasons (i.e., weather, traffic volume, etc.). When ATC states in the clearance, “hold for release,” the pilot may not depart utilizing that IFR clearance until a release time or additional instructions are issued by ATC. This does not preclude the pilot from cancelling the IFR clearance with ATC and departing under VFR; but an IFR clearance may not be available after departure. In addition, ATC will include departure delay information in conjunction with “hold for release” instructions.

EXAMPLE–

(Aircraft identification) cleared to (destination) airport as filed, maintain (altitude), and, if required (additional instructions or information), hold for release, expect (time in hours and/or minutes) departure delay.

33.1.3 Release Times. A “release time” is a departure restriction issued to a pilot by ATC, specifying the earliest time an aircraft may depart. ATC will use “release times” in conjunction with traffic management procedures and/or to separate a departing aircraft from other traffic.

EXAMPLE–

(Aircraft identification) released for departure at (time in hours and/or minutes).

33.1.4 Expect Departure Clearance Time (EDCT). The EDCT is the runway release time assigned to an aircraft included in traffic management programs. Aircraft are expected to depart no earlier than 5 minutes before, and no later than 5 minutes after the EDCT.

33.2 If practical, pilots departing uncontrolled airports should obtain IFR clearances prior to becoming airborne when two-way communication with the controlling ATC facility is available.

34. Departure Control

34.1 Departure Control is an approach control function responsible for ensuring separation between departures. So as to expedite the handling of departures, Departure Control may suggest a takeoff direction other than that which may normally have been used under VFR handling. Many times it is preferred to offer the pilot a runway that will require the fewest turns after takeoff to place the pilot on course or selected departure route as quickly as possible. At many locations particular attention is paid to the use of preferential runways for local noise abatement programs, and route departures away from congested areas.

34.2 Departure Control utilizing radar will normally clear aircraft out of the terminal area using instrument departure procedures (DPs) via radio navigation aids. When a departure is to be vectored immediately following takeoff, the pilot will be advised prior to takeoff of the initial heading to be flown but may not be advised of the purpose of the heading. Pilots operating in a radar environment are expected to associate departure headings with vectors to their planned route of flight. When given a vector taking the aircraft off a previously assigned nonradar route, the pilot will be advised briefly what the vector is to achieve. Thereafter, radar service will be provided until the aircraft has been reestablished “on-course” using an appropriate navigation aid and the pilot has been advised of the aircraft’s position; or, a handoff is made to another radar controller with further surveillance capabilities.

34.3 Controllers will inform pilots of the departure control frequencies and, if appropriate, the transpon-

der code before takeoff. Pilots must ensure their transponder is adjusted to the “on” or normal operating position as soon as practical and remain on during all operations unless otherwise requested to change to “standby” by ATC. Pilots should not change to the departure control frequency until requested. Controllers may omit the departure control frequency if a DP has or will be assigned and the departure control frequency is published on the DP.

35. Abbreviated IFR Departure Clearance (Cleared . . . as Filed) Procedures

35.1 ATC facilities will issue an abbreviated IFR departure clearance based on the ROUTE of flight filed in the IFR flight plan, provided the filed route can be approved with little or no revision. These abbreviated clearance procedures are based on the following conditions:

35.1.1 The aircraft is on the ground or it has departed VFR and the pilot is requesting IFR clearance while airborne.

35.1.2 That a pilot will not accept an abbreviated clearance if the route or destination of a flight plan filed with ATC has been changed by him/her or the company or the operations officer before departure.

35.1.3 That it is the responsibility of the company or operations office to inform the pilot when they make a change to the filed flight plan.

35.1.4 That it is the responsibility of the pilot to inform ATC in the initial call-up (for clearance) when the filed flight plan has been either:

35.1.4.1 Amended.

35.1.4.2 Canceled and replaced with a new filed flight plan.

NOTE–

The facility issuing a clearance may not have received the revised route or the revised flight plan by the time a pilot requests clearance.

35.2 Controllers will issue a detailed clearance when they know that the original filed flight plan has been changed or when the pilot requests a full route clearance.

35.3 The clearance as issued will include the destination airport filed in the flight plan.

35.4 ATC procedures now require the controller to state the DP name, the current number and the DP Transition name after the phrase “Cleared to

(destination) airport,” and prior to the phrase, “then as filed,” for ALL departure clearances when the DP or DP Transition is to be flown. The procedure applies whether or not the DP is filed in the flight plan.

35.5 Standard Terminal Arrivals (STARs), when filed in a flight plan, are considered a part of the filed route of flight and will not normally be stated in an initial departure clearance. If the ARTCC’s jurisdictional airspace includes both the departure airport and the fix where a STAR or STAR Transition begins, the STAR name, the current number, and the STAR Transition name MAY be stated in the initial clearance.

35.6 “Cleared to (destination) airport as filed” does NOT include the en route altitude filed in a flight plan. An en route altitude will be stated in the clearance or the pilot will be advised to expect an assigned/filed altitude within a given time frame or at a certain point after departure. This may be done verbally in the departure instructions or stated in the DP.

35.7 In a radar and a nonradar environment, the controller will state “Cleared to (destination) airport as filed” or:

35.7.1 If a DP or DP Transition is to be flown, specify the DP name, the current DP number, the DP Transition name, the assigned altitude/flight level, and any additional instructions (departure control frequency, beacon code assignment, etc.) necessary to clear a departing aircraft via the DP/DP Transition and the route filed.

EXAMPLE–

National Seven Twenty cleared to Miami Airport Intercontinental one departure, Lake Charles transition then as filed, maintain Flight Level two seven zero.

35.7.2 When there is no DP or when the pilot cannot accept a DP, specify the assigned altitude/flight level, and any additional instructions necessary to clear a departing aircraft via an appropriate departure routing and the route filed.

NOTE–

A detailed departure route description or a radar vector may be used to achieve the desired departure routing.

35.7.3 If necessary to make a minor revision to the filed route, specify the assigned DP/DP Transition (or departure routing), the revision to the filed route, the

assigned altitude/flight level, and any additional instructions necessary to clear a departing aircraft.

EXAMPLE–

Jet Star One Four Two Four cleared to Atlanta Airport, South Boston two departure then as filed except change route to read South Boston Victor 20 Greensboro, maintain one seven thousand.

35.7.4 Additionally, in a nonradar environment, specify one or more fixes as necessary to identify the initial route of flight.

EXAMPLE–

Cessna Three One Six Zero Foxtrot cleared to Charlotte Airport as filed via Brooke, maintain seven thousand.

35.8 To ensure success of the program, pilots should:

35.8.1 Avoid making changes to a filed flight plan just prior to departure.

35.8.2 State the following information in the initial call–up to the facility when no change has been made to the filed flight plan: Aircraft call sign, location, type operation (IFR), and the name of the airport (or fix) to which you expect clearance.

EXAMPLE–

“Washington clearance delivery (or ground control if appropriate) American Seventy Six at gate one, IFR Los Angeles.”

35.8.3 If the flight plan has been changed, state the change and request a full route clearance.

EXAMPLE–

“Washington clearance delivery, American Seventy Six at gate one. IFR San Francisco. My flight plan route has been amended (or destination changed). Request full route clearance.”

35.8.4 Request verification or clarification from ATC if ANY portion of the clearance is not clearly understood.

35.8.5 When requesting clearance for the IFR portion of a VFR–IFR flight, request such clearance prior to the fix where IFR operation is proposed to commence in sufficient time to avoid delay. Use the following phraseology:

EXAMPLE–

“Los Angeles center, Apache Six One Papa, VFR estimating Paso Robles VOR at three two, one thousand five hundred, request IFR to Bakersfield.”

36. Instrument Departure Procedures (DP) – Obstacle Departure Procedures (ODP) and Standard Instrument Departures (SID)

36.1 Instrument departure procedures are pre-planned instrument flight rule (IFR) procedures which provide obstruction clearance from the terminal area to the appropriate en route structure. There are two types of DPs, Obstacle Departure Procedures (ODPs), printed either textually or graphically, and Standard Instrument Departures (SIDs), always printed graphically. All DPs, either textual or graphic may be designed using either conventional or RNAV criteria. RNAV procedures will have RNAV printed in the title, e.g., SHEAD TWO DEPARTURE (RNAV). ODPs provide obstruction clearance via the least onerous route from the terminal area to the appropriate en route structure. ODPs are recommended for obstruction clearance and may be flown without ATC clearance unless an alternate departure procedure (SID or radar vector) has been specifically assigned by ATC. Graphic ODPs will have (OBSTACLE) printed in the procedure title, e.g., GEYSR THREE DEPARTURE (OBSTACLE), or, CROWN ONE DEPARTURE (RNAV)(OBSTACLE). Standard Instrument Departures are air traffic control (ATC) procedures printed for pilot/controller use in graphic form to provide obstruction clearance and a transition from the terminal area to the appropriate en route structure. SIDs are primarily designed for system enhancement and to reduce pilot/controller workload. ATC clearance must be received prior to flying a SID. All DPs provide the pilot with a way to depart the airport and transition to the en route structure safely. Pilots operating under 14 CFR Part 91 are strongly encouraged to file and fly a DP at night, during marginal Visual Meteorological Conditions (VMC) and Instrument Meteorological Conditions (IMC), when one is available. The following paragraphs will provide an overview of the DP program, why DPs are developed, what criteria are used, where to find them, how they are to be flown, and finally pilot and ATC responsibilities.

36.2 Why are DPs necessary? The primary reason is to provide obstacle clearance protection information to pilots. A secondary reason, at busier airports, is to increase efficiency and reduce communications and departure delays through the use of SIDs. When an instrument approach is initially developed for an airport, the need for DPs is assessed. The procedure

designer conducts an obstacle analysis to support departure operations. If an aircraft may turn in any direction from a runway within the limits of the assessment area (see paragraph 36.3.3) and remain clear of obstacles, that runway passes what is called a diverse departure assessment and no ODP will be published. A SID may be published if needed for air traffic control purposes. However, if an obstacle penetrates what is called the 40:1 obstacle identification surface, then the procedure designer chooses whether to:

36.2.1 Establish a steeper than normal climb gradient; or

36.2.2 Establish a steeper than normal climb gradient with an alternative that increases takeoff minima to allow the pilot to visually remain clear of the obstacle(s); or

36.2.3 Design and publish a specific departure route; or

36.2.4 A combination or all of the above.

36.3 What criteria is used to provide obstruction clearance during departure?

36.3.1 Unless specified otherwise, required obstacle clearance for all departures, including diverse, is based on the pilot crossing the departure end of the runway at least 35 feet above the departure end of runway elevation, climbing to 400 feet above the departure end of runway elevation before making the initial turn, and maintaining a minimum climb gradient of 200 feet per nautical mile (FPNM), unless required to level off by a crossing restriction, until the minimum IFR altitude. A greater climb gradient may be specified in the DP to clear obstacles or to achieve an ATC crossing restriction. If an initial turn higher than 400 feet above the departure end of runway elevation is specified in the DP, the turn should be commenced at the higher altitude. If a turn is specified at a fix, the turn must be made at that fix. Fixes may have minimum and/or maximum crossing altitudes that must be adhered to prior to passing the fix. In rare instances, obstacles that exist on the extended runway centerline may make an “early turn” more desirable than proceeding straight ahead. In these cases, the published departure instructions will include the language “turn left(right) as soon as practicable.” These departures will also include a ceiling and visibility minimum of at least 300 and 1. Pilots encountering one of these DPs should preplan the climb out to gain altitude and begin the turn as

TBL ENR 1.10-1
NOTAM CONTRACTIONS

A	
AADC	Approach and Departure Control
ABV	Above
A/C	Approach Control
ACCUM	Accumulate
ACFT	Aircraft
ACR	Air Carrier
ACTV/ACTVT	Active/Activate
ADF	Automatic Direction Finder
ADJ	Adjacent
ADZ/ADZD	Advise/Advised
AFD	Airport/Facility Directory
AFSS	Automated Flight Service Station
ALS	Approach Light System
ALTM	Altimeter
ALTN/ALTNLY	Alternate/Alternately
ALSTG	Altimeter Setting
AMDT	Amendment
APCH	Approach
APL	Airport Lights
ARFF	Aircraft Rescue & Fire Fighting
ARPT	Airport
ARSR	Air Route Surveillance Radar
ASDE	Airport Surface Detection Equipment
ASOS	Automated Surface Observing System
ASPH	Asphalt
ASR	Airport Surveillance Radar
ATC	Air Traffic Control
ATCT	Airport Traffic Control Tower
ATIS	Automated Terminal Information Service
AVBL	Available
AWOS	Automatic Weather Observing System
AWSS	Automatic Weather Sensor System
AZM	Azimuth
B	
BC	Back Course
BCN	Beacon
BERM	Snowbank/s Containing Earth/Gravel
BLO	Below
BND	Bound
BRAF	Braking Action Fair
BRAG	Braking Action Good
BRAN	Braking Action Nil
BRAP	Braking Action Poor
BYD	Beyond
C	
CAAS	Class A Airspace
CAT	Category
CBAS	Class B Airspace
CBSA	Class B Surface Area
CCAS	Class C Airspace
CCLKWS	Counterclockwise
CCSA	Class C Surface Area
CD	Clearance Delivery

CDAS	Class D Airspace
CDSA	Class D Surface Area
CEAS	Class E Airspace
CESA	Class E Surface Area
CFA	Controlled Firing Area
CGAS	Class G Airspace
CHG	Change
CLKWS	Clockwise
CLNC	Clearance
CLSD	Closed
CMSN/CMSND	Commission/Commissioned
CNCL/CNCLD/ CNL	Cancel/Canceled/Cancel
CNTRLN	Centerline
CONC	Concrete
CONT	Continue/Continuously
CRS	Course
CTAF	Common Traffic Advisory Frequency
CTLZ	Control Zone
D	
DALGT	Daylight
DCMS/DCMSND	Decommission/Decommissioned
DCT	Direct
DEP	Depart/Departure
DEPT	Department
DH	Decision Height
DISABLD	Disabled
DLA/DLAD	Delay/Delayed
DLT/DLTD	Delete/Deleted
DLY	Daily
DME	Distance Measuring Equipment
DMSTN	Demonstration
DP	Instrument Departure Procedure
DPCR	Departure Procedure
DRCT	Direct
DRFT/DRFTD	Drift/Drifted Snowbank/s Caused By Wind Action
DSPLCD	Displaced
DSTC	Distance
DWPNT	Dew Point
E	
E	East
EBND	Eastbound
EFAS	En Route Flight Advisory Service
EFF	Effective
ELEV	Elevate/Elevation
ENG	Engine
ENTR	Entire
EXCP	Except
F	
FA	Final Approach
FAC	Facility
FAF	Final Approach Fix
FDC	Flight Data Center

FM	Fan Marker
FREQ	Frequency
FRH	Fly Runway Heading
FRZN	Frozen
FRNZ SLR	Frozen Slush on Runway/s
FSS	Flight Service Station
G	
GC	Ground Control
GCA	Ground Controlled Approach
GOVT	Government
GP	Glide Path
GPS	Global Positioning System
GRVL	Gravel
GS	Glide Slope
H	
HAA	Height Above Airport
HAT	Height Above Touchdown
HAZ	Hazard
HEL	Helicopter
HELI	Heliport
HF	High Frequency
HIRL	High Intensity Runway Lights
HIWAS	Hazardous Inflight Weather Advisory Service
HOL	Holiday
HP	Holding Pattern
I	
IAP	Instrument Approach Procedure
IBND	Inbound
ID	Identification
IDENT	Identify/Identifier/Identification
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IM	Inner Marker
IN	Inch/Inches
INDEFLY	Indefinitely
INOP	Inoperative
INST	Instrument
INT	Intersection
INTST	Intensity
IR	Ice On Runway/s
L	
L	Left
LAA	Local Airport Advisory
LAT	Latitude
LAWRS	Limited Aviation Weather Reporting Station
LB	Pound/Pounds
LC	Local Control
LCL	Local
LCTD	Located
LDA	Localizer Type Directional Aid
LGT/LGTD/ LGTS	Light/Lighted/Lights
LIRL	Low Intensity Runway Edge Lights
LLWAS	Low Level Wind Shear Alert System
LMM	Compass Locator at ILS Middle Marker

LNDG	Landing
LOC	Localizer
LOM	Compass Locator at ILS Outer Marker
LONG	Longitude
LRN	LORAN
LSR	Loose Snow on Runway/s
LT	Left Turn After Take-off
M	
MALS	Medium Intensity Approach Lighting System
MALSF	Medium Intensity Approach Lighting System with Sequenced Flashers
MALSRL	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
MAP	Missed Approach Point
MCA	Minimum Crossing Altitude
MDA	Minimum Descent Altitude
MEA	Minimum En Route Altitude
MED	Medium
MIN	Minute
MIRL	Medium Intensity Runway Edge Lights
MLS	Microwave Landing System
MM	Middle Marker
MNM	Minimum
MOCA	Minimum Obstruction Clearance Altitude
MONTR	Monitor
MSA	Minimum Safe Altitude/Minimum Sector Altitude
MSAW	Minimum Safe Altitude Warning
MSL	Mean Sea Level
MU	Designate a Friction Value Representing Runway Surface Conditions
MUD	Mud
MUNI	Municipal
N	
N	North
NA	Not Authorized
NBND	Northbound
NDB	Nondirectional Radio Beacon
NE	Northeast
NGT	Night
NM	Nautical Mile/s
NMR	Nautical Mile Radius
NOPT	No Procedure Turn Required
NTAP	Notice To Airmen Publication
NW	Northwest
O	
OBSC	Obscured
OBSTN	Obstruction
OM	Outer Marker
OPER	Operate
OPN	Operation
ORIG	Original
OTS	Out of Service
OVR	Over

P	
PAEW	Personnel and Equipment Working
PAJA	Parachute Jumping Activities
PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
PARL	Parallel
PAT	Pattern
PCL	Pilot Controlled Lighting
PERM/PERMLY	Permanent/Permanently
PLA	Practice Low Approach
PLW	Plow/Plowed
PN	Prior Notice Required
PPR	Prior Permission Required
PREV	Previous
PRIRA	Primary Radar
PROC	Procedure
PROP	Propeller
PSGR	Passenger/s
PSR	Packed Snow on Runway/s
PT/PTN	Procedure Turn
PVT	Private
R	
RAIL	Runway Alignment Indicator Lights
RCAG	Remote Communication Air/Ground Facility
RCL	Runway Centerline
RCLS	Runway Centerline Light System
RCO	Remote Communication Outlet
RCV/RCVR	Receive/Receiver
REF	Reference
REIL	Runway End Identifier Lights
RELCTD	Relocated
RLLS	Runway Lead-in Light System
RMDR	Remainder
RNAV	Area Navigation
RPRT	Report
RQRD	Required
RRL	Runway Remaining Lights
RSVN	Reservation
RT	Right Turn after Take-off
RTE	Route
RTR	Remote Transmitter/Receiver
RTS	Return to Service
RUF	Rough
RVR	Runway Visual Range
RVRM	RVR Midpoint
RVRR	RVR Rollout
RVRT	RVR Touchdown
RVV	Runway Visibility Value
RY/RWY	Runway
S	
S	South
SAA	Special Activity Airspace
SBND	Southbound
SDF	Simplified Directional Facility
SE	Southeast
SECRA	Secondary Radar

SFL	Sequenced Flashing Lights
SI	Straight-In Approach
SIR	Packed or Compacted Snow and Ice on Runway/s
SKED	Scheduled
SLR	Slush on Runway/s
SNBNK	Snowbank/s Caused by Plowing
SND	Sand/Sanded
SNGL	Single
SNW	Snow
SPD	Speed
SR	Sunrise
SS	Sunset
SSALF	Simplified Short Approach Lighting System with Sequenced Flashers
SSALR	Simplified Short Approach Lighting System with Runway Alignment Indicator Lights
SSALS	Simplified Short Approach Lighting System
STAR	Standard Terminal Arrival
SUA	Special Use Airspace
SVC	Service
SW	Southwest
SWEPT	Swept or Broom/Broomed
T	
TACAN	Tactical Air Navigational Aid
TDZ/TDZL	Touchdown Zone/Touchdown Zone Lights
TFC	Traffic
TFR	Temporary Flight Restriction
TGL	Touch and Go Landings
THN	Thin
THR	Threshold
THRU	Through
TIL	Until
TKOF	Takeoff
TMPRY	Temporary
TRML	Terminal
TRNG	Training
TRSA	Terminal Radar Service Area
TRSN	Transition
TSNT	Transient
TWEB	Transcribed Weather Broadcast
TWR	Tower
TWY	Taxiway
U	
UNAVBL	Unavailable
UNLGTD	Unlighted
UNMKD	Unmarked
UNMON	Unmonitored
UNRELBL	Unreliable
UNUSBL	Unusable
V	
VASI	Visual Approach Slope Indicator
VDP	Visual Descent Point
VFR	Visual Flight Rules

VIA	By Way Of
VICE	Instead/Versus
VIS/VSBY	Visibility
VMC	Visual Meteorological Conditions
VOL	Volume
VOLMET	Meteorological Information for Aircraft in Flight
VOR	VHF Omni-Directional Radio Range
VORTAC	VOR and TACAN (collocated)
VOT	VOR Test Signal
W	
W	West
WBND	Westbound
WEA/WX	Weather
WI	Within
WKDAYS	Monday through Friday
WKEND	Saturday and Sunday
WND	Wind
WP	Waypoint
WSR	Wet Snow on Runway/s
WTR	Water on Runway/s
WX	Weather
/	And
+	In Addition/Also

3.2.1 NOTAM (D)

3.2.1.1 NOTAM (D) information is disseminated for all navigational facilities that are part of the National Airspace System (NAS), all public use airports, seaplane bases, and heliports listed in the Airport/Facility Directory (A/FD). This category of information is distributed automatically via Service A telecommunications systems. These NOTAMs remain available via Service A for the duration of their validity or until published.

All NOTAM Ds must have one of the following keywords as the first part of the text after the location identifier:

Keyword	Definition
RWY <i>Example</i>	Runway ABC XX/XXX ABC <u>RWY</u> 3/21 CLSD
TWY <i>Example</i>	Taxiway ABC XX/XXX ABC <u>TWY</u> F LGTS OTS
RAMP <i>Example</i>	Ramp ABC XX/XXX ABC <u>RAMP</u> TERMINAL EAST SIDE CONSTRUCTION
APRON <i>Example</i>	Apron ABC XX/XXX ABC <u>APRON</u> SW TWY C NEAR HANGARS CLSD
AD <i>Example</i>	Aerodrome ABC XX/XXX ABC <u>AD</u> ABN OTS

Keyword	Definition
OBST <i>Example</i>	Obstruction ABC XX/XXX ABC <u>OBST</u> TOWER 283 (246 AGL) 2.2 S LGTS OTS (ASR 1065881) TIL 1003282300
NAV <i>Example</i>	Navigation ABC XX/XXX ABC <u>NAV</u> VOR OTS
COM <i>Example</i>	Communications ABC XX/XXX ABC <u>COM</u> ATIS OTS
SVC <i>Example</i>	Services XX/XXX ABC <u>SVC</u> JET FUEL UNAVBL TIL 1003291600
AIRSPACE <i>Example</i>	Airspace ABC XX/XXX ABC <u>AIRSPACE</u> AIRSHOW ACFT 5000/BLW 5 NMR AIRPORT AVOIDANCE ADZD TIL 1003152200
U	Unverified Aeronautical Information (for use only where authorized by Letter of Agreement)*
O	Other Aeronautical Information**

* **Unverified Aeronautical Information** can be movement area or other information received that meets NOTAM criteria and has not been confirmed by the Airport Manager (AMGR) or their designee. If Flight Service is unable to contact airport management, Flight Service shall forward (U) NOTAM information to the United States NOTAM System (USNS). Subsequent to USNS distribution of a (U) NOTAM, Flight Service will inform airport management of the action taken as soon as practical. Any such NOTAM will be prefaced with “(U)” as the keyword and followed by the appropriate keyword contraction, following the location identifier.

** **Other Aeronautical Information** is that which is received from any authorized source that may be beneficial to aircraft operations and does not meet defined NOTAM criteria. Any such NOTAM will be prefaced with “(O)” as the keyword following the location identifier.

3.2.1.2 NOTAM Ds that crossover into International NOTAMs

These NOTAMs contain the same data as NOTAM Ds, only they are referenced differently. They are categorized, stored, and issued with a series letter preceding them and are distributed via Service A to countries requesting NOTAMs for that airport. The FAA currently uses the Series A (and may use Series K) for this type of NOTAM.

1.4 Except when applicable under 14 CFR Sections 99.7 and 99.12, Part 99 does not apply to aircraft operations:

1.4.1 Within the 48 contiguous states and the District of Columbia, or within the State of Alaska, and remains within 10 miles of the point of departure.

1.4.2 Over any island, or within 3 nautical miles of the coastline of any island, in the Hawaii ADIZ.

1.4.3 Associated with any ADIZ other than the contiguous U.S. ADIZ, when the aircraft true airspeed is less than 180 knots.

1.5 Authorizations to deviate from the requirements of Part 99 may also be granted by the ARTCC, on a local basis, for some operations associated with an ADIZ.

1.6 An air-filed VFR Flight Plan makes an aircraft subject to interception for positive identification when entering an ADIZ. Pilots are therefore urged to file the required DVFR flight plan either in person or by telephone prior to departure.

1.7 Special Security Instructions

1.7.1 During defense emergency or air defense emergency conditions, additional special security instructions may be issued in accordance with the Emergency Security Control of Air Traffic (ESCAT) Plan.

1.7.2 Under the provisions of the ESCAT Plan, the military will direct the action to be taken in regard to landing, grounding, diversion, or dispersal of aircraft and the control of air navigation aids in the defense of the U.S. during emergency conditions.

1.7.3 At the time a portion or all of ESCAT is implemented, ATC facilities will broadcast appropriate instructions received from the Air Traffic Control System Command Center (ATCSCC) over available ATC frequencies. Depending on instructions received from the ATCSCC, VFR flights may be directed to land at the nearest available airport, and IFR flights will be expected to proceed as directed by ATC.

1.7.4 Pilots on the ground may be required to file a flight plan and obtain an approval (through FAA) prior to conducting flight operation.

1.7.5 In view of the above, all pilots should guard an ATC or FSS frequency at all times while conducting flight operations.

2. Interception Procedures

2.1 General

2.1.1 In conjunction with the FAA, Air Defense Sectors monitor air traffic and could order an intercept in the interest of national security or defense. Intercepts during peacetime operations are vastly different from those conducted under increased states of readiness. The interceptors may be fighters or rotary wing aircraft. The reasons for aircraft intercept include, but are not limited to:

2.1.1.1 Identify an aircraft.

2.1.1.2 Track an aircraft.

2.1.1.3 Inspect an aircraft.

2.1.1.4 Divert an aircraft.

2.1.1.5 Establish communications with an aircraft.

2.1.2 When specific information is required (i.e., markings, serial numbers, etc.) the interceptor pilot(s) will respond only if, in their judgment, the request can be conducted in a safe manner. Intercept procedures are described in some detail in the paragraphs below. In all situations, the interceptor pilot will consider safety of flight for all concerned throughout the intercept procedure. The interceptor pilot(s) will use caution to avoid startling the intercepted crew or passengers and understand that maneuvers considered normal for interceptor aircraft may be considered hazardous to other aircraft.

2.1.3 All aircraft operating in US national airspace are highly encouraged to maintain a listening watch on VHF/UHF guard frequencies (121.5 or 243.0 MHz). If subjected to a military intercept, it is incumbent on civilian aviators to understand their responsibilities and to comply with ICAO standard signals relayed from the intercepting aircraft. Specifically, aviators are expected to contact air traffic control without delay (if able) on the local operating frequency or on VHF/UHF guard. Noncompliance may result in the use of force.

2.2 Fighter Intercept Phases (See FIG ENR 1.12-2)

2.2.1 Approach Phase

2.2.1.1 As standard procedure, intercepted aircraft are approached from behind. Typically, interceptor aircraft will be employed in pairs; however, it is not uncommon for a single aircraft to perform the intercept operation. Safe separation between

interceptors and intercepted aircraft is the responsibility of the intercepting aircraft and will be maintained at all times.

2.2.2 Identification Phase

2.2.2.1 Interceptor aircraft will initiate a controlled closure toward the aircraft of interest, holding at a distance no closer than deemed necessary to establish positive identification and to gather the necessary information. The interceptor may also fly past the intercepted aircraft while gathering data at a distance considered safe based on aircraft performance characteristics.

2.2.3 Post Intercept Phase

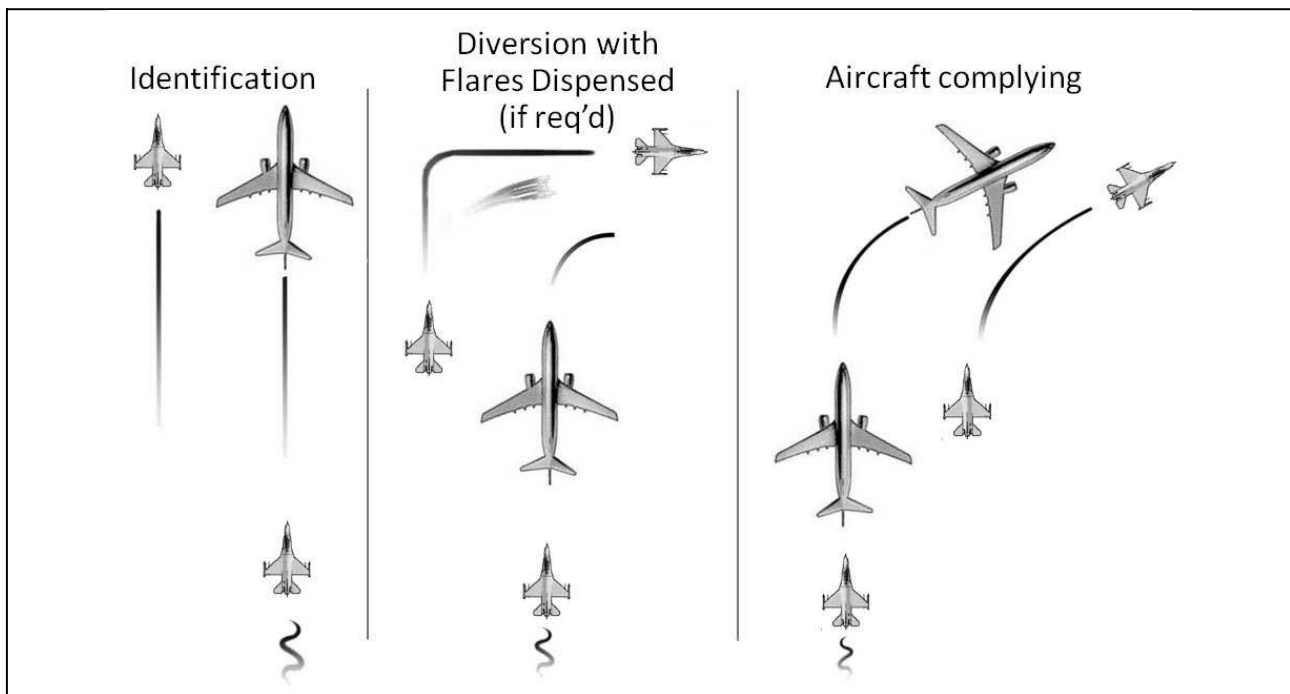
2.2.3.1 An interceptor may attempt to establish communications via standard ICAO signals. In time-critical situations where the interceptor is seeking an immediate response from the intercepted aircraft or if the intercepted aircraft remains non-compliant to instruction, the interceptor pilot may initiate a divert maneuver. In this maneuver, the interceptor flies across the intercepted aircraft's flight path (minimum 500 feet separation and commencing from slightly below the intercepted aircraft altitude) in the general direction the intercepted aircraft is

expected to turn. The interceptor will rock its wings (daytime) or flash external lights/select afterburners (night) while crossing the intercepted aircraft's flight path. The interceptor will roll out in the direction the intercepted aircraft is expected to turn before returning to verify the aircraft of interest is complying. The intercepted aircraft is expected to execute an immediate turn to the direction of the intercepting aircraft. If the aircraft of interest does not comply, the interceptor may conduct a second climbing turn across the intercepted aircraft's flight path (minimum 500 feet separation and commencing from slightly below the intercepted aircraft altitude) while expending flares as a warning signal to the intercepted aircraft to comply immediately and to turn in the direction indicated and to leave the area. The interceptor is responsible to maintain safe separation during these and all intercept maneuvers. Flight safety is paramount.

NOTE-

1. NORAD interceptors will take every precaution to preclude the possibility of the intercepted aircraft experiencing jet wash/wake turbulence; however, there is a potential that this condition could be encountered.
2. During night/IMC, the intercept will be from below flight path.

FIG ENR 1.12-2
Intercept Procedures



2.3 Helicopter Intercept Phases (See FIG ENR 1.12-3)

2.3.1 Approach Phase

2.3.1.1 Aircraft intercepted by helicopter may be approached from any direction, although the helicopter should close for identification and signaling from behind. Generally, the helicopter will approach off the left side of the intercepted aircraft. Safe separation between the helicopter and the unidentified aircraft will be maintained at all times.

2.3.2 Identification Phase

2.3.2.1 The helicopter will initiate a controlled closure toward the aircraft of interest, holding at a distance no closer than deemed necessary to establish positive identification and gather the necessary information. The intercepted pilot should expect the interceptor helicopter to take a position off his left wing slightly forward of abeam.

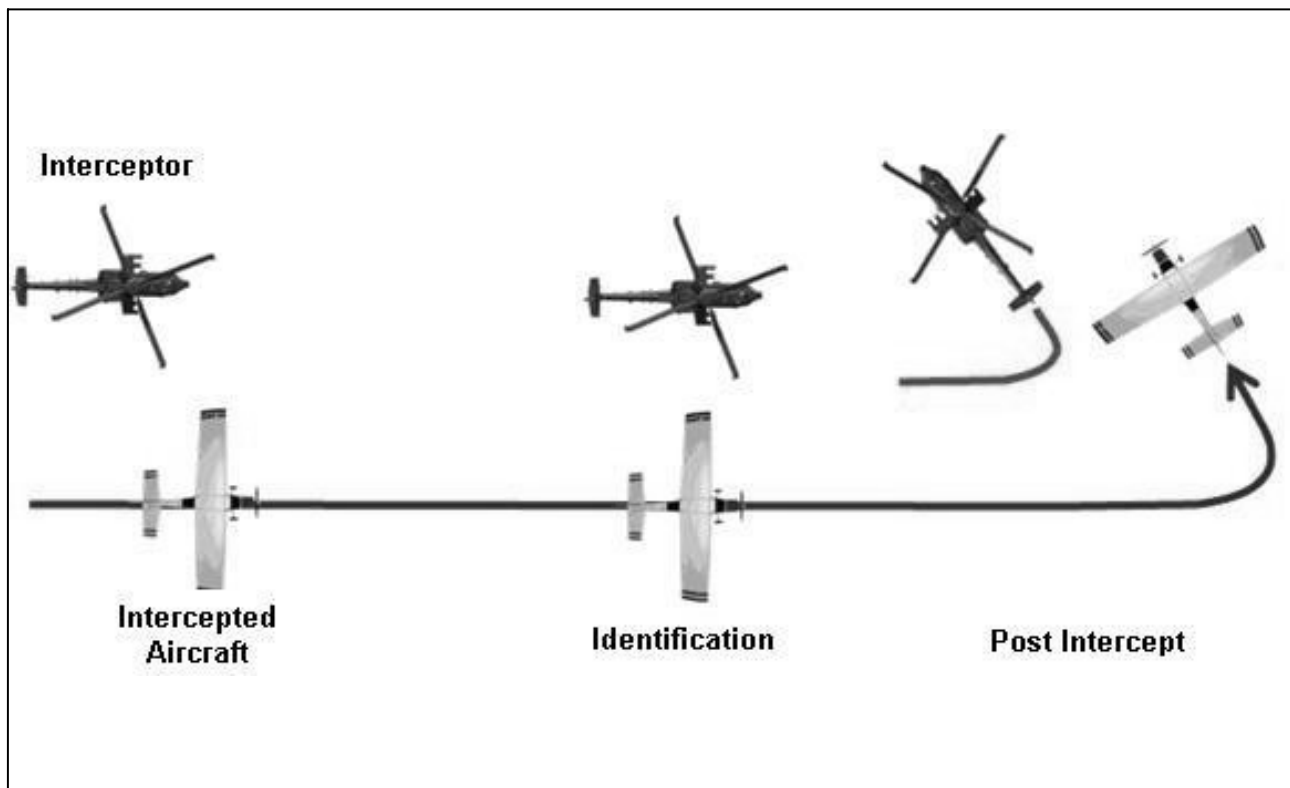
2.3.3 Post Intercept Phase

2.3.3.1 Visual signaling devices may be used in an attempt to communicate with the intercepted aircraft. Visual signaling devices may include, but are not limited to, LED scrolling signboards or blue flashing lights. If compliance is not obtained through the use of radios or signaling devices, standard ICAO intercept signals (TBL ENR 1.12-1) may be employed. In order to maintain safe aircraft separation, it is incumbent upon the pilot of the intercepted aircraft not to fall into a trail position (directly behind the helicopter) if instructed to follow the helicopter. This is because the helicopter pilot may lose visual contact with the intercepted aircraft.

NOTE-

Intercepted aircraft must not follow directly behind the helicopter thereby allowing the helicopter pilot to maintain visual contact with the intercepted aircraft and ensuring safe separation is maintained.

FIG ENR 1.12-3
Helicopter Intercept Procedures



2.3.4 Summary of Intercepted Aircraft Actions

2.3.4.1 An intercepted aircraft must, without delay:

a) Adhere to instructions relayed through the use of visual devices, visual signals, and radio communications from the intercepting aircraft.

b) Attempt to establish radio communications with the intercepting aircraft or with the appropriate air traffic control facility by making a general call on guard frequencies (121.5 or 243.0 MHz), giving the identity, position, and nature of the flight.

c) If transponder equipped, select Mode 3/A Code 7700 unless otherwise instructed by air traffic control.

NOTE-

If instruction received from any agency conflicts with that given by the intercepting aircraft through visual or radio communications, the intercepted aircraft must seek immediate clarification.

d) Continue to comply with interceptor aircraft signals and instructions until positively released.

2.4 Interception Signals (See TBL ENR 1.12-1 and TBL ENR 1.12-2)

2.5 Visual Warning System (VWS)

2.5.1 The VWS signal consists of highly-focused red and green colored laser lights designed to illuminate in an alternating red and green signal pattern. These lasers may be directed at specific aircraft suspected of making unauthorized entry into the Washington, DC Special Flight Rules Area (DC SFRA) proceeding on a heading or flight path that may be interpreted as a threat or that operate contrary to the operating rules for the DC SFRA. The beam is neither hazardous to the eyes of pilots/aircrew or passengers, regardless of altitude or distance from the source nor will the beam affect aircraft systems.

2.5.1.1 If you are communicating with ATC, and this signal is directed at your aircraft, you are required to contact ATC and advise that you are being illuminated by a visual warning system.

2.5.1.2 If this signal is directed at you, and you are not communicating with ATC, you are advised to turn to the most direct heading away from the center of the

DC SFRA as soon as possible. Immediately contact ATC on an appropriate frequency, VHF Guard 121.5 or UHF Guard 243.0, and provide your aircraft identification, position, and nature of the flight. Failure to follow these procedures may result in interception by military aircraft. Further noncompliance with interceptor aircraft or ATC may result in the use of force.

2.5.1.3 Pilots planning to operate aircraft in or near the DC SFRA are to familiarize themselves with aircraft intercept procedures. This information applies to all aircraft operating within the DC SFRA including DOD, Law Enforcement, and aircraft engaged in aeromedical operations and does not change procedures established for reporting unauthorized laser illumination as published in FAA Advisory Circulars and Notices.

REFERENCE-
CFR 91.161

2.5.1.4 More details including a video demonstration of the VWS are available from the following FAA web site: www.faa.gov/VisualWarningSystem/VisualWarning.htm.

3. Law Enforcement Operations by Civil and Military Organizations

3.1 Special law enforcement operations

3.1.1 Special law enforcement operations include in-flight identification, surveillance, interdiction, and pursuit activities performed in accordance with official civil and/or military mission responsibilities.

3.1.2 To facilitate accomplishment of these special missions, exemptions from specified sections of the Federal Aviation Regulations have been granted to designated departments and agencies. However, it is each organization's responsibility to apprise air traffic control (ATC) of their intent to operate under an authorized exemption before initiating actual operations.

3.1.3 Additionally, some departments and agencies that perform special missions have been assigned coded identifiers to permit them to apprise ATC of ongoing mission activities and solicit special air traffic assistance.

**TBL ENR 1.12-1
Intercepting Signals**

INTERCEPTING SIGNALS				
Signals initiated by intercepting aircraft and responses by intercepted aircraft (as set forth in ICAO Annex 2-Appendix 1, 2.1)				
Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1	<p>DAY-Rocking wings from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft and, after acknowledgement, a slow level turn, normally to the left, on to the desired heading.</p> <p>NIGHT-Same and, in addition, flashing navigational lights at irregular intervals.</p> <p><i>NOTE 1-Meteorological conditions or terrain may require the intercepting aircraft to take up a position slightly above and ahead of, and to the right of, the intercepted aircraft and to make the subsequent turn to the right.</i></p> <p><i>NOTE 2-If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock its wings each time it passes the intercepted aircraft.</i></p>	<p>You have been intercepted. Follow me.</p>	<p>AEROPLANES: DAY-Rocking wings and following.</p> <p>NIGHT-Same and, in addition, flashing navigational lights at irregular intervals.</p> <p>HELICOPTERS: DAY or NIGHT-Rocking aircraft, flashing navigational lights at irregular intervals and following.</p>	<p>Understood, will comply.</p>
2	<p>DAY or NIGHT-An abrupt break-away maneuver from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.</p>	<p>You may proceed.</p>	<p>AEROPLANES: DAY or NIGHT-Rocking wings.</p> <p>HELICOPTERS: DAY or NIGHT-Rocking aircraft.</p>	<p>Understood, will comply.</p>
3	<p>DAY-Circling aerodrome, lowering landing gear and overflying runway in direction of landing or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area.</p> <p>NIGHT-Same and, in addition, showing steady landing lights.</p>	<p>Land at this aerodrome.</p>	<p>AEROPLANES: DAY-Lowering landing gear, following the intercepting aircraft and, if after overflying the runway landing is considered safe, proceeding to land.</p> <p>NIGHT-Same and, in addition, showing steady landing lights (if carried).</p> <p>HELICOPTERS: DAY or NIGHT-Following the intercepting aircraft and proceeding to land, showing a steady landing light (if carried).</p>	<p>Understood, will comply.</p>

**TBL ENR 1.12-2
Intercepting Signals**

INTERCEPTING SIGNALS				
Signals and Responses During Aircraft Intercept				
Signals initiated by intercepted aircraft and responses by intercepting aircraft				
(as set forth in ICAO Annex 2-Appendix 1, 2.2)				
Series	INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responses	Meaning
4	<p>AEROPLANES: DAY-Raising landing gear while passing over landing runway at a height exceeding 300m (1,000 ft) but not exceeding 600m (2,000 ft) above the aerodrome level, and continuing to circle the aerodrome.</p> <p>NIGHT-Flashing landing lights while passing over landing runway at a height exceeding 300m (1,000 ft) but not exceeding 600m (2,000 ft) above the aerodrome level, and continuing to circle the aerodrome. If unable to flash landing lights, flash any other lights available.</p>	Aerodrome you have designated is inadequate.	<p>DAY or NIGHT-If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear and uses the Series 1 signals prescribed for intercepting aircraft.</p> <p>If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.</p>	<p>Understood, follow me.</p> <p>Understood, you may proceed.</p>
5	<p>AEROPLANES: DAY or NIGHT-Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.</p>	Cannot comply.	DAY or NIGHT-Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	<p>AEROPLANES: DAY or NIGHT-Irregular flashing of all available lights.</p> <p>HELICOPTERS: DAY or NIGHT-Irregular flashing of all available lights.</p>	In distress.	DAY or NIGHT-Use Series 2 signals prescribed for intercepting aircraft.	Understood.

ENR 1.15 Medical Facts for Pilots

1. Fitness for Flight

1.1 Medical Certification

1.1.1 All pilots except those flying gliders and free air balloons must possess valid medical certificates in order to exercise the privileges of their airman certificates. The periodic medical examinations required for medical certification are conducted by designated Aviation Medical Examiners, who are physicians with a special interest in aviation safety and training in aviation medicine.

1.1.2 The standards for medical certification are contained in the Federal Aviation Regulations (14 CFR Part 67). Pilots who have a history of certain medical conditions described in these standards are mandatorily disqualified from flying. These medical conditions include a personality disorder manifested by overt acts, a psychosis, alcoholism, drug dependence, epilepsy, an unexplained disturbance of consciousness, myocardial infarction, angina pectoris, and diabetes requiring medication for its control. Other medical conditions may be temporarily disqualifying, such as acute infections, anemia, and peptic ulcer. Pilots who do not meet medical standards may still be qualified under special issuance provisions or the exemption process. This may require that either additional medical information be provided or practical flight tests be conducted.

1.1.3 Student pilots should visit an aviation medical examiner as soon as possible in their flight training in order to avoid unnecessary training expenses should they not meet the medical standards. For the same reason, the student pilot who plans to enter commercial aviation should apply for the highest class of medical certificate that might be necessary in the pilot's career.

CAUTION—

The Federal Aviation Regulations prohibit a pilot who possesses a current medical certificate from performing crewmember duties while the pilot has a known medical condition or increase of a known medical condition that would make the pilot unable to meet the standards for the medical certificate.

1.2 Illness

1.2.1 Even a minor illness suffered in day-to-day living can seriously degrade performance of many piloting tasks vital to safe flight. Illness can produce fever and distracting symptoms that can impair judgment, memory, alertness, and the ability to make calculations. Although symptoms from an illness may be under adequate control with a medication, the medication itself may decrease pilot performance.

1.2.2 The safest rule is not to fly while suffering from any illness. If this rule is considered too stringent for a particular illness, the pilot should contact an aviation medical examiner for advice.

1.3 Medication

1.3.1 Pilot performance can be seriously degraded by both prescribed and over-the-counter medications, as well as by the medical conditions for which they are taken. Many medications, such as tranquilizers, sedatives, strong pain relievers, and cough-suppressant preparations, have primary effects that may impair judgment, memory, alertness, coordination, vision, and the ability to make calculations. Others, such as antihistamines, blood pressure drugs, muscle relaxants, and agents to control diarrhea and motion sickness, have side effects that may impair the same critical functions. Any medication that depresses the nervous system, such as a sedative, tranquilizer, or antihistamine, can make a pilot much susceptible to hypoxia (see below).

1.3.2 The Federal Aviation Regulations prohibit pilots from performing crewmember duties while using any medication that affects the faculties in any way contrary to safety. The safest rule is not to fly as a crewmember while taking any medication, unless approved to do so by the FAA.

1.4 Alcohol

1.4.1 Extensive research has provided a number of facts about the hazards of alcohol consumption and flying. As little as one ounce of liquor, one bottle of beer, or four ounces of wine can impair flying skills, with the alcohol consumed in these drinks being detectable in the breath and blood at least three hours. Even after the body completely destroys a moderate amount of alcohol, a pilot can still be severely

impaired for many hours by hangover. There is simply no way of increasing the destruction of alcohol or alleviating a hangover. Alcohol also renders a pilot much more susceptible to disorientation and hypoxia (see below).

1.4.2 A consistently high alcohol-related, fatal aircraft accident rate serves to emphasize that alcohol and flying are a potentially lethal combination. The Federal Aviation Regulations prohibit pilots from performing crewmember duties within eight hours after drinking any alcoholic beverage or while under the influence of alcohol. However, due to the slow destruction of alcohol, a pilot may still be under the influence eight hours after drinking a moderate amount of alcohol. Therefore, an excellent rule is to allow at least 12 to 24 hours between “bottle and throttle” depending on the amount of alcoholic beverage consumed.

1.5 Fatigue

1.5.1 Fatigue continues to be one of the most treacherous hazards to flight safety, as it may not be apparent to a pilot until serious errors are made. Fatigue is best described as either acute (short-term) or chronic (long-term).

1.5.2 A normal occurrence of everyday living, acute fatigue is the tiredness felt after long periods of physical and mental strain, including strenuous muscular effort, immobility, heavy mental workload, strong emotional pressure, monotony, and lack of sleep. Consequently, coordination and alertness, so vital to safe pilot performance, can be reduced. Acute fatigue is prevented by adequate rest and sleep, as well as regular exercise and proper nutrition.

1.5.3 Chronic fatigue occurs when there is not enough time for full recovery between episodes of acute fatigue. Performance continues to fall off, and judgment becomes impaired so that unwarranted risks may be taken. Recovery from chronic fatigue requires a prolonged period of rest.

1.5.4 OBSTRUCTIVE SLEEP APNEA (OSA). OSA is now recognized as an important preventable factor identified in transportation accidents. OSA interrupts the normal restorative sleep necessary for normal functioning and is associated with chronic illnesses such as hypertension, heart attack, stroke, obesity, and diabetes. Symptoms include snoring, excessive daytime sleepiness, intermittent prolonged breathing pauses while sleeping, memory impair-

ment and lack of concentration. There are many available treatments which can reverse the day time symptoms and reduce the chance of an accident. OSA can be easily treated. Most treatments are acceptable for medical certification upon demonstrating effective treatment. If you have any symptoms described above, or neck size over 17 inches in men or 16 inches in women, or a body mass index greater than 30 you should be evaluated for sleep apnea by a sleep medicine specialist.

(http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html) With treatment you can avoid or delay the onset of these chronic illnesses and prolong a quality life.

1.6 Stress

1.6.1 Stress from the pressures of everyday living can impair pilot performance, often in very subtle ways. Difficulties, particularly at work, can occupy thought processes enough to markedly decrease alertness. Distraction can so interfere with judgment that unwarranted risks are taken, such as flying into deteriorating weather conditions to keep on schedule. Stress and fatigue (see above) can be an extremely hazardous combination.

1.6.2 Most pilots do leave stress “on the ground.” Therefore when more than usual difficulties are being experienced, a pilot should consider delaying flight until these difficulties are satisfactorily resolved.

1.7 Emotion

1.7.1 Certain emotionally upsetting events, including a serious argument, death of a family member, separation or divorce, loss of job, and financial catastrophe, can render a pilot unable to fly an aircraft safely. The emotions of anger, depression, and anxiety from such events not only decrease alertness but also may lead to taking risks that border on self-destruction. Any pilot who experiences an emotionally upsetting event should not fly until satisfactorily recovered from it.

1.8 Personal Checklist

1.8.1 Aircraft accident statistics show that pilots should be conducting preflight checklists on themselves as well as their aircraft, for pilot impairment contributes to many more accidents than failure of aircraft systems. A personal checklist that can be easily committed to memory, which includes all of the categories of pilot impairment discussed in

this section, is distributed by the FAA in form of a wallet-sized card.

1.9 PERSONAL CHECKLIST. *I'm physically and mentally safe to fly; not being impaired by:*

Illness

Medication

Stress

Alcohol

Fatigue

Emotion

2. Effects of Altitude

2.1 Hypoxia

2.1.1 Hypoxia is a state of oxygen deficiency in the body sufficient to impair functions of the brain and other organs. Hypoxia from exposure to altitude is due only to the reduced barometric pressures encountered at altitude, for the concentration of oxygen in the atmosphere remains about 21 percent from the ground out to space.

2.1.2 Although a deterioration in night vision occurs at a cabin pressure altitude as low as 5,000 feet, other significant effects of altitude hypoxia usually do not occur in the normal healthy pilot below 12,000 feet. From 12,000 to 15,000 feet of altitude, judgment, memory, alertness, coordination and ability to make calculations are impaired. Headache, drowsiness, dizziness and either a sense of well-being (euphoria) or belligerence occur. The effects appear following increasingly shorter periods of exposure to increasing altitude. In fact, pilot performance can seriously deteriorate within 15 minutes at 15,000 feet.

2.1.3 At cabin pressure altitudes above 15,000 feet, the periphery of the visual field grays out to a point where only central vision remains (tunnel vision). A blue coloration (cyanosis) of the fingernails and lips develops. The ability to take corrective and protective action is lost in 20 to 30 minutes at 18,000 feet and 5 to 12 minutes at 20,000 feet, followed soon thereafter by unconsciousness.

2.1.4 The altitude at which significant effects of hypoxia occur can be lowered by a number of factors. Carbon monoxide inhaled in smoking or from exhaust fumes (see below), lowered hemoglobin (anemia), and certain medications can reduce the oxygen-carrying capacity of the blood to the degree that the amount of oxygen provided to body tissues will already be equivalent to the oxygen provided to the tissues when exposed to cabin pressure altitude of several thousand feet. Small amounts of alcohol and low doses of certain drugs, such as antihistamines, tranquilizers, sedatives, and analgesics can, through their depressant actions, render the brain much more susceptible to hypoxia. Extreme heat and cold, fever, and anxiety increase the body's demand for oxygen, and hence its susceptibility to hypoxia.

2.1.5 The effects of hypoxia are usually quite difficult to recognize, especially when they occur gradually. Since symptoms of hypoxia do not vary in an individual, the ability to recognize hypoxia can be greatly improved by experiencing and witnessing the effects of hypoxia during an altitude chamber "flight." The FAA provides this opportunity through aviation physiology training, which is conducted at the FAA Civil Aeromedical Institute and at many military facilities across the U.S. To attend the Physiological Training Program at the Civil Aeromedical Institute, Mike Monroney Aeronautical Center, Oklahoma City, OK, contact by telephone (405) 954-6212, or by writing Aerospace Medical Education Division, AAM-400, CAMI, Mike Monroney Aeronautical Center, P.O. Box 25082, Oklahoma City, OK 73125.

NOTE-

To attend the physiological training program at one of the military installations having the training capability, an application form and a fee must be submitted. Full particulars about location, fees, scheduling procedures, course content, individual requirements, etc., are contained in the physiological training application, Form Number AC-3150-7, which is obtained by contacting the Accident Prevention Specialist or the Office Forms Manager in the nearest FAA office.

2.1.6 Hypoxia is prevented by heeding factors that reduce tolerance to altitude, by enriching the inspired air with oxygen from an appropriate oxygen system and by maintaining a comfortable, safe cabin pressure altitude. For optimum protection, pilots are encouraged to use supplemental oxygen above 10,000 feet during the day, and above 5,000 feet at night. The Federal Aviation Regulations require that

the minimum flight crew be provided with and use supplemental oxygen after 30 minutes of exposure to cabin pressure altitudes between 12,500 and 14,000 feet, and immediately on exposure to cabin pressure altitudes above 14,000. Every occupant of the aircraft must be provided with supplemental oxygen at cabin pressure altitudes above 15,000 feet.

2.2 Ear Block

2.2.1 As the aircraft cabin pressure decreases during ascent, the expanding air in the middle ear pushes the eustachian tube open and, by escaping down it to the nasal passages, equalizes in pressure with the cabin pressure. But during descent, the pilot must periodically open the eustachian tube to equalize pressure. This can be accomplished by swallowing, yawning, tensing muscles in the throat or, if these do not work, by the combination of closing the mouth, pinching the nose closed and attempting to blow through the nostrils (Valsalva maneuver).

2.2.2 Either an upper respiratory infection, such as a cold or sore throat, or a nasal allergic condition can produce enough congestion around the eustachian tube to make equalization difficult. Consequently, the difference in pressure between the middle ear and aircraft cabin can build up to a level that will hold the eustachian tube closed, making equalization difficult if not impossible. This problem is commonly referred to as an “ear block.”

2.2.3 An ear block produces severe ear pain and loss of hearing that can last from several hours to several days. Rupture of the ear drum can occur in flight or after landing. Fluid can accumulate in the middle ear and become infected.

2.2.4 An ear block is prevented by not flying with an upper respiratory infection or nasal allergic condition. Adequate protection is usually not provided by decongestant sprays or drops to reduce congestion around the eustachian tubes. Oral decongestants have side effects that can significantly impair pilot performance.

2.2.5 If an ear block does not clear shortly after landing, a physician should be consulted.

2.3 Sinus Block

2.3.1 During ascent and descent, air pressure in the sinuses equalizes with the aircraft cabin pressure through small openings that connect the sinuses to the nasal passages. Either an upper respiratory infection,

such as a cold or sinusitis, or a nasal allergic condition can produce enough congestion around an opening to slow equalization and, as the difference in pressure between the sinus and cabin mounts, eventually plug the opening. This “sinus block” occurs most frequently during descent.

2.3.2 A sinus block can occur in the frontal sinuses, located above each eyebrow, or in the maxillary sinuses, located in each upper cheek. It will usually produce excruciating pain over the sinus area. A maxillary sinus block can also make the upper teeth ache. Bloody mucus may discharge from the nasal passages.

2.3.3 A sinus block is prevented by not flying with an upper respiratory infection or nasal allergic condition. Adequate protection is usually not provided by decongestant sprays or drops to reduce congestion around the sinus openings. Oral decongestants have side effects that can impair pilot performance.

2.3.4 If a sinus block does not clear shortly after landing, a physician should be consulted.

2.4 Decompression Sickness After Scuba Diving

2.4.1 A pilot or passenger who intends to fly after SCUBA diving should allow the body sufficient time to rid itself of excess nitrogen absorbed during diving. If not, decompression sickness due to evolved gas can occur during exposure to low altitude and create a serious inflight emergency.

2.4.2 The recommended waiting time before going to flight altitudes of up to 8,000 feet is at least 12 hours after diving which has not required controlled ascent (nondecompression stop diving), and at least 24 hours after diving which has required controlled ascent (decompression stop diving). The waiting time before going to flight altitudes above 8,000 feet should be at least 24 hours after any SCUBA dive. These recommended altitudes are actual flight altitudes above mean sea level (AMSL) and not pressurized cabin altitudes. This takes into consideration the risk of decompression of the aircraft during flight.

3. Hyperventilation in Flight

3.1 Hyperventilation, or an abnormal increase in the volume of air breathed in and out of the lungs, can occur subconsciously when a stressed situation is encountered in flight. As hyperventilation “blows off” excessive carbon dioxide from the body, a pilot

can experience symptoms of lightheadedness, suffocation, drowsiness, tingling in the extremities, and coolness – and react to them with even greater hyperventilation. Incapacitation can eventually result from incoordination, disorientation, and painful muscle spasms. Finally, unconsciousness can occur.

3.2 The symptoms of hyperventilation subside within a few minutes after the rate and depth of breathing are consciously brought back under control. The buildup of carbon dioxide in the body can be hastened by controlled breathing in and out of a paper bag held over the nose and mouth.

3.3 Early symptoms of hyperventilation and hypoxia are similar. Moreover, hyperventilation and hypoxia can occur at the same time. Therefore, if a pilot is using an oxygen system when symptoms are experienced, the oxygen regulator should immediately be set to deliver 100 percent oxygen, and then the system checked to assure that it has been functioning effectively before giving attention to rate and depth of breathing.

4. Carbon Monoxide Poisoning in Flight

4.1 Carbon monoxide is a colorless, odorless, and tasteless gas contained in exhaust fumes. When breathed even in minute quantities over a period of time, it can significantly reduce the ability of the blood to carry oxygen. Consequently, effects of hypoxia occur (see subparagraph 2.1).

4.2 Most heaters in light aircraft work by air flowing over the manifold. Use of these heaters while exhaust fumes are escaping through manifold cracks and seals is responsible every year for several nonfatal and fatal aircraft accidents from carbon monoxide poisoning.

4.3 A pilot who detects the odor of exhaust or experiences symptoms of headache, drowsiness, or dizziness while using the heater should suspect carbon monoxide poisoning, and immediately shut off the heater and open air vents. If symptoms are severe, or continue after landing, medical treatment should be sought.

5. Illusions in Flight

5.1 Introduction. Many different illusions can be experienced in flight. Some can lead to spatial disorientation. Others can lead to landing errors.

Illusions rank among the most common factors cited as contributing to fatal aircraft accidents.

5.2 Illusions Leading to Spatial Disorientation

5.2.1 Various complex motions and forces and certain visual scenes encountered in flight can create illusions of motion and position. Spatial disorientation from these illusions can be prevented only by visual reference to reliable, fixed points on the ground or to flight instruments.

5.2.2 The Leans. An abrupt correction of a banked attitude, which has been entered too slowly to stimulate the motion sensing system in the inner ear, can create the illusion of banking in the opposite direction. The disoriented pilot will roll the aircraft back into its original dangerous attitude or, if level flight is maintained, will feel compelled to lean in the perceived vertical plane until this illusion subsides.

5.2.3 Coriolis Illusion. An abrupt head movement in a prolonged constant-rate turn that has ceased stimulating the motion sensing system can create the illusion of rotation or movement in an entirely different axis. The disoriented pilot will maneuver the aircraft into a dangerous attitude in an attempt to stop rotation. This most overwhelming of all illusions in flight may be prevented by not making sudden, extreme head movements, particularly while making prolonged constant-rate turns under IFR conditions.

5.2.4 Graveyard Spin. A proper recovery from a spin that has ceased stimulating the motion sensing system can create the illusion of spinning in the opposite direction. The disoriented pilot will return the aircraft to its original spin.

5.2.5 Graveyard Spiral. An observed loss of altitude during a coordinated constant-rate turn that has ceased stimulating the motion sensing system can create the illusion of being in a descent with the wings level. The disoriented pilot will pull back on the controls, tightening the spiral and increasing the loss of altitude.

5.2.6 Somatogravic Illusion. A rapid acceleration during takeoff can create the illusion of being in a nose-up attitude. The disoriented pilot will push the aircraft into a nose-low, or dive attitude. A rapid deceleration by a quick reduction of the throttles can have the opposite effect, with the disoriented pilot pulling the aircraft into a nose-up, or stall attitude.

5.2.7 Inversion Illusion. An abrupt change from climb to straight and level flight can create the illusion of tumbling backwards. The disoriented pilot will push the aircraft abruptly into a nose–low attitude, possibly intensifying this illusion.

5.2.8 Elevator Illusion. An abrupt upward vertical acceleration, usually by an updraft, can create the illusion of being in a climb. The disoriented pilot will push the aircraft into a nose–low attitude. An abrupt downward vertical acceleration, usually by a downdraft, has the opposite effect, with the disoriented pilot pulling the aircraft into a nose–up attitude.

5.2.9 False Horizon. Sloping cloud formations, an obscured horizon, a dark scene spread with ground lights and stars, and certain geometric patterns of ground lights can create illusions of not being aligned correctly with the actual horizon. The disoriented pilot will place the aircraft in a dangerous attitude.

5.2.10 Autokinesis. In the dark, a static light will appear to move about when stared at for many seconds. The disoriented pilot will lose control of the aircraft in attempting to align it with the light.

5.3 Illusions Leading to Landing Errors

5.3.1 Various surface features and atmospheric conditions encountered in landing can create illusions of incorrect height above and distance from the runway threshold. Landing errors from these illusions can be prevented by anticipating them during approaches, aerial visual inspection of unfamiliar airports before landing, using electronic glide slope or VASI systems when available, and maintaining optimum proficiency in landing procedures.

5.3.2 Runway Width Illusion. A narrower–than–usual runway can create the illusion that the aircraft is at a higher altitude than it actually is. The pilot who does not recognize this illusion will fly a lower approach, with the risk of striking objects along the approach path or landing short. A wider–than–usual runway can have the opposite effect, with the risk of leveling out high and landing hard or overshooting the runway.

5.3.3 Runway and Terrain Slopes Illusion. An upsloping runway, upsloping terrain, or both, can

create the illusion that the aircraft is at a higher altitude than it actually is. The pilot who does not recognize this illusion will fly a lower approach. A downsloping runway, downsloping approach terrain, or both, can have the opposite effect.

5.3.4 Featureless Terrain Illusion. An absence of ground features, as when landing over water, darkened areas, and terrain made featureless by snow, can create the illusion that the aircraft is at a higher altitude than it actually is. The pilot who does not recognize this illusion will fly a lower approach.

5.3.5 Atmospheric Illusions. Rain on the wind–screen can create the illusion of greater height, and atmospheric haze can create the illusion of being at greater distance from the runway. The pilot who does not recognize these illusions will fly a lower approach. Penetration of fog can create the illusion of pitching up. The pilot who does not recognize this illusion will steepen the approach, often quite abruptly.

5.3.6 Ground Lighting Illusions. Lights along a straight path, such as a road, and even lights on moving trains can be mistaken for runway and approach lights. Bright runway and approach lighting systems, especially where few lights illuminate the surrounding terrain, may create the illusion of less distance to the runway. The pilot who does not recognize this illusion will fly a higher approach. Conversely, the pilot overflying terrain which has few lights to provide height cues may make lower than normal approach.

6. Vision in Flight

6.1 Introduction. Of the body senses, vision is the most important for safe flight. Major factors that determine how effectively vision can be used are the level of illumination and the technique of scanning the sky for other aircraft.

6.2 Vision Under Dim and Bright Illumination

6.2.1 Under conditions of dim illumination, small print and colors on aeronautical charts and aircraft instruments become unreadable unless adequate cockpit lighting is available. Moreover, another aircraft must be much closer to be seen unless its navigation lights are on.

TBL ENR 1.19–2
RNP Levels Supported for International Operations

RNP Level	Typical Application
4	Projected for oceanic/remote areas where 30 NM horizontal separation is applied
10	Oceanic/remote areas where 50 NM lateral separation is applied

2.3 Other RNP Applications Outside the U.S. The FAA and ICAO member states have led initiatives in implementing the RNP concept to oceanic operations. For example, RNP–10 routes have been established in the northern Pacific (NOPAC) which has increased capacity and efficiency by reducing the distance between tracks to 50 NM. (See TBL ENR 1.19–2.)

2.4 Aircraft and Airborne Equipment Eligibility for RNP Operations. Aircraft meeting RNP criteria will have an appropriate entry including special conditions and limitations in its Aircraft Flight Manual (AFM), or supplement. Operators of aircraft not having specific AFM–RNP certification may be issued operational approval including special conditions and limitations for specific RNP levels.

NOTE–
Some airborne systems use Estimated Position Uncertainty (EPU) as a measure of the current estimated navigational performance. EPU may also be referred to as Actual Navigation Performance (ANP) or Estimated Position Error (EPE).

3. Use of Suitable Area Navigation (RNAV) Systems on Conventional Procedures and Routes

3.1 Discussion. This paragraph sets forth policy, while providing operational and airworthiness guidance regarding the suitability and use of RNAV systems when operating on, or transitioning to, conventional, non–RNAV routes and procedures within the U.S. National Airspace System (NAS):

3.1.1 Use of a suitable RNAV system as a Substitute Means of Navigation when a Very–High Frequency (VHF) Omni–directional Range (VOR), Distance Measuring Equipment (DME), Tactical Air Navigation (TACAN), VOR/TACAN (VORTAC), VOR/DME, Non–directional Beacon (NDB), or compass locator facility including locator outer marker and locator middle marker is out–of–service (that is, the navigation aid (NAVAID) information is not

available); an aircraft is not equipped with an Automatic Direction Finder (ADF) or DME; or the installed ADF or DME on an aircraft is not operational. For example, if equipped with a suitable RNAV system, a pilot may hold over an out–of–service NDB.

3.1.2 Use of a suitable RNAV system as an Alternate Means of Navigation when a VOR, DME, VORTAC, VOR/DME, TACAN, NDB, or compass locator facility including locator outer marker and locator middle marker is operational and the respective aircraft is equipped with operational navigation equipment that is compatible with conventional nav aids. For example, if equipped with a suitable RNAV system, a pilot may fly a procedure or route based on operational VOR using that RNAV system without monitoring the VOR.

NOTE–
1. *Additional information and associated requirements are available in Advisory Circular 90-108 titled “Use of Suitable RNAV Systems on Conventional Routes and Procedures.”*

2. *Good planning and knowledge of your RNAV system are critical for safe and successful operations.*

3. *Pilots planning to use their RNAV system as a substitute means of navigation guidance in lieu of an out–of–service NAVAID may need to advise ATC of this intent and capability.*

4. *The navigation database should be current for the duration of the flight. If the AIRAC cycle will change during flight, operators and pilots should establish procedures to ensure the accuracy of navigation data, including suitability of navigation facilities used to define the routes and procedures for flight. To facilitate validating database currency, the FAA has developed procedures for publishing the amendment date that instrument approach procedures were last revised. The amendment date follows the amendment number; for example, Amdt 4 14Jan10. Currency of graphic departure procedures and STARs may be ascertained by the numerical designation in the procedure title. If an amended chart is published for the procedure, or the procedure amendment date shown on the chart is on or after the expiration date of the database, the*

operator must not use the database to conduct the operation.

3.2 Types of RNAV Systems that Qualify as a Suitable RNAV System. When installed in accordance with appropriate airworthiness installation requirements and operated in accordance with applicable operational guidance (e.g., aircraft flight manual and Advisory Circular material), the following systems qualify as a suitable RNAV system:

3.2.1 An RNAV system with TSO–C129/–C145/–C146 equipment, installed in accordance with AC 20–138, Airworthiness Approval of Global Positioning System (GPS) Navigation Equipment for Use as a VFR and IFR Supplemental Navigation System, or AC 20–130A, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors, and authorized for instrument flight rules (IFR) en route and terminal operations (including those systems previously qualified for “GPS in lieu of ADF or DME” operations), or

3.2.2 An RNAV system with DME/DME/IRU inputs that is compliant with the equipment provisions of AC 90–100A, U.S. Terminal and En Route Area Navigation (RNAV) Operations, for RNAV routes. A table of compliant equipment is available at the following website:

http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/policy_guidance/

NOTE–

Approved RNAV systems using DME/DME/IRU, without GPS/WAAS position input, may only be used as a substitute means of navigation when specifically authorized by a Notice to Airmen (NOTAM) or other FAA guidance for a specific procedure. The NOTAM or other FAA guidance authorizing the use of DME/DME/IRU systems will also identify any required DME facilities based on an FAA assessment of the DME navigation infrastructure.

3.3 Uses of Suitable RNAV Systems. Subject to the operating requirements, operators may use a suitable RNAV system in the following ways.

3.3.1 Determine aircraft position relative to, or distance from a VOR (see NOTE 5 below), TACAN, NDB, compass locator, DME fix; or a named fix defined by a VOR radial, TACAN course, NDB bearing, or compass locator bearing intersecting a VOR or localizer course.

3.3.2 Navigate to or from a VOR, TACAN, NDB, or compass locator.

3.3.3 Hold over a VOR, TACAN, NDB, compass locator, or DME fix.

3.3.4 Fly an arc based upon DME.

NOTE–

1. The allowances described in this section apply even when a facility is identified as required on a procedure (for example, “Note ADF required”).

2. These operations do not include lateral navigation on localizer–based courses (including localizer back–course guidance) without reference to raw localizer data.

3. Unless otherwise specified, a suitable RNAV system cannot be used for navigation on procedures that are identified as not authorized (“NA”) without exception by a NOTAM. For example, an operator may not use a RNAV system to navigate on a procedure affected by an expired or unsatisfactory flight inspection, or a procedure that is based upon a recently decommissioned NAVAID.

4. Pilots may not substitute for the NAVAID (for example, a VOR or NDB) providing lateral guidance for the final approach segment. This restriction does not refer to instrument approach procedures with “or GPS” in the title when using GPS or WAAS. These allowances do not apply to procedures that are identified as not authorized (NA) without exception by a NOTAM, as other conditions may still exist and result in a procedure not being available. For example, these allowances do not apply to a procedure associated with an expired or unsatisfactory flight inspection, or is based upon a recently decommissioned NAVAID.

5. For the purpose of paragraph NO TAG, “VOR” includes VOR, VOR/DME, and VORTAC facilities and “compass locator” includes locator outer marker and locator middle marker.

3.4 Alternate Airport Considerations. For the purposes of flight planning, any required alternate airport must have an available instrument approach procedure that does not require the use of GPS. This restriction includes conducting a conventional approach at the alternate airport using a substitute means of navigation that is based upon the use of GPS. For example, these restrictions would apply when planning to use GPS equipment as a substitute means of navigation for an out–of–service VOR that supports an ILS missed approach procedure at an alternate airport. In this case, some other approach not reliant upon the use of GPS must be available. This restriction does not apply to RNAV systems using TSO–C145/–C146 WAAS equipment. For further WAAS guidance see ENR 4.1 paragraph 19.

ENR 5.2 Military Exercise and Training Areas

1. Military Operations Area (MOA)

1.1 MOAs consist of airspace of defined vertical and lateral limits established for the purpose of separating certain military training activities from IFR traffic. Whenever a MOA is being used, nonparticipating IFR traffic may be cleared through a MOA if IFR separation can be provided by ATC. Otherwise, ATC will reroute or restrict nonparticipating IFR traffic.

1.2 Examples of activities conducted in MOAs include, but are not limited to: air combat tactics, air intercepts, aerobatics, formation training, and low-altitude tactics. Military pilots flying in an active MOA are exempted from the provisions of 14 CFR Section 91.303(c) and (d) which prohibits aerobatic flight within Class D and Class E surface areas, and within Federal airways. Additionally, the Department of Defense has been issued an authorization to operate aircraft at indicated airspeeds in excess of 250 knots below 10,000 feet MSL within active MOAs.

1.3 Pilots operating under VFR should exercise extreme caution while flying within a MOA when military activity is being conducted. The activity status (active/inactive) of MOAs may change frequently. Therefore, pilots should contact any FSS within 100 miles of the area to obtain accurate real-time information concerning the MOA hours of operation. Prior to entering an active MOA, pilots should contact the controlling agency for traffic advisories.

1.4 MOAs are depicted on Sectional, VFR Terminal Area, and En Route Low Altitude Charts.

2. Alert Areas

2.1 Alert Areas are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain a high volume of pilot training or an unusual type of aerial activity. Pilots should be particularly alert when flying in these areas. All activity within an Alert Area shall be conducted in accordance with FAA regulations, without waiver, and pilots of

participating aircraft as well as pilots transiting the area shall be equally responsible for collision avoidance.

3. Controlled Firing Area (CFA)

3.1 CFAs contain activities which, if not conducted in a controlled environment, could be hazardous to nonparticipating aircraft. The distinguishing feature of the CFA, as compared to other special use airspace, is that its activities are suspended immediately when spotter aircraft, radar, or ground lookout positions indicate an aircraft might be approaching the area. There is no need to chart CFAs since they do not cause a nonparticipating aircraft to change its flight path.

4. Military Training Route (MTR)

4.1 National security depends largely on the deterrent effect of our airborne military forces. To be proficient, the military services must train in a wide range of airborne tactics. One phase of this training involves “low level” combat tactics. The required maneuvers and high speeds are such that they may occasionally make the see-and-avoid aspect of VFR flight more difficult without increased vigilance in areas containing such operations. In an effort to ensure the greatest practical level of safety for all flight operations, the MTR program was conceived.

4.2 The MTR program is a joint venture by the FAA and the DOD. MTRs are mutually developed for use by the military for the purpose of conducting low-altitude, high-speed training. The routes above 1,500 feet above ground level (AGL) are developed to be flown, to the maximum extent possible, under IFR. The routes at 1,500 feet AGL and below are generally developed to be flown under VFR.

4.3 Generally, MTRs are established below 10,000 feet MSL for operations at speeds in excess of 250 knots. However, route segments may be defined at higher altitudes for purposes of route continuity. For example, route segments may be defined for descent, climbout, and mountainous terrain. There are IFR and VFR routes as follows:

4.3.1 IFR Military Training Routes–IR. Operations on these routes are conducted in accordance with IFR regardless of weather conditions.

4.3.2 VFR Military Training Routes–VR. Operations on these routes are conducted in accordance with VFR except flight visibility shall be 5 miles or more; and flights shall not be conducted below a ceiling of less than 3,000 feet AGL.

4.4 MTRs will be identified and charted as follows:

4.4.1 Route Identification

4.4.1.1 MTRs with no segment above 1,500 feet AGL shall be identified by four number characters; e.g., IR1206, VR1207.

4.4.1.2 MTRs that include one or more segments above 1,500 feet AGL shall be identified by three number characters; e.g., IR206, VR207.

4.4.1.3 Alternate IR/VR routes or route segments are identified by using the basic/principal route designation followed by a letter suffix, e.g., IR008A, VR1007B, etc.

4.4.2 Route Charting

4.4.2.1 IFR Low Altitude En Route Chart. This chart will depict all IR routes and all VR routes that accommodate operations above 1,500 feet AGL.

4.4.2.2 VFR Sectional Charts. These charts will depict military training activities such as IR, VR, MOA, restricted area, warning area, and alert area information.

4.4.2.3 Area Planning (AP/1B) Chart (DOD Flight Information Publication–FLIP). This chart is published by the DOD primarily for military users

and contains detailed information on both IR and VR routes.

4.5 The FLIP contains charts and narrative descriptions of these routes. This publication is available to the general public by single copy or annual subscription from:

Aeronautical Navigation Products (AeroNav)
Logistics Group, AJV-372
Federal Aviation Administration
10201 Good Luck Road
Glenn Dale, MD 20769-9700
Telephone: 1-800-638-8972 (Toll free within U.S.)
301-436-8301
301-436-6829 (FAX)
e-mail: 9-AMC-Chartsales@faa.gov

4.5.1 This DOD FLIP is available for pilot briefings at FSSs and many airports.

4.6 Nonparticipating aircraft are not prohibited from flying within an MTR; however, extreme vigilance should be exercised when conducting flight through or near these routes. Pilots should contact FSSs within 100 NM of a particular MTR to obtain current information or route usage in their vicinity. Information available includes times of scheduled activity, altitudes in use on each route segment, and actual route width. Route width varies for each MTR and can extend several miles on either side of the charted MTR centerline. Route width information for IR and VR MTRs is also available in the FLIP AP/1B along with additional MTR (SR/AR) information. When requesting MTR information, pilots should give the FSS their position, route of flight, and destination in order to reduce frequency congestion and permit the FSS specialist to identify the MTR which could be a factor.

14.4.6 Off–Airport Landings.

14.4.6.1 In the event of an off–airport landing, pilots have used a number of different visual cues to gain reference. Use whatever you must to create the contrast you need. Natural references seem to work best (trees, rocks, snow ribs, etc.)

- a) Over flight.
- b) Use of markers.
- c) Weighted flags.
- d) Smoke bombs.
- e) Any colored rags.
- f) Dye markers.
- g) Kool–aid.
- h) Trees or tree branches.

14.4.6.2 It is difficult to determine the depth of snow in areas that are level. Dropping items from the aircraft to use as reference points should be used as a visual aid only and not as a primary landing reference. Unless your marker is biodegradable, be sure to retrieve it after landing. Never put yourself in a position where no visual references exist.

14.4.6.3 Abort landing if blowing snow obscures your reference. Make your decisions early. Don't assume you can pick up a lost reference point when you get closer.

14.4.6.4 Exercise extreme caution when flying from sunlight into shade. Physical awareness may tell you that you are flying straight but you may actually be in a spiral dive with centrifugal force pressing against you. Having no visual references enhances this illusion. Just because you have a good visual reference does not mean that it's safe to continue. There may be snow–covered terrain not visible in the direction that you are traveling. Getting caught in a no visual reference situation can be fatal.

14.4.7 Flying Around a Lake.

14.4.7.1 When flying along lakeshores, use them as a reference point. Even if you can see the other side, realize that your depth perception may be poor. It is easy to fly into the surface. If you must cross the lake, check the altimeter frequently and maintain a safe altitude while you still have a good reference. Don't descend below that altitude.

14.4.7.2 The same rules apply to seemingly flat areas of snow. If you don't have good references, avoid going there.

14.4.8 Other Traffic. Be on the look out for other traffic in the area. Other aircraft may be using your same reference point. Chances are greater of colliding with someone traveling in the same direction as you, than someone flying in the opposite direction.

14.4.9 Ceilings. Low ceilings have caught many pilots off guard. Clouds do not always form parallel to the surface, or at the same altitude. Pilots may try to compensate for this by flying with a slight bank and thus creating a descending turn.

14.4.10 Glaciers. Be conscious of your altitude when flying over glaciers. The glaciers may be rising faster than you are climbing.

15. Operations in Ground Icing Conditions

15.1 The presence of aircraft airframe icing during takeoff, typically caused by improper or no deicing of the aircraft being accomplished prior to flight has contributed to many recent accidents in turbine aircraft. The General Aviation Joint Steering Committee (GAJSC) is the primary vehicle for government–industry cooperation, communication, and coordination on GA accident mitigation. The Turbine Aircraft Operations Subgroup (TAOS) works to mitigate accidents in turbine accident aviation. While there is sufficient information and guidance currently available regarding the effects of icing on aircraft and methods for deicing, the TAOS has developed a list of recommended actions to further assist pilots and operators in this area.

15.1.1 While the efforts of the TAOS specifically focus on turbine aircraft, it is recognized that their recommendations are applicable to and can be adapted for the pilot of a small, piston powered aircraft too.

15.2 The following recommendations are offered:

15.2.1 Ensure that your aircraft's lift–generating surfaces are COMPLETELY free of contamination before flight through a tactile (hands on) check of the critical surfaces when feasible. Even when otherwise permitted, operators should avoid smooth or polished frost on lift–generating surfaces as an acceptable preflight condition.

15.2.2 Review and refresh your cold weather standard operating procedures.

15.2.3 Review and be familiar with the Airplane Flight Manual (AFM) limitations and procedures necessary to deal with icing conditions prior to flight, as well as in flight.

15.2.4 Protect your aircraft while on the ground, if possible, from sleet and freezing rain by taking advantage of aircraft hangars.

15.2.5 Take full advantage of the opportunities available at airports for deicing. Do not refuse deicing services simply because of cost.

15.2.6 Always consider canceling or delaying a flight if weather conditions do not support a safe operation.

15.3 If you haven't already developed a set of Standard Operating Procedures for cold weather operations, they should include:

15.3.1 Procedures based on information that is applicable to the aircraft operated, such as AFM limitations and procedures;

15.3.2 Concise and easy to understand guidance that outlines best operational practices;

15.3.3 A systematic procedure for recognizing, evaluating and addressing the associated icing risk, and offer clear guidance to mitigate this risk;

15.3.4 An aid (such as a checklist or reference cards) that is readily available during normal day-to-day aircraft operations.

15.4 There are several sources for guidance relating to airframe icing, including:

<http://aircrafticing.grc.nasa.gov/index.html>

<http://www.ibac.org/is-bao/isbao.htm>

http://www.natasafety1st.org/bus_deice.htm

15.4.1 Advisory Circular (AC) 91–74, Pilot Guide, Flight in Icing Conditions.

15.4.2 AC 135–17, Pilot Guide Small Aircraft Ground Deicing.

15.4.3 AC 135–9, FAR Part 135 Icing Limitations.

15.4.4 AC 120–60, Ground Deicing and Anti-icing Program.

15.4.5 AC 135–16, Ground Deicing and Anti-icing Training and Checking.

15.5 The FAA Approved Deicing Program Updates is published annually as a Flight Standards Information Bulletin for Air Transportation and contains detailed information on deicing and anti-icing procedures and holdover times. It may be accessed at the following web site by selecting the current year's information bulletins:

http://www.faa.gov/library/manuals/examiners_inspectors/8400/fsat

16. Avoid Flight in the Vicinity of Thermal Plumes (Smoke Stacks and Cooling Towers)

16.1 Flight Hazards Exist Around Thermal Plumes. Thermal plumes are defined as visible or invisible emissions from power plants, industrial production facilities, or other industrial systems that release large amounts of vertically directed unstable gases. High temperature exhaust plumes may cause significant air disturbances such as turbulence and vertical shear. Other identified potential hazards include, but are not necessarily limited to, reduced visibility, oxygen depletion, engine particulate contamination, exposure to gaseous oxides, and/or icing. Results of encountering a plume may include airframe damage, aircraft upset, and/or engine damage/failure. These hazards are most critical during low altitude flight, especially during takeoff and landing.

16.2 When able, a pilot should fly upwind of possible thermal plumes. When a plume is visible via smoke or a condensation cloud, remain clear and realize a plume may have both visible and invisible characteristics. Exhaust stacks without visible plumes may still be in full operation, and airspace in the vicinity should be treated with caution. As with mountain wave turbulence or clear air turbulence, an invisible plume may be encountered unexpectedly. Cooling towers, power plant stacks, exhaust fans, and other similar structures are depicted in FIG ENR 5.7–3. Whether plumes are visible or invisible, the total extent of their unstable air is difficult to ascertain. FAA studies are underway to further characterize the effects of thermal plumes as exhaust effluents. Until the results of these studies are known and possible changes to rules and policy are identified and/or published, pilots are encouraged to

(TSO), or later revisions: TSO-C154c, Universal Access Transceiver (UAT) Automatic Dependent Surveillance-Broadcast (ADS-B) Equipment, or TSO-C166b, Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information.

4.5.2 Flight crews must comply with the procedures prescribed in the Houston ARTCC Letter of Agreement dated December 17, 2009, or later.

NOTE-

The unique ADS-B architecture in the Gulf of Mexico depends upon reception of an aircraft's Mode C in addition

to the other message elements described in 14 CFR 91.227. Flight crews must be made aware that loss of Mode C also means that ATC will not receive the aircraft's ADS-B signal.

4.6 FAA/AeroNav publishes the grid system waypoints on the IFR Gulf of Mexico Vertical Flight Reference Chart. A commercial equivalent is also available. The chart is updated annually and is available from a FAA chart agent or FAA directly, web site address:

http://www.faa.gov/air_traffic/flight_info/aeronav

PART 3 – AERODROMES (AD)

AD 0.

- AD 0.1 Preface – Not applicable
- AD 0.2 Record of AIP Amendments – See GEN 0.2-1
- AD 0.3 Record of AIP Supplements – Not applicable

AD 0.4 Checklist of Pages

PAGE	DATE
PART 3 – AERODROMES (AD)	
AD 0	
0.4-1	25 AUG 11
0.4-2	25 AUG 11
0.4-3	25 AUG 11
0.4-4	25 AUG 11
0.6-1	10 MAR 11
AD 1	
1.1-1	10 MAR 11
1.1-2	10 MAR 11
1.1-3	10 MAR 11
1.1-4	10 MAR 11
1.1-5	10 MAR 11
1.1-6	10 MAR 11
1.1-7	10 MAR 11
1.1-8	10 MAR 11
1.1-9	10 MAR 11
1.1-10	10 MAR 11
1.1-11	10 MAR 11
1.1-12	10 MAR 11
1.1-13	10 MAR 11
1.1-14	10 MAR 11
1.1-15	10 MAR 11
1.1-16	10 MAR 11
1.1-17	10 MAR 11
1.1-18	10 MAR 11
1.1-19	25 AUG 11
1.1-20	10 MAR 11
1.1-21	10 MAR 11
1.1-22	10 MAR 11
1.1-23	10 MAR 11
1.1-24	10 MAR 11
1.1-25	10 MAR 11
1.1-26	10 MAR 11
1.1-27	10 MAR 11
1.1-28	25 AUG 11
1.1-29	10 MAR 11
1.1-30	10 MAR 11

PAGE	DATE
1.1-31	10 MAR 11
1.1-32	10 MAR 11
1.1-33	10 MAR 11
1.1-34	10 MAR 11
1.1-35	10 MAR 11
1.1-36	10 MAR 11
1.1-37	10 MAR 11
1.1-38	10 MAR 11
1.1-39	10 MAR 11
1.1-40	10 MAR 11
1.1-41	10 MAR 11
1.1-42	10 MAR 11
1.1-43	10 MAR 11
1.1-44	10 MAR 11
1.1-45	10 MAR 11
1.1-46	10 MAR 11
1.1-47	10 MAR 11
1.1-48	10 MAR 11
1.1-49	10 MAR 11
AD 2	
2-1	25 AUG 11
2-2	25 AUG 11
2-3	25 AUG 11
2-4	25 AUG 11
2-5	25 AUG 11
2-6	25 AUG 11
2-7	25 AUG 11
2-8	25 AUG 11
2-9	25 AUG 11
2-10	25 AUG 11
2-11	25 AUG 11
2-12	25 AUG 11
2-13	25 AUG 11
2-14	25 AUG 11
2-15	25 AUG 11
2-16	25 AUG 11
2-17	25 AUG 11
2-18	25 AUG 11
2-19	25 AUG 11
2-20	25 AUG 11

PAGE	DATE
2-21	25 AUG 11
2-22	25 AUG 11
2-23	25 AUG 11
2-24	25 AUG 11
2-25	25 AUG 11
2-26	25 AUG 11
2-27	25 AUG 11
2-28	25 AUG 11
2-29	25 AUG 11
2-30	25 AUG 11
2-31	25 AUG 11
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2-52	25 AUG 11
2-53	25 AUG 11
2-54	25 AUG 11
2-55	25 AUG 11
2-56	25 AUG 11
2-57	25 AUG 11
2-58	25 AUG 11
2-59	25 AUG 11
2-60	25 AUG 11

PAGE	DATE
2-61	25 AUG 11
2-62	25 AUG 11
2-63	25 AUG 11
2-64	25 AUG 11
2-65	25 AUG 11
2-66	25 AUG 11
2-67	25 AUG 11
2-68	25 AUG 11
2-69	25 AUG 11
2-70	25 AUG 11
2-71	25 AUG 11
2-72	25 AUG 11
2-73	25 AUG 11
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2-100	25 AUG 11
2-101	25 AUG 11
2-102	25 AUG 11
2-103	25 AUG 11
2-104	25 AUG 11
2-105	25 AUG 11
2-106	25 AUG 11
2-107	25 AUG 11
2-108	25 AUG 11
2-109	25 AUG 11
2-110	25 AUG 11
2-111	25 AUG 11
2-112	25 AUG 11

PAGE	DATE
2-113	25 AUG 11
2-114	25 AUG 11
2-115	25 AUG 11
2-116	25 AUG 11
2-117	25 AUG 11
2-118	25 AUG 11
2-119	25 AUG 11
2-120	25 AUG 11
2-121	25 AUG 11
2-122	25 AUG 11
2-123	25 AUG 11
2-124	25 AUG 11
2-125	25 AUG 11
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2-128	25 AUG 11
2-129	25 AUG 11
2-130	25 AUG 11
2-131	25 AUG 11
2-132	25 AUG 11
2-133	25 AUG 11
2-134	25 AUG 11
2-135	25 AUG 11
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PAGE	DATE
2-165	25 AUG 11
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PAGE	DATE
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PAGE	DATE
2-321	25 AUG 11
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2-372	25 AUG 11

PAGE	DATE
2-373	25 AUG 11
2-374	25 AUG 11
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PAGE	DATE
2-421	25 AUG 11
2-422	25 AUG 11
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2-447	25 AUG 11
2-448	25 AUG 11
2-449	25 AUG 11
2-450	25 AUG 11
2-451	25 AUG 11
2-452	25 AUG 11
2-453	25 AUG 11
2-454	25 AUG 11
APPENDIX	
A-1	10 MAR 11
1 through 372	N/A

PAGE	DATE
INDEX	
I-1	25 AUG 11
I-2	25 AUG 11
I-3	25 AUG 11
I-4	25 AUG 11
I-5	25 AUG 11
I-6	25 AUG 11
I-7	25 AUG 11
I-8	25 AUG 11

AD 0.5 List of Hand Amendments to the AIP – Not applicable

per minute. The top light is normally installed near the top of the supporting structure, while the lower light indicates the approximate lower portion of the wire span. The lights are beamed towards the companion structure and identify the area of the wire span.

15.3.4 High intensity flashing white lights are also employed to identify tall structures, such as chimneys and towers, and obstructions to air navigation. The lights provide a 360 degree coverage about the structure at 40 flashes per minute and consist of from one to seven levels of lights depending upon the height of the structure. Where more than one level is used, the vertical banks flash simultaneously.

■ 16. Runway Lead-in Light System (RLLS)

16.1 The lead-in lighting system consists of a series of flashing lights installed at or near ground level to describe the desired course to a runway or final approach. Each group of lights is positioned and aimed so as to be conveniently sighted and followed from the approaching aircraft under conditions at or above approach minimums under consideration. The system may be curved, straight, or combination thereof, as required. The lead-in lighting system may be terminated at any approved approach lighting system, or it may be terminated at a distance from the landing threshold which is compatible with authorized visibility minimums permitting visual reference to the runway environment.

16.2 The outer portion uses groups of lights to mark segments of the approach path beginning at a point within easy visual range of a final approach fix. These groups are spaced close enough together (approximately one mile) to give continuous lead-in guidance. A group consists of at least three flashing lights in a linear or cluster configuration and may be augmented by steady burning lights where required. When practicable, groups flash in sequence toward runways. Each system is designed to suit local conditions and to provide the visual guidance intended. The design of all RLLS is compatible with the requirements of U.S. Standards for Terminal Instrument Procedures (TERPS) where such proce-

dures are applied for establishing instrument minimums.

17. Airport Marking Aids and Signs

17.1 General

17.1.1 Airport pavement markings and signs provide information that is useful to a pilot during takeoff, landing, and taxiing.

17.1.2 Uniformity in airport markings and signs from one airport to another enhances safety and improves efficiency. Pilots are encouraged to work with the operators of the airports they use to achieve the marking and sign standards described in this section.

17.1.3 Pilots who encounter ineffective, incorrect, or confusing markings or signs on an airport should make the operator of the airport aware of the problem. These situations may also be reported under the Aviation Safety Reporting Program as described in ENR 1.16. Pilots may also report these situations to the FAA Regional Airports Division.

17.1.4 The markings and signs described in this section reflect the current FAA recommended standards.

REFERENCE—

AC 150/5340–1, *Standards for Airport Markings.*
AC 150/5340–18, *Standards for Airport Sign Systems.*

17.2 Airport Pavement Markings

17.2.1 General. For the purpose of this presentation the Airport Pavement Markings have been grouped into the four areas:

17.2.1.1 Runway Markings.

17.2.1.2 Taxiway Markings.

17.2.1.3 Holding Position Markings.

17.2.1.4 Other Markings.

17.2.2 Marking Colors. Markings for runways are white. Markings defining the landing area on a heliport are also white except for hospital heliports which use a red “H” on a white cross. Markings for taxiways, areas not intended for use by aircraft (closed and hazardous areas), and holding positions (even if they are on a runway) are yellow.

17.3 Runway Markings

17.3.1 General. There are three types of markings for runways: visual, non precision instrument, and precision instrument. TBLAD 1.1–5 identifies the marking elements for each type of runway, and TBLAD 1.1–6 identifies runway threshold markings.

17.3.2 Runway Designators. Runway numbers and letters are determined from the approach direction. The runway number is the whole number nearest one-tenth the magnetic azimuth of the centerline of the runway, measured clockwise from the magnetic north. The letters differentiate between left (L), right (R), or center (C), parallel runways, as applicable:

17.3.2.1 For two parallel runways “L” “R.”

17.3.2.2 For three parallel runways “L” “C” “R.”

17.3.3 Runway Centerline Marking. The runway centerline identifies the center of the runway and provides alignment guidance during takeoff and

landing. The centerline consists of a line of uniformly spaced stripes and gaps.

17.3.4 Runway Aiming Point Marking. The aiming point marking serves as a visual aiming point for a landing aircraft. These two rectangular markings consist of a broad white stripe located on each side of the runway centerline and approximately 1,000 feet from the landing threshold. (See FIG AD 1.1–13.)

17.3.5 Runway Touchdown Zone Markers. The touchdown zone markings identify the touchdown zone for landing operations and are coded to provide distance information in 500 feet (150 m) increments. These markings consist of groups of one, two, and three rectangular bars symmetrically arranged in pairs about the runway centerline as shown in FIG AD 1.1–13, Precision Instrument Runway Markings. For runways having touchdown zone markings on both ends, those pairs of markings which extend to within 900 feet (270 m) of the midpoint between the thresholds are eliminated.

TBLAD 1.1–5
Runway Marking Elements

Marking Element	Visual Runway	Nonprecision Instrument Runway	Precision Instrument Runway
Designation	X	X	X
Centerline	X	X	X
Threshold	X ¹	X	X
Aiming Point	X ²	X	X
Touchdown Zone			X
Side Stripes			X

¹On runways used, or intended to be used, by international commercial transports.
²On runways 4,000 feet (1200 m) or longer used by jet aircraft.

TBLAD 1.1–6
Number of Runway Threshold Stripes

Runway Width	Number of Stripes
60 feet (18 m)	4
75 feet (23 m)	6
100 feet (30 m)	8
150 feet (45 m)	12
200 feet (60 m)	16

The airport operator determines the need, size, and location for these signs.

26. Runway Distance Remaining Signs

26.1 Runway distance remaining signs have a black background with a white numeral inscription and may be installed along one or both side(s) of the runway. The number on the signs indicates the distance (in thousands of feet) of landing runway remaining. The last sign; i.e., the sign with the numeral “1,” will be located at least 950 feet from the runway end. FIG AD 1.1–53 shows an example of a runway distance remaining sign.

27. Aircraft Arresting Systems

27.1 Certain airports are equipped with a means of rapidly stopping military aircraft on a runway. This equipment, normally referred to as EMERGENCY ARRESTING GEAR, generally consists of pendant cables supported over the runway surface by rubber “donuts.” Although most devices are located in the overrun areas, a few of these arresting systems have cables stretched over the operational areas near the ends of a runway.

27.2 Arresting cables which cross over a runway require special markings on the runway to identify the cable location. These markings consist of 10 feet diameter solid circles painted “identification yellow,” 30 feet on center, perpendicular to the runway centerline across the entire runway width. Additional details are contained in AC 150/5220–9, Aircraft Arresting Systems for Joint Civil/Military Airports.

NOTE–

Aircraft operations on the runway are not restricted by the installation of aircraft arresting devices.

27.3 Engineered materials arresting systems (EMAS). EMAS, which are constructed of high energy-absorbing materials of selected strength, are located in the safety area beyond the end of the

runway. They are designed to crush under the weight of commercial aircraft and they exert deceleration forces on the landing gear. These systems do not affect the normal landing and takeoff of airplanes. More information concerning EMAS is in FAA Advisory Circular AC 150/5220–22, Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns.

NOTE–

EMAS may be located as close as 35 feet beyond the end of the runway. Aircraft should never taxi or drive across the runway.

28. Security Identifications Display Area (Aerodrome Ramp Area)

28.1 Security Identification Display Areas (SIDA) are limited access areas that require a badge issued in accordance with procedures in CFR 49 Part 1542. Movement through or into these areas is prohibited without proper identification being displayed. If you are unsure of the location of a SIDA, contact the airport authority for additional information. Airports that have a SIDA must have the following information available:

28.1.1 A description and map detailing boundaries and pertinent features;

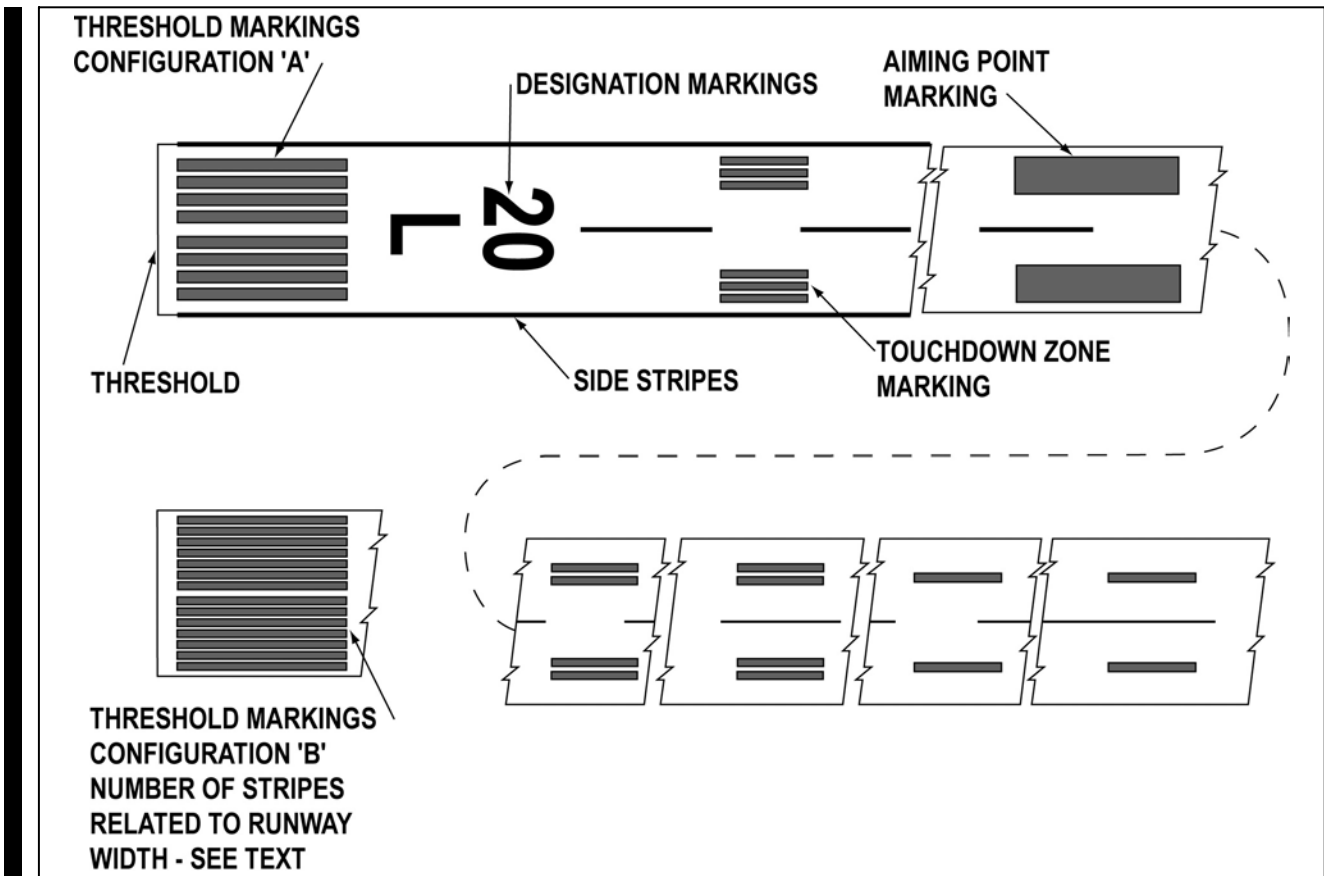
28.1.2 Measures used to perform the access control functions required under CFR 49 Part 1542.201(b)(1);

28.1.3 Procedures to control movement within the secured area, including identification media required under CFR 49 Part 1542.201(b)(3); and

28.1.4 A description of the notification signs required under CFR 49 Part 1542.201(b)(6).

28.2 Pilots or passengers without proper identification that are observed entering a SIDA (ramp area) may be reported to TSA or airport security. Pilots are advised to brief passengers accordingly.

FIG AD 1.1-13
Precision Instrument Runway Markings



AD 2. AERODROMES

1. The following is a partial list of U.S. airports designated to serve international operations. This list contains U.S. airports with scheduled passenger service in large aircraft and certain airports designated as alternate service airports. Omitted from this list are designated general aviation airports, airports with scheduled cargo but no scheduled passenger service, and certain airports having international service in commuter-type aircraft.

ICAO ID	Location	Airport Name	Designation
Alaska			
PANC	Anchorage	Ted Stevens Anchorage International	Regular
PAED	Anchorage	Elmendorf AFB	Alternate
PACD	Cold Bay	Cold Bay	Alternate
PAEI	Fairbanks	Eielson AFB	Alternate
PAFA	Fairbanks	Fairbanks International	Regular
PAJN	Juneau	Juneau International	Regular
PAKN	King Salmon	King Salmon	Alternate
American Samoa			
NSTU	Pago Pago	Pago Pago International	Regular
Arizona			
KPHX	Phoenix	Phoenix Sky Harbor International	Regular
KTUS	Tucson	Tucson International	Regular
California			
KFAT	Fresno	Fresno Yosemite International	Alternate
KLAX	Los Angeles	Los Angeles International	Regular
KOAK	Oakland	Metropolitan Oakland International	Regular
KONT	Ontario	Ontario International	Alternate
KPMD	Palmdale	Palmdale Regional/USAF Plant 42	Alternate
KSMF	Sacramento	Sacramento International	Alternate

ICAO ID	Location	Airport Name	Designation
KSAN	San Diego	San Diego International	Regular
KSFO	San Francisco	San Francisco International	Regular
KSJC	San Jose	San Jose Norman Y. Mineta International	Regular
KSCK	Stockton	Stockton Metropolitan	Alternate
Colorado			
KDEN	Denver	Denver International	Regular
KPUB	Pueblo	Pueblo Memorial	Alternate
Connecticut			
KBDL	Windsor Locks	Bradley International	Regular
District of Columbia			
KIAD	Washington	Washington Dulles International	Regular
Florida			
KFLL	Fort Lauderdale	Fort Lauderdale/Hollywood International	Regular
KRSW	Fort Myers	Southwest Florida International	Regular
KMIA	Miami	Miami International	Regular
KMCO	Orlando	Orlando International	Regular
KTPA	Tampa	Tampa International	Regular
KPBI	West Palm Beach	Palm Beach International	Regular
Georgia			
KATL	Atlanta	Hartsfield – Jackson Atlanta International	Regular
Guam			
PGUM	Agana	Guam International	Regular
PGUA	Guam Island	Andersen AFB	Alternate
Hawaii			
PHTO	Hilo	Hilo International	Alternate
PHNL	Honolulu	Honolulu International	Regular
PHOG	Kahului	Kahului	Regular

ICAO ID	Location	Airport Name	Designation
Illinois			
KORD	Chicago	Chicago–O’Hare International	Regular
Indiana			
KIND	Indianapolis	Indianapolis International	Regular
Kansas			
KICT	Wichita	Wichita Mid–Continent	Alternate
Kentucky			
KCVG	Covington	Cincinnati/ Northern Kentucky International	Regular
Louisiana			
KMSY	New Orleans	Louis Armstrong New Orleans International	Regular
Maine			
KBGR	Bangor	Bangor International	Alternate
Maryland			
KBWI	Baltimore	Baltimore–Washington International Thurgood Marshall	Regular
Massachusetts			
KBOS	Boston	General Edward Lawrence Logan International	Regular
Michigan			
KDTW	Detroit	Detroit Metropolitan Wayne County	Regular
Minnesota			
KMSP	Minneapolis	Minneapolis–St. Paul International (Wold–Chamberlain)	Regular
Missouri			
KMCI	Kansas City	Kansas City International	Regular
KSTL	St. Louis	Lambert–St. Louis International	Regular
Nevada			
KLAS	Las Vegas	McCarran International	Regular
KRNO	Reno	Reno/Tahoe International	Regular

ICAO ID	Location	Airport Name	Designation
New Jersey			
KEWR	Newark	Newark Liberty International	Regular
New York			
KJFK	New York	John F. Kennedy International	Regular
KIAG	Niagara Falls	Niagara Falls International	Alternate
KSYR	Syracuse	Syracuse Hancock International	Regular
North Carolina			
KCLT	Charlotte	Charlotte/ Douglas International	Regular
KRDU	Raleigh–Durham	Raleigh–Durham International	Regular
Northern Mariana Islands			
PGSN	Saipan Island	Francisco C. Ada/Saipan International	Regular
Ohio			
KCLE	Cleveland	Cleveland–Hopkins International	Regular
KCMH	Columbus	Port Columbus International	Regular
Oregon			
KPDX	Portland	Portland International	Regular
Palau Island			
PTRO	Babelthuap Island	Babelthuap/ Koror	Regular
Pennsylvania			
KPHL	Philadelphia	Philadelphia International	Regular
KPIT	Pittsburgh	Pittsburgh International	Regular
Puerto Rico			
TJMZ	Mayaguez	Eugenio Maria De Hostos	Regular
TJSJ	San Juan	Luis Munoz Marin International	Regular
Tennessee			
KMEM	Memphis	Memphis International	Regular
KBNA	Nashville	Nashville International	Regular

ICAO ID	Location	Airport Name	Designation
Texas			
KDFW	Dallas	Dallas–Fort Worth International	Regular
KELP	El Paso	El Paso International	Regular
KIAH	Houston	George Bush Intercontinental/ Houston	Regular
KLRD	Laredo	Laredo International	Regular
KSAT	San Antonio	San Antonio International	Regular
Utah			
KSLC	Salt Lake City	Salt Lake City International	Regular
Virgin Islands			
TIST	Charlotte Amalie St. Thomas	Cyril E. King	Regular
TISX	Christiansted St. Croix	Henry E Rohlsen	Regular
Washington			
KPAE	Everett	Snohomish County (Paine Field)	Alternate
KSEA	Seattle	Seattle–Tacoma International	Regular
KGEG	Spokane	Spokane International	Alternate

ICAO ID	Location	Airport Name	Designation
Wisconsin			
KMKE	Milwaukee	General Mitchell International	Regular

1.1 Diagrams of these airports, arranged alphabetically by state and in the order listed above, are on the pages following. The most up-to-date diagrams of these and other U.S. airports are in the Terminal Procedures Publication (TPP). For additional information on these airports, see the U.S. Airport/Facility Directory (A/FD).

1.2 Both the A/FD and TPP may be purchased from:
Aeronautical Navigation Products (AeroNav)
Logistics Group, AJV-372
Federal Aviation Administration
10201 Good Luck Road
Glenn Dale, MD 20769-9700
Telephone: 1-800-638-8972 (Toll free within U.S.)
301-436-8301
301-436-6829 (FAX)
e-mail: 9-AMC-Chartsales@faa.gov

Instrument Approach Procedures (Charts) Airport Diagram/Airport Sketch

09071
LEGEND

INSTRUMENT APPROACH PROCEDURES (CHARTS)

AIRPORT DIAGRAM/AIRPORT SKETCH

Runways

Hard Surface	Other Than Hard Surface	Stopways, Taxiways, Parking Areas, Water Runways	Displaced Threshold
Closed Runway	Closed Taxiway	Under Construction	Metal Surface

ARRESTING GEAR: Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.

uni-directional bi-directional Jet Barrier

ARRESTING SYSTEM

REFERENCE FEATURES

Buildings.....	
Tanks.....	
Obstructions.....	
Airport Beacon #.....	
Runway	
Radar Reflectors.....	
Control Tower #.....	
Hot Spot.....	

When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A **D** symbol is shown to indicate runway declared distance information available, see appropriate A/FD, Alaska or Pacific Supplement for distance information.

Runway Weight Bearing Capacity/or PCN Pavement Classification Number is shown as a codified expression. Refer to the appropriate Supplement/Directory for applicable codes e.g., RWY 14-32 S75, T185, ST175, TT325 PCN 80 F/D/X/U

Helicopter Alighting Areas

Negative Symbols used to identify Copter Procedures landing point.....

Runway Threshold elevation.....THRE 123
Runway TDZ elevation.....TDZE 123

Runway Slope.....
 0.3% DOWN
 0.8% UP
 (shown when runway slope is greater than or equal to 0.3%)

NOTE:
Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or 1/2 minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

Positional accuracy within ±600 feet unless otherwise noted on the chart.

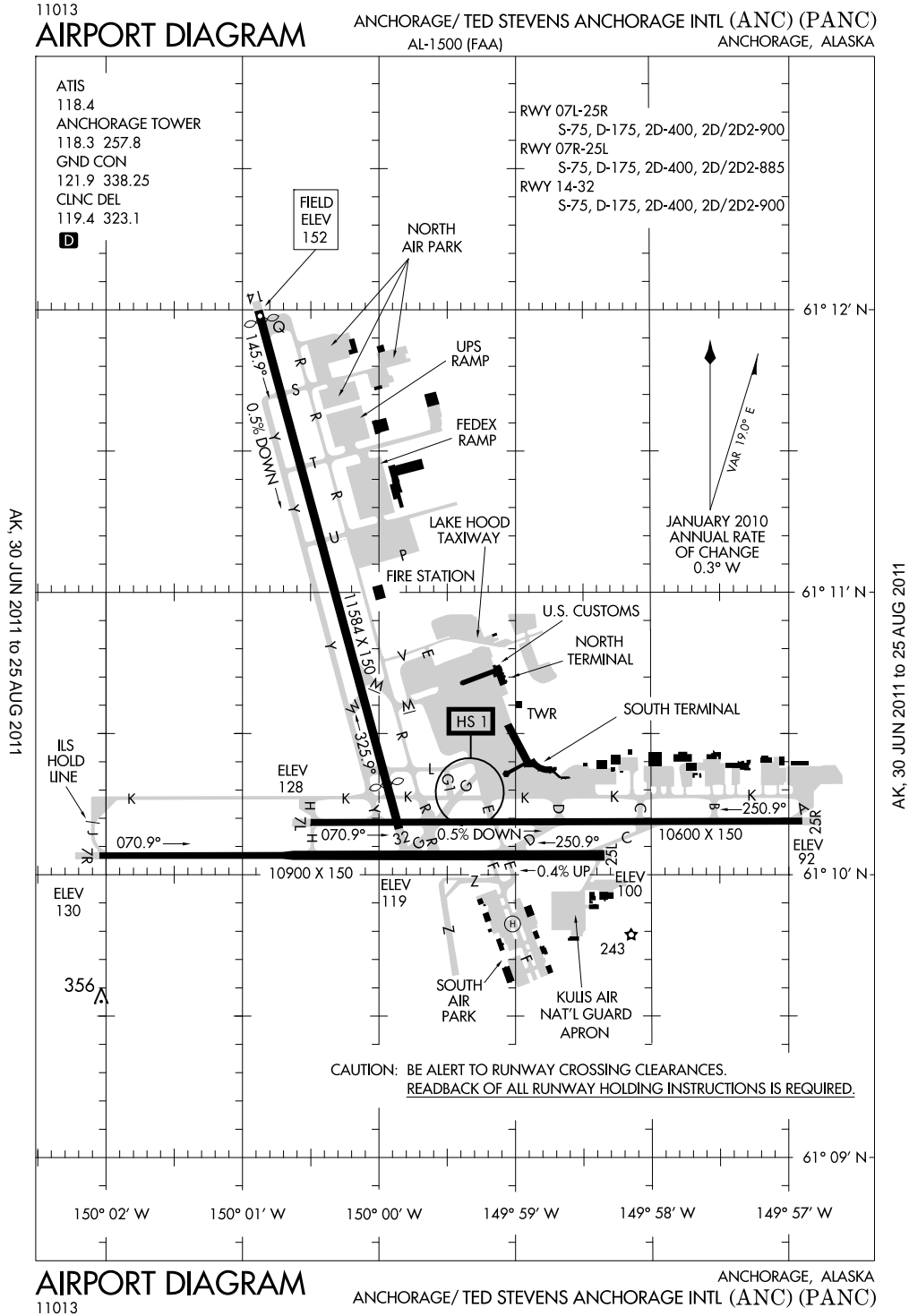
NOTE:
All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in FLIP. (Foreign Only)

SCOPE

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and provide information for updating Computer Based Navigation Systems (I.E., INS, GPS) aboard aircraft. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.

LEGEND

Anchorage, Alaska
Ted Stevens Anchorage International
ICAO Identifier PANC



Anchorage, AK
Ted Stevens Anchorage Intl
ICAO Identifier PANC

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 61-10-27.70N / 149-59-46.90W
- 2.2.2 From City: 4 Miles SW Of Anchorage, AK
- 2.2.3 Elevation: 152 ft
- 2.2.5 Magnetic variation: 21E (2005)
- 2.2.6 Airport Contact: John Parrott
BOX 196960
Anchorage, AK 99519
(907-266-2525)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A,A1
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 4/1/2005

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 07L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 10600 ft x 150 ft
- 2.12.5 Coordinates: 61-10-11.15N / 150-00-30.00W
- 2.12.6 Threshold elevation: 128 ft
- 2.12.6 Touchdown zone elevation: 128 ft
- 2.12.7 Slope: 0.5DOWN

- 2.12.1 Designation: 25R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 10600 ft x 150 ft
- 2.12.5 Coordinates: 61-10-11.32N / 149-56-53.88W
- 2.12.6 Threshold elevation: 92 ft
- 2.12.6 Touchdown zone elevation: 92 ft

- 2.12.1 Designation: 07R

- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 10900 ft x 150 ft
- 2.12.5 Coordinates: 61-10-00.00N / 150-02-00.00W
- 2.12.6 Threshold elevation: 130 ft
- 2.12.6 Touchdown zone elevation: 130 ft

- 2.12.1 Designation: 25L
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 10900 ft x 150 ft
- 2.12.5 Coordinates: 61-10-00.00N / 149-58-21.53W
- 2.12.6 Threshold elevation: 100 ft
- 2.12.6 Touchdown zone elevation: 114 ft
- 2.12.7 Slope: 0.4UP

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 165
- 2.12.3 Dimensions: 11584 ft x 150 ft
- 2.12.5 Coordinates: 61-11-59.97N / 150-00-52.84W
- 2.12.6 Threshold elevation: 152 ft
- 2.12.6 Touchdown zone elevation: 151 ft
- 2.12.7 Slope: 0.5DOWN

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 345
- 2.12.3 Dimensions: 11584 ft x 150 ft
- 2.12.5 Coordinates: 61-10-00.00N / 149-59-51.21W
- 2.12.6 Threshold elevation: 119 ft
- 2.12.6 Touchdown zone elevation: 121 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 14
- 2.13.2 Takeoff run available: 10492
- 2.13.3 Takeoff distance available: 10492
- 2.13.4 Accelerate-stop distance available: 10492
- 2.13.5 Landing distance available: 10492

- 2.13.1 Designation: 32
- 2.13.2 Takeoff run available: 11584
- 2.13.3 Takeoff distance available: 12584
- 2.13.4 Accelerate-stop distance available: 11584
- 2.13.5 Landing distance available: 10692

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 07L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 25R

2.14.4 Visual approach slope indicator system:
6-box VASI on left

2.14.10 Remarks: Upwind Threshold Crossing
Height 64.19' GA 3.25 Deg; Dwnwnd Threshold
Crossing Height 39.31' GA 3.00 Deg.

2.14.1 Designation: 07R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25L

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.10 Remarks: PAPI, Runway 25L, Upwind
Threshold Crossing Height 101 Ft Glide Angle
3.25 Deg; Dwnwnd Threshold Crossing Height 75
Ft Glide Angle 3.00 Deg.

2.14.1 Designation: 14

2.14.2 Approach lighting system: Omnidirectional
approach lighting system

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 32

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

**AD 2.18 Air traffic services communication
facilities**

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 118.4 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC

2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 119.4 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 123.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 126.4 MHz

2.18.1 Service designation: CD/S

2.18.3 Service designation: 128.65 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 134.1 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 257.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 257.9 MHz

2.18.1 Service designation: RDR

2.18.3 Service designation: 259.1 MHz

2.18.1 Service designation: RDR

2.18.3 Service designation: 271.3 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC

2.18.3 Service designation: 290.5 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 290.5 MHz

2.18.1 Service designation: RDR

2.18.3 Service designation: 320.1 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 323.1 MHz

2.18.1 Service designation: RDR

2.18.3 Service designation: 324.3 MHz

2.18.1 Service designation: RDR

2.18.3 Service designation: 327.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 363.2 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 363.2 MHz

2.18.1 Service designation: USB ANG OPS

2.18.3 Service designation: 4897.5 MHz

2.18.1 Service designation: ANG OPS

2.18.3 Service designation: 311 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 338.25 MHz

2.18.1 Service designation: ANG OPNS

2.18.3 Service designation: 140.15 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Outer Marker for runway 07L.
Magnetic variation: 19E

2.19.2 ILS identification: TGN

2.19.5 Coordinates: 61-10-00.00N /
150-10-37.20W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 07L.

Magnetic variation: 19E

2.19.2 ILS identification: TGN

2.19.5 Coordinates: 61-10-13.63N /
150-00-10.18W

2.19.6 Site elevation: 119 ft

2.19.1 ILS type: DME for runway 07L. Magnetic
variation: 19E

2.19.2 ILS identification: TGN

2.19.5 Coordinates: 61-10-14.27N /
149-56-32.40W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 07L.
Magnetic variation: 19E

2.19.2 ILS identification: TGN

2.19.5 Coordinates: 61-10-11.33N /
149-56-32.63W

2.19.6 Site elevation: 78 ft

2.19.1 ILS type: Glide Slope for runway 07R.
Magnetic variation: 21E

2.19.2 ILS identification: ANC

2.19.5 Coordinates: 61-10-00.00N /
150-01-42.70W

2.19.6 Site elevation: 128 ft

2.19.1 ILS type: Outer Marker for runway 07R.
Magnetic variation: 21E

2.19.2 ILS identification: ANC

2.19.5 Coordinates: 61-10-00.00N /
150-10-37.20W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 07R.
Magnetic variation: 21E

2.19.2 ILS identification: ANC

2.19.5 Coordinates: 61-10-00.00N /
150-02-23.05W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 07R.
Magnetic variation: 21E

2.19.2 ILS identification: ANC

2.19.5 Coordinates: 61-10-00.00N /
150-02-56.82W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 07R. Magnetic
variation: 21E

2.19.2 ILS identification: ANC

2.19.5 Coordinates: 61-10-00.00N /
149-57-58.68W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 07R.
Magnetic variation: 21E
2.19.2 ILS identification: ANC
2.19.5 Coordinates: 61-10-00.00N /
149-57-55.49W
2.19.6 Site elevation: 98 ft

2.19.1 ILS type: Localizer for runway 14. Magnetic
variation: 21E
2.19.2 ILS identification: BSC
2.19.5 Coordinates: 61-09-59.91N /
149-59-45.63W

2.19.6 Site elevation: 122 ft

2.19.1 ILS type: DME for runway 14. Magnetic
variation: 21E
2.19.2 ILS identification: BSC
2.19.5 Coordinates: 61-10-00.00N /
149-59-40.34W
2.19.6 Site elevation: 135 ft

2.19.1 ILS type: Glide Slope for runway 14.
Magnetic variation: 21E
2.19.2 ILS identification: BSC
2.19.5 Coordinates: 61-11-45.22N /
150-00-52.60W
2.19.6 Site elevation: 142 ft

General Remarks:

MIGRATORY BIRDS IN THE VICINITY OF AIRPORT SPRING THROUGH FALL.

ONE HR PRIOR PERMISSION REQUIRED FOR NON-TRANSPONDER AIRCRAFT OPERATIONS.
PRIOR PERMISSION REQUIRED FOR NON-RADIO AIRCRAFT OPERATIONS. NO NIGHTTIME
NON-RADIO AIRCRAFT OPERATIONS PERMITTED. PILOTS MUST PROVIDE AN ESTIMATED
TIME OF ARRIVAL & REMAIN WITHIN PLUS OR MINUS 15 MINUTES OF ESTIMATED TIME OF
ARRIVAL.

FOR WEATHER SERVICE OFFICE PHONE 907-266-5105.

NOISE SENSITIVE AREA IN EFFECT; CONTACT AIRPORT MANAGER AT 907-266-2525 OR
AIRPORT OPERATIONS 907-266-2600 FOR FURTHER INFORMATION.

TO COORDINATE NON-TRANSPONDER OR NON-RADIO OPERATIONS CONTACT
AERONAUTICAL CHART ATCT AT 907-271-2700 DURING ADMIN HRS (0730-1600 WKDAYS).
DURING NON-ADMIN HRS & HOLIDAYS CONTACT FAA AT 907-271-5936.

UNLIGHTED 489 FT TOWER 2 1/2 MILES NORTHEAST.

PORTIONS OF TAXIWAY K BETWEEN TAXIWAY H & TAXIWAY J NOT VISIBILITY FROM ATCT.

NO COMPASS CALIBRATION PAD.

RIGHT TURN OUT OF RAMP PARKING AREA R-2 THROUGH R-4 PROHIBITED.

USE FREQ 122.55 (RCO) FOR FILING, ACTIVATING & CANCELING FLIGHT PLANS IN THE
ANCHORAGE BOWL AREA.

FAA RAMP PRIOR PERMISSION REQUIRED - CONTACT AERONAUTICAL CHART FLIGHT
INSPECTION FIELD OFFICE FREQ 135.85, 907-271-2414 OR AVIATION 405-954-9780 MON-FRI
0600-1430L.

ANCHORAGE WX CAMERA AVAILABLE ON INTERNET AT

HTTP://AKWEATHERCAMS.FAA.GOV

ANCHORAGE AIRPORT TRAFFIC CONTROL TOWER HAS BEEN GRANTED A WAIVER TO THE GUIDELINES THAT PROHIBIT THE CONTROL TOWER FROM DIRECTING AN AIRCRAFT TO “LINEUP AND WAIT” AT AN INTERSECTION, BETWEEN SUNSET AND SUNRISE.

THIS WAIVER ALLOWS THE TOWER TO DIRECT THE AIRCRAFT TO “LINEUP AND WAIT” DURING PERIODS OF DARKNESS AT THE FOLLOWING INTERSECTION: RUNWAY 32 AT TAXIWAY KILO.

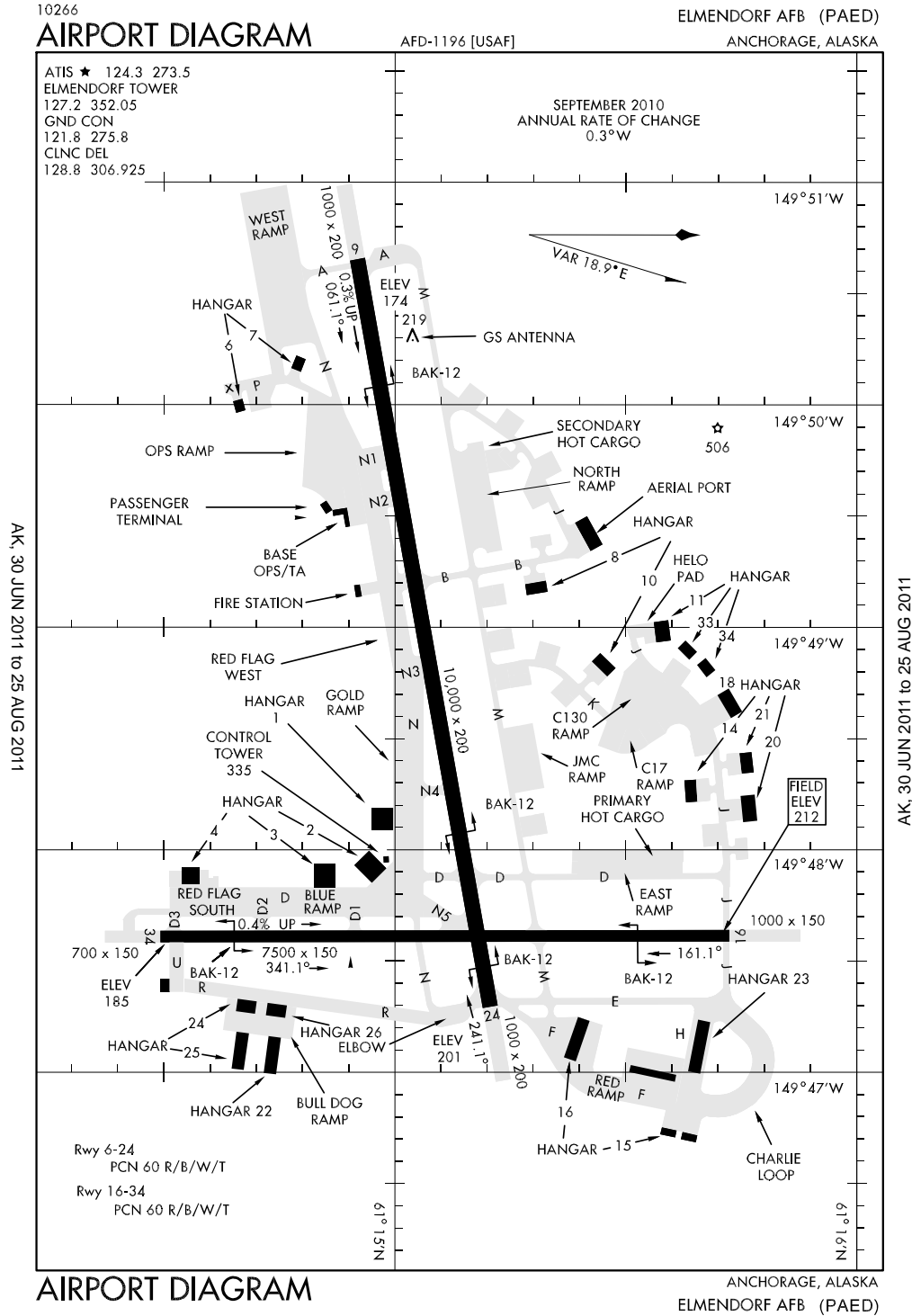
AIRCRAFT SHALL NOT “LINEUP AND WAIT” UNDER THE PROVISIONS OF THIS WAIVER WHEN THE SUBJECT INTERSECTION IS NOT VISIBLE FROM THE TOWER. WHEN THE PROVISIONS OF THIS WAIVER ARE BEING EXERCISED, THE AFFECTED RUNWAY SHALL BE USED FOR DEPARTURES ONLY.

INTERSECTION DEPARTURES WILL CONTINUE TO BE UTILIZED AT OTHER LOCATIONS BETWEEN SUNSET AND SUNRISE. HOWEVER, AIRCRAFT CANNOT BE DIRECTED TO “LINEUP AND WAIT ” PRIOR TO TAKEOFF CLEARANCE.

TAXIWAY V SECURITY GATE EAST OF TAXIWAY E; KEY 121.75 5 TIMES TO ACTIVATE. TWY V RESTRICTED TO AIRCRAFT WEIGHING 12500 LBS OR LESS. SUBJECT TO JET BLAST WEST OF TAXIWAY E.

TRANSIENT MILITARY AIRCRAFT PRIOR PERMISSION REQUIRED.

Anchorage, Alaska Elmendorf AFB ICAO Identifier PAED



Anchorage, AK
Elmendorf AFB
ICAO Identifier PAED

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 61-15-00.00N / 149-48-23.45W
- 2.2.2 From City: 3 Miles NE Of Anchorage, AK
- 2.2.3 Elevation: 212 ft
- 2.2.5 Magnetic variation: 21E (2005)
- 2.2.6 Airport Contact: Airfield Mgr
300SS/DOFJ
Elmendorf AFB, AK 99506
(907-552-2444)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: None
- 2.4.4 De-icing facilities: Fluid: Presair, De-Ice, Nitrogen-Lhnit.
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 16
- 2.10.1.b Type of obstacle: Trees Hill. Not Lighted or Marked

- 2.10.1.a. Runway designation: 34
- 2.10.1.b Type of obstacle: Pline Tree. Not Lighted or Marked

- 2.10.1.a. Runway designation: 24
- 2.10.1.b Type of obstacle: Pline Pole. Not Lighted or Marked

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 16
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 7505 ft x 150 ft
- 2.12.4 PCN: 60 R/B/W/T
- 2.12.5 Coordinates: 61-15-43.45N /

- 149-47-36.51W
- 2.12.6 Threshold elevation: 212 ft

- 2.12.1 Designation: 34
- 2.12.2 True Bearing: 360
- 2.12.3 Dimensions: 7505 ft x 150 ft
- 2.12.4 PCN: 60 R/B/W/T
- 2.12.5 Coordinates: 61-14-29.54N / 149-47-36.55W
- 2.12.6 Threshold elevation: 185 ft

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 80
- 2.12.3 Dimensions: 10000 ft x 200 ft
- 2.12.4 PCN: 60 R/B/W/T
- 2.12.5 Coordinates: 61-14-55.08N / 149-50-39.33W
- 2.12.6 Threshold elevation: 175 ft

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 260
- 2.12.3 Dimensions: 10000 ft x 200 ft
- 2.12.4 PCN: 60 R/B/W/T
- 2.12.5 Coordinates: 61-15-12.17N / 149-47-18.01W
- 2.12.6 Threshold elevation: 201 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 16
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.10 Remarks: Non-Standard PAPI Glide Angle 4.2 Degs On Runway 16 Due To High Terrain.

- 2.14.1 Designation: 34
- 2.14.2 Approach lighting system: ALSAF: 3000 feet high intensity approach lighting system with centerline sequence flashers
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 06
- 2.14.2 Approach lighting system: ALSAF: 3000 feet high intensity approach lighting system with centerline sequence flashers
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.10 Remarks: Approach Lights Extended 15'' Above Surface Up To 100' Prior To Threshold Runway 06 PAPI Unusable Beyond 8 Degs Either Side Of Course Path.

2.14.1 Designation: 24
2.14.4 Visual approach slope indicator system:
4-light PAPI on left
2.14.10 Remarks: PAPI Runway 24 Unusable
Beyond 7 Degrees Right Of Course.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: 11AF RESCUE
COORD CNTR

2.18.3 Service designation: 123.1 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 124.3 MHz
2.18.4 Hours of operation: 0700-2300

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 127.2 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 134.8 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 273.5 MHz
2.18.4 Hours of operation: 0700-2300

2.18.1 Service designation: 11AF RESCUE
COORD CNTR
2.18.3 Service designation: 282.8 MHz

2.18.1 Service designation: PMSV
2.18.3 Service designation: 346.6 MHz

2.18.1 Service designation: AIR MOBILITY CTRL
CNTR (CALL "DENALI")
2.18.3 Service designation: 349.4 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 372.2 MHz

2.18.1 Service designation: 11AF COMD CEN
2.18.3 Service designation: 381 MHz

2.18.1 Service designation: AIR MOBILITY CTRL
CNTR (CALL "DENALI")

General Remarks:

LANDING RUNWAY 16 NOT RECOMMENDED FOR JET AIRCRAFT EXCEPT DURING DAY VFR
DUE OBSTRUCTION 337' MSL LOCATED 1950' FROM THR & 574' W OF CENTERLINE.

HANGAR SPACE & WARM STORAGE EXTREMELY LIMITED OCT-MAY.

2.18.3 Service designation: 134.1 MHz
2.18.1 Service designation: LCL/P
2.18.3 Service designation: 352.05 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 128.8 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 306.925 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 275.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 06. Magnetic
variation: 21E

2.19.2 ILS identification: EDF

2.19.5 Coordinates: 61-15-14.02N /
149-46-47.94W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 06.
Magnetic variation: 21E

2.19.2 ILS identification: EDF

2.19.5 Coordinates: 61-15-00.00N /
149-50-10.94W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 06.
Magnetic variation: 21E

2.19.2 ILS identification: EDF

2.19.5 Coordinates: 61-14-52.87N /
149-51-00.00W

2.19.6 Site elevation: 192 ft

2.19.1 ILS type: Middle Marker for runway 06.
Magnetic variation: 21E

2.19.2 ILS identification: EDF

2.19.5 Coordinates: 61-14-49.02N /
149-51-49.94W

2.19.6 Site elevation: 99999 ft

PREVENTIVE MAINT: TACAN WED AND FRI 1600-1700Z; ILS TUE AND THR 1500-1700Z;
PRECISION APPROACH RADAR SAT-SUN 1800-2000Z; AIRPORT SURVEILLANCE RADAR
SAT-SUN 2000-2200.

QUIET HR 0630-1400Z WEEKDAYS; 0630-1600Z WEEKEND & HOLDS, AIR MOBILITY COMMAND
AIRCRAFT EXEMPT.

CAUTION: MOOSE ON & IN THE VICINITY OF RUNWAY.

DURING VISUAL METEOROLOGICAL CONDITIONS DEPS/MISSED APCHS/GO AROUNDS;
AIRCRAFT SHALL MAINTAIN AT OR BELOW 1200' MSL UNTIL DEP END OF RUNWAY 05.
ALL FIGHTER AIRCRAFT ON ARR EXPECT REDUCED SEPARATION; SAME TYPE AIRCRAFT
AND DAY 3000 FT; DISSIMILAR AIRCRAFT AND/OR NIGHT 6000 FT; AHEAD/BEHIND
FORMATION LANDING-6000 FT.

NOTICE: A RIDGE EXTENDING FROM APPROXIMATELY 260 - 020 DEGREES ONE TO TWO
MILES FROM THE TOWER PREVENTS OBSERVATION OF FOG OVER KNIK ARM. VISIBILITY
MAY DROP RAPIDLY AS FOG POURS OVER RIDGE.

AIRCRAFT REQUIRING CUSTOMS CONTACT BASE OPERATIONS 90 MIN PRIOR TO ARRIVAL
BY WAY OF GLOBAL RADIO.

ALL AIRCRAFT MAINTAIN IDLE POWER ON OUTBOARD ENGINE WHILE TAXIING.

NO SIGNS OR PAINTED HOLD SHORT LINES ON INTERSECTING RUNWAYS.

PRIOR PERMISSION REQUIRED NUMBERS WILL BE PROVIDED BETWEEN 24 HRS & 5 DAYS
PRIOR TO ARR, CONTACT BASE OPERATIONS DSN 317-552-2107/1202 OR C907-552-2107/1202.

EXTENSIVE SERVICE DELAY FOR FUEL.

ALL VIP AIRCRAFT CONTACT BASE OPERATIONS 30 MIN PRIOR TO ARR.

FREQUENT ACTIVITY IN R2203. WHEN UNABLE TO AVOID CONTACT ATCT.

ALL TRANSIENT AIRCREWS OPER OUT OF ELMENDORF INTENDING ON LOCAL MISSIONS
MUST RECEIVE A LOCAL BRIEFING FROM 3 OG/CC AT 317-552-2262.

SPECIAL AIR TRAFFIC RULES FAR PART 93, SEE REGULATORY NOTICES IN THE SUPPLEMENT.

FIRST 1000 FT RUNWAY 0506 & FIRST 1200 FT RUNWAY 24 ARE CONCRETE, MIDDLE 7800 FT IS
ASPHALT. FOR CURRENT RUNWAY CONDITION READING/RUNWAY SURFACE CONDITIONS
ON RUNWAY 06/24 & RUNWAY 16/34 CONTACT TOWER.

LIMITED MAINTENANCE CAPABILITIES ON WEEKEND.

JOAP, JOINT OIL ANALYSIS PROGRAM AVAILABLE. L/H NIT, LOW & HIGH PRESSURE
NITROGEN SERVICING AVAILABLE.

CHANGE JET AIRCRAFT STARTING UNITS (JASU) TO, (A/M32A-86), MC-1A), (MC-2A),
(AM32A-60A). (AM32-95)150 +/-5 LBS/MIN (2055 +/-68CFM) AT 51 +/-02 PSIA. LASS 150 +/-5

LBS/MIN @ 49 +/-2 PSIA.

FUEL: J8

OIL: O-123, O-128, O-133, O-148, O-156, JOAP.

JOAP & LOW & HIGH PRESURE NITROGEN SERVICING FURNISHED DURING NORMAL DUTY HOURS, OTHER TIMES ON REQUEST.

FLUID: PRESAIR, DE-ICE, NITROGEN-L/H NIT.

ALL AIRCRAFT REQUIRE BARRIER REMOVAL MUST CONTACT AIRFIELD MANAGEMENT PRIOR TO DEPARTING PREVIOUS STATION.

PRIOR PERMISSION REQUIRED NRS VALID 6 HRS PRIOR TO OR AFTER ESTIMATED TIME OF ARRIVAL.

UNITS DEPLOYING, INTENDING TO FLY ANY SORTIES THAT ORIGINATE AND TERMINATE AT ELMENDORF MUST DEPLOY WITH CREW CHIEFS AND CONTACT 3 WG SCHEDULING DSN 317-552-2406 NOT LATER THAN 90 DAYS PRIOR TO ARRIVAL TO OBTAIN SPONSORING UNIT INFORMATION.

RUNWAY 16/34 RUBBER ACCUMULATE NORTH & SOUTH 1000FT.

TRANSIENT MAINTENANCE: AIRCRAFT SERVICES ARE LIMITED TO POL SERVICING, INTAKE/EXHAUST INSPECTIONS, F-16 CHIP DETECTOR INSPECTIONS AND END OF RUNWAY INSPECTIONS.

IFF SERVICE AVAILABLE. AIRFIELD WX IS AUTOMATICALLY MONITOR BY AN/FQ-19 AUTOMATED WX OBSERVING SYSTEM AND BACKED-UP/ AUGMENTED BY HUMAN OBSERVER WHEN NECESSARY 24/7. DSN 317-552-4903/4397OR C907-552-4903/4397. FULL SERVICE WX BRIEFING 24HRS 17 OPERATIONAL WEATHER SQUADRON DSN 315-449-8333 OR C808-449-8333.

C17/C130 OVERT LIGHTS AVAILABLE ON RY16/34. C17/C130 COVERT LIGHTS AVAILABLE ON RUNWAY 16.

NIGHT VISION GOGGLE OPERATIONS ON RUNWAY 16/34 & RUNWAY 06/24 MON-FRI FROM 0400-1000Z++ .

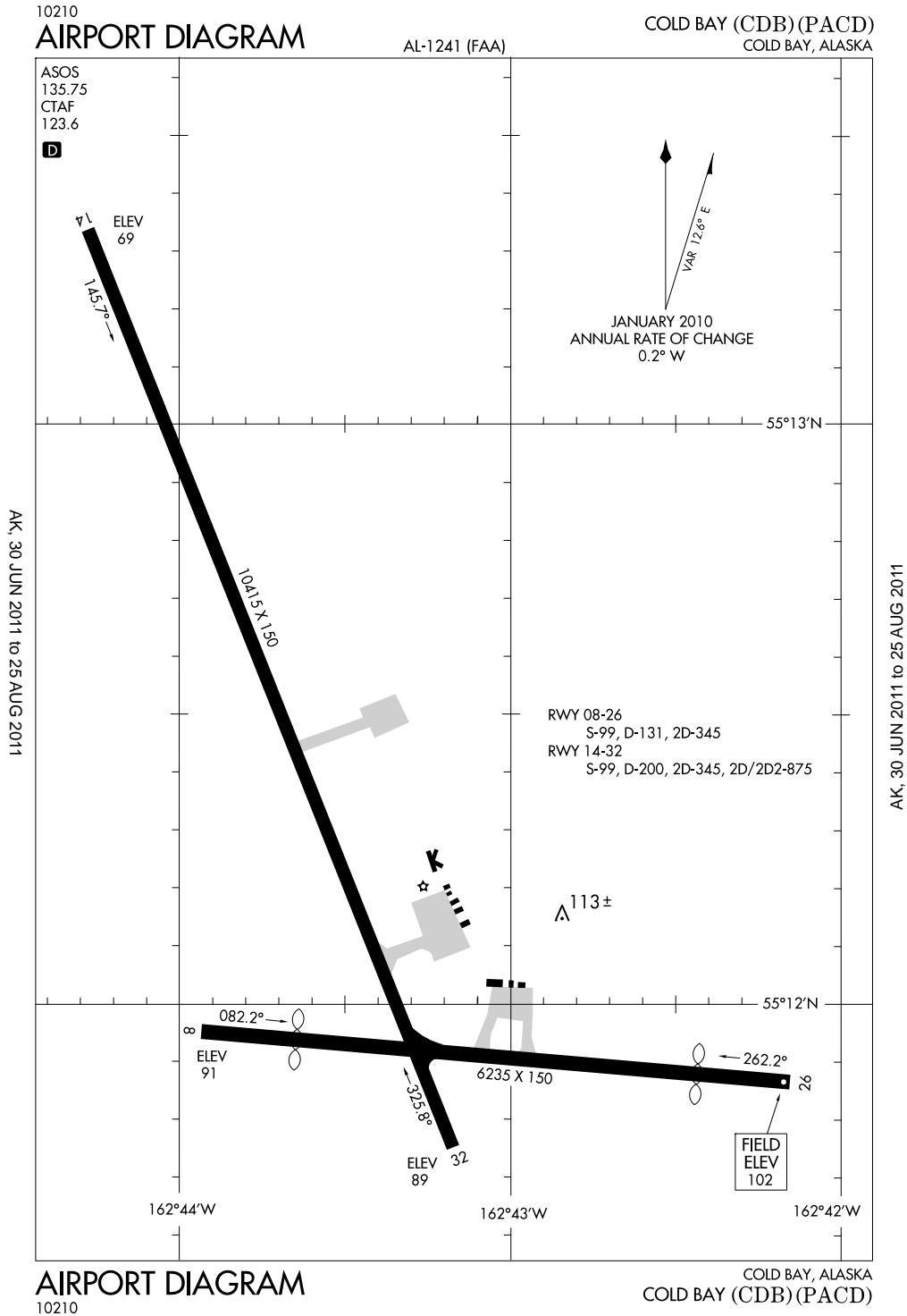
DURING EVACUATION OF WX STATION, CONTACT 17 OPERATIONAL WX SQUADRON AT DSN 315-449-8333.

ALTERNATE WX LOCATION VISIBILITY OBSTRUCTED FROM SE-W DUE TO HANGARS. USE PHONE PATCH WHEN WX RELOCATES TO ALTERNATE LOCATION.PHONE PATCH CAPABILITY THROUGH 3 WG/CP AT 907-552-3000.

CAUTION: NUMEROUS AIRCRAFT WILL BE OPR IFR BETWEEN 1500-2000 MSL FROM BGQ 092/10 INTO R2203 TO EDF 320/07 IN THE VICINITY OF BIG LAKE, PALMER, BIRCHWOOD, GOOSEBAY AND WASILLA, AK., MON-SAT 0300--800Z++.

ALL NON-BASED ASSIGNED AIRCRAFT REQUIRE PRIOR PERMISSION REQUIRED.

Cold Bay, Alaska
Cold Bay
ICAO Identifier PACD



Cold Bay, AK
Cold Bay
ICAO Identifier PACD

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 55-12-18.54N / 162-43-28.08W
- 2.2.2 From City: 0 Miles N Of Cold Bay, AK
- 2.2.3 Elevation: 102 ft
- 2.2.5 Magnetic variation: 14E (2005)
- 2.2.6 Airport Contact: Jeff Doerning
BOX 97
Cold Bay, AK 99571
(907-532-5000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: OCT-APR Months, ALL Days, 0630-1900 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Minor
- 2.4.7 Remarks: Maint Duty Hrs: 0700 - 1800 Sun Thru Sat (1 May - 30 Sep); 0530 - 1800 (1 Oct - 30 Apr).

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 1/2005
- 2.6.4 Remarks: Closed To Aircraft 0 Operations With More Than 30 Passenger Seats Except Prior Permission Required In Writing To Airport Manager Box 97 Cold Bay Ak 99571.

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 158
- 2.12.3 Dimensions: 10415 ft x 150 ft
- 2.12.5 Coordinates: 55-13-20.62N / 162-44-16.51W
- 2.12.6 Threshold elevation: 69 ft
- 2.12.6 Touchdown zone elevation: 74 ft

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 338
- 2.12.3 Dimensions: 10415 ft x 150 ft

- 2.12.5 Coordinates: 55-11-45.16N / 162-43-10.26W
- 2.12.6 Threshold elevation: 89 ft
- 2.12.6 Touchdown zone elevation: 89 ft

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 95
- 2.12.3 Dimensions: 6235 ft x 150 ft
- 2.12.5 Coordinates: 55-11-57.13N / 162-43-56.05W
- 2.12.6 Threshold elevation: 91 ft
- 2.12.6 Touchdown zone elevation: 93 ft
- 2.12.7 Slope: 0.3UP

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 275
- 2.12.3 Dimensions: 6235 ft x 150 ft
- 2.12.5 Coordinates: 55-11-52.01N / 162-42-00.00W
- 2.12.6 Threshold elevation: 102 ft
- 2.12.6 Touchdown zone elevation: 96 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 08
- 2.13.2 Takeoff run available: 6235
- 2.13.3 Takeoff distance available: 6235
- 2.13.4 Accelerate-stop distance available: 5235
- 2.13.5 Landing distance available: 4235

- 2.13.1 Designation: 26
- 2.13.2 Takeoff run available: 6235
- 2.13.3 Takeoff distance available: 6235
- 2.13.4 Accelerate-stop distance available: 5235
- 2.13.5 Landing distance available: 4235

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 14
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

- 2.14.1 Designation: 32
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

- 2.14.1 Designation: 08
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

2.14.10 Remarks: Line Of Sight For VASI Rwy 08
Offset 5 Degrees To The North.

162-44-00.00W
2.19.6 Site elevation: 68 ft

2.14.1 Designation: 26
2.14.4 Visual approach slope indicator system:
4-box VASI on left

2.19.1 ILS type: Outer Marker for runway 14.
Magnetic variation: 14E
2.19.2 ILS identification: CDB
2.19.5 Coordinates: 55-17-49.16N /

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 14. Magnetic
variation: 14E

162-47-24.07W
2.19.6 Site elevation: 36 ft

2.19.2 ILS identification: CDB
2.19.5 Coordinates: 55-11-41.02N /
162-43-00.00W
2.19.6 Site elevation: 89 ft

2.19.1 ILS type: Middle Marker for runway 14.
Magnetic variation: 14E
2.19.2 ILS identification: CDB
2.19.5 Coordinates: 55-13-53.76N /

2.19.1 ILS type: Glide Slope for runway 14.
Magnetic variation: 14E
2.19.2 ILS identification: CDB
2.19.5 Coordinates: 55-13-12.78N /

162-44-39.55W
2.19.6 Site elevation: 99999 ft

General Remarks:

SNOW & ICE REMOVAL AND AIRPORT HAZARD REPORTING ONLY PERFORMED DURING
DUTY HRS UNLESS BY PRIOR ARRANGEMENT IN WRITING WITH AIRPORT MANAGER.

LARGE BIRDS NEAR APPROACH ENDS OF ALL RUNWAYS.

BRAKELOCK TURNS NOT ALLOWED ON RUNWAYS.

CODE OF FEDERAL REGULATIONS INDEX B. INDEX MAY BE REDUCED FOR AIRCRAFT LESS
THAN 90'.

NO CUSTOMS AVAILABLE; WRITTEN PERMISSION REQUIRED FOR REFUELING STOPS 24-48
HRS IN ADVANCE IF ARRIVING FROM A FOREIGN COUNTY; FAX 907-271-2684 OR
907-271-2686.

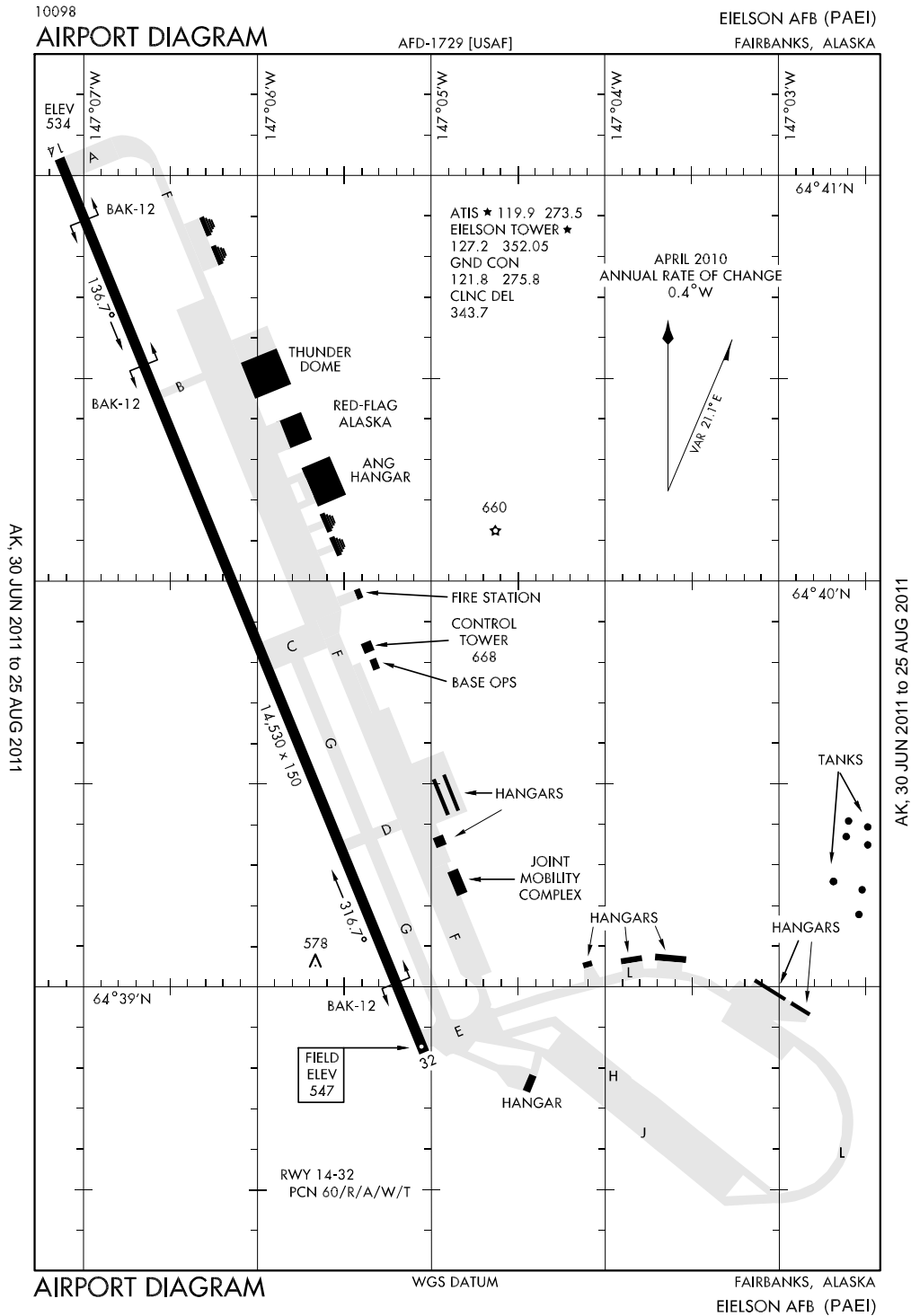
TOWER 4.8 NAUTICAL MILE NW OF AIRPORT UNLIGHTED.

PERSONNEL AND EQUIPMENT MAY BE WORKING ON THE RUNWAY AT ANY TIME.

AIRPORT SAND LARGER GRADATION THAN FAA RECOMMENDED/SEE AC150/5200-30.

WX CAMERA AVAILABLE ON INTERNET AT [HTTP://AKWEATHERCAMS.FAA.GOV](http://AKWEATHERCAMS.FAA.GOV)

**Fairbanks, Alaska
Eielson AFB
ICAO Identifier PAEI**



Fairbanks, AK
Eielson AFB
ICAO Identifier PAEI

147–05–00.00W
2.12.6 Threshold elevation: 547 ft
2.12.6 Touchdown zone elevation: 536 ft

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 64–39–56.40N / 147–06–00.00W
2.2.2 From City: 17 Miles SE Of Fairbanks, AK
2.2.3 Elevation: 547 ft
2.2.5 Magnetic variation: 23E (2005)
2.2.6 Airport Contact: Chief Airfield Management
343 CSG/OTM
Eielson AFB, AK 99702
(907–377–3201)
2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

2.3.1 – 2.3.11: ALL Months, ALL Days,
1600–0800Z++ Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: None
2.4.4 De-icing facilities: None
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 32
2.10.1.b Type of obstacle: Trees. Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 14
2.12.2 True Bearing: 159
2.12.3 Dimensions: 14530 ft x 150 ft
2.12.4 PCN: 60 R/A/W/T
2.12.5 Coordinates: 64–41–00.00N / 147–07–00.00W
2.12.6 Threshold elevation: 534 ft
2.12.6 Touchdown zone elevation: 547 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 339
2.12.3 Dimensions: 14530 ft x 150 ft
2.12.4 PCN: 60 R/A/W/T
2.12.5 Coordinates: 64–38–49.49N /

AD 2.14 Approach and runway lighting

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system:
4–light PAPI on left
2.14.10 Remarks: Non Standard 2 Parallel Row
Approach Lights–Af Type E.

2.14.1 Designation: 32
2.14.2 Approach lighting system: ALSAF: 3000
feet high intensity approach lighting system with
centerline sequence flashers
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: RDR SFA
2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: SUAIS RADIO
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 127.2 MHz

2.18.1 Service designation: RDR SFA
2.18.3 Service designation: 259.1 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 273.5 MHz
2.18.4 Hours of operation: 1600–0800Z++

2.18.1 Service designation: GND/P
2.18.3 Service designation: 275.8 MHz

2.18.1 Service designation: RDR SFA
2.18.3 Service designation: 318.2 MHz

2.18.1 Service designation: RDR SFA
2.18.3 Service designation: 320.1 MHz

2.18.1 Service designation: RDR SFA
2.18.3 Service designation: 324.3 MHz

2.18.1 Service designation: CD
2.18.3 Service designation: 343.7 MHz

2.18.1 Service designation: PMSV
2.18.3 Service designation: 346.6 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 372.2 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 352.05 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 139.3 MHz

2.18.1 Service designation: WING OPS
2.18.3 Service designation: 259.5 MHz

2.18.1 Service designation: SOURDOUGH
2.18.3 Service designation: 139.6 MHz

2.18.1 Service designation: CP (HAVE QUICK)
2.18.3 Service designation: 289.4 MHz

2.18.1 Service designation: 168 ANG OPS
2.18.3 Service designation: 238.3 MHz

2.18.1 Service designation: 168 ANG OPS
2.18.3 Service designation: 293.6 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 119.9 MHz
2.18.4 Hours of operation: 1600-0800Z++

2.18.1 Service designation: SOURDOUGH
2.18.3 Service designation: 359.15 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 32. Magnetic variation: 23E
2.19.2 ILS identification: EAF
2.19.5 Coordinates: 64-41-22.49N / 147-07-21.65W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 32. Magnetic variation: 23E
2.19.2 ILS identification: EAF
2.19.5 Coordinates: 64-38-56.49N / 147-05-22.63W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 32. Magnetic variation: 23E
2.19.2 ILS identification: EAF
2.19.5 Coordinates: 64-38-10.49N / 147-04-32.62W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 14. Magnetic variation: 23E
2.19.2 ILS identification: EIL
2.19.5 Coordinates: 64-40-51.59N / 147-07-00.00W
2.19.6 Site elevation: 532 ft

2.19.1 ILS type: Localizer for runway 14. Magnetic variation: 23E
2.19.2 ILS identification: EIL
2.19.5 Coordinates: 64-38-33.05N / 147-04-51.27W
2.19.6 Site elevation: 548 ft

General Remarks:

TRANSMIT ALERT SERVICE AVAILABLE 0700-0000 MON-FRI EXCEPT HOLIDAY; OTHER TIMES PRIOR PERMISSION REQUIRED THROUGH BASE OPERATIONS OFFICE.

CRYPTO MATERIALS NOT AVAILABLE TRANSIENT CREW. ALL AIRCRAFT WITH VIP CONTACT AIRFIELD MANAGEMENT 20-30 MINUTES PRIOR TO ESTIMATED TIME OF ARRIVAL WITH FIRM CHICK TIME. LIMITED FLEET SERVICE AVAILABLE, NO POTABLE WATER.

OVERHEAD TRAFFIC PATTERN ALTITUDE 2000 FT MSL; RECTANGULAR TRAFFIC PATTERN ALTITUDE 1500 FT MSL.

AVOID SMALL ARMS RANGE LOCATED 2.5 NAUTICAL MILE E OF APPROACH END RUNWAY 32. SMALL ARM RANGE ACTIVE WEEKEND 1700-0100Z++, SURFACE TO 3500 FT AGL.

CARGO & PASSENGER CARRYING AIRCRAFT CALL COMMAND POST 3 HRS PROIR TO LANDING AND 30 MIN PROIR TO LANDING AND STATE NUMBER OF PASSENGERS.

BASH PHASE II MONTHS ARE APR, MAY, AUG AND SEPT. DURING PERIODS OF STANDING WATER ON THE AIRFIELD, GULLS, DUCKS, GEESE AND OTHER BIRDS POSE A SIGNIFICANT HAZARD TO AIRCRAFT. REPORT ALL BIRD AND ANIMAL STRIKES ON & IN THE VICINITY OF EILSON TO AIRFIELD MANAGEMENT, DSN 317-377-186, PILOT TO DISPATCH OR 354 FW/SE DSN 317-377-4110.

TO AVOID DELAY FILE FLIGHT PLAN AT LEAST 2 HRS PRIOR TO ESTIMATED TIME OF DEPARTURE. ARRIVALS REQUIRING CUSTOMS MUST NOTIFY AIRFIELD MANAGEMENT 1.5 HRS PRIOR TO LANDING. U.S. IMMIGRATION SERVICE NOT AVAILABLE. AIR TERMINAL AND GROUND HANDLING SERVICE OPRS 1630-0030Z++ WEEKDAYS.

DEP AIRCRAFT REMAIN AT OR BELOW 1500 FT UNTIL DEP END OF RUNWAY.

ALL PACAF FIGHTER AIRCRAFT ON ARR EXPECT REDUCED RUNWAY SEPARATION; SIMILAR FIGHTER TYPE/DAY - 3000 FT; DISSIMILAR FIGHTER TYPE AND/OR NIGHT WET RUNWAY OR RUNWAY CONDITION READING REPORT LESS THAN 17 - 6000 FT; BEHIND FORMATION LANDING - 6000 FT; FIGHTER TYPE LANDING BEHIND NON-FTR TYPE - 9000 FT; RUNWAY CONDITION READING VALIDATED AS CONDITIONS WARRANT.

FLIGHTS ORIGINATING OUTSIDE OF THE STATE REFER TO ALASKA SECTION OF US AIR FORCE - FOREIGN CLEARANCE GUIDE.

TRANSMIT BILLETING EXTREMELY LIMITED/EXTENSIVE FUEL DELAYS DURING RED FLAG ALASKA EXERCISE (APR-OCT).

ARCTIC GEAR IS STRONGLY ENCOURAGED DUE TO POSSIBLE EXTREME COLD TEMPERATURES 1 OCT - 31 AT SEA; LIMITED SUPPLIES ON HAND.

QUIET HRS 0800-1600Z++ EXCEPT REQUIRE OG/CC APPROVAL.

AIR TERMINAL AND GROUND HANDLING SERVICE OPRS 1630-0030Z++ WEEKDAYS. AIRCRAFT REQUIRING TERMINAL AND GROUND HANDLING SERVICE ARE REQUIRED TO PROVIDE ADVANCE NOTICE OR DELAYS IN SERVICE MAY BE EXPERIENCED. AIRCRAFT REQUIRING SERVICE SHOULD MAKE PRIOR COORDINATION WITH AIRFIELD MANAGEMENT.

ALASKA ANG 168TH AREFS OPERATIONS DSN (317-377-8800, C 907-377-8800) ANG OPR 24 HRS. AIRFIELD MANAGEMENT DSN 317-377-1861/3201.

FOR FLIGHT ADVISORIES OR STATUS OF RESTRICTED & MOAS CONTACT EIELSON RANGE CONTROL ON SAUIS RADIO 125.3 OR CALL 1-800-758-8723.

TAXIING PROHIBITED ON TAXIWAY 'F' FROM TAXIWAY 'C' TO TAXIWAY 'D' FOR AIRCRAFT WITH WINGSPAN GREATER THAN 133 FT WHEN ANY AIRCRAFT IS PARKED ON 'L' ROW. RUNWAY 14 & 32 PAPI GS NOT COINCIDENTAL WITH ILS GS.

AIRPORT REMARKS: PRIOR PERMISSION REQUIRED NUMBER REQUIRED 24 HRS IN ADVANCE PRIOR TO FILING FLIGHT PLAN; CONTACT DSN 317-377-1861 C907-377-1861.

EXPECT ARRIVAL TIME RESTRICTION FOR ALL AIRCRAFT, EXCEPT AIREVAC & DV CODE 7 OR HIGHER

DURING BIRD WATCH CONDITION MODERATE LOCAL PATTERN WORK LIMITED TO MIN REQUIRE WITH OG/CC APPROVAL, NO TOUCH AND GO LANDING, FORMATION TKOF/LNDG PROHIBITED AND LOW APPROACH LIMITED TO 300 FT AGL. DURING BIRD WATCH CONDITION SEVERE; TAKE-OFF, PATTERN, AND LANDING PROHIBITED WITHOUT OG/CC APPROVAL, EXCEPT FOR EMERGENCY.

MOOSE HAVE BEEN SPOTTED ON OR NEAR THE RUNWAY ENVIRONMENT ALL HRS OF THE DAY.

N & S BARRIER RUNOUT REDUCED TO 950 FT.

ALL TRANSIENT AIRCREWS MUST REGISTER WITH AIRFIELD MANAGEMENT UPON ARRIVAL. SEE API SUPPLEMENTARY AIRPORT REMARKS. LIMITED SECRET AND COMSEC STORAGE AVAILABLE AT AIRFIELD MANAGEMENT.

LIMITED SECRET AND COMSEC STORAGE AVAILABLE AT BASE OPERATIONS. AIRFIELD MANAGEMENT DOES NOT HAVE COMSEC RESPONSIBILITIES. FOR TOP SECRET AND COMSEC ISSUE/STORAGE CONTACT COMMAND COMMAND POST DSN 317-377-1500.

PORTIONS OF APRON 'O' ROW AND SOUTH RAMP NOT VISIBLE FROM TOWER.

ALL CONTINGENCY OPER CONTACT AIRPORT MANAGER FOR COORDINATION.

TRANSIENT ALERT: TRANSIENT MAINT LIMITED TO F16 SERVICING UPON AIRCREW REQ. THRU FLIGHT/BPO/PREFLIGHT INSPECTION OF F16 NOT AVAILABLE.

AIRPORT OPR 1600-0800Z++. QUIET HRS 0700-1600Z++, EXCEPTIONS REQUIRE OPERATIONS GROUP COMMANDER APPROVAL.

RADIO/NAV/WEATHER REMARKS - (F) 1500-0700Z ++ DAILY.

ARTIC GEAR IS STRONGLY ENCOURAGED DUE TO EXTREME COLD TEMPARTURES OCT1-MAR31.

PERSONNEL AND EQUIPMENT WORKING ON RUNWAY 14-32 WHEN TOWER UNMANNED. PRE-COORDINATE WITH MAINT OPERATIONS CENTER DSN 317-377-1205 NO LATER THAN 48 HRS FROM ESTIMATED TIME OF ARRIVAL. UHF IS THE PREFERRED PATTERN FREQ.

AIRPORT REMARKS: PRIME KNIGHT NOT AVAILABLE.

AIRPORT REMARKS: RUNWAY 300 FT WIDE ENTIRE LENGTH, CENTER 150 FT USABLE.

FAIRBANKS FSS LOCAL CONTROL 474-0137. FOR FLIGHT ADVISORIES OR STATUS OF RESTRICTED AND MILITARY OPERATING AREAS, CONTACT EIELSON RANGE CONTROL ON SUAIS RADIO 125.3 OR TELEPHONE 1-800-758-8723. ASOS FREQ 119.275 IS ASSOCIATED WITH R-2205 YUKON TRAINING RANGE.

BASE OPERATIONS DOES NOT HAVE COMSEC RESPONSIBILITIES. BASE OPERATIONS WILL

NOT ISSUE COMSEC.

ASOS FREQ 118.525 IS ASSOCIATED WITH R-2211 BLAIR LAKE TRAINING RANGE. PMSV: METRO BELOW 3000 FT RECEPTION FROM 3000-0900 IS LIMITED BEYOND 15NM BY TERRAIN, BELOW 15000 FT LIMITED BEYOND 75NM, NO LIMITATIONS WITHIN 100NM AT 20000 FT.

AUGMENTATION CAPABLE DURING NORMAL OPR HR. DUR EVACUATION OF WX STATION CONTACT OP WX SQUADRON AT NUMBER ABOVE. ALTITUDE WX LOCATION VISIBILITY SEVERELY LIMITED DUE TO BUILDING AND PARK AIRCRAFT.

PHONE PATCH CAPABILITY THROUGH 354 FW/CP AT 907-377-1500. FMQ19 907-377-5846.

BRAKING ACTION ON RUNWAY SIGNIFICANTLY REDUCED DURING WET CONDITIONS. EXERCISE EXTREME CAUTION WHEN TRNS FR CONCRETE TO ASPHALT SURFACE.

AIRCRAFT USING TAXIWAY G RESTRICTED TO CENTER KEEL, E AND W TAXIWAY LINES CLOSED TO ALL AIRCRAFT MOVEMENT.

CAUTION: NONSTANDARD LIGHT, 2000 FT OF RUNWAY EDGE LIGHT BETWEEN DELTA-CHARLIE TAXIWAYS LOCATED 12 FT FR RUNWAY EDGE.

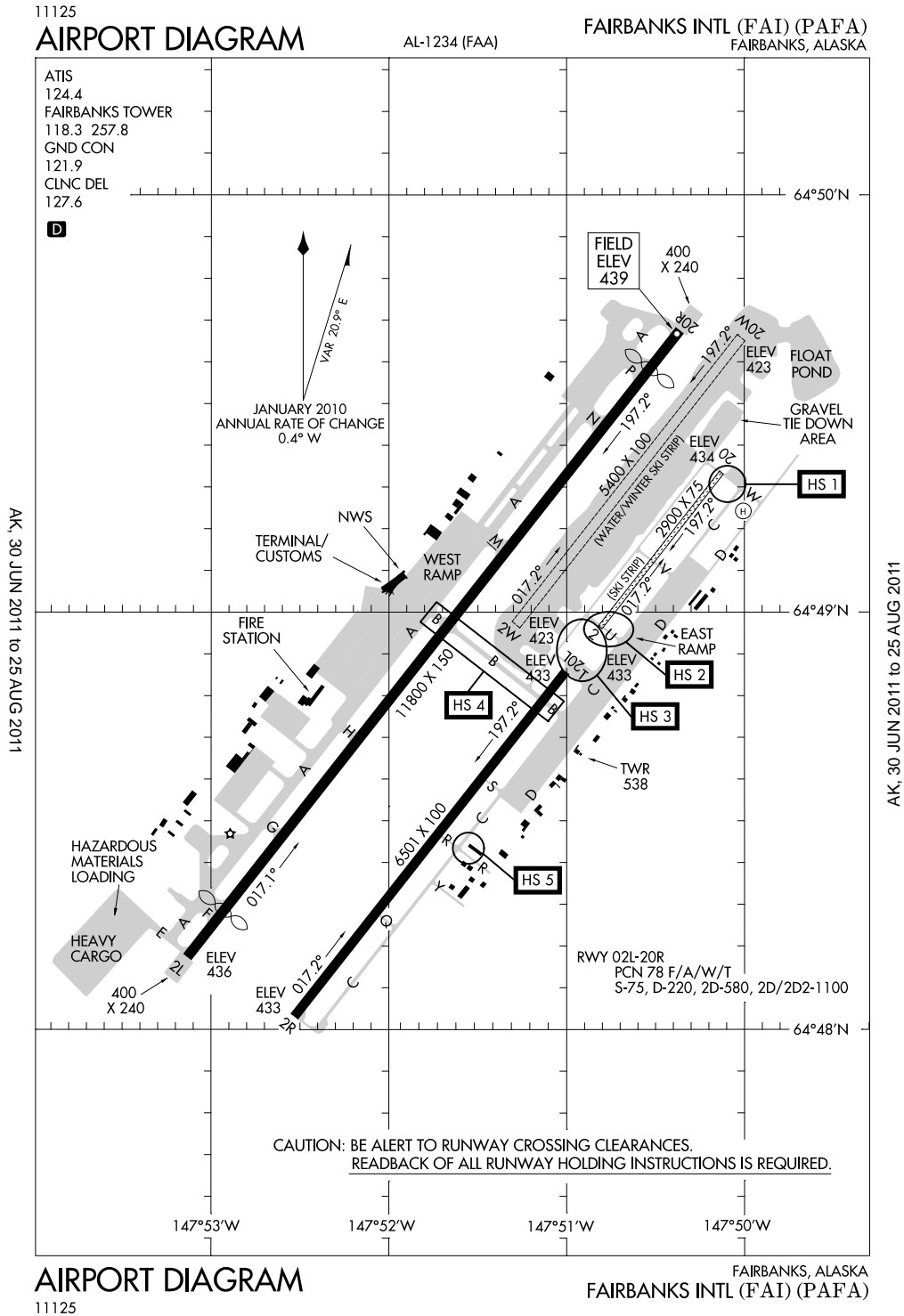
UNMONITORED WHEN PAEI TOWER CLOSED. FULL SERVICE AVAILABLE 1600-0800Z++, LIMITED SERVICE ON TIME. FULL SERVICE VARY WITH LOCAL FLYNG SCHEDULE. WX BRIEFING AVAILABLE DSN 317-377-3140/1160.

AWOS IN USE.

BRIEFING FOR TRANSIENT AIRCREWS BEYOND NORMAL OPERATING HRS BY WAY OF 17TH OWS AT JOINT BASE PEARL HARBOR-HICKAM DSN 315-449-8333/7950 C808-449-8333/7950 OR DSN 315-448-3809, C808-448-3809.

CAUTION: LOCALIZER AND GS CRITICAL AREAS ARE NOT PROTECTED FROM AIRFIELD ACCESS ROADS.

Fairbanks, Alaska Fairbanks International ICAO Identifier PAFA



Fairbanks, AK
Fairbanks Intl
ICAO Identifier PAFA

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 64–48–54.40N / 147–51–23.21W
- 2.2.2 From City: 3 Miles SW Of Fairbanks, AK
- 2.2.3 Elevation: 439 ft
- 2.2.5 Magnetic variation: 21E (2010)
- 2.2.6 Airport Contact: Jesse Vanderzanden
6450 AIRPORT WAY – SUITE 1
Fairbanks, AK 99709
(907–474–2500)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 3/1/2005

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 02L
- 2.10.1.b Type of obstacle: Tree (72 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 652 ft from Centerline

- 2.10.1.a. Runway designation: 20R
- 2.10.1.b Type of obstacle: Tree (86 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 430 ft from Centerline

- 2.10.1.a. Runway designation: 20W
- 2.10.1.b Type of obstacle: Fence (11 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 02W

- 2.10.1.b Type of obstacle: Fence (14 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 170 ft from Centerline

- 2.10.1.a. Runway designation: 02R
- 2.10.1.b Type of obstacle: Trees (79 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 350 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 02L
- 2.12.2 True Bearing: 38
- 2.12.3 Dimensions: 11800 ft x 150 ft
- 2.12.4 PCN: 78 F/A/W/T
- 2.12.5 Coordinates: 64–48–00.00N / 147–53–00.00W
- 2.12.6 Threshold elevation: 436 ft
- 2.12.6 Touchdown zone elevation: 438 ft

- 2.12.1 Designation: 20R
- 2.12.2 True Bearing: 218
- 2.12.3 Dimensions: 11800 ft x 150 ft
- 2.12.4 PCN: 78 F/A/W/T
- 2.12.5 Coordinates: 64–49–40.91N / 147–50–21.13W
- 2.12.6 Threshold elevation: 439 ft
- 2.12.6 Touchdown zone elevation: 439 ft

- 2.12.1 Designation: 02W
- 2.12.2 True Bearing: 38
- 2.12.3 Dimensions: 5400 ft x 100 ft
- 2.12.5 Coordinates: 64–48–58.00N / 147–51–16.59W
- 2.12.6 Threshold elevation: 423 ft

- 2.12.1 Designation: 20W
- 2.12.2 True Bearing: 218
- 2.12.3 Dimensions: 5400 ft x 100 ft
- 2.12.5 Coordinates: 64–49–39.83N / 147–49–59.62W
- 2.12.6 Threshold elevation: 423 ft

- 2.12.1 Designation: 02R
- 2.12.2 True Bearing: 38
- 2.12.3 Dimensions: 6501 ft x 100 ft
- 2.12.5 Coordinates: 64–48–00.00N / 147–52–32.24W
- 2.12.6 Threshold elevation: 433 ft
- 2.12.6 Touchdown zone elevation: 433 ft

2.12.1 Designation: 20L
2.12.2 True Bearing: 218
2.12.3 Dimensions: 6501 ft x 100 ft
2.12.5 Coordinates: 64-48-51.24N /
147-50-59.67W
2.12.6 Threshold elevation: 433 ft
2.12.6 Touchdown zone elevation: 434 ft

2.12.1 Designation: 02
2.12.2 True Bearing: 38
2.12.3 Dimensions: 2900 ft x 75 ft
2.12.5 Coordinates: 64-48-57.80N /
147-50-47.60W
2.12.6 Threshold elevation: 433 ft

2.12.1 Designation: 20
2.12.2 True Bearing: 218
2.12.3 Dimensions: 2900 ft x 75 ft
2.12.5 Coordinates: 64-49-20.26N /
147-50-00.00W
2.12.6 Threshold elevation: 434 ft

AD 2.13 Declared distances

2.13.1 Designation: 02L
2.13.2 Takeoff run available: 11800
2.13.3 Takeoff distance available: 12800
2.13.4 Accelerate-stop distance available: 11800
2.13.5 Landing distance available: 11050

2.13.1 Designation: 20R
2.13.2 Takeoff run available: 11800
2.13.3 Takeoff distance available: 12800
2.13.4 Accelerate-stop distance available: 11800
2.13.5 Landing distance available: 11050

AD 2.14 Approach and runway lighting

2.14.1 Designation: 02L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 20R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 02R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 20L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: ATIS(907-456-1244)
2.18.3 Service designation: 124.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P DEP/P TRSA
IC
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: APCH/P DEP/P TRSA
2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 127.6 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: DEP/S
2.18.3 Service designation: 327.1 MHz

2.18.1 Service designation: APCH/P DEP/P TRSA
IC
2.18.3 Service designation: 363.2 MHz

2.18.1 Service designation: APCH/P DEP/P TRSA
2.18.3 Service designation: 381.4 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 02L.

Magnetic variation: 21E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-49-42.85N /
147-50-17.60W

2.19.6 Site elevation: 431 ft

2.19.1 ILS type: Inner Marker for runway 02L.

Magnetic variation: 21E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-48-00.00N /
147-53-12.52W

2.19.6 Site elevation: 531 ft

2.19.1 ILS type: Glide Slope for runway 02L.

Magnetic variation: 21E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-48-21.01N /
147-52-36.34W

2.19.6 Site elevation: 427 ft

2.19.1 ILS type: Middle Marker for runway 02L.

Magnetic variation: 21E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-47-53.40N /
147-53-39.80W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 02L. Magnetic
variation: 21E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-48-21.34N /

147-52-35.90W

2.19.6 Site elevation: 449 ft

2.19.1 ILS type: Middle Marker for runway 20R.

Magnetic variation: 21E

2.19.2 ILS identification: FAI

2.19.5 Coordinates: 64-49-56.80N /
147-49-51.90W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 20R.

Magnetic variation: 21E

2.19.2 ILS identification: FAI

2.19.5 Coordinates: 64-48-00.00N /
147-53-00.00W

2.19.6 Site elevation: 432 ft

2.19.1 ILS type: Outer Marker for runway 20R.

Magnetic variation: 21E

2.19.2 ILS identification: FAI

2.19.5 Coordinates: 64-53-59.35N /
147-42-25.75W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 20R.

Magnetic variation: 21E

2.19.2 ILS identification: FAI

2.19.5 Coordinates: 64-49-24.41N /
147-50-39.79W

2.19.6 Site elevation: 430 ft

General Remarks:

MIGRATORY BIRDS IN THE VICINITY OF AIRPORT DURING SPRING THRU FALL.

ATCT LOCATED AT 64-48-39.438N 147-50-55.722W ELEVATION 538' MSL.

SEAPLANE BASE CONTROLLED BY FAIRBANKS INTL ATCT. CONTACT ATCT ON FREQ 118.3 AS SOON AS PRACTICAL AFTER START UP FOR TAXI ON THE POND. FLOAT POND TRAFFIC AS ASSIGNED BY FAIRBANKS ATCT. LIMITED TRANSIENT FLOAT PLANE PARKING AVAILABLE, CONTACT OPERATIONS 907-474-2530 FOR INFORMATION. SURFACE FROZEN IN WINTER, NOT MONT, AIR OPERATIONS NOT RECOMMENDED.

BE ALERT FOR SNOW REMOVAL EQUIPMENT OPERATIONS FROM 1 OCT TO 15 MAY.

MILITARY CONTRACT FUEL AVAILABLE.

BE ALERT: BLASTING AT 1500 MON-FRI 1 NAUTICAL MILE RADIUS OF 65 03N 147 37W OF TRUE NORTH MINE (2 NAUTICAL MILE NW OF PEDRO DOME) 1500 FT & BELOW.

FOR FLIGHTS IN MOA'S EAST OF FAIRBANKS RECOMMEND CONTACTING EIELSON RANGR CONTROL ON 125.3 OR CALL 1-800-758-8723 FOR INFORMATION ON MILITARY ACTIVITES.

NOISE ABATEMENT PROCEDURES IN EFECT FROM 2200-0800 ALL LARGE AIRCRAFT, TURBINE ENGINE, AND HEAVY AIRCRAFT UTILIZE RUNWAY 01L FOR ARRS AND 19R FOR DEPS WHEN WIND IS NOT AN OPERATIOINAL FACTOR.

RUNWAY 02R/20L CLOSED TO JET AIRCRAFT.

TRANSIENT PARKING EAST RAMP FOR NON JET AIRCRAFT WITH WINGSPAN LESS THAN 79 FT. NO TRANSIENT AIRCRAFT PARKING ON WEST RAMP, CONTACT APT OPERATIONS 907-474-2530 FOR INFORMATION & MEDIVAC PARKING. HELICOPTER ARRIVALS & DEPS FR NEW COMPASS ROSE OPER TO/FR EAST.

RUNWAYS 02W & 20W TOUCHDOWN REFERENCE MARKERS 500 FT FROM SHORELINE, MARKED WITH BUOYS DURING FLOAT SEASON.

TEMPORARY HELIPAD LOCATED ON EAST RAMP, SOUTH OF TAXIWAY W IN GRASSY AREA MARKED WITH ORANGE CONES. (MAY 1 THRU OCT 1)

FOR AVAILABILITY OF SUMMER GRAVEL STRIP RUNWAY 02/20 AND WINTER SKI STRIP RUNWAY 02/20 CONSULT LOCAL NOTAMS AND CONTACT TOWER PRIOR TO ARRIVAL /DEPARTURE.

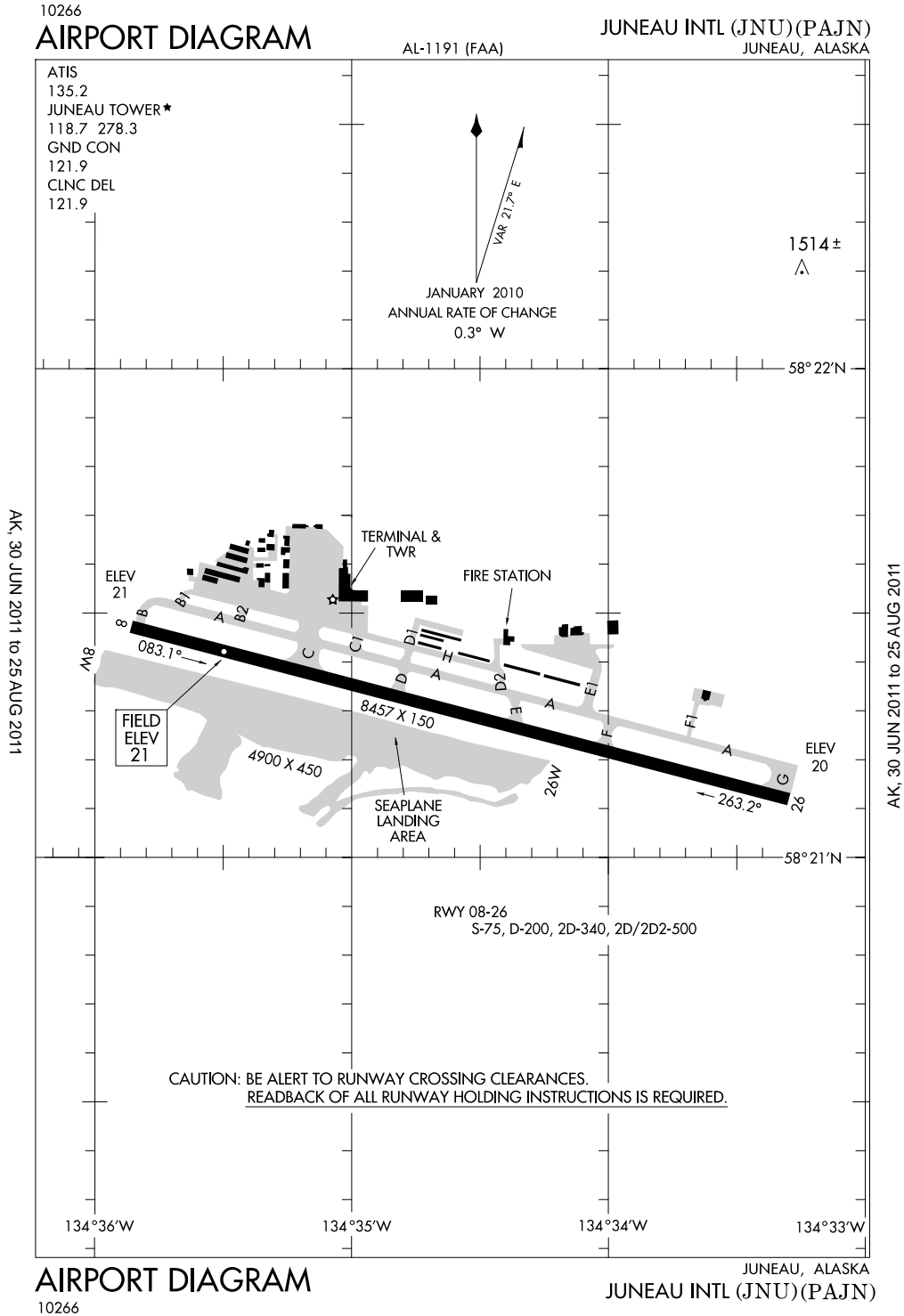
N/S TAXIWAY (TWY A) IS WEST AND PARALLEL TO RUNWAY 02L/20R. BE ALERT TO AVOID LANDING ON TAXIWAY.

NO STEP TAXI EXCEPT IN CHANNEL.

NE COMPASS ROSE CLOSED TO HELICOPTERS OVER 12,500 LBS. FROST HEAVES SOUTH 2600 FT RUNWAY 02R/20L CONTACT AIRPORT OPERS 907-474-2530 WITH SAFETY CONCERNS. CONSULT NOTAMS FOR NW COMPASS ROSE AVAILABILITY. HELICOPTER ARRIVALS AND DEPARTURES FROM NW COMPASS ROSE OPR TO/FROM EAST.

RUNWAY 02/20 SKI STRIP HOLD LINES AND NE COMPASS ROSE MARKINGS OBSCURE FALL-SPRING.

Juneau, Alaska
Juneau International
ICAO Identifier PAJN



Juneau, AK
Juneau Intl
ICAO Identifier PAJN

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 58-21-17.90N / 134-34-34.60W
- 2.2.2 From City: 7 Miles NW Of Juneau, AK
- 2.2.3 Elevation: 21 ft
- 2.2.5 Magnetic variation: 23E (2005)
- 2.2.6 Airport Contact: Jeannie Johnson
1873 SHELL SIMMONS DR, SUITE 201
Juneau, AK 99801 (907-789-7821)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,80,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major
- 2.4.7 Remarks: Airframe/Power Plant Service For Single/Twin Prop Eng Aircraft Turbin & Avionics.

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 08
- 2.10.1.b Type of obstacle: Tower (573 ft). Marked and Lighted
- 2.10.1.c Location of obstacle: 900 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 105
- 2.12.3 Dimensions: 8457 ft x 150 ft
- 2.12.5 Coordinates: 58-21-28.55N / 134-35-51.21W
- 2.12.6 Threshold elevation: 21 ft
- 2.12.6 Touchdown zone elevation: 21 ft

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 285

- 2.12.3 Dimensions: 8457 ft x 150 ft
- 2.12.5 Coordinates: 58-21-00.00N / 134-33-18.00W
- 2.12.6 Threshold elevation: 20 ft
- 2.12.6 Touchdown zone elevation: 20 ft

- 2.12.1 Designation: 08W
- 2.12.3 Dimensions: 4900 ft x 450 ft

- 2.12.1 Designation: 26W
- 2.12.3 Dimensions: 4900 ft x 450 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 08
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left
- 2.14.10 Remarks: VASI Aligned Aprxly 13 Degs Right Of Runway Centerline And Is Not Visible On Runway Cntrl. VASI Unusable Beyond 06 Degs Left Of Crs. Ldin Lights.

- 2.14.1 Designation: 26
- 2.14.4 Visual approach slope indicator system: 4-box VASI on right
- 2.14.10 Remarks: VASI Usable Only Within 2 Nm.

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.7 MHz

- 2.18.1 Service designation: CD
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: NG OPS
- 2.18.3 Service designation: 124.65 MHz

- 2.18.1 Service designation: ATIS
- 2.18.3 Service designation: 135.2 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 278.3 MHz

- 2.18.1 Service designation: NG OPS

2.18.3 Service designation: 64.7 MHz

134-38-10.36W

2.19.6 Site elevation: 161 ft

2.18.1 Service designation: SEASONAL USE ONLY.

2.19.1 ILS type: DME for runway 08. Magnetic variation: 23E

2.18.3 Service designation: 120.7 MHz

2.19.2 ILS identification: JDL

AD 2.19 Radio navigation and landing aids

2.19.5 Coordinates: 58-21-31.02N / 134-38-10.22W

2.19.1 ILS type: Localizer for runway 08. Magnetic variation: 23E

2.19.6 Site elevation: 175 ft

2.19.2 ILS identification: JDL

2.19.5 Coordinates: 58-21-32.04N /

General Remarks:

NATIONAL GUARD 24 HR PRIOR PERMISSION REQUIRED DUE TO LIMITED PARKING C907-789-3366. 0730-1600 WEEKDAYS CONTACT GUARD OPERATIONS 10 MIN PRIOR TO LANDING ON 124.65.

WILDLIFE & BIRDS ON & IN THE VICINITY OF AIRPORT.

BATTLESHIP ISLAND LDIN GROUPING; CENTER LIGHT 582132.88N 1344012.22W.
IJDL-LOCALIZER LDIN GROUPING; CENTER LIGHT 582132.02N 1343810.39W.

INCREASED HELICOPTER/LIGHT AIRCRAFT ACTIVITY APR 15-OCT 1 ENTIRE LENGTH ON GASTINEAU CHANNEL & WITHIN 5 MILES OF AIRPORT.

PARAGLIDING ACTIVITY 3 MILES N OF AIRPORT IN THE VICINITY OF THUNDER MOUNTAIN & OVER GASTINEAU CHANNEL NEARS DOWNTOWN APR 15-OCT 1 6000 FT & BELOW.

TRAFFIC PATTERN ALTITUDE 1500 AGL FOR LARGE TURBINE AIRCRAFT; 1000 FT AGL FOR FIXED WING AIRCRAFT; 500 FT AGL FOR HELICOPTERS.

FOR A LOCAL CALL TO JNU AUTOMATED FLIGHT SERVICE STATION CALL 907-789-7380.

TRANSIENT DOCK AVAILABLE FOR PUBLIC USE FOR UP TO SIX AIRCRAFT, SW CORNER.

SEE SPECIAL NOTICES AND GENERAL NOTICES FOR ADDITIONAL INFORMATION ON OPERATIONS IN JUNEAU AREA.

LENA POINT, PEDERSON HILL AND SISTERS ISLAND WX CAMERAS AVAILABLE ON INTERNET AT [HTTP://AKWEATHERCAMS.FAA.GOV](http://AKWEATHERCAMS.FAA.GOV)

COMPASS ROSE LOCATED ON TAXIWAY G AT EAST END OF TAXIWAY A NEAR APPROACH END RUNWAY 26.

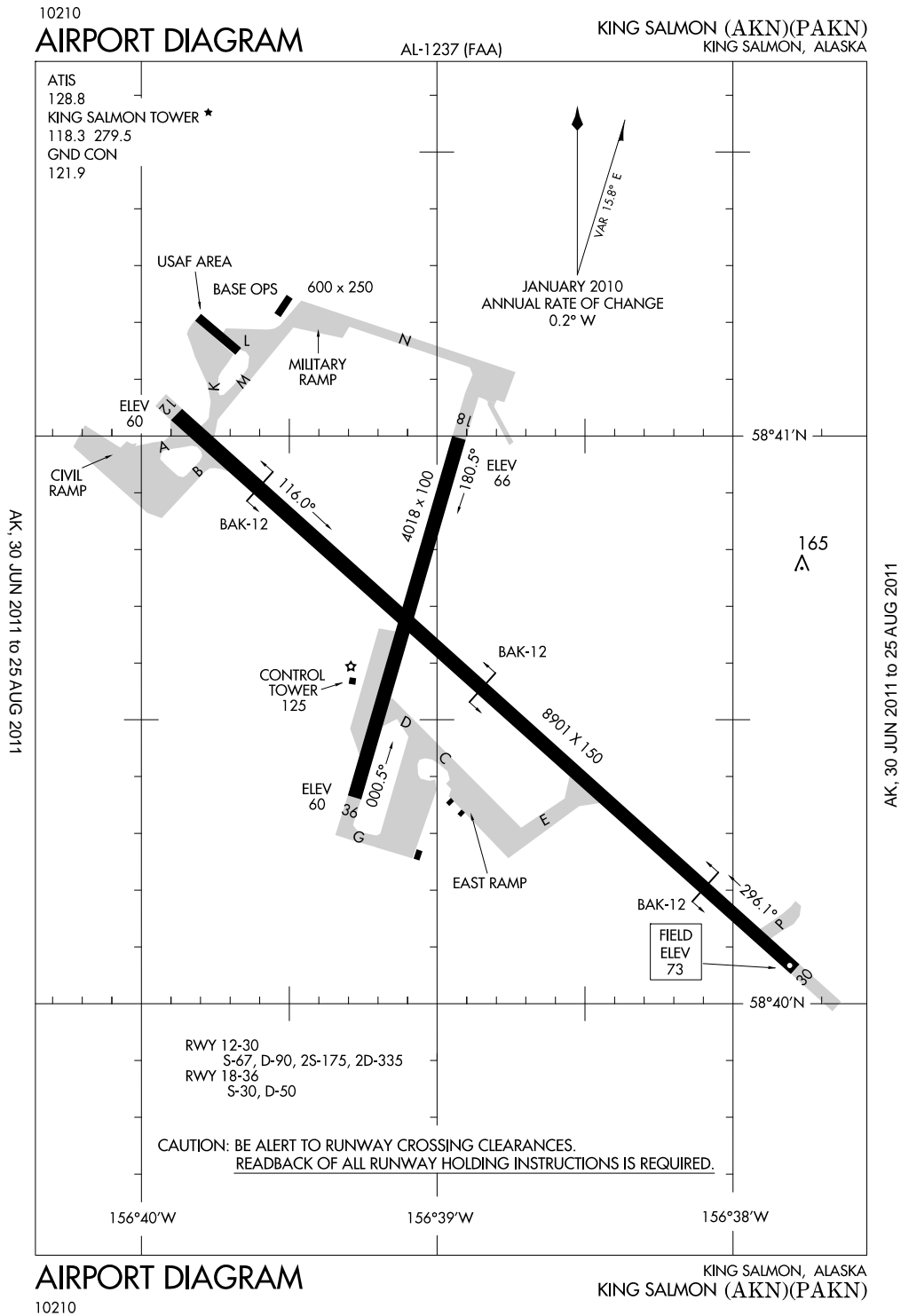
RUNWAY 08/26 SAND USED TO ENHANCE RUNWAY FRICTION MAY NOT MEET FAA SPECS.

HEAVY EQUIPMENT BETWEEN TAXIWAY E1 & TAXIWAY F1 NORTH OF TAXIWAY A 0630-1730 MON-SAT.

RUNWAY 26 PERSONNEL AND EQUIPMENT WORKING APPROACH END RUNWAY 0700-1700 MON-SAT.

RUNWAY 08/26 PERSONNEL AND EQUIPMENT WORKING ADJACENT E 3000 FT SOUTH SIDE 0700-1700 MON-SAT.

King Salmon, Alaska King Salmon ICAO Identifier PAKN



King Salmon, AK
King Salmon
ICAO Identifier PAKN

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 58–40–35.38N / 156–38–55.29W
- 2.2.2 From City: 0 Miles SE Of King Salmon, AK
- 2.2.3 Elevation: 73 ft
- 2.2.5 Magnetic variation: 16E (2010)
- 2.2.6 Airport Contact: Jay Knight
PO BOX 65
King Salmon, AK 99613
(907–246–3325)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 – 2.3.11: ALL Months, ALL Days, 0800–1600 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A,B
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major
- 2.4.7 Remarks: Transient Parking Marked At North End Of General Aviation Ramp.

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I A certified on 3/21/2005
- 2.6.4 Remarks: Closed To Aircraft 0 Operations With More Than 30 Passenger Seats Except Prior Permission Required In Writing To Airport Manager PO Box 65 King Salmon Ak, 99613.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 18
- 2.10.1.b Type of obstacle: Trees (40 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 18
- 2.12.2 True Bearing: 196
- 2.12.3 Dimensions: 4018 ft x 100 ft
- 2.12.5 Coordinates: 58–40–59.78N / 156–38–55.61W
- 2.12.6 Threshold elevation: 66 ft

2.12.6 Touchdown zone elevation: 66 ft

- 2.12.1 Designation: 36
- 2.12.2 True Bearing: 16
- 2.12.3 Dimensions: 4018 ft x 100 ft
- 2.12.5 Coordinates: 58–40–21.80N / 156–39–16.96W
- 2.12.6 Threshold elevation: 60 ft
- 2.12.6 Touchdown zone elevation: 65 ft

- 2.12.1 Designation: NW
- 2.12.3 Dimensions: 4000 ft x 500 ft

- 2.12.1 Designation: SE
- 2.12.3 Dimensions: 4000 ft x 500 ft

- 2.12.1 Designation: 12
- 2.12.2 True Bearing: 132
- 2.12.3 Dimensions: 8901 ft x 150 ft
- 2.12.5 Coordinates: 58–41–00.00N / 156–39–53.02W
- 2.12.6 Threshold elevation: 60 ft
- 2.12.6 Touchdown zone elevation: 62 ft

- 2.12.1 Designation: 30
- 2.12.2 True Bearing: 312
- 2.12.3 Dimensions: 8901 ft x 150 ft
- 2.12.5 Coordinates: 58–40–00.00N / 156–37–47.63W
- 2.12.6 Threshold elevation: 73 ft
- 2.12.6 Touchdown zone elevation: 73 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 12
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4–light PAPI on left
- 2.14.1 Designation: 30
- 2.14.4 Visual approach slope indicator system: 4–light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.3 MHz
- 2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

156-39-29.89W

2.19.6 Site elevation: 64 ft

2.18.1 Service designation: ATIS

2.18.3 Service designation: 128.8 MHz

2.18.4 Hours of operation: 24

2.19.1 ILS type: Middle Marker for runway 12.

Magnetic variation: 16E

2.19.2 ILS identification: AKN

2.18.1 Service designation: EMERG

2.19.5 Coordinates: 58-41-25.44N /

2.18.3 Service designation: 243 MHz

156-40-42.92W

2.19.6 Site elevation: 1 ft

2.18.1 Service designation: PTD

2.18.3 Service designation: 372.2 MHz

2.19.1 ILS type: Outer Marker for runway 12.

Magnetic variation: 16E

2.19.2 ILS identification: AKN

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 279.5 MHz

2.19.5 Coordinates: 58-44-14.14N /

156-46-45.49W

2.19.6 Site elevation: 99999 ft

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 12. Magnetic variation: 16E

2.19.2 ILS identification: AKN

2.19.5 Coordinates: 58-39-56.55N /

156-37-32.37W

2.19.6 Site elevation: 78 ft

2.19.1 ILS type: DME for runway 12. Magnetic variation: 16E

2.19.2 ILS identification: AKN

2.19.5 Coordinates: 58-39-59.60N /

156-37-31.70W

2.19.6 Site elevation: 78 ft

2.19.1 ILS type: Glide Slope for runway 12.

Magnetic variation: 16E

2.19.2 ILS identification: AKN

2.19.5 Coordinates: 58-40-57.34N /

General Remarks:

LANDING AREA RUNWAY NW/SE ALSO USED BY BOATS.

FLOCKS OF LARGE MIGRATORY BIRDS IN VICINITY DURING SEASON.

OFF PAVEMENT OPERATIONS BY AIRCRAFT; INCLUDING HELICOPTERS; NOT AUTHORIZED AT THE AIR CARRIER APRON. NO LANDING; PARKING OR TAKE-OFFS PERMITTED FROM DIRT OR GRASS.

AIR DEFENSE ALERT FIGHTERS MAY SCRAMBLE AT ANY TIME.

ONE INCH DIP ON CENTERLINE 1850 FT FROM APPROACH END RUNWAY 36 EXTENDS TO THREE INCH DIP 25 FT WIDE ON WEST EDGE.

CIVILIAN TRANSIENT PARKING ON SE RAMP ONLY; OTHER PARKING LONGER THAN 48 HRS REQUIRES PERMIT.

ALL FIGHTER AIRCRAFT ON ARR EXPECT REDUCED SEPARATION; SIMILAR APPROACH CHARACTERISTICS AND DAY - 3000 FT; DISSIMILAR APPROACH CHARACTERISTICS AND/OR NIGHT - 6000 FT; AHEAD/BEHIND FORMATION LANDING - 6000 FT.

200 FT SAFETY AREA APPROACH END RUNWAY 12.

RUNWAY CONDITION READING UPDATED AS REQUIRED DURING 11TH AF FIGHTER FLYING WINDOW. AIRCREWS COORDINATE FOR RUNWAY CONDITION READING CHECKS WITH KING SALMON OPERATIONS AT OTHER TIMES. AIRCRAFT OPERATIONS RESTRICTED TO LOW APPROACH/FULL STOP LANDING ONLY.

FIGHTER AIRCRAFT COORDINATE DESIRED BARRIER CONFIGURATION OR ENGAGEMENT AS EARLY AS POSSIBLE. EXPECT AT LEAST 30 MIN DELAY FOR SHORT-NOTICE REQUIREMENT.

FLIGHTS ORIG OUTSIDE ALASKA REFER TO USAF FOREIGN CLEARANCE GUIDE. NO CUSTOMS AVAILABLE.

SNOW, ICE REMOVAL & AIRPORT HAZARD CONDITION PERFORMED & REPORTED DURING MAINT DUTY HRS.

USAF FACILITIES MINIMALLY OPR BY CIVIL CONTRACTORS WITH LIMITED SUPPORT CAPABILITY. TO CONFIRM OPR HRS NOT LATER THAN 24 HRS IN ADVANCE OF EXPECTED ARRIVAL.

MILITARY FIGHTERS/EMERGENCY DIVERTS CALL HARMONY BEFORE 100 NAUTICAL MILE INBOUND ON 391.2/140.1. NON-EMERG/NON-FTR AIRCRAFT CALL KING SALMON OPERATIONS; 24 HR POINT NORMALLY MONITORS COMMON TRAFFIC ADVISORY FREQUENCY DURING OPR HRS.

RUNWAY 18/36 NOT INSPECTED FOR MILITARY OPERATIONS.

AIRCRAFT RESCUE AND FIRE FIGHTING EQUIPMENT STAFFED DURING PERIODS OF AIR CARRIER ACTIVITY ONLY.

PRIVATE JETS MAY PARK ON THE SE SECTION OF E RAMP; CALL AIRPORT MANAGER AT 907-246-3325 FOR INFORMATION.

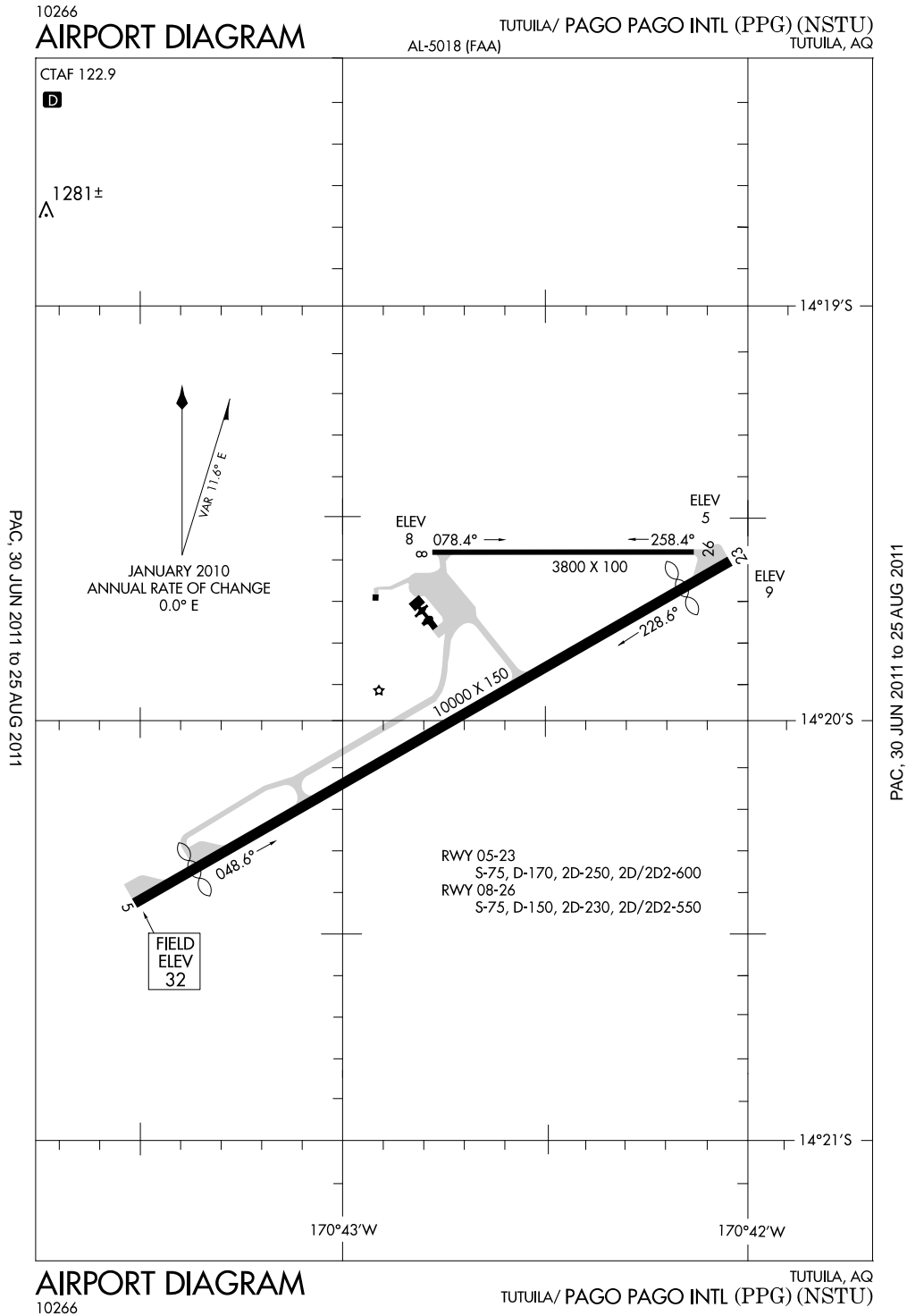
AIRPORT MAINT DUTY HRS 0800-1700.

AIRPORT SAND LARGER GRADATION THAN FAA RECOMMENDED/SEE AC150/5200-30.

EAST APRON: PAVEMENT CRUMBLING, POSSIBLE FOREIGN OBJECT DAMAGE HAZARD. JET AIRCRAFT BE ALERT DURING RUN-UP TO AVOID DAMAGE WITH JET WASH.

WX CAMERA AVAILABLE ON INTERNET AT [HTTP://AKWEATHERCAMS.FAA.GOV](http://AKWEATHERCAMS.FAA.GOV).

Pago Pago, American Samoa
Pago Pago/International
ICAO Identifier NSTU



Pago Pago, AS
Pago Pago Intl
ICAO Identifier NSTU

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 14–19–53.98S / 170–42–41.41W
- 2.2.2 From City: 3 Miles SW Of Pago Pago, AS
- 2.2.3 Elevation: 32 ft
- 2.2.5 Magnetic variation: 12E (1990)
- 2.2.6 Airport Contact: Matagi R.M. Mcmoore
DEPT OF PORT ADMIN, BOX 1539
Pago Pago, AS 96799 (684–733–4510)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 05
- 2.10.1.b Type of obstacle: Hill (446 ft). Lighted
- 2.10.1.c Location of obstacle: 1000 ft from Centerline

- 2.10.1.a. Runway designation: 23
- 2.10.1.b Type of obstacle: Fence (8 ft). Lighted

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 3800 ft x 100 ft
- 2.12.5 Coordinates: 14–19–35.13S / 170–42–46.75W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 6 ft

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 270

- 2.12.3 Dimensions: 3800 ft x 100 ft
- 2.12.5 Coordinates: 14–19–35.10S / 170–42–00.00W
- 2.12.6 Threshold elevation: 5 ft
- 2.12.6 Touchdown zone elevation: 6 ft

- 2.12.1 Designation: 05
- 2.12.2 True Bearing: 60
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 14–20–25.82S / 170–43–30.84W
- 2.12.6 Threshold elevation: 32 ft
- 2.12.6 Touchdown zone elevation: 30 ft

- 2.12.1 Designation: 23
- 2.12.2 True Bearing: 240
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 14–19–36.47S / 170–42–00.00W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 9 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 05
- 2.13.2 Takeoff run available: 9200
- 2.13.3 Takeoff distance available: 10200
- 2.13.4 Accelerate–stop distance available: 9200
- 2.13.5 Landing distance available: 8200

- 2.13.1 Designation: 23
- 2.13.2 Takeoff run available: 10000
- 2.13.3 Takeoff distance available: 10000
- 2.13.4 Accelerate–stop distance available: 10000
- 2.13.5 Landing distance available: 9200

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 05
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4–box VASI on left

- 2.14.1 Designation: 23
- 2.14.4 Visual approach slope indicator system: 4–light PAPI on left

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: Localizer for runway 05. Magnetic variation: 12E
- 2.19.2 ILS identification: TUT

2.19.5 Coordinates: 14-19-38.78S /
170-42-12.90W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: DME for runway 05. Magnetic
variation: 12E

2.19.2 ILS identification: TUT
2.19.5 Coordinates: 14-19-37.63S /
170-42-14.71W
2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Glide Slope for runway 05.
Magnetic variation: 12E

2.19.2 ILS identification: TUT
2.19.5 Coordinates: 14-20-13.06S /
170-43-15.19W
2.19.6 Site elevation: 25 ft

2.19.1 ILS type: Middle Marker for runway 05.
Magnetic variation: 12E

2.19.2 ILS identification: TUT
2.19.5 Coordinates: 14-20-36.10S /
170-43-49.30W
2.19.6 Site elevation: 74 ft

General Remarks:

PERMANENT CABLE ACROSS MID PAGO PAGO HARBOR 4SM NNE AIRPORT, RISES ABRUPTLY TO 1609' MOUNTAIN ALAVA N SIDE OF HARBOR, EXTREMELY HAZARDOUS TO AIRCRAFT.

ALL FLIGHTS (EXCEPT SCHEDULED) PRIOR PERMISSION FROM AIRPORT MANAGER WITH 24 HRS PRIOR NOTICE.

SEA SPRAY FROM SURF & BLOW HOLES MAY DRIFT ACROSS RUNWAY 05/23 UNDER ROUGH SEA CONDITIONS.

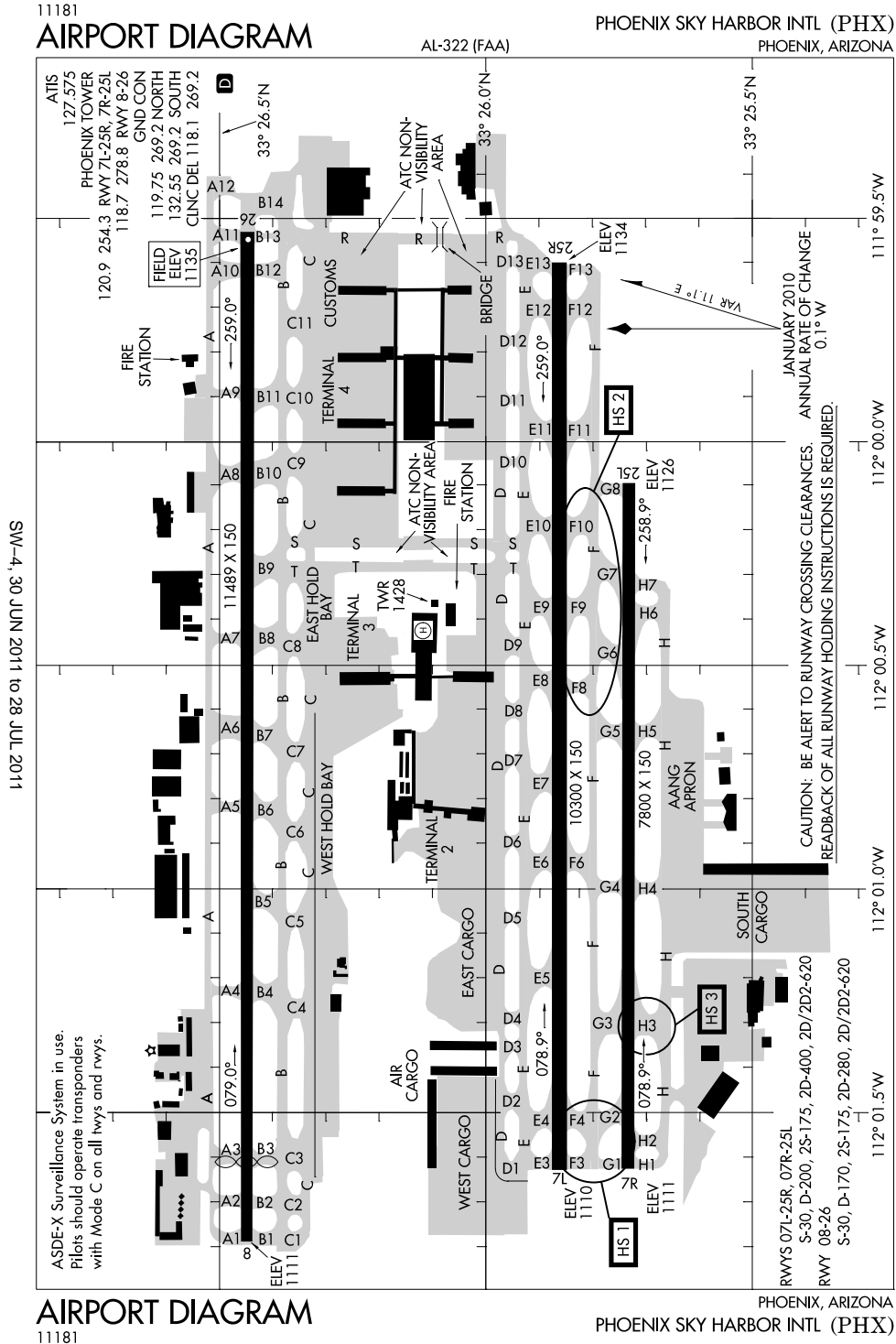
ALL AIRCRAFT TRANSITING PAGO PAGO (EXCEPT COMMERCIAL CARRIERS) MUST MAKE FUEL ARRANGEMENTS WITH PPG AT 684-733-3158.

ALL AIRCRAFT EXCEEDING 100000 GROSS WEIGHT UPON TOUCHDOWN TAXI TO THR TURN-AROUND BEFORE TAXIING TO APRON. AIRCRAFT UNDER 100000 MAKE TURN-ARND WHERE FEASIBLE.

OLOTELE MOUNTAIN 1617 FT MSL 3.5 MILES WEST OF THRESHOLD RUNWAY 08.

PERMANENTLY LIGHTED & MARKED 226' TOWER ATOP MOUNTAIN ALAVA 4.3SM NNE AIRPORT.

Phoenix, Arizona
Phoenix Sky Harbor International
ICAO Identifier KPHX



Phoenix, AZ
Phoenix Sky Harbor Intl
ICAO Identifier KPHX

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 33-26-00.00N / 112-00-41.70W
- 2.2.2 From City: 3 Miles E Of Phoenix, AZ
- 2.2.3 Elevation: 1135 ft
- 2.2.5 Magnetic variation: 12E (2000)
- 2.2.6 Airport Contact: Danny Murphy
3400 SKY HARBOR BLVD, SUITE 3300
Phoenix, AZ 85034 (602-273-3300)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 08
- 2.10.1.b Type of obstacle: Bldg (66 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 503 ft from Centerline

- 2.10.1.a. Runway designation: 26
- 2.10.1.b Type of obstacle: Road (9 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 540 ft from Centerline

- 2.10.1.a. Runway designation: 07L
- 2.10.1.b Type of obstacle: Pole (62 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 750 ft from Centerline

- 2.10.1.a. Runway designation: 25R

- 2.10.1.b Type of obstacle: Ant (416 ft). Marked and Lighted
- 2.10.1.c Location of obstacle: 600 ft from Centerline

- 2.10.1.a. Runway designation: 07R
- 2.10.1.b Type of obstacle: Pole (33 ft). Lighted
- 2.10.1.c Location of obstacle: 640 ft from Centerline

- 2.10.1.a. Runway designation: 25L
- 2.10.1.b Type of obstacle: Ant (424 ft). Marked and Lighted
- 2.10.1.c Location of obstacle: 1193 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 11489 ft x 150 ft
- 2.12.5 Coordinates: 33-26-27.10N / 112-01-47.26W
- 2.12.6 Threshold elevation: 1111 ft
- 2.12.6 Touchdown zone elevation: 1118 ft

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 11489 ft x 150 ft
- 2.12.5 Coordinates: 33-26-26.96N / 111-59-31.69W
- 2.12.6 Threshold elevation: 1135 ft
- 2.12.6 Touchdown zone elevation: 1135 ft

- 2.12.1 Designation: 07L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 10300 ft x 150 ft
- 2.12.5 Coordinates: 33-25-51.81N / 112-01-37.56W
- 2.12.6 Threshold elevation: 1110 ft
- 2.12.6 Touchdown zone elevation: 1116 ft

- 2.12.1 Designation: 25R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 10300 ft x 150 ft
- 2.12.5 Coordinates: 33-25-51.73N / 111-59-36.05W
- 2.12.6 Threshold elevation: 1134 ft
- 2.12.6 Touchdown zone elevation: 1134 ft

- 2.12.1 Designation: 07R
- 2.12.2 True Bearing: 90

2.12.3 Dimensions: 7800 ft x 150 ft
2.12.5 Coordinates: 33-25-43.89N /
112-01-37.57W
2.12.6 Threshold elevation: 1111 ft
2.12.6 Touchdown zone elevation: 1116 ft

2.12.1 Designation: 25L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 7800 ft x 150 ft
2.12.5 Coordinates: 33-25-43.84N /
112-00-00.00W
2.12.6 Threshold elevation: 1126 ft
2.12.6 Touchdown zone elevation: 1126 ft

2.12.1 Designation: H1
2.12.3 Dimensions: 60 ft x 60 ft

AD 2.13 Declared distances

2.13.1 Designation: 08
2.13.2 Takeoff run available: 11489
2.13.3 Takeoff distance available: 11489
2.13.4 Accelerate-stop distance available: 11489
2.13.5 Landing distance available: 10591

2.13.1 Designation: 26
2.13.2 Takeoff run available: 11489
2.13.3 Takeoff distance available: 11489
2.13.4 Accelerate-stop distance available: 11489
2.13.5 Landing distance available: 11489

AD 2.14 Approach and runway lighting

2.14.1 Designation: 08
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 26
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 07L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 07R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 119.2 MHz

2.18.1 Service designation: GND/P (NORTH)
2.18.3 Service designation: 119.75 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 120.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 123.7 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 123.7 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 124.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 124.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: APCH/P DEP/P IC
2.18.3 Service designation: 128.65 MHz

2.18.1 Service designation: GND/P (SOUTH)
2.18.3 Service designation: 132.55 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 239 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 254.3 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: GND/P CD/P
2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 269.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 269.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 269.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 269.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 363 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 363 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 124.9 MHz

2.18.1 Service designation: APCH/P DEP/P IC
2.18.3 Service designation: 353.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 353.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 281.45 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 127.575 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 278.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 08. Magnetic
variation: 12E

2.19.2 ILS identification: SYQ

2.19.5 Coordinates: 33-26-26.95N /
111-59-19.75W

2.19.6 Site elevation: 1145 ft

2.19.1 ILS type: DME for runway 08. Magnetic
variation: 12E

2.19.2 ILS identification: SYQ

2.19.5 Coordinates: 33-26-24.32N /
111-59-19.70W

2.19.6 Site elevation: 1149 ft
2.19.1 ILS type: Glide Slope for runway 08.
Magnetic variation: 12E

2.19.2 ILS identification: SYQ
2.19.5 Coordinates: 33-26-29.65N /
112-01-24.63W

2.19.6 Site elevation: 1111 ft

2.19.1 ILS type: DME for runway 26. Magnetic
variation: 12E

2.19.2 ILS identification: CWJ
2.19.5 Coordinates: 33-26-24.18N /
112-01-59.25W

2.19.6 Site elevation: 1119 ft

2.19.1 ILS type: Glide Slope for runway 26.
Magnetic variation: 12E

2.19.2 ILS identification: CWJ
2.19.5 Coordinates: 33-26-29.60N /
111-59-44.43W

2.19.6 Site elevation: 1129 ft

2.19.1 ILS type: Localizer for runway 26. Magnetic
variation: 12E

2.19.2 ILS identification: CWJ
2.19.5 Coordinates: 33-26-27.11N /
112-01-59.23W

2.19.6 Site elevation: 1105 ft

2.19.1 ILS type: Localizer for runway 07L.
Magnetic variation: 12E

2.19.2 ILS identification: PHX
2.19.5 Coordinates: 33-25-51.72N /
111-59-20.41W

2.19.6 Site elevation: 1133 ft

2.19.1 ILS type: Middle Marker for runway 07L.
Magnetic variation: 12E

2.19.2 ILS identification: PHX
2.19.5 Coordinates: 33-25-51.76N /
112-02-00.00W

2.19.6 Site elevation: 1304 ft

2.19.1 ILS type: DME for runway 07L. Magnetic
variation: 12E

2.19.2 ILS identification: PHX
2.19.5 Coordinates: 33-25-54.14N /
111-59-19.06W

2.19.6 Site elevation: 1142 ft

2.19.1 ILS type: Outer Marker for runway 07L.

Magnetic variation: 12E

2.19.2 ILS identification: PHX

2.19.5 Coordinates: 33-25-53.81N /
112-06-23.58W

2.19.6 Site elevation: 1056 ft

2.19.1 ILS type: Glide Slope for runway 07L.
Magnetic variation: 12E

2.19.2 ILS identification: PHX
2.19.5 Coordinates: 33-25-49.05N /
112-01-25.22W

2.19.6 Site elevation: 1106 ft

2.19.1 ILS type: Glide Slope for runway 07R.
Magnetic variation: 12E

2.19.2 ILS identification: AHA
2.19.5 Coordinates: 33-25-41.10N /
112-01-25.10W

2.19.6 Site elevation: 1109 ft

2.19.1 ILS type: Localizer for runway 07R.
Magnetic variation: 12E

2.19.2 ILS identification: AHA
2.19.5 Coordinates: 33-25-43.83N /
111-59-57.89W

2.19.6 Site elevation: 1123 ft

2.19.1 ILS type: DME for runway 07R. Magnetic
variation: 12E

2.19.2 ILS identification: AHA
2.19.5 Coordinates: 33-25-46.37N /
111-59-57.82W

2.19.6 Site elevation: 1135 ft

2.19.1 ILS type: DME for runway 25L. Magnetic
variation: 12E

2.19.2 ILS identification: RJG
2.19.5 Coordinates: 33-25-46.37N /
111-59-57.82W

2.19.6 Site elevation: 1135 ft

2.19.1 ILS type: Glide Slope for runway 25L.
Magnetic variation: 12E

2.19.2 ILS identification: RJG
2.19.5 Coordinates: 33-25-41.06N /
112-00-16.87W

2.19.6 Site elevation: 1120 ft

2.19.1 ILS type: Localizer for runway 25L.
Magnetic variation: 12E

2.19.2 ILS identification: RJG

2.19.5 Coordinates: 33-25-43.90N /
112-01-48.76W

2.19.6 Site elevation: 1103 ft

General Remarks:

FEE FOR ALL CHARTERS; TRAVEL CLUBS AND CERTAIN REVENUE PRODUCING AIRCRAFT.

TRAINING BY CIVIL TURBOJET AIRCRAFT PROHIBITED EXCEPT PRIOR PERMISSION
REQUIRED.

TAXIWAY A BETWEEN TAXIWAY A1 AND TAXIWAY A10 RESTRICTED TO AIRCRAFT
WINGSPAN 125 FT OR LESS.

TAXIWAY D RESTRICTED TO AIRCRAFT WINGSPAN 171 FT OR LESS.

ILS (PHX) RUNWAY 07L ANTENNA LOCATED 525 FT WEST OF TAXIWAY G3, 117 FT NORTH
TAXIWAY F CENTERLINE.

ILS (AHA) RUNWAY 07R ANTENNA LOCATED 525 FT. WEST OF TAXIWAY H3, 113 FT NORTH
TAXIWAY H CENTERLINE.

AIRCRAFT ENGINE RUN-UP FOR MAINTENANCE PROHIBITED EXCEPT PRIOR PERMISSION
REQUIRED. CONTACT DUTY SUPERVISORY (602) 273- 2008. NO ENGINE RUNS ON AIRPORT
BETWEEN 2300 AND 0500.

ANG: PHASE II BASH (THE HIGH BIRD POTENTIAL HAZARD TIME PERIOD) IS IN EFFECTIVE
AUG-OCT AND MAR-MAY.PHASE I BASH IS IN EFFECTIVE NOV-FEB AND JUN-JUL.

NOISE ABATEMENT PROCEDURES ARE IN AFFECT AT ALL TIMES. CONTACT 602-273-4300
FOR MORE INFORMATION.

NO EXPERIMENTAL FLIGHT OR GROUND DEMONSTRATION WITHOUT WRITTEN APPROVAL
OF AVIATION DIRECTOR PHONE 602-273-2072.

PERSONNEL AND EQUIPMENT WORKING IN THE VICINITY OF TERMINALS 2,3 & 4.

BIRD ACTIVITY WITHIN 10 MILES OF AIRPORT UP TO 10,000 MSL.

TAXIWAY R AND PORTIONS OF TAXIWAYS S AND T DIRECTLY BELOW THE ATCT ARE NON
VISIBLE AREAS FROM THE ATCT. PHOENIX ATCT UNABLE TO PROVIDE AIR TRAFFIC
CONTROL SERVICES TO AIRCRAFT WHILE ON TAXIWAY R, AND PORTIONS OF TAXIWAYS S
AND T.

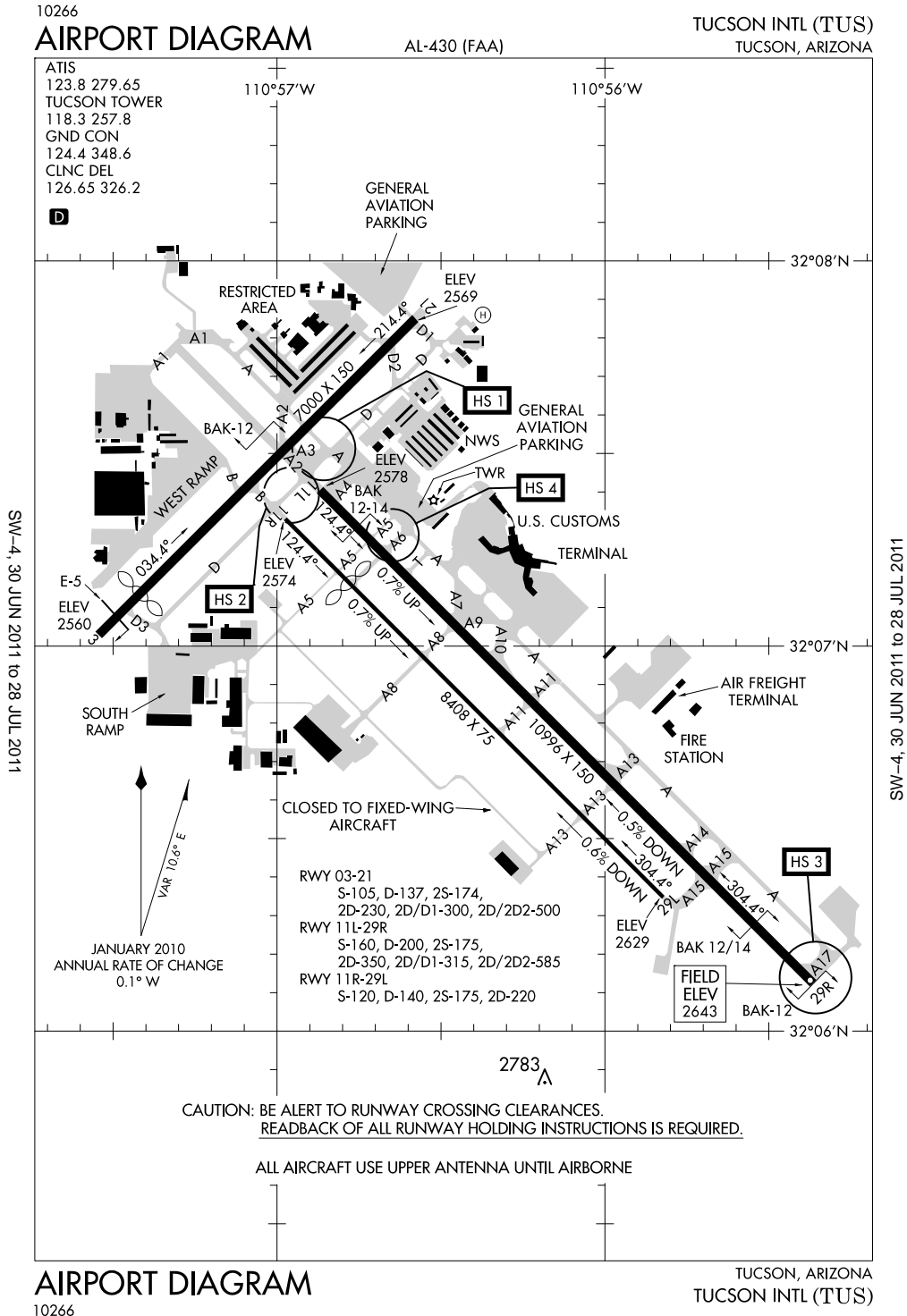
ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH
MODE C ON ALL TAXIWAYS AND RUNWAYS.

TAXIWAY D BETWEEN INTERSECTIONS TAXIWAYS D8 & D9 RESTRICTED TO AIRCRAFT WITH
WINGSPAN 135 FT OR LESS.

OVERHEAD TRAIN BRIDGE AT MIDPOINT OF TAXIWAY ;'R' PROVIDES 79 FT TAIL & UP TO 160
FT WINGTIP CLEARANCE FROM TAXIWAY CENTERLINE.OVERHEAD TRAIN BRIDGE AT

MIDPOINT OF TAXIWAY 'R' PROVIDES 79 FT TAIL & UP TO 160 FT WINGTIP CLEARANCE FROM TAXIWAY CENTERLINE.

Tucson, Arizona
Tucson International
ICAO Identifier KTUS



Tucson, AZ

Tucson Intl

ICAO Identifier KTUS

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 32-06-57.90N / 110-56-27.70W
- 2.2.2 From City: 6 Miles S Of Tucson, AZ
- 2.2.3 Elevation: 2643 ft
- 2.2.5 Magnetic variation: 12E (1995)
- 2.2.6 Airport Contact: Bonnie Allin
TUCSON APT AUTH 7005 S PLUMER
Tucson, AZ 85706 (520-573-8100)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 29L
- 2.10.1.b Type of obstacle: Pole (37 ft). Lighted
- 2.10.1.c Location of obstacle: 350 ft from Centerline

- 2.10.1.a. Runway designation: 29R
- 2.10.1.b Type of obstacle: Gnd (8 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 03
- 2.10.1.b Type of obstacle: Rr (21 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 250 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 11R

- 2.12.2 True Bearing: 135
- 2.12.3 Dimensions: 8408 ft x 75 ft
- 2.12.5 Coordinates: 32-07-19.57N / 110-56-58.75W
- 2.12.6 Threshold elevation: 2574 ft
- 2.12.6 Touchdown zone elevation: 2605 ft
- 2.12.7 Slope: 0.7UP

- 2.12.1 Designation: 29L
- 2.12.2 True Bearing: 315
- 2.12.3 Dimensions: 8408 ft x 75 ft
- 2.12.5 Coordinates: 32-06-20.72N / 110-55-49.66W
- 2.12.6 Threshold elevation: 2629 ft
- 2.12.6 Touchdown zone elevation: 2629 ft
- 2.12.7 Slope: 0.6DOWN

- 2.12.1 Designation: 11L
- 2.12.2 True Bearing: 135
- 2.12.3 Dimensions: 10996 ft x 150 ft
- 2.12.5 Coordinates: 32-07-24.13N / 110-56-52.48W
- 2.12.6 Threshold elevation: 2578 ft
- 2.12.6 Touchdown zone elevation: 2599 ft
- 2.12.7 Slope: 0.7UP

- 2.12.1 Designation: 29R
- 2.12.2 True Bearing: 315
- 2.12.3 Dimensions: 10996 ft x 150 ft
- 2.12.5 Coordinates: 32-06-00.00N / 110-55-22.15W
- 2.12.6 Threshold elevation: 2643 ft
- 2.12.6 Touchdown zone elevation: 2643 ft
- 2.12.7 Slope: 0.5DOWN

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 45
- 2.12.3 Dimensions: 7000 ft x 150 ft
- 2.12.5 Coordinates: 32-07-00.00N / 110-57-32.55W
- 2.12.6 Threshold elevation: 2560 ft
- 2.12.6 Touchdown zone elevation: 2572 ft

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 225
- 2.12.3 Dimensions: 7000 ft x 150 ft
- 2.12.5 Coordinates: 32-07-50.74N / 110-56-34.96W
- 2.12.6 Threshold elevation: 2569 ft
- 2.12.6 Touchdown zone elevation: 2572 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 03
- 2.13.2 Takeoff run available: 7000
- 2.13.3 Takeoff distance available: 7000
- 2.13.4 Accelerate-stop distance available: 7000
- 2.13.5 Landing distance available: 6160

- 2.13.1 Designation: 21
- 2.13.2 Takeoff run available: 6000
- 2.13.3 Takeoff distance available: 7000
- 2.13.4 Accelerate-stop distance available: 6000
- 2.13.5 Landing distance available: 6000

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 11R
- 2.14.4 Visual approach slope indicator system:
4-light PAPI on left

- 2.14.1 Designation: 11L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system:
4-light PAPI on left

- 2.14.1 Designation: 29R
- 2.14.4 Visual approach slope indicator system:
4-light PAPI on left

- 2.14.1 Designation: 21
- 2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.3 MHz

- 2.18.1 Service designation: LCL/S
- 2.18.3 Service designation: 119 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: ATIS (520)741-1177
- 2.18.3 Service designation: 123.8 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 124.4 MHz

- 2.18.1 Service designation: CD
- 2.18.3 Service designation: 126.65 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 243 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 257.8 MHz

- 2.18.1 Service designation: CD
- 2.18.3 Service designation: 326.2 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 348.6 MHz

- 2.18.1 Service designation: ANG COMD POST
- 2.18.3 Service designation: 138.525 MHz

- 2.18.1 Service designation: ATIS
- 2.18.3 Service designation: 279.65 MHz
- 2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: Localizer for runway 11L.
Magnetic variation: 12E
- 2.19.2 ILS identification: TUS
- 2.19.5 Coordinates: 32-05-53.51N /
110-55-00.00W
- 2.19.6 Site elevation: 2660 ft

- 2.19.1 ILS type: Glide Slope for runway 11L.
Magnetic variation: 12E
- 2.19.2 ILS identification: TUS
- 2.19.5 Coordinates: 32-07-14.77N /
110-56-48.06W
- 2.19.6 Site elevation: 2580 ft

- 2.19.1 ILS type: Middle Marker for runway 11L.
Magnetic variation: 12E
- 2.19.2 ILS identification: TUS
- 2.19.5 Coordinates: 32-07-51.90N /
110-57-22.60W
- 2.19.6 Site elevation: 2550 ft

- 2.19.1 ILS type: Outer Marker for runway 11L.
Magnetic variation: 12E
- 2.19.2 ILS identification: TUS
- 2.19.5 Coordinates: 32-10-54.55N /
111-00-57.52W
- 2.19.6 Site elevation: 2500 ft

2.19.1 ILS type: DME for runway 11L. Magnetic variation: 12E 110-55-00.00W
2.19.2 ILS identification: TUS 2.19.6 Site elevation: 2659 ft
2.19.5 Coordinates: 32-05-54.93N /

General Remarks:

AIRCRAFT DEPG RUNWAY 11R REQUIRED TO ATTAIN AT LEAST 400' AGL PRIOR TO STARTING TURN.

PORTIONS OF TAXIWAY D NOT VISIBLE FROM ATCT DUE TO HANGARS.

RUNWAY 11L/29R HAS DISTANCE REMAINING MARKINGS ON NE SIDE. RUNWAY 03/21 HAS DISTANCE REMAINING MARKERS ON SE SIDE.

NO B-747 TRAINING EXCEPT PRIOR PERMISSION REQUIRED; NO FLIGHT TRAINING 2200-0600 EXCEPT PRIOR PERMISSION REQUIRED; CALL FLIGHTLINE OFFICE 520-573-8128.

B747 AIRCRAFT TAXI WITH INBOARD ENGINES ONLY.

TAXIWAY T - GENERAL AVIATION TAXIWAY, 30,000 LBS OR LESS.

ANG: JUMP START AIRCRAFT CONTACT ANG CMD POST 520-295-6371 20 MIN PRIOR TO ARR.

ANG: PRIOR PERMISSION REQUIRED DSN 844-6371, C520-295-6371, FAX EXTENSION 6374.

ANG: BASE OPERATIONS OPR 1300-2400Z++MON-FRI EXCEPT HOLIDAY.

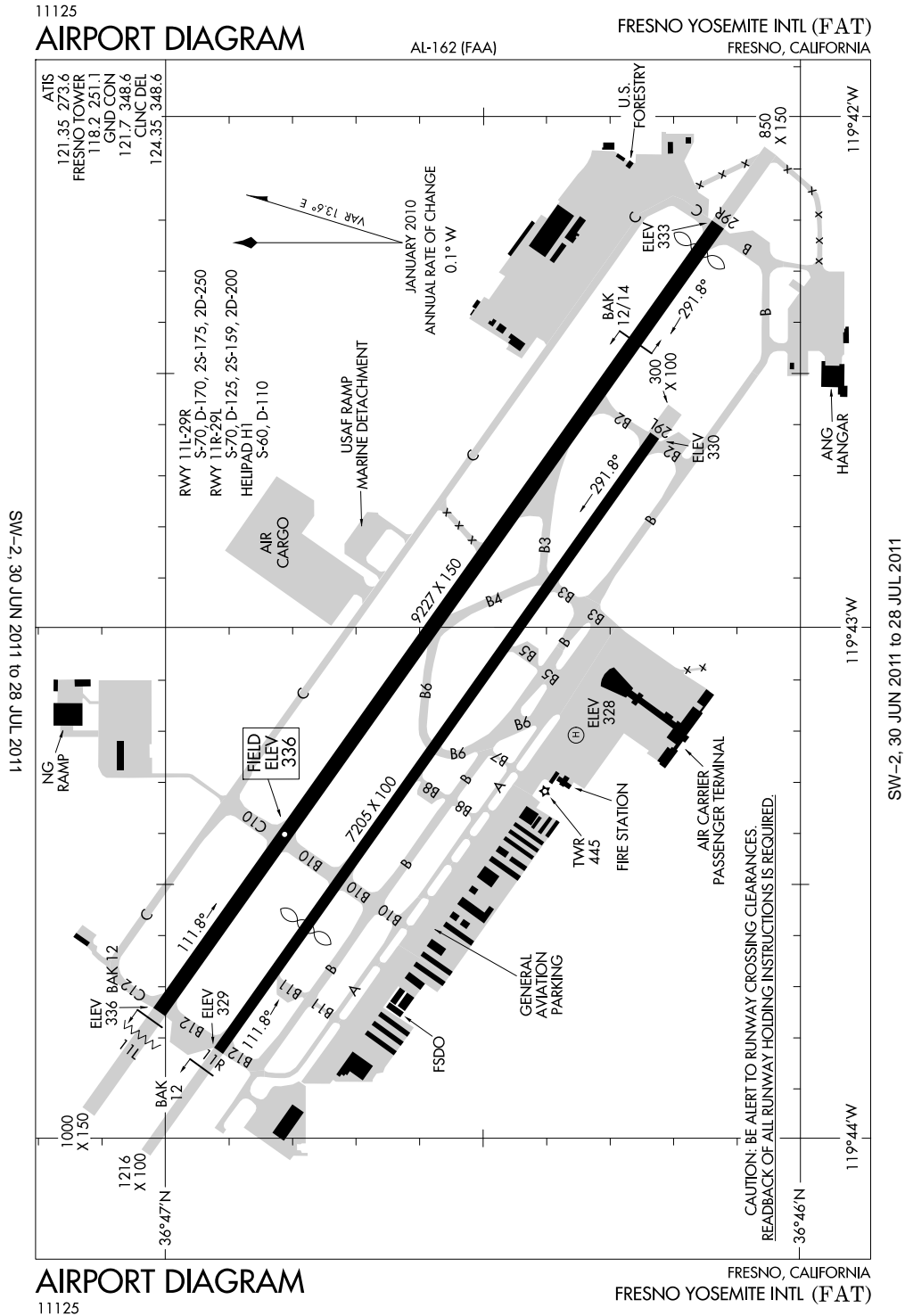
AIR CARRIERS USE RUNWAY 11L/29R.

RUNWAY 11R/29L RESTRICTED TO AIRCRAFT WITH WINGSPAN LESS THAN 73 FT & LANDING SPEED LESS THAN 120 KNOTS.

SERVICE-A-GEAR: BAK-12B IN RUNWAY 11L OVERRUN HAS 850' RUN OUT.

HELICOPTER OPERATIONS LOCATED SOUTH OF RUNWAY 11R/29L & WEST OF TAXIWAY A13.

Fresno, California Fresno Yosemite International ICAO Identifier KFAT



Fresno, CA
Fresno Yosemite Intl
ICAO Identifier KFAT

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 36-46-34.30N / 119-43-00.00W
- 2.2.2 From City: 5 Miles NE Of Fresno, CA
- 2.2.3 Elevation: 336 ft
- 2.2.5 Magnetic variation: 14E (2005)
- 2.2.6 Airport Contact: Russell C. Widmar, A.A.E.
4995 E CLINTON WAY
Fresno, CA 93727
(559-621-4500)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 11L
- 2.10.1.b Type of obstacle: Pole (31 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 650 ft from Centerline
- 2.10.1.a. Runway designation: 29R
- 2.10.1.b Type of obstacle: Road (16 ft). Lighted
- 2.10.1.c Location of obstacle: 580 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 70 ft x 70 ft
- 2.12.1 Designation: 11L
- 2.12.2 True Bearing: 125
- 2.12.3 Dimensions: 9227 ft x 150 ft

- 2.12.5 Coordinates: 36-47-00.00N / 119-43-45.17W
- 2.12.6 Threshold elevation: 336 ft
- 2.12.6 Touchdown zone elevation: 336 ft

- 2.12.1 Designation: 29R
- 2.12.2 True Bearing: 305
- 2.12.3 Dimensions: 9227 ft x 150 ft
- 2.12.5 Coordinates: 36-46-00.00N / 119-42-12.68W
- 2.12.6 Threshold elevation: 333 ft
- 2.12.6 Touchdown zone elevation: 333 ft

- 2.12.1 Designation: 11R
- 2.12.2 True Bearing: 125
- 2.12.3 Dimensions: 7205 ft x 100 ft
- 2.12.5 Coordinates: 36-46-55.01N / 119-43-49.70W
- 2.12.6 Threshold elevation: 329 ft
- 2.12.6 Touchdown zone elevation: 333 ft

- 2.12.1 Designation: 29L
- 2.12.2 True Bearing: 305
- 2.12.3 Dimensions: 7205 ft x 100 ft
- 2.12.5 Coordinates: 36-46-13.79N / 119-42-37.48W
- 2.12.6 Threshold elevation: 330 ft
- 2.12.6 Touchdown zone elevation: 330 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 11L
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.1 Designation: 29R
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.1 Designation: 29L
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 119.6 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 121.35 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 132 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 251.1 MHz

2.18.1 Service designation: NG OPNS
2.18.3 Service designation: 255.8 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 273.6 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: ANG
2.18.3 Service designation: 298.3 MHz

2.18.1 Service designation: GND/P CD/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: NG OPNS
2.18.3 Service designation: 40.95 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 323.25 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 268.7 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 351.95 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 11L.
Magnetic variation: 14E

2.19.2 ILS identification: RPW
2.19.5 Coordinates: 36-46-00.00N /
119-42-00.00W
2.19.6 Site elevation: 333 ft

2.19.1 ILS type: DME for runway 11L. Magnetic
variation: 14E

2.19.2 ILS identification: RPW
2.19.5 Coordinates: 36-47-10.83N /
119-43-56.63W
2.19.6 Site elevation: 330 ft

2.19.1 ILS type: Localizer for runway 29R.
Magnetic variation: 14E

2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-47-00.00N /
119-43-58.60W
2.19.6 Site elevation: 331 ft

2.19.1 ILS type: DME for runway 29R. Magnetic
variation: 14E

2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-47-10.83N /
119-43-56.63W
2.19.6 Site elevation: 347 ft

2.19.1 ILS type: Outer Marker for runway 29R.
Magnetic variation: 14E

2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-43-48.19N /
119-38-00.00W
2.19.6 Site elevation: 340 ft

2.19.1 ILS type: Middle Marker for runway 29R.
Magnetic variation: 14E

2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-45-47.67N /
119-41-37.41W
2.19.6 Site elevation: 330 ft

2.19.1 ILS type: Inner Marker for runway 29R.
Magnetic variation: 14E
2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-46-00.00N /
119-42-00.00W
2.19.6 Site elevation: 330 ft

2.19.1 ILS type: Glide Slope for runway 29R.
Magnetic variation: 14E
2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-46-18.84N /
119-42-23.48W
2.19.6 Site elevation: 331 ft

General Remarks:

FOR TAXIWAY A; 40 FT WIDE; PRIOR APPROVAL REQUIRED AIRCRAFT OVER 60000 LBS GROSS WEIGHT.

NO INTERSECTION DEPS TO THE NW EXCEPT THE INTERSECTION OF RUNWAY 29R AT TAXIWAY B2 OR DURING SINGLE RUNWAY OPERATIONS.

FRESNO YOSEMITE INTL IS NOISE SENSITIVE; NOISE ABATEMENT PROCEDURES IN EFFECT.

NO MULTIPLE APPROACHES AND LANDINGS 2200-0700 MONDAY THRU SATURDAY; 1800-1000 SUNDAY.

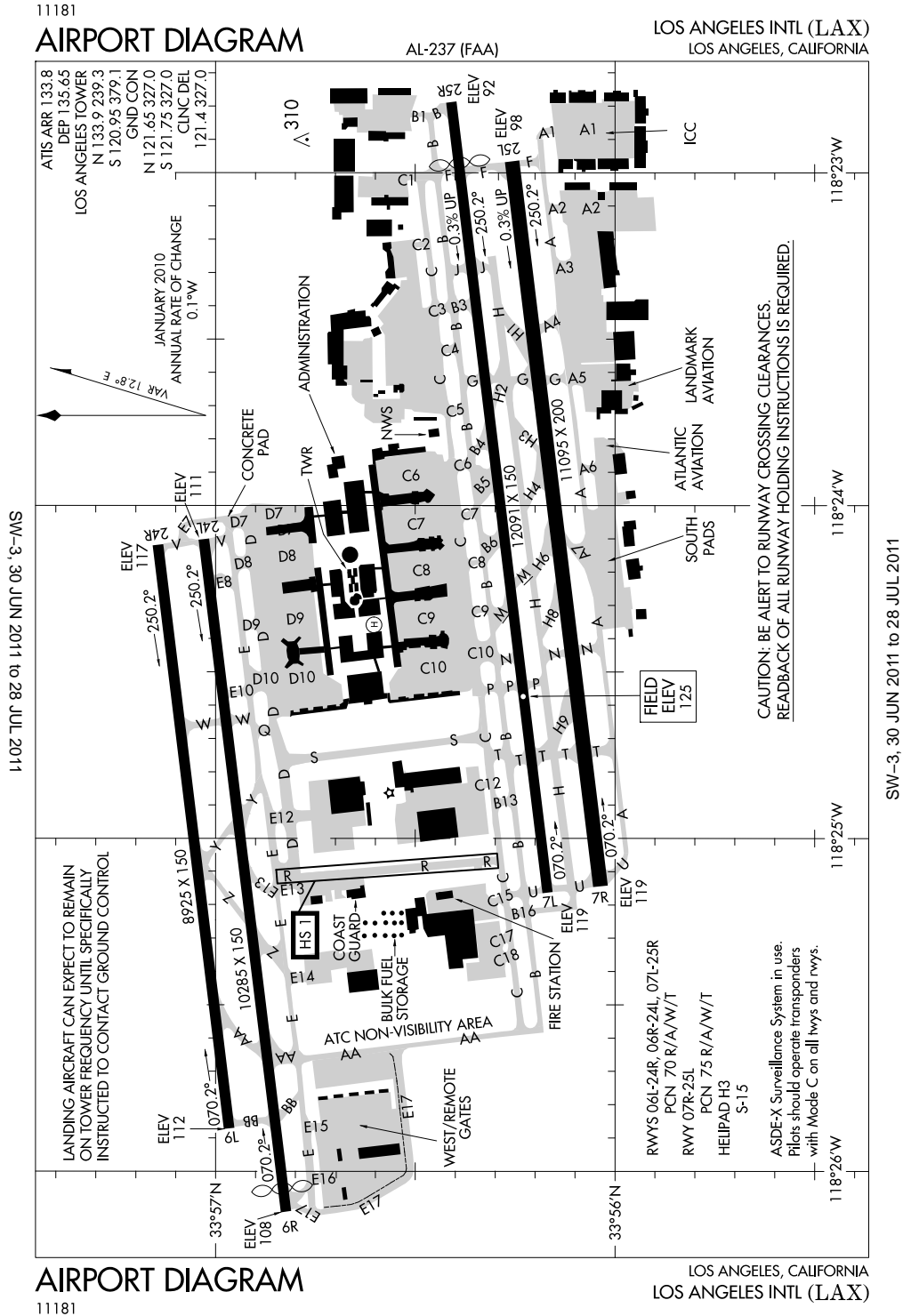
POSSIBLE WAKE TURBULENCE OR WIND SHEAR ARR TO RUNWAY 29L OR DEP FROM RUNWAY 11R. JET TESTING CONDUCTED AT AIR NATIONAL GUARD RAMP LOCATED AT SE CORNER OF AIRPORT.

(E93) HELIPORT LOCATED LATITUDE 36-46-20.82N LONG 119-43-11.51W.

NUMEROUS BIRDS IN THE VICINITY OF AIRPORT.

LIGHTED RUNWAY DISTANCE REMAINING MARKERS S SIDE OF RUNWAY 11R/29L; LIGHTED RUNWAY DISTANCE REMAINING MARKERS BOTH SIDES OF RUNWAY 11L/29R.

Los Angeles, California
Los Angeles International
ICAO Identifier KLAX



Los Angeles, CA
Los Angeles Intl
ICAO Identifier KLAX

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 33-56-33.08N / 118-24-25.78W
- 2.2.2 From City: 9 Miles SW Of Los Angeles, CA
- 2.2.3 Elevation: 125 ft
- 2.2.5 Magnetic variation: 14E (1980)
- 2.2.6 Airport Contact: Jacqueline Yaft
ONE WORLD WAY
Los Angeles, CA 90009
(424-646-5060)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 25R
- 2.10.1.b Type of obstacle: Rr (25 ft). Lighted
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 07R
- 2.10.1.b Type of obstacle: Pole (67 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 825 ft from Centerline

- 2.10.1.a. Runway designation: 25L
- 2.10.1.b Type of obstacle: Rr (21 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 600 ft from Centerline

- 2.10.1.a. Runway designation: 06L
- 2.10.1.b Type of obstacle: Pole (61 ft). Not Lighted

- or Marked
- 2.10.1.c Location of obstacle: 300 ft from Centerline

- 2.10.1.a. Runway designation: 24R
- 2.10.1.b Type of obstacle: Sign (42 ft). Lighted
- 2.10.1.c Location of obstacle: 350 ft from Centerline

- 2.10.1.a. Runway designation: 06R
- 2.10.1.b Type of obstacle: Pole (9 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 375 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 07L
- 2.12.2 True Bearing: 83
- 2.12.3 Dimensions: 12091 ft x 150 ft
- 2.12.4 PCN: 70 R/A/W/T
- 2.12.5 Coordinates: 33-56-00.00N / 118-25-00.00W
- 2.12.6 Threshold elevation: 118 ft
- 2.12.6 Touchdown zone elevation: 126 ft

- 2.12.1 Designation: 25R
- 2.12.2 True Bearing: 263
- 2.12.3 Dimensions: 12091 ft x 150 ft
- 2.12.4 PCN: 70 R/A/W/T
- 2.12.5 Coordinates: 33-56-23.54N / 118-22-47.18W
- 2.12.6 Threshold elevation: 92 ft
- 2.12.6 Touchdown zone elevation: 102 ft

- 2.12.1 Designation: 07R
- 2.12.2 True Bearing: 83
- 2.12.3 Dimensions: 11095 ft x 200 ft
- 2.12.4 PCN: 75 R/A/W/T
- 2.12.5 Coordinates: 33-56-00.00N / 118-25-00.00W
- 2.12.6 Threshold elevation: 119 ft
- 2.12.6 Touchdown zone elevation: 125 ft

- 2.12.1 Designation: 25L
- 2.12.2 True Bearing: 263
- 2.12.3 Dimensions: 11095 ft x 200 ft
- 2.12.4 PCN: 75 R/A/W/T
- 2.12.5 Coordinates: 33-56-14.49N / 118-22-57.75W
- 2.12.6 Threshold elevation: 98 ft
- 2.12.6 Touchdown zone elevation: 104 ft

2.12.1 Designation: 06L
2.12.2 True Bearing: 83
2.12.3 Dimensions: 8925 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-56-56.79N /
118-25-52.16W
2.12.6 Threshold elevation: 112 ft
2.12.6 Touchdown zone elevation: 117 ft

2.12.1 Designation: 24R
2.12.2 True Bearing: 263
2.12.3 Dimensions: 8925 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-57-00.00N /
118-24-00.00W
2.12.6 Threshold elevation: 117 ft
2.12.6 Touchdown zone elevation: 120 ft

2.12.1 Designation: 06R
2.12.2 True Bearing: 83
2.12.3 Dimensions: 10285 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-56-48.27N /
118-26-00.00W
2.12.6 Threshold elevation: 108 ft
2.12.6 Touchdown zone elevation: 114 ft

2.12.1 Designation: 24L
2.12.2 True Bearing: 263
2.12.3 Dimensions: 10285 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-57-00.00N /
118-24-00.00W
2.12.6 Threshold elevation: 111 ft
2.12.6 Touchdown zone elevation: 121 ft

2.12.1 Designation: H1
2.12.3 Dimensions: 63 ft x 63 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system

with runway alignment indicator lights

2.14.1 Designation: 07R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.10 Remarks: Runway 25L ALSF2 Operates
As SSALR Till Weather Goes Below Vfr.

2.14.1 Designation: 06L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 24R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left
2.14.10 Remarks: Runway 24R ALSF2 Operates
As SSALR Till Weather Goes Below Vfr.

2.14.1 Designation: 06R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 24L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 119.8 MHz
2.18.1 Service designation: CD/S
2.18.3 Service designation: 120.35 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 120.95 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.4 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: SPECIAL FLIGHT
RULE AREA
2.18.3 Service designation: 128.55 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 133.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 133.9 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P CD
2.18.3 Service designation: 327 MHz

2.18.1 Service designation: SAMSO FLT OPS
2.18.3 Service designation: 372.2 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 379.1 MHz

AD 2.19 Radio navigation and landing aids
2.19.1 ILS type: DME for runway 07L. Magnetic

variation: 14E
2.19.2 ILS identification: IAS
2.19.5 Coordinates: 33-56-00.00N /
118-25-19.64W
2.19.6 Site elevation: 126 ft

2.19.1 ILS type: Localizer for runway 07L.
Magnetic variation: 14E
2.19.2 ILS identification: IAS
2.19.5 Coordinates: 33-56-24.72N /
118-22-35.64W
2.19.6 Site elevation: 88 ft

2.19.1 ILS type: Glide Slope for runway 07L.
Magnetic variation: 14E
2.19.2 ILS identification: IAS
2.19.5 Coordinates: 33-56-00.00N /
118-24-56.47W
2.19.6 Site elevation: 120 ft

2.19.1 ILS type: Middle Marker for runway 07L.
Magnetic variation: 14E
2.19.2 ILS identification: IAS
2.19.5 Coordinates: 33-56-00.00N /
118-25-46.90W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 25R. Magnetic
variation: 14E
2.19.2 ILS identification: CFN
2.19.5 Coordinates: 33-56-00.00N /
118-25-19.64W
2.19.6 Site elevation: 126 ft

2.19.1 ILS type: Outer Marker for runway 25R.
Magnetic variation: 14E
2.19.2 ILS identification: CFN
2.19.5 Coordinates: 33-56-53.50N /
118-16-32.20W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 25R.
Magnetic variation: 14E
2.19.2 ILS identification: CFN
2.19.5 Coordinates: 33-56-00.00N /
118-25-17.98W
2.19.6 Site elevation: 119 ft

2.19.1 ILS type: Glide Slope for runway 25R.
Magnetic variation: 14E
2.19.2 ILS identification: CFN

2.19.5 Coordinates: 33-56-17.85N /
118-23-10.21W

2.19.6 Site elevation: 96 ft

2.19.1 ILS type: Middle Marker for runway 25R.
Magnetic variation: 14E

2.19.2 ILS identification: CFN

2.19.5 Coordinates: 33-56-25.90N /
118-22-24.40W

2.19.6 Site elevation: 87 ft

2.19.1 ILS type: Localizer for runway 07R.
Magnetic variation: 14E

2.19.2 ILS identification: MKZ

2.19.5 Coordinates: 33-56-15.76N /
118-22-45.34W

2.19.6 Site elevation: 92 ft

2.19.1 ILS type: DME for runway 07R. Magnetic
variation: 14E

2.19.2 ILS identification: MKZ

2.19.5 Coordinates: 33-56-00.00N /
118-25-19.78W

2.19.6 Site elevation: 126 ft

2.19.1 ILS type: Glide Slope for runway 07R.
Magnetic variation: 14E

2.19.2 ILS identification: MKZ

2.19.5 Coordinates: 33-56-00.00N /
118-24-55.54W

2.19.6 Site elevation: 119 ft

2.19.1 ILS type: Middle Marker for runway 07R.
Magnetic variation: 14E

2.19.2 ILS identification: MKZ

2.19.5 Coordinates: 33-55-58.50N /
118-25-41.70W

2.19.6 Site elevation: 104 ft

2.19.1 ILS type: Localizer for runway 25L.
Magnetic variation: 14E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-55-59.85N /
118-25-20.81W

2.19.6 Site elevation: 119 ft

2.19.1 ILS type: Inner Marker for runway 25L.
Magnetic variation: 14E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-56-16.30N /
118-22-46.10W

2.19.6 Site elevation: 91 ft

2.19.1 ILS type: Outer Marker for runway 25L.
Magnetic variation: 14E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-56-53.50N /
118-16-32.20W

2.19.6 Site elevation: 127 ft

2.19.1 ILS type: Middle Marker for runway 25L.
Magnetic variation: 14E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-56-18.50N /
118-22-23.90W

2.19.6 Site elevation: 84 ft

2.19.1 ILS type: Glide Slope for runway 25L.
Magnetic variation: 14E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-56-17.75N /
118-23-10.20W

2.19.6 Site elevation: 96 ft

2.19.1 ILS type: DME for runway 25L. Magnetic
variation: 14E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-56-00.00N /
118-25-19.78W

2.19.6 Site elevation: 126 ft

2.19.1 ILS type: Localizer for runway 06L.
Magnetic variation: 14E

2.19.2 ILS identification: UWU

2.19.5 Coordinates: 33-57-00.00N /
118-23-56.74W

2.19.6 Site elevation: 106 ft

2.19.1 ILS type: Glide Slope for runway 06L.
Magnetic variation: 14E

2.19.2 ILS identification: UWU

2.19.5 Coordinates: 33-56-54.57N /
118-25-39.81W

2.19.6 Site elevation: 109 ft

2.19.1 ILS type: DME for runway 06L. Magnetic
variation: 14E

2.19.2 ILS identification: UWU

2.19.5 Coordinates: 33-56-51.00N /
118-26-27.00W

2.19.6 Site elevation: 133 ft

2.19.1 ILS type: Middle Marker for runway 06L.
Magnetic variation: 14E
2.19.2 ILS identification: UWU
2.19.5 Coordinates: 33-56-50.80N /
118-26-25.80W
2.19.6 Site elevation: 121 ft

2.19.1 ILS type: DME for runway 24R. Magnetic
variation: 14E
2.19.2 ILS identification: OSS
2.19.5 Coordinates: 33-56-51.00N /
118-26-27.00W
2.19.6 Site elevation: 133 ft
2.19.1 ILS type: Glide Slope for runway 24R.
Magnetic variation: 14E
2.19.2 ILS identification: OSS
2.19.5 Coordinates: 33-57-00.00N /
118-24-18.51W
2.19.6 Site elevation: 115 ft

2.19.1 ILS type: Inner Marker for runway 24R.
Magnetic variation: 14E
2.19.2 ILS identification: OSS
2.19.5 Coordinates: 33-57-00.00N /
118-23-56.00W
2.19.6 Site elevation: 105 ft

2.19.1 ILS type: Outer Marker for runway 24R.
Magnetic variation: 14E
2.19.2 ILS identification: OSS
2.19.5 Coordinates: 33-57-53.70N /
118-16-40.70W
2.19.6 Site elevation: 136 ft

2.19.1 ILS type: Localizer for runway 24R.
Magnetic variation: 14E
2.19.2 ILS identification: OSS
2.19.5 Coordinates: 33-56-53.17N /
118-26-27.50W
2.19.6 Site elevation: 123 ft

2.19.1 ILS type: Middle Marker for runway 24R.
Magnetic variation: 14E
2.19.2 ILS identification: OSS
2.19.5 Coordinates: 33-57-11.00N / 118-23-33.00W
2.19.6 Site elevation: 104 ft

2.19.1 ILS type: Localizer for runway 06R.
Magnetic variation: 14E
2.19.2 ILS identification: GPE
2.19.5 Coordinates: 33-57-00.00N /

118-23-55.57W
2.19.6 Site elevation: 106 ft

2.19.1 ILS type: Glide Slope for runway 06R.
Magnetic variation: 14E
2.19.2 ILS identification: GPE
2.19.5 Coordinates: 33-56-52.61N /
118-25-54.09W
2.19.6 Site elevation: 106 ft

2.19.1 ILS type: Middle Marker for runway 06R.
Magnetic variation: 14E
2.19.2 ILS identification: GPE
2.19.5 Coordinates: 33-56-45.50N /
118-26-33.30W
2.19.6 Site elevation: 65 ft

2.19.1 ILS type: DME for runway 06R. Magnetic
variation: 14E
2.19.2 ILS identification: GPE
2.19.5 Coordinates: 33-56-49.97N /
118-26-22.78W
2.19.6 Site elevation: 133 ft

2.19.1 ILS type: DME for runway 24L. Magnetic
variation: 14E
2.19.2 ILS identification: HQB
2.19.5 Coordinates: 33-56-49.97N /
118-26-22.78W
2.19.6 Site elevation: 133 ft

2.19.1 ILS type: Outer Marker for runway 24L.
Magnetic variation: 14E
2.19.2 ILS identification: HQB
2.19.5 Coordinates: 33-57-53.70N /
118-16-40.70W
2.19.6 Site elevation: 136 ft

2.19.1 ILS type: Localizer for runway 24L.
Magnetic variation: 14E
2.19.2 ILS identification: HQB
2.19.5 Coordinates: 33-56-46.73N /
118-26-22.18W
2.19.6 Site elevation: 122 ft

2.19.1 ILS type: Glide Slope for runway 24L.
Magnetic variation: 14E
2.19.2 ILS identification: HQB
2.19.5 Coordinates: 33-57-00.00N /
118-24-18.49W
2.19.6 Site elevation: 115 ft

206, 207,208,209).

FOR B-777-300 AND 300ER/A340-600 AIRCRAFT OPERATION RESTRICTIONS CONTACT LAX AIRFIELD OPERATIONS (310) 646-4265.

TOM BRADLEY INTERNATIONAL GATES: CHECK LAWA (LOS ANGELES WORLD AIRPORT) RULES AND REGULATIONS FOR LATEST OPERATING PROCEDURES.

TAXIWAY E-17: A340-600, B777-300/300ER AIRCRAFT NORTHBOUND TURN ONTO TAXIWAY E-17 FROM WESTBOUND TAXIWAY E PROHIBITED.

TAXIWAY E: A340-600, B777-300/300ER AIRCRAFT WESTBOUND TURN ONTO TAXIWAY E FROM SOUTHBOUND TAXIWAY BB PROHIBITED.

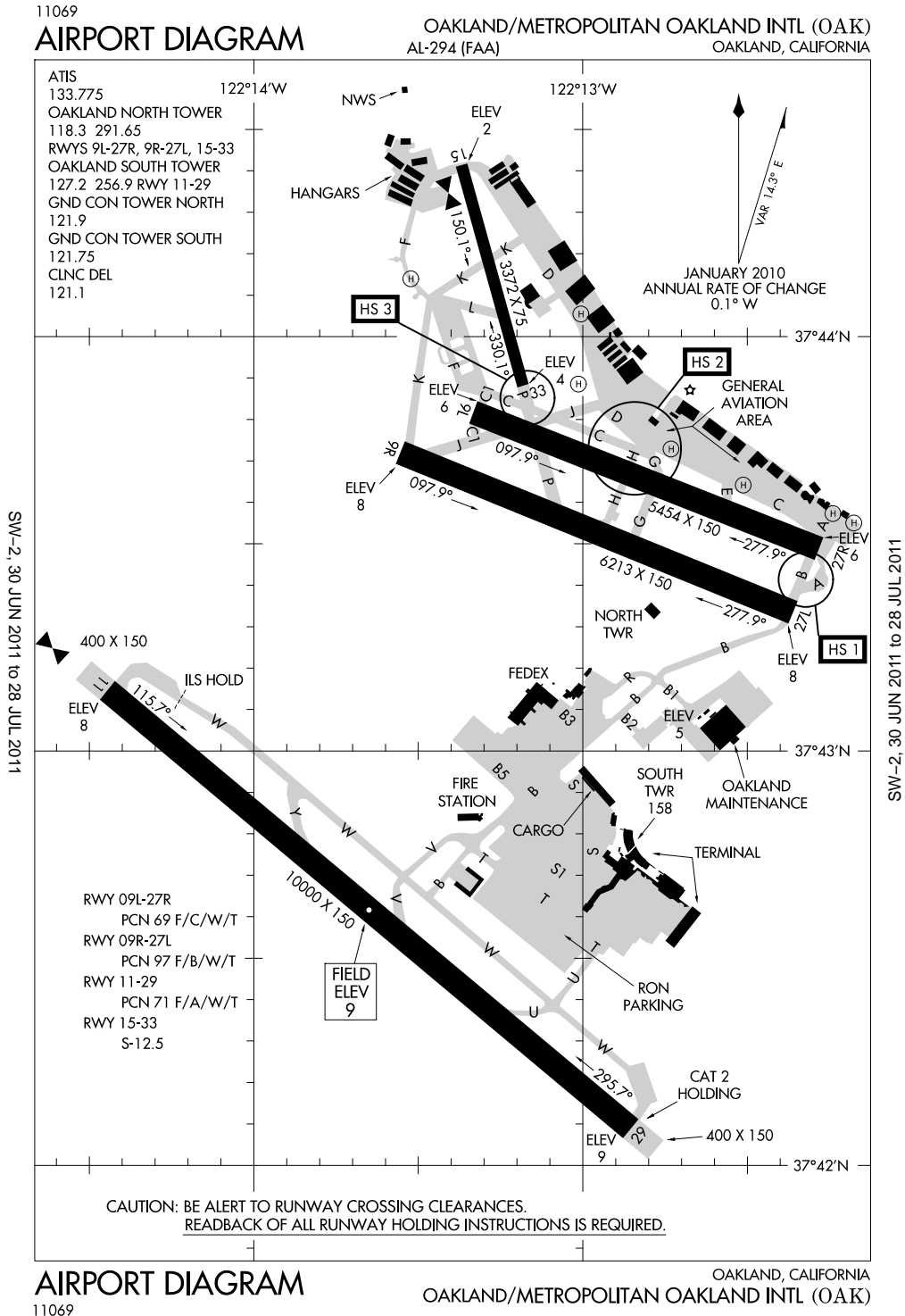
TAXIWAY C-8: A340-600, B777-300/300ER AIRCRAFT PROHIBITED ON TAXIWAY C-8 BETWEEN TAXIWAY B AND TAXIWAY C.

TAXIWAY C-9: A340-600, B777-300/300ER AIRCRAFT PROHIBITED ON TAXIWAY C-9 BETWEEN TAXIWAY B AND TAXIWAY C.

A-380 OPERATIONS CONTACT LAX AIRFIELD OPERATIONS (310) 646-4265 FOR AIRCRAFT MOVEMENT PROCEDURES.

TAXILANE D7 SOUTH OF TAXIWAY E RESTRICTED TO 767-300 AIRCRAFT AND SMALLER.

Oakland, California Metropolitan Oakland International ICAO Identifier KOAK



Oakland, CA
Metropolitan Oakland Intl
ICAO Identifier KOAK

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 37-43-16.60N / 122-13-14.60W
- 2.2.2 From City: 4 Miles S Of Oakland, CA
- 2.2.3 Elevation: 9 ft
- 2.2.5 Magnetic variation: 16E (1995)
- 2.2.6 Airport Contact: Rob Forester
METROPOLITAN OAKLAND INTL ARPT
Oakland, CA 94621 (510-563-6436)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 27R
- 2.10.1.b Type of obstacle: Bldg (11 ft). Lighted
- 2.10.1.c Location of obstacle: 480 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09L
- 2.12.2 True Bearing: 112
- 2.12.3 Dimensions: 5454 ft x 150 ft
- 2.12.4 PCN: 69 F/C/W/T
- 2.12.5 Coordinates: 37-43-49.67N / 122-13-19.80W
- 2.12.6 Threshold elevation: 6 ft
- 2.12.6 Touchdown zone elevation: 6 ft

- 2.12.1 Designation: 27R
- 2.12.2 True Bearing: 292
- 2.12.3 Dimensions: 5454 ft x 150 ft
- 2.12.4 PCN: 69 F/C/W/T

- 2.12.5 Coordinates: 37-43-29.32N / 122-12-16.93W
- 2.12.6 Threshold elevation: 6 ft
- 2.12.6 Touchdown zone elevation: 7 ft

- 2.12.1 Designation: 09R
- 2.12.2 True Bearing: 112
- 2.12.3 Dimensions: 6213 ft x 150 ft
- 2.12.4 PCN: 97 F/B/W/T
- 2.12.5 Coordinates: 37-43-43.35N / 122-13-33.25W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 27L
- 2.12.2 True Bearing: 292
- 2.12.3 Dimensions: 6213 ft x 150 ft
- 2.12.4 PCN: 97 F/B/W/T
- 2.12.5 Coordinates: 37-43-20.18N / 122-12-21.63W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 11
- 2.12.2 True Bearing: 129
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.4 PCN: 71 F/A/W/T
- 2.12.5 Coordinates: 37-43-00.00N / 122-14-26.65W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 29
- 2.12.2 True Bearing: 310
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.4 PCN: 71 F/A/W/T
- 2.12.5 Coordinates: 37-42-00.00N / 122-12-51.32W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 164
- 2.12.3 Dimensions: 3372 ft x 75 ft
- 2.12.5 Coordinates: 37-44-25.01N / 122-13-22.09W
- 2.12.6 Threshold elevation: 2 ft
- 2.12.6 Touchdown zone elevation: 5 ft

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 344

2.12.3 Dimensions: 3372 ft x 75 ft
2.12.5 Coordinates: 37-43-52.90N /
122-13-10.83W
2.12.6 Threshold elevation: 4 ft
2.12.6 Touchdown zone elevation: 5 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09L
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 27R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 09R
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 27L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 11
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 29
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: CD
2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 124.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 127.2 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 133.775 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 291.65 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 27R.
Magnetic variation: 16E
2.19.2 ILS identification: OAK
2.19.5 Coordinates: 37-43-54.33N /
122-13-34.24W
2.19.6 Site elevation: 3 ft

2.19.1 ILS type: Middle Marker for runway 27R.
Magnetic variation: 16E
2.19.2 ILS identification: OAK
2.19.5 Coordinates: 37-43-16.88N /
122-11-38.86W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Glide Slope for runway 27R.
Magnetic variation: 16E
2.19.2 ILS identification: OAK
2.19.5 Coordinates: 37-43-28.59N /
122-12-30.62W
2.19.6 Site elevation: 3 ft

2.19.1 ILS type: Outer Marker for runway 27R.
Magnetic variation: 16E
2.19.2 ILS identification: OAK
2.19.5 Coordinates: 37-41-54.13N /
122-07-25.03W
2.19.6 Site elevation: 30 ft

2.19.1 ILS type: Outer Marker for runway 11.
Magnetic variation: 16E
2.19.2 ILS identification: AAZ
2.19.5 Coordinates: 37-46-54.04N /
122-19-53.69W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Middle Marker for runway 11.
Magnetic variation: 16E
2.19.2 ILS identification: AAZ
2.19.5 Coordinates: 37-43-31.45N /
122-15-00.00W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Localizer for runway 11. Magnetic
variation: 16E
2.19.2 ILS identification: AAZ
2.19.5 Coordinates: 37-42-00.00N /
122-12-46.64W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Glide Slope for runway 11.
Magnetic variation: 16E
2.19.2 ILS identification: AAZ
2.19.5 Coordinates: 37-43-00.00N /
122-14-13.82W
2.19.6 Site elevation: 4 ft

2.19.1 ILS type: Glide Slope for runway 29.
Magnetic variation: 16E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-42-00.00N /
122-13-00.00W

General Remarks:

BIRDS ON & IN THE VICINITY OF AIRPORT.

400 FT BLAST PAD RUNWAY 29 & 500 FT BLAST PAD RUNWAY 11.

RUNWAYS 09L/27R & 09R/27L HAVE CENTERLINE REFLECTORS.

NOISE PROHIBITIONS NOT APPLICABLE IN EMERGENCY OR WHENEVER RUNWAY 11/29 IS
CLOSED DUE TO MAINT, SAFETY, WINDS OR WEATHER.

AIRCRAFT WITH EXPERIMENTAL OR LIMITED CERTIFICATION HAVING OVER 1000
HORSEPOWER OR 4000 LBS ARE RESTRICTED TO RUNWAY 11/29.

1000' CLEARWAYS RUNWAY 11 & 29.

100' LIGHTED MICROWAVE ANTENNA TOWER LOCATED 1320' WSW OF OAK VORTAC; S OF
UPWIND END OF RUNWAY 27L.

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Outer Marker for runway 29.
Magnetic variation: 16E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-39-00.00N /
122-08-25.68W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Localizer for runway 29. Magnetic
variation: 16E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-43-29.86N /
122-14-58.10W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Middle Marker for runway 29.
Magnetic variation: 16E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-41-44.61N /
122-12-20.00W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Inner Marker for runway 29.
Magnetic variation: 16E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-41-59.92N /
122-12-43.09W
2.19.6 Site elevation: 10 ft

RUNWAYS 29, 27R AND RUNWAY 27L DISTANCE REMAINING SIGNS LEFT SIDE.

FOR NOISE ABATEMENT INFORMATION CONTACT NOISE ABATEMENT OFFICE AT (510) 563-6463.

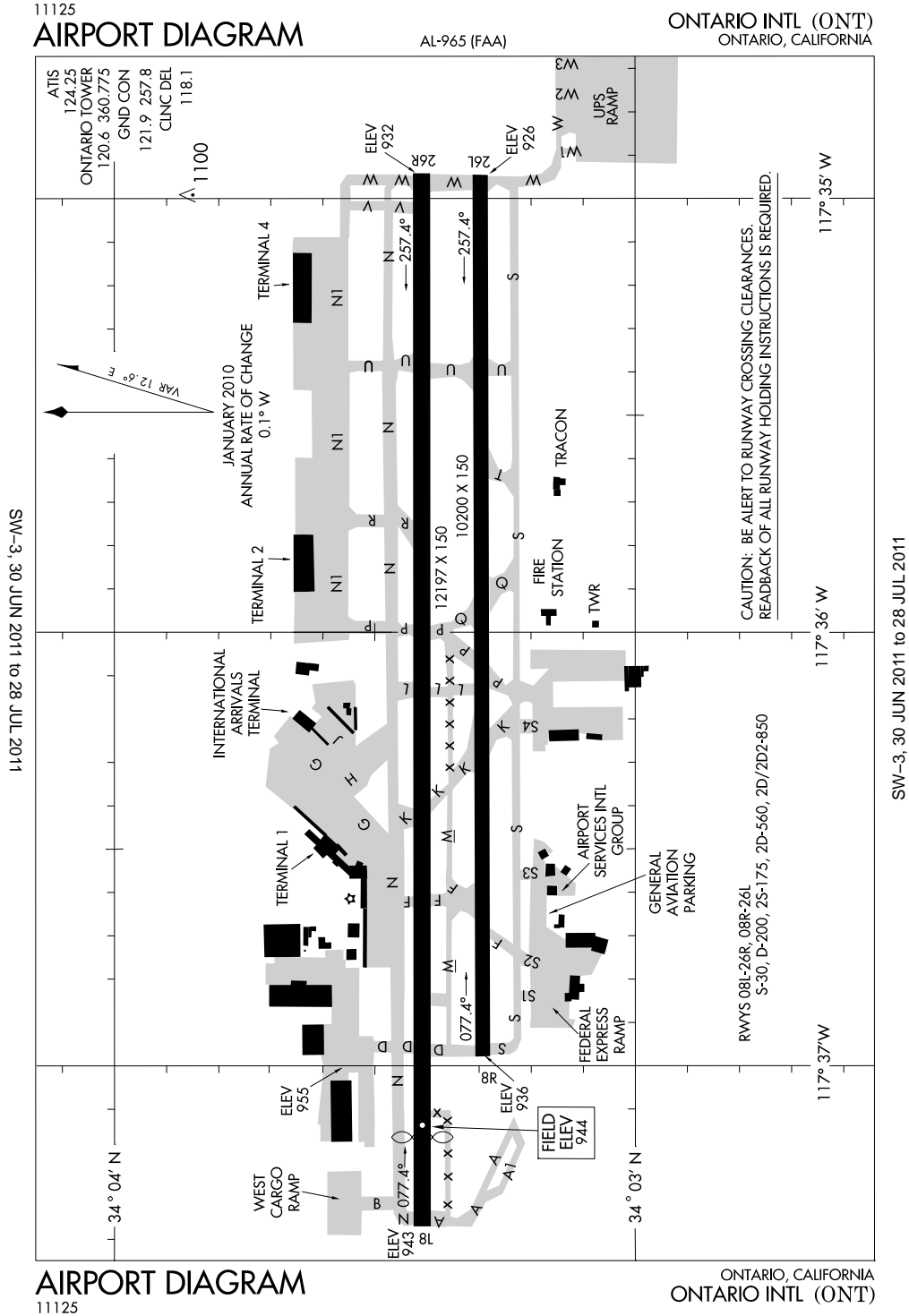
RUNWAY 15/33 CLOSED TO AIR CARRIER AIRCRAFT.

PREFERENTIAL RUNWAY USE PROGRAM IN EFFECT 2200-0600. NORTH FIELD PREFERRED ARR RUNWAY 27L, NORTH FIELD PREFERRED DEP RUNWAYS 09R OR 27R. IF THESE RUNWAYS UNACCEPTABLE FOR SAFETY OR ATC INSTRUCTION THEN RUNWAY 11/29 MUST BE USED.

24 HR NOISE ABATEMENT PROCEDURE – TURBOJET AND TURBOFAN POWERED AIRCRAFT, TURBOROPS OVER 17, 000 LBS, FOUR-ENGINE RECIPROCATING POWERED AIRCRAFT, AND SURPLUS MILITARY AIRCRAFT OVER 12,500 POUNDS SHOULD NOT DEPART RUNWAYS 27R & 27R OR LAND ON RUNWAYS 09R & 09L.

INTERSECTION OF TAXIWAYS B, W AND V NOT VISIBLE FROM ATCT. TAXIWAY K BETWEEN RUNWAY 33 AND TAXIWAY D AND PORTIONS OF TAXIWAY D NOT VISIBLE FROM ATCT.

**Ontario, California
Ontario International
ICAO Identifier KONT**



Ontario, CA
Ontario Intl
ICAO Identifier KONT

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 34-03-21.60N / 117-36-00.00W
- 2.2.2 From City: 2 Miles E Of Ontario, CA
- 2.2.3 Elevation: 944 ft
- 2.2.5 Magnetic variation: 14E (1990)
- 2.2.6 Airport Contact: Jess Romo
ONTARIO INTERNATIONAL AIRPORT
Ontario, CA 91761 (909-544-5300)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 08L
- 2.10.1.b Type of obstacle: Rr (20 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 250 ft from Centerline

- 2.10.1.a. Runway designation: 26R
- 2.10.1.b Type of obstacle: Pole (40 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 400 ft from Centerline

- 2.10.1.a. Runway designation: 26L
- 2.10.1.b Type of obstacle: Pole (40 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 400 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 12197 ft x 150 ft
- 2.12.5 Coordinates: 34-03-24.75N / 117-37-22.15W
- 2.12.6 Threshold elevation: 943 ft
- 2.12.6 Touchdown zone elevation: 944 ft

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 12197 ft x 150 ft
- 2.12.5 Coordinates: 34-03-24.82N / 117-34-57.19W
- 2.12.6 Threshold elevation: 932 ft
- 2.12.6 Touchdown zone elevation: 932 ft

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 10200 ft x 150 ft
- 2.12.5 Coordinates: 34-03-17.85N / 117-36-58.41W
- 2.12.6 Threshold elevation: 936 ft
- 2.12.6 Touchdown zone elevation: 936 ft

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 10200 ft x 150 ft
- 2.12.5 Coordinates: 34-03-17.89N / 117-34-57.19W
- 2.12.6 Threshold elevation: 926 ft
- 2.12.6 Touchdown zone elevation: 926 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 08L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 26R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 08R
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 26L
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: CD/P
- 2.18.3 Service designation: 118.1 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 120.6 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: D-ATIS)
- 2.18.3 Service designation: 124.25 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 243 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 257.8 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 360.775 MHz

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: Glide Slope for runway 08L. Magnetic variation: 14E
- 2.19.2 ILS identification: AOD
- 2.19.5 Coordinates: 34-03-21.21N / 117-36-59.90W
- 2.19.6 Site elevation: 936 ft

- 2.19.1 ILS type: Middle Marker for runway 08L. Magnetic variation: 14E
- 2.19.2 ILS identification: AOD
- 2.19.5 Coordinates: 34-03-25.80N / 117-37-51.55W
- 2.19.6 Site elevation: 947 ft

- 2.19.1 ILS type: Localizer for runway 08L.

- Magnetic variation: 14E
- 2.19.2 ILS identification: AOD
- 2.19.5 Coordinates: 34-03-24.82N / 117-34-45.84W
- 2.19.6 Site elevation: 929 ft

- 2.19.1 ILS type: Glide Slope for runway 26R. Magnetic variation: 14E
- 2.19.2 ILS identification: ONT
- 2.19.5 Coordinates: 34-03-22.01N / 117-35-10.97W
- 2.19.6 Site elevation: 926 ft

- 2.19.1 ILS type: Outer Marker for runway 26R. Magnetic variation: 14E
- 2.19.2 ILS identification: ONT
- 2.19.5 Coordinates: 34-03-22.33N / 117-28-17.72W
- 2.19.6 Site elevation: 1010 ft

- 2.19.1 ILS type: Middle Marker for runway 26R. Magnetic variation: 14E
- 2.19.2 ILS identification: ONT
- 2.19.5 Coordinates: 34-03-24.79N / 117-34-24.33W
- 2.19.6 Site elevation: 940 ft

- 2.19.1 ILS type: DME for runway 26R. Magnetic variation: 14E
- 2.19.2 ILS identification: ONT
- 2.19.5 Coordinates: 34-03-22.15N / 117-37-26.54W
- 2.19.6 Site elevation: 958 ft

- 2.19.1 ILS type: Localizer for runway 26R. Magnetic variation: 14E
- 2.19.2 ILS identification: ONT
- 2.19.5 Coordinates: 34-03-24.76N / 117-37-26.68W
- 2.19.6 Site elevation: 945 ft

- 2.19.1 ILS type: DME for runway 26L. Magnetic variation: 14E
- 2.19.2 ILS identification: TWO
- 2.19.5 Coordinates: 34-03-20.47N / 117-37-00.00W
- 2.19.6 Site elevation: 948 ft

- 2.19.1 ILS type: Middle Marker for runway 26L. Magnetic variation: 14E
- 2.19.2 ILS identification: TWO

2.19.5 Coordinates: 34-03-17.88N /
117-34-24.41W
2.19.6 Site elevation: 924 ft

2.19.1 ILS type: Glide Slope for runway 26L.
Magnetic variation: 14E
2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-21.89N /
117-35-10.97W
2.19.6 Site elevation: 925 ft

2.19.1 ILS type: Inner Marker for runway 26L.
Magnetic variation: 14E
2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-17.89N /
117-34-47.85W
2.19.6 Site elevation: 921 ft

2.19.1 ILS type: Outer Marker for runway 26L.
Magnetic variation: 14E

2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-22.33N /
117-28-17.72W
2.19.6 Site elevation: 1010 ft

2.19.1 ILS type: Localizer for runway 26L.
Magnetic variation: 14E

2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-17.84N /
117-37-10.29W
2.19.6 Site elevation: 931 ft

General Remarks:

NO ACCESS TO RUNWAY 08R FROM TAXIWAY A.

FBO'S ON FREQ 130.75 AND 131.6.

TAXIWAY H RESTRICTED TO AIRCRAFT WITH WINGSPAN OF 124 FT OR SMALLER WHEN GATE 35A OCCUPIED BY B747 OR LARGER AIRCRAFT.

TAXIWAY J RESTRICTED TO AIRCRAFT WITH WINGSPAN OF 108 FT OR SMALLER.

WILDLIFE HAZARD MANAGEMENT PLAN IN EFFECT; POTENTIAL BIRD HAZARDS MAY EXIST ON AND IN THE VICINITY OF AIRPORT; BE ALERT TO LARGE NUMBERS OF STARLINGS AND CROWS POSSIBLE ON APPROACH TO RUNWAY 26L AND RUNWAY 26R, HAWKS, EAGLES, FALCONS AND OWLS SPOTTED ON OCCASION.

TAXIWAY M, TAXIWAY A, TAXIWAY S-3 AND TAXIWAY S-4 RESTRICTED TO AIRCRAFT WITH WINGSPAN 117 FT OR SMALLER.

PILOTS SHOULD USE JUDGEMENTAL OVERSTEER ON TAXIWAY A, TAXIWAY M, TAXIWAY H, TAXIWAY J, TAXIWAY S-3 AND TAXIWAY S-4.

NOISE ABATEMENT PROCEDURES IN EFFECT; FULL-LENGTH TURBOJET DEP ENCOURAGED, NIGHTLY PREFERENTIAL RUNWAY USAGE, 2100-0600.

EASTBOUND B747, B777, A330, A340 OR LARGER AIRCRAFT ON TAXIWAY S PROHIBITED FROM NORTHBOUND TURNS ONTO TAXIWAY K.

B747, B777, A330, A340 OR LARGER AIRCRAFT ON TAXIWAY S PROHIBITED FROM NORTHBOUND TURNS ONTO TAXIWAY P.

AIRCRAFT PARKING AND CONTRACT GROUND SERVICES ARE LIMITED FOR NON-SCHEDULED OPERATIONS. FOR SCHEDULING INFORMATION CALL AIRFIELD OPERATIONS (909)975-5344.

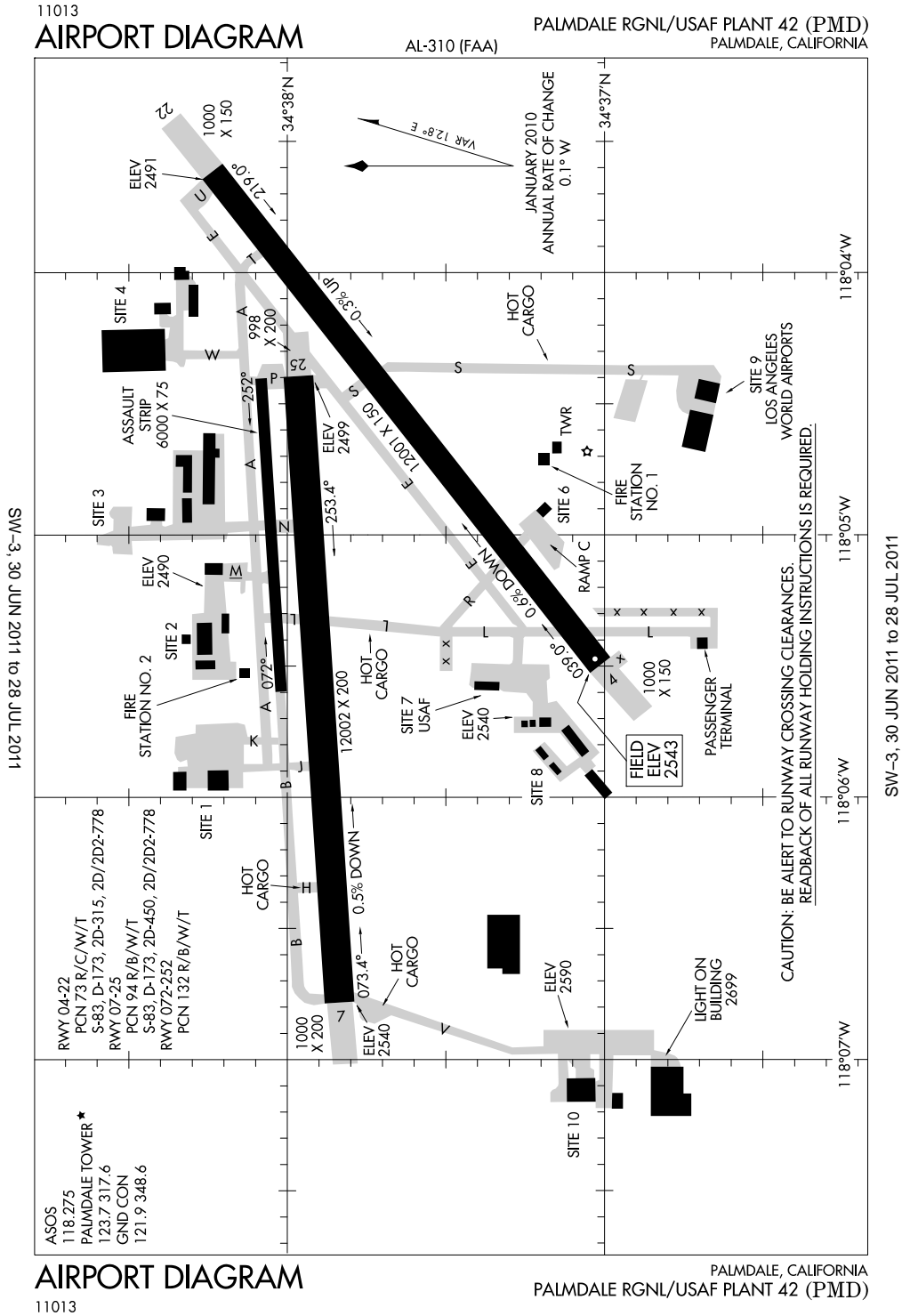
TAXIWAY W SOUTH OF TAXIWAY S IS A NON-MOVEMENT AREA; ALL AIRCRAFT CONTACT RAMP CONTROL 131.325 FOR ACCESS.

ALL MILITARY AND GENERAL AVIATION (FIXED OR ROTOR WING) AIRCRAFT OPERATIONS ARE RESTRICTED TO FBO FACILITIES WITH ADVANCE COORDINATION; OVERNIGHT TIEDOWN AND PARKING FEE.

TAXIWAY S SOUTH OF CENTERLINE BETWEEN TXLN S-2 AND S-3, AND THE SOUTHERN HALF OF TXLN S-2 AND S-3 ARE NOT VISIBLE FROM ATCT; PILOTS USE CAUTION ENTERING TXLN S-2 AND S-3.

TAXIWAY M FIRST 1,275 FT CLOSED EAST OF TAXIWAY A.

Palmdale, California
Palmdale Regional/USAF Plant 42
ICAO Identifier KPMD



Palmdale, CA
Palmdale Rgnl/USAF Plant 42
ICAO Identifier KPMD

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 34-37-45.80N / 118-05-00.00W
- 2.2.2 From City: 3 Miles NE Of Palmdale, CA
- 2.2.3 Elevation: 2543 ft
- 2.2.5 Magnetic variation: 15E (1980)
- 2.2.6 Airport Contact: Ken Neitzel
2503 E AVE P
Palmdale, CA 93550
(661-272-6715)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, 0430-2100 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: None
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 04
- 2.10.1.b Type of obstacle: Hill. Not Lighted or Marked

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 07
- 2.12.2 True Bearing: 86
- 2.12.3 Dimensions: 12002 ft x 200 ft
- 2.12.4 PCN: 94 R/B/W/T
- 2.12.5 Coordinates: 34-37-50.11N / 118-06-47.03W
- 2.12.6 Threshold elevation: 2540 ft
- 2.12.6 Touchdown zone elevation: 2540 ft
- 2.12.7 Slope: 0.5DOWN

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 266
- 2.12.3 Dimensions: 12002 ft x 200 ft
- 2.12.4 PCN: 94 R/B/W/T

- 2.12.5 Coordinates: 34-37-57.99N / 118-04-23.74W
- 2.12.6 Threshold elevation: 2499 ft
- 2.12.6 Touchdown zone elevation: 2503 ft
- 2.12.7 Slope: 0.2UP

- 2.12.1 Designation: 04
- 2.12.2 True Bearing: 52
- 2.12.3 Dimensions: 12001 ft x 150 ft
- 2.12.4 PCN: 73 R/C/W/T
- 2.12.5 Coordinates: 34-37-00.00N / 118-05-29.80W
- 2.12.6 Threshold elevation: 2542 ft
- 2.12.6 Touchdown zone elevation: 2542 ft
- 2.12.7 Slope: 0.6DOWN

- 2.12.1 Designation: 22
- 2.12.2 True Bearing: 232
- 2.12.3 Dimensions: 12001 ft x 150 ft
- 2.12.4 PCN: 73 R/C/W/T
- 2.12.5 Coordinates: 34-38-14.24N / 118-03-36.97W
- 2.12.6 Threshold elevation: 2491 ft
- 2.12.6 Touchdown zone elevation: 2498 ft
- 2.12.7 Slope: 0.3UP

- 2.12.1 Designation: 072
- 2.12.3 Dimensions: 6000 ft x 75 ft
- 2.12.4 PCN: 132 R/B/W/T

- 2.12.1 Designation: 252
- 2.12.3 Dimensions: 6000 ft x 75 ft
- 2.12.4 PCN: 132 R/B/W/T

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 25
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 22
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: Outer Marker for runway 25. Magnetic variation: 15E
- 2.19.2 ILS identification: PMD
- 2.19.5 Coordinates: 34-38-22.66N / 117-57-30.34W
- 2.19.6 Site elevation: 2550 ft

2.19.1 ILS type: Middle Marker for runway 25.

Magnetic variation: 15E

2.19.2 ILS identification: PMD

2.19.5 Coordinates: 34-38-00.00N /
118-03-46.16W

2.19.6 Site elevation: 2492 ft

2.19.1 ILS type: Localizer for runway 25. Magnetic
variation: 15E

2.19.2 ILS identification: PMD

2.19.5 Coordinates: 34-37-48.79N /
118-07-10.91W

2.19.6 Site elevation: 2552 ft

2.19.1 ILS type: Glide Slope for runway 25.

Magnetic variation: 15E

2.19.2 ILS identification: PMD

2.19.5 Coordinates: 34-38-00.00N /
118-04-40.08W

2.19.6 Site elevation: 2492 ft

General Remarks:

SERVICES NORMALLY ASSOCIATED WITH AN AFB, NOT AVAILABLE AT THIS INSTALLATION.

WHEN ATCT CLOSED AIRPORT CLOSED TO ALL TRAFFIC WITHOUT WRITTEN APPROVAL.

PARKING RAMP LOCATED S OF RUNWAY 22 & TAXIWAY V NOT VISIBLE FROM ATCT.

LIMITED FUELING AVAILABLE TO GOVERNMENT AIRCRAFT ONLY 0730-1730 WEEKDAY;
CALL PLANT OFFICE TO ARRANGE.

UNLIGHTED OBSTRUCTION SURROUND AIRFIELD.

DRAINAGE DITCHES PARALLEL ALL RUNWAYS.

BIRD HAZARD POTENTIAL EXISTS. MIGRATORY SEASON PHASE II 1 OCT - 31 AT SEA.
DURING BIRD WATCH CONDITION MODERATE, TAKE-OFF AND LANDING PERMITTED.
DURING BIRD WATCH CONDITION SEVERE, TAKE-OFF AND LANDING PROHIBITED.

MILITARY USE: ASSAULT LANDING ZONE LOCATED 1ST 6,000 EAST END OF TAXIWAY B,
ASSAULT LANDING ZONE 25 OPEN TO C-130 AIRCRAFT, PRIOR PERMISSION REQUIRED
ONLY; CALL 661-272-6715. ASSAULT LANDING ZONE ONE-WAY LANDING ASSAULT
LANDING ZONE 25 ONLY.

MISC: WINDS ARE ESTIMATE DUE TO FMQ-13 WIND SENSORS BEING ACCURATE TO WITHIN
ONLY +/- 2 KNOTS. ATC/WX WILL NOT INCLUDE/RELAY WIND CORRECTION INTO
FORECAST/PHRASEOLOGY. THEREFORE, AIRCREWS WILL INCORPORATE A +/- 2 KNOTS
ACCURACY INTO THEIR DECISION MAKING PROCESS FOR FLYING OPR.

OFFICIAL BUSINESS ONLY, MILITARY AIRPORT CIVIL USE REQUIRES USAF APPROVAL AND
DD FORM 2400/01/02.

CAUTION: RUNWAY EDGE LIGHT LOCATED 30' FR OUTSIDE SIDE STRIPE. 60' AGL STRING OF
UTILITY POLES VIOLATE RUNWAY 22 APPROACH CLEAR ZONE SURFACE N OF EXTENSION
CENTERLINE.

SERVICE-LGT: GATED THRESHOLD LIGHT RUNWAY 07-25 AND RUNWAY 04-22.

RESTRICTED: OFFICIAL BUSINESS ONLY, PRIOR PERMISSION REQUIRED FOR ALL FULL STOP
LANDING ONLY. CALL C661-272-6715 DURING DUTY HR, ON TIME C661-272-6600 AFTER
DUTY HR.

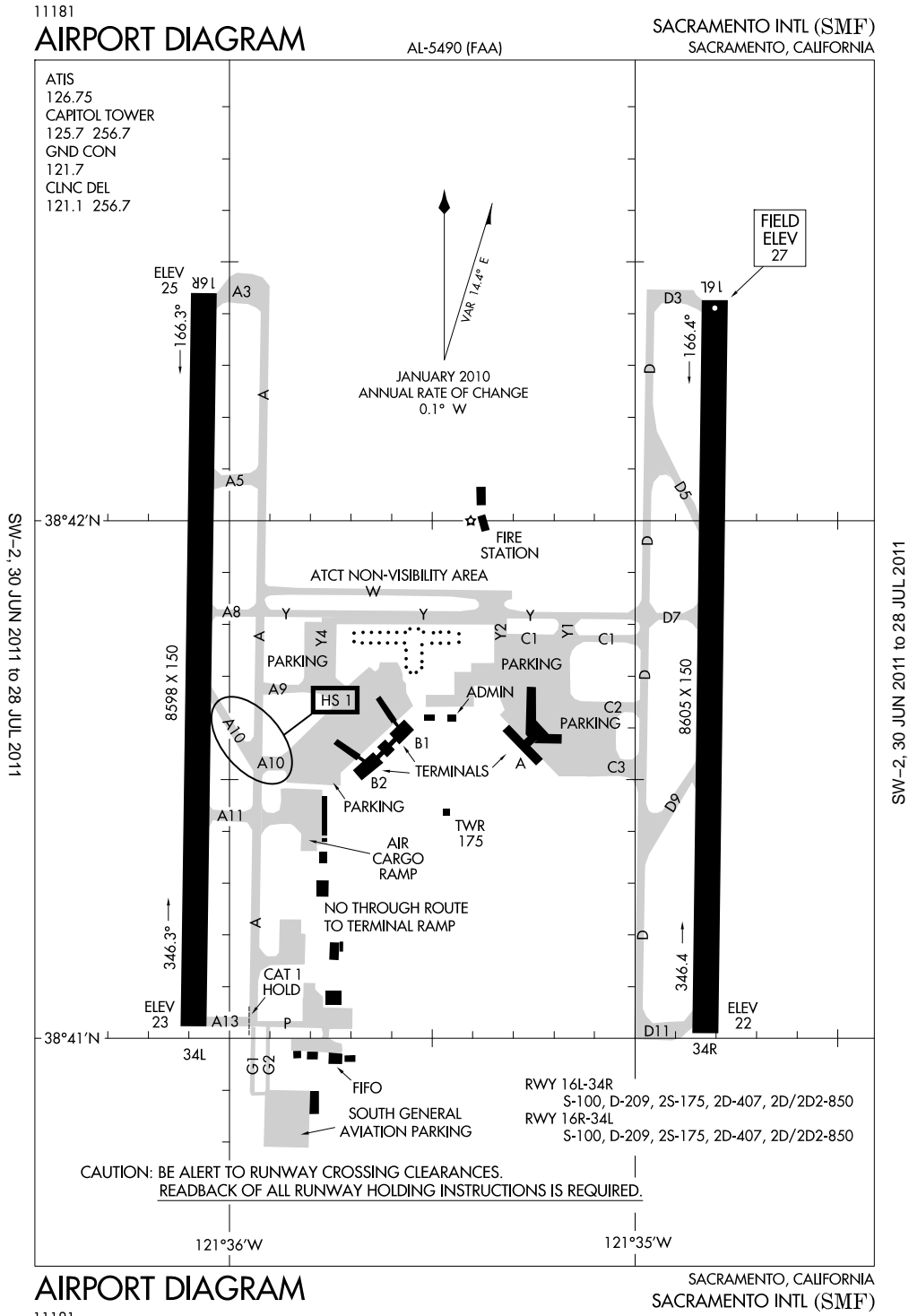
SERVICE-TRAN ALERT: NO FLEET SERVICE AVAILABLE.

MISC: COMSEC STORAGE UNAVAILABLE.

RESTRICTED: RUNWAY 252 MRK ONLY FOR C-130 ASSAULT OPR; ONE-WAY LANDING ONLY.
USE OF ASSAULT STRIP LANDING ZONE REQ PRIOR COORD WITH 146 OSF/OSK DSN 893-7590,
C805-986-7590.

CAUTION: USE EXTREME CAUTION FOR UNMANNED AERIAL SYSTEMS (UAS) OPERATIONS
IN VICINITY.

**Sacramento, California
Sacramento International
ICAO Identifier KSMF**



Sacramento, CA
Sacramento Intl
ICAO Identifier KSMF

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 38-41-43.60N / 121-35-26.80W
- 2.2.2 From City: 10 Miles NW Of Sacramento, CA
- 2.2.3 Elevation: 27 ft
- 2.2.5 Magnetic variation: 17E (1980)
- 2.2.6 Airport Contact: Barry Rondinella
6900 AIRPORT BLVD
Sacramento, CA 95837
(916-874-0566)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 181
- 2.12.3 Dimensions: 8605 ft x 150 ft
- 2.12.5 Coordinates: 38-42-25.70N / 121-34-48.21W
- 2.12.6 Threshold elevation: 27 ft
- 2.12.6 Touchdown zone elevation: 27 ft

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 1
- 2.12.3 Dimensions: 8605 ft x 150 ft
- 2.12.5 Coordinates: 38-41-00.00N / 121-34-49.64W
- 2.12.6 Threshold elevation: 22 ft
- 2.12.6 Touchdown zone elevation: 24 ft

- 2.12.1 Designation: 16R
- 2.12.2 True Bearing: 181

- 2.12.3 Dimensions: 8598 ft x 150 ft
- 2.12.5 Coordinates: 38-42-26.42N / 121-36-00.00W
- 2.12.6 Threshold elevation: 25 ft
- 2.12.6 Touchdown zone elevation: 25 ft

- 2.12.1 Designation: 34L
- 2.12.2 True Bearing: 1
- 2.12.3 Dimensions: 8598 ft x 150 ft
- 2.12.5 Coordinates: 38-41-00.00N / 121-36-00.00W
- 2.12.6 Threshold elevation: 22 ft
- 2.12.6 Touchdown zone elevation: 24 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 16L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 34R
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 16R
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right
- 2.14.10 Remarks: ALSF2 Unmonitored.

- 2.14.1 Designation: 34L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: CD/P
- 2.18.3 Service designation: 121.1 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.7 MHz

- 2.18.1 Service designation: LCL/P

2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 126.75 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P GND/P LCL/P

2.18.3 Service designation: 256.7 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 16L.

Magnetic variation: 17E

2.19.2 ILS identification: MDK

2.19.5 Coordinates: 38-40-50.25N /

121-34-49.82W

2.19.6 Site elevation: 17 ft

2.19.1 ILS type: DME for runway 16L. Magnetic variation: 17E

2.19.2 ILS identification: MDK

2.19.5 Coordinates: 38-40-50.22N /

121-34-46.30W

2.19.6 Site elevation: 31 ft

2.19.1 ILS type: Glide Slope for runway 16L.

Magnetic variation: 17E

2.19.2 ILS identification: MDK

2.19.5 Coordinates: 38-42-15.23N /

121-34-44.36W

2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Localizer for runway 16R.

Magnetic variation: 15E

2.19.2 ILS identification: SMF

2.19.5 Coordinates: 38-40-35.75N /

121-36-00.00W

2.19.6 Site elevation: 20 ft

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 15E

2.19.2 ILS identification: SMF

2.19.5 Coordinates: 38-40-34.70N /

121-36-00.00W

2.19.6 Site elevation: 34 ft

2.19.1 ILS type: Inner Marker for runway 16R.

Magnetic variation: 15E

2.19.2 ILS identification: SMF

2.19.5 Coordinates: 38-42-34.10N /

121-36-00.00W

2.19.6 Site elevation: 23 ft

2.19.1 ILS type: Middle Marker for runway 16R.

Magnetic variation: 15E

2.19.2 ILS identification: SMF

2.19.5 Coordinates: 38-42-53.08N /

121-36-00.00W

2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Glide Slope for runway 16R.

Magnetic variation: 15E

2.19.2 ILS identification: SMF

2.19.5 Coordinates: 38-42-15.86N /

121-36-00.00W

2.19.6 Site elevation: 23 ft

2.19.1 ILS type: Outer Marker for runway 16R.

Magnetic variation: 15E

2.19.2 ILS identification: SMF

2.19.5 Coordinates: 38-47-41.76N /

121-35-57.70W

2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Localizer for runway 34L.

Magnetic variation: 17E

2.19.2 ILS identification: HUX

2.19.5 Coordinates: 38-42-35.75N /

121-36-00.00W

2.19.6 Site elevation: 23 ft

2.19.1 ILS type: Glide Slope for runway 34L.

Magnetic variation: 17E

2.19.2 ILS identification: HUX

2.19.5 Coordinates: 38-41-12.50N /

121-36-00.00W

2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Outer Marker for runway 34L.

Magnetic variation: 17E

2.19.2 ILS identification: HUX

2.19.5 Coordinates: 38-37-00.00N /

121-36-11.87W

2.19.6 Site elevation: 15 ft

2.19.1 ILS type: Middle Marker for runway 34L.

Magnetic variation: 17E

2.19.2 ILS identification: HUX

2.19.5 Coordinates: 38-40-32.75N /

121-36-00.00W

2.19.6 Site elevation: 17 ft

2.19.1 ILS type: DME for runway 34L. Magnetic variation: 17E

2.19.2 ILS identification: HUX
2.19.5 Coordinates: 38-42-36.91N /
121-36-00.00W

2.19.6 Site elevation: 37 ft

General Remarks:

BIRDS ON AND IN VICINITY OF AIRPORT.

FAA GROSS WEIGHT STRENGTH EVALUATION DC-10-10 = 410000 LBS; DC-10-30 = 530000 LBS.

NOISE SENSITIVE AREAS W OF AIRPORT ON SAC RIVER. LOCAL TURN DISCOURAGED FOR JET AIRCRAFT. WHEN CONDUCTING IFR APPROACH IN VFR CONDITIONS EXECUTE MISSED APPROACH AT DEP END OF RUNWAYS. PLAN VFR PATTERNS TO E. USE MIN POWER SETTINGS.

ALL AIRCRAFT CONTACT ATC GROUND CONTROL PRIOR TO MOVEMENT ON RAMP.

CROP DUSTERS OPER IN THE VICINITY OF AIRPORT AT OR BELOW 200 FT AGL.

(A49A-16R) ALSF2 OPERS AS SSALR TILL WEATHER GOES BELOW VFR.

TAXIWAY REMARK #2: THE MAXIMUM ALLOWABLE GROSS AIRCRAFT LOAD FOR TAXIWAYS G1, G2, AND THE GENERAL AVIATION PARKING APRON IS: 70,000 LBS FOR SINGLE GEAR AIRCRAFT; 170,000 LBS FOR DUAL GEAR AIRCRAFT; AND 250,000 LBS FOR DUAL TANDEM GEAR AIRCRAFT.

TAXIWAY REMARK #2 CONT'D: AN AIRCRAFT CANNOT EXCEED THE AIRPLANE DESIGN GROUP III CRITERIA AND MUST HAVE A WHEEL BASE OF LESS THAN 60 FT.

MILITARY AIRCRAFT PARKING WILL BE LIMITED DUE TO CONSTRUCTION. CONTACT AIRPORT OPERATIONS IF PARKING IS REQUIRED (916) 806-5351.

TAXI LANE BETWEEN TAXIWAY A10 AND INTERSECTION OF TAXIWAY A9 & TAXIWAY Y4 CLOSED TO AIRCRAFT WITH WINGSPAN OVER 125 FT.

PORTION OF TAXIWAY W 500 FT EAST OF TAXIWAY A TO 2100 FT EAST OF TAXIWAY A IS NOT VISIBLE FROM ATCT.

TAXIWAY Y4 WILL BE OPEN AND RESTRICTED TO AIRCRAFT WITH A WINGSPAN OF LESS THAN 118 FT (GROUP III) AND WILL BE CLOSED NIGHTLY FOR REMAINING OVERNIGHT PARKING OR ANYTIME REMAINING OVERNIGHT PAD IS UTILIZED.

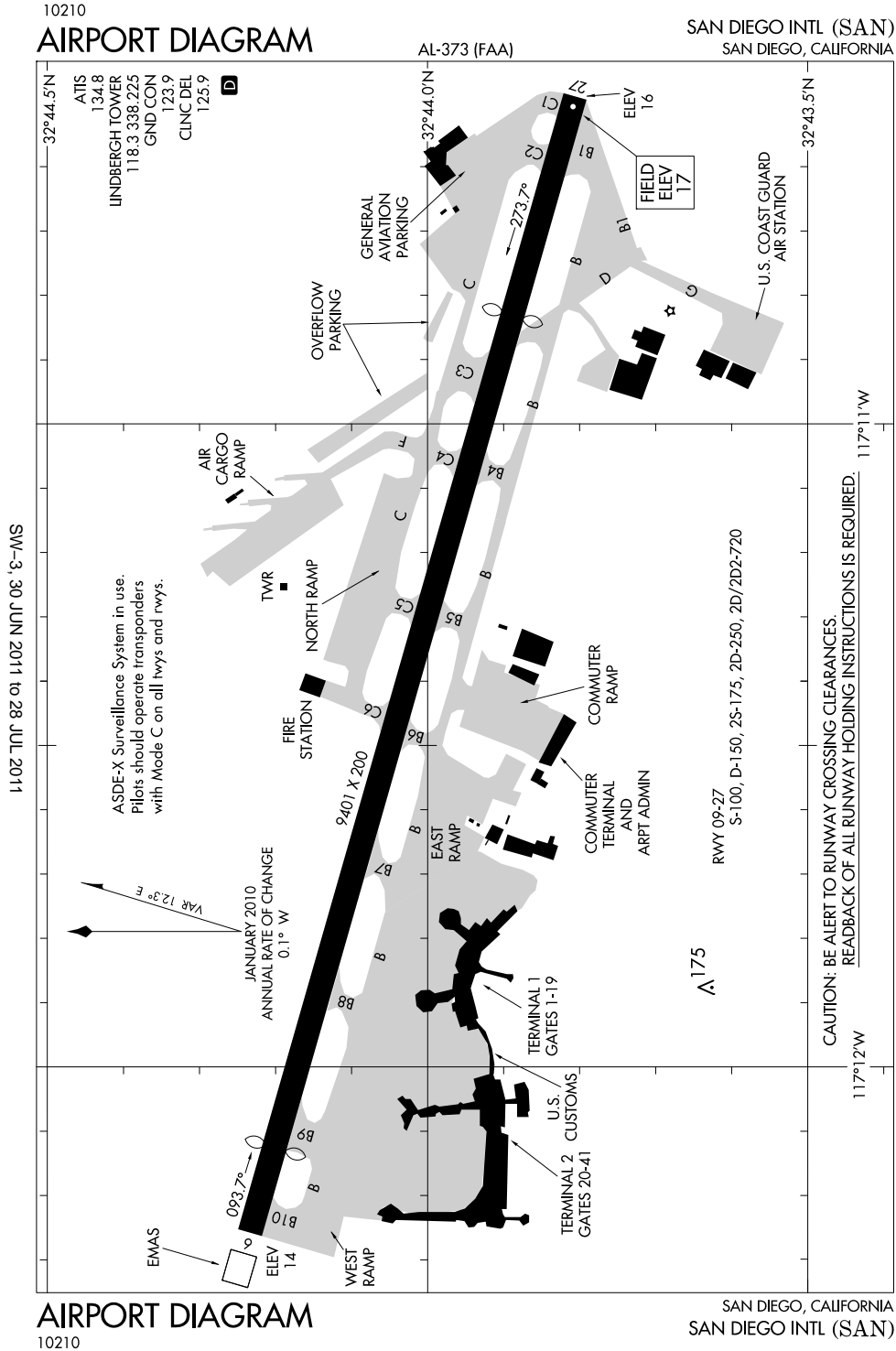
DUE TO CONSTRUCTION ACTIVITY, AIRCRAFT MAY ENCOUNTER DIFFICULTIES PERFORMING TRANSPONDER CHECKS IN AND AROUND GATES LOCATED AT TERMINAL B1 AND B2. PROBLEM MAY BE ALLEVIATED BY PERFORMING TRANSPONDER CHECKS WHILE TAXIING OUT TO TAXIWAY A.

NUMEROUS CONSTRUCTION CRANES AND EQUIPMENT WILL BE OPERATING SOUTH OF TAXIWAY W BETWEEN TAXIWAY Y2 AND THE REMAINING OVERNIGHT PAD. NO CRANE OR OTHER EQUIPMENT WILL BE MORE THAN 275 FT AGL. EQUIPMENT WILL BE FLAGGED AND LIGHTED OR LOWERED DURING THE HOURS OF LOW VISIBILITY OR DARKNESS.

COMMON USE JET BRIDGES B35 AND B37 ARE TO BE UTILIZED FOR AIRCRAFT TOW-IN AND TOW-OUT OPERATIONS ONLY. ALL OTHER AIRCRAFT, WITH THE EXCEPTION OF E120 OPERATIONS, MUST SHUT DOWN POWER PRIOR TO APPROACHING GATES AND SHALL BE TOWED INTO PLACE.

RUNWAY 16R/34L CRANE 265 FT AGL 1600 FT EAST MIDPOINT LIGHTED AND LOWERED AT NIGHT.

**San Diego, California
San Diego International
ICAO Identifier KSAN**



San Diego, CA
San Diego Intl
ICAO Identifier KSAN

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 32-44-00.00N / 117-11-22.80W
- 2.2.2 From City: 2 Miles W Of San Diego, CA
- 2.2.3 Elevation: 17 ft
- 2.2.5 Magnetic variation: 14E (1980)
- 2.2.6 Airport Contact: Angela Shafer-Payne
3225 N HARBOR DRIVE
San Diego, CA 92101
(619) 400-2455
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 09
- 2.10.1.b Type of obstacle: Tree (31 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 385 ft from Centerline

- 2.10.1.a. Runway designation: 27
- 2.10.1.b Type of obstacle: Sign (61 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 106
- 2.12.3 Dimensions: 9401 ft x 200 ft
- 2.12.5 Coordinates: 32-44-13.62N / 117-12-15.66W

- 2.12.6 Threshold elevation: 14 ft
- 2.12.6 Touchdown zone elevation: 17 ft

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 286
- 2.12.3 Dimensions: 9401 ft x 200 ft
- 2.12.5 Coordinates: 32-43-47.98N / 117-10-29.88W
- 2.12.6 Threshold elevation: 16 ft
- 2.12.6 Touchdown zone elevation: 17 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 09
- 2.13.2 Takeoff run available: 9401
- 2.13.3 Takeoff distance available: 9401
- 2.13.4 Accelerate-stop distance available: 8280
- 2.13.5 Landing distance available: 7580

- 2.13.1 Designation: 27
- 2.13.2 Takeoff run available: 9401
- 2.13.3 Takeoff distance available: 9401
- 2.13.4 Accelerate-stop distance available: 9401
- 2.13.5 Landing distance available: 7591

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 09
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

- 2.14.1 Designation: 27
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.10 Remarks: PAPI 4-Box(L) 3.5 Degrees Angle; Threshold Crossing Height 66' From Displaced Thr; Baffled Horizontally 4.8 Degrees N Of Centerline And 10.0 Degrees S Of Centerline ; Lateral Coverage Has Been Narrowed To Avoid Obstacles; Close Alignment To Runway Centerline Is Necessary; Use Of Localizer Recommended. MALSR Rwy 27 Threshold To 1400'.

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.3 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: CD
2.18.3 Service designation: 125.9 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 134.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 338.225 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 14E

2.19.2 ILS identification: SAN
2.19.5 Coordinates: 32-43-47.58N /
117-10-28.21W
2.19.6 Site elevation: 18 ft

2.19.1 ILS type: Middle Marker for runway 09.
Magnetic variation: 14E

2.19.2 ILS identification: SAN
2.19.5 Coordinates: 32-44-23.65N /
117-12-57.08W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 09. Magnetic

variation: 14E
2.19.2 ILS identification: SAN
2.19.5 Coordinates: 32-43-46.80N /
117-10-28.50W
2.19.6 Site elevation: 29 ft

2.19.1 ILS type: Glide Slope for runway 09.
Magnetic variation: 14E
2.19.2 ILS identification: SAN
2.19.5 Coordinates: 32-44-10.40N /
117-11-49.98W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 14E
2.19.2 ILS identification: UBR
2.19.5 Coordinates: 32-44-14.44N /
117-12-19.04W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: DME for runway 27. Magnetic variation: 14E
2.19.2 ILS identification: UBR
2.19.5 Coordinates: 32-44-11.40N /
117-12-19.91W
2.19.6 Site elevation: 26 ft

General Remarks:

TERRAIN & BUILDINGS TO 500' MSL N & E WITHIN 1 1/2 MI.

PRACTICE APPROACHES AND TOUCH AND GO LANDING PROHIBITED.

POSSIBLE ERRONEOUS GROUND PROXIMITY WARNING SYSTEM ALERTS BETWEEN 1.6 & 1.3 DME WHILE ON PAPI APPROACH PATH FOR RUNWAY 27.

TO REDUCE JET BLAST IMPACT AT N END OF TAXIWAY F AIRCRAFT WILL NOT START ENGINE UNTIL 800 FT FROM N END OF TAXIWAY F; ABEAM THE SECOND PARKING PAD.

ULTRALIGHT VEHICLES PROHIBITED ON AIRPORT.

747 AND LARGER AIRCRAFT ARE PROHIBITED FROM MAKING INTERSECTION TAKE-OFFS.

PRIOR PERMISSION REQUIRED FOR AIRCRAFT WITH WINGSPAN IN EXCESS OF 230 FT.

INTERMITTENT PRESENCE OF BIRDS ON AND IN THE VICINITY OF OF AIRPORT.

CROSS-BLEED ENGINE STARTS PERMITTED ONLY ON PARALLEL TAXIWAY WITH AIRCRAFT ALIGNED ON TAXIWAY CENTERLINE.

OUTBOARD ENGINES OF FOUR-ENGINE AIRCRAFT ARE TO BE KEPT AT IDLE POWER FOR

ALL GROUND MANEUVERING.

TAXIING AIRCRAFT ARE PROHIBITED FROM PASSING TO THE SOUTH OF AIRCRAFT LOCATED ON TAXIWAY B INTO ALLEY LOCATED BETWEEN GATES 7 AND 14. TAXIING AIRCRAFT SHALL FOLLOW LEAD-IN LINES UNTIL THE NOSE WHEEL OF THE AIRCRAFT HAS ENTERED THE NON-MOVEMENT AREA OF THE ALLEY.

PILOTS REQUIRED TO CONTACT ATCT GROUND CONTROLLER PRIOR TO PUSHBACK, TOW OUT AND TAXI FOR TRAFFIC ADVISORIES.

MILITARY AIRCRAFT ON OFFICIAL BUSINESS ONLY CONTACT AIRPORT OPERATIONS AT 619-400-2710 FOR PRIOR PERMISSION REQUIRED.

ASDE-X SURVEILLANCE SYSTEM IN USE. PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

TAXIWAY C EDGE LIGHTS OUT OF SERVICE INDEFINITELY.

AIRCRAFT TAXIING ON TAXIWAY B EAST OF TAXIWAY B-6 RESTRICTED TO GROUP IV AIRCRAFT AND BELOW.

AIRCRAFT CROSSING RUNWAY 09/27 ON TAXIWAY C6, HOLD SHORT OF TAXIWAY C6 FACING WEST ON TAXIWAY C, PARALLEL TO RUNWAY.

DUE TO PERSONNEL AND EQUIPMENT WORKING ON RUNWAY 09-27, 30 MINUTE PRIOR PERMISSION REQUIRED 0830-1200Z FOR ALL LANDINGS AND DEPARTURES CALL 619 400-2710.

San Francisco, CA
San Francisco Intl
ICAO Identifier KSFO

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 37-37-00.00N / 122-22-29.60W
- 2.2.2 From City: 8 Miles SE Of San Francisco, CA
- 2.2.3 Elevation: 13 ft
- 2.2.5 Magnetic variation: 17E (1975)
- 2.2.6 Airport Contact: John L. Martin
PO BOX 8097
San Francisco, CA 94128
(650-821-5000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 01R
- 2.10.1.b Type of obstacle: Tree (177 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 200 ft from Centerline

- 2.10.1.a. Runway designation: 10L
- 2.10.1.b Type of obstacle: Tower (88 ft). Marked and Lighted
- 2.10.1.c Location of obstacle: 1300 ft from Centerline

- 2.10.1.a. Runway designation: 10R
- 2.10.1.b Type of obstacle: Tower (87 ft). Marked and Lighted
- 2.10.1.c Location of obstacle: 950 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 28X
- 2.12.3 Dimensions: 0 ft x 0 ft

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 27
- 2.12.3 Dimensions: 7500 ft x 200 ft
- 2.12.4 PCN: 90 F/B/X/T
- 2.12.5 Coordinates: 37-36-32.35N / 122-22-55.92W
- 2.12.6 Threshold elevation: 10 ft
- 2.12.6 Touchdown zone elevation: 11 ft

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 207
- 2.12.3 Dimensions: 7500 ft x 200 ft
- 2.12.4 PCN: 90 F/B/X/T
- 2.12.5 Coordinates: 37-37-37.94N / 122-22-12.44W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 10 ft

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 27
- 2.12.3 Dimensions: 8648 ft x 200 ft
- 2.12.4 PCN: 100 F/B/X/T
- 2.12.5 Coordinates: 37-36-24.54N / 122-22-50.57W
- 2.12.6 Threshold elevation: 11 ft
- 2.12.6 Touchdown zone elevation: 12 ft

- 2.12.1 Designation: 19L
- 2.12.2 True Bearing: 207
- 2.12.3 Dimensions: 8648 ft x 200 ft
- 2.12.4 PCN: 100 F/B/X/T
- 2.12.5 Coordinates: 37-37-40.17N / 122-22-00.00W
- 2.12.6 Threshold elevation: 10 ft
- 2.12.6 Touchdown zone elevation: 11 ft

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 117
- 2.12.3 Dimensions: 11870 ft x 200 ft
- 2.12.4 PCN: 80 F/B/X/T
- 2.12.5 Coordinates: 37-37-43.45N / 122-23-36.20W
- 2.12.6 Threshold elevation: 5 ft
- 2.12.6 Touchdown zone elevation: 7 ft

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 297

2.12.3 Dimensions: 11870 ft x 200 ft
2.12.4 PCN: 80 F/B/X/T
2.12.5 Coordinates: 37-36-48.71N /
122-21-25.70W
2.12.6 Threshold elevation: 13 ft
2.12.6 Touchdown zone elevation: 13 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 117
2.12.3 Dimensions: 10602 ft x 200 ft
2.12.4 PCN: 80 F/B/X/T
2.12.5 Coordinates: 37-37-31.04N /
122-23-26.58W
2.12.6 Threshold elevation: 6 ft
2.12.6 Touchdown zone elevation: 9 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 297
2.12.3 Dimensions: 10602 ft x 200 ft
2.12.4 PCN: 80 F/B/X/T
2.12.5 Coordinates: 37-36-42.15N /
122-21-30.03W
2.12.6 Threshold elevation: 13 ft
2.12.6 Touchdown zone elevation: 13 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 19R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 19L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left
2.14.10 Remarks: Runway 19L MALSF Has A Non
Standard Length Of 1,115 Ft With 3 Sequenced
Flashers.

2.14.1 Designation: 10L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 28R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 10R
2.14.4 Visual approach slope indicator system:

4-light PAPI on left

2.14.1 Designation: 28L
2.14.2 Approach lighting system: SSALR:
Simplified short approach lighting system with
runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 113.7 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 115.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P PTC
2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 118.85 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: ILS PRM RY 28L IC
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: LDA PRM RY 28R IC
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 128.65 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.45 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: IC
2.18.3 Service designation: 351.8 MHz

122-22-10.49W
2.19.6 Site elevation: 7 ft

2.18.1 Service designation: MONITOR ILS PRM
RY 28L
2.18.3 Service designation: 125.15 MHz

2.19.1 ILS type: Middle Marker for runway 19L.
Magnetic variation: 17E
2.19.2 ILS identification: SIA
2.19.5 Coordinates: 37-38-10.77N /
122-21-40.14W
2.19.6 Site elevation: 99999 ft

2.18.1 Service designation: MONITOR LDA PRM
RY 28R
2.18.3 Service designation: 127.675 MHz

2.19.1 ILS type: DME for runway 28R. Magnetic
variation: 15E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37-37-48.64N /
122-23-40.59W
2.19.6 Site elevation: 17 ft

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 28X.
Magnetic variation: 17E
2.19.2 ILS identification: FNP
2.19.5 Coordinates: 37-37-16.65N /
122-22-00.00W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Middle Marker for runway 28R.
Magnetic variation: 15E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37-36-33.79N /
122-20-50.18W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: DME for runway 28X. Magnetic
variation: 17E
2.19.2 ILS identification: FNP
2.19.5 Coordinates: 37-37-14.97N /
122-22-00.00W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Outer Marker for runway 28R.
Magnetic variation: 15E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37-34-19.93N /
122-15-35.65W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Glide Slope for runway 28X.
Magnetic variation: 17E
2.19.2 ILS identification: FNP
2.19.5 Coordinates: 37-36-49.92N /
122-21-40.22W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Inner Marker for runway 28R.
Magnetic variation: 15E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37-36-44.79N /
122-21-16.36W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Localizer for runway 19L.
Magnetic variation: 17E
2.19.2 ILS identification: SIA
2.19.5 Coordinates: 37-36-16.27N /
122-22-56.05W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Localizer for runway 28R.
Magnetic variation: 15E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37-37-46.34N /
122-23-43.12W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: DME for runway 19L. Magnetic
variation: 17E
2.19.2 ILS identification: SIA
2.19.5 Coordinates: 37-36-18.70N /
122-22-59.40W
2.19.6 Site elevation: 24 ft

2.19.1 ILS type: Glide Slope for runway 28R.
Magnetic variation: 15E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37-36-50.24N /
122-21-40.01W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Glide Slope for runway 19L.
Magnetic variation: 17E
2.19.2 ILS identification: SIA
2.19.5 Coordinates: 37-37-31.57N /

2.19.1 ILS type: Glide Slope for runway 28L.
Magnetic variation: 17E
2.19.2 ILS identification: SFO
2.19.5 Coordinates: 37-36-50.12N /
122-21-40.09W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Localizer for runway 28L.
Magnetic variation: 17E
2.19.2 ILS identification: SFO
2.19.5 Coordinates: 37-37-35.65N /
122-23-37.60W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Outer Marker for runway 28L.
Magnetic variation: 17E
2.19.2 ILS identification: SFO
2.19.5 Coordinates: 37-34-19.93N /
122-15-35.65W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 28L. Magnetic
variation: 17E
2.19.2 ILS identification: SFO
2.19.5 Coordinates: 37-37-33.93N /
122-23-39.54W
2.19.6 Site elevation: 22 ft

General Remarks:

FLOCKS OF BIRDS FEEDING ALONG SHORELINE ADJACENT TO AIRPORT; ON OCCASIONS FLY ACROSS VARIOUS PARTS OF THE AIRPORT.

HIGH SPEED TAXIWAY (T) GRAVELLED FULL WIDTH BETWEEN RUNWAY 28R AND 28L.

NOISE SENSITIVE AIRPORT; FOR NOISE ABATEMENT PROCEDURES CONTACT AIRPORT NOISE OFFICE MON-FRI 0800-1700 BY CALLING 650-821-5100.

747-400'S SHALL TAXI AT A SPEED OF LESS THAN 10 MPH ON ALL NON-RESTRICTED TAXIWAYS ON THE TERMINAL SIDE OF THE INTERSECTING RUNWAYS. MOVEMENT SPEED OF NOT MORE THAN 5 MPH IS REQUIRED WHEN TWO 747-400'S PASS OR OVERTAKE EACH OTHER ON PARALLEL TAXIWAYS A & B.

SEVERAL RUNWAY HOLD POSITION SIGNS ARE ON THE RIGHT RATHER THAN THE LEFT SIDE OF THE TAXIWAYS.

NO GROOVING EXISTS AT AIRPORT RUNWAY INTERSECTIONS.

RUNWAY 10 PREFERRED RUNWAY BETWEEN 0100-0600 WEATHER AND FLIGHT CONDITIONS PERMITTING.

AIRLINE PILOTS SHALL STRICTLY FOLLOW THE PAINTED NOSE GEAR LINES AND NO OVERSTEERING ADJUSTMENT IS PERMITTED.

PERSONNEL AND EQUIPMENT WORKING APPROACH END RUNWAYS 28L, 28R, 19L INDEFINITELY.

RUNWAYS 01L/19R, 01R/19L, 10R/28L, 10L/28R GROOVED FULL LENGTH EXCEPT AT RUNWAY INTERSECTIONS.

B747, B777, A330, A340 OR LARGER AIRCRAFT ARE RESTRICTED FROM USING TAXIWAY A1 WHEN B747-400, A340-600, OR LARGER AIRCRAFT ARE HOLDING SHORT OF RUNWAY 1R ON TAXIWAY A.

RAMP CLOSED TO AIRCRAFT WITH WINGSPANS OVER 117 FT AT TERMINAL 1, GATE C41

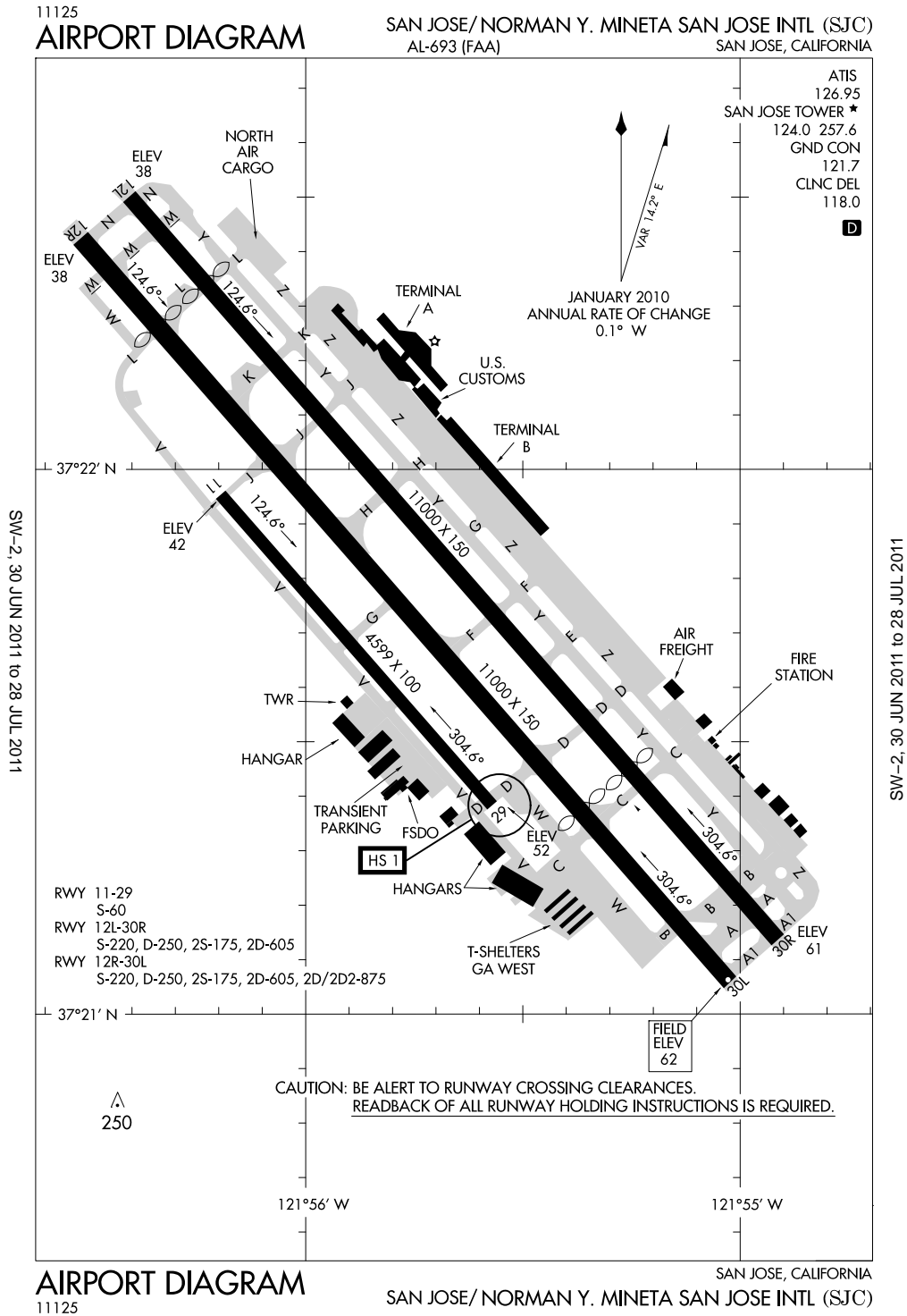
INDEFINITELY.

ALL OUTBOUND TAXIWAY YANKEE HEAVY AIRCRAFT WITH A WINGSPAN OF 171 FT. OR GREATER UNDER POWER PROHIBITED FROM ENTERING WESTBOUND TAXIWAY ZULU.

SIMULTANEOUS OPERATIONS IN EFFECT ALL RUNWAYS.

HELICOPTER LANDING AREA MARKED ON TAXIWAY (C) WEST OF TAXIWAY (R) OPERATIONS FOR CIVIL AND MILITARY USE.

San Jose, California Norman Y. Mineta San Jose International ICAO Identifier KSJC



San Jose, CA
Norman Y. Mineta San Jose Intl
ICAO Identifier KSJC

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 37-21-45.60N / 121-55-44.80W
- 2.2.2 From City: 2 Miles NW Of San Jose, CA
- 2.2.3 Elevation: 62 ft
- 2.2.5 Magnetic variation: 16E (1990)
- 2.2.6 Airport Contact: William Sherry, Aae
1701 AIRPORT BLVD, SUITE B-1130
San Jose, CA 95110 (408-392-3600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973
- 2.6.4 Remarks: Runway 12R/30L And Runway 12L/30R Far 139 Certified.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 29
- 2.10.1.b Type of obstacle: Tree (79 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 100 ft from Centerline

- 2.10.1.a. Runway designation: 12L
- 2.10.1.b Type of obstacle: Pole (32 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 580 ft from Centerline

- 2.10.1.a. Runway designation: 30R
- 2.10.1.b Type of obstacle: Tree (54 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 550 ft from Centerline

- 2.10.1.a. Runway designation: 12R
- 2.10.1.b Type of obstacle: Pole (29 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 480 ft from Centerline

- 2.10.1.a. Runway designation: 30L
- 2.10.1.b Type of obstacle: Fence (14 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 170 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 11
- 2.12.2 True Bearing: 139
- 2.12.3 Dimensions: 4599 ft x 100 ft
- 2.12.5 Coordinates: 37-21-57.21N / 121-56-11.75W
- 2.12.6 Threshold elevation: 42 ft
- 2.12.6 Touchdown zone elevation: 49 ft

- 2.12.1 Designation: 29
- 2.12.2 True Bearing: 319
- 2.12.3 Dimensions: 4599 ft x 100 ft
- 2.12.5 Coordinates: 37-21-22.99N / 121-55-34.24W
- 2.12.6 Threshold elevation: 52 ft
- 2.12.6 Touchdown zone elevation: 52 ft

- 2.12.1 Designation: 12L
- 2.12.2 True Bearing: 139
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.5 Coordinates: 37-22-29.97N / 121-56-24.63W
- 2.12.6 Threshold elevation: 38 ft
- 2.12.6 Touchdown zone elevation: 44 ft

- 2.12.1 Designation: 30R
- 2.12.2 True Bearing: 319
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.5 Coordinates: 37-21-00.00N / 121-54-54.92W
- 2.12.6 Threshold elevation: 61 ft
- 2.12.6 Touchdown zone elevation: 55 ft

- 2.12.1 Designation: 12R
- 2.12.2 True Bearing: 139
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.5 Coordinates: 37-22-25.42N / 121-56-31.15W

2.12.6 Threshold elevation: 38 ft
2.12.6 Touchdown zone elevation: 46 ft

2.12.1 Designation: 30L
2.12.2 True Bearing: 319
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.5 Coordinates: 37-21-00.00N /
121-55-00.00W
2.12.6 Threshold elevation: 62 ft
2.12.6 Touchdown zone elevation: 57 ft

AD 2.13 Declared distances

2.13.1 Designation: 12L
2.13.2 Takeoff run available: 10125
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 10125
2.13.5 Landing distance available: 8810

2.13.1 Designation: 30R
2.13.2 Takeoff run available: 10020
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 10020
2.13.5 Landing distance available: 7479

2.13.1 Designation: 12R
2.13.2 Takeoff run available: 9883
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 9883
2.13.5 Landing distance available: 8584

2.13.1 Designation: 30L
2.13.2 Takeoff run available: 10142
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 10142
2.13.5 Landing distance available: 7605

AD 2.14 Approach and runway lighting

2.14.1 Designation: 11
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 29
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 12L
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 30R
2.14.4 Visual approach slope indicator system:

4-light PAPI on left

2.14.1 Designation: 12R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 30L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P PTC
2.18.3 Service designation: 118 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 126.95 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 257.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 12R.
Magnetic variation: 16E
2.19.2 ILS identification: SLV
2.19.5 Coordinates: 37-21-00.00N /
121-55-00.00W
2.19.6 Site elevation: 75 ft

2.19.1 ILS type: DME for runway 12R. Magnetic
variation: 16E
2.19.2 ILS identification: SLV
2.19.5 Coordinates: 37-21-00.00N /
121-55-00.00W
2.19.6 Site elevation: 75 ft

2.19.1 ILS type: Glide Slope for runway 12R.
Magnetic variation: 16E

2.19.2 ILS identification: SLV
2.19.5 Coordinates: 37-22-00.00N /
121-56-14.57W
2.19.6 Site elevation: 36 ft

2.19.1 ILS type: Middle Marker for runway 12R.
Magnetic variation: 16E
2.19.2 ILS identification: SLV
2.19.5 Coordinates: 37-22-36.25N /
121-56-43.05W
2.19.6 Site elevation: 32 ft

2.19.1 ILS type: Outer Marker for runway 30L.
Magnetic variation: 16E
2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37-17-30.79N /
121-51-11.03W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 30L.
Magnetic variation: 16E
2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37-20-56.13N /
121-54-53.62W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 30L.
Magnetic variation: 16E
2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37-21-33.00N /
121-55-27.86W
2.19.6 Site elevation: 48 ft

2.19.1 ILS type: DME for runway 30L. Magnetic
variation: 16E
2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37-22-27.53N /
121-56-32.57W
2.19.6 Site elevation: 49 ft

2.19.1 ILS type: Localizer for runway 30L.
Magnetic variation: 16E
2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37-22-27.15N /
121-56-33.06W
2.19.6 Site elevation: 49 ft

General Remarks:

BIRDS FREQUENTLY ON OR IN VICINITY OF AIRPORT.

TAXIWAY Y WILL BE PERIODICALLY RESTRICTED TO AIRCRAFT WITH A WINGSPAN OF LESS THAN 171 FT (MD-11 OR SMALLER) DURING B-777 OPERATIONS ON RUNWAY 12L/30R.

TAXIWAY Z WILL BE PERIODICALLY RESTRICTED TO AIRCRAFT WITH A WINGSPAN OF LESS THAN 118 FT (BBJ OR SMALLER) DURING B-777 OPERATIONS.

RUNWAY 11/29 LIMITED TO AIRCRAFT WITH WINGSPAN OF LESS THAN 79 FT AND APPROACH SPEED OF LESS THAN 121 KNOTS (GULFSTREAM I OR SMALLER).

TAXIWAY V LIMITED TO AIRCRAFT WITH WINGSPAN OF LESS THAN 118 FT (A321 OR SMALLER).

UNSCHEDULED OPERATIONS BY GROUP 5 AIRCRAFT (B747) AND LARGER NOT AUTH EXCEPT WITH PRIOR AIRPORT APPROVAL CONTACT AIRPORT MANAGER (408) 392-3501.

NOISE ABATEMENT PROCEDURE: RUNWAY 30L/12R IS PREFERRED ARRIVAL RUNWAY FOR JET AIRCRAFT AND RUNWAY 12L/30R IS THE PREFERRED DEP RUNWAY FOR JET AIRCRAFT. ALL JET AIRCRAFT TAKE-OFFS ARE TO BE INITIATED FROM END OF RUNWAY UNLESS DIRECTED OTHERWISE BY ATCT.

JET DEP ON RUNWAY 11/29 NOT AUTH EXCEPT FOR JETS UNDER 75,000 LBS MFG DESIGNED CERT GROSS TAKE-OFF WGT AND ONLY DURING CLOSURES OF BOTH RUNWAY 12R/30L AND

RUNWAY 12L/30R.

CURFEW HRS 2300-0700 FAR 36 STAGE II, 2330-0630 FAR 36 STAGE III AIRCRAFT LISTED ON THE SCHEDULE OF AUTHORIZED AIRCRAFT ISSUED BY THE DIRECTOR OF AVIATION. DELAYED SCHEDULED FLIGHTS, AND ALTERNATE/EMERGENCY OPERATIONS MAY BE EXEMPT FROM CURFEW HOUR RESTRICTIONS.

PRIOR AIRPORT NOTIFICATION IS REQUIRED FOR ALL LATE/EARLY ARRIVALS. CONTACT MANAGER ON DUTY AT (408) 392-3501.

FIRST 400 FT RUNWAY 30R & RUNWAY 30L CLOSED FOR TAKE-OFF DC10, MD11, L1011.

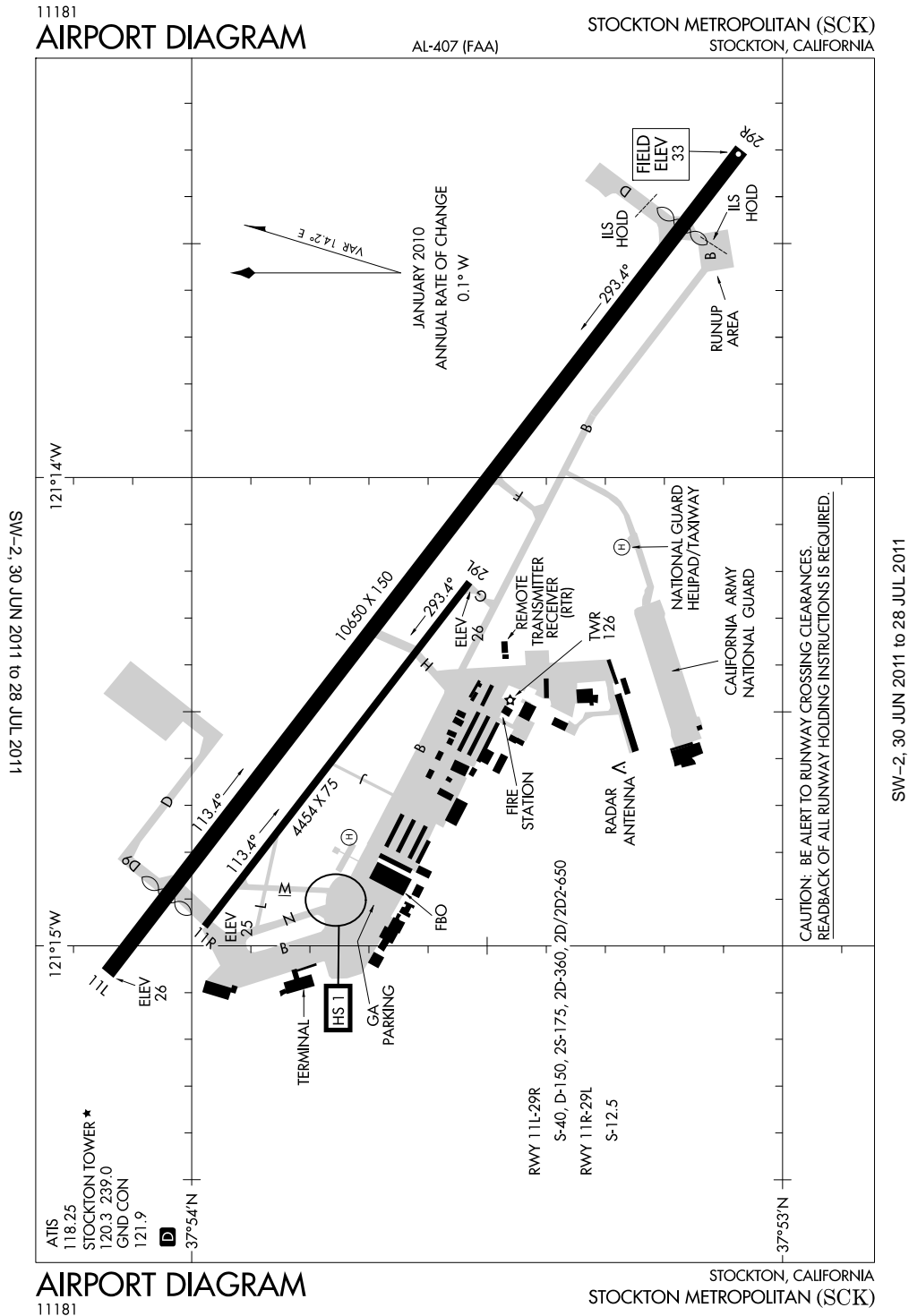
ALL ENGINE RUN-UPS REQUIRE PRIOR AIRPORT APPROVAL, CONTACT MANAGER ON DUTY (408) 392-3501.

RUNWAY 11-29 RUN-UP AREA LIMITED TO AIRCRAFT 12,500 LBS OR LIGHTER.

TAXIWAY D BETWEEN TAXIWAY W AND TAXIWAY V LIMITED TO AIRCRAFT WITH A WINGSPAN OF LESS THAN 118 FT (A-321 OR SMALLER).

TAXIWAY G AND TAXIWAY J BETWEEN RUNWAY 12R/30L AND TAXIWAY V LIMITED TO 100,000 LBS GROSS TAKE-OFF WEIGHT.

Stockton, California Stockton Metropolitan ICAO Identifier KSKK



Stockton, CA
Stockton Metropolitan
ICAO Identifier KSKC

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 37-53-39.00N / 121-14-17.90W
- 2.2.2 From City: 3 Miles SE Of Stockton, CA
- 2.2.3 Elevation: 33 ft
- 2.2.5 Magnetic variation: 14E (2010)
- 2.2.6 Airport Contact: Susan Palmeri
5000 S. AIRPORT WAY ROOM 202
Stockton, CA 95206 (209-468-4700)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 5/1/1973
- 2.6.4 Remarks: Closed To Unscheduled Air Carrier Operations With More Than 30 Passenger Seats Except One Hr Prior Permission Required Call Airport Manager (209) 468-4700 Or 4722; After Hrs Call (209) 468-4722.

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 70 ft x 70 ft

- 2.12.1 Designation: 11L
- 2.12.2 True Bearing: 128
- 2.12.3 Dimensions: 10650 ft x 150 ft
- 2.12.5 Coordinates: 37-54-00.00N / 121-15-00.00W
- 2.12.6 Threshold elevation: 26 ft
- 2.12.6 Touchdown zone elevation: 29 ft

- 2.12.1 Designation: 29R
- 2.12.2 True Bearing: 308
- 2.12.3 Dimensions: 10650 ft x 150 ft

- 2.12.5 Coordinates: 37-53-00.00N / 121-13-17.91W
- 2.12.6 Threshold elevation: 33 ft
- 2.12.6 Touchdown zone elevation: 32 ft

- 2.12.1 Designation: 11R
- 2.12.2 True Bearing: 128
- 2.12.3 Dimensions: 4454 ft x 75 ft
- 2.12.5 Coordinates: 37-53-58.71N / 121-14-57.48W
- 2.12.6 Threshold elevation: 25 ft
- 2.12.6 Touchdown zone elevation: 26 ft

- 2.12.1 Designation: 29L
- 2.12.2 True Bearing: 308
- 2.12.3 Dimensions: 4454 ft x 75 ft
- 2.12.5 Coordinates: 37-53-31.86N / 121-14-13.44W
- 2.12.6 Threshold elevation: 26 ft
- 2.12.6 Touchdown zone elevation: 26 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 11L
- 2.13.2 Takeoff run available: 9600
- 2.13.3 Takeoff distance available: 10600
- 2.13.4 Accelerate-stop distance available: 9690
- 2.13.5 Landing distance available: 8690

- 2.13.1 Designation: 29R
- 2.13.2 Takeoff run available: 10037
- 2.13.3 Takeoff distance available: 11037
- 2.13.4 Accelerate-stop distance available: 9701
- 2.13.5 Landing distance available: 8701

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 11L
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 29R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: ATIS(209-982-4667)
- 2.18.3 Service designation: 118.25 MHz
- 2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 239 MHz

2.18.1 Service designation: ANG OPNS
2.18.3 Service designation: 49 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 139.4 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 356.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 29R.
Magnetic variation: 14E
2.19.2 ILS identification: SCK
2.19.5 Coordinates: 37-54-14.45N /
121-15-13.08W

General Remarks:

SEAGULLS ON AND IN VICINITY OF AIRPORT MOSTLY DURING RAINY WEATHER.

AVOID OVERFLYING SAN JOAQUIN GENERAL HOSPITAL & THE CITY OF MANTECA.

AIRPORT CLOSED TO TOUCH AND GO LANDING & PLANNED LOW APPROACHES FOR TURBOJET AIRCRAFT 2200-0700 EXCEPT BY PRIOR PERMISSION REQUIRED FROM AIRPORT MANAGER PART 36 STAGE 3 AIRCRAFT.

PRACTICE CIRCLING APPROACHES TO RUNWAYS 11L/11R NOT AUTHORIZED FOR ANY TURBINE POWERED ACFT/PROP DRIVEN AIRCRAFT EXCEEDING 12500 LBS EXCEPT BY PRIOR PERMISSION REQUIRED FROM AIRPORT MANAGER.

MILITARY USE: ARRANGE OPR 1500-2330Z++ MON-FRI. DSN 466-5319, C209-983-5319, FAX 5391. PRIOR PERMISSION REQUIRED. LIMITED TRANSIENT SERVICE AND MAINT AVAILABLE FOR CH47.

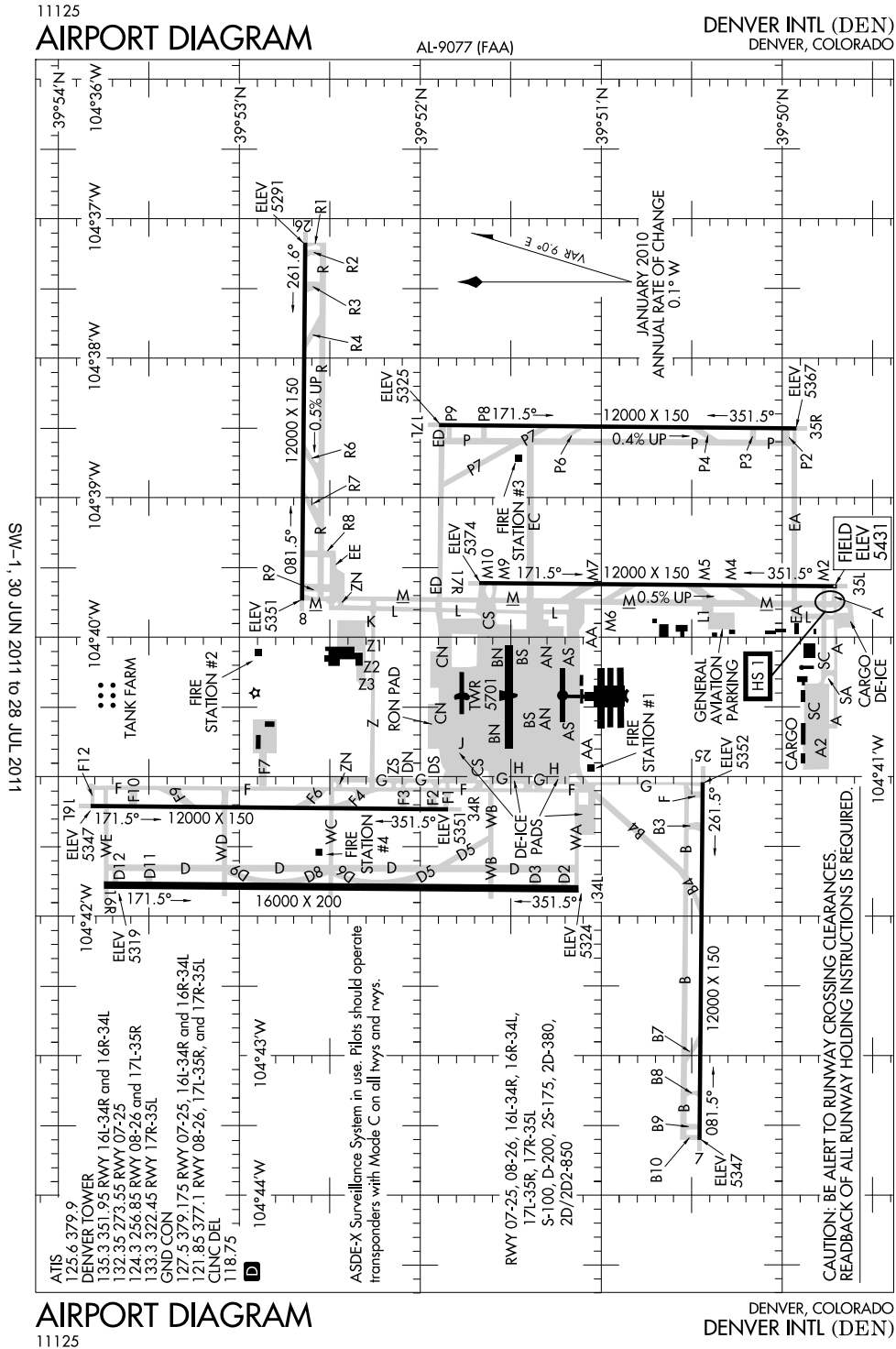
THE FOLLOWING AREAS NOT VISIBLE FROM ATCT: TAXIWAY B FROM NORTH SIDE OF TERMINAL BUILDING TO 25 FT WEST OF TAXIWAY J. SOUTH HALF OF TAXIWAY B INTERMITTENTLY FROM TAXIWAY J TO 200 FT WEST OF TAXIWAY H. TRANSIENT PARKING AREA. ALL TERMINAL RAMPS. TAXIWAY B FROM APPROXIMATE 200 FT WEST AND EAST OF TAXIWAY J.

TRANSIENT PARKING AVAILABLE AT FBO.

BE ALERT TO ELEVATED MALSR APPROACH END RUNWAY 29R LOCATED AT DSPLCD THRESHOLD DEMARCATION BAR WHEN USING FULL LENGTH OF RUNWAY 29R.

APRON TAXIWAY AND TAXIWAY B,F, D, D9, N, AND H FOR AIRCRAFT ABOVE 12,500 LBS. ALL OTHER TAXIWAYS RESTRICTED TO AIRCRAFT LESS THAN 12,500 LBS.

Denver, Colorado
Denver International
ICAO Identifier KDEN



Denver, CO
Denver Intl
ICAO Identifier KDEN

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-51-41.96N / 104-40-23.44W
- 2.2.2 From City: 16 Miles NE Of Denver, CO
- 2.2.3 Elevation: 5431 ft
- 2.2.5 Magnetic variation: 11E (1995)
- 2.2.6 Airport Contact: Kim Day
ADMIN BLDG, 8500 PENA BLVD
Denver, CO 80249 (303-342-2200)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A,MOGAS
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 2/1/1995

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 07
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-50-27.40N / 104-43-35.97W
- 2.12.6 Threshold elevation: 5347 ft
- 2.12.6 Touchdown zone elevation: 5348 ft

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 271
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-50-26.36N / 104-41-00.00W
- 2.12.6 Threshold elevation: 5352 ft
- 2.12.6 Touchdown zone elevation: 5352 ft

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 181
- 2.12.3 Dimensions: 12000 ft x 150 ft

- 2.12.5 Coordinates: 39-53-49.33N / 104-41-12.50W
- 2.12.6 Threshold elevation: 5347 ft
- 2.12.6 Touchdown zone elevation: 5354 ft

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 1
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-51-50.78N / 104-41-13.88W
- 2.12.6 Threshold elevation: 5351 ft
- 2.12.6 Touchdown zone elevation: 5351 ft

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 91
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-52-39.20N / 104-39-44.03W
- 2.12.6 Threshold elevation: 5351 ft
- 2.12.6 Touchdown zone elevation: 5351 ft

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 271
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-52-38.08N / 104-37-10.15W
- 2.12.6 Threshold elevation: 5291 ft
- 2.12.6 Touchdown zone elevation: 5306 ft

- 2.12.1 Designation: 17L
- 2.12.2 True Bearing: 181
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-51-53.83N / 104-38-28.70W
- 2.12.6 Threshold elevation: 5325 ft
- 2.12.6 Touchdown zone elevation: 5335 ft

- 2.12.1 Designation: 35R
- 2.12.2 True Bearing: 1
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-49-55.27N / 104-38-30.16W
- 2.12.6 Threshold elevation: 5367 ft
- 2.12.6 Touchdown zone elevation: 5367 ft

- 2.12.1 Designation: 17R
- 2.12.2 True Bearing: 181
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-51-40.48N / 104-39-36.56W
- 2.12.6 Threshold elevation: 5374 ft

2.12.6 Touchdown zone elevation: 5388 ft

2.12.1 Designation: 35L

2.12.2 True Bearing: 1

2.12.3 Dimensions: 12000 ft x 150 ft

2.12.5 Coordinates: 39-49-41.93N /

104-39-37.99W

2.12.6 Threshold elevation: 5430 ft

2.12.6 Touchdown zone elevation: 5430 ft

2.12.1 Designation: 16R

2.12.2 True Bearing: 180

2.12.3 Dimensions: 16000 ft x 200 ft

2.12.5 Coordinates: 39-53-44.87N /

104-41-45.90W

2.12.6 Threshold elevation: 5319 ft

2.12.6 Touchdown zone elevation: 5323 ft

2.12.1 Designation: 34L

2.12.2 True Bearing: 1

2.12.3 Dimensions: 16000 ft x 200 ft

2.12.5 Coordinates: 39-51-00.00N /

104-41-47.72W

2.12.6 Threshold elevation: 5324 ft

2.12.6 Touchdown zone elevation: 5324 ft

AD 2.13 Declared distances

2.13.1 Designation: 07

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 25

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 13000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 16L

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 34R

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 13000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 08

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 13000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 26

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 17L

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 35R

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 17R

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 35L

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 16R

2.13.2 Takeoff run available: 16000

2.13.3 Takeoff distance available: 16000

2.13.4 Accelerate-stop distance available: 16000

2.13.5 Landing distance available: 16000

2.13.1 Designation: 34L

2.13.2 Takeoff run available: 16000

2.13.3 Takeoff distance available: 16000

2.13.4 Accelerate-stop distance available: 16000

2.13.5 Landing distance available: 16000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07

2.14.2 Approach lighting system: MALSR: 1400

feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 25
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 16L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 34R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 08
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 26
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 17L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 35R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system

with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 17R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 35L
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 16R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 34L
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.75 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 120.35 MHz

2.18.1 Service designation: FINAL CTL
2.18.3 Service designation: 120.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.85 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 124.3 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 125.6 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CLASS B DEP/P
2.18.3 Service designation: 126.1 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 127.05 MHz

2.18.1 Service designation: CLASS B DEP/P
2.18.3 Service designation: 128.25 MHz

2.18.1 Service designation: CLASS B DEP/P
2.18.3 Service designation: 128.45 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 133.3 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 134.025 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 134.85 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 322.45 MHz

2.18.1 Service designation: CLASS B DEP/P
2.18.3 Service designation: 360.75 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 363.25 MHz

2.18.1 Service designation: CLASS B DEP/P
2.18.3 Service designation: 371.95 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 377.1 MHz

2.18.1 Service designation: CLASS B DEP/P
2.18.3 Service designation: 251.075 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 251.125 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 379.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P
2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 273.55 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 135.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 256.85 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 351.95 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 379.175 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 379.3 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 346.4 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 126.55 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 269.525 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 307.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 07.
Magnetic variation: 11E
2.19.2 ILS identification: DZG
2.19.5 Coordinates: 39-50-23.26N /
104-43-22.65W
2.19.6 Site elevation: 5337 ft

2.19.1 ILS type: Outer Marker for runway 07.

Magnetic variation: 11E
2.19.2 ILS identification: DZG
2.19.5 Coordinates: 39-50-31.70N /
104-49-41.50W
2.19.6 Site elevation: 5215 ft

2.19.1 ILS type: Middle Marker for runway 07.
Magnetic variation: 11E
2.19.2 ILS identification: DZG
2.19.5 Coordinates: 39-50-27.60N /
104-44-11.80W
2.19.6 Site elevation: 5283 ft

2.19.1 ILS type: Localizer for runway 07. Magnetic
variation: 11E
2.19.2 ILS identification: DZG
2.19.5 Coordinates: 39-50-26.27N /
104-40-49.08W
2.19.6 Site elevation: 5352 ft

2.19.1 ILS type: DME for runway 07. Magnetic
variation: 11E
2.19.2 ILS identification: DZG
2.19.5 Coordinates: 39-50-23.66N /
104-40-48.62W
2.19.6 Site elevation: 5355 ft

2.19.1 ILS type: Localizer for runway 25. Magnetic
variation: 11E
2.19.2 ILS identification: ERP
2.19.5 Coordinates: 39-50-27.49N /
104-43-49.05W
2.19.6 Site elevation: 5345 ft

2.19.1 ILS type: DME for runway 25. Magnetic
variation: 11E
2.19.2 ILS identification: ERP
2.19.5 Coordinates: 39-50-23.66N /
104-40-48.38W
2.19.6 Site elevation: 5355 ft

2.19.1 ILS type: Glide Slope for runway 25.
Magnetic variation: 11E
2.19.2 ILS identification: ERP
2.19.5 Coordinates: 39-50-22.41N /
104-41-15.79W
2.19.6 Site elevation: 5341 ft

2.19.1 ILS type: Middle Marker for runway 25.
Magnetic variation: 11E
2.19.2 ILS identification: ERP

2.19.5 Coordinates: 39-50-26.10N /
104-40-25.50W
2.19.6 Site elevation: 5325 ft

2.19.1 ILS type: Outer Marker for runway 25.
Magnetic variation: 11E
2.19.2 ILS identification: ERP
2.19.5 Coordinates: 39-50-15.80N /
104-34-56.30W
2.19.6 Site elevation: 5319 ft

2.19.1 ILS type: Outer Marker for runway 16L.
Magnetic variation: 11E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-58-19.70N /
104-41-26.10W
2.19.6 Site elevation: 5161 ft

2.19.1 ILS type: Middle Marker for runway 16L.
Magnetic variation: 11E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-54-18.00N /
104-41-12.20W
2.19.6 Site elevation: 5347 ft

2.19.1 ILS type: Localizer for runway 16L.
Magnetic variation: 11E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-51-40.69N /
104-41-13.99W
2.19.6 Site elevation: 5340 ft

2.19.1 ILS type: DME for runway 16L. Magnetic
variation: 11E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-53-59.63N /
104-41-15.77W
2.19.6 Site elevation: 5354 ft

2.19.1 ILS type: Glide Slope for runway 16L.
Magnetic variation: 11E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-53-39.55N /
104-41-17.87W
2.19.6 Site elevation: 5343 ft

2.19.1 ILS type: Glide Slope for runway 34R.
Magnetic variation: 9E
2.19.2 ILS identification: OUF
2.19.5 Coordinates: 39-52-00.00N /
104-41-19.01W

2.19.6 Site elevation: 5343 ft

2.19.1 ILS type: Inner Marker for runway 34R.
Magnetic variation: 9E

2.19.2 ILS identification: OUF

2.19.5 Coordinates: 39-51-42.30N /
104-41-14.00W

2.19.6 Site elevation: 5342 ft

2.19.1 ILS type: Middle Marker for runway 34R.
Magnetic variation: 9E

2.19.2 ILS identification: OUF

2.19.5 Coordinates: 39-51-23.40N /
104-41-14.10W

2.19.6 Site elevation: 5298 ft

2.19.1 ILS type: DME for runway 34R. Magnetic
variation: 9E

2.19.2 ILS identification: OUF

2.19.5 Coordinates: 39-53-59.63N /
104-41-15.77W

2.19.6 Site elevation: 5354 ft

2.19.1 ILS type: Outer Marker for runway 34R.
Magnetic variation: 9E

2.19.2 ILS identification: OUF

2.19.5 Coordinates: 39-47-00.00N /
104-41-33.80W

2.19.6 Site elevation: 5561 ft

2.19.1 ILS type: Localizer for runway 34R.
Magnetic variation: 9E

2.19.2 ILS identification: OUF

2.19.5 Coordinates: 39-53-59.43N /
104-41-12.38W

2.19.6 Site elevation: 5346 ft

2.19.1 ILS type: DME for runway 08. Magnetic
variation: 11E

2.19.2 ILS identification: FUI

2.19.5 Coordinates: 39-52-41.90N /
104-39-57.58W

2.19.6 Site elevation: 5356 ft

2.19.1 ILS type: Glide Slope for runway 08.
Magnetic variation: 11E

2.19.2 ILS identification: FUI

2.19.5 Coordinates: 39-52-43.15N /
104-39-29.86W

2.19.6 Site elevation: 5339 ft

2.19.1 ILS type: Outer Marker for runway 08.
Magnetic variation: 11E

2.19.2 ILS identification: FUI

2.19.5 Coordinates: 39-52-40.50N /
104-46-20.00W

2.19.6 Site elevation: 5245 ft

2.19.1 ILS type: Localizer for runway 08. Magnetic
variation: 11E

2.19.2 ILS identification: FUI

2.19.5 Coordinates: 39-52-37.98N /
104-36-57.06W

2.19.6 Site elevation: 5280 ft

2.19.1 ILS type: Middle Marker for runway 08.
Magnetic variation: 11E

2.19.2 ILS identification: FUI

2.19.5 Coordinates: 39-52-39.40N /
104-40-19.50W

2.19.6 Site elevation: 5352 ft

2.19.1 ILS type: Localizer for runway 26. Magnetic
variation: 11E

2.19.2 ILS identification: JOY

2.19.5 Coordinates: 39-52-39.30N /
104-39-57.12W

2.19.6 Site elevation: 5345 ft

2.19.1 ILS type: Glide Slope for runway 26.
Magnetic variation: 11E

2.19.2 ILS identification: JOY

2.19.5 Coordinates: 39-52-42.22N /
104-37-22.38W

2.19.6 Site elevation: 5290 ft

2.19.1 ILS type: Outer Marker for runway 26.
Magnetic variation: 11E

2.19.2 ILS identification: JOY

2.19.5 Coordinates: 39-52-34.30N /
104-29-18.70W

2.19.6 Site elevation: 5111 ft

2.19.1 ILS type: Middle Marker for runway 26.
Magnetic variation: 11E

2.19.2 ILS identification: JOY

2.19.5 Coordinates: 39-52-37.80N /
104-36-31.00W

2.19.6 Site elevation: 5256 ft

2.19.1 ILS type: DME for runway 26. Magnetic
variation: 11E

2.19.2 ILS identification: JOY
2.19.5 Coordinates: 39-52-41.90N /
104-39-57.58W
2.19.6 Site elevation: 5356 ft

2.19.1 ILS type: Localizer for runway 17L.
Magnetic variation: 11E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-49-45.18N /
104-38-30.28W
2.19.6 Site elevation: 5360 ft

2.19.1 ILS type: Outer Marker for runway 17L.
Magnetic variation: 11E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-56-35.40N /
104-38-23.70W
2.19.6 Site elevation: 5161 ft

2.19.1 ILS type: Middle Marker for runway 17L.
Magnetic variation: 11E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-52-23.20N /
104-38-28.30W
2.19.6 Site elevation: 5323 ft

2.19.1 ILS type: Glide Slope for runway 17L.
Magnetic variation: 11E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-51-44.06N /
104-38-23.56W
2.19.6 Site elevation: 5323 ft

2.19.1 ILS type: DME for runway 17L. Magnetic
variation: 11E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-52-00.00N /
104-38-25.18W
2.19.6 Site elevation: 5342 ft

2.19.1 ILS type: DME for runway 35R. Magnetic
variation: 9E
2.19.2 ILS identification: DPP
2.19.5 Coordinates: 39-52-00.00N /
104-38-25.19W
2.19.6 Site elevation: 5342 ft

2.19.1 ILS type: Glide Slope for runway 35R.
Magnetic variation: 9E
2.19.2 ILS identification: DPP
2.19.5 Coordinates: 39-50-00.00N /

104-38-24.77W
2.19.6 Site elevation: 5356 ft

2.19.1 ILS type: Inner Marker for runway 35R.
Magnetic variation: 9E
2.19.2 ILS identification: DPP
2.19.5 Coordinates: 39-49-46.80N /
104-38-30.30W
2.19.6 Site elevation: 5361 ft

2.19.1 ILS type: Outer Marker for runway 35R.
Magnetic variation: 9E
2.19.2 ILS identification: DPP
2.19.5 Coordinates: 39-45-13.10N /
104-38-27.20W
2.19.6 Site elevation: 5504 ft

2.19.1 ILS type: Localizer for runway 35R.
Magnetic variation: 9E
2.19.2 ILS identification: DPP
2.19.5 Coordinates: 39-52-00.00N /
104-38-28.57W
2.19.6 Site elevation: 5332 ft

2.19.1 ILS type: Middle Marker for runway 35R.
Magnetic variation: 9E
2.19.2 ILS identification: DPP
2.19.5 Coordinates: 39-49-27.90N /
104-38-30.60W
2.19.6 Site elevation: 5356 ft

2.19.1 ILS type: Localizer for runway 17R.
Magnetic variation: 11E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-49-31.84N /
104-39-38.10W
2.19.6 Site elevation: 5424 ft

2.19.1 ILS type: DME for runway 17R. Magnetic
variation: 11E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-51-50.93N /
104-39-33.05W
2.19.6 Site elevation: 5385 ft

2.19.1 ILS type: Outer Marker for runway 17R.
Magnetic variation: 11E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-56-35.50N /
104-39-32.20W
2.19.6 Site elevation: 5286 ft

2.19.1 ILS type: Middle Marker for runway 17R.
Magnetic variation: 11E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-52-10.50N /
104-39-36.20W
2.19.6 Site elevation: 5365 ft

2.19.1 ILS type: Glide Slope for runway 17R.
Magnetic variation: 11E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-51-30.91N /
104-39-31.42W
2.19.6 Site elevation: 5374 ft

2.19.1 ILS type: Localizer for runway 35L.
Magnetic variation: 9E
2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-51-50.57N /
104-39-36.44W
2.19.6 Site elevation: 5374 ft

2.19.1 ILS type: DME for runway 35L. Magnetic
variation: 9E
2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-51-50.93N /
104-39-33.05W
2.19.6 Site elevation: 5384 ft

2.19.1 ILS type: Glide Slope for runway 35L.
Magnetic variation: 9E
2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-49-52.77N /
104-39-32.60W
2.19.6 Site elevation: 5419 ft

2.19.1 ILS type: Outer Marker for runway 35L.
Magnetic variation: 9E
2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-45-13.30N /
104-39-48.60W
2.19.6 Site elevation: 5606 ft

2.19.1 ILS type: Middle Marker for runway 35L.
Magnetic variation: 9E
2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-49-14.60N /
104-39-38.40W
2.19.6 Site elevation: 5411 ft

2.19.1 ILS type: Inner Marker for runway 35L.
Magnetic variation: 9E

2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-49-33.40N /
104-39-38.10W
2.19.6 Site elevation: 5426 ft

2.19.1 ILS type: Glide Slope for runway 16R.
Magnetic variation: 11E
2.19.2 ILS identification: DQQ
2.19.5 Coordinates: 39-53-34.83N /
104-41-51.28W
2.19.6 Site elevation: 5317 ft

2.19.1 ILS type: DME for runway 16R. Magnetic
variation: 11E
2.19.2 ILS identification: DQQ
2.19.5 Coordinates: 39-53-55.69N /
104-41-50.91W
2.19.6 Site elevation: 5311 ft

2.19.1 ILS type: Localizer for runway 16R.
Magnetic variation: 11E
2.19.2 ILS identification: DQQ
2.19.5 Coordinates: 39-50-56.79N /
104-41-47.83W
2.19.6 Site elevation: 5320 ft

2.19.1 ILS type: DME for runway 34L. Magnetic
variation: 9E
2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-53-55.64N /
104-41-50.91W
2.19.6 Site elevation: 5311 ft

2.19.1 ILS type: Localizer for runway 34L.
Magnetic variation: 9E
2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-53-54.87N /
104-41-45.79W
2.19.6 Site elevation: 5320 ft

2.19.1 ILS type: Glide Slope for runway 34L.
Magnetic variation: 9E
2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-51-17.60N /
104-41-52.85W
2.19.6 Site elevation: 5318 ft

2.19.1 ILS type: Inner Marker for runway 34L.
Magnetic variation: 9E
2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-50-58.29N /

104-41-47.82W
2.19.6 Site elevation: 5317 ft

General Remarks:

FIXED OR MOVABLE OBJECT LINE BETWEEN RAMP & SOUTH TAXIWAYS BN-BS REMOVED.

OVERHEAD PASSENGER BRIDGE ON SOUTH SIDE OF CONCOURSE 'A' PROVIDES 42 FT TAIL & 118 FT WINGSPAN CLEARANCE WHEN ON TAXIWAY CENTERLINE.

INSUFFICIENT TAXIWAY CORNER FILLET PAVEMENT IN THE SE CORNER OF THE TAXIWAY M/M2 INTERSECTION FOR AIRCRAFT WITH WINGSPANS OVER 107 FT.

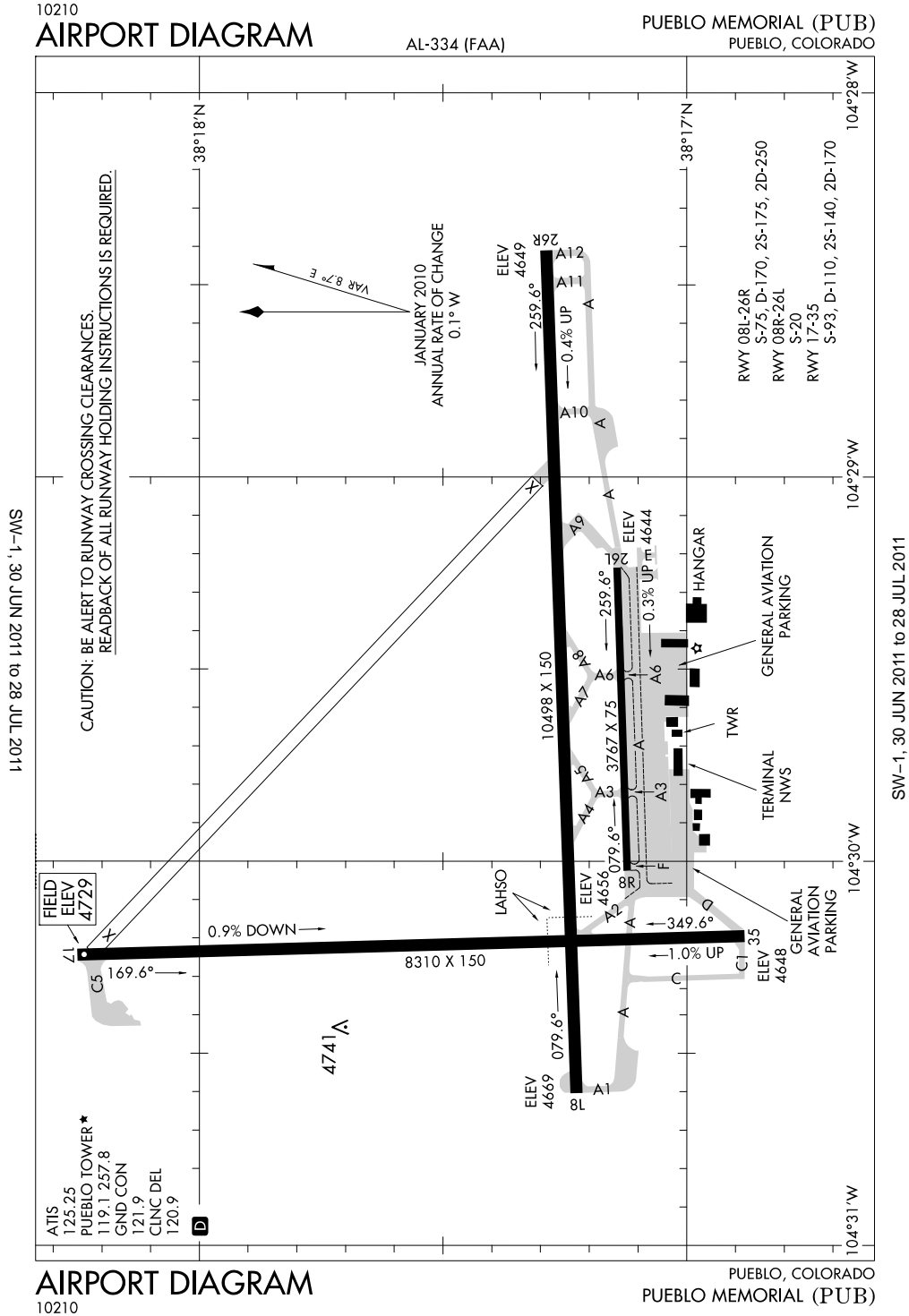
FLIGHT NOTIFICATION SERVICE (ADCUS) AVAILABLE.

INFORMAL RUNWAY USE PROGRAM IS IN EFFECT 24 HRS A DAY. FOR ADDITIONAL NOISE ABATEMENT INFORMATION CONTACT AIRPORT MANAGEMENT AT 303-342-4200.

WATERFOWL AND MIGRATORY BIRD ACTIVITY IN THE VICINITY OF AIRPORT YEAR ROUND.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

Pueblo, Colorado
Pueblo Memorial
ICAO Identifier KPUB



Pueblo, CO
Pueblo Memorial
ICAO Identifier KPUB

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 38-17-20.90N / 104-29-47.40W
- 2.2.2 From City: 5 Miles E Of Pueblo, CO
- 2.2.3 Elevation: 4729 ft
- 2.2.5 Magnetic variation: 11E (1985)
- 2.2.6 Airport Contact: Mark Lovin
31201 BRYAN CIRCLE
Pueblo, CO 81001
(719-553-2760)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, M-F Days, 0400-2300 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index Ii A certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 26L
- 2.10.1.b Type of obstacle: Gnd (7 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 245 ft from Centerline
- 2.10.1.a. Runway designation: 08R
- 2.10.1.b Type of obstacle: Gnd (20 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 17
- 2.12.2 True Bearing: 178
- 2.12.3 Dimensions: 8310 ft x 150 ft
- 2.12.5 Coordinates: 38-18-15.06N / 104-30-14.69W
- 2.12.6 Threshold elevation: 4729 ft

- 2.12.6 Touchdown zone elevation: 4729 ft
- 2.12.7 Slope: 0.9DOWN

- 2.12.1 Designation: 35
- 2.12.2 True Bearing: 358
- 2.12.3 Dimensions: 8310 ft x 150 ft
- 2.12.5 Coordinates: 38-16-52.97N / 104-30-11.65W
- 2.12.6 Threshold elevation: 4648 ft
- 2.12.6 Touchdown zone elevation: 4677 ft
- 2.12.7 Slope: 1UP

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 88
- 2.12.3 Dimensions: 10498 ft x 150 ft
- 2.12.5 Coordinates: 38-17-13.64N / 104-30-36.24W
- 2.12.6 Threshold elevation: 4669 ft
- 2.12.6 Touchdown zone elevation: 4671 ft
- 2.12.7 Slope: 0DOWN

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 268
- 2.12.3 Dimensions: 10498 ft x 150 ft
- 2.12.5 Coordinates: 38-17-16.75N / 104-28-24.66W
- 2.12.6 Threshold elevation: 4649 ft
- 2.12.6 Touchdown zone elevation: 4659 ft

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 88
- 2.12.3 Dimensions: 3767 ft x 75 ft
- 2.12.5 Coordinates: 38-17-00.00N / 104-30-00.00W
- 2.12.6 Threshold elevation: 4656 ft
- 2.12.6 Touchdown zone elevation: 4656 ft

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 268
- 2.12.3 Dimensions: 3767 ft x 75 ft
- 2.12.5 Coordinates: 38-17-00.00N / 104-29-14.23W
- 2.12.6 Threshold elevation: 4644 ft
- 2.12.6 Touchdown zone elevation: 4655 ft
- 2.12.7 Slope: 0.3UP

AD 2.13 Declared distances

- 2.13.1 Designation: 17
- 2.13.2 Takeoff run available: 8308
- 2.13.3 Takeoff distance available: 8308
- 2.13.4 Accelerate-stop distance available: 8308

2.13.5 Landing distance available: 8308

2.13.1 Designation: 35

2.13.2 Takeoff run available: 8308

2.13.3 Takeoff distance available: 8308

2.13.4 Accelerate-stop distance available: 8308

2.13.5 Landing distance available: 8308

2.13.1 Designation: 08L

2.13.2 Takeoff run available: 10496

2.13.3 Takeoff distance available: 10496

2.13.4 Accelerate-stop distance available: 10496

2.13.5 Landing distance available: 10496

2.13.1 Designation: 26R

2.13.2 Takeoff run available: 10496

2.13.3 Takeoff distance available: 10496

2.13.4 Accelerate-stop distance available: 10496

2.13.5 Landing distance available: 10496

2.13.1 Designation: 08R

2.13.2 Takeoff run available: 3767

2.13.3 Takeoff distance available: 3767

2.13.4 Accelerate-stop distance available: 3767

2.13.5 Landing distance available: 3767

2.13.1 Designation: 26L

2.13.2 Takeoff run available: 3767

2.13.3 Takeoff distance available: 3767

2.13.4 Accelerate-stop distance available: 3767

2.13.5 Landing distance available: 3767

AD 2.14 Approach and runway lighting

2.14.1 Designation: 17

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 35

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 08L

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 26R

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: ATIS

2.18.3 Service designation: 125.25 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: CLNC DEL

2.18.3 Service designation: 120.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 08L.

Magnetic variation: 11E

2.19.2 ILS identification: PUB

2.19.5 Coordinates: 38-17-17.20N /
104-28-00.00W

2.19.6 Site elevation: 4653 ft

2.19.1 ILS type: Glide Slope for runway 08L.

Magnetic variation: 11E

2.19.2 ILS identification: PUB

2.19.5 Coordinates: 38-17-18.93N /
104-30-21.58W

2.19.6 Site elevation: 4673 ft

2.19.1 ILS type: Outer Marker for runway 08L.

Magnetic variation: 11E

2.19.2 ILS identification: PUB

2.19.5 Coordinates: 38-17-00.00N /
104-38-49.50W

2.19.6 Site elevation: 4730 ft

2.19.1 ILS type: Middle Marker for runway 08L.

Magnetic variation: 11E

2.19.2 ILS identification: PUB

2.19.5 Coordinates: 38-17-12.61N /
104-31-20.10W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 26R.
Magnetic variation: 11E

2.19.2 ILS identification: TFR

2.19.5 Coordinates: 38-17-21.36N /
104-28-39.20W

2.19.6 Site elevation: 4650 ft

2.19.1 ILS type: Localizer for runway 26R.
Magnetic variation: 11E

2.19.2 ILS identification: TFR

2.19.5 Coordinates: 38-17-13.25N /
104-30-52.56W

2.19.6 Site elevation: 4668 ft

2.19.1 ILS type: Outer Marker for runway 26R.
Magnetic variation: 11E

2.19.2 ILS identification: TFR

2.19.5 Coordinates: 38-17-26.64N /
104-21-17.89W

2.19.6 Site elevation: 4660 ft

2.19.1 ILS type: Middle Marker for runway 26R.
Magnetic variation: 11E

2.19.2 ILS identification: TFR

2.19.5 Coordinates: 38-17-17.69N /
104-27-45.32W

2.19.6 Site elevation: 4640 ft

General Remarks:

HIGH VOLUME TRAINING DA-20 AIRCRAFT SR-SS MON-FRI. OVERHEAD PATTERN DURING TRAINING. EXTENSIVE USE OF TRAINING AREA 12-28 DME N-SW OF AIRPORT 500 FT AGL-8500 FT MSL.

FREQUENT USAGE OF RUNWAYS 8R/26L AFTER SUNSET BY UNLIGHTED MILITARY TRANSIENT AIRCRAFT.

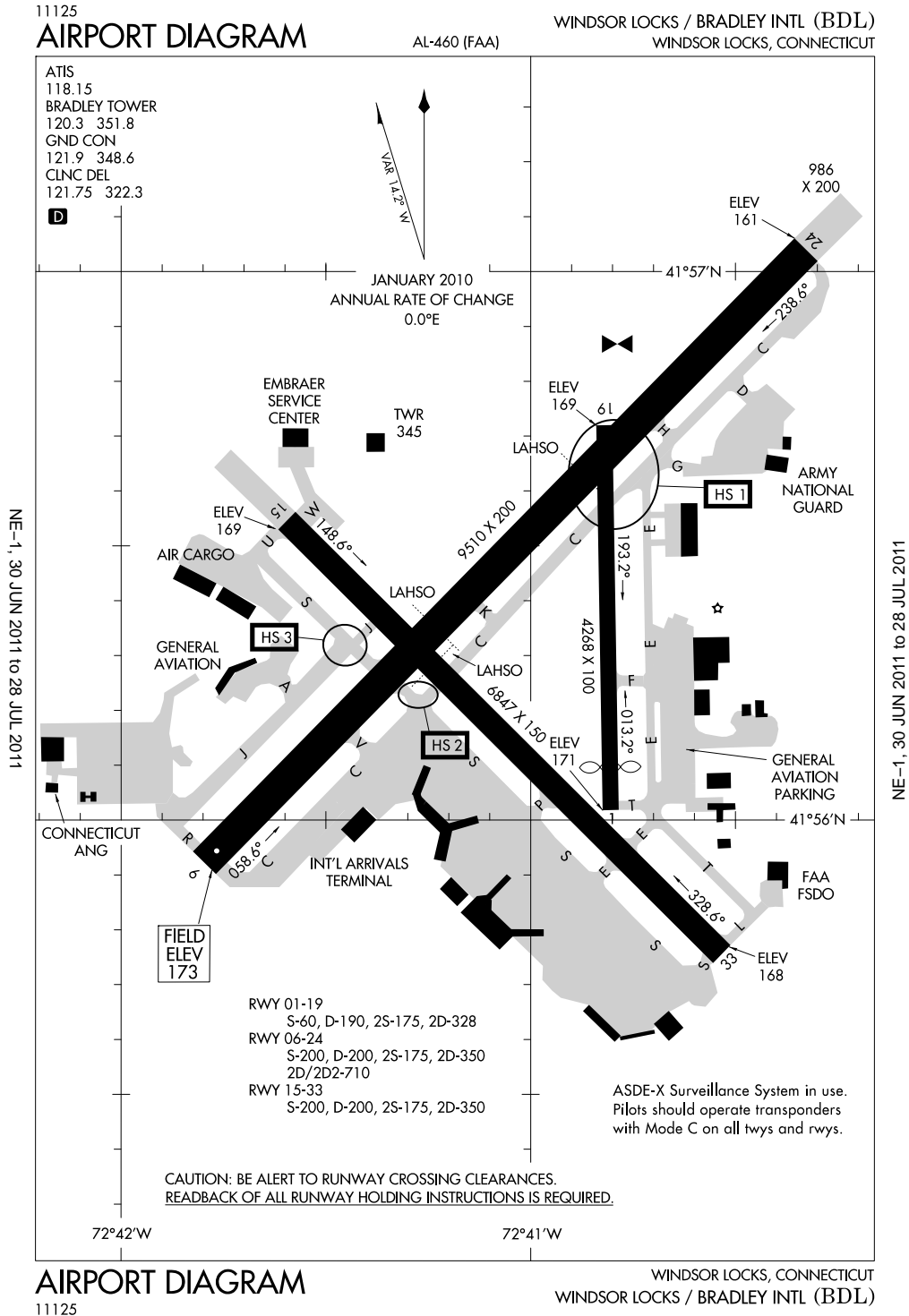
RUNWAY 8R/26L UNLIGHTED AND UNAVAILABLE AT NIGHT.

RUNWAY 8R/26L HAS BLUE TAXIWAY EDGE LIGHTS ON N EDGE.

BE ALERT; INTENSIVE USAF STUDENT TRAINING IN VICINITY OF COLORADO SPRINGS & PUEBLO COLORADO.

SEE FLIGHT INFORMATION PUBLICATION AP/1 SUPPLEMENTARY AIRPORT INFORMATION.

Windsor Locks, Connecticut Bradley International ICAO Identifier KBDL



Windsor Locks, CT
Bradley Intl
ICAO Identifier KBDL

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 41-56-20.00N / 72-40-59.60W
- 2.2.2 From City: 3 Miles W Of Windsor Locks, CT
- 2.2.3 Elevation: 173 ft
- 2.2.5 Magnetic variation: 14W (1980)
- 2.2.6 Airport Contact: Eric Waldron, A.A.E. Ace
BRADLEY INTL AIRPORT
Windsor Locks, CT 6096
(860-292-2001)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 15
- 2.10.1.b Type of obstacle: Trees (75 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 33
- 2.10.1.b Type of obstacle: Trees (44 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 430 ft from Centerline

- 2.10.1.a. Runway designation: 06
- 2.10.1.b Type of obstacle: Trees (185 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 400 ft from Centerline

- 2.10.1.a. Runway designation: 24

- 2.10.1.b Type of obstacle: Trees (71 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 19
- 2.10.1.b Type of obstacle: Trees (90 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 01
- 2.10.1.b Type of obstacle: Acft (40 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 350 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 134
- 2.12.3 Dimensions: 6847 ft x 150 ft
- 2.12.5 Coordinates: 41-56-32.63N / 72-41-35.71W
- 2.12.6 Threshold elevation: 169 ft
- 2.12.6 Touchdown zone elevation: 171 ft

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 314
- 2.12.3 Dimensions: 6847 ft x 150 ft
- 2.12.5 Coordinates: 41-55-45.32N / 72-40-30.96W
- 2.12.6 Threshold elevation: 168 ft
- 2.12.6 Touchdown zone elevation: 171 ft

- 2.12.1 Designation: 01
- 2.12.2 True Bearing: 359
- 2.12.3 Dimensions: 4268 ft x 100 ft
- 2.12.5 Coordinates: 41-56-00.00N / 72-40-48.30W
- 2.12.6 Threshold elevation: 171 ft
- 2.12.6 Touchdown zone elevation: 171 ft

- 2.12.1 Designation: 19
- 2.12.2 True Bearing: 179
- 2.12.3 Dimensions: 4268 ft x 100 ft
- 2.12.5 Coordinates: 41-56-43.21N / 72-40-49.25W
- 2.12.6 Threshold elevation: 169 ft
- 2.12.6 Touchdown zone elevation: 170 ft

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 44
- 2.12.3 Dimensions: 9510 ft x 200 ft

2.12.5 Coordinates: 41-55-55.25N / 72-41-47.69W
2.12.6 Threshold elevation: 173 ft
2.12.6 Touchdown zone elevation: 173 ft

2.12.1 Designation: 24
2.12.2 True Bearing: 224
2.12.3 Dimensions: 9510 ft x 200 ft
2.12.5 Coordinates: 41-57-00.00N / 72-40-19.68W
2.12.6 Threshold elevation: 161 ft
2.12.6 Touchdown zone elevation: 170 ft

AD 2.13 Declared distances

2.13.1 Designation: 15
2.13.2 Takeoff run available: 6847
2.13.3 Takeoff distance available: 6847
2.13.4 Accelerate–stop distance available: 6847
2.13.5 Landing distance available: 6847

2.13.1 Designation: 33
2.13.2 Takeoff run available: 6847
2.13.3 Takeoff distance available: 6847
2.13.4 Accelerate–stop distance available: 6847
2.13.5 Landing distance available: 6847

2.13.1 Designation: 06
2.13.2 Takeoff run available: 9509
2.13.3 Takeoff distance available: 9509
2.13.4 Accelerate–stop distance available: 9509
2.13.5 Landing distance available: 9509

2.13.1 Designation: 24
2.13.2 Takeoff run available: 9509
2.13.3 Takeoff distance available: 9509
2.13.4 Accelerate–stop distance available: 9509
2.13.5 Landing distance available: 9509

2.13.1 Designation: 01
2.13.2 Takeoff run available: 4268
2.13.3 Takeoff distance available: 4268
2.13.4 Accelerate–stop distance available: 4268

2.13.1 Designation: 19
2.13.5 Landing distance available: 4268

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 33
2.14.4 Visual approach slope indicator system:

4–light PAPI on right

2.14.1 Designation: 06
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 24
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 118.15 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 123.45 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 125.65 MHz

2.18.1 Service designation: APCH/P CLASS C
2.18.3 Service designation: 127.225 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS IC

2.18.3 Service designation: 127.8 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 243.9 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 322.3 MHz

2.18.1 Service designation: APCH/P CLASS C

2.18.3 Service designation: 323.2 MHz

2.18.1 Service designation: APCH/S DEP/S
CLASS C

2.18.3 Service designation: 327.1 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: ANG-OPS

2.18.3 Service designation: 349.7 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 351.8 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 41.9 MHz

2.18.1 Service designation: ANG OPS

2.18.3 Service designation: 138.55 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC

2.18.3 Service designation: 290.55 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC

2.18.3 Service designation: 269.325 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC

2.18.3 Service designation: 281.5 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 33.

Magnetic variation: 14W

2.19.2 ILS identification: IKX

2.19.5 Coordinates: 41-55-54.77N /
72-40-38.59W

2.19.6 Site elevation: 167 ft

2.19.1 ILS type: DME for runway 33. Magnetic
variation: 14W

2.19.2 ILS identification: IKX

2.19.5 Coordinates: 41-56-37.97N /
72-41-47.43W

2.19.6 Site elevation: 183 ft

2.19.1 ILS type: Outer Marker for runway 33.

Magnetic variation: 14W

2.19.2 ILS identification: IKX

2.19.5 Coordinates: 41-52-13.60N /
72-35-40.58W

2.19.6 Site elevation: 125 ft

2.19.1 ILS type: Localizer for runway 33. Magnetic
variation: 14W

2.19.2 ILS identification: IKX

2.19.5 Coordinates: 41-56-40.16N /
72-41-46.01W

2.19.6 Site elevation: 168 ft

2.19.1 ILS type: Localizer for runway 06. Magnetic
variation: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-57-17.85N /
72-39-59.41W

2.19.6 Site elevation: 149 ft

2.19.1 ILS type: DME for runway 06. Magnetic
variation: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-57-17.28N /
72-39-56.50W

2.19.6 Site elevation: 164 ft

2.19.1 ILS type: Glide Slope for runway 06.

Magnetic variation: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-56-00.00N /
72-41-41.89W

2.19.6 Site elevation: 169 ft

2.19.1 ILS type: Inner Marker for runway 06.

Magnetic variation: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-55-49.46N /
72-41-56.05W
2.19.6 Site elevation: 173 ft

2.19.1 ILS type: Outer Marker for runway 06.
Magnetic variation: 14W
2.19.2 ILS identification: BDL
2.19.5 Coordinates: 41-52-38.58N /
72-45-58.34W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 06.
Magnetic variation: 14W
2.19.2 ILS identification: BDL
2.19.5 Coordinates: 41-55-35.77N /
72-42-13.17W
2.19.6 Site elevation: 166 ft

2.19.1 ILS type: Localizer for runway 24. Magnetic
variation: 14W
2.19.2 ILS identification: MYQ
2.19.5 Coordinates: 41-55-47.66N /
72-41-57.63W
2.19.6 Site elevation: 170 ft

2.19.1 ILS type: DME for runway 24. Magnetic
variation: 14W
2.19.2 ILS identification: MYQ
2.19.5 Coordinates: 41-57-17.35N /
72-39-56.33W

2.19.6 Site elevation: 99999 ft
2.19.1 ILS type: Outer Marker for runway 24.
Magnetic variation: 14W
2.19.2 ILS identification: MYQ
2.19.5 Coordinates: 42-01-16.18N /
72-34-53.96W
2.19.6 Site elevation: 114 ft

2.19.1 ILS type: Inner Marker for runway 24.
Magnetic variation: 14W
2.19.2 ILS identification: MYQ
2.19.5 Coordinates: 41-57-12.08N /
72-40-00.00W
2.19.6 Site elevation: 141 ft

2.19.1 ILS type: Glide Slope for runway 24.
Magnetic variation: 14W
2.19.2 ILS identification: MYQ
2.19.5 Coordinates: 41-56-53.58N /
72-40-25.96W
2.19.6 Site elevation: 157 ft

2.19.1 ILS type: Middle Marker for runway 24.
Magnetic variation: 14W
2.19.2 ILS identification: MYQ
2.19.5 Coordinates: 41-57-20.88N /
72-39-55.38W
2.19.6 Site elevation: 159 ft

General Remarks:

NUMEROUS BIRDS FREQUENTLY ON OR IN VICINITY OF AIRPORT.

OPERATIONS CONTACT AUTOVON 636-8385; COMMERCIAL 860-627-3001

ANG - OPR 0700-1530 TUES/FRI/SAT; 0700-2300 WED/THUR.

ANG - PRIOR PERMISSION REQUIRED V220-2356.

NO DE-ICING AVAILABLE AT ANG.

TAXIWAY J CLOSED BETWEEN S & R TO AIRCRAFT WITH WINGSPANS IN EXCESS OF 170 FT.

NO TRAINING FLIGHTS; NO PRACTICE APPROACHES; NO TOUCH AND GO LANDING
BETWEEN: 2300 - 0700 MON THRU SAT & 2300 - 1200 SUN.

(E117) CT ANG AND U.S. ARMY NATIONAL GUARD.

ASDE-X SURVEILLANCE SYSTEM IN USE. PILOTS SHOULD OPERATE TRANSPONDERS WITH

MODE 'C' ON ALL TAXIWAYS & RUNWAYS.

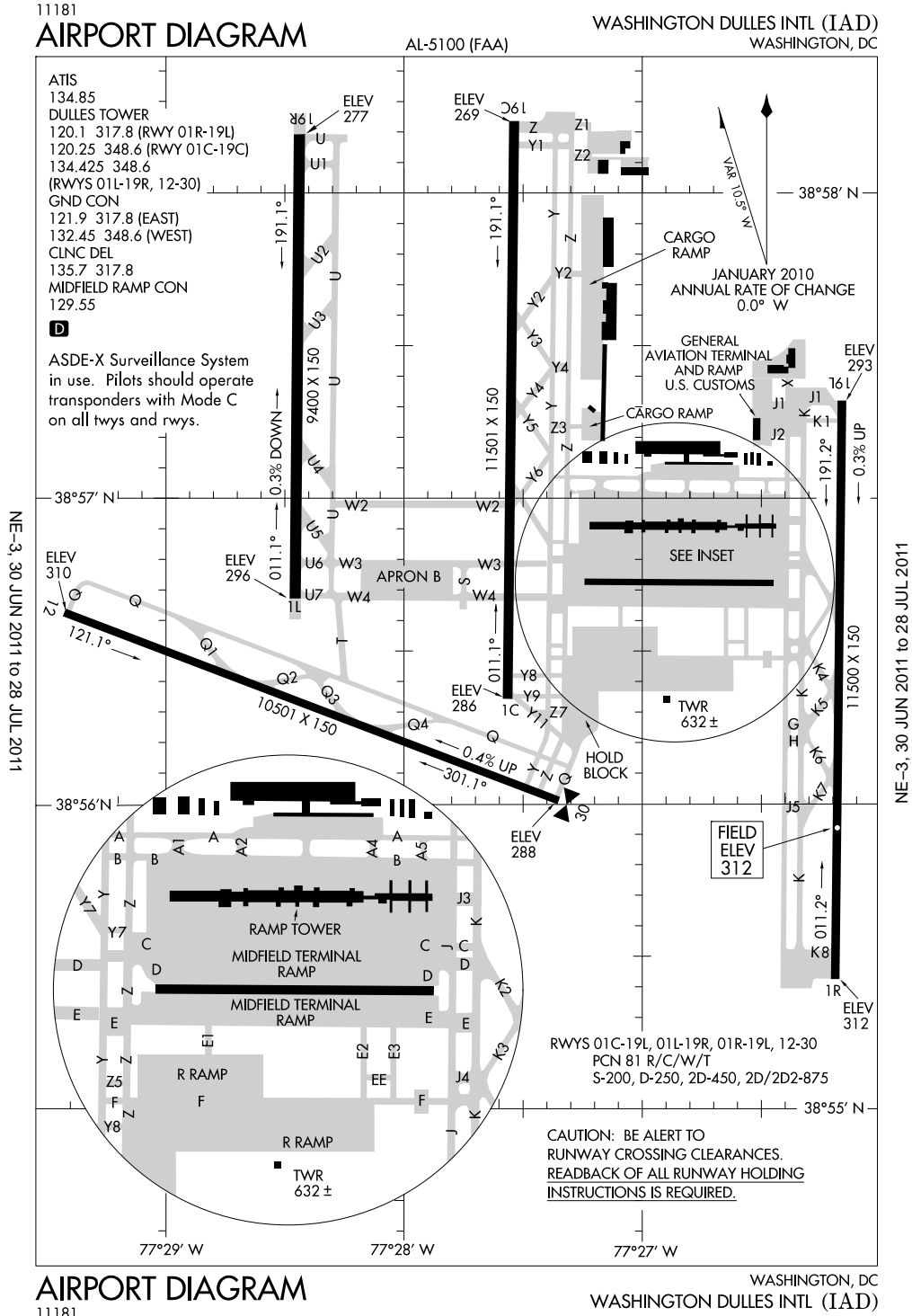
RUNWAY 01/19 OPEN FOR AIRCRAFT WITH WINGSPAN LESS THAN 79 FT.

RUNWAY 01 IS CLOSED FOR ARRS TO ALL FIXED WING AIRCRAFT.

RUNWAY 19 CLOSED FOR DEPS TO ALL FIXED WING AIRCRAFT.

RAMP AIR NATIONAL GUARD RAMP PERSONNEL AND EQUIPMENT WORKING BARRICADED
ADJACENT NE SIDE.

Washington, District of Columbia
Washington Dulles International
ICAO Identifier KIAD



Washington, DC
Washington Dulles Intl
ICAO Identifier KIAD

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 38-56-50.80N / 77-27-35.80W
- 2.2.2 From City: 20 Miles W Of Washington, VA
- 2.2.3 Elevation: 312 ft
- 2.2.5 Magnetic variation: 10W (2000)
- 2.2.6 Airport Contact: Christopher Browne
1 SAARINEN CIRCLE
Dulles, VA 20166
(703-572-2730)
- 2.2.7 Traffic: IFR/VFR
- 2.2.8 Remarks: Located In Both Fairfax County Va And Loudoun County Va.

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 01R
- 2.10.1.b Type of obstacle: Bldg (16 ft). Lighted
- 2.10.1.c Location of obstacle: 200 ft from Centerline
- 2.10.1.a. Runway designation: 19L
- 2.10.1.b Type of obstacle: Pole (38 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 720 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 12
- 2.12.2 True Bearing: 111
- 2.12.3 Dimensions: 10501 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T

- 2.12.5 Coordinates: 38-56-37.58N / 77-29-25.60W
- 2.12.6 Threshold elevation: 310 ft
- 2.12.6 Touchdown zone elevation: 310 ft

- 2.12.1 Designation: 30
- 2.12.2 True Bearing: 291
- 2.12.3 Dimensions: 10501 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-56-00.00N / 77-27-21.23W
- 2.12.6 Threshold elevation: 288 ft
- 2.12.6 Touchdown zone elevation: 288 ft
- 2.12.7 Slope: 0.4UP

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 1
- 2.12.3 Dimensions: 9400 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-56-41.88N / 77-28-29.32W
- 2.12.6 Threshold elevation: 296 ft
- 2.12.6 Touchdown zone elevation: 296 ft
- 2.12.7 Slope: 0.3DOWN

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 181
- 2.12.3 Dimensions: 9400 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-58-14.78N / 77-28-27.98W
- 2.12.6 Threshold elevation: 277 ft
- 2.12.6 Touchdown zone elevation: 278 ft

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 1
- 2.12.3 Dimensions: 11500 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-55-25.53N / 77-26-11.22W
- 2.12.6 Threshold elevation: 312 ft
- 2.12.6 Touchdown zone elevation: 312 ft
- 2.12.7 Slope: 0.3DOWN

- 2.12.1 Designation: 19L
- 2.12.2 True Bearing: 181
- 2.12.3 Dimensions: 11500 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-57-19.19N / 77-26-00.00W
- 2.12.6 Threshold elevation: 293 ft

2.12.6 Touchdown zone elevation: 302 ft
2.12.7 Slope: 0.3UP

2.12.1 Designation: 01C
2.12.2 True Bearing: 1
2.12.3 Dimensions: 11501 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-56-20.64N /
77-27-35.21W
2.12.6 Threshold elevation: 286 ft
2.12.6 Touchdown zone elevation: 286 ft

2.12.1 Designation: 19C
2.12.2 True Bearing: 181
2.12.3 Dimensions: 11501 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-58-14.30N /
77-27-33.57W
2.12.6 Threshold elevation: 269 ft
2.12.6 Touchdown zone elevation: 272 ft

AD 2.13 Declared distances

2.13.1 Designation: 12
2.13.2 Takeoff run available: 10501
2.13.3 Takeoff distance available: 10501
2.13.4 Accelerate-stop distance available: 10501
2.13.5 Landing distance available: 10501

2.13.1 Designation: 30
2.13.2 Takeoff run available: 10501
2.13.3 Takeoff distance available: 10501
2.13.4 Accelerate-stop distance available: 10501
2.13.5 Landing distance available: 10501

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 9400
2.13.3 Takeoff distance available: 9400
2.13.4 Accelerate-stop distance available: 9400
2.13.5 Landing distance available: 9400

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 9400
2.13.3 Takeoff distance available: 9400
2.13.4 Accelerate-stop distance available: 9400
2.13.5 Landing distance available: 9400

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

2.13.1 Designation: 01C
2.13.2 Takeoff run available: 11501
2.13.3 Takeoff distance available: 11501
2.13.4 Accelerate-stop distance available: 11501
2.13.5 Landing distance available: 11501

2.13.1 Designation: 19C
2.13.2 Takeoff run available: 11501
2.13.3 Takeoff distance available: 11501
2.13.4 Accelerate-stop distance available: 11501
2.13.5 Landing distance available: 11501

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 30
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 19R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III

configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 19L

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01C

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 19C

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

**AD 2.18 Air traffic services communication
facilities**

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P IC

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: AS ASGND

2.18.3 Service designation: 125.8 MHz

2.18.1 Service designation: AS ASGND

2.18.3 Service designation: 128.42 MHz

2.18.1 Service designation: MIDFLD RAMP CTL

2.18.3 Service designation: 129.55 MHz

2.18.1 Service designation: GND/P IC

2.18.3 Service designation: 132.45 MHz

2.18.1 Service designation: AS ASGND

2.18.3 Service designation: 132.45 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 134.85 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P

2.18.3 Service designation: 135.7 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P IC

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P IC

2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 120.25 MHz

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 134.425 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 12. Magnetic
variation: 10W

2.19.2 ILS identification: AJU

2.19.5 Coordinates: 38-55-57.51N /
77-27-00.00W

2.19.6 Site elevation: 281 ft

2.19.1 ILS type: Glide Slope for runway 12.
Magnetic variation: 10W

2.19.2 ILS identification: AJU

2.19.5 Coordinates: 38-56-30.40N /
77-29-15.54W

2.19.6 Site elevation: 304 ft

2.19.1 ILS type: Middle Marker for runway 12.

Magnetic variation: 10W
2.19.2 ILS identification: AJU
2.19.5 Coordinates: 38-56-47.20N /
77-29-58.37W
2.19.6 Site elevation: 319 ft

2.19.1 ILS type: Outer Marker for runway 12.
Magnetic variation: 10W
2.19.2 ILS identification: AJU
2.19.5 Coordinates: 38-58-35.61N /
77-36-00.00W
2.19.6 Site elevation: 382 ft

2.19.1 ILS type: Inner Marker for runway 01L.
Magnetic variation: 10W
2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-56-33.39N /
77-28-29.44W
2.19.6 Site elevation: 299 ft

2.19.1 ILS type: Localizer for runway 01L.
Magnetic variation: 10W
2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-58-24.77N /
77-28-27.84W
2.19.6 Site elevation: 278 ft

2.19.1 ILS type: Glide Slope for runway 01L.
Magnetic variation: 10W
2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-56-52.89N /
77-28-34.35W
2.19.6 Site elevation: 289 ft

2.19.1 ILS type: DME for runway 01L. Magnetic
variation: 10W
2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-58-25.07N /
77-28-31.14W
2.19.6 Site elevation: 275 ft

2.19.1 ILS type: Inner Marker for runway 19R.
Magnetic variation: 10W
2.19.2 ILS identification: ISU
2.19.5 Coordinates: 38-58-23.51N /
77-28-27.86W
2.19.6 Site elevation: 276 ft

2.19.1 ILS type: Localizer for runway 19R.
Magnetic variation: 10W
2.19.2 ILS identification: ISU

2.19.5 Coordinates: 38-56-31.90N /
77-28-29.46W
2.19.6 Site elevation: 299 ft

2.19.1 ILS type: Glide Slope for runway 19R.
Magnetic variation: 10W
2.19.2 ILS identification: ISU
2.19.5 Coordinates: 38-58-00.00N /
77-28-33.32W
2.19.6 Site elevation: 273 ft

2.19.1 ILS type: DME for runway 19R. Magnetic
variation: 10W
2.19.2 ILS identification: ISU
2.19.5 Coordinates: 38-58-25.08N /
77-28-31.16W
2.19.6 Site elevation: 275 ft

2.19.1 ILS type: Localizer for runway 01R.
Magnetic variation: 10W
2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-57-30.87N /
77-26-00.00W
2.19.6 Site elevation: 302 ft

2.19.1 ILS type: Inner Marker for runway 01R.
Magnetic variation: 10W
2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-55-17.13N /
77-26-11.35W
2.19.6 Site elevation: 319 ft

2.19.1 ILS type: Middle Marker for runway 01R.
Magnetic variation: 10W
2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-54-53.77N /
77-26-11.67W
2.19.6 Site elevation: 317 ft

2.19.1 ILS type: DME for runway 01R. Magnetic
variation: 10W
2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-55-11.08N /
77-26-00.00W
2.19.6 Site elevation: 314 ft

2.19.1 ILS type: Outer Marker for runway 01R.
Magnetic variation: 10W
2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-50-50.18N /
77-26-16.38W

2.19.6 Site elevation: 242 ft
2.19.1 ILS type: Glide Slope for runway 01R.
Magnetic variation: 10W
2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-55-35.85N /
77-26-00.00W
2.19.6 Site elevation: 307 ft

2.19.1 ILS type: Outer Marker for runway 19L.
Magnetic variation: 10W
2.19.2 ILS identification: SGC
2.19.5 Coordinates: 39-01-14.61N /
77-25-55.33W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 19L.
Magnetic variation: 10W
2.19.2 ILS identification: SGC
2.19.5 Coordinates: 38-55-11.81N /
77-26-11.43W
2.19.6 Site elevation: 315 ft

2.19.1 ILS type: DME for runway 19L. Magnetic
variation: 10W
2.19.2 ILS identification: SGC
2.19.5 Coordinates: 38-55-11.08N /
77-26-00.00W
2.19.6 Site elevation: 314 ft

2.19.1 ILS type: Glide Slope for runway 19L.
Magnetic variation: 10W
2.19.2 ILS identification: SGC
2.19.5 Coordinates: 38-57-00.00N /
77-26-00.00W
2.19.6 Site elevation: 291 ft

2.19.1 ILS type: Middle Marker for runway 19L.
Magnetic variation: 10W
2.19.2 ILS identification: SGC
2.19.5 Coordinates: 38-57-43.15N /
77-26-00.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 01C.
Magnetic variation: 10W
2.19.2 ILS identification: OSZ
2.19.5 Coordinates: 38-58-24.68N /
77-27-33.42W
2.19.6 Site elevation: 263 ft

2.19.1 ILS type: Outer Marker for runway 01C.

Magnetic variation: 10W
2.19.2 ILS identification: OSZ
2.19.5 Coordinates: 38-50-31.20N /
77-27-35.06W
2.19.6 Site elevation: 219 ft

2.19.1 ILS type: Glide Slope for runway 01C.
Magnetic variation: 10W
2.19.2 ILS identification: OSZ
2.19.5 Coordinates: 38-56-31.06N / 77-27-40.75W
2.19.6 Site elevation: 282 ft

2.19.1 ILS type: Middle Marker for runway 01C.
Magnetic variation: 10W
2.19.2 ILS identification: OSZ
2.19.5 Coordinates: 38-55-53.17N /
77-27-35.57W
2.19.6 Site elevation: 272 ft

2.19.1 ILS type: Glide Slope for runway 19C.
Magnetic variation: 10W
2.19.2 ILS identification: DLX
2.19.5 Coordinates: 38-58-00.00N /
77-27-38.79W
2.19.6 Site elevation: 265 ft

2.19.1 ILS type: Middle Marker for runway 19C.
Magnetic variation: 10W
2.19.2 ILS identification: DLX
2.19.5 Coordinates: 38-58-46.70N /
77-27-33.10W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 19C.
Magnetic variation: 10W
2.19.2 ILS identification: DLX
2.19.5 Coordinates: 39-01-50.27N /
77-27-29.64W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 19C.
Magnetic variation: 10W
2.19.2 ILS identification: DLX
2.19.5 Coordinates: 38-56-14.91N /
77-27-35.29W
2.19.6 Site elevation: 285 ft

2.19.1 ILS type: Inner Marker for runway 19C.
Magnetic variation: 10W
2.19.2 ILS identification: DLX
2.19.5 Coordinates: 38-58-23.00N /

77-27-33.44W
2.19.6 Site elevation: 264 ft

General Remarks:

ITINERANT AIRCRAFT CONTACT FBO ON 122.95 FOR SERVICES.

AIR CARRIER PUSH BACKS & POWER FROM ALL APRON POSITIONS REQUIRE CLEARANCE FROM MWAA RAMP TOWER.

DEER/LARGE FLOCKS OF BIRDS ON & IN THE VICINITY OF AIRPORT.

DURING PERIODS OF AIRCRAFT SATURATION LONG TERM PARKING MAY NOT BE AVAILABLE. SERVICES FOR FUEL AND GO ONLY WILL BE AVAILABLE.

FLIGHT TRAINING BETWEEN 2200-0700 IS PROHIBITED.

TAXILANE 'C' ACTIVE; PUSHBACK CLEARANCES ON NORTH SIDE OF MIDFIELD TERMINAL ARE ONTO TAXILANE 'D' ONLY UNLESS OTHERWISE AUTH.

PERSONNEL AND EQUIPMENT WORKING ADJACENT ALL RUNWAYS & TAXIWAYS INDEFINITELY.

ALL AIRCRAFT WITH WINGSPAN EXCEEDING 118 FT ARE RESTRICTED FROM USING TAXILANE A BETWEEN A1 & A5.

RUNUP BLOCKS FOR RUNWAY 30 DESIGNATED AS NON-MOVEMENT AREA.

ALL 180 DEGREE TURNS OUT OF APRON POSITIONS SHALL BE MADE USING MINIMUM POWER.

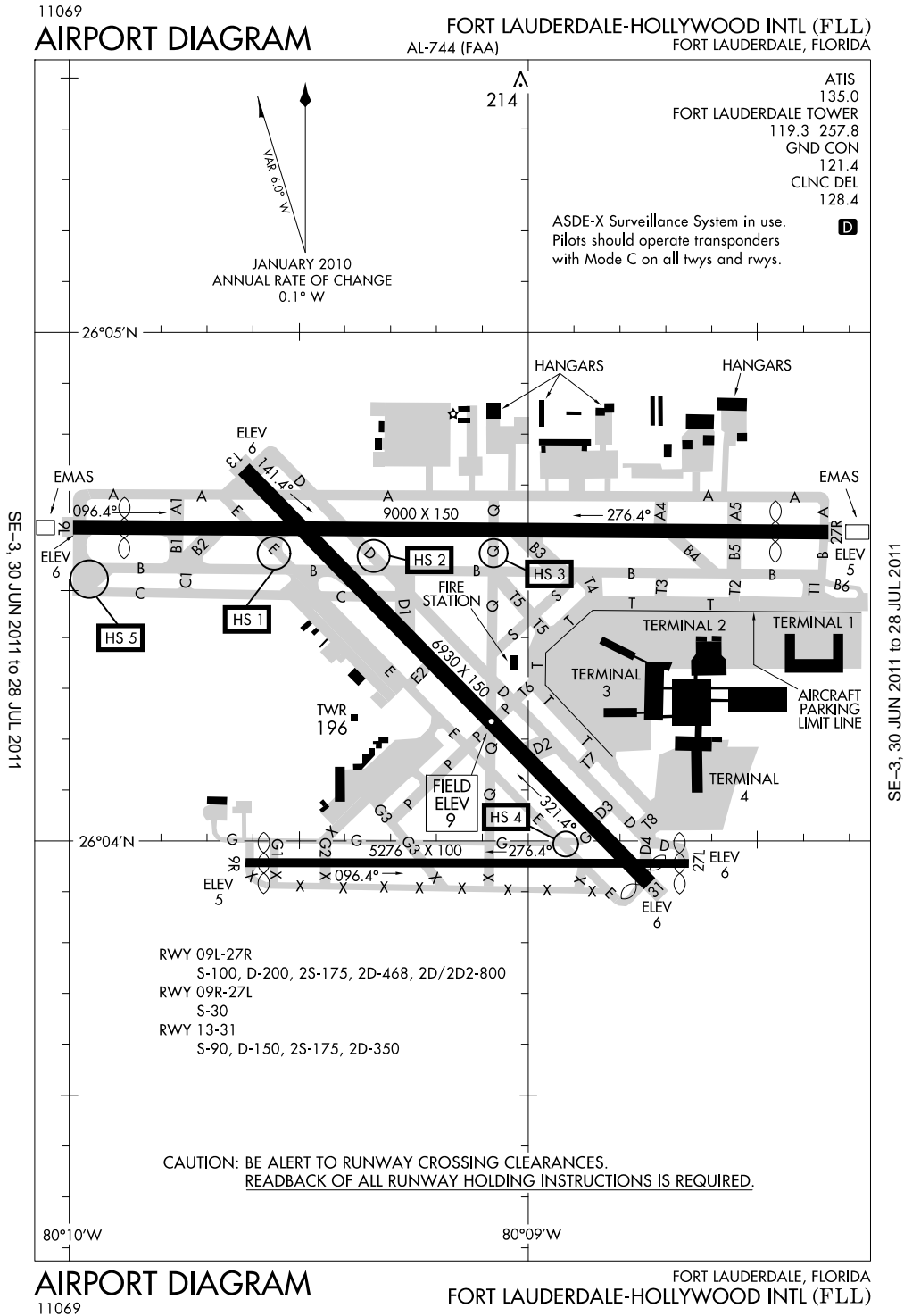
LANDING FEE. FLIGHT NOTIFICATION SERVICE (ADCUS) AVAILABLE. NOTE: SEE SPECIAL NOTICES ---CONTINUOUS POWER FACILITIES.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE ADDED TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

TAXIWAY E1 RESTRICTED TO AIRCRAFT WITH A WINGSPAN LESS THAN 79 FT.

IAD TAXIWAY J CLOSED NORTH OF TAXIWAY J1.

Fort Lauderdale, Florida Fort Lauderdale/Hollywood International ICAO Identifier KFLI



Fort Lauderdale, FL
Fort Lauderdale/Hollywood Intl
ICAO Identifier KFLI

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 26-04-21.30N / 80-09-00.00W
- 2.2.2 From City: 3 Miles SW Of Fort Lauderdale, FL
- 2.2.3 Elevation: 9 ft
- 2.2.5 Magnetic variation: 3W (1985)
- 2.2.6 Airport Contact: Kent George
100 AVIATION BLVD
Ft Lauderdale, FL 33315
(954-359-6100)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 4/25/2005

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 09L
- 2.10.1.b Type of obstacle: Road (14 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 27R
- 2.10.1.b Type of obstacle: Rr (33 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 530 ft from Centerline

- 2.10.1.a. Runway designation: 09R
- 2.10.1.b Type of obstacle: Tree (35 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 50 ft from Centerline

- 2.10.1.a. Runway designation: 27L

- 2.10.1.b Type of obstacle: Pole (42 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 150 ft from Centerline

- 2.10.1.a. Runway designation: 31
- 2.10.1.b Type of obstacle: Rr (49 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 10 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 26-04-37.02N / 80-09-59.54W
- 2.12.6 Threshold elevation: 6 ft
- 2.12.6 Touchdown zone elevation: 7 ft

- 2.12.1 Designation: 27R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 26-04-36.45N / 80-08-20.84W
- 2.12.6 Threshold elevation: 5 ft
- 2.12.6 Touchdown zone elevation: 7 ft

- 2.12.1 Designation: 09R
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 5276 ft x 100 ft
- 2.12.5 Coordinates: 26-03-57.51N / 80-09-37.14W
- 2.12.6 Threshold elevation: 5 ft
- 2.12.6 Touchdown zone elevation: 6 ft

- 2.12.1 Designation: 27L
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 5276 ft x 100 ft
- 2.12.5 Coordinates: 26-03-57.16N / 80-08-39.29W
- 2.12.6 Threshold elevation: 6 ft
- 2.12.6 Touchdown zone elevation: 6 ft

- 2.12.1 Designation: 13
- 2.12.2 True Bearing: 135
- 2.12.3 Dimensions: 6930 ft x 150 ft
- 2.12.5 Coordinates: 26-04-44.05N / 80-09-37.40W
- 2.12.6 Threshold elevation: 6 ft
- 2.12.6 Touchdown zone elevation: 7 ft

- 2.12.1 Designation: 31
- 2.12.2 True Bearing: 315
- 2.12.3 Dimensions: 6930 ft x 150 ft
- 2.12.5 Coordinates: 26-03-55.21N / 80-08-44.00W
- 2.12.6 Threshold elevation: 6 ft
- 2.12.6 Touchdown zone elevation: 9 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 09L
- 2.13.2 Takeoff run available: 9000
- 2.13.3 Takeoff distance available: 9000
- 2.13.4 Accelerate-stop distance available: 9000
- 2.13.5 Landing distance available: 8423

- 2.13.1 Designation: 27R
- 2.13.2 Takeoff run available: 9000
- 2.13.3 Takeoff distance available: 9000
- 2.13.4 Accelerate-stop distance available: 9000
- 2.13.5 Landing distance available: 8396

- 2.13.1 Designation: 09R
- 2.13.2 Takeoff run available: 5276
- 2.13.3 Takeoff distance available: 5276
- 2.13.4 Accelerate-stop distance available: 5276
- 2.13.5 Landing distance available: 4956

- 2.13.1 Designation: 27L
- 2.13.2 Takeoff run available: 5276
- 2.13.3 Takeoff distance available: 5276
- 2.13.4 Accelerate-stop distance available: 5276
- 2.13.5 Landing distance available: 5134

- 2.13.1 Designation: 13
- 2.13.2 Takeoff run available: 6930
- 2.13.3 Takeoff distance available: 6930
- 2.13.4 Accelerate-stop distance available: 6930
- 2.13.5 Landing distance available: 6930

- 2.13.1 Designation: 31
- 2.13.2 Takeoff run available: 6930
- 2.13.3 Takeoff distance available: 6930
- 2.13.4 Accelerate-stop distance available: 6930
- 2.13.5 Landing distance available: 6860

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 09L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system:

4-light PAPI on right

- 2.14.1 Designation: 27R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 09R
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 27L
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 13
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 31
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 119.3 MHz

- 2.18.1 Service designation: LCL/S
- 2.18.3 Service designation: 120.2 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.4 MHz

- 2.18.1 Service designation: GND/ALTERNATE
- 2.18.3 Service designation: 121.7 MHz

- 2.18.1 Service designation: CD/P PTC
- 2.18.3 Service designation: 128.4 MHz

- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 135 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 257.8 MHz

- 2.18.1 Service designation: RAMP CTL
- 2.18.3 Service designation: 118.175 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 09L.
Magnetic variation: 3W

2.19.2 ILS identification: LHI
2.19.5 Coordinates: 26-04-36.42N /
80-08-15.66W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: DME for runway 09L. Magnetic
variation: 3W

2.19.2 ILS identification: LHI
2.19.5 Coordinates: 26-04-40.17N /
80-08-15.66W

2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Glide Slope for runway 09L.
Magnetic variation: 3W

2.19.2 ILS identification: LHI
2.19.5 Coordinates: 26-04-39.64N /
80-09-42.33W

2.19.6 Site elevation: 3 ft

2.19.1 ILS type: Middle Marker for runway 09L.
Magnetic variation: 3W

2.19.2 ILS identification: LHI
2.19.5 Coordinates: 26-04-37.62N /
80-10-35.57W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 27R.
Magnetic variation: 3W

2.19.2 ILS identification: UDL
2.19.5 Coordinates: 26-04-37.04N /
80-10-00.00W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: DME for runway 27R. Magnetic
variation: 3W

2.19.2 ILS identification: UDL
2.19.5 Coordinates: 26-04-34.53N /

80-10-00.00W

2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Middle Marker for runway 27R.
Magnetic variation: 3W

2.19.2 ILS identification: UDL
2.19.5 Coordinates: 26-04-36.29N /
80-07-54.09W

2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Glide Slope for runway 27R.
Magnetic variation: 3W

2.19.2 ILS identification: UDL
2.19.5 Coordinates: 26-04-39.62N /
80-08-39.06W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Localizer for runway 09R.
Magnetic variation: 3W

2.19.2 ILS identification: FLL
2.19.5 Coordinates: 26-03-57.14N /
80-08-36.11W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Outer Marker for runway 09R.
Magnetic variation: 3W

2.19.2 ILS identification: FLL
2.19.5 Coordinates: 26-03-53.37N /
80-16-26.27W

2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Localizer for runway 13. Magnetic
variation: 3W

2.19.2 ILS identification: LID
2.19.5 Coordinates: 26-03-50.87N /
80-08-39.26W

2.19.6 Site elevation: 5 ft

General Remarks:

CLOSED TO AIR CARRIER TRAINING. CLOSED TO LARGE AIRCRAFT TRAINING OVER 58000
LBS MAX CERTIFIED GROSS TAKE-OFF WEIGHT. CLOSED TO ALL TRAINING 2300-0700.

NOISE ABATEMENT IN EFFECT CONTACT AIRPORT NOISE ABATEMENT OFFICE-954-359-6181
FOR DETAILS.

JET RUNUPS PROHIBITED 2300-0700.

ALL RUNWAYS ARE NOISE SENSITIVE.

FLOCKS OF BIRDS ON AND IN THE VICINITY OF THE AIRPORT.

ALL WIDE BODY TYPE AIRCRAFT DEPARTING RUNWAY 9L SHOULD FOLLOW TAXIWAY CENTERLINE INTO POSITION ON RUNWAY.

TAXIWAYS SOUTH OF TAXIWAY C AND WEST OF RUNWAY 13/31 EXCEPT FOR TAXIWAYS P & E ARE 50 FT WIDE OR LESS; DESIGN CRITERIA FOR LARGE AIRCRAFT NOT MAINTAINED.

RUNWAY 09R/27L CLOSED TO AIRCRAFT IN EXCESS OF 58000 LBS MAX CERTIFICATED GROSS TAKE-OFF WEIGHT.

PRIOR PERMISSION REQUIRED FOR AIRCRAFT WITH EXPLOSIVES.

AIRCRAFT WITH WINGSPANS GREATER THAN 112 FT MAY UTILIZE TAXIWAY 'E' BETWEEN TAXIWAYS 'B'/'P' BY PRIOR PERMISSION REQUIRED ONLY.

ARR AIRCRAFT FROM THE NORTH MAINTAIN 6000 FT UNTIL ABEAM RUNWAY 09L ON DOWNWIND.

ARR AIRCRAFT FROM 'N' & 'W' MAINTAIN 6000 FT UNTIL ABEAM RUNWAY 27L, RUNWAY 27R ON DOWNWIND.

NO VFR APPROACHES OR BASE LEGS UNTIL OFFSHORE.

AIRCRAFT HOLDING SHORT FOR RUNWAY 27L AT D4 BE ALERT; RUNWAYS 31 AND 27L CAN BE CONFUSING.

BE ALERT: INTERSECTION OF TAXIWAY 'G' AND 'Q' NOT VISIBLE FROM TOWER.

TAXIWAY B6 CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 126 FT AND TAIL HEIGHT GREATER THAN 46 FT.

AIR CARRIER AIRCRAFT USE RAMP PUSH BACK PROCEDURES AS PRESCRIBED BY AIRPORT OPERATIONS.

EAST SIDE OF CONCOURSE B AVAILBLE ONLY TO AIRCRAFT WITH A WINGSPAN OF LESS THAN 124.9 FT.

AIRCRAFT OPERATING FROM TERMINAL 1, 2 AND GATES E1, E5, E7, E9, E10 AT TERMINAL 3 MUST CONTACT RAMP CONTROL. RAMP CONTROL EFFECTIVE 0600-2200.

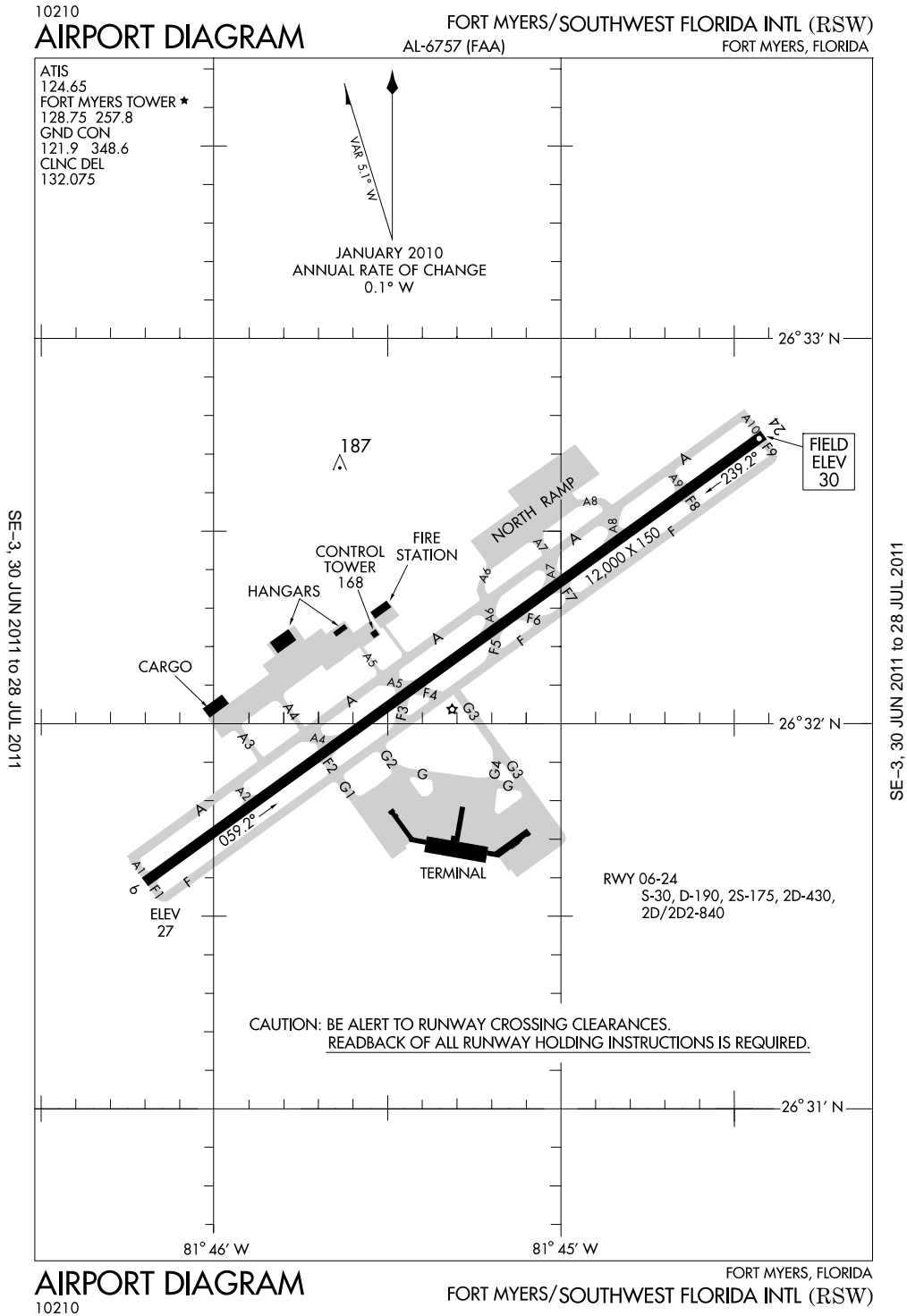
ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE 'C' ON ALL TAXIWAYS AND RUNWAYS.

CONCENTRATION OF BIRDS BELOW 500 FT, 2.0 NAUTICAL MILE WEST OF THE APPROACH ENDS OF RUNWAYS 9L & 9R.

CENTER 50 FT RUNWAY 09R/27L NOT GROOVED.

TURBULENCE BELOW 1000 FT OVER LANDFILL LOCATED 2NM W, AND OVER ELECTRIC POWER PLANT LOCATED 1 1/4 NAUTICAL MILE ENE.

Fort Myers, Florida Southwest Florida International ICAO Identifier KRSW



Fort Myers, FL
Southwest Florida Intl
ICAO Identifier KRSW

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 26-32-10.20N / 81-45-18.60W
- 2.2.2 From City: 10 Miles SE Of Fort Myers, FL
- 2.2.3 Elevation: 30 ft
- 2.2.5 Magnetic variation: 4W (2000)
- 2.2.6 Airport Contact: Robert M. Ball
11000 TERMINAL ACCESS RD.
Fort Myers, FL 33913
(239--590-4800)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1983
- 2.6.4 Remarks: Closed To Unscheduled Aircraft Operations With More Than 30 Passenger Seats Except Prior Permission Required Call Airport Manager (239) 590-4810.

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 06
 - 2.12.2 True Bearing: 54
 - 2.12.3 Dimensions: 12000 ft x 150 ft
 - 2.12.5 Coordinates: 26-31-35.35N / 81-46-12.07W
 - 2.12.6 Threshold elevation: 26 ft
 - 2.12.6 Touchdown zone elevation: 27 ft
-
- 2.12.1 Designation: 24
 - 2.12.2 True Bearing: 234
 - 2.12.3 Dimensions: 12000 ft x 150 ft
 - 2.12.5 Coordinates: 26-32-45.02N / 81-44-25.03W
 - 2.12.6 Threshold elevation: 30 ft

- 2.12.6 Touchdown zone elevation: 30 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 06
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

- 2.14.1 Designation: 24
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: APCH/P DEP/P CLASS C

- 2.18.3 Service designation: 119.75 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: ATIS
- 2.18.3 Service designation: 124.65 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: APCH/P DEP/P CLASS C

- 2.18.3 Service designation: 125.15 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS C IC

- 2.18.3 Service designation: 126.8 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 128.75 MHz

- 2.18.1 Service designation: CD/P
- 2.18.3 Service designation: 132.075 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 257.8 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS C

- 2.18.3 Service designation: 306.2 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS C

- 2.18.3 Service designation: 327.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 385.45 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 06.
Magnetic variation: 4W
2.19.2 ILS identification: RSW
2.19.5 Coordinates: 26-31-38.24N /
81-46-00.00W
2.19.6 Site elevation: 26 ft

2.19.1 ILS type: Localizer for runway 06. Magnetic
variation: 4W
2.19.2 ILS identification: RSW
2.19.5 Coordinates: 26-32-51.12N /
81-44-15.66W
2.19.6 Site elevation: 28 ft

2.19.1 ILS type: Outer Marker for runway 06.
Magnetic variation: 4W
2.19.2 ILS identification: RSW
2.19.5 Coordinates: 26-29-00.00N /
81-50-00.00W
2.19.6 Site elevation: 10 ft

General Remarks:

PRIOR PERMISSION REQUIRED FOR TERMINAL RAMP CALL (239-590-4810)

AIR CARRIER PILOTS USE RAMP PROC AS PRESCRIBED BY AIRPORT OPERATIONS.

BIRDS & WILDLIFE ON AND IN THE VICINITY OF AIRPORT.

NO HELICOPTER OPERATIONS PERMITTED ON TERMINAL APRON.

LIGHTS ON PARALLEL ROAD & PARKING LOT NW OF RUNWAY 06/24 CAN BE MISTAKEN FOR
THE RUNWAY & APPROACH ENVIRONMENT.

ATCT CLEARANCE REQUIRED PRIOR TO ENTERING TAXIWAY 'F'.

AIRPORT HAS RUNWAY USE PROGRAM. USE DISTANT NOISE ABATEMENT DEP PROFILE.
VISUAL APPROACHES TO RUNWAY 06 W OF FORT MYERS BEACH ARE REQUESTED TO
MAINTAIN 3000 FT UNTIL CROSSING FORT MYERS BEACH SHORELINE 12 NAUTICAL MILE
SW OF AIRPORT. FOR NOISE ABATEMENT PROCEDURES CONTACT AIRPORT MANAGER
239-590-4810

CAUTION: OPEN BAGGAGE BAYS WITHIN TERMINAL AREA. AIRCREWS SHOULD USE
MINIMUM THRUST SETTINGS IN THESE AREAS, ESPECIALLY DURING SINGLE ENGINE TAXI.
CROSS-BLEED STARTS ONLY ALLOWED AFTER REACHING THE TUG RELEASE POINT.

Miami, FL
Miami Intl
ICAO Identifier KMIA

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 25-47-43.30N / 80-17-24.40W
- 2.2.2 From City: 8 Miles NW Of Miami, FL
- 2.2.3 Elevation: 9 ft
- 2.2.5 Magnetic variation: 5W (2000)
- 2.2.6 Airport Contact: Jose Abreu, P.E.
PO BOX 025504
Miami, FL 33102
(305-876-7077)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 30
- 2.10.1.b Type of obstacle: Tree (52 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 300 ft from Centerline

- 2.10.1.a. Runway designation: 12
- 2.10.1.b Type of obstacle: Tower (40 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 200 ft from Centerline

- 2.10.1.a. Runway designation: 09
- 2.10.1.b Type of obstacle: Rr (23 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 580 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 12
- 2.12.2 True Bearing: 119
- 2.12.3 Dimensions: 9355 ft x 150 ft
- 2.12.5 Coordinates: 25-47-57.43N / 80-18-00.00W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 8 ft

- 2.12.1 Designation: 30
- 2.12.2 True Bearing: 299
- 2.12.3 Dimensions: 9355 ft x 150 ft
- 2.12.5 Coordinates: 25-47-11.85N / 80-16-39.14W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 8 ft

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 87
- 2.12.3 Dimensions: 10506 ft x 200 ft
- 2.12.5 Coordinates: 25-48-00.00N / 80-18-00.00W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 8 ft

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 267
- 2.12.3 Dimensions: 10506 ft x 200 ft
- 2.12.5 Coordinates: 25-48-00.00N / 80-16-10.33W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 8 ft

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 87
- 2.12.3 Dimensions: 8600 ft x 150 ft
- 2.12.5 Coordinates: 25-48-10.43N / 80-18-00.00W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 8 ft

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 267
- 2.12.3 Dimensions: 8600 ft x 150 ft
- 2.12.5 Coordinates: 25-48-14.32N / 80-16-31.55W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 8 ft

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 87
- 2.12.3 Dimensions: 13016 ft x 150 ft
- 2.12.5 Coordinates: 25-47-00.00N / 80-18-53.42W

- 2.12.6 Threshold elevation: 7 ft
- 2.12.6 Touchdown zone elevation: 7 ft

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 267
- 2.12.3 Dimensions: 13016 ft x 150 ft
- 2.12.5 Coordinates: 25-47-15.83N / 80-16-31.17W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 9 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 12
- 2.13.2 Takeoff run available: 9355
- 2.13.3 Takeoff distance available: 9355

- 2.13.1 Designation: 30
- 2.13.2 Takeoff run available: 9355
- 2.13.3 Takeoff distance available: 9355

- 2.13.1 Designation: 08R
- 2.13.2 Takeoff run available: 10506
- 2.13.3 Takeoff distance available: 10506
- 2.13.4 Accelerate-stop distance available: 10506
- 2.13.5 Landing distance available: 10506

- 2.13.1 Designation: 26L
- 2.13.2 Takeoff run available: 10506
- 2.13.3 Takeoff distance available: 10506
- 2.13.4 Accelerate-stop distance available: 10506
- 2.13.5 Landing distance available: 10506

- 2.13.1 Designation: 08L
- 2.13.2 Takeoff run available: 8600
- 2.13.3 Takeoff distance available: 8600
- 2.13.4 Accelerate-stop distance available: 8600
- 2.13.5 Landing distance available: 8600

- 2.13.1 Designation: 26R
- 2.13.2 Takeoff run available: 8600
- 2.13.3 Takeoff distance available: 8600
- 2.13.4 Accelerate-stop distance available: 8600
- 2.13.5 Landing distance available: 8600

- 2.13.1 Designation: 09
- 2.13.2 Takeoff run available: 13016
- 2.13.3 Takeoff distance available: 13016

- 2.13.1 Designation: 27
- 2.13.2 Takeoff run available: 13016
- 2.13.3 Takeoff distance available: 13016
- 2.13.4 Accelerate-stop distance available: 13016

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 12
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right

- 2.14.1 Designation: 30
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 08R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 26L
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 08L
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 26R
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 09
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 27
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P IC

- 2.18.3 Service designation: 118.3 MHz
- 2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 119.15 MHz
2.18.4 Hours of operation: 24
- 2.18.1 Service designation: DEP/P
2.18.3 Service designation: 119.45 MHz
- 2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 120.5 MHz
- 2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz
- 2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 121.8 MHz
- 2.18.1 Service designation: LCL/P
2.18.3 Service designation: 123.9 MHz
- 2.18.1 Service designation: APCH/P DEP/P
CLASS B IC
2.18.3 Service designation: 124.85 MHz
- 2.18.1 Service designation: RTIS(120-300
WITHIN 25 NM)
2.18.3 Service designation: 125.25 MHz
- 2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.5 MHz
- 2.18.1 Service designation: APCH/S
2.18.3 Service designation: 125.75 MHz
- 2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 127.5 MHz
- 2.18.1 Service designation: CD/P IC
2.18.3 Service designation: 135.35 MHz
- 2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 256.9 MHz
- 2.18.1 Service designation: DEP/P
2.18.3 Service designation: 290.325 MHz
- 2.18.1 Service designation: APCH/S
2.18.3 Service designation: 263.025 MHz
- 2.18.1 Service designation: APCH/P CLASS B IC
2.18.3 Service designation: 322.3 MHz
- 2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 348.6 MHz
- 2.18.1 Service designation: DEP/P
2.18.3 Service designation: 354.1 MHz
- 2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 379.9 MHz
- 2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 133.675 MHz
2.18.4 Hours of operation: 24
- 2.18.1 Service designation: GATE HOLD
2.18.3 Service designation: 120.35 MHz
- 2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 118.3 MHz
- 2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 119.15 MHz
2.18.4 Hours of operation: 24
- 2.18.1 Service designation: DEP/P
2.18.3 Service designation: 119.45 MHz
- 2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 120.5 MHz
- 2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz
- 2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 121.8 MHz
- 2.18.1 Service designation: LCL/P
2.18.3 Service designation: 123.9 MHz
- 2.18.1 Service designation: APCH/P DEP/P
CLASS B IC
2.18.3 Service designation: 124.85 MHz
- 2.18.1 Service designation: RTIS(120-300
WITHIN 25 NM)
2.18.3 Service designation: 125.25 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.5 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 125.75 MHz

2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: CD/P IC
2.18.3 Service designation: 135.35 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 290.325 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 263.025 MHz

2.18.1 Service designation: APCH/P CLASS B IC
2.18.3 Service designation: 322.3 MHz

2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 354.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 379.9 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 133.675 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GATE HOLD
2.18.3 Service designation: 120.35 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 30. Magnetic variation: 5W
2.19.2 ILS identification: DCX
2.19.5 Coordinates: 25-47-59.88N / 80-18-13.04W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: DME for runway 30. Magnetic variation: 5W

2.19.2 ILS identification: DCX
2.19.5 Coordinates: 25-47-57.77N / 80-18-14.51W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: Glide Slope for runway 30. Magnetic variation: 5W
2.19.2 ILS identification: DCX
2.19.5 Coordinates: 25-47-17.64N / 80-16-59.57W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Glide Slope for runway 12. Magnetic variation: 5W
2.19.2 ILS identification: GEM
2.19.5 Coordinates: 25-47-49.35N / 80-17-59.90W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: DME for runway 12. Magnetic variation: 5W
2.19.2 ILS identification: GEM
2.19.5 Coordinates: 25-47-11.28N / 80-16-32.41W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: Localizer for runway 12. Magnetic variation: 5W
2.19.2 ILS identification: GEM
2.19.5 Coordinates: 25-47-00.00N / 80-16-34.81W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Localizer for runway 08R. Magnetic variation: 5W
2.19.2 ILS identification: MFA
2.19.5 Coordinates: 25-48-00.00N / 80-16-00.00W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Middle Marker for runway 08R. Magnetic variation: 5W
2.19.2 ILS identification: MFA
2.19.5 Coordinates: 25-48-00.00N / 80-18-43.38W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: DME for runway 08R. Magnetic variation: 5W
2.19.2 ILS identification: MFA
2.19.5 Coordinates: 25-48-00.00N /

80-16-00.00W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Glide Slope for runway 08R.
Magnetic variation: 5W
2.19.2 ILS identification: MFA
2.19.5 Coordinates: 25-48-00.00N /
80-17-54.81W
2.19.6 Site elevation: 4 ft

2.19.1 ILS type: Glide Slope for runway 26L.
Magnetic variation: 5W
2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-00.00N /
80-16-22.51W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Localizer for runway 26L.
Magnetic variation: 5W
2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-00.00N /
80-18-13.77W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: DME for runway 26L. Magnetic
variation: 5W
2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-00.00N /
80-18-13.80W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Middle Marker for runway 26L.
Magnetic variation: 5W
2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-00.00N /
80-15-44.08W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 26L.
Magnetic variation: 5W
2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-18.83N /
80-11-42.26W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 08L. Magnetic
variation: 5W
2.19.2 ILS identification: ROY
2.19.5 Coordinates: 25-48-17.24N / 80-16-20.63W
2.19.6 Site elevation: 19 ft

2.19.1 ILS type: Localizer for runway 08L.
Magnetic variation: 5W
2.19.2 ILS identification: ROY
2.19.5 Coordinates: 25-48-14.77N / 80-16-20.62W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: DME for runway 26R. Magnetic
variation: 5W
2.19.2 ILS identification: CNV
2.19.5 Coordinates: 25-48-00.00N / 80-18-16.47W
2.19.6 Site elevation: 20 ft

2.19.1 ILS type: Localizer for runway 26R.
Magnetic variation: 5W
2.19.2 ILS identification: CNV
2.19.5 Coordinates: 25-48-00.00N / 80-18-16.48W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic
variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-47-17N / 80-16-23.05W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Outer Marker for runway 09.
Magnetic variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-46-59.33N /
80-23-00.00W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Middle Marker for runway 09.
Magnetic variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-47-00.00N /
80-19-00.00W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Glide Slope for runway 09.
Magnetic variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-47-00.00N /
80-18-26.71W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Glide Slope for runway 27.
Magnetic variation: 5W
2.19.2 ILS identification: MIA
2.19.5 Coordinates: 25-47-11.73N /
80-16-45.40W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Outer Marker for runway 27.
Magnetic variation: 5W

2.19.2 ILS identification: MIA

2.19.5 Coordinates: 25-47-26.47N /
80-11-39.14W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic
variation: 5W

2.19.2 ILS identification: MIA

General Remarks:

CLOSED NON ENGINE AIRCRAFT.

AIRCRAFT WITH A WINGSPAN GREATER THAN 170 FT ARE PROHIBITED FROM TAXIING ON TAXIWAY P EAST OF TAXIWAY U. AIRCRAFT WITH A WINGSPAN GREATER THAN 143 FT ARE PROHIBITED FROM USING TAXIWAY AA.

ALL TURBOJET AIRCRAFT USE DISTANT NOISE ABATEMENT DEP PROFILE FROM ALL RUNWAYS EXCEPT A320, B727, B737-800, B767-400, AND DC9 WHICH SHOULD USE CLOSE-IN NOISE ABATEMENT ABATEMENT PROFILE.

BIRDS ON & IN THE VICINITY OF AIRPORT.

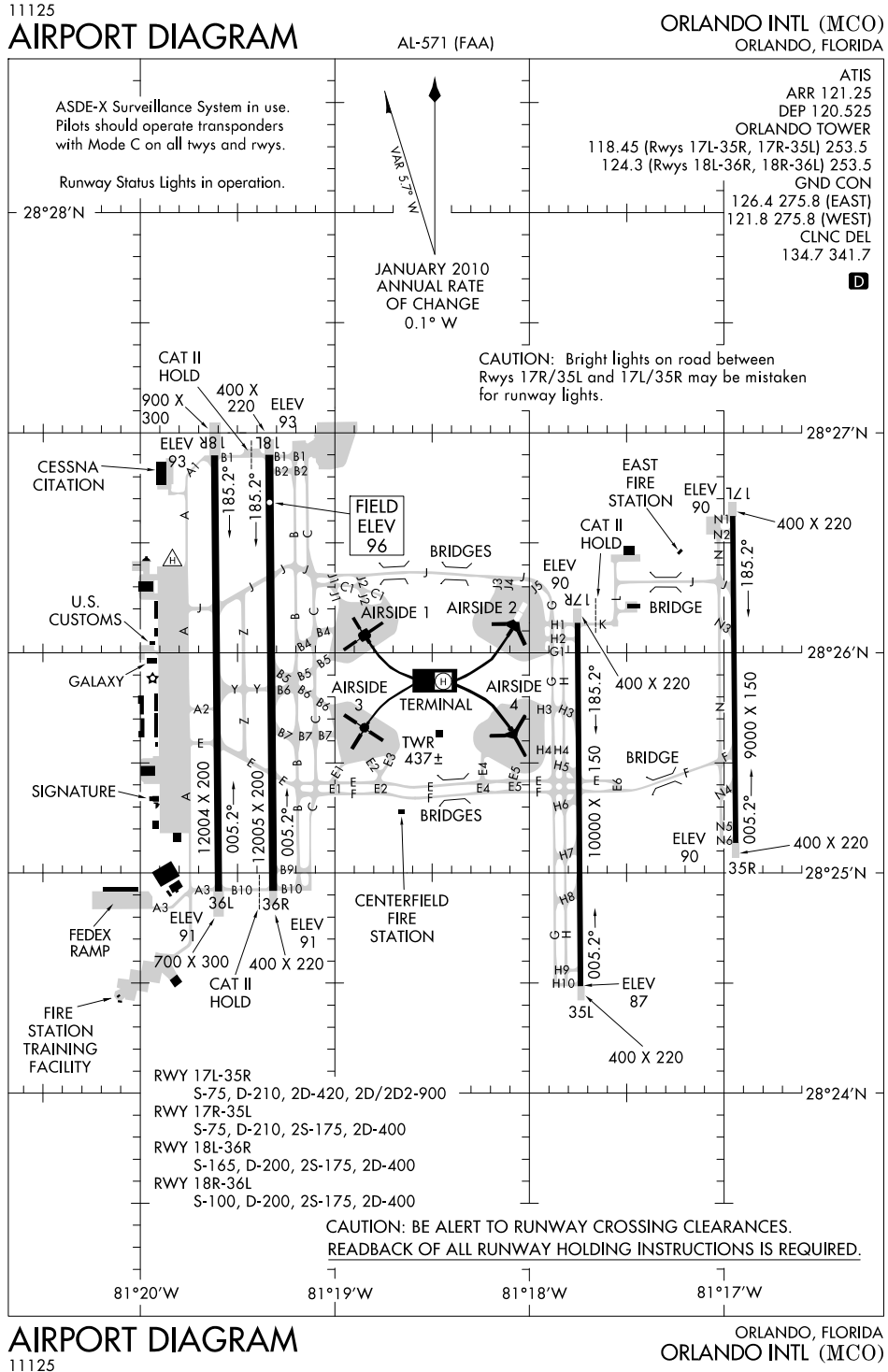
PRIOR PERMISSION REQUIRED 3 HRS PRIOR TO ALL ARRIVALS ON THE GENERAL AVIATION CENTER (GAC) RAMP. CONTACT RAMP CONTROL AT 305-876-7550 AND UPON ARRIVAL ON FREQ 130.5. AIRCRAFT WITH WINGSPAN GREATER THAN 78 FT ARE PROHIBITED FROM ENTERING THE GENERAL AVIATION AIRCRAFT RAMP.

ALL MEDICAL EMERGENCIES ARRIVALS, WITH THE EXCEPTION OF AIR AMBULANCE FLIGHTS, MUST SECURE DOORS UNTIL AIRCRAFT RESCUE AND FIRE FIGHTING IS ON SCENE.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

PRIOR PERMISSION REQUIRED FOR INBOUND MILITARY FLIGHTS 100 NAUTICAL MILE ON FREQ 130.5.

Orlando, Florida
Orlando International
ICAO Identifier KMCO



Orlando, FL
Orlando Intl
ICAO Identifier KMCO

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 28-25-45.82N / 81-18-32.38W
- 2.2.2 From City: 6 Miles SE Of Orlando, FL
- 2.2.3 Elevation: 96 ft
- 2.2.5 Magnetic variation: 5W (2000)
- 2.2.6 Airport Contact: Phil Brown
ONE AIRPORT BLVD
Orlando, FL 32827
(407-825-2001)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 4/1/2005

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 17R
- 2.12.2 True Bearing: 179
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 28-26-00.00N / 81-17-45.17W
- 2.12.6 Threshold elevation: 90 ft
- 2.12.6 Touchdown zone elevation: 90 ft

- 2.12.1 Designation: 35L
- 2.12.2 True Bearing: 359
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 28-24-29.20N / 81-17-44.13W
- 2.12.6 Threshold elevation: 87 ft
- 2.12.6 Touchdown zone elevation: 88 ft

- 2.12.1 Designation: 18L
- 2.12.2 True Bearing: 179

- 2.12.3 Dimensions: 12005 ft x 200 ft
- 2.12.5 Coordinates: 28-26-54.00N / 81-19-20.30W
- 2.12.6 Threshold elevation: 92 ft
- 2.12.6 Touchdown zone elevation: 96 ft

- 2.12.1 Designation: 36R
- 2.12.2 True Bearing: 359
- 2.12.3 Dimensions: 12005 ft x 200 ft
- 2.12.5 Coordinates: 28-24-55.15N / 81-19-19.04W
- 2.12.6 Threshold elevation: 91 ft
- 2.12.6 Touchdown zone elevation: 92 ft

- 2.12.1 Designation: 18R
- 2.12.2 True Bearing: 179
- 2.12.3 Dimensions: 12004 ft x 200 ft
- 2.12.5 Coordinates: 28-26-53.86N / 81-19-37.11W
- 2.12.6 Threshold elevation: 92 ft
- 2.12.6 Touchdown zone elevation: 94 ft

- 2.12.1 Designation: 36L
- 2.12.2 True Bearing: 359
- 2.12.3 Dimensions: 12004 ft x 200 ft
- 2.12.5 Coordinates: 28-24-55.01N / 81-19-35.83W
- 2.12.6 Threshold elevation: 91 ft
- 2.12.6 Touchdown zone elevation: 93 ft

- 2.12.1 Designation: 17L
- 2.12.2 True Bearing: 179
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 28-26-37.31N / 81-16-57.29W
- 2.12.6 Threshold elevation: 90 ft
- 2.12.6 Touchdown zone elevation: 90 ft

- 2.12.1 Designation: 35R
- 2.12.2 True Bearing: 359
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 28-25-00.00N / 81-16-56.38W
- 2.12.6 Threshold elevation: 90 ft
- 2.12.6 Touchdown zone elevation: 90 ft

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 44 ft x 44 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 18L

2.13.2 Takeoff run available: 12005
2.13.3 Takeoff distance available: 12005
2.13.4 Accelerate-stop distance available: 12005
2.13.5 Landing distance available: 12005

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 12005
2.13.3 Takeoff distance available: 12005
2.13.4 Accelerate-stop distance available: 11601
2.13.5 Landing distance available: 11601

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 12004
2.13.3 Takeoff distance available: 12004
2.13.4 Accelerate-stop distance available: 12004
2.13.5 Landing distance available: 12004

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 12004
2.13.3 Takeoff distance available: 12004
2.13.4 Accelerate-stop distance available: 11621
2.13.5 Landing distance available: 11621

AD 2.14 Approach and runway lighting

2.14.1 Designation: 17R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 35L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 18L
2.14.4 Visual approach slope indicator system:
6-box VASI on left
2.14.10 Remarks: VASI Upwind Threshold
Crossing Height 89.7' GA 3.25 Degs Downwind
Threshold Crossing Height 52.4' GA 3.00 Degs.

2.14.1 Designation: 36R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 18R
2.14.2 Approach lighting system: MALSR: 1400

feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 36L
2.14.4 Visual approach slope indicator system:
6-box VASI on left
2.14.10 Remarks: VASI Upwind Threshold
Crossing Height 94' GA 3.25 Degs; Downwind
Threshold Crossing Height 52' GA 3.00 Degs.

2.14.1 Designation: 17L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 35R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 119.4 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 120.15 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: D-ATIS ARR

2.18.3 Service designation: 121.25 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 123.85 MHz

2.18.1 Service designation: LCL/P (RYS 18L/36R)

& 18R/36L)
2.18.3 Service designation: 124.3 MHz

2.18.1 Service designation: APCH/P DEP/P IC
CLASS B
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 125.55 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 134.05 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 134.7 MHz

2.18.1 Service designation: AR OPS
2.18.3 Service designation: 148.8 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 284.7 MHz

2.18.1 Service designation: APCH/P DEP/P IC
CLASS B
2.18.3 Service designation: 307 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 339.8 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 341.7 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 351.9 MHz

2.18.1 Service designation: AR OPS
2.18.3 Service designation: 41.5 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 120.525 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 253.5 MHz

2.18.1 Service designation: LCL/P (RYS 17L/35R

& 17R/35L)
2.18.3 Service designation: 118.45 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 275.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 126.4 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 119.475 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 17R.
Magnetic variation: 5W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-24-18.77N /
81-17-44.02W

2.19.6 Site elevation: 82 ft

2.19.1 ILS type: DME for runway 17R. Magnetic
variation: 5W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-24-18.95N /
81-17-47.07W

2.19.6 Site elevation: 86 ft

2.19.1 ILS type: Glide Slope for runway 17R.
Magnetic variation: 5W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-25-57.84N /
81-17-40.58W

2.19.6 Site elevation: 87 ft

2.19.1 ILS type: Inner Marker for runway 17R.
Magnetic variation: 5W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-26-16.70N /
81-17-45.26W

2.19.6 Site elevation: 86 ft

2.19.1 ILS type: Middle Marker for runway 17R.
Magnetic variation: 5W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-26-34.25N /
81-17-45.43W

2.19.6 Site elevation: 82 ft

2.19.1 ILS type: DME for runway 35L. Magnetic variation: 5W
2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-26-18.45N / 81-17-48.12W
2.19.6 Site elevation: 100 ft

2.19.1 ILS type: Glide Slope for runway 35L. Magnetic variation: 5W
2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-24-39.53N / 81-17-39.76W
2.19.6 Site elevation: 84 ft

2.19.1 ILS type: Inner Marker for runway 35L. Magnetic variation: 5W
2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-24-20.54N / 81-17-44.05W
2.19.6 Site elevation: 87 ft

2.19.1 ILS type: Middle Marker for runway 35L. Magnetic variation: 5W
2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-24-00.00N / 81-17-43.84W
2.19.6 Site elevation: 83 ft

2.19.1 ILS type: Localizer for runway 35L. Magnetic variation: 5W
2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-26-18.60N / 81-17-45.27W
2.19.6 Site elevation: 87 ft

2.19.1 ILS type: Glide Slope for runway 36R. Magnetic variation: 5W
2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-25-00.00N / 81-19-23.63W
2.19.6 Site elevation: 88 ft

2.19.1 ILS type: Inner Marker for runway 36R. Magnetic variation: 5W
2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-24-46.65N / 81-19-18.94W
2.19.6 Site elevation: 87 ft

2.19.1 ILS type: Outer Marker for runway 36R. Magnetic variation: 5W

2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-20-38.35N / 81-19-18.23W
2.19.6 Site elevation: 68 ft

2.19.1 ILS type: Localizer for runway 36R. Magnetic variation: 5W
2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-27-00.00N / 81-19-20.38W
2.19.6 Site elevation: 91 ft

2.19.1 ILS type: Middle Marker for runway 36R. Magnetic variation: 5W
2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-24-31.89N / 81-19-18.77W
2.19.6 Site elevation: 85 ft

2.19.1 ILS type: DME for runway 36R. Magnetic variation: 5W
2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-27-00.00N / 81-19-18.03W
2.19.6 Site elevation: 91 ft

2.19.1 ILS type: Localizer for runway 18R. Magnetic variation: 5W
2.19.2 ILS identification: TFE
2.19.5 Coordinates: 28-24-42.58N / 81-19-35.70W
2.19.6 Site elevation: 87 ft

2.19.1 ILS type: Glide Slope for runway 18R. Magnetic variation: 5W
2.19.2 ILS identification: TFE
2.19.5 Coordinates: 28-26-43.50N / 81-19-32.52W
2.19.6 Site elevation: 89 ft

2.19.1 ILS type: Outer Marker for runway 18R. Magnetic variation: 5W
2.19.2 ILS identification: TFE
2.19.5 Coordinates: 28-33-00.00N / 81-19-38.75W
2.19.6 Site elevation: 103 ft

2.19.1 ILS type: Middle Marker for runway 18R. Magnetic variation: 5W
2.19.2 ILS identification: TFE
2.19.5 Coordinates: 28-27-20.04N /

81-19-37.39W
2.19.6 Site elevation: 90 ft

2.19.1 ILS type: DME for runway 18R. Magnetic variation: 5W

2.19.2 ILS identification: TFE

2.19.5 Coordinates: 28-24-42.05N /
81-19-38.48W

2.19.6 Site elevation: 86 ft

2.19.1 ILS type: DME for runway 17L. Magnetic variation: 5W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-24-58.00N /
81-16-51.68W

2.19.6 Site elevation: 86 ft

2.19.1 ILS type: Glide Slope for runway 17L. Magnetic variation: 5W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-26-26.95N /
81-16-52.59W

2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Inner Marker for runway 17L. Magnetic variation: 5W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-26-45.82N /
81-16-57.38W

2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Localizer for runway 17L. Magnetic variation: 5W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-24-57.81N /
81-16-56.27W

2.19.6 Site elevation: 94 ft

2.19.1 ILS type: Middle Marker for runway 17L. Magnetic variation: 5W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-26-59.83N /
81-16-57.52W

2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Glide Slope for runway 35R. Magnetic variation: 5W

2.19.2 ILS identification: CER

2.19.5 Coordinates: 28-25-18.63N /
81-16-51.89W

2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Inner Marker for runway 35R. Magnetic variation: 5W

2.19.2 ILS identification: CER

2.19.5 Coordinates: 28-24-59.68N /
81-16-56.29W

2.19.6 Site elevation: 90 ft

2.19.1 ILS type: DME for runway 35R. Magnetic variation: 5W

2.19.2 ILS identification: CER

2.19.5 Coordinates: 28-26-48.23N /
81-16-52.81W

2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Localizer for runway 35R. Magnetic variation: 5W

2.19.2 ILS identification: CER

2.19.5 Coordinates: 28-26-47.70N /
81-16-57.40W

2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Middle Marker for runway 35R. Magnetic variation: 5W

2.19.2 ILS identification: CER

2.19.5 Coordinates: 28-24-45.67N /
81-16-56.15W

2.19.6 Site elevation: 90 ft

General Remarks:

BIRDS & DEER ON & IN THE VICINITY OF AIRPORT.

24 HR PRIOR PERMISSION REQUIRED FOR HELIPAD LANDING CALL 407-825-2036.
COMMERCIAL OPERATIONS ONLY, NO PRIVATE OPERATIONS.

AVOID CONTACT WITH TAXIWAY EDGE LIGHTS; ALL AIRCRAFT DETERMINED TO BE FAA DESIGN GROUP IV AND ABOVE MUST PERFORM JUDGEMENTAL OVERSTEERING INSTEAD

OF COCKPIT CENTERLINE STEERING WHEN TAXIING.

WHEN OVERRUN LIGHTS ILS RUNWAY 7 AND MCO ILS RUNWAYS 17 & 18R SIMULTANEOUS OPERATIONS ARE CONDUCTED, ATC RADAR REQUIRED.

BRIGHT LIGHTS ON ROAD BETWEEN RUNWAY 17R/35L AND RUNWAY 17L/35R MAY BE MISTAKEN FOR RUNWAY LIGHTS.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE 'C' ON ALL TAXIWAYS & RUNWAYS.

AIRCRAFT PARKED ON AIRSIDE 2 CENTERLINE WEST OF TAXIWAY G1 AND/OR SOUTH OF TAXIWAY J3 BETWEEN 2200 & 0700.

GROUND OPERATIONS OF AIRCRAFT WITH WINGSPAN GREATER THAN 213 FT MUST USE TAXIWAYS WEST OF RUNWAY 18L/36R EXCEPT NORTH OF TAXIWAY A WHICH IS RESTRICTED TO WINGSPAN LESS THAN 213 FT.

USE CAUTION IN VICINITY OF TAXIWAY "A" ALONG WEST RAMP.

UNLESS ADVISED BY AUTOMATIC TERMINAL INFORMATION SERVICE, DEPARTING FLIGHTS ON INITIAL CONTACT WITH GROUND CONTROL: AIRCRAFT ON WEST RAMP, AIRSIDE 1 & 3 (GATES 1-59) USE GROUND CONTROL 121.8. AIRCRAFT AT AIRSIDE 2 & 4 (GATES 60 AND HIGHER), USE GROUND CONTROL 126.4.

Tampa, FL
Tampa Intl
ICAO Identifier KTPA

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 27-58-31.70N / 82-31-59.70W
- 2.2.2 From City: 6 Miles W Of Tampa, FL
- 2.2.3 Elevation: 26 ft
- 2.2.5 Magnetic variation: 5W (2010)
- 2.2.6 Airport Contact: Ed Cooley
PO BOX 22287
Tampa, FL 33622
(813-870-8700)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 10
- 2.10.1.b Type of obstacle: Trees (26 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 301 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 92
- 2.12.3 Dimensions: 6999 ft x 150 ft
- 2.12.5 Coordinates: 27-58-14.99N / 82-32-00.00W
- 2.12.6 Threshold elevation: 14 ft
- 2.12.6 Touchdown zone elevation: 20 ft

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 272
- 2.12.3 Dimensions: 6999 ft x 150 ft

- 2.12.5 Coordinates: 27-58-12.89N / 82-30-51.89W
- 2.12.6 Threshold elevation: 26 ft
- 2.12.6 Touchdown zone elevation: 26 ft

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 2
- 2.12.3 Dimensions: 8300 ft x 150 ft
- 2.12.5 Coordinates: 27-57-51.52N / 82-31-44.37W
- 2.12.6 Threshold elevation: 18 ft
- 2.12.6 Touchdown zone elevation: 18 ft

- 2.12.1 Designation: 19L
- 2.12.2 True Bearing: 182
- 2.12.3 Dimensions: 8300 ft x 150 ft
- 2.12.5 Coordinates: 27-59-13.66N / 82-31-41.57W
- 2.12.6 Threshold elevation: 26 ft
- 2.12.6 Touchdown zone elevation: 26 ft

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 2
- 2.12.3 Dimensions: 11002 ft x 150 ft
- 2.12.5 Coordinates: 27-57-47.86N / 82-32-32.48W
- 2.12.6 Threshold elevation: 11 ft
- 2.12.6 Touchdown zone elevation: 11 ft

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 182
- 2.12.3 Dimensions: 11002 ft x 150 ft
- 2.12.5 Coordinates: 27-59-36.74N / 82-32-28.78W
- 2.12.6 Threshold elevation: 21 ft
- 2.12.6 Touchdown zone elevation: 21 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 10
- 2.13.2 Takeoff run available: 6999
- 2.13.3 Takeoff distance available: 6999
- 2.13.4 Accelerate-stop distance available: 6999
- 2.13.5 Landing distance available: 6999

- 2.13.1 Designation: 28
- 2.13.2 Takeoff run available: 6999
- 2.13.3 Takeoff distance available: 6999
- 2.13.4 Accelerate-stop distance available: 6500
- 2.13.5 Landing distance available: 6500

- 2.13.1 Designation: 01R

2.13.2 Takeoff run available: 8300
2.13.3 Takeoff distance available: 8300
2.13.4 Accelerate-stop distance available: 8300
2.13.5 Landing distance available: 8300

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 8300
2.13.3 Takeoff distance available: 8300
2.13.4 Accelerate-stop distance available: 8300
2.13.5 Landing distance available: 8300

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 10800
2.13.5 Landing distance available: 10800

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 11002
2.13.5 Landing distance available: 11002

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 28
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 19L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 19R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 118.15 MHz

2.18.1 Service designation: FINAL-CTL IC
2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 118.8 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 119.05 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 119.65 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 119.9 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 121.35 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 126.45 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 128.475 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 133.6 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: GND/P LCL/P
2.18.3 Service designation: 269.4 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 290.3 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 285.625 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B
2.18.3 Service designation: 353.575 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 316.05 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 353.75 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 19L.
Magnetic variation: 5W
2.19.2 ILS identification: TPA
2.19.5 Coordinates: 27-59-00.00N /
82-31-37.46W
2.19.6 Site elevation: 24 ft

2.19.1 ILS type: Localizer for runway 19L.
Magnetic variation: 5W
2.19.2 ILS identification: TPA
2.19.5 Coordinates: 27-57-41.53N /
82-31-44.71W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: Middle Marker for runway 19L.
Magnetic variation: 5W
2.19.2 ILS identification: TPA
2.19.5 Coordinates: 27-59-43.35N /
82-31-40.56W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 19L.

Magnetic variation: 5W
2.19.2 ILS identification: TPA
2.19.5 Coordinates: 27-59-23.06N /
82-31-41.25W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 19L.
Magnetic variation: 5W
2.19.2 ILS identification: TPA
2.19.5 Coordinates: 28-05-00.00N /
82-31-30.91W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 01R. Magnetic
variation: 5W
2.19.2 ILS identification: TWJ
2.19.5 Coordinates: 27-59-22.99N /
82-31-38.43W
2.19.6 Site elevation: 36 ft

2.19.1 ILS type: Localizer for runway 01R.
Magnetic variation: 5W
2.19.2 ILS identification: TWJ
2.19.5 Coordinates: 27-59-23.93N /
82-31-41.22W
2.19.6 Site elevation: 26 ft

2.19.1 ILS type: Localizer for runway 01L.
Magnetic variation: 5W
2.19.2 ILS identification: AMP
2.19.5 Coordinates: 27-59-44.78N /
82-32-28.51W
2.19.6 Site elevation: 21 ft

2.19.1 ILS type: Inner Marker for runway 01L.
Magnetic variation: 5W
2.19.2 ILS identification: AMP
2.19.5 Coordinates: 27-57-39.62N /
82-32-32.76W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 01L.
Magnetic variation: 5W
2.19.2 ILS identification: AMP
2.19.5 Coordinates: 27-57-15.71N /
82-32-33.57W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 01L.
Magnetic variation: 5W
2.19.2 ILS identification: AMP

2.19.5 Coordinates: 27-57-58.24N /
82-32-36.59W
2.19.6 Site elevation: 8 ft

2.19.5 Coordinates: 27-59-26.45N /
82-32-33.59W
2.19.6 Site elevation: 17 ft

2.19.1 ILS type: Outer Marker for runway 01L.
Magnetic variation: 5W
2.19.2 ILS identification: AMP
2.19.5 Coordinates: 27-51-40.23N /
82-32-44.85W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 19R.
Magnetic variation: 5W
2.19.2 ILS identification: JRT
2.19.5 Coordinates: 28-00-00.00N /
82-32-27.94W
2.19.6 Site elevation: 21 ft

2.19.1 ILS type: Localizer for runway 19R.
Magnetic variation: 5W
2.19.2 ILS identification: JRT
2.19.5 Coordinates: 27-57-38.21N /
82-32-32.80W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: DME for runway 19R. Magnetic
variation: 5W
2.19.2 ILS identification: JRT
2.19.5 Coordinates: 27-57-38.34N /
82-32-30.27W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Glide Slope for runway 19R.
Magnetic variation: 5W
2.19.2 ILS identification: JRT

General Remarks:

RUNWAY 19L IS NOISE SENSITIVE TO TURBOJET DEPARTURES. RUNWAY 01R IS NOISE SENSITIVE TO TURBOJET ARRIVALS. PUBLISHED NOISE ABATEMENT PROCEDURES IN EFFECT.

ONLY AIRCRAFT WITH PRIOR PERMISSION MAY USE TERMINAL APRON; ALL OTHERS USE GA APRON.

BIRD ACTIVITY ON AND IN VICINITY OF AIRPORT.

TAXIWAY RSTRS: AIRPLANE DESIGN GRP V OR LGR – TAXIWAY N WEST OF TAXIWAY L UNAVAILABLE. NORTH 1500 FT TAXIWAY E ALSO UNAVAILABLE FOR WINGSPAN GREATER THAN 171 FT UNLESS PRIOR PERMISSION REQUIRED FROM AIRPORT OPERATIONS.

TAXIWAY RSTRS: GRP IV AIRCRAFT WITH WINGSPAN GREATER THAN 117 FT — TAXIWAY LANE E SOUTH OF TAXIWAY S, AND TAXIWAY R EAST OF TAXIWAY D ARE NON-MOVEMENT AREAS AND UNAVAILABLE WO PRIOR PERMISSION REQUIRED FROM AIRPORT OPERATIONS.

West Palm Beach, FL
Palm Beach Intl
ICAO Identifier KPBI

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 26-40-59.40N / 80-05-44.10W
- 2.2.2 From City: 3 Miles W Of West Palm Beach, FL
- 2.2.3 Elevation: 20 ft
- 2.2.5 Magnetic variation: 6W (2010)
- 2.2.6 Airport Contact: Bruce V Pelly
BLDG 846-PALM BEACH INTL
West Palm Beach, FL 33406
(561-471-7412)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 4/29/2005

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 14
- 2.10.1.b Type of obstacle: Trees (84 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 150 ft from Centerline

- 2.10.1.a. Runway designation: 32
- 2.10.1.b Type of obstacle: Road (32 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 250 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 93
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 26-40-59.55N /

- 80-06-30.13W
- 2.12.6 Threshold elevation: 19 ft
- 2.12.6 Touchdown zone elevation: 19 ft

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 273
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 26-40-54.74N / 80-04-40.01W
- 2.12.6 Threshold elevation: 16 ft
- 2.12.6 Touchdown zone elevation: 18 ft

- 2.12.1 Designation: 10R
- 2.12.2 True Bearing: 93
- 2.12.3 Dimensions: 3213 ft x 75 ft
- 2.12.5 Coordinates: 26-40-52.28N / 80-06-22.64W
- 2.12.6 Threshold elevation: 17 ft
- 2.12.6 Touchdown zone elevation: 17 ft

- 2.12.1 Designation: 28L
- 2.12.2 True Bearing: 273
- 2.12.3 Dimensions: 3213 ft x 75 ft
- 2.12.5 Coordinates: 26-40-50.74N / 80-05-47.26W
- 2.12.6 Threshold elevation: 14 ft
- 2.12.6 Touchdown zone elevation: 17 ft

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 135
- 2.12.3 Dimensions: 6931 ft x 150 ft
- 2.12.5 Coordinates: 26-41-30.60N / 80-06-14.48W
- 2.12.6 Threshold elevation: 17 ft
- 2.12.6 Touchdown zone elevation: 17 ft

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 315
- 2.12.3 Dimensions: 6931 ft x 150 ft
- 2.12.5 Coordinates: 26-40-41.91N / 80-05-20.62W
- 2.12.6 Threshold elevation: 16 ft
- 2.12.6 Touchdown zone elevation: 16 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 10L
- 2.13.2 Takeoff run available: 10000
- 2.13.3 Takeoff distance available: 10000
- 2.13.4 Accelerate-stop distance available: 10000
- 2.13.5 Landing distance available: 8800

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 9189

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 3213
2.13.3 Takeoff distance available: 3213
2.13.4 Accelerate-stop distance available: 3213
2.13.5 Landing distance available: 3213

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 3213
2.13.3 Takeoff distance available: 3213
2.13.4 Accelerate-stop distance available: 3213
2.13.5 Landing distance available: 3213

2.13.1 Designation: 14
2.13.2 Takeoff run available: 6931
2.13.3 Takeoff distance available: 6931
2.13.4 Accelerate-stop distance available: 5999
2.13.5 Landing distance available: 5999

2.13.1 Designation: 32
2.13.2 Takeoff run available: 6931
2.13.3 Takeoff distance available: 6931
2.13.4 Accelerate-stop distance available: 6931
2.13.5 Landing distance available: 6513

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 28R
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 10R
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 28L
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 14

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 118.75 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 123.75 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P CLASS C IC
2.18.3 Service designation: 124.6 MHz

2.18.1 Service designation: FINAL APCH
2.18.3 Service designation: 125 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: APCH/P CLASS C
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: CLASS C /S
2.18.3 Service designation: 127.35 MHz

2.18.1 Service designation: DEP/P CLASS C
2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: APCH/P CLASS C IC
2.18.3 Service designation: 317.4 MHz

2.18.1 Service designation: DEP/P CLASS C
2.18.3 Service designation: 343.6 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 384.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Outer Marker for runway 10L.
Magnetic variation: 6W
2.19.2 ILS identification: PBI
2.19.5 Coordinates: 26-41-15.72N /
80-12-36.74W
2.19.6 Site elevation: 17 ft

2.19.1 ILS type: Glide Slope for runway 10L.
Magnetic variation: 6W
2.19.2 ILS identification: PBI
2.19.5 Coordinates: 26-40-55.98N /
80-06-00.00W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: Localizer for runway 10L.

General Remarks:

MIGRATORY BIRDS ON AND IN THE VICINITY OF AIRPORT.

NOISE ABATEMENT PROCEDURES IN EFFECT CALL AIRPORT MANAGER 561-471-7467.

ULTRALIGHT ACTIVITY IN THE VICINITY OF AIRPORT.

PORTIONS OF TAXIWAY 'F' S OF TAXIWAY 'G' TO APPROACH END RUNWAY 32 NOT VISIBLE FROM ATCT DUE TO BUILDINGS & PARKED AIRCRAFT.

BE ALERT; RUNWAYS 28L & 28R THRESHOLDS STAGGERED BY 5400 FT.

RUNWAY 10R/28L NON-AIR CARRIER AIRCRAFT ONLY.

BE ALERT: TAXIWAY L IS LOCATED BETWEEN RUNWAYS 10L/28R & 10R/28L. TAXIWAY L IS WIDER AND LONGER THAN RUNWAY 10R/28L - DO NOT CONFUSE TAXIWAY L FOR RUNWAY. TAXIWAY L LIMITED TO B-727-100 SERIES AND SMALLER AIRCRAFT.

Magnetic variation: 6W
2.19.2 ILS identification: PBI
2.19.5 Coordinates: 26-40-54.27N /
80-04-28.92W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: Middle Marker for runway 10L.
Magnetic variation: 6W
2.19.2 ILS identification: PBI
2.19.5 Coordinates: 26-41-00.00N /
80-06-56.66W
2.19.6 Site elevation: 18 ft

2.19.1 ILS type: Localizer for runway 28R.
Magnetic variation: 6W
2.19.2 ILS identification: PWB
2.19.5 Coordinates: 26-40-59.91N /
80-06-38.53W
2.19.6 Site elevation: 18 ft

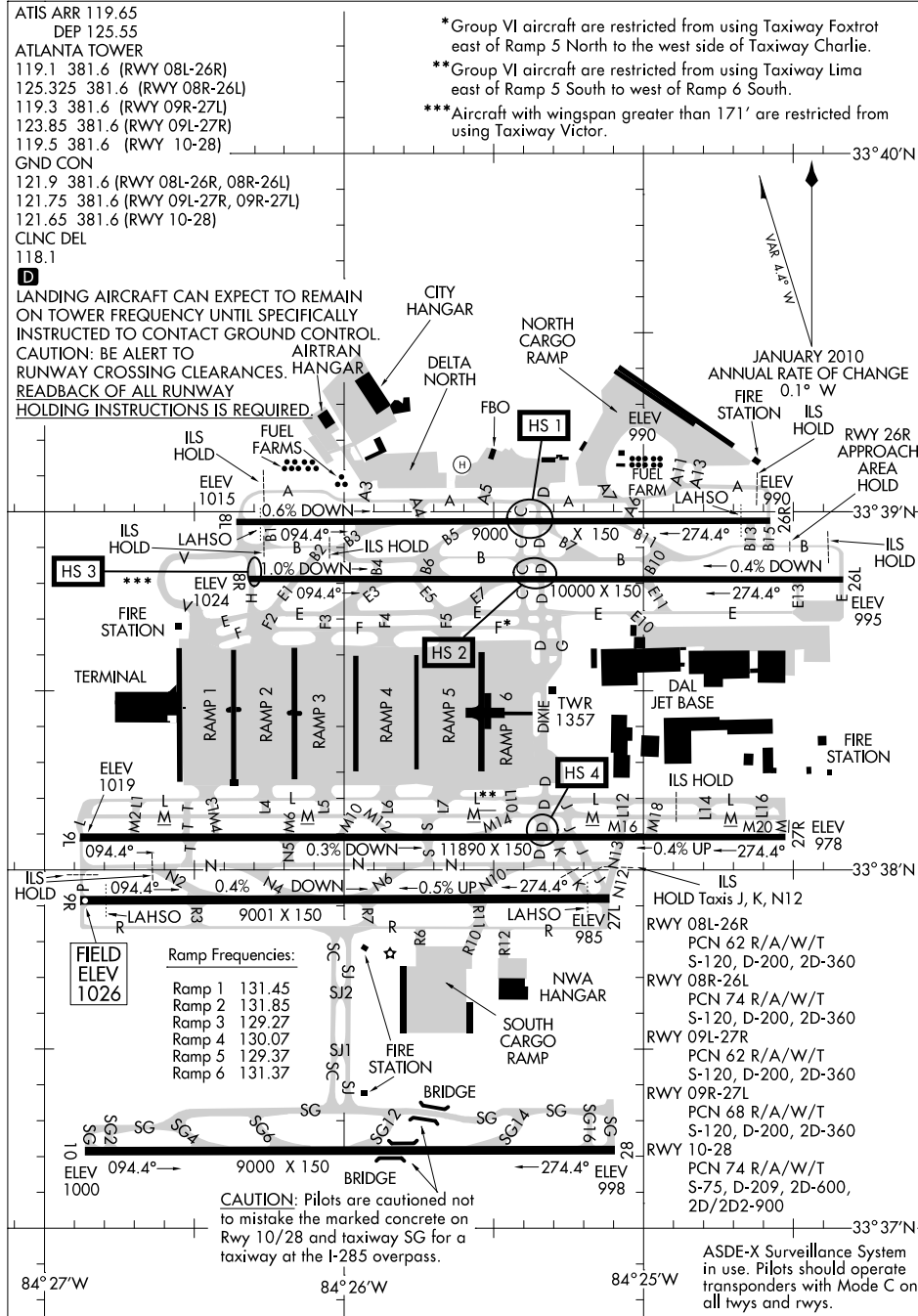
2.19.1 ILS type: Glide Slope for runway 28R.
Magnetic variation: 6W
2.19.2 ILS identification: PWB
2.19.5 Coordinates: 26-40-51.94N /
80-05-00.00W
2.19.6 Site elevation: 14 ft

Atlanta, Georgia
Hartsfield-Jackson Atlanta International
ICAO Identifier KATL

10322

AIRPORT DIAGRAM

ATLANTA/ HARTSFIELD - JACKSON ATLANTA INTL (ATL)
AL-26 (FAA) ATLANTA, GEORGIA



SE-4, 30 JUN 2011 to 28 JUL 2011

SE-4, 30 JUN 2011 to 28 JUL 2011

AIRPORT DIAGRAM

ATLANTA, GEORGIA
ATLANTA/ HARTSFIELD - JACKSON ATLANTA INTL (ATL)

10322

Atlanta, GA
Hartsfield - Jackson Atlanta Intl
ICAO Identifier KATL

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 33-38-12.19N / 84-25-41.04W
- 2.2.2 From City: 7 Miles S Of Atlanta, GA
- 2.2.3 Elevation: 1026 ft
- 2.2.5 Magnetic variation: 2W (1985)
- 2.2.6 Airport Contact: Benjamin Decosta
PO BOX 20509 AIRPORT OPNS
Atlanta, GA 30320
(404-530-6600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 09L
- 2.10.1.b Type of obstacle: Other (108 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 200 ft from Centerline

- 2.10.1.a. Runway designation: 09R
- 2.10.1.b Type of obstacle: Tower (88 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 1000 ft from Centerline

- 2.10.1.a. Runway designation: 08L
- 2.10.1.b Type of obstacle: Sign (14 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 400 ft from Centerline

- 2.10.1.a. Runway designation: 26R
- 2.10.1.b Type of obstacle: Ant (53 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 800 ft from Centerline

- 2.10.1.a. Runway designation: 08R
- 2.10.1.b Type of obstacle: Rr (64 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 26L
- 2.10.1.b Type of obstacle: Vent (13 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 560 ft from Centerline

- 2.10.1.a. Runway designation: 10
- 2.10.1.b Type of obstacle: Sign (51 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 770 ft from Centerline

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Tower (136 ft). Lighted
- 2.10.1.c Location of obstacle: 410 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 11890 ft x 150 ft
- 2.12.4 PCN: 62 R/A/W/T
- 2.12.5 Coordinates: 33-38-00.00N / 84-26-52.68W
- 2.12.6 Threshold elevation: 1019 ft
- 2.12.6 Touchdown zone elevation: 1019 ft
- 2.12.7 Slope: 0.3DOWN

- 2.12.1 Designation: 27R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 11890 ft x 150 ft
- 2.12.4 PCN: 62 R/A/W/T
- 2.12.5 Coordinates: 33-38-00.00N / 84-24-32.07W
- 2.12.6 Threshold elevation: 978 ft
- 2.12.6 Touchdown zone elevation: 985 ft
- 2.12.7 Slope: 0.4UP

- 2.12.1 Designation: 09R

2.12.2 True Bearing: 90
2.12.3 Dimensions: 9001 ft x 150 ft
2.12.4 PCN: 68 R/A/W/T
2.12.5 Coordinates: 33-37-54.53N /
84-26-52.68W
2.12.6 Threshold elevation: 1026 ft
2.12.6 Touchdown zone elevation: 1026 ft
2.12.7 Slope: 0.4DOWN

2.12.1 Designation: 27L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9001 ft x 150 ft
2.12.4 PCN: 68 R/A/W/T
2.12.5 Coordinates: 33-37-54.56N /
84-25-00.00W
2.12.6 Threshold elevation: 985 ft
2.12.6 Touchdown zone elevation: 999 ft
2.12.7 Slope: 0.5UP

2.12.1 Designation: H1
2.12.3 Dimensions: 52 ft x 52 ft

2.12.1 Designation: 08L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 62 R/A/W/T
2.12.5 Coordinates: 33-38-58.32N /
84-26-20.49W
2.12.6 Threshold elevation: 1015 ft
2.12.6 Touchdown zone elevation: 1015 ft
2.12.7 Slope: 0.6DOWN

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 62 R/A/W/T
2.12.5 Coordinates: 33-38-58.35N /
84-24-34.03W
2.12.6 Threshold elevation: 990 ft
2.12.6 Touchdown zone elevation: 990 ft

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-38-48.43N /
84-26-18.11W
2.12.6 Threshold elevation: 1024 ft
2.12.6 Touchdown zone elevation: 1024 ft
2.12.7 Slope: 1DOWN

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-38-48.46N /
84-24-19.83W
2.12.6 Threshold elevation: 995 ft
2.12.6 Touchdown zone elevation: 995 ft
2.12.7 Slope: 0.4DOWN

2.12.1 Designation: 10
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-37-12.98N /
84-26-52.36W
2.12.6 Threshold elevation: 1000 ft
2.12.6 Touchdown zone elevation: 1000 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-37-13.02N /
84-25-00.00W
2.12.6 Threshold elevation: 998 ft
2.12.6 Touchdown zone elevation: 998 ft

AD 2.13 Declared distances

2.13.1 Designation: 09L
2.13.2 Takeoff run available: 11890
2.13.3 Takeoff distance available: 11890
2.13.4 Accelerate-stop distance available: 11730
2.13.5 Landing distance available: 11730

2.13.1 Designation: 27R
2.13.2 Takeoff run available: 11890
2.13.3 Takeoff distance available: 11890
2.13.4 Accelerate-stop distance available: 11690
2.13.5 Landing distance available: 11690

2.13.1 Designation: 09R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 27L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 8865

2.13.5 Landing distance available: 8865

2.13.1 Designation: 08L

2.13.2 Takeoff run available: 9000

2.13.3 Takeoff distance available: 9000

2.13.4 Accelerate-stop distance available: 8800

2.13.5 Landing distance available: 8800

2.13.1 Designation: 26R

2.13.2 Takeoff run available: 9000

2.13.3 Takeoff distance available: 9000

2.13.4 Accelerate-stop distance available: 8800

2.13.5 Landing distance available: 8800

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 27R

2.14.2 Approach lighting system: MALS: 1400 feet medium intensity approach lighting system

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 09R

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 27L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 08L

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 26R

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 08R

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 26L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 10

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.1 Designation: 28

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 119.65 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 125.55 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: ILS PRM LCL/P
2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: ILS PRM LCL/P
2.18.3 Service designation: 125.325 MHz

2.18.1 Service designation: ILS PRM LCL/P
2.18.3 Service designation: 123.85 MHz

2.18.1 Service designation: ILS PRM LCL/P
2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: ILS PRM LCL/P
2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: LCL/P GND/P
2.18.3 Service designation: 381.6 MHz

2.18.1 Service designation: ILS PRM MONITOR/P
2.18.3 Service designation: 126.9 MHz

2.18.1 Service designation: ILS PRM MONITOR/P
2.18.3 Service designation: 132.55 MHz

2.18.1 Service designation: ILS PRM MONITOR/P
2.18.3 Service designation: 133.425 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 135.375 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Outer Marker for runway 09L.
Magnetic variation: 2W
2.19.2 ILS identification: HZK
2.19.5 Coordinates: 33-37-57.07N /
84-32-34.28W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 09L.
Magnetic variation: 2W
2.19.2 ILS identification: HZK
2.19.5 Coordinates: 33-38-00.00N /
84-24-24.40W
2.19.6 Site elevation: 968 ft

2.19.1 ILS type: Glide Slope for runway 09L.
Magnetic variation: 2W
2.19.2 ILS identification: HZK
2.19.5 Coordinates: 33-38-00.00N /
84-26-39.67W
2.19.6 Site elevation: 1017 ft

2.19.1 ILS type: Middle Marker for runway 09L.
Magnetic variation: 2W
2.19.2 ILS identification: HZK
2.19.5 Coordinates: 33-38-00.00N /
84-27-20.50W
2.19.6 Site elevation: 987 ft

2.19.1 ILS type: DME for runway 09L. Magnetic
variation: 2W
2.19.2 ILS identification: HZK
2.19.5 Coordinates: 33-38-00.00N /
84-24-44.38W
2.19.6 Site elevation: 978 ft

2.19.1 ILS type: Middle Marker for runway 27R.
Magnetic variation: 2W
2.19.2 ILS identification: AFA
2.19.5 Coordinates: 33-38-00.00N /
84-23-54.35W
2.19.6 Site elevation: 954 ft

2.19.1 ILS type: Outer Marker for runway 27R.
Magnetic variation: 2W
2.19.2 ILS identification: AFA
2.19.5 Coordinates: 33-38-00.00N /
84-18-36.44W
2.19.6 Site elevation: 905 ft

2.19.1 ILS type: Localizer for runway 27R.
Magnetic variation: 2W
2.19.2 ILS identification: AFA
2.19.5 Coordinates: 33-38-00.00N /
84-27-00.00W
2.19.6 Site elevation: 1020 ft

2.19.1 ILS type: Glide Slope for runway 27R.
Magnetic variation: 2W
2.19.2 ILS identification: AFA
2.19.5 Coordinates: 33-38-00.00N /
84-24-44.13W
2.19.6 Site elevation: 978 ft

2.19.1 ILS type: DME for runway 09R. Magnetic
variation: 2W

2.19.2 ILS identification: FUN
2.19.5 Coordinates: 33-37-56.63N /
84-24-54.23W
2.19.6 Site elevation: 987 ft

2.19.1 ILS type: Outer Marker for runway 09R.
Magnetic variation: 2W
2.19.2 ILS identification: FUN
2.19.5 Coordinates: 33-37-57.07N /
84-32-34.28W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 09R.
Magnetic variation: 2W
2.19.2 ILS identification: FUN
2.19.5 Coordinates: 33-37-54.52N /
84-27-00.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 09R.
Magnetic variation: 2W
2.19.2 ILS identification: FUN
2.19.5 Coordinates: 33-37-54.57N /
84-24-52.61W
2.19.6 Site elevation: 976 ft

2.19.1 ILS type: Glide Slope for runway 09R.
Magnetic variation: 2W
2.19.2 ILS identification: FUN
2.19.5 Coordinates: 33-37-58.49N /
84-26-39.06W
2.19.6 Site elevation: 1017 ft

2.19.1 ILS type: Middle Marker for runway 09R.
Magnetic variation: 2W
2.19.2 ILS identification: FUN
2.19.5 Coordinates: 33-37-55.50N /
84-27-19.55W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 27L.
Magnetic variation: 4W
2.19.2 ILS identification: FSQ
2.19.5 Coordinates: 33-37-54.53N /
84-27-00.00W
2.19.6 Site elevation: 1022 ft

2.19.1 ILS type: Glide Slope for runway 27L.
Magnetic variation: 4W
2.19.2 ILS identification: FSQ
2.19.5 Coordinates: 33-37-58.52N /

84-25-16.60W
2.19.6 Site elevation: 986 ft

2.19.1 ILS type: Outer Marker for runway 27L.
Magnetic variation: 4W
2.19.2 ILS identification: FSQ
2.19.5 Coordinates: 33-38-00.00N /
84-18-36.44W
2.19.6 Site elevation: 905 ft

2.19.1 ILS type: Middle Marker for runway 27L.
Magnetic variation: 4W
2.19.2 ILS identification: FSQ
2.19.5 Coordinates: 33-37-53.22N /
84-24-32.44W
2.19.6 Site elevation: 940 ft

2.19.1 ILS type: Inner Marker for runway 27L.
Magnetic variation: 4W
2.19.2 ILS identification: FSQ
2.19.5 Coordinates: 33-37-54.59N /
84-24-52.99W
2.19.6 Site elevation: 984 ft

2.19.1 ILS type: DME for runway 27L. Magnetic
variation: 4W
2.19.2 ILS identification: FSQ
2.19.5 Coordinates: 33-37-52.64N /
84-27-00.00W
2.19.6 Site elevation: 1025 ft

2.19.1 ILS type: Localizer for runway 08L.
Magnetic variation: 4W
2.19.2 ILS identification: HFW
2.19.5 Coordinates: 33-38-58.35N /
84-24-23.39W
2.19.6 Site elevation: 985 ft

2.19.1 ILS type: Outer Marker for runway 08L.
Magnetic variation: 4W
2.19.2 ILS identification: HFW
2.19.5 Coordinates: 33-38-48.52N /
84-32-31.60W
2.19.6 Site elevation: 956 ft

2.19.1 ILS type: Inner Marker for runway 08L.
Magnetic variation: 4W
2.19.2 ILS identification: HFW
2.19.5 Coordinates: 33-38-58.32N /
84-26-30.52W
2.19.6 Site elevation: 985 ft

2.19.1 ILS type: DME for runway 08L. Magnetic variation: 4W
2.19.2 ILS identification: HFZ
2.19.5 Coordinates: 33-39-00.00N / 84-24-24.70W
2.19.6 Site elevation: 993 ft

2.19.1 ILS type: Glide Slope for runway 08L. Magnetic variation: 4W
2.19.2 ILS identification: HFZ
2.19.5 Coordinates: 33-39-00.00N / 84-26-00.00W
2.19.6 Site elevation: 1002 ft

2.19.1 ILS type: Middle Marker for runway 08L. Magnetic variation: 4W
2.19.2 ILS identification: HFZ
2.19.5 Coordinates: 33-38-58.31N / 84-26-47.75W
2.19.6 Site elevation: 1024 ft

2.19.1 ILS type: Glide Slope for runway 26R. Magnetic variation: 4W
2.19.2 ILS identification: GXZ
2.19.5 Coordinates: 33-39-00.00N / 84-24-47.63W
2.19.6 Site elevation: 979 ft

2.19.1 ILS type: Outer Marker for runway 26R. Magnetic variation: 4W
2.19.2 ILS identification: GXZ
2.19.5 Coordinates: 33-38-43.61N / 84-18-39.88W
2.19.6 Site elevation: 834 ft

2.19.1 ILS type: Inner Marker for runway 26R. Magnetic variation: 4W
2.19.2 ILS identification: GXZ
2.19.5 Coordinates: 33-38-58.36N / 84-24-22.79W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 26R. Magnetic variation: 4W
2.19.2 ILS identification: GXZ
2.19.5 Coordinates: 33-39-00.00N / 84-26-27.65W
2.19.6 Site elevation: 1016 ft

2.19.1 ILS type: Middle Marker for runway 26R. Magnetic variation: 4W

2.19.2 ILS identification: GXZ
2.19.5 Coordinates: 33-38-56.36N / 84-23-56.86W
2.19.6 Site elevation: 945 ft

2.19.1 ILS type: Localizer for runway 26R. Magnetic variation: 4W
2.19.2 ILS identification: GXZ
2.19.5 Coordinates: 33-38-58.32N / 84-26-28.21W
2.19.6 Site elevation: 1012 ft

2.19.1 ILS type: Localizer for runway 08R. Magnetic variation: 2W
2.19.2 ILS identification: ATL
2.19.5 Coordinates: 33-38-48.46N / 84-24-00.00W
2.19.6 Site elevation: 987 ft

2.19.1 ILS type: DME for runway 08R. Magnetic variation: 2W
2.19.2 ILS identification: ATL
2.19.5 Coordinates: 33-38-46.18N / 84-24-00.00W
2.19.6 Site elevation: 993 ft

2.19.1 ILS type: Outer Marker for runway 08R. Magnetic variation: 2W
2.19.2 ILS identification: ATL
2.19.5 Coordinates: 33-38-48.52N / 84-32-31.60W
2.19.6 Site elevation: 956 ft

2.19.1 ILS type: Middle Marker for runway 08R. Magnetic variation: 2W
2.19.2 ILS identification: ATL
2.19.5 Coordinates: 33-38-49.70N / 84-26-48.56W
2.19.6 Site elevation: 1008 ft

2.19.1 ILS type: Inner Marker for runway 08R. Magnetic variation: 2W
2.19.2 ILS identification: ATL
2.19.5 Coordinates: 33-38-48.43N / 84-26-28.57W
2.19.6 Site elevation: 1033 ft

2.19.1 ILS type: Glide Slope for runway 08R. Magnetic variation: 2W
2.19.2 ILS identification: ATL
2.19.5 Coordinates: 33-38-52.40N /

84-26-00.00W
2.19.6 Site elevation: 1006 ft

2.19.1 ILS type: DME for runway 26L. Magnetic variation: 2W
2.19.2 ILS identification: BRU
2.19.5 Coordinates: 33-38-50.57N / 84-26-28.39W
2.19.6 Site elevation: 1026 ft

2.19.1 ILS type: Outer Marker for runway 26L. Magnetic variation: 2W
2.19.2 ILS identification: BRU
2.19.5 Coordinates: 33-38-43.61N / 84-18-39.88W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 26L. Magnetic variation: 2W
2.19.2 ILS identification: BRU
2.19.5 Coordinates: 33-38-52.41N / 84-24-32.84W
2.19.6 Site elevation: 988 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic variation: 2W
2.19.2 ILS identification: BRU
2.19.5 Coordinates: 33-38-48.43N / 84-26-29.58W
2.19.6 Site elevation: 1032 ft

2.19.1 ILS type: Middle Marker for runway 26L. Magnetic variation: 2W
2.19.2 ILS identification: BRU
2.19.5 Coordinates: 33-38-48.55N / 84-23-43.60W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 4W
2.19.2 ILS identification: OMO
2.19.5 Coordinates: 33-37-13.02N / 84-24-53.99W
2.19.6 Site elevation: 970 ft

2.19.1 ILS type: DME for runway 10. Magnetic variation: 4W

2.19.2 ILS identification: OMO
2.19.5 Coordinates: 33-37-12.45N / 84-24-53.96W
2.19.6 Site elevation: 970 ft

2.19.1 ILS type: Glide Slope for runway 10. Magnetic variation: 4W
2.19.2 ILS identification: OMO
2.19.5 Coordinates: 33-37-00.00N / 84-26-38.76W
2.19.6 Site elevation: 985 ft

2.19.1 ILS type: Inner Marker for runway 10. Magnetic variation: 4W
2.19.2 ILS identification: OMO
2.19.5 Coordinates: 33-37-12.98N / 84-27-00.00W
2.19.6 Site elevation: 993 ft

2.19.1 ILS type: DME for runway 28. Magnetic variation: 4W
2.19.2 ILS identification: PKU
2.19.5 Coordinates: 33-37-12.41N / 84-27-00.00W
2.19.6 Site elevation: 970 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 4W
2.19.2 ILS identification: PKU
2.19.5 Coordinates: 33-37-12.97N / 84-27-00.00W
2.19.6 Site elevation: 970 ft

2.19.1 ILS type: Glide Slope for runway 28. Magnetic variation: 4W
2.19.2 ILS identification: PKU
2.19.5 Coordinates: 33-37-17.07N / 84-25-19.84W
2.19.6 Site elevation: 990 ft

2.19.1 ILS type: Inner Marker for runway 28. Magnetic variation: 4W
2.19.2 ILS identification: PKU
2.19.5 Coordinates: 33-37-13.02N / 84-24-55.77W
2.19.6 Site elevation: 974 ft

General Remarks:

BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

PREFERENTIAL RUNWAY USE IN EFFECT, EXPECT TO USE RUNWAYS 08R/26L, 09L/27R FOR DEPS; RUNWAYS 08L/26R, 09R/27L ARE USED PRIMARILY FOR ARRIVALS.

RUNUPS ARE PERMITTED AT VARIOUS SITES; COORDINATE USE OF CITY FACILITIES, MOVEMENT AREAS, ALLOWABLE NON-MOVEMENT AREAS WITH DEPT OF AVIATION OPERATIONS, 404-530-6620; AND COORDINATE THE USE OF THE AIRLINES' FACILITIES WITH THEM.

NOISE & OPERATIONS MONITORING SYSTEM (NOMS) PROGRAM IN EFFECT; CALL THE ATLANTA DEPT OF AVIATION 770-43-NOISE OR 770-436-6473 FOR MORE INFORMATION.

ALL RUNWAYS, TOUCH AND GO OPERATIONS, LOW APPROACHES, AND PRACTICE INSTRUMENT APPROACHES NOT PERMITTED.

GROUP VI AIRCRAFT(LOCKHEED GALAXY C-5; ANTONOV AN-124 & AN-125) WITH A WINGSPAN OF GREATER THAN 214 FT ARE RESTRICTED FROM USING TAXIWAY 'L' EAST OF RAMP 5 SOUTH TO THE WEST SIDE OF RAMP 6 SOUTH, AND TAXIWAY 'F' EAST OF RAMP 5 NORTH AND WEST OF TAXIWAY DIXIE.

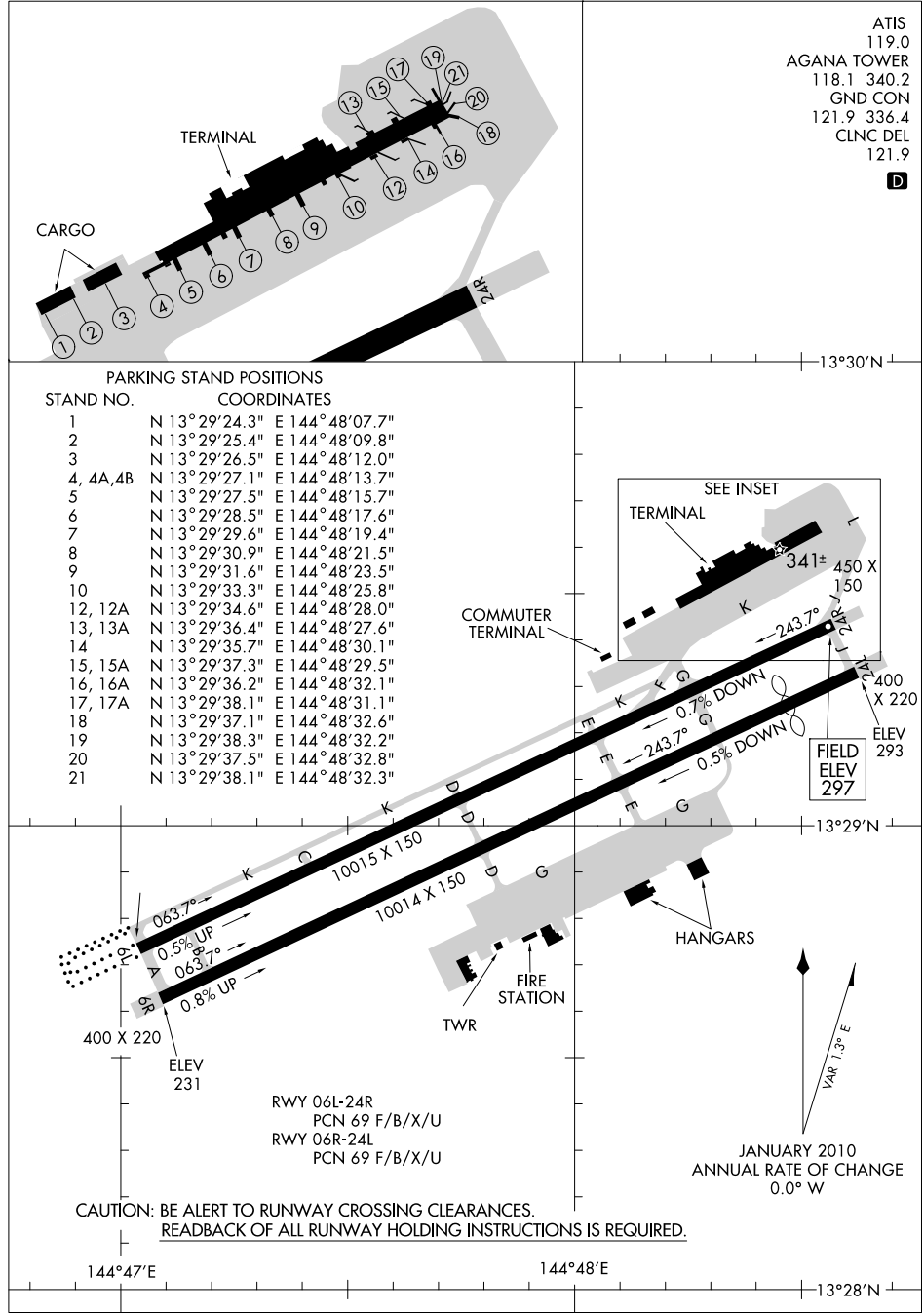
ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

AIRCRAFT WITH WINGSPAN GREATER THAN 171 FT ARE RESTRICTED FROM USING TAXIWAY V.

RUNWAY 9L DEPARTURES CAN EXPECT INTERSECTION DEPARTURE FROM M2 WITH RUNWAY REMAINING 10,940 FT.

Agana, Guam
Guam International
ICAO Identifier PGUM

11181 **AIRPORT DIAGRAM** AL-2146 (FAA) **GUAM INTL (GUM)(PGUM)**
GUAM, GQ



PAC, 30 JUN 2011 to 25 AUG 2011

PAC, 30 JUN 2011 to 25 AUG 2011

AIRPORT DIAGRAM GUAM, GQ
11181 **GUAM INTL (GUM)(PGUM)**

Agana, GU
Guam Intl
ICAO Identifier PGUM

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 13-29-00.00N / 144-47-49.81E
- 2.2.2 From City: 3 Miles NE Of Agana, GU
- 2.2.3 Elevation: 297 ft
- 2.2.5 Magnetic variation: 2E (2000)
- 2.2.6 Airport Contact: Mary C. Torres
P.O. BOX 8770
Tamuning, GU 96931
(671-646-0300)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 4/1/1995

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 06L
- 2.10.1.b Type of obstacle: Tower (420 ft). Marked
- 2.10.1.c Location of obstacle: 1500 ft from Centerline

- 2.10.1.a. Runway designation: 06R
- 2.10.1.b Type of obstacle: Tower (420 ft). Marked
- 2.10.1.c Location of obstacle: 1500 ft from Centerline

- 2.10.1.a. Runway designation: 24L
- 2.10.1.b Type of obstacle: Hill (220 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 1200 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 06L

- 2.12.2 True Bearing: 65
- 2.12.3 Dimensions: 10015 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-28-44.07N / 144-47-00.00E
- 2.12.6 Threshold elevation: 239 ft
- 2.12.6 Touchdown zone elevation: 256 ft

- 2.12.1 Designation: 24R
- 2.12.2 True Bearing: 245
- 2.12.3 Dimensions: 10015 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-29-26.12N / 144-48-34.29E
- 2.12.6 Threshold elevation: 297 ft
- 2.12.6 Touchdown zone elevation: 297 ft

- 2.12.1 Designation: 06R
- 2.12.2 True Bearing: 65
- 2.12.3 Dimensions: 10014 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-28-37.78N / 144-47-00.00E
- 2.12.6 Threshold elevation: 231 ft
- 2.12.6 Touchdown zone elevation: 258 ft

- 2.12.1 Designation: 24L
- 2.12.2 True Bearing: 245
- 2.12.3 Dimensions: 10014 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-29-19.82N / 144-48-37.29E
- 2.12.6 Threshold elevation: 293 ft
- 2.12.6 Touchdown zone elevation: 289 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 06L
- 2.13.2 Takeoff run available: 10015
- 2.13.3 Takeoff distance available: 10015
- 2.13.4 Accelerate-stop distance available: 10015
- 2.13.5 Landing distance available: 10015

- 2.13.1 Designation: 24R
- 2.13.2 Takeoff run available: 10015
- 2.13.3 Takeoff distance available: 10015
- 2.13.4 Accelerate-stop distance available: 10015
- 2.13.5 Landing distance available: 10015

- 2.13.1 Designation: 06R
- 2.13.2 Takeoff run available: 10014
- 2.13.3 Takeoff distance available: 10014

2.13.4 Accelerate-stop distance available: 10014
2.13.5 Landing distance available: 10014

2.13.1 Designation: 24L
2.13.2 Takeoff run available: 10014
2.13.3 Takeoff distance available: 10014
2.13.4 Accelerate-stop distance available: 10014
2.13.5 Landing distance available: 9014

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 24R
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 06R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on right
2.14.1 Designation: 24L
2.14.4 Visual approach slope indicator system: PVASI on left

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 06L. Magnetic variation: 2E
2.19.2 ILS identification: GUM
2.19.5 Coordinates: 13-29-30.59N / 144-48-44.07E
2.19.6 Site elevation: 308 ft

2.19.1 ILS type: Glide Slope for runway 06L. Magnetic variation: 2E
2.19.2 ILS identification: GUM
2.19.5 Coordinates: 13-28-51.82N / 144-47-00.00E

General Remarks:

1000' OVERRUN S END & 450' OVERRUN N END RUNWAY 6L-24R.

FOR PARKING INFORMATION ALL AIRCRAFT CONTACT RAMP CONTROL. ALL AIRCRAFT DEP
TERMINAL PARKING CONTACT RAMP CONTROL FOR ENGINE START AND PUSHBACK.

TRANSIENT AIRCRAFT PROVIDE 24 HRS ADVANCE INFORMATION TO EXECUTIVE MANAGER
GUAM INTL AIRPORT AUTHORITY; 1-671-646-0300/01/02 MON-FRI 0800-1700 OR FAX

2.19.6 Site elevation: 246 ft

2.19.1 ILS type: Outer Marker for runway 06L. Magnetic variation: 2E
2.19.2 ILS identification: GUM
2.19.5 Coordinates: 13-26-41.70N / 144-42-29.30E
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 06L. Magnetic variation: 2E
2.19.2 ILS identification: GUM
2.19.5 Coordinates: 13-28-33.30N / 144-46-31.80E
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 06L. Magnetic variation: 2E
2.19.2 ILS identification: GUM
2.19.5 Coordinates: 13-29-34.10N / 144-48-42.94E
2.19.6 Site elevation: 317 ft

2.19.1 ILS type: Glide Slope for runway 06R. Magnetic variation: 2E
2.19.2 ILS identification: AWD
2.19.5 Coordinates: 13-28-38.00N / 144-47-15.40E
2.19.6 Site elevation: 237 ft

2.19.1 ILS type: Localizer for runway 06R. Magnetic variation: 2E
2.19.2 ILS identification: AWD
2.19.5 Coordinates: 13-29-24.23N / 144-48-46.93E
2.19.6 Site elevation: 311 ft

2.19.1 ILS type: DME for runway 06R. Magnetic variation: 2E
2.19.2 ILS identification: AWD
2.19.5 Coordinates: 13-29-21.74N / 144-48-48.12E
2.19.6 Site elevation: 316 ft

1-671-646-8823.

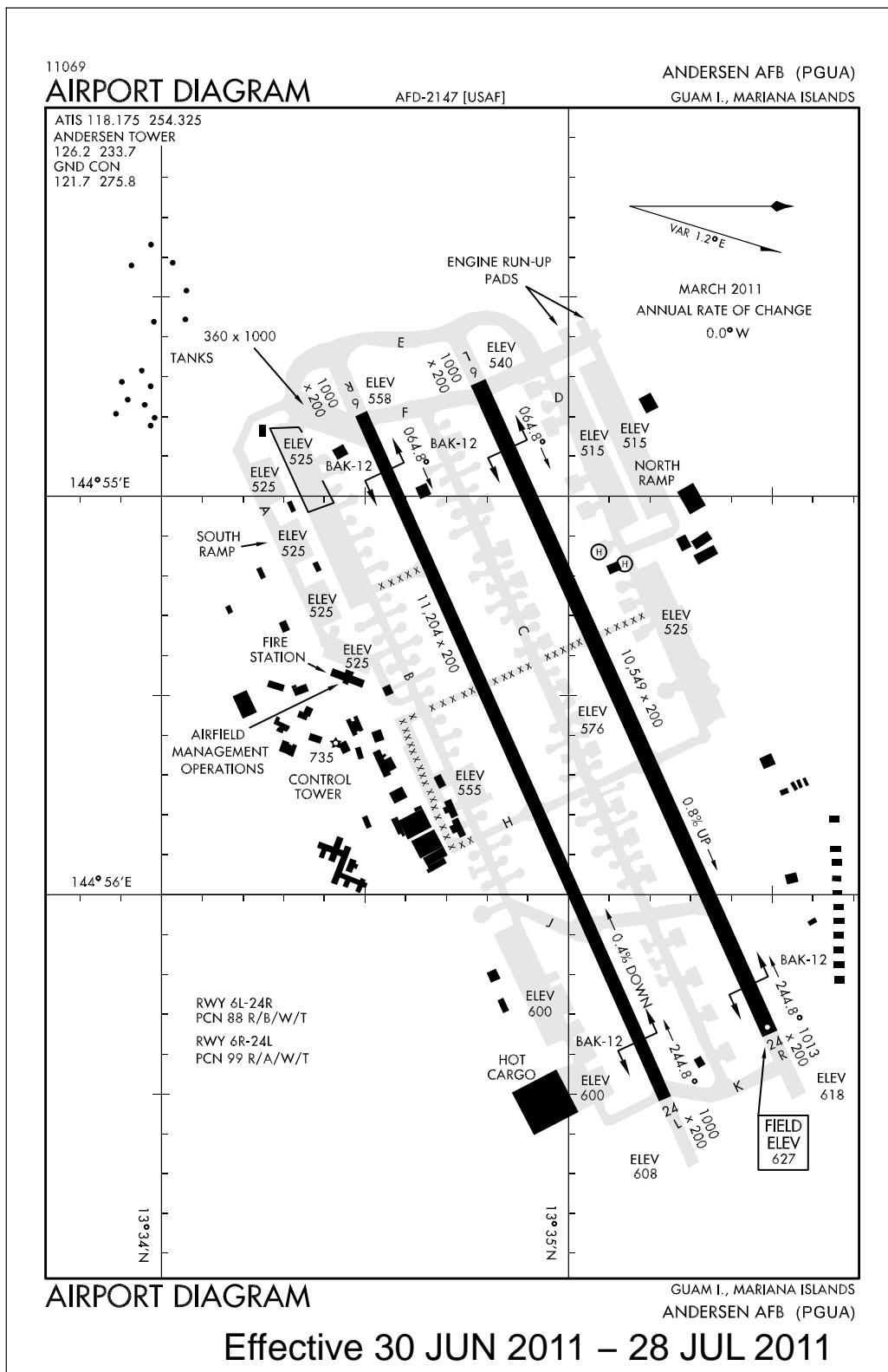
EFFECTIVE RUNWAY GRADIENT RUNWAY 06L 0.46% UP NE; RUNWAY 24R 0.70% DOWN SW;
RUNWAY 06R 0.80 % UP NE; RUNWAY 24L 0.52% DOWN SW.

LIGHTED TOWER 780 FT 1.3 NAUTICAL MILE ENE OF RUNWAY 24L THRESHOLD.

RISING TERRAIN 75 FT FROM RUNWAY 24L THRESHOLD 140 FT EAST OF CENTERLINE
EXTENDED +8 FT.

DEP VFR AIRCRAFT MAINT RUNWAY HEADING UNTIL PAST DEP END OF RUNWAY AND
REACHING 1000 FT AGL; RIGHT PATTERN 24L/R DO NOT EXCEED 1500 FT AGL IN TRAFFIC
PATTERN.

**Guam Island, Guam
Andersen AFB
ICAO Identifier PGUA**



Andersen, Mariana Island, GU
Andersen AFB
ICAO Identifier PGUA

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 13-35-00.00N / 144-55-48.24E
- 2.2.2 From City: 0 Miles N Of Andersen, Mariana Island, GU
- 2.2.3 Elevation: 612 ft
- 2.2.5 Magnetic variation: 2E (1980)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: None
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

- 2.10.1.a Runway designation: 06R
- 2.10.1.b Type of obstacle: Tower-L. Not Lighted or Marked

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 06L
- 2.12.3 Dimensions: 10549 ft x 200 ft
- 2.12.4 PCN: 88 R/B/W/T
- 2.12.5 Coordinates: 13-34-49.24N / 144-54-56.24E
- 2.12.6 Threshold elevation: 535 ft

- 2.12.1 Designation: 24R
- 2.12.3 Dimensions: 10549 ft x 200 ft
- 2.12.4 PCN: 88 R/B/W/T
- 2.12.5 Coordinates: 13-35-31.98N / 144-56-33.86E

- 2.12.6 Threshold elevation: 613 ft

- 2.12.1 Designation: 06R
- 2.12.3 Dimensions: 11204 ft x 200 ft
- 2.12.4 PCN: 99 R/A/W/T
- 2.12.5 Coordinates: 13-34-31.15N / 144-54-59.35E
- 2.12.6 Threshold elevation: 558 ft
- 2.12.6 Touchdown zone elevation: 558 ft

- 2.12.1 Designation: 24L
- 2.12.3 Dimensions: 11204 ft x 200 ft
- 2.12.4 PCN: 99 R/A/W/T
- 2.12.5 Coordinates: 13-35-16.58N / 144-56-43.01E
- 2.12.6 Threshold elevation: 608 ft
- 2.12.6 Touchdown zone elevation: 608 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 06L
- 2.14.2 Approach lighting system: SALS: Short approach lighting system
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 24R
- 2.14.2 Approach lighting system: ALSF1: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category 1 configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 06R
- 2.14.2 Approach lighting system: ALSF1: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category 1 configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 24L
- 2.14.2 Approach lighting system: SALS: Short approach lighting system
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.10 Remarks: Mod 1300' Length.

General Remarks:

FREQUENT RAIN SHOWERS OF SHORT DURATION, EXPECT WET RUNWAY BRAKING ACTION.

HAZARDOUS AIR TURBULENCE FINAL APPROACH RUNWAYS 24L/24R. NO VISIBILITY REFERENCE AVAILABLE ON NIGHT TAKE-OFF BEYOND END RUNWAY 6.

ARRESTING GEAR BAK-12 RUNWAYS 06L & 06R 30 MIN NOTICE REQUIRE.

AREA BETWEEN 1000' ROLL BAR AND THU LIGHT RUNWAY 06R AND 06L UNLIGHTED. LAST 642' PRIOR TO THU LIGHT 24R UNLIGHTED.

MAINT AVAILABLE 0100-0400 WEEKDAY ONLY; CLOSED WEEKEND & HOLIDAY.

BASE OPERATIONS V366-4188; FAX V366-6217.

TAXIWAY B AND C BETWEEN TAXIWAY J AND K CLOSED DUE TO CONSTRUCTION.

NO ARRESTING GEAR MARKERS LOCATED ON THE LEFT SIDE OF ALL APPROACH END BARRIERS.

RESTRICTED: BRAKING ACTION ON BOTH RUNWAYS MAY BE LESS THAN EXPECT DUE TO RUBBER BUILD-UP; PROBABILITY OF HYDROPLANING EXISTS.

RESTRICTED: PRIOR PERMISSION NOT REQUIRED FOR AIR MOBILITY COMMAND MSN. ALL AEROMEDICAL EVACUATION MISSIONS ARE REQUIRED TO CONTACT AMCC (DSN 366-2961, C671-366-2961) BY ANY MEANS AVAIL 3 HRS PRIOR TO ARR. ALL AIR MOBILITY COMMAND AIRCRAFT REQUIRE TO MAKE UHF CALL 30 MIN PRIOR ARR.

MISC: AIRFIELD MANAGEMENT HAS NO COMSEC STORAGE AVAILABLE FOR TRANSIENT AIRCREWS. TRANSMIT AIRCREWS CAN STORE COMSEC AT 36WG CIRCULAR POLARIZATION; AIR MOBILITY COMMAND AIRCREWS CAN STORE COMSEC AT AMCC.

MISC: ALL NON-AMC AIRCREWS INTENDING TO REMAINING OVERNIGHT MUST CHECK INTO AIRFIELD MANAGEMENT OPERATIONS AND PROVIDE POC INFORMATION UPON ARRIVAL.

MISC: BASE WX STATION PROVIDES CONTINUOUS 24-HOUR SERVICE OBSN, LIMITED WX BRIEF SUPPORT. WX OBSERVERS VIEW OBSTRUCTED BY BUILDINGS N-SSW. REMOTE BRIEF AVAILABLE CONTINUOUS 24-HOUR SERVICE FOR USN/USMC FR FWCAD PH AT DSN 315-449-8333/7950.

RESTRICTED: ALL NON-AMC AIRCRAFT CONTACT 36 WG COMMAND POST 90 MIN OUT AND AT 30 MIN OUT PRIOR TO ARR.

MISC: AIRCRAFT EXCEEDING AIRFIELD WEIGHTS MUST REQUEST WEIGHT BEARING CAPACITY WAIVER WITH 24 HR NOTICE TO AIRFIELD OPERATIONS TO PROCESS ANY APPROVALS NEEDED. IF REQUESTS ARE NOT MADE WITHIN 24 HRS EXPECT DELAYS.

RESTRICTED #1 PART A: ALL AIRCRAFT DEP PGUA ARE REQUIRED TO HAVE A BROWN TREE SNAKE INSPECTION CONDUCTED BY USDA PRIOR TO ENGINE START.

RESTRICTED #1 PART B: OUTBND AIRCRAFT MUST CONTACT 36 WG COMMAND POST DSN 366-2981 3 HR PRIOR TO DEP AND/OR 3 HR PRIOR TO ESTIMATED TIME OF DEPARTURE CHANGE.

RESTRICTED #1 PART C: CONTACT 36 WG COMMAND POST AT DSN 366-2981 TO SCHEDULE BTS INSPECTIONS. FAILURE TO RECEIVE THIS INSPECTION WILL RESULT IN UNNECESSARY DELAYS AND PROBABLE DENIAL OF DEPARTURE CLEARANCE.

SERVICE-A-GEAR: CONTACT CONTROL TOWER 30 MIN PRIOR FOR DEPARTURE END BAK12 CABLE CONFIGURATION. 30 MIN PRIOR NOTICE REQ FOR CHANGE CONFIGURATION. BAK12 HOUSING LOCATED 317' FROM RUNWAY CENTERLINE, 217' FROM RUNWAY EDGE, MAX HEIGHT 8'. NO ARRESTING-GEAR MARKER LOCATED ON LEFT SIDE OF ALL APPROACH END BARRIERS.

RESTRICTED: PRIOR PERMISSION REQUIRED DSN 366-4188/2260.

MISC: ATTENTION: ALL DRY ICE REQ MUST BE MADE THRU 734TH MS/ATOC DSN 315-366-3125/3137/3162 OR C671-366-3125/3137/3162. REQ MUST BE MADE AT LEAST 24 HR IN ADVANCE FOR AIRCRAFT LANDING TUE-FRI AND 72 HR IN ADVANCE FOR AIRCRAFT LANDING SAT-MON. DUR HOLIDAY, ADD 2 HR TO COORD TIME.

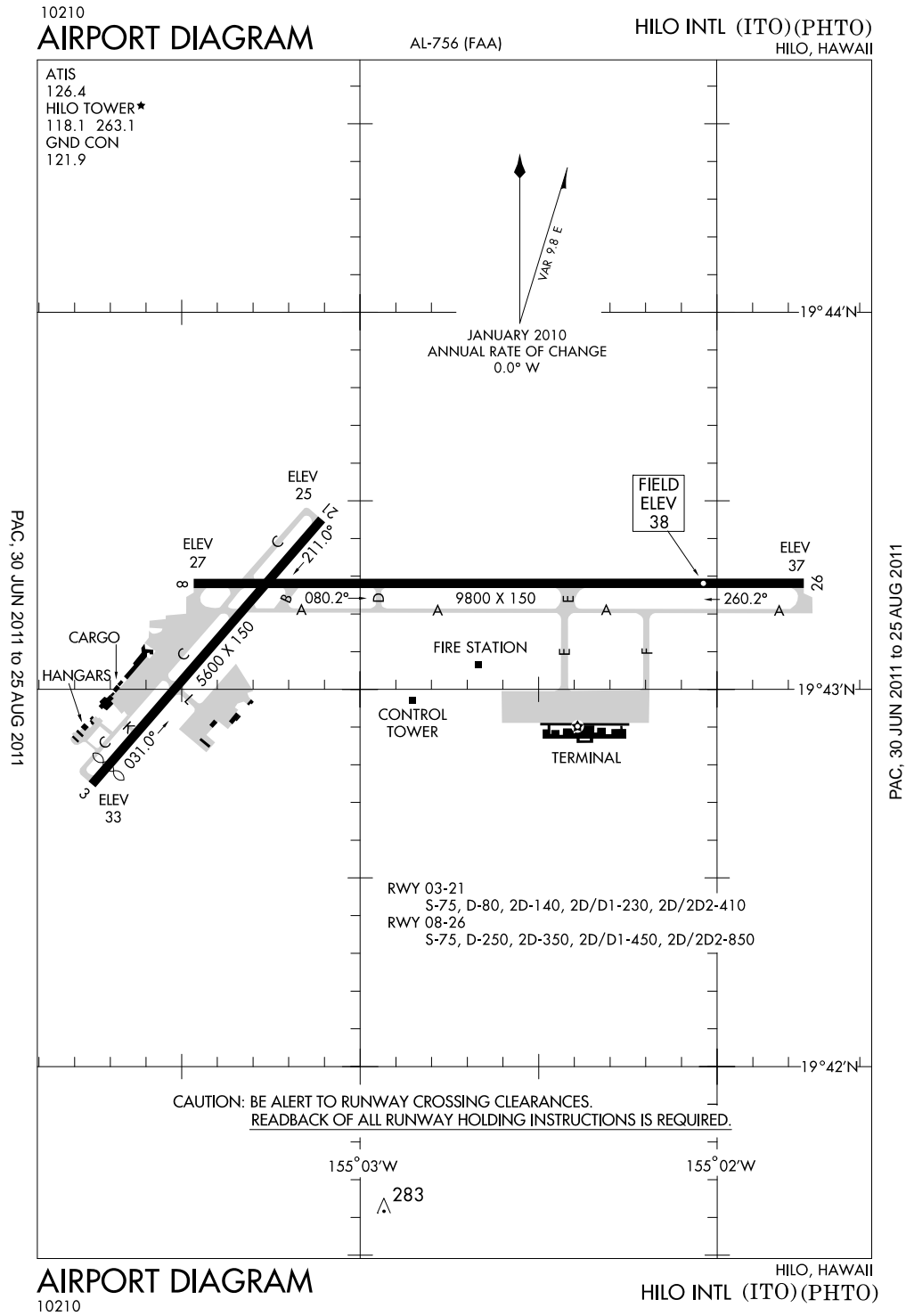
RESTRICTED: RESTRICTIONS TO FLIGHT OPERATIONS DUR EA BIRD WATCH CONDITION. MODERATE: NO TOUCH AND GO LANDING. RESTRICTED LOW APPROACH NO LOWER THAN 200' OR AS DETERMINED BY SOF. SEVERE: RESTRICTED LOW APPROACH NO LOWER THAN 200' OR AS DETERMINED BY SOF. EMERGENCY LANDING AND 36 OG/CC APPROVE DEP ONLY. PHASE I: PHASE I:1 APR - 31 JUL. PHASE II: 1 AUG - 31 AT SEA.

RESTRICTED 1 OF 2: THERE WILL BE NO OVERFLIGHT OF MARIANA CROW TERRITORIES BELOW 1,000 FT AGL FROM SEP-MAY. OVERFLIGHT BELOW 1,000 FT AGL IS ALLOWED BETWEEN JUNE AND AUG, THE CROW NON-BREEDING SEASON.

RESTRICTED 2 OF 2: CROW NESTING TERRITORIES ARE IDENT BY DEPARTMENT OF AQUATIC AND WILDLIFE RESOURCES (DAWR) AND UPDATES WILL BE PROVIDED TO 36 CES/CEV AND 36TH OSS STAFFS.

MISC: RUNWAY 06L AND 06R UNDERRUNS 1000' AVAILABLE FOR TWY/TKOF. RUNWAY 24R UNDERRUN AVAILABLE 500' FOR TAXI/TKOF.

Hilo, Hawaii
Hilo International
ICAO Identifier PHTO



Hilo, HI
Hilo Intl
ICAO Identifier PHTO

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 19-43-12.95N / 155-02-54.49W
- 2.2.2 From City: 2 Miles E Of Hilo, HI
- 2.2.3 Elevation: 38 ft
- 2.2.5 Magnetic variation: 11E (1985)
- 2.2.6 Airport Contact: Steven J. Santiago
ASSISTANT AIRPORT DISTRICT
MANAGER
Hilo, HI 96720 (808-961-9300)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, 0700-2030 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 08
- 2.10.1.b Type of obstacle: Tree (32 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 600 ft from Centerline

- 2.10.1.a. Runway designation: 26
- 2.10.1.b Type of obstacle: Tree (25 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 400 ft from Centerline

- 2.10.1.a. Runway designation: 03
- 2.10.1.b Type of obstacle: Fence (7 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 21

- 2.10.1.b Type of obstacle: Pole (37 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 20 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 9800 ft x 150 ft
- 2.12.5 Coordinates: 19-43-16.93N / 155-03-27.99W
- 2.12.6 Threshold elevation: 27 ft
- 2.12.6 Touchdown zone elevation: 30 ft

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 9800 ft x 150 ft
- 2.12.5 Coordinates: 19-43-16.92N / 155-01-45.41W
- 2.12.6 Threshold elevation: 37 ft
- 2.12.6 Touchdown zone elevation: 38 ft

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 41
- 2.12.3 Dimensions: 5600 ft x 150 ft
- 2.12.5 Coordinates: 19-42-44.96N / 155-03-44.78W
- 2.12.6 Threshold elevation: 33 ft
- 2.12.6 Touchdown zone elevation: 34 ft
- 2.12.7 Slope: 0.1DOWN

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 221
- 2.12.3 Dimensions: 5600 ft x 150 ft
- 2.12.5 Coordinates: 19-43-26.99N / 155-03-00.00W
- 2.12.6 Threshold elevation: 25 ft
- 2.12.6 Touchdown zone elevation: 31 ft
- 2.12.7 Slope: 0.1UP

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 08
- 2.14.2 Approach lighting system: Omnidirectional approach lighting system
- 2.14.4 Visual approach slope indicator system: 6-box VASI on left
- 2.14.10 Remarks: VASI Upwind Threshold Crossing Height 110.3' Glide Angle 3.25 Degs; Downwind Threshold Crossing Height 59.6' Glide Angle 3.00 Degs.

- 2.14.1 Designation: 26

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-box VASI on left

2.14.1 Designation: 03
2.14.4 Visual approach slope indicator system: 4-box VASI on left
2.14.10 Remarks: VASI Usable Dist Limited To 4 Nm From Threshold Due Obstruction.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 119.7 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 126.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 263.1 MHz

2.18.1 Service designation: APCH/P DEP/P

General Remarks:

RUNWAY 08 PAVED 1325' MARKED BY CHEVRONS, UNUSABLE FOR LANDING/TAKEOFF/OVERUN/STY; CANNOT BE USED IN COMPUTING TAKE-OFF DATA.

ATCT CONTROLS ENTRY/EXIT TRAFFIC ON TAXIWAYS F&E TO EAST TERMINAL RAMP.

181' LIGHTED SMOKE STACK 1/2 STATUTE MILE SOUTH OF FIELD.

PRIOR PERMISSION REQUIRED FROM AIRPORT MANAGER FOR TRANSIENT PARKING.

BE ALERT OCCASIONAL BIRD FLOCKS ON AIRPORT AND IN FLIGHT ACROSS RUNWAY 08/26 AND 03/21.

2.18.3 Service designation: 269.2 MHz
2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 323 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 120.25 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 26. Magnetic variation: 11E
2.19.2 ILS identification: ITO
2.19.5 Coordinates: 19-43-13.74N / 155-03-39.51W
2.19.6 Site elevation: 39 ft

2.19.1 ILS type: Glide Slope for runway 26. Magnetic variation: 11E
2.19.2 ILS identification: ITO
2.19.5 Coordinates: 19-43-20.89N / 155-01-58.10W
2.19.6 Site elevation: 33 ft

2.19.1 ILS type: Middle Marker for runway 26. Magnetic variation: 11E
2.19.2 ILS identification: ITO
2.19.5 Coordinates: 19-43-16.90N / 155-01-00.00W
2.19.6 Site elevation: 26 ft

2.19.1 ILS type: Localizer for runway 26. Magnetic variation: 11E
2.19.2 ILS identification: ITO
2.19.5 Coordinates: 19-43-16.93N / 155-03-38.78W
2.19.6 Site elevation: 26 ft

(A70A) JET FUEL AVAILABLE MON-SAT 0800-1700 CALL (808) 935-6881/6122 OR 961-6601.

(E93) NO MARKED PAD, HELICOPTER OPER FROM FBO HANGER AREA.

CLASS A AND B EXPLOSIVES PROHIBITED.

PRIOR PERMISSION REQUIRED FROM AIRPORT MANAGER FOR TRANSPORTATION OF CLASS C EXPLOSIVES AND HAZARDOUS MATERIAL IN OR OUT OF AIRPORT.

NOISE ABATEMENT: AVOID OVERFLIGHT OF NOISE SENSITIVE RESIDENTIAL AREAS N, W AND SW OF AIRPORT.

RUNWAY 3/21 CLOSED TO TURBINE AIRCRAFT 1800-0600.

RUNWAY 08/26 SINGLE-BELLY TWIN TANDEM (SBTT) GROSS WEIGHT 450,000 LBS.

RUNWAY 03/21 SINGLE-BELLY TWIN TANDEM (SBTT) GROSS WEIGHT 230,000 LBS.

Honolulu, HI
Honolulu Intl
ICAO Identifier PHNL

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 21-19-00.00N / 157-55-20.74W
- 2.2.2 From City: 3 Miles NW Of Honolulu, HI
- 2.2.3 Elevation: 13 ft
- 2.2.5 Magnetic variation: 11E (1990)
- 2.2.6 Airport Contact: Jim Pratt
300 RODGERS BLVD. #12
Honolulu, HI 96819
(808-836-6533)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,80,A,A1+,B
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 22L
- 2.10.1.b Type of obstacle: Stack (74 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 475 ft from Centerline

- 2.10.1.a. Runway designation: 04R
- 2.10.1.b Type of obstacle: Tree (20 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 200 ft from Centerline

- 2.10.1.a. Runway designation: 26R
- 2.10.1.b Type of obstacle: Road (15 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 22R
- 2.10.1.b Type of obstacle: Ant (50 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 20 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 04R
- 2.12.2 True Bearing: 53
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 21-18-50.10N / 157-55-37.69W
- 2.12.6 Threshold elevation: 8 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 22L
- 2.12.2 True Bearing: 233
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 21-19-43.76N / 157-54-21.65W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 12300 ft x 150 ft
- 2.12.5 Coordinates: 21-19-30.89N / 157-56-35.64W
- 2.12.6 Threshold elevation: 12 ft
- 2.12.6 Touchdown zone elevation: 13 ft

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 12300 ft x 150 ft
- 2.12.5 Coordinates: 21-19-30.88N / 157-54-25.54W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 12000 ft x 200 ft
- 2.12.5 Coordinates: 21-18-24.49N / 157-56-45.07W
- 2.12.6 Threshold elevation: 10 ft
- 2.12.6 Touchdown zone elevation: 10 ft

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 12000 ft x 200 ft
- 2.12.5 Coordinates: 21-18-24.48N / 157-54-38.15W

2.12.6 Threshold elevation: 10 ft
2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 04L
2.12.2 True Bearing: 53
2.12.3 Dimensions: 6952 ft x 150 ft
2.12.5 Coordinates: 21-19-00.00N /
157-55-23.95W
2.12.6 Threshold elevation: 10 ft
2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 233
2.12.3 Dimensions: 6952 ft x 150 ft
2.12.5 Coordinates: 21-19-47.45N /
157-54-25.22W
2.12.6 Threshold elevation: 8 ft
2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 04W
2.12.2 True Bearing: 51
2.12.3 Dimensions: 3000 ft x 150 ft
2.12.5 Coordinates: 21-18-53.09N /
157-54-46.44W

2.12.1 Designation: 22W
2.12.2 True Bearing: 231
2.12.3 Dimensions: 3000 ft x 150 ft
2.12.5 Coordinates: 21-19-11.80N /
157-54-21.78W

2.12.1 Designation: 08W
2.12.2 True Bearing: 91
2.12.3 Dimensions: 5000 ft x 300 ft
2.12.5 Coordinates: 21-18-40.85N /
157-55-00.00W

2.12.1 Designation: 26W
2.12.2 True Bearing: 271
2.12.3 Dimensions: 5000 ft x 300 ft
2.12.5 Coordinates: 21-18-39.98N /
157-54-00.00W

AD 2.13 Declared distances

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 6948
2.13.3 Takeoff distance available: 6948
2.13.4 Accelerate-stop distance available: 6398
2.13.5 Landing distance available: 6398

2.13.1 Designation: 22R

2.13.2 Takeoff run available: 6948
2.13.3 Takeoff distance available: 6948
2.13.4 Accelerate-stop distance available: 6948
2.13.5 Landing distance available: 6798

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 22L
2.14.4 Visual approach slope indicator system:
4-box VASI on left
2.14.10 Remarks: VASI Unusable Beyond 2 Nm
From Threshold
ry 22L VASI GA 3.0deg Threshold Crossing
Height 52 Ft.

2.14.1 Designation: 08L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 26R
2.14.4 Visual approach slope indicator system:
6-box VASI on left
2.14.10 Remarks: VASI Upper GA 3.25 Degrees
Threshold Crossing Height 96 Ft ; Lower GA 3.00
Degrees Threshold Crossing Height 52 Ft .

2.14.1 Designation: 08R
2.14.4 Visual approach slope indicator system:
6-box VASI on left
2.14.10 Remarks: VASI Runway 08R Upper GA
3.25 Degrees Threshold Crossing Height 96 Ft;
Lower GA 3.0 Degrees Threshold Crossing Height
52 Ft.

2.14.1 Designation: 26L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 04L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: AS ASGND

2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: CD

2.18.3 Service designation: 121.4 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: HONOLULU RAMP
ADVISORY

2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/S

2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: DEP/P CLASS B

2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 127.9 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: PTD

2.18.3 Service designation: 133.6 MHz

2.18.1 Service designation: HICKAM ADVSY
RAMP

2.18.3 Service designation: 133.6 MHz

2.18.1 Service designation: CP

2.18.3 Service designation: 141.8 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 269 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 269 MHz

2.18.1 Service designation: CD

2.18.3 Service designation: 281.4 MHz

2.18.1 Service designation: AS ASGND

2.18.3 Service designation: 285.4 MHz

2.18.1 Service designation: ANG-OPNS

2.18.3 Service designation: 293.7 MHz

2.18.1 Service designation: SAC-OPNS

2.18.3 Service designation: 311 MHz

2.18.1 Service designation: DEP/P CLASS B

2.18.3 Service designation: 317.6 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 338.2 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: PTD

2.18.3 Service designation: 372.2 MHz

2.18.1 Service designation: COMD POST

2.18.3 Service designation: 292.5 MHz

2.18.1 Service designation: SHAKA OPS

2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: SHAKA OPS

2.18.3 Service designation: 349.4 MHz

2.18.1 Service designation: HICKAM RAMP
ADVISORY

2.18.3 Service designation: 234.8 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 251.15 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 239.05 MHz

157-54-16.41W
2.19.6 Site elevation: 6 ft

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 273.575 MHz

2.19.1 ILS type: Middle Marker for runway 08L.
Magnetic variation: 11E

2.19.2 ILS identification: HNL

2.19.5 Coordinates: 21-19-31.00N /
157-57-10.30W

2.19.6 Site elevation: 99999 ft

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 04R.
Magnetic variation: 11E

2.19.2 ILS identification: IUM

2.19.5 Coordinates: 21-19-49.82N /
157-54-13.05W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Glide Slope for runway 08L.

Magnetic variation: 11E

2.19.2 ILS identification: HNL

2.19.5 Coordinates: 21-19-26.68N /
157-56-22.59W

2.19.6 Site elevation: 7 ft

2.19.1 ILS type: DME for runway 04R. Magnetic
variation: 11E

2.19.2 ILS identification: IUM

2.19.5 Coordinates: 21-19-47.83N /
157-54-12.09W

2.19.6 Site elevation: 21 ft

2.19.1 ILS type: Outer Marker for runway 08L.

Magnetic variation: 11E

2.19.2 ILS identification: HNL

2.19.5 Coordinates: 21-19-29.70N /
158-02-55.90W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 04R.
Magnetic variation: 11E

2.19.2 ILS identification: IUM

2.19.5 Coordinates: 21-18-53.99N /
157-55-26.90W

2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Localizer for runway 26L.

Magnetic variation: 11E

2.19.2 ILS identification: EPC

2.19.5 Coordinates: 21-19-34.96N /
157-54-28.18W

2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Middle Marker for runway 04R.
Magnetic variation: 11E

2.19.2 ILS identification: IUM

2.19.5 Coordinates: 21-18-33.00N /
157-55-59.70W

2.19.6 Site elevation: 4 ft

2.19.1 ILS type: DME for runway 26L. Magnetic

variation: 11E

2.19.2 ILS identification: EPC

2.19.5 Coordinates: 21-19-36.96N /
157-54-25.90W

2.19.6 Site elevation: 21 ft

2.19.1 ILS type: Localizer for runway 08L.
Magnetic variation: 11E

2.19.2 ILS identification: HNL

2.19.5 Coordinates: 21-19-30.88N /

General Remarks:

REMAIN AT LEAST 1 MILE OFF SHORE OF WAIKIKI DIAMOND HEAD KOKO HEAD & EWA BEACH. ARR RUNWAY 08L; FLY ILS APPROACH PROC OR A CLOSE-IN BASE LEG REMAINING OVER CENTER OF PEARL HARBOR CHANNEL. ARR 26L/R; RNM AT TRAFFIC PATTERN ALTITUDES AS LONG AS POSSIBLE BEFORE BEGINNING DESCENT FOR LANDING.

RUNWAY 04R/22L DC10 450000+; L-1011 450000+; RUNWAY 04L/22R DC10 450000; L-1011 450000+; RUNWAY 08L/26R DC10 400000; L-1011 410000; RUNWAY 08R/26L DC10 415000; L-1011 400000.

PRIOR PERMISSION REQUIRED FROM AIRPORT MANAGER FOR TRANSPORTATION OF CLASS A

OR B EXPLOSIVES IN AND/OR OUT OF HNL.

DUE TO NON-VISIBILITY TOWER UNABLE TO DETERMINE IF THE FOLLOWING AREAS ARE CLEAR OF OBSTRUCTIONS AND/OR TRAFFIC: PORTIONS OF TAXIWAY RB BETWEEN TAXIWAY B & RUNWAY 08R; PORTIONS OF INTER-ISLAND AIRCRAFT PARKING RAMP.

MILITARY: PRIOR PERMISSION REQUIRED ALL AIRCRAFT UNITS PLANNING TO STAGE OPERATIONS FROM HICKAM AFB MUST CONTACT 15 OSS/OSX DSN 315-449-3129 NOT LATER THAN 3 WEEKS PRIOR REGARDLESS.

PERSONNEL AND EQUIPMENT WORKING 600-1300 FT EAST RUNWAY 22L & 22R THRESHOLD, 0700-1530 MON-FRI.

DUE TO LOCATION OF ATCT, CONTROLLERS UNABLE TO DETERMINE WHETHER AIRCRAFT ARE ON CORRECT FINAL APPROACH TO RUNWAYS 04L-04R AND 22L-22R.

TAXIWAYS G AND L BETWEEN TAXIWAY A AND INTER-ISLAND RAMP CLOSED TO WIDE-BODIED AND 4-ENGINE TURBO-JET AIRCRAFT UNDER POWER WITHOUT PRIOR PERMISSION FROM AIRPORT OPERATIONS MANAGER (808) 836-6428 MON-FRI 0745-1630.

RUNWAYS CLOSED 0730-0930 EVERY MONTH AS FOLLOWS; RUNWAY 04R/22L FIRST TUE; RUNWAY 08R/26L SECOND TUE; AND RUNWAY 08L/26R THIRD TUE.

CAUTION: DURING PERIODS OF REPEATED PRECIPITATION ANTICIPATE WET RUNWAY CONDITIONS, IF CURRENT CONDITIONS REQUIRE CONFIRMATION CONTACT HONOLULU TOWER ON INITIAL CONTACT.

CAUTION: RECREATIONAL BOATING ACTIVITIES ON AND IN THE VICINITY OF WATERWAYS.

MILITARY: ALL AIRCRAFT INBOUND TO HICKAM SHOULD ADDRESS FLIGHT PLAN TO PHIK.

MILITARY: ALL MILITARY AIRCRAFT WITH VIP CODE 7 OR ABOVE CONTACT 15AB COMMAND POST OR RELAY THRU HF/SSB AIRWAY 1 HOUR OUT TO CONFIRM BLOCKTIME.

TRAFFIC PATTERN OVERHEAD ALTITUDE 2000 FT, RESTRICTED TO HIANG AIRCRAFT.

MILITARY: ALL MILITARY AIRCRAFT REQUIRE CUSTOMS/AGRICULTURE/IMIGRATION INSPECTION MUST CONTACT HICKAM PILOT TO DISPATCH OR IF AIR MOBILITY COMMAND CONTACT HICKAM AMCC, NOT LATER THAN 3 HRS PRIOR TO ARR WITH ESTIMATE BLOCK TIME, NR OF CIV/MIL PAX/FOREIGN NATIONALS/AND DV CODES.*

RUNWAYS 04W/22W AND 08W/26W RECREATIONAL BOATING ACTIVITIES ON AND IN THE VICINITY OF WATERWAYS.

BIRD STRIKE HAZARD ALL RUNWAYS.

MILITARY ARRESTING GEAR: HOOK MB100(B) LOCATED 200 FT FROM THRESHOLD RUNWAY 26R.

MILITARY: TO MINIMIZE FOREIGN OBJECT DAMAGE POTENTIAL, ALL AIRCRAFT SHOULD USE MINIMUM THRUST, EXPECIALLY OUTBOARD ENGINES, WHEN TAXIING PAST THE F-15

ALERT FACILITY ON TAXIWAY TANGO.

MILITARY CAUTION: FOREIGN OBJECT DAMAGE HAZARD EXISTS ON ALL MOVEMENT AREAS EAST OF TAXIWAY SIERRA. FIGHTER AIRCRAFT EXERCISE EXTREME CAUTION WHEN TAXING.

MILITARY CAUTION: A FOREIGN OBJECT DAMAGE HAZARD EXISTS ON ALL TAXIWAYS AND RUNWAYS BUT ESPECIALLY ON RUNWAY 4L/22R AND TAXIWAYS NORTH OF RUNWAY 8L/26R.

TAXIWAY L LIGHTS BETWEEN GATE 50 AND GATE 59 OUT OF SERVICE INDEFINITELY.

MILITARY CAUTION: NO F-16 TRANSIENT SUPPORT AVAILABLE IN ACCORDANCE WITH AREA CONTROL CENTER LSET FLASH SAFETY 06-02. TRANSIENT F-16 UNITS SHOULD PROVIDE THEIR OWN MAINTENANCE SUPPORT.

MILITARY RESTRICTED: ALL TRANSIENT AIRCRAFT, NOT ON AN AIR MOBILITY COMMAND MSN, WILL PROVIDE A 2-3 HR OUT CALL, AS WELL AS 20-30 MIN OUT CALL ON 292.5 TO THE 15 AW/CP (KOA CONTROL). UPON ARRIVAL, CREWS WILL PROCEED DIRECTLY TO COMMAND POST (BLDG 2050) AND COMPLETE AN OUTBOUND SETUP SHEET TO FACILITATE DEPARTURE REQUIREMENTS.

MILITARY/COMMUNICATIONS: BEDTIME "(613AOC/AMD CORONET MSN COMMANDER WILL MEET AIRCRAFT UPON ARR; ALL CORONET W TANKERS USE 311.0 FOR TANKER-FIGHTER INTER-PLANE ON LAUNCH DAY. AFTER DUTY HR DSN 448-8888 613AOC/AMD, FLIGHT MANAGEMENT.)

CRANE 280 FT AGL 300 FT NORTH TERMINAL CENTRAL CONCOURSE UNTIL 01 JAN 2009.

TAXIWAY G LIGHTED SIGN OUT OF SERVICE AT RUNWAY 8L/26R TAXIWAY G INTERSECTION.

MILITARY MISC (1 OF 2): HICKAM BASE WX STATION OPEN MON-FRI 1400Z-0800Z; CLOSED WEEKENDS/HOL EXCEPT DUR LOCAL FLYING, AS MANNING PERMITS.

MILITARY MISC (2 OF 2 CONT'D): LIMITED WX BRIEF SUPPORT. REMOTE FLIGHT WX BRIEFINGS CONTACT 17TH WX SQUALL 24 HR, DSN 315-449-7950/8333/8335, FAX DSN 315-449-8336; 2 HR PRIOR NOTICE REQUIRE FOR TIMELY BRIEF. OFFICIAL OBSN TAKEN BY FAA. COOPERATIVE WX WATCH PROCEDURES DO NOT EXIST BETWEEN WX AND ATC.

MILITARY MISC: NO COMSEC MATERIAL AVAILABLE THRU HICKAM AIRFIELD OPERATIONS. TRANSIENT AIRCREWS SHOULD PLAN TO ARR WITH APPROPRIATE AMOUNT OF COMSEC TO COMPLETE ENTIRE MSN.

MILITARY REMARKS: SEE FLIGHT INFORMATION PUBLICATION AP/3 SUPPLEMENTARY AIRPORT INFORMATION, ROUTE AND AREA RESTRICTED, AND OAKLAND FIR FLIGHT HAZARD.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

MILITARY CAUTION: USE CAUTION FOR OBST 76_i FR TAXIWAY "M" CENTERLINE ON OCEANSIDE, APPROXIMATELY 200_i FR PARK APRON.

MILITARY MISC: AIRFIELD OPERATIONS DSN 449-0046/0048 FAX DSN 449-7624.

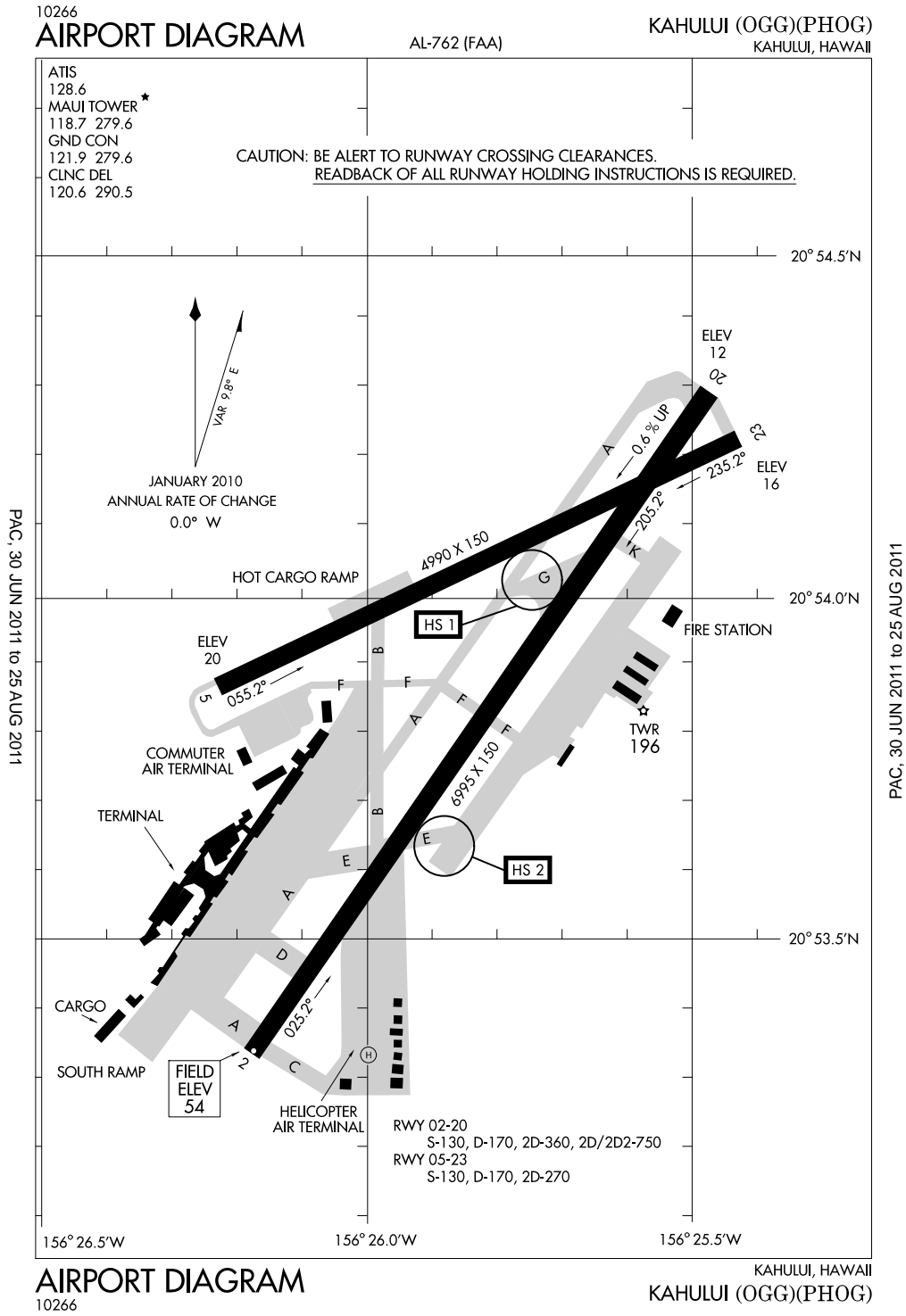
MILITARY RESTRICTED: WIDE BODY AND 4 ENGINE TURBO-JETS LANDING ON RUNWAY 04R ROLL TO END OF RUNWAY, NO LEFT TURN AT TAXIWAY K WITHOUT TOWER APPROVAL. TAXIWAY K NOT A HIGH SPEED EXIT TAXIWAY. TAXIWAY RA HOLD SHORT APPROACH ZONE RUNWAY 04L/R AT HOLD LINE. TAXIWAY P CLOSED TO AIRCRAFT OVER 12,500 LB.

MILITARY SERVICE-A-GEAR: RUNWAY 4R/22L AND 8R/26L SURFACE GROOVED WITHIN 10 FT OF A-G SYSTEM. POTENTIAL FOR FIGHTER AIRCRAFT TAIL HOOK SKIP EXISTS.

MILITARY MISC 1 OF 2: DUE TO SENSITIVITIES OF CITIZENS, FIGHTER AIRCRAFT AND WATER-AUGMENTED AIRCRAFT DEP ONLY AUTHORIZED FR 1700-0700Z MON-SAT, AND 1800-0700Z SUN AND HOLIDAY. ALL REQ FOR WAIVERS WILL BE SENT TO THE 15/OG/CC AT LEAST 5 WORKING DAYS IN ADVANCE.

MILITARY MISC 2 OF 2: WAIVERS WILL BE GRANTED ON EXTREME NECESSARY. IF SHORT NOTICE MSN ESSENTIAL WAIVERS ARE NECESSARY, CONTACT 15OG/CC BY TELEPHONE THRU 15 WG COMMAND POST(15 WG/CP). 15 WG COMP POST WILL PASS APPROVAL TO HICKAM FLIGHT SERVICE AND HICKAM RAMP ADVSY.

Kahului, Hawaii
Kahului
ICAO Identifier PHOG



Kahului, HI
Kahului
ICAO Identifier PHOG

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 20-53-55.14N / 156-25-49.65W
- 2.2.2 From City: 3 Miles E Of Kahului, HI
- 2.2.3 Elevation: 54 ft
- 2.2.5 Magnetic variation: 11E (1990)
- 2.2.6 Airport Contact: Marvin Moniz
1 KAHULUI AIRPORT ROAD, UNIT 5
Kahului, HI 96732 (808-872-3808)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 02
- 2.10.1.b Type of obstacle: Stack (198 ft). Lighted
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 20
- 2.10.1.b Type of obstacle: Bldg (5 ft). Marked
- 2.10.1.c Location of obstacle: 250 ft from Centerline

- 2.10.1.a. Runway designation: 05
- 2.10.1.b Type of obstacle: Trees (31 ft). Not Lighted or Marked

- 2.10.1.a. Runway designation: 23
- 2.10.1.b Type of obstacle: Pole (35 ft). Not Lighted or Marked

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 02
- 2.12.2 True Bearing: 35
- 2.12.3 Dimensions: 6995 ft x 150 ft
- 2.12.5 Coordinates: 20-53-20.90N / 156-26-10.75W
- 2.12.6 Threshold elevation: 54 ft
- 2.12.6 Touchdown zone elevation: 54 ft

- 2.12.1 Designation: 20
- 2.12.2 True Bearing: 215
- 2.12.3 Dimensions: 6995 ft x 150 ft
- 2.12.5 Coordinates: 20-54-17.71N / 156-25-28.47W
- 2.12.6 Threshold elevation: 12 ft
- 2.12.6 Touchdown zone elevation: 25 ft

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 125 ft x 125 ft

- 2.12.1 Designation: 05
- 2.12.2 True Bearing: 65
- 2.12.3 Dimensions: 4990 ft x 150 ft
- 2.12.5 Coordinates: 20-53-52.88N / 156-26-13.56W
- 2.12.6 Threshold elevation: 20 ft
- 2.12.6 Touchdown zone elevation: 20 ft

- 2.12.1 Designation: 23
- 2.12.2 True Bearing: 245
- 2.12.3 Dimensions: 4990 ft x 150 ft
- 2.12.5 Coordinates: 20-54-13.75N / 156-25-25.85W
- 2.12.6 Threshold elevation: 16 ft
- 2.12.6 Touchdown zone elevation: 17 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 02
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

- 2.14.1 Designation: 20
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 05
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

2.14.10 Remarks: VASI Unusable Beyond 4 Nm From Threshold Due To Rapidly Rising Terrain.

CLASS C IC
2.18.3 Service designation: 322.4 MHz

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: APCH/P DEP/P CLASS C IC
2.18.3 Service designation: 225.4 MHz

2.18.1 Service designation: APCH/P DEP/P CLASS C IC
2.18.3 Service designation: 119.5 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 02. Magnetic variation: 11E

2.18.1 Service designation: APCH/P DEP/P CLASS C IC
2.18.3 Service designation: 120.2 MHz

2.19.2 ILS identification: OGG
2.19.5 Coordinates: 20-54-22.18N / 156-25-25.15W

2.18.1 Service designation: CD
2.18.3 Service designation: 120.6 MHz

2.19.6 Site elevation: 6 ft

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.19.1 ILS type: Glide Slope for runway 02. Magnetic variation: 11E

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.19.2 ILS identification: OGG
2.19.5 Coordinates: 20-53-29.55N / 156-25-59.23W

2.18.1 Service designation: ATIS
2.18.3 Service designation: 128.6 MHz
2.18.4 Hours of operation: 24

2.19.6 Site elevation: 48 ft

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.19.1 ILS type: Middle Marker for runway 02. Magnetic variation: 11E

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 279.6 MHz

2.19.2 ILS identification: OGG
2.19.5 Coordinates: 20-52-59.70N / 156-26-26.50W
2.19.6 Site elevation: 66 ft

2.18.1 Service designation: GND/P
2.18.3 Service designation: 279.6 MHz

2.19.1 ILS type: Outer Marker for runway 02. Magnetic variation: 11E

2.18.1 Service designation: CD/P
2.18.3 Service designation: 290.5 MHz

2.19.2 ILS identification: OGG
2.19.5 Coordinates: 20-48-13.30N / 156-29-59.30W
2.19.6 Site elevation: 39 ft

2.18.1 Service designation: APCH/P DEP/P

2.19.1 ILS type: DME for runway 02. Magnetic variation: 11E

General Remarks:

570' LIGHTED TOWER APPROXIMATE 3 MI. W.

2.19.2 ILS identification: OGG
2.19.5 Coordinates: 20-54-18.74N / 156-25-23.97W

24 HRS PRIOR PERMISSION REQUIRED FOR CLASS A & B EXPLOSIVES AND 4 HRS PRIOR PERMISSION REQUIRED FOR OTHER HAZARDOUS CARGO IN/OUT OF AIRPORT; CONTACT (808) 872-3830 0745-1630 OTHER TIMES (808) 872-3888.

2.19.6 Site elevation: 9 ft

RAMP AREA E SIDE RUNWAY 02 UNDER STATE AUTHORITY. FAA NOT RESPONSIBLE FOR

DIRECTION & CONTROL GROUND TRAFFIC IN AREA.

MIGRATORY BIRD ACTIVITY BELOW 1500 FT WITHIN 5 NAUTICAL MILE RADIUS OF AIRPORT DURING AUG-MAY.

MILITARY HELICOPTER OPERATIONS RESTRICTED TO HAZMAT AREA N OF RUNWAY 05/23.

COMMUTER TERMINAL RAMP RESTRICTED TO AIRCRAFT 140000 LBS OR LESS.

AREA E OF APPROACH END RUNWAY 02 DESIGNATED AS HELICOPTER OPER AREA. NO FIXED WING AIRCRAFT MAY OPER ON HELIPAD DURING OPERATIONAL HRS SR-SS.

PRIOR PERMISSION REQUIRED FOR FIXED WING AIRCRAFT OPERATIONS ON HELIPAD DURING NON-OPERATIONAL HRS CALL (808) 872-3880 5:15A-10:00P.

ACCESS TO HELIPAD FROM TAXIWAY C ONLY.

DUE TO NONVISIBILITY ATCT UNABLE TO DETERMINE IF FOLLOWING AREA IS CLEAR OF OBSTRUCTIONS AND/OR TRAFFIC: PORTION OF TAXIWAY F BETWEEN THE COMMUTER AIR TERMINAL & APPROACH END RUNWAY 05.

DUE TO NONVISIBILITY ATCT UNABLE TO PROVIDE ATC SERVICE BETWEEN AIRCRAFT & GROUND VEHICLES ON THE COMMUTER AIR TERMINAL S OF TAXIWAY F AND THE HELICOPTER AIR TERMINAL E OF APPROACH END RUNWAY 02.

TRANSIENT PARKING LOCATED ON NE SECTION OF E RAMP.

RUNWAY 02/20 SINGLE-BELLY TWIN TANDEM (SBTT) GROSS WEIGHT 460,000 LBS.

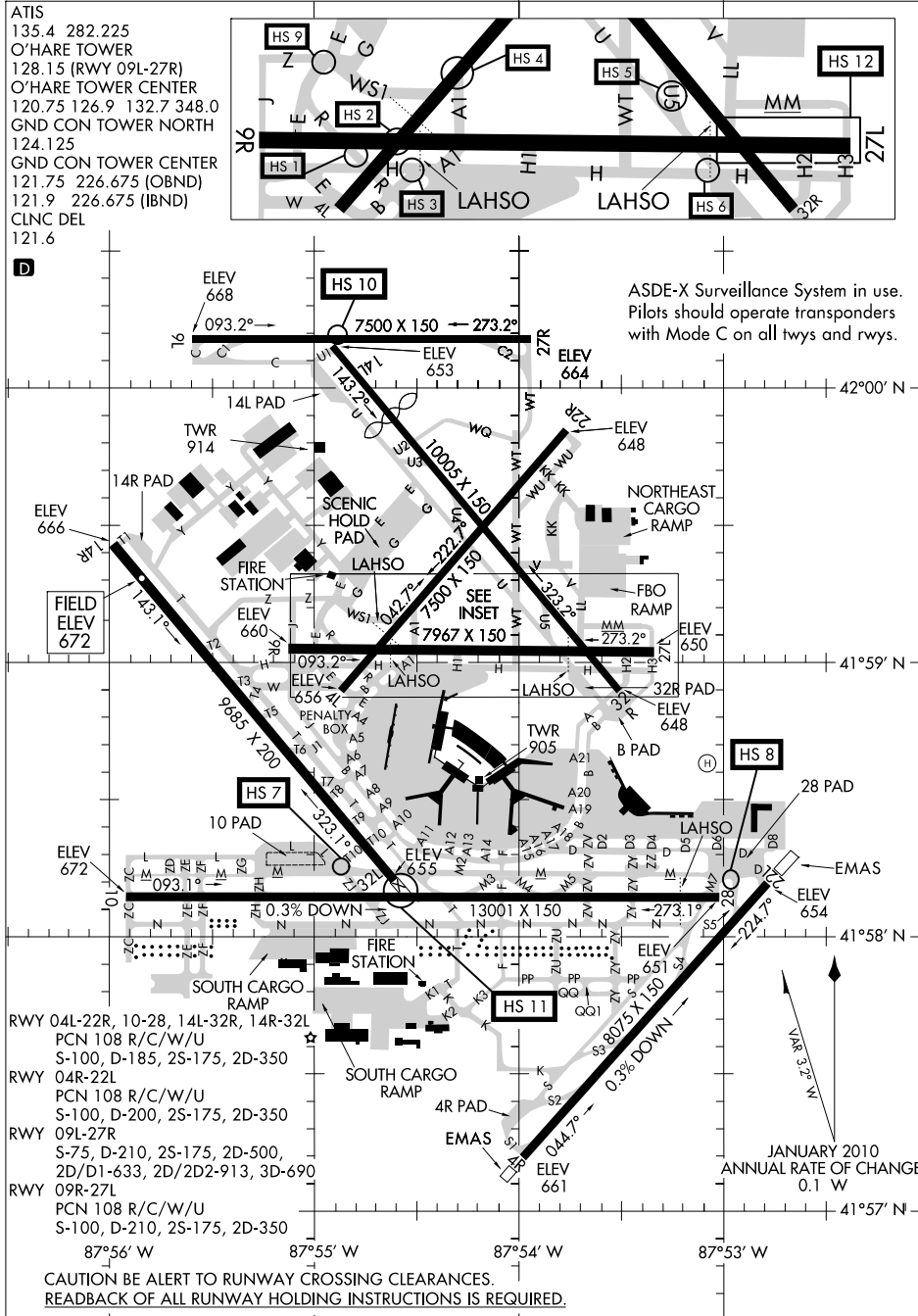
TAXIWAY G CLOSED TO AIRCRAFT OVER 30,000 LBS.

AIRCRAFT ABOVE 80,000 LBS LANDING RUNWAY 02 UNABLE TO TURN OFF ONTO RUNWAY 05 DUE TO RUNWAY 05 PAVEMENT CONDITION.

TAXIWAY F CLOSED TO LEFT TURNS FROM RUNWAY 02 AIRCRAFT ABOVE 80,000 LBS.

Chicago, Illinois
Chicago-O'Hare International
ICAO Identifier KORD

11181 **AIRPORT DIAGRAM** AL-166 (FAA) CHICAGO-O'HARE INTL (ORD)
CHICAGO, ILLINOIS



AIRPORT DIAGRAM CHICAGO, ILLINOIS
11181 CHICAGO-O'HARE INTL (ORD)

Chicago, IL
Chicago O'Hare Intl
ICAO Identifier KORD

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 41-58-53.94N / 87-54-24.02W
- 2.2.2 From City: 14 Miles NW Of Chicago, IL
- 2.2.3 Elevation: 672 ft
- 2.2.5 Magnetic variation: 3W (2010)
- 2.2.7 Traffic: IFR/VFR
- 2.2.8 Remarks: And Du Page Co.

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 14R
- 2.10.1.b Type of obstacle: Trees (63 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 56 ft from Centerline

- 2.10.1.a. Runway designation: 32R
- 2.10.1.b Type of obstacle: Pole (43 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 725 ft from Centerline

- 2.10.1.a. Runway designation: 10
- 2.10.1.b Type of obstacle: Pole (43 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 630 ft from Centerline

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Sign (56 ft). Lighted
- 2.10.1.c Location of obstacle: 723 ft from Centerline

- 2.10.1.a. Runway designation: 09L
- 2.10.1.b Type of obstacle: Ant (743 ft). Marked and Lighted
- 2.10.1.c Location of obstacle: 4443 ft from Centerline

- 2.10.1.a. Runway designation: 27R
- 2.10.1.b Type of obstacle: Ant (87 ft). Marked and Lighted
- 2.10.1.c Location of obstacle: 118 ft from Centerline

- 2.10.1.a. Runway designation: 04L
- 2.10.1.b Type of obstacle: Lt Std (29 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 411 ft from Centerline

- 2.10.1.a. Runway designation: 22L
- 2.10.1.b Type of obstacle: Ant (109 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 545 ft from Centerline

- 2.10.1.a. Runway designation: 27L
- 2.10.1.b Type of obstacle: Ant (24 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 587 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 14R
- 2.12.2 True Bearing: 140
- 2.12.3 Dimensions: 9685 ft x 200 ft
- 2.12.4 PCN: 108 R/C/W/U
- 2.12.5 Coordinates: 41-59-25.57N / 87-55-59.30W
- 2.12.6 Threshold elevation: 666 ft
- 2.12.6 Touchdown zone elevation: 668 ft

- 2.12.1 Designation: 32L
- 2.12.2 True Bearing: 320
- 2.12.3 Dimensions: 9685 ft x 200 ft
- 2.12.4 PCN: 108 R/C/W/U
- 2.12.5 Coordinates: 41-58-12.30N / 87-54-36.84W
- 2.12.6 Threshold elevation: 655 ft

- 2.12.1 Designation: 14L
- 2.12.2 True Bearing: 140

2.12.3 Dimensions: 10005 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 42-00-00.00N /
87-54-55.33W
2.12.6 Threshold elevation: 653 ft
2.12.6 Touchdown zone elevation: 653 ft

2.12.1 Designation: 32R
2.12.2 True Bearing: 320
2.12.3 Dimensions: 10005 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-58-53.06N /
87-53-30.17W
2.12.6 Threshold elevation: 648 ft
2.12.6 Touchdown zone elevation: 653 ft

2.12.1 Designation: 10
2.12.2 True Bearing: 90
2.12.3 Dimensions: 13001 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-58-00.00N / 87-55-53.51W
2.12.6 Threshold elevation: 672 ft
2.12.6 Touchdown zone elevation: 672 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 270
2.12.3 Dimensions: 13001 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-58-00.00N / 87-53-00.00W
2.12.6 Threshold elevation: 651 ft
2.12.6 Touchdown zone elevation: 652 ft

2.12.1 Designation: 09L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.5 Coordinates: 42-00-10.19N /
87-55-36.03W
2.12.6 Threshold elevation: 668 ft
2.12.6 Touchdown zone elevation: 668 ft
2.12.7 Slope: 0.1DOWN

2.12.1 Designation: 27R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.5 Coordinates: 42-00-10.19N /
87-53-56.70W
2.12.6 Threshold elevation: 664 ft
2.12.6 Touchdown zone elevation: 664 ft
2.12.7 Slope: 0.1UP

2.12.1 Designation: 04L

2.12.2 True Bearing: 39
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-58-53.96N /
87-54-50.10W
2.12.6 Threshold elevation: 656 ft
2.12.6 Touchdown zone elevation: 658 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 219
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-59-51.13N /
87-53-46.94W
2.12.6 Threshold elevation: 648 ft
2.12.6 Touchdown zone elevation: 651 ft

2.12.1 Designation: 04R
2.12.2 True Bearing: 42
2.12.3 Dimensions: 8075 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-57-11.98N /
87-53-57.91W
2.12.6 Threshold elevation: 661 ft
2.12.6 Touchdown zone elevation: 661 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 222
2.12.3 Dimensions: 8075 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-58-11.72N /
87-52-47.08W
2.12.6 Threshold elevation: 654 ft
2.12.6 Touchdown zone elevation: 654 ft

2.12.1 Designation: 09R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 7967 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-59-00.00N /
87-55-00.00W
2.12.6 Threshold elevation: 660 ft
2.12.6 Touchdown zone elevation: 660 ft

2.12.1 Designation: 27L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 7967 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-59-00.00N /
87-53-20.58W
2.12.6 Threshold elevation: 650 ft
2.12.6 Touchdown zone elevation: 653 ft

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 200 ft x 100 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 14R
- 2.13.2 Takeoff run available: 9685
- 2.13.3 Takeoff distance available: 9685
- 2.13.4 Accelerate–stop distance available: 9662
- 2.13.5 Landing distance available: 8650

- 2.13.1 Designation: 32L
- 2.13.2 Takeoff run available: 9685
- 2.13.3 Takeoff distance available: 9685
- 2.13.4 Accelerate–stop distance available: 9685

- 2.13.1 Designation: 14L
- 2.13.2 Takeoff run available: 10005
- 2.13.3 Takeoff distance available: 10005
- 2.13.4 Accelerate–stop distance available: 10005
- 2.13.5 Landing distance available: 8007

- 2.13.1 Designation: 32R
- 2.13.2 Takeoff run available: 10005
- 2.13.3 Takeoff distance available: 10005
- 2.13.4 Accelerate–stop distance available: 10005
- 2.13.5 Landing distance available: 10005

- 2.13.1 Designation: 10
- 2.13.2 Takeoff run available: 13000
- 2.13.3 Takeoff distance available: 13000
- 2.13.4 Accelerate–stop distance available: 13000
- 2.13.5 Landing distance available: 12246

- 2.13.1 Designation: 28
- 2.13.2 Takeoff run available: 13000
- 2.13.3 Takeoff distance available: 13000
- 2.13.4 Accelerate–stop distance available: 13000
- 2.13.5 Landing distance available: 13000

- 2.13.1 Designation: 09L
- 2.13.2 Takeoff run available: 7500
- 2.13.3 Takeoff distance available: 7500
- 2.13.4 Accelerate–stop distance available: 7500
- 2.13.5 Landing distance available: 7500

- 2.13.1 Designation: 27R
- 2.13.2 Takeoff run available: 7500
- 2.13.3 Takeoff distance available: 7500
- 2.13.4 Accelerate–stop distance available: 7500
- 2.13.5 Landing distance available: 7500

- 2.13.1 Designation: 04L
- 2.13.2 Takeoff run available: 7500
- 2.13.3 Takeoff distance available: 7500
- 2.13.4 Accelerate–stop distance available: 7500
- 2.13.5 Landing distance available: 7500

- 2.13.1 Designation: 22R
- 2.13.2 Takeoff run available: 7500
- 2.13.3 Takeoff distance available: 7500
- 2.13.4 Accelerate–stop distance available: 7500
- 2.13.5 Landing distance available: 7500

- 2.13.1 Designation: 04R
- 2.13.2 Takeoff run available: 8075
- 2.13.3 Takeoff distance available: 8075
- 2.13.4 Accelerate–stop distance available: 8075
- 2.13.5 Landing distance available: 8075

- 2.13.1 Designation: 22L
- 2.13.2 Takeoff run available: 8075
- 2.13.3 Takeoff distance available: 8075
- 2.13.4 Accelerate–stop distance available: 8075
- 2.13.5 Landing distance available: 8075

- 2.13.1 Designation: 09R
- 2.13.2 Takeoff run available: 7967
- 2.13.3 Takeoff distance available: 7967
- 2.13.4 Accelerate–stop distance available: 7967
- 2.13.5 Landing distance available: 7967

- 2.13.1 Designation: 27L
- 2.13.2 Takeoff run available: 7967
- 2.13.3 Takeoff distance available: 7967
- 2.13.4 Accelerate–stop distance available: 7967
- 2.13.5 Landing distance available: 7967

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 14R
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4–light PAPI on right

- 2.14.1 Designation: 14L
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 32R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 10

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 28

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 09L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 27R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 22R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.10 Remarks: Vgsi And ILS Glidepath Not
Coincident.

2.14.1 Designation: 04R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 22L

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 09R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 27L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P CLASS B IC

2.18.3 Service designation: 119 MHz

2.18.1 Service designation: CD/S PTC/S

2.18.3 Service designation: 119.25 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 120.55 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 121.15 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND METERING

2.18.3 Service designation: 121.675 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 125.4 MHz

2.18.1 Service designation: VFR ADV

2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 133.5 MHz

2.18.1 Service designation: CLASS B/S

2.18.3 Service designation: 134.4 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: ALCP
2.18.3 Service designation: 252.1 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 269.5 MHz

2.18.1 Service designation: APCH/P CLASS B
2.18.3 Service designation: 284 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 290.2 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 307.2 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 337.4 MHz

2.18.1 Service designation: APCH/P CLASS B IC
2.18.3 Service designation: 393.1 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 349 MHz

2.18.1 Service designation: APCH/P CLASS B
2.18.3 Service designation: 133.625 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: O'HARE TWR
CENTER LCL/P
2.18.3 Service designation: 126.9 MHz

2.18.1 Service designation: O'HARE TWR
CENTER LCL/P
2.18.3 Service designation: 120.75 MHz

2.18.1 Service designation: O'HARE TWR
CENTER LCL/P
2.18.3 Service designation: 132.7 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 127.925 MHz

2.18.1 Service designation: CLNC DEL/P
2.18.3 Service designation: 121.6 MHz

2.18.1 Service designation: O'HARE TWR
NORTH GC/P
2.18.3 Service designation: 124.125 MHz

2.18.1 Service designation: O'HARE TWR LCL/P
2.18.3 Service designation: 128.15 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 126.625 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 282.225 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND CON CENTER
(INBOUND)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND CON CENTER
(OUTBOUND)
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: O'HARE TWR
CENTER GND/P
2.18.3 Service designation: 226.675 MHz

2.18.1 Service designation: O'HARE TWR
CENTER LCL/P
2.18.3 Service designation: 348 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 377.15 MHz

AD 2.19 Radio navigation and landing aids
2.19.1 ILS type: DME for runway 14R. Magnetic
variation: 3W
2.19.2 ILS identification: ORD
2.19.5 Coordinates: 41-57-37.71N /
87-54-00.00W
2.19.6 Site elevation: 665 ft

2.19.1 ILS type: Glide Slope for runway 14R.
Magnetic variation: 3W
2.19.2 ILS identification: ORD
2.19.5 Coordinates: 41-59-15.81N /
87-55-55.22W
2.19.6 Site elevation: 662 ft

2.19.1 ILS type: Outer Marker for runway 14R.
Magnetic variation: 3W
2.19.2 ILS identification: ORD
2.19.5 Coordinates: 42-03-21.36N /
88-00-28.05W
2.19.6 Site elevation: 693 ft

2.19.1 ILS type: Inner Marker for runway 14R.
Magnetic variation: 3W
2.19.2 ILS identification: ORD
2.19.5 Coordinates: 41-59-32.74N /
87-56-00.00W
2.19.6 Site elevation: 659 ft

2.19.1 ILS type: Localizer for runway 14R.
Magnetic variation: 3W
2.19.2 ILS identification: ORD
2.19.5 Coordinates: 41-57-38.76N /
87-53-59.11W
2.19.6 Site elevation: 651 ft

2.19.1 ILS type: Middle Marker for runway 14R.
Magnetic variation: 3W
2.19.2 ILS identification: ORD
2.19.5 Coordinates: 41-59-46.54N /
87-56-22.90W
2.19.6 Site elevation: 674 ft

2.19.1 ILS type: Localizer for runway 32L.
Magnetic variation: 3W
2.19.2 ILS identification: RVG
2.19.5 Coordinates: 41-59-30.50N /
87-56-00.00W
2.19.6 Site elevation: 663 ft

2.19.1 ILS type: DME for runway 32L. Magnetic
variation: 3W
2.19.2 ILS identification: RVG
2.19.5 Coordinates: 41-59-34.48N /
87-56-00.00W
2.19.6 Site elevation: 677 ft

2.19.1 ILS type: Glide Slope for runway 32L.
Magnetic variation: 3W

2.19.2 ILS identification: RVG
2.19.5 Coordinates: 41-57-52.64N /
87-54-21.11W
2.19.6 Site elevation: 648 ft

2.19.1 ILS type: Outer Marker for runway 32L.
Magnetic variation: 3W
2.19.2 ILS identification: RVG
2.19.5 Coordinates: 41-53-39.91N /
87-49-34.69W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 32L.
Magnetic variation: 3W
2.19.2 ILS identification: RVG
2.19.5 Coordinates: 41-57-22.13N /
87-53-40.44W
2.19.6 Site elevation: 653 ft

2.19.1 ILS type: DME for runway 14L. Magnetic
variation: 3W
2.19.2 ILS identification: OHA
2.19.5 Coordinates: 41-58-43.19N /
87-53-23.65W
2.19.6 Site elevation: 665 ft

2.19.1 ILS type: Inner Marker for runway 14L.
Magnetic variation: 3W
2.19.2 ILS identification: OHA
2.19.5 Coordinates: 42-00-00.00N /
87-54-43.27W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 14L.
Magnetic variation: 3W
2.19.2 ILS identification: OHA
2.19.5 Coordinates: 41-59-48.18N /
87-54-25.13W
2.19.6 Site elevation: 648 ft

2.19.1 ILS type: Middle Marker for runway 14L.
Magnetic variation: 3W
2.19.2 ILS identification: OHA
2.19.5 Coordinates: 42-00-29.46N /
87-55-18.64W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 14L.
Magnetic variation: 3W
2.19.2 ILS identification: OHA
2.19.5 Coordinates: 42-04-00.00N /

87-59-27.18W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 14L.

Magnetic variation: 3W

2.19.2 ILS identification: OHA

2.19.5 Coordinates: 41-58-44.36N /

87-53-20.39W

2.19.6 Site elevation: 650 ft

2.19.1 ILS type: Glide Slope for runway 32R.

Magnetic variation: 3W

2.19.2 ILS identification: IDN

2.19.5 Coordinates: 41-59-00.00N /

87-53-36.78W

2.19.6 Site elevation: 646 ft

2.19.1 ILS type: Outer Marker for runway 32R.

Magnetic variation: 3W

2.19.2 ILS identification: IDN

2.19.5 Coordinates: 41-54-17.50N /

87-48-24.90W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 32R.

Magnetic variation: 3W

2.19.2 ILS identification: IDN

2.19.5 Coordinates: 42-00-16.11N /

87-55-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 32R.

Magnetic variation: 3W

2.19.2 ILS identification: IDN

2.19.5 Coordinates: 42-00-17.04N /

87-55-00.00W

2.19.6 Site elevation: 649 ft

2.19.1 ILS type: Middle Marker for runway 32R.

Magnetic variation: 3W

2.19.2 ILS identification: IDN

2.19.5 Coordinates: 41-58-33.83N /

87-53-00.00W

2.19.6 Site elevation: 645 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-00.00N / 87-52-39.69W

2.19.6 Site elevation: 645 ft

2.19.1 ILS type: DME for runway 10. Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-00.00N / 87-52-41.69W

2.19.6 Site elevation: 656 ft

2.19.1 ILS type: Middle Marker for runway 10.

Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-00.00N / 87-55-52.10W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 10.

Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-00.00N / 88-01-35.55W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 10.

Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-00.00N / 87-55-38.76W

2.19.6 Site elevation: 665 ft

2.19.1 ILS type: DME for runway 28. Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-00.00N / 87-52-41.69W

2.19.6 Site elevation: 656 ft

2.19.1 ILS type: Glide Slope for runway 28.

Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-00.00N / 87-53-15.05W

2.19.6 Site elevation: 648 ft

2.19.1 ILS type: Outer Marker for runway 28.

Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-00.00N / 87-47-22.63W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 28.

Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-00.00N / 87-52-49.13W

2.19.6 Site elevation: 649 ft

2.19.1 ILS type: Middle Marker for runway 28.

Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-00.00N / 87-52-23.76W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-00.00N / 87-56-00.00W

2.19.6 Site elevation: 661 ft

2.19.1 ILS type: DME for runway 09L. Magnetic variation: 3W

2.19.2 ILS identification: SAJ

2.19.5 Coordinates: 42-00-14.10N /

87-55-48.23W

2.19.6 Site elevation: 670 ft

2.19.1 ILS type: Glide Slope for runway 09L. Magnetic variation: 3W

2.19.2 ILS identification: SAJ

2.19.5 Coordinates: 42-00-14.22N /

87-55-20.67W

2.19.6 Site elevation: 651 ft

2.19.1 ILS type: Localizer for runway 09L. Magnetic variation: 3W

2.19.2 ILS identification: SAJ

2.19.5 Coordinates: 42-00-10.19N /

87-53-43.32W

2.19.6 Site elevation: 661 ft

2.19.1 ILS type: Inner Marker for runway 09L. Magnetic variation: 3W

2.19.2 ILS identification: SAJ

2.19.5 Coordinates: 42-00-10.18N /

87-55-47.42W

2.19.6 Site elevation: 668 ft

2.19.1 ILS type: Inner Marker for runway 27R. Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-10.20N /

87-53-44.38W

2.19.6 Site elevation: 663 ft

2.19.1 ILS type: Localizer for runway 27R. Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-10.19N /

87-55-50.20W

2.19.6 Site elevation: 668 ft

2.19.1 ILS type: Glide Slope for runway 27R.

Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-14.21N /

87-54-11.75W

2.19.6 Site elevation: 648 ft

2.19.1 ILS type: DME for runway 27R. Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-14.10N /

87-55-48.23W

2.19.6 Site elevation: 670 ft

2.19.1 ILS type: Localizer for runway 04L. Magnetic variation: 3W

2.19.2 ILS identification: HNA

2.19.5 Coordinates: 41-59-56.39N /

87-53-41.13W

2.19.6 Site elevation: 644 ft

2.19.1 ILS type: Outer Marker for runway 04L. Magnetic variation: 3W

2.19.2 ILS identification: HNA

2.19.5 Coordinates: 41-54-51.77N /

87-59-19.46W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 22R. Magnetic variation: 3W

2.19.2 ILS identification: RXZ

2.19.5 Coordinates: 41-58-46.49N /

87-54-58.36W

2.19.6 Site elevation: 662 ft

2.19.1 ILS type: Glide Slope for runway 22R. Magnetic variation: 3W

2.19.2 ILS identification: RXZ

2.19.5 Coordinates: 41-59-45.44N /

87-53-58.39W

2.19.6 Site elevation: 645 ft

2.19.1 ILS type: Outer Marker for runway 22R. Magnetic variation: 3W

2.19.2 ILS identification: RXZ

2.19.5 Coordinates: 42-03-20.68N /

87-50-00.00W

2.19.6 Site elevation: 665 ft

2.19.1 ILS type: Middle Marker for runway 22R. Magnetic variation: 3W

2.19.2 ILS identification: RXZ
2.19.5 Coordinates: 42-00-10.86N /
87-53-25.14W
2.19.6 Site elevation: 636 ft

2.19.1 ILS type: Glide Slope for runway 04R.
Magnetic variation: 3W
2.19.2 ILS identification: FJU
2.19.5 Coordinates: 41-57-16.86N /
87-53-44.35W
2.19.6 Site elevation: 654 ft

2.19.1 ILS type: Middle Marker for runway 04R.
Magnetic variation: 3W
2.19.2 ILS identification: FJU
2.19.5 Coordinates: 41-56-48.83N /
87-54-28.68W
2.19.6 Site elevation: 655 ft
2.19.1 ILS type: Outer Marker for runway 04R.
Magnetic variation: 3W
2.19.2 ILS identification: FJU
2.19.5 Coordinates: 41-53-54.57N /
87-57-51.36W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 04R.
Magnetic variation: 3W
2.19.2 ILS identification: FJU
2.19.5 Coordinates: 41-58-16.20N /
87-52-41.76W
2.19.6 Site elevation: 647 ft

2.19.1 ILS type: Outer Marker for runway 22L.
Magnetic variation: 3W
2.19.2 ILS identification: LQQ
2.19.5 Coordinates: 42-02-16.02N /
87-47-46.00W
2.19.6 Site elevation: 629 ft

2.19.1 ILS type: Localizer for runway 22L.
Magnetic variation: 3W
2.19.2 ILS identification: LQQ
2.19.5 Coordinates: 41-57-00.00N /
87-54-00.00W
2.19.6 Site elevation: 653 ft

2.19.1 ILS type: Glide Slope for runway 22L.
Magnetic variation: 3W
2.19.2 ILS identification: LQQ
2.19.5 Coordinates: 41-58-00.00N /
87-52-52.61W

2.19.6 Site elevation: 646 ft

2.19.1 ILS type: Middle Marker for runway 22L.
Magnetic variation: 3W
2.19.2 ILS identification: LQQ
2.19.5 Coordinates: 41-58-34.71N /
87-52-19.73W
2.19.6 Site elevation: 642 ft

2.19.1 ILS type: Glide Slope for runway 27L.
Magnetic variation: 3W
2.19.2 ILS identification: IAC
2.19.5 Coordinates: 41-59-00.00N /
87-53-34.35W
2.19.6 Site elevation: 646 ft

2.19.1 ILS type: Outer Marker for runway 27L.
Magnetic variation: 3W
2.19.2 ILS identification: IAC
2.19.5 Coordinates: 41-59-00.00N /
87-47-20.48W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 27L.
Magnetic variation: 3W
2.19.2 ILS identification: IAC
2.19.5 Coordinates: 41-59-00.00N /
87-52-41.36W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 27L.
Magnetic variation: 3W
2.19.2 ILS identification: IAC
2.19.5 Coordinates: 41-59-00.00N /
87-55-17.98W
2.19.6 Site elevation: 664 ft

2.19.1 ILS type: Inner Marker for runway 27L.
Magnetic variation: 3W
2.19.2 ILS identification: IAC
2.19.5 Coordinates: 41-59-00.00N /
87-53-00.00W
2.19.6 Site elevation: 642 ft

2.19.1 ILS type: DME for runway 27L. Magnetic
variation: 3W
2.19.2 ILS identification: IAC
2.19.5 Coordinates: 41-59-00.00N / 87-53-10.21W
2.19.6 Site elevation: 654 ft

2.19.1 ILS type: Localizer for runway 09R.

Magnetic variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-00.00N /
87-53-10.49W
2.19.6 Site elevation: 643 ft

2.19.1 ILS type: Outer Marker for runway 09R.
Magnetic variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-00.00N /
88-01-39.29W
2.19.6 Site elevation: 717 ft

2.19.1 ILS type: DME for runway 09R. Magnetic
variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-00.00N /

87-53-10.21W
2.19.6 Site elevation: 654 ft

2.19.1 ILS type: Glide Slope for runway 09R.
Magnetic variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-00.00N /
87-54-51.31W
2.19.6 Site elevation: 658 ft

2.19.1 ILS type: Middle Marker for runway 09R.
Magnetic variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-00.00N /
87-55-54.53W
2.19.6 Site elevation: 659 ft

General Remarks:

AIRPORT NIGHTTIME NOISE ABATEMENT PROCEDURES ARE IN EFFECT FROM 2200 TO 0700;
CONTACT AIRPORT MANAGER ON 773-686-2255.

BIRDS ON & IN THE VICINITY OF AIRPORT. PYROTECHNICS & BIRD CANNONS IN USE FOR
BIRD CONTROL.

AIRCRAFT WITH WINGSPAN GREATER THAN 214 FT REQUIRE 48 HRS PRIOR PERMISSION
REQUIRED - CALL 773-686-2255.

SEE LAND AND HOLD SHORT OPERATIONS SECTION.

DURING PERIODS OF COLD WEATHER; THE APPROACH CONTROL END OF RUNWAY 32R MAY
NOT BE VISIBLE FROM THE ATCT DUE TO STEAM PLUME FROM AIRPORT HEATING PLANT.

BE ALERT: OF DUPLICATE ALPHA-NUMERIC TAXIWAY DESIGNATORS & TERMINAL GATE
DESIGNATIONS INVOLVING THE LETTERS G, H, K L & M.

MAGNETIC DEVIATION POSSIBLE IMMEDIATELY WEST OF TAXIWAY M7 & RUNWAY 22L
APPROACH ON TAXIWAY M.

PERSONNEL AND EQUIPMENT WORKING NEAR VARIOUS TAXIWAYS.

PERIODIC FIRE DEPT TRAINING AT N SECTOR OF THE AIRPORT.

PRIMARY RUN-UP LOCATION GROUND RUN UP ENCLOSURE; SECONDARY RUN UP
LOCATIONS AVAILABLE UPON REQ CONTACT CITY OPERATIONS 773-686-2255.

LINE UP & WAIT WAIVER IN EFFECT AFTER DARK AT THE FOLLOWING INTERSECTIONS;
RUNWAY 32L AT TAXIWAYS T-10 AND, RUNWAY 28 AT TAXIWAY ZY AND ZV, RUNWAY 14L AT
TAXIWAYS U2 & V & RUNWAY 32R AT TAXIWAY V AND RUNWAY 10 AT TAXIWAY ZH. THESE
RUNWAYS WILL BE USED FOR DEPS ONLY WHEN EXERCISING THE PROVISIONS OF THIS
WAIVER.

ALL PART 91 & UNSCHEDULED PART 125, 133 & 135 CHARTER OPERATORS CONTACT SIGNATURE FLIGHT SUPPORT AT 773-686-7000 REGARDING NEW SECURITY REGULATIONS PRIOR TO DEP.

RUNWAY H1 APPROACH DEP PATHS ARE E & W.

B747-400, B777-300ER, B777-200LR(F), A340-600 OR A340-500 CANNOT PASS ON TAXIWAYS 'A' & 'B' INSUFFICIENT WINGTIP CLEARANCE.

BE ALERT: THE NORTHEAST/SOUTHWEST PORTION OF TAXIWAY Y IS NOT VISIBLE FROM THE CENTER ATCT.

GENERAL AVIATION RAMP AND FBO LOCATED AT THE NORTH EAST RAMP VICINITY OF 27L APPROACH

ATCT IS AUTHORIZED TO CONDUCT ARRS TO RUNWAYS 14L & 14R WHILE CONDUCTING SIMULTANEOUS OPPOSITE DIRECTION DEPS OFF OF RUNWAYS 09R & 28 DURING IFR WEATHER CONDITIONS. ATCT IS AUTHORIZED TO CONDUCT SIMULTANEOUS CONVERGING INSTRUMENT APPROACHES TO RUNWAYS 14R & 22R WHILE CONDUCTING SIMULTANEOUS OPPOSITE DIRECTION DEPS OFF OF RUNWAYS 09R & 28 DURING IFR WEATHER CONDITIONS.

TAXIWAY V RESTRICTED TO AIRCRAFT LESS THAN 117 FT WINGSPAN OR WHEELBASE LESS THAN 30 FT (DESIGN GROUP 4-5-6) BETWEEN TAXIWAY KK & TAXIWAY LL.

ATCT IS AUTHORIZED TO CONDUCT SIMULTANEOUS OPPOSITE DIRECTION DEPS ON RUNWAYS 09R AND 28 DURING INSTRUMENT FLIGHT RULES (IFR) WX CONDITIONS.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS & RUNWAYS.

RUNWAY 9L/27R TRIPLE DUAL TANDEM 690,000; DUAL TANDUM W/DUAL WHEEL (2D/D1) 633,000

YANKEE ECHO GATE IS MANNED 24 HRS A DAY. YANKEE TANGO GATE IS MANNED 24 HRS A DAY.

RUNWAY 32L CLOSED TO ARRIVALS.

ATC IS AUTHORIZED TO CONDUCT SIMULTANEOUS DEPS FROM RUNWAYS 14R/14L, 32L/32R, 4L/4R, 22R/22L, 9R WITH 9L OR 10, AND 27L WITH 28 OR 27R WITH COURSE DIVERGENCE BEGINNING NO LATER THAN 4 MILES FROM RUNWAY END.

Indianapolis, IN
Indianapolis Intl
ICAO Identifier KIND

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-43-00.00N / 86-17-40.78W
- 2.2.2 From City: 7 Miles SW Of Indianapolis, IN
- 2.2.3 Elevation: 797 ft
- 2.2.5 Magnetic variation: 2W (1985)
- 2.2.6 Airport Contact: John Clark
7800 COL. H. WEIR COOK MEMORIAL DR.
Indianapolis, IN 46241 (317-487-9594)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 23R
- 2.10.1.b Type of obstacle: Ant (140 ft). Lighted
- 2.10.1.c Location of obstacle: 138 ft from Centerline

- 2.10.1.a. Runway designation: 23L
- 2.10.1.b Type of obstacle: Ant (78 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 484 ft from Centerline

- 2.10.1.a. Runway designation: 32
- 2.10.1.b Type of obstacle: Trees (56 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 391 ft from Centerline

- 2.10.1.a. Runway designation: 14
- 2.10.1.b Type of obstacle: Ant (61 ft). Not Lighted

- or Marked
- 2.10.1.c Location of obstacle: 756 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 05L
- 2.12.2 True Bearing: 45
- 2.12.3 Dimensions: 11200 ft x 150 ft
- 2.12.5 Coordinates: 39-42-23.03N / 86-19-14.94W
- 2.12.6 Threshold elevation: 738 ft
- 2.12.6 Touchdown zone elevation: 748 ft

- 2.12.1 Designation: 23R
- 2.12.2 True Bearing: 225
- 2.12.3 Dimensions: 11200 ft x 150 ft
- 2.12.5 Coordinates: 39-43-41.91N / 86-17-34.40W
- 2.12.6 Threshold elevation: 783 ft
- 2.12.6 Touchdown zone elevation: 783 ft

- 2.12.1 Designation: 05R
- 2.12.2 True Bearing: 45
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 39-42-00.00N / 86-18-15.94W
- 2.12.6 Threshold elevation: 789 ft
- 2.12.6 Touchdown zone elevation: 791 ft

- 2.12.1 Designation: 23L
- 2.12.2 True Bearing: 225
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 39-43-11.28N / 86-16-46.17W
- 2.12.6 Threshold elevation: 788 ft
- 2.12.6 Touchdown zone elevation: 790 ft

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 135
- 2.12.3 Dimensions: 7280 ft x 150 ft
- 2.12.5 Coordinates: 39-44-00.00N / 86-17-19.81W
- 2.12.6 Threshold elevation: 787 ft
- 2.12.6 Touchdown zone elevation: 796 ft

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 315
- 2.12.3 Dimensions: 7280 ft x 150 ft
- 2.12.5 Coordinates: 39-43-12.73N / 86-16-13.42W
- 2.12.6 Threshold elevation: 782 ft

2.12.6 Touchdown zone elevation: 792 ft

AD 2.13 Declared distances

2.13.1 Designation: 05L

2.13.2 Takeoff run available: 11200

2.13.3 Takeoff distance available: 11200

2.13.4 Accelerate-stop distance available: 11200

2.13.5 Landing distance available: 11200

2.13.1 Designation: 23R

2.13.2 Takeoff run available: 11200

2.13.3 Takeoff distance available: 11200

2.13.4 Accelerate-stop distance available: 11200

2.13.5 Landing distance available: 11200

2.13.1 Designation: 05R

2.13.2 Takeoff run available: 10000

2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate-stop distance available: 10000

2.13.5 Landing distance available: 10000

2.13.1 Designation: 23L

2.13.2 Takeoff run available: 10000

2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate-stop distance available: 10000

2.13.5 Landing distance available: 10000

2.13.1 Designation: 14

2.13.2 Takeoff run available: 7280

2.13.3 Takeoff distance available: 7280

2.13.4 Accelerate-stop distance available: 7280

2.13.5 Landing distance available: 7280

2.13.1 Designation: 32

2.13.2 Takeoff run available: 7280

2.13.3 Takeoff distance available: 7280

2.13.4 Accelerate-stop distance available: 7280

2.13.5 Landing distance available: 7280

AD 2.14 Approach and runway lighting

2.14.1 Designation: 05L

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 23R

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system

with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 05R

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 23L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 14

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.10 Remarks: Unusable Beyond 8 Degrees Right Of Course.

2.14.1 Designation: 32

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P IC

2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/S

2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/P CLASS C

2.18.3 Service designation: 124.65 MHz

2.18.1 Service designation: APCH/P CLASS C
2.18.3 Service designation: 127.15 MHz

2.18.1 Service designation: CD PRE TAXI CLNC
2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: CD LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 119.05 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 134.25 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P CLASS C
2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 05L.
Magnetic variation: 2W
2.19.2 ILS identification: IND
2.19.5 Coordinates: 39-42-32.78N /
86-19-00.00W
2.19.6 Site elevation: 735 ft

2.19.1 ILS type: Outer Marker for runway 05L.
Magnetic variation: 2W
2.19.2 ILS identification: IND
2.19.5 Coordinates: 39-37-44.40N /
86-25-00.00W
2.19.6 Site elevation: 689 ft

2.19.1 ILS type: DME for runway 05L. Magnetic
variation: 2W
2.19.2 ILS identification: IND
2.19.5 Coordinates: 39-43-51.36N /
86-17-27.60W
2.19.6 Site elevation: 784 ft

2.19.1 ILS type: Inner Marker for runway 05L.
Magnetic variation: 2W
2.19.2 ILS identification: IND
2.19.5 Coordinates: 39-42-15.71N /
86-19-24.44W
2.19.6 Site elevation: 736 ft

2.19.1 ILS type: Localizer for runway 05L.
Magnetic variation: 2W
2.19.2 ILS identification: IND
2.19.5 Coordinates: 39-43-49.02N /
86-17-25.33W
2.19.6 Site elevation: 788 ft

2.19.1 ILS type: Middle Marker for runway 05L.
Magnetic variation: 2W
2.19.2 ILS identification: IND
2.19.5 Coordinates: 39-42-00.00N /
86-19-43.10W
2.19.6 Site elevation: 726 ft

2.19.1 ILS type: Localizer for runway 23R.
Magnetic variation: 2W
2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-42-15.92N /
86-19-24.00W
2.19.6 Site elevation: 737 ft

2.19.1 ILS type: Glide Slope for runway 23R.
Magnetic variation: 2W
2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-43-36.51N /
86-17-48.46W
2.19.6 Site elevation: 772 ft

2.19.1 ILS type: Outer Marker for runway 23R.
Magnetic variation: 2W
2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-47-44.67N /
86-12-24.00W
2.19.6 Site elevation: 731 ft

2.19.1 ILS type: Middle Marker for runway 23R.
Magnetic variation: 2W
2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-44-24.76N /
86-16-00.00W
2.19.6 Site elevation: 789 ft

2.19.1 ILS type: DME for runway 23R. Magnetic
variation: 2W

2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-43-51.36N /
86-17-27.60W
2.19.6 Site elevation: 784 ft

2.19.1 ILS type: Outer Marker for runway 05R.
Magnetic variation: 2W
2.19.2 ILS identification: OQV
2.19.5 Coordinates: 39-37-00.00N /
86-24-28.30W
2.19.6 Site elevation: 710 ft

2.19.1 ILS type: Middle Marker for runway 05R.
Magnetic variation: 2W
2.19.2 ILS identification: OQV
2.19.5 Coordinates: 39-42-00.00N /
86-19-43.10W
2.19.6 Site elevation: 770 ft

2.19.1 ILS type: DME for runway 05R. Magnetic
variation: 2W
2.19.2 ILS identification: OQV
2.19.5 Coordinates: 39-43-20.20N /
86-16-39.55W
2.19.6 Site elevation: 788 ft

2.19.1 ILS type: Inner Marker for runway 05R.
Magnetic variation: 2W
2.19.2 ILS identification: OQV
2.19.5 Coordinates: 39-41-54.66N /
86-18-23.77W
2.19.6 Site elevation: 778 ft

2.19.1 ILS type: Localizer for runway 05R.
Magnetic variation: 2W
2.19.2 ILS identification: OQV
2.19.5 Coordinates: 39-43-18.37N /
86-16-37.12W
2.19.6 Site elevation: 785 ft

2.19.1 ILS type: Glide Slope for runway 05R.
Magnetic variation: 2W
2.19.2 ILS identification: OQV
2.19.5 Coordinates: 39-42-00.00N /
86-18-00.00W
2.19.6 Site elevation: 789 ft

2.19.1 ILS type: Localizer for runway 23L.
Magnetic variation: 2W
2.19.2 ILS identification: FVJ
2.19.5 Coordinates: 39-41-54.18N /

86-18-24.47W
2.19.6 Site elevation: 779 ft

2.19.1 ILS type: Glide Slope for runway 23L.
Magnetic variation: 2W
2.19.2 ILS identification: FVJ
2.19.5 Coordinates: 39-43-00.00N /
86-16-54.54W
2.19.6 Site elevation: 785 ft

2.19.1 ILS type: Middle Marker for runway 23L.
Magnetic variation: 2W
2.19.2 ILS identification: FVJ
2.19.5 Coordinates: 39-43-30.36N /
86-16-21.76W
2.19.6 Site elevation: 785 ft

2.19.1 ILS type: DME for runway 23L. Magnetic
variation: 2W
2.19.2 ILS identification: FVJ
2.19.5 Coordinates: 39-43-20.20N /
86-16-39.55W
2.19.6 Site elevation: 788 ft

2.19.1 ILS type: Outer Marker for runway 23L.
Magnetic variation: 2W
2.19.2 ILS identification: FVJ
2.19.5 Coordinates: 39-47-11.15N /
86-11-46.46W
2.19.6 Site elevation: 710 ft

2.19.1 ILS type: Glide Slope for runway 32.
Magnetic variation: 2W
2.19.2 ILS identification: COA
2.19.5 Coordinates: 39-43-14.60N /
86-16-23.17W
2.19.6 Site elevation: 782 ft

2.19.1 ILS type: Outer Marker for runway 32.
Magnetic variation: 2W
2.19.2 ILS identification: COA
2.19.5 Coordinates: 39-39-24.86N /
86-11-00.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 32.
Magnetic variation: 2W
2.19.2 ILS identification: COA
2.19.5 Coordinates: 39-42-52.06N /
86-15-44.56W
2.19.6 Site elevation: 752 ft

2.19.1 ILS type: Localizer for runway 32. Magnetic variation: 2W

2.19.2 ILS identification: COA

2.19.5 Coordinates: 39-44-00.00N / 86-17-28.59W

2.19.6 Site elevation: 783 ft

2.19.1 ILS type: Middle Marker for runway 14.

Magnetic variation: 2W

2.19.2 ILS identification: BJP

2.19.5 Coordinates: 39-44-19.96N / 86-17-42.27W

2.19.6 Site elevation: 776 ft

2.19.1 ILS type: Outer Marker for runway 14.

Magnetic variation: 2W

2.19.2 ILS identification: BJP

2.19.5 Coordinates: 39-47-34.36N / 86-22-00.00W

2.19.6 Site elevation: 865 ft

2.19.1 ILS type: Glide Slope for runway 14.

Magnetic variation: 2W

2.19.2 ILS identification: BJP

2.19.5 Coordinates: 39-43-59.30N / 86-17-00.00W

2.19.6 Site elevation: 792 ft

2.19.1 ILS type: Localizer for runway 14. Magnetic variation: 2W

2.19.2 ILS identification: BJP

2.19.5 Coordinates: 39-43-00.00N / 86-16-00.00W

2.19.6 Site elevation: 764 ft

General Remarks:

PRIMARY STUDENT TOUCH AND GO LANDING NOT PERMITTED.

LARGE FLOCKS OF BIRDS ON & IN THE VICINITY OF AIRPORT.

NOISE ABATEMENT PROCEDURES IN EFFECT CONTACT AIRPORT MANAGEMENT ON 317-487-9594.

TAXIWAY V CLOSED TO AIR CARRIER OPERATIONS WITH MORE THAN 30 PASSENGER SEATS.

BE ALERT TO CLOSE PROXIMITY OF RUNWAY 14/32 TO NORTHEAST RAMP.

TAXIWAY 'H' RUNS CONTIGUOUS AT NORTHEAST RAMP.

TAXIWAY H NE OF TAXIWAY M NOT AVAILABLE FOR GROUP V AIRCRAFT.

RUNWAY 05R/23L & RUNWAY 14/32 HAVE 200 FT BLAST PADS BOTH ENDS. RUNWAY 5L/23R HAS 400 FT BLAST PAD AT BOTH ENDS.

Wichita, KS
Wichita Mid-Continent
ICAO Identifier KICT

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 37-38-59.80N / 97-25-59.00W
- 2.2.2 From City: 5 Miles SW Of Wichita, KS
- 2.2.3 Elevation: 1333 ft
- 2.2.5 Magnetic variation: 7E (1985)
- 2.2.6 Airport Contact: Mr. Victor White, A.A.E.
2173 AIR CARGO ROAD
Wichita, KS 67209
(316-946-4700)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 20
- 2.12.3 Dimensions: 10301 ft x 150 ft
- 2.12.5 Coordinates: 37-38-00.00N / 97-26-45.59W
- 2.12.6 Threshold elevation: 1313 ft
- 2.12.6 Touchdown zone elevation: 1314 ft

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 200
- 2.12.3 Dimensions: 10301 ft x 150 ft
- 2.12.5 Coordinates: 37-39-41.76N / 97-26-00.00W
- 2.12.6 Threshold elevation: 1330 ft
- 2.12.6 Touchdown zone elevation: 1330 ft

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 20

- 2.12.3 Dimensions: 7301 ft x 150 ft
- 2.12.5 Coordinates: 37-38-33.95N / 97-25-34.63W
- 2.12.6 Threshold elevation: 1321 ft
- 2.12.6 Touchdown zone elevation: 1321 ft

- 2.12.1 Designation: 19L
- 2.12.2 True Bearing: 200
- 2.12.3 Dimensions: 7301 ft x 150 ft
- 2.12.5 Coordinates: 37-39-41.77N / 97-25-00.00W
- 2.12.6 Threshold elevation: 1320 ft
- 2.12.6 Touchdown zone elevation: 1320 ft

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 150
- 2.12.3 Dimensions: 6301 ft x 150 ft
- 2.12.5 Coordinates: 37-39-27.16N / 97-26-24.27W
- 2.12.6 Threshold elevation: 1332 ft
- 2.12.6 Touchdown zone elevation: 1332 ft

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 330
- 2.12.3 Dimensions: 6301 ft x 150 ft
- 2.12.5 Coordinates: 37-38-33.22N / 97-25-45.10W
- 2.12.6 Threshold elevation: 1322 ft
- 2.12.6 Touchdown zone elevation: 1322 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 01L
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

- 2.14.1 Designation: 19R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

- 2.14.1 Designation: 01R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

- 2.14.1 Designation: 19L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system:
4-light PAPI on left
2.14.10 Remarks: PAPI Out Of Service Indefinitely.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 125.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 134.85 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 134.85 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 325.8 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 327.1 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 385.55 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 385.55 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 134.8 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 125.15 MHz
2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 01L.
Magnetic variation: 7E
2.19.2 ILS identification: TWI
2.19.5 Coordinates: 37-38-16.71N /
97-26-46.01W
2.19.6 Site elevation: 1310 ft

2.19.1 ILS type: Middle Marker for runway 01L.
Magnetic variation: 7E
2.19.2 ILS identification: TWI
2.19.5 Coordinates: 37-37-39.47N /
97-26-57.83W
2.19.6 Site elevation: 1323 ft

2.19.1 ILS type: Outer Marker for runway 01L.
Magnetic variation: 7E
2.19.2 ILS identification: TWI
2.19.5 Coordinates: 37-33-33.95N /
97-28-51.78W
2.19.6 Site elevation: 1310 ft

2.19.1 ILS type: Inner Marker for runway 01L.
Magnetic variation: 7E
2.19.2 ILS identification: TWI
2.19.5 Coordinates: 37-37-57.14N /
97-26-49.69W
2.19.6 Site elevation: 1317 ft

2.19.1 ILS type: Localizer for runway 01L.
Magnetic variation: 7E

2.19.2 ILS identification: TWI

2.19.5 Coordinates: 37-39-51.34N /
97-25-57.41W

2.19.6 Site elevation: 1320 ft

2.19.1 ILS type: Localizer for runway 19R.
Magnetic variation: 7E

2.19.2 ILS identification: HOV

2.19.5 Coordinates: 37-37-55.48N /
97-26-50.44W

2.19.6 Site elevation: 1320 ft

2.19.1 ILS type: Glide Slope for runway 19R.
Magnetic variation: 7E

2.19.2 ILS identification: HOV

2.19.5 Coordinates: 37-39-33.83N /
97-26-10.72W

2.19.6 Site elevation: 1327 ft

2.19.1 ILS type: Middle Marker for runway 19R.
Magnetic variation: 7E

2.19.2 ILS identification: HOV

2.19.5 Coordinates: 37-40-00.00N /
97-25-49.89W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 19R.
Magnetic variation: 7E

2.19.2 ILS identification: HOV

2.19.5 Coordinates: 37-44-16.61N /
97-24-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 01R.
Magnetic variation: 7E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-39-50.13N /
97-24-59.73W

2.19.6 Site elevation: 1312 ft

2.19.1 ILS type: DME for runway 01R. Magnetic
variation: 7E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-39-52.04N /

97-25-00.00W

2.19.6 Site elevation: 1327 ft

2.19.1 ILS type: Glide Slope for runway 01R.

Magnetic variation: 7E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-38-42.64N /
97-25-24.70W

2.19.6 Site elevation: 1315 ft

2.19.1 ILS type: Middle Marker for runway 01R.

Magnetic variation: 7E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-38-00.00N /
97-25-49.07W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 01R.

Magnetic variation: 7E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-34-41.50N /
97-27-21.09W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 19L. Magnetic
variation: 7E

2.19.2 ILS identification: MVP

2.19.5 Coordinates: 37-38-21.53N /
97-25-43.26W

2.19.6 Site elevation: 1320 ft

2.19.1 ILS type: Glide Slope for runway 19L.

Magnetic variation: 7E

2.19.2 ILS identification: MVP

2.19.5 Coordinates: 37-39-30.78N /
97-25-00.00W

2.19.6 Site elevation: 1312 ft

2.19.1 ILS type: Localizer for runway 19L.

Magnetic variation: 7E

2.19.2 ILS identification: MVP

2.19.5 Coordinates: 37-38-21.32N /
97-25-40.42W

2.19.6 Site elevation: 1318 ft

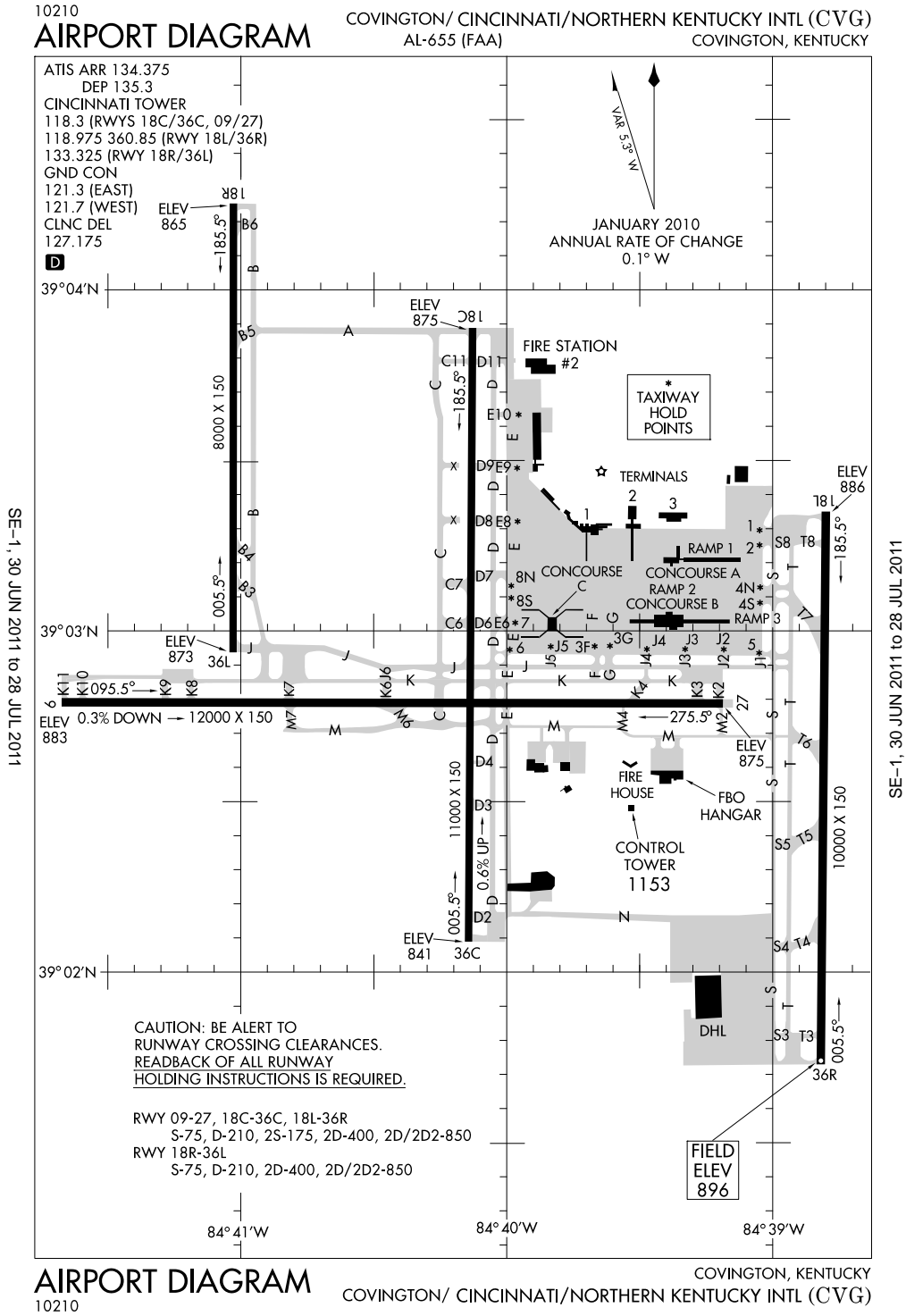
General Remarks:

MIGRATORY BIRDS ON & IN THE VICINITY OF AIRPORT.

PRIOR PERMISSION REQUIRED FOR AIRCRAFT CARRYING CLASS 1 – DIVISION 1.1; 1.2 OR 1.3 EXPLOSIVES AS DEFINED BY 49 CODE OF FEDERAL REGULATIONS 173.50.

TAXIWAYS F, G, H, J, M1 AND ALL PARKING RAMPS ARE NON-MOVEMENT AREAS.

Covington, Kentucky Cincinnati/Northern Kentucky International ICAO Identifier KCVG



Covington, KY
Cincinnati/Northern Kentucky Intl
ICAO Identifier KCVG

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-02-55.81N / 84-40-00.00W
- 2.2.2 From City: 8 Miles SW Of Covington, KY
- 2.2.3 Elevation: 896 ft
- 2.2.5 Magnetic variation: 4W (1995)
- 2.2.6 Airport Contact: Mr. John C. Mok
PO BOX 752000
Cincinnati, OH 45275
(859-767-3151)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 36L
- 2.10.1.b Type of obstacle: Tree (91 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 895 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 18L
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 39-03-21.08N / 84-38-48.00W
- 2.12.6 Threshold elevation: 886 ft
- 2.12.6 Touchdown zone elevation: 889 ft

- 2.12.1 Designation: 36R
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 10000 ft x 150 ft

- 2.12.5 Coordinates: 39-01-42.24N / 84-38-48.46W
- 2.12.6 Threshold elevation: 896 ft
- 2.12.6 Touchdown zone elevation: 896 ft

- 2.12.1 Designation: 18C
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.5 Coordinates: 39-03-53.07N / 84-40-00.00W
- 2.12.6 Threshold elevation: 875 ft
- 2.12.6 Touchdown zone elevation: 875 ft

- 2.12.1 Designation: 36C
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.5 Coordinates: 39-02-00.00N / 84-40-00.00W
- 2.12.6 Threshold elevation: 841 ft
- 2.12.6 Touchdown zone elevation: 851 ft

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-02-46.91N / 84-41-42.36W
- 2.12.6 Threshold elevation: 883 ft
- 2.12.6 Touchdown zone elevation: 883 ft

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 39-02-46.54N / 84-39-10.26W
- 2.12.6 Threshold elevation: 875 ft
- 2.12.6 Touchdown zone elevation: 875 ft

- 2.12.1 Designation: 18R
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 8000 ft x 150 ft
- 2.12.5 Coordinates: 39-04-15.18N / 84-41-00.00W
- 2.12.6 Threshold elevation: 865 ft
- 2.12.6 Touchdown zone elevation: 868 ft

- 2.12.1 Designation: 36L
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 8000 ft x 150 ft
- 2.12.5 Coordinates: 39-02-56.11N / 84-41-00.00W
- 2.12.6 Threshold elevation: 873 ft

2.12.6 Touchdown zone elevation: 873 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 09
- 2.13.2 Takeoff run available: 12000
- 2.13.3 Takeoff distance available: 12000
- 2.13.4 Accelerate-stop distance available: 11880
- 2.13.5 Landing distance available: 11880

- 2.13.1 Designation: 27
- 2.13.2 Takeoff run available: 12000
- 2.13.3 Takeoff distance available: 12000
- 2.13.4 Accelerate-stop distance available: 12000
- 2.13.5 Landing distance available: 12000

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 18L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right
- 2.14.1 Designation: 36R
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right
- 2.14.1 Designation: 18C
- 2.14.2 Approach lighting system: SSALR: Simplified short approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on right
- 2.14.1 Designation: 36C
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.1 Designation: 09
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system:

4-light PAPI on left

- 2.14.1 Designation: 27
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

- 2.14.1 Designation: 18R
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

- 2.14.1 Designation: 36L
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.975 MHz
- 2.18.1 Service designation: APCH/P CLASS B
- 2.18.3 Service designation: 119.7 MHz
- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.3 MHz
- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz
- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.7 MHz
- 2.18.1 Service designation: APCH/P CLASS B
- 2.18.3 Service designation: 123.875 MHz
- 2.18.1 Service designation: (001-180)
- 2.18.3 Service designation: 126.65 MHz
- 2.18.1 Service designation: CD/P
- 2.18.3 Service designation: 127.175 MHz
- 2.18.1 Service designation: DEP/P CLASS B
- 2.18.3 Service designation: 128.7 MHz
- 2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 134.375 MHz
2.18.4 Hours of operation: 24

84-38-48.51W
2.19.6 Site elevation: 872 ft

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.3 MHz
2.18.4 Hours of operation: 24

2.19.1 ILS type: DME for runway 36R. Magnetic variation: 4W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-03-30.88N / 84-38-51.18W
2.19.6 Site elevation: 905 ft

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 360.85 MHz

2.19.1 ILS type: Middle Marker for runway 36R. Magnetic variation: 4W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-01-16.54N / 84-38-48.58W
2.19.6 Site elevation: 915 ft

2.18.1 Service designation: APCH/P CLASS B
2.18.3 Service designation: 254.25 MHz

2.18.1 Service designation: APCH/P CLASS B
2.18.3 Service designation: 363.15 MHz

2.19.1 ILS type: Localizer for runway 36R. Magnetic variation: 4W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-03-31.50N / 84-38-47.96W
2.19.6 Site elevation: 892 ft

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 133.325 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 18L. Magnetic variation: 4W
2.19.2 ILS identification: CIZ
2.19.5 Coordinates: 39-01-31.58N / 84-38-45.41W
2.19.6 Site elevation: 915 ft

2.19.1 ILS type: Glide Slope for runway 36R. Magnetic variation: 4W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-01-52.80N / 84-38-43.34W
2.19.6 Site elevation: 890 ft

2.19.1 ILS type: Localizer for runway 18L. Magnetic variation: 4W
2.19.2 ILS identification: CIZ
2.19.5 Coordinates: 39-01-31.79N / 84-38-48.50W
2.19.6 Site elevation: 899 ft

2.19.1 ILS type: Inner Marker for runway 36R. Magnetic variation: 4W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-01-33.56N / 84-38-48.50W
2.19.6 Site elevation: 899 ft

2.19.1 ILS type: Glide Slope for runway 18L. Magnetic variation: 4W
2.19.2 ILS identification: CIZ
2.19.5 Coordinates: 39-03-10.88N / 84-38-42.98W
2.19.6 Site elevation: 881 ft

2.19.1 ILS type: Localizer for runway 18C. Magnetic variation: 4W
2.19.2 ILS identification: SIC
2.19.5 Coordinates: 39-01-59.67N / 84-40-00.00W
2.19.6 Site elevation: 839 ft

2.19.1 ILS type: Middle Marker for runway 18L. Magnetic variation: 4W
2.19.2 ILS identification: CIZ
2.19.5 Coordinates: 39-03-47.57N /

2.19.1 ILS type: Middle Marker for runway 18C. Magnetic variation: 4W
2.19.2 ILS identification: SIC
2.19.5 Coordinates: 39-04-10.50N / 84-40-00.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 18C. Magnetic variation: 4W

2.19.2 ILS identification: SIC

2.19.5 Coordinates: 39-01-59.68N / 84-40-00.00W

2.19.6 Site elevation: 845 ft

2.19.1 ILS type: Outer Marker for runway 18C. Magnetic variation: 4W

2.19.2 ILS identification: SIC

2.19.5 Coordinates: 39-07-30.20N / 84-40-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 18C. Magnetic variation: 4W

2.19.2 ILS identification: SIC

2.19.5 Coordinates: 39-03-42.65N / 84-40-12.14W

2.19.6 Site elevation: 868 ft

2.19.1 ILS type: Localizer for runway 36C. Magnetic variation: 4W

2.19.2 ILS identification: CVG

2.19.5 Coordinates: 39-04-00.00N / 84-40-00.00W

2.19.6 Site elevation: 882 ft

2.19.1 ILS type: DME for runway 36C. Magnetic variation: 4W

2.19.2 ILS identification: CVG

2.19.5 Coordinates: 39-04-00.00N / 84-40-10.17W

2.19.6 Site elevation: 886 ft

2.19.1 ILS type: Glide Slope for runway 36C. Magnetic variation: 4W

2.19.2 ILS identification: CVG

2.19.5 Coordinates: 39-02-15.48N / 84-40-12.49W

2.19.6 Site elevation: 834 ft

2.19.1 ILS type: Inner Marker for runway 36C. Magnetic variation: 4W

2.19.2 ILS identification: CVG

2.19.5 Coordinates: 39-01-54.05N / 84-40-00.00W

2.19.6 Site elevation: 956 ft

2.19.1 ILS type: Middle Marker for runway 36C. Magnetic variation: 4W

2.19.2 ILS identification: CVG

2.19.5 Coordinates: 39-01-31.79N / 84-40-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN

2.19.5 Coordinates: 39-02-42.92N / 84-41-28.27W

2.19.6 Site elevation: 874 ft

2.19.1 ILS type: Outer Marker for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN

2.19.5 Coordinates: 39-02-44.69N / 84-46-22.67W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN

2.19.5 Coordinates: 39-02-46.92N / 84-41-27.61W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN

2.19.5 Coordinates: 39-02-46.53N / 84-39-00.00W

2.19.6 Site elevation: 874 ft

2.19.1 ILS type: DME for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN

2.19.5 Coordinates: 39-02-43.95N / 84-39-00.00W

2.19.6 Site elevation: 872 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 4W

2.19.2 ILS identification: JDP

2.19.5 Coordinates: 39-02-46.94N / 84-41-55.34W

2.19.6 Site elevation: 884 ft

2.19.1 ILS type: Middle Marker for runway 27. Magnetic variation: 4W

2.19.2 ILS identification: JDP

2.19.5 Coordinates: 39-02-46.46N /

- 84-38-37.56W
2.19.6 Site elevation: 890 ft
- 2.19.1 ILS type: Outer Marker for runway 27.
Magnetic variation: 4W
2.19.2 ILS identification: JDP
2.19.5 Coordinates: 39-02-46.53N /
84-32-59.24W
2.19.6 Site elevation: 860 ft
- 2.19.1 ILS type: Glide Slope for runway 27.
Magnetic variation: 4W
2.19.2 ILS identification: JDP
2.19.5 Coordinates: 39-02-46.58N /
84-39-25.15W
2.19.6 Site elevation: 867 ft
- 2.19.1 ILS type: DME for runway 36L. Magnetic
variation: 4W
2.19.2 ILS identification: VAC
2.19.5 Coordinates: 39-04-25.03N /
84-41-00.00W
2.19.6 Site elevation: 848 ft
- 2.19.1 ILS type: Localizer for runway 36L.
Magnetic variation: 4W
2.19.2 ILS identification: VAC
2.19.5 Coordinates: 39-04-25.49N /
84-41-00.00W
2.19.6 Site elevation: 855 ft
- 2.19.1 ILS type: Glide Slope for runway 36L.
Magnetic variation: 4W
- 2.19.2 ILS identification: VAC
2.19.5 Coordinates: 39-03-00.00N /
84-41-00.00W
2.19.6 Site elevation: 867 ft
- 2.19.1 ILS type: Localizer for runway 18R.
Magnetic variation: 4W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-02-41.27N /
84-41-00.00W
2.19.6 Site elevation: 878 ft
- 2.19.1 ILS type: Inner Marker for runway 18R.
Magnetic variation: 4W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-04-23.57N /
84-41-00.00W
2.19.6 Site elevation: 860 ft
- 2.19.1 ILS type: Glide Slope for runway 18R.
Magnetic variation: 4W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-04-00.00N /
84-41-00.00W
2.19.6 Site elevation: 861 ft
- 2.19.1 ILS type: DME for runway 18R. Magnetic
variation: 4W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-02-41.52N /
84-41-00.00W
2.19.6 Site elevation: 869 ft

General Remarks:

NOISE SENSITIVE AREAS NORTH & SOUTH OF AIRPORT. RUNWAY ASSIGNMENTS BETWEEN 2200-0700 WILL BE PREDICATED ON NOISE ABATEMENT CONSIDERATIONS.

FOR ALL RUNWAYS GROSS WEIGHT STRENGTH FOR 777 AIRCRAFT IS 595,000 LBS.

FOR ALL RUNWAYS GROSS WEIGHT STRENGTH FOR MD11 AIRCRAFT IS 605,000 LBS.

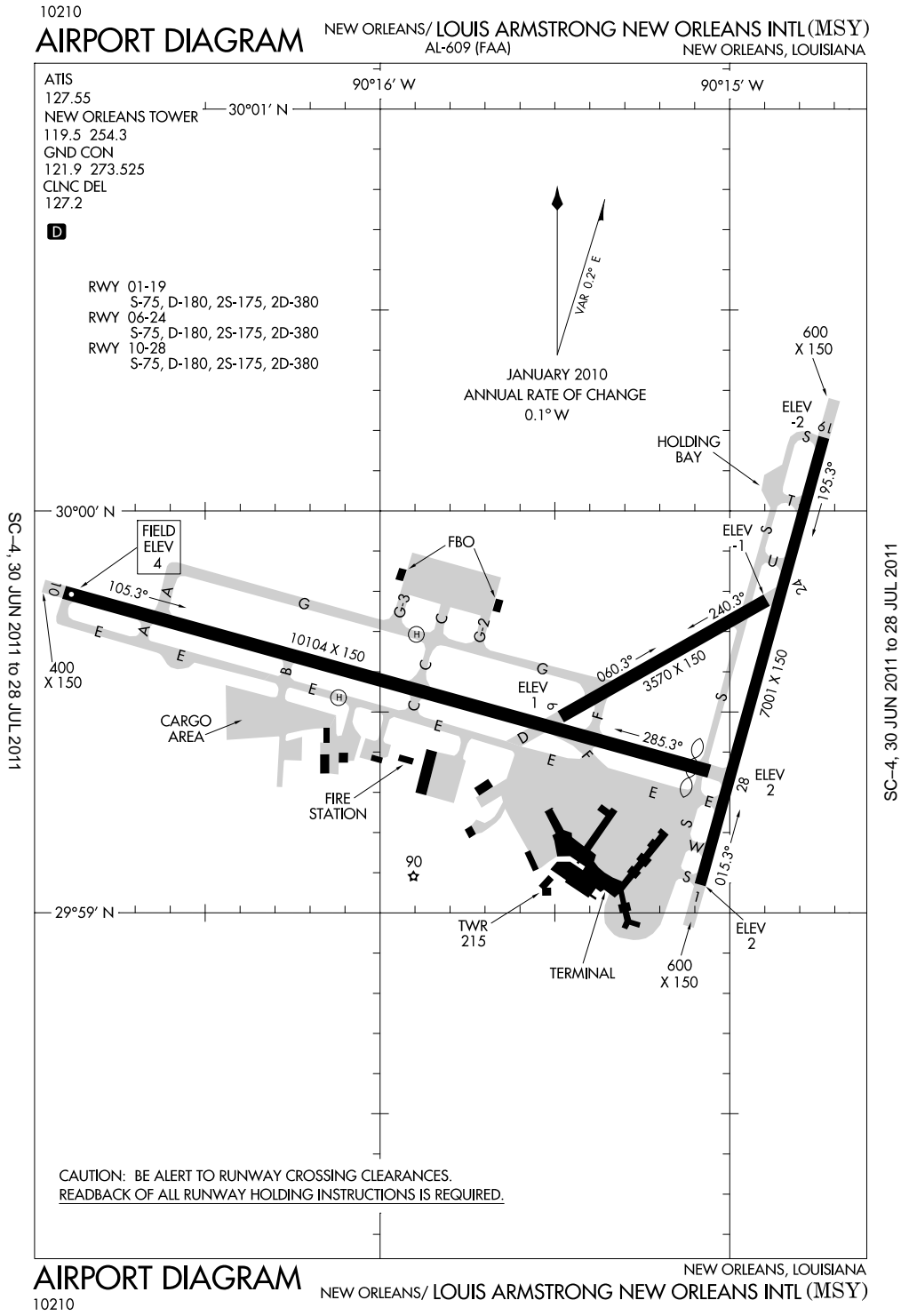
SUCCESSIVE OR SIMULTANEOUS DEPS FROM RUNWAYS 18L AND RUNWAY 18C ARE APPROVED WITH COURSE DIVERGENCE BEGINNING NO FURTHER THAN 2 MILES FROM END OF RUNWAY DUE TO NOISE ABATEMENT RESTRICTIONS.

RUNWAY 09/27 WEST 4200 FT CONCRETE; EAST 750 FT CONCRETE; REMAINDER ASPHALT OVERLAY.

SUCCESSIVE OR SIMULTANEOUS DEPS FROM RUNWAY 36C & RUNWAY 36R ARE APPROVED WITH COURSE DIVERGENCE BEGINNING NO FURTHER THAN 2 MILES FROM END OF RUNWAY DUE TO NOISE ABATEMENT RESTRICTIONS.

TAXIWAY S SOUTH OF TAXIWAY N CLOSED TO AIRCRAFT WITH WINGSPANS 171 FT AND GREATER.

New Orleans, Louisiana Louis Armstrong New Orleans International ICAO Identifier KMSY



New Orleans, LA
Louis Armstrong New Orleans Intl
ICAO Identifier KMSY

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 29-59-36.20N / 90-15-28.90W
2.2.2 From City: 10 Miles W Of New Orleans, LA
2.2.3 Elevation: 4 ft
2.2.5 Magnetic variation: 2E (1990)
2.2.6 Airport Contact: Iftikhar Ahmad
PO BOX 20007
New Orleans, LA 70141
(504-628-2426)
2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: 100LL,A
2.4.4 De-icing facilities: None
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 01
2.10.1.b Type of obstacle: Road (12 ft). Lighted
2.10.1.c Location of obstacle: 365 ft from Centerline

2.10.1.a. Runway designation: 19
2.10.1.b Type of obstacle: Road (13 ft). Lighted
2.10.1.c Location of obstacle: 289 ft from Centerline

2.10.1.a. Runway designation: 06
2.10.1.b Type of obstacle: Pole (30 ft). Lighted
2.10.1.c Location of obstacle: 343 ft from Centerline

2.10.1.a. Runway designation: 24
2.10.1.b Type of obstacle: Tree (33 ft). Not Lighted or Marked

- 2.10.1.c Location of obstacle: 315 ft from Centerline

- 2.10.1.a. Runway designation: 28
2.10.1.b Type of obstacle: Tree (53 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 694 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 01
2.12.2 True Bearing: 15
2.12.3 Dimensions: 7001 ft x 150 ft
2.12.5 Coordinates: 29-59-00.00N / 90-15-00.00W
2.12.6 Threshold elevation: 2 ft
2.12.6 Touchdown zone elevation: 3 ft

- 2.12.1 Designation: 19
2.12.2 True Bearing: 195
2.12.3 Dimensions: 7001 ft x 150 ft
2.12.5 Coordinates: 30-00-10.99N / 90-14-43.84W
2.12.6 Threshold elevation: -2 ft
2.12.6 Touchdown zone elevation: 0 ft

- 2.12.1 Designation: 06
2.12.2 True Bearing: 60
2.12.3 Dimensions: 3570 ft x 150 ft
2.12.5 Coordinates: 29-59-29.27N / 90-15-28.99W
2.12.6 Threshold elevation: 1 ft
2.12.6 Touchdown zone elevation: 1 ft

- 2.12.1 Designation: 24
2.12.2 True Bearing: 240
2.12.3 Dimensions: 3570 ft x 150 ft
2.12.5 Coordinates: 29-59-46.68N / 90-14-53.67W
2.12.6 Threshold elevation: -1 ft
2.12.6 Touchdown zone elevation: 1 ft

- 2.12.1 Designation: 10
2.12.2 True Bearing: 105
2.12.3 Dimensions: 10104 ft x 150 ft
2.12.5 Coordinates: 29-59-47.86N / 90-16-54.22W
2.12.6 Threshold elevation: 4 ft
2.12.6 Touchdown zone elevation: 4 ft

- 2.12.1 Designation: 28

- 2.12.2 True Bearing: 285
- 2.12.3 Dimensions: 10104 ft x 150 ft
- 2.12.5 Coordinates: 29-59-21.17N / 90-15-00.00W
- 2.12.6 Threshold elevation: 2 ft
- 2.12.6 Touchdown zone elevation: 3 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 01
- 2.13.2 Takeoff run available: 7001
- 2.13.3 Takeoff distance available: 7001
- 2.13.4 Accelerate-stop distance available: 7001
- 2.13.5 Landing distance available: 7001

- 2.13.1 Designation: 19
- 2.13.2 Takeoff run available: 7001
- 2.13.3 Takeoff distance available: 7001
- 2.13.4 Accelerate-stop distance available: 7001
- 2.13.5 Landing distance available: 7001

- 2.13.1 Designation: 06
- 2.13.2 Takeoff run available: 3570
- 2.13.3 Takeoff distance available: 3570
- 2.13.4 Accelerate-stop distance available: 3570
- 2.13.5 Landing distance available: 3570

- 2.13.1 Designation: 24
- 2.13.2 Takeoff run available: 3570
- 2.13.3 Takeoff distance available: 3570
- 2.13.4 Accelerate-stop distance available: 3570
- 2.13.5 Landing distance available: 3570

- 2.13.1 Designation: 10
- 2.13.2 Takeoff run available: 10104
- 2.13.3 Takeoff distance available: 10104
- 2.13.4 Accelerate-stop distance available: 10104
- 2.13.5 Landing distance available: 10104

- 2.13.1 Designation: 28
- 2.13.2 Takeoff run available: 10104
- 2.13.3 Takeoff distance available: 10104
- 2.13.4 Accelerate-stop distance available: 10104
- 2.13.5 Landing distance available: 9800

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 01
- 2.14.2 Approach lighting system: LDIN: Lead-in light system
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 19
- 2.14.2 Approach lighting system: MALS: 1400 feet medium intensity approach lighting system
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 10
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right

- 2.14.1 Designation: 28
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 119.5 MHz

- 2.18.1 Service designation: APCH/P
- 2.18.3 Service designation: 120.1 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS B
- 2.18.3 Service designation: 123.85 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS B
- 2.18.3 Service designation: 125.5 MHz

- 2.18.1 Service designation: IC
- 2.18.3 Service designation: 125.5 MHz

- 2.18.1 Service designation: CD/P PTC
- 2.18.3 Service designation: 127.2 MHz

- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 127.55 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 133.15 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 254.3 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: IC

2.18.3 Service designation: 284.7 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 290.3 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B

2.18.3 Service designation: 350.35 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 273.525 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 01. Magnetic
variation: 2E

2.19.2 ILS identification: JFI

2.19.5 Coordinates: 30-00-21.65N /
90-14-43.24W

2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Glide Slope for runway 01.
Magnetic variation: 2E

2.19.2 ILS identification: JFI

2.19.5 Coordinates: 29-59-13.61N /
90-14-58.55W

2.19.6 Site elevation: 0 ft

2.19.1 ILS type: Outer Marker for runway 01.
Magnetic variation: 2E

2.19.2 ILS identification: JFI

2.19.5 Coordinates: 29-54-53.36N /
90-16-26.35W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 01. Magnetic
variation: 2E

2.19.2 ILS identification: JFI

2.19.5 Coordinates: 30-00-20.51N /
90-14-40.81W

2.19.6 Site elevation: -4 ft

2.19.1 ILS type: Middle Marker for runway 01.
Magnetic variation: 2E

2.19.2 ILS identification: JFI

2.19.5 Coordinates: 29-58-28.53N /
90-15-15.88W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 19. Magnetic
variation: 2E

2.19.2 ILS identification: ONW

2.19.5 Coordinates: 30-00-21.65N /
90-14-43.24W

2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Localizer for runway 19. Magnetic
variation: 2E

2.19.2 ILS identification: ONW

2.19.5 Coordinates: 29-58-56.76N /
90-15-00.00W

2.19.6 Site elevation: 2 ft

2.19.1 ILS type: Glide Slope for runway 10.
Magnetic variation: 2E

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-48.61N /
90-16-39.25W

2.19.6 Site elevation: 3 ft

2.19.1 ILS type: Outer Marker for runway 10.
Magnetic variation: 2E

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 30-01-30.85N /
90-23-59.58W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 10.
Magnetic variation: 2E

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-50.26N /
90-17-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 10. Magnetic variation: 2E

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-17.34N / 90-14-56.02W

2.19.6 Site elevation: 13 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 2E

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-19.32N / 90-14-55.85W

2.19.6 Site elevation: 0 ft

2.19.1 ILS type: Middle Marker for runway 10. Magnetic variation: 2E

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-56.63N / 90-17-22.12W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 28. Magnetic variation: 2E

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-59-17.34N / 90-14-56.02W

2.19.6 Site elevation: 13 ft

2.19.1 ILS type: Glide Slope for runway 28.

Magnetic variation: 2E

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-59-27.97N / 90-15-16.78W

2.19.6 Site elevation: 1 ft

2.19.1 ILS type: Middle Marker for runway 28.

Magnetic variation: 2E

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-59-15.11N / 90-14-37.70W

2.19.6 Site elevation: 1 ft

2.19.1 ILS type: Outer Marker for runway 28.

Magnetic variation: 2E

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-58-12.35N / 90-10-27.99W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 2E

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-59-50.53N / 90-17-00.00W

2.19.6 Site elevation: 5 ft

General Remarks:

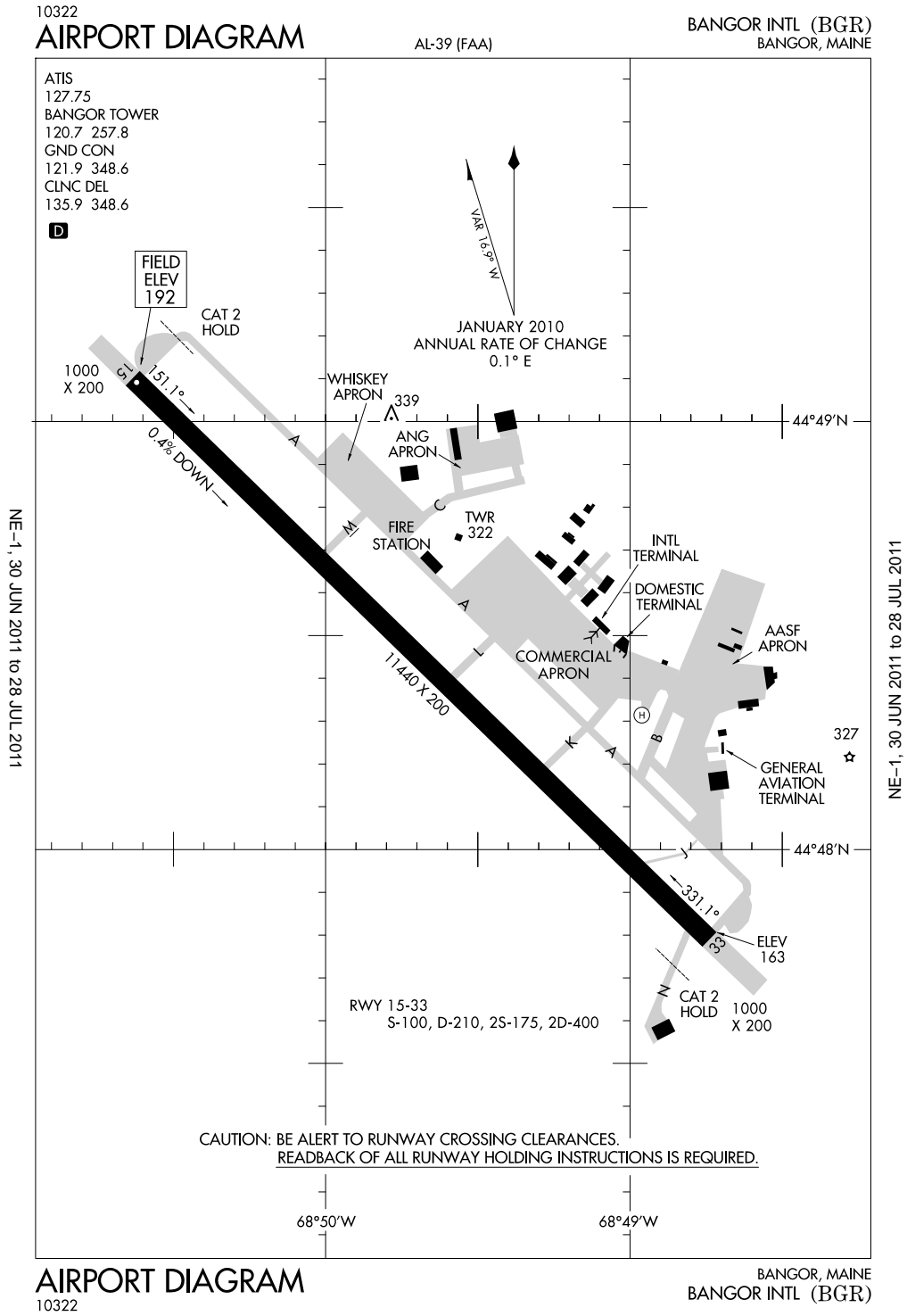
180 DEGREE & LOCKED WHEEL TURNS PROHIBITED ON ASPHALT SURFACE AIRCRAFT 12500 LBS & OVER.

FLOCKS OF BIRDS ON & IN VICINITY OF AIRPORT.

RUNWAY 10 NOISE SENSITIVE FOR DEP; AVAILABLE FOR OPERATIONAL NECESSITY. ALL RUNWAYS NOISE SENSITIVE FOR ARR. ARRIVING TURBOJETS MUST MAKE 5 MILE FINAL APPROACH TO MINIMIZE NOISE.

RUNWAY 06/24 CLOSED TO TAKEOFFS AND LANDINGS INDEFINITELY.

**Bangor, Maine
Bangor International
ICAO Identifier KBGR**



Bangor, ME
Bangor Intl
ICAO Identifier KBGR

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 44-48-26.80N / 68-49-41.30W
- 2.2.2 From City: 3 Miles W Of Bangor, ME
- 2.2.3 Elevation: 192 ft
- 2.2.5 Magnetic variation: 19W (1985)
- 2.2.6 Airport Contact: Rebecca Hupp
BANGOR INTERNATIONAL ARPT
Bangor, ME 4401 (207-992-4600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 33
- 2.10.1.b Type of obstacle: Trees (76 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 100 ft x 100 ft

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 134
- 2.12.3 Dimensions: 11440 ft x 200 ft
- 2.12.5 Coordinates: 44-49-00.00N / 68-50-38.15W
- 2.12.6 Threshold elevation: 192 ft
- 2.12.6 Touchdown zone elevation: 192 ft

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 314

- 2.12.3 Dimensions: 11440 ft x 200 ft
- 2.12.5 Coordinates: 44-47-47.41N / 68-48-44.36W
- 2.12.6 Threshold elevation: 163 ft
- 2.12.6 Touchdown zone elevation: 163 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 15
- 2.13.2 Takeoff run available: 11440
- 2.13.3 Takeoff distance available: 11440
- 2.13.4 Accelerate-stop distance available: 11440
- 2.13.5 Landing distance available: 11440

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 15
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 33
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 120.7 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS C IC
- 2.18.3 Service designation: 124.5 MHz

- 2.18.1 Service designation: ATIS
- 2.18.3 Service designation: 127.75 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: CD/P
- 2.18.3 Service designation: 135.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 239.3 MHz

68-48-59.71W
2.19.6 Site elevation: 149 ft

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 239.3 MHz

2.19.1 ILS type: DME for runway 33. Magnetic
variation: 19W
2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-47-42.50N /
68-48-31.81W

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.19.6 Site elevation: 166 ft

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.19.1 ILS type: Localizer for runway 15. Magnetic
variation: 19W
2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-47-40.37N /

2.18.1 Service designation: GND/P CD/P
2.18.3 Service designation: 348.6 MHz

68-48-34.19W
2.19.6 Site elevation: 166 ft

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 41.2 MHz

2.19.1 ILS type: Glide Slope for runway 15.
Magnetic variation: 19W
2.19.2 ILS identification: JVH

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 118.925 MHz

2.19.5 Coordinates: 44-49-00.00N /
68-50-22.48W
2.19.6 Site elevation: 188 ft

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 33. Magnetic
variation: 19W
2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-49-13.62N /
68-50-48.98W
2.19.6 Site elevation: 182 ft

2.19.1 ILS type: Inner Marker for runway 15.
Magnetic variation: 19W
2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-49-12.06N /
68-50-46.72W
2.19.6 Site elevation: 184 ft

2.19.1 ILS type: Middle Marker for runway 33.
Magnetic variation: 19W
2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-47-30.62N /
68-48-20.24W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 15. Magnetic
variation: 19W
2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-47-42.50N /
68-48-31.81W
2.19.6 Site elevation: 166 ft

2.19.1 ILS type: Outer Marker for runway 33.
Magnetic variation: 19W
2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-43-39.19N /
68-42-46.33W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 15.
Magnetic variation: 19W
2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-52-49.62N /
68-55-59.54W
2.19.6 Site elevation: 129 ft

2.19.1 ILS type: Glide Slope for runway 33.
Magnetic variation: 19W
2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-47-53.70N /

2.19.1 ILS type: Middle Marker for runway 15.
Magnetic variation: 19W
2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-49-23.69N /
68-51-00.00W

2.19.6 Site elevation: 158 ft

General Remarks:

TAXIWAY J LIMITED TO AIRCRAFT 75000 LBS GROSS TAKEOFF WEIGHT

TRANSIENT AIRCRAFT MAY BE DIVERTED TO CIVILIAN SIDE DURING NON-DUTY HRS & WEEKENDS. FEE REQUIRED; NO ANG TRANSIENT ALERT.

RESTRICTED: TAXIWAY 'J' CLOSED DURING WINTER.

TRAFFIC PATTERN: RUNWAY 33 LEFT TRAFFIC, TURBO JET TRAFFIC 2000' MSL UNLESS OTHERWISE INSTR.

MISC: RUNWAY 15-33 GROOVED.

ANG: PRIOR PERMISSION REQUIRED DSN 698-7232 (COMM 207-990-7232), 3 HR OUT CALL (HF 6761) & 30 MIN OUT CALL (311.0) REQUIRED TO ENSURE CUSTOMS/AG AVAIL & TIMELY TRANSIENT SERVICE. TRANSIENT MAINT AVAILABLE BY PRIOR PERMISSION REQUIRED. TRANSIENT AIRCRAFT MAY BE DIVERTED TO CIVIL SIDE DUR OPERATING HRS.

ANG: FEE REQUIRE. ANG NOT EQUIPMENT OR MANNED WITH AN AERIAL PORT FLIGHT 30 OR MORE PASSENGER WILL BE SENT TO CITY FOR PROCESSING. CAN HANDLE ALL AIR MOBILITY COMMAND AIRCRAFT. SERVICE AVAILABLE 24/7. ALL HAZARD CARGO SHOULD BE PRE-COORD FOR SAFETY REASONS, NO HOT CARGO PAD AVAILABLE.

ARRANGE: OPR 1230-2100Z++ MON-FRI EXCEPT HOLIDAY. LIMITED MAINT. J8. PRIOR PERMISSION REQUIRED MAY-OCT SERVICE DSN 626-1100.

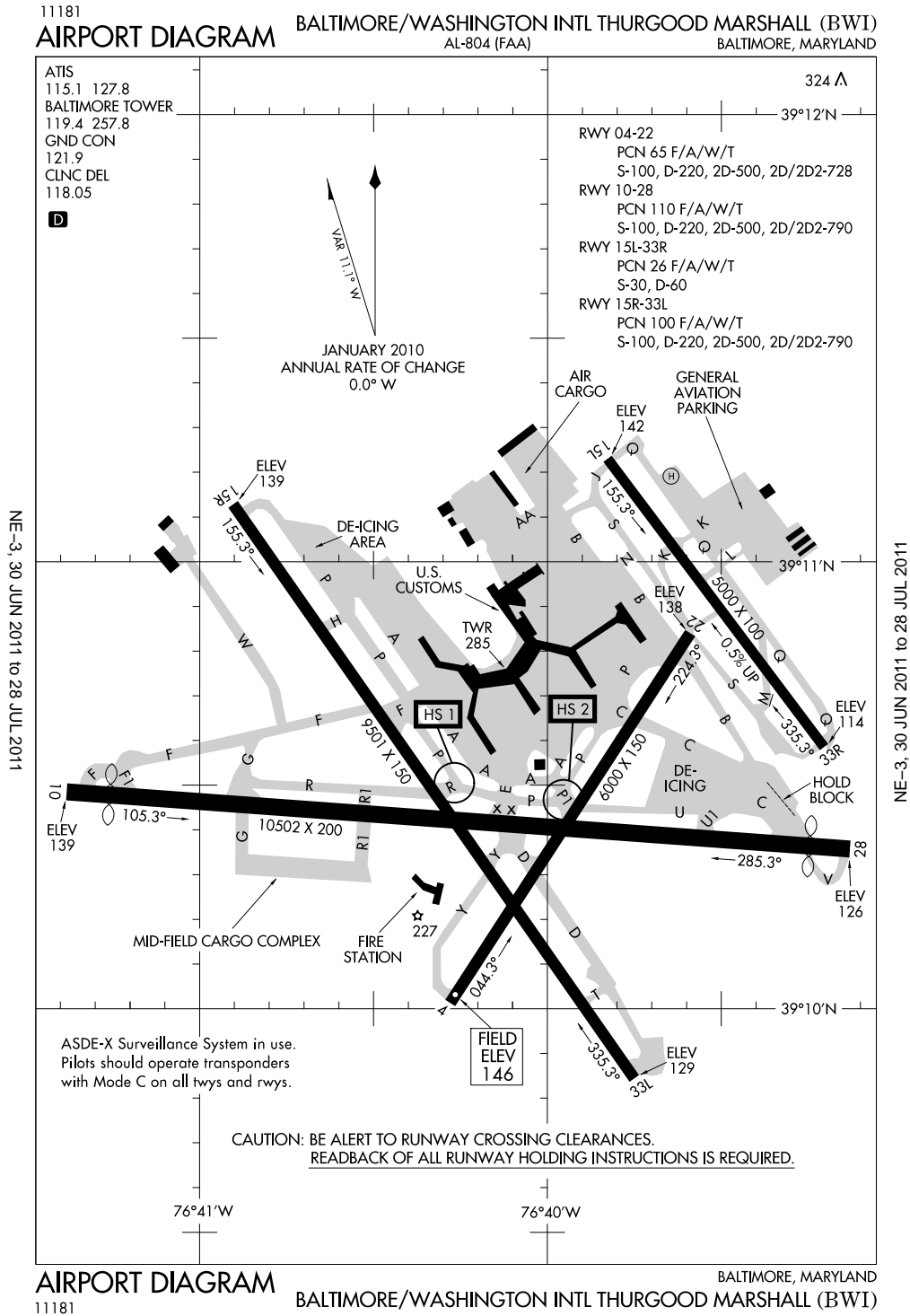
CAUTION: DEER HAZARD.

CAUTION: BASH PHASE II PERIOD OCT-NOV, APR-MAY. EXPECT INCREASED BIRD ACTIVITY. CONTACT BASE OPS/COMMAND POST/SOF FOR CURRENT BIRDWATCH CONDITION.

SERVICE-FLUID: REMARKS: FOREIGN MILITARY ONLY: ON BASE LOX SERVICE UNAVAILABLE. OFF-BASE CONTRACTED LOX AVAILABLE 24/7, CONTACT ADVANTAGE GAS (207-942-6393) FOR PRECOORDINATION.

ANG: LIMITED TRANSIENT AIRCRAFT RAMP SPACE AVAILABLE MAY 08 THRU OCT 09 DUE TO RAMP CONSTRUCTION. CIVIL RAMP SPACE FOR MILITARY AIRCRAFT MAY ALSO BE AFFECT.

Baltimore, Maryland Baltimore-Washington International Thurgood Marshall ICAO Identifier KBWI



Baltimore, MD
Baltimore/Washington Intl Thurgood Marshal
ICAO Identifier KBWI

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-10-31.30N / 76-40-00.00W
- 2.2.2 From City: 9 Miles S Of Baltimore, MD
- 2.2.3 Elevation: 146 ft
- 2.2.5 Magnetic variation: 11W (2000)
- 2.2.6 Airport Contact: John Stewart
PO BOX 8766
BWI Airport, MD 21240
(410-859-7018)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: RWY 28 De-Ice Pad Lane 1 R Standard To Aircraft With Wingspan 171 Ft Or Less, Lane 2 R Standard To Aircraft With Wingspan 135 Ft Or Less, Lane 3 Is Used By Large Aircraft Max Wingspan 215 Ft And When In Use-Lanes 2 And 4 Are Unavailable. Lanes 4, 5 And 6 Are R Standard To Aircraft Wingspan 135 Ft Or Less.
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 15L
- 2.10.1.b Type of obstacle: Pole (31 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 615 ft from Centerline

- 2.10.1.a. Runway designation: 33R
- 2.10.1.b Type of obstacle: Tree (39 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 585 ft from Centerline

- 2.10.1.a. Runway designation: 15R
- 2.10.1.b Type of obstacle: Ant (126 ft). Lighted
- 2.10.1.c Location of obstacle: 908 ft from Centerline

- 2.10.1.a. Runway designation: 33L
- 2.10.1.b Type of obstacle: Tower (154 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 906 ft from Centerline

- 2.10.1.a. Runway designation: 10
- 2.10.1.b Type of obstacle: Tree (35 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 305 ft from Centerline

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Tree (31 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 425 ft from Centerline

- 2.10.1.a. Runway designation: 04
- 2.10.1.b Type of obstacle: Tree (51 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 22
- 2.10.1.b Type of obstacle: Pole (60 ft). Lighted
- 2.10.1.c Location of obstacle: 328 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 15L
- 2.12.2 True Bearing: 144
- 2.12.3 Dimensions: 5000 ft x 100 ft
- 2.12.4 PCN: 26 F/A/W/T
- 2.12.5 Coordinates: 39-11-14.54N / 76-39-48.74W
- 2.12.6 Threshold elevation: 142 ft
- 2.12.6 Touchdown zone elevation: 142 ft

- 2.12.1 Designation: 33R
- 2.12.2 True Bearing: 324
- 2.12.3 Dimensions: 5000 ft x 100 ft
- 2.12.4 PCN: 26 F/A/W/T
- 2.12.5 Coordinates: 39-10-34.45N / 76-39-11.63W

2.12.6 Threshold elevation: 114 ft
2.12.6 Touchdown zone elevation: 124 ft

2.12.1 Designation: H1
2.12.3 Dimensions: 100 ft x 100 ft

2.12.1 Designation: 15R
2.12.2 True Bearing: 144
2.12.3 Dimensions: 9501 ft x 150 ft
2.12.4 PCN: 100 F/A/W/T
2.12.5 Coordinates: 39-11-00.00N /
76-40-55.14W
2.12.6 Threshold elevation: 139 ft
2.12.6 Touchdown zone elevation: 139 ft

2.12.1 Designation: 33L
2.12.2 True Bearing: 324
2.12.3 Dimensions: 9501 ft x 150 ft
2.12.4 PCN: 100 F/A/W/T
2.12.5 Coordinates: 39-09-51.15N /
76-39-44.58W
2.12.6 Threshold elevation: 129 ft
2.12.6 Touchdown zone elevation: 142 ft

2.12.1 Designation: 10
2.12.2 True Bearing: 94
2.12.3 Dimensions: 10502 ft x 200 ft
2.12.4 PCN: 110 F/A/W/T
2.12.5 Coordinates: 39-10-29.09N /
76-41-22.63W
2.12.6 Threshold elevation: 139 ft
2.12.6 Touchdown zone elevation: 143 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 274
2.12.3 Dimensions: 10502 ft x 200 ft
2.12.4 PCN: 110 F/A/W/T
2.12.5 Coordinates: 39-10-21.48N /
76-39-00.00W
2.12.6 Threshold elevation: 126 ft
2.12.6 Touchdown zone elevation: 142 ft

2.12.1 Designation: 04
2.12.2 True Bearing: 33
2.12.3 Dimensions: 6000 ft x 150 ft
2.12.4 PCN: 65 F/A/W/T
2.12.5 Coordinates: 39-10-00.00N /
76-40-16.92W
2.12.6 Threshold elevation: 146 ft
2.12.6 Touchdown zone elevation: 146 ft

2.12.1 Designation: 22
2.12.2 True Bearing: 213
2.12.3 Dimensions: 6000 ft x 150 ft
2.12.4 PCN: 65 F/A/W/T
2.12.5 Coordinates: 39-10-50.38N /
76-39-35.21W
2.12.6 Threshold elevation: 138 ft
2.12.6 Touchdown zone elevation: 143 ft

AD 2.13 Declared distances

2.13.1 Designation: 15L
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate-stop distance available: 5000
2.13.5 Landing distance available: 5000

2.13.1 Designation: 33R
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate-stop distance available: 5000
2.13.5 Landing distance available: 5000

2.13.1 Designation: 15R
2.13.2 Takeoff run available: 9501
2.13.3 Takeoff distance available: 9501
2.13.4 Accelerate-stop distance available: 9501
2.13.5 Landing distance available: 9501

2.13.1 Designation: 33L
2.13.2 Takeoff run available: 9501
2.13.3 Takeoff distance available: 9501
2.13.4 Accelerate-stop distance available: 9501
2.13.5 Landing distance available: 9501

2.13.1 Designation: 10
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10502
2.13.5 Landing distance available: 9952

2.13.1 Designation: 28
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10502
2.13.5 Landing distance available: 10002

2.13.1 Designation: 04
2.13.2 Takeoff run available: 6000
2.13.3 Takeoff distance available: 6000
2.13.4 Accelerate-stop distance available: 6000
2.13.5 Landing distance available: 6000

- 2.13.1 Designation: 22
- 2.13.2 Takeoff run available: 6000
- 2.13.3 Takeoff distance available: 6000
- 2.13.4 Accelerate-stop distance available: 6000
- 2.13.5 Landing distance available: 6000

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 15L
- 2.14.4 Visual approach slope indicator system:
4-light PAPI on left

- 2.14.1 Designation: 33R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system:
4-light PAPI on left

- 2.14.1 Designation: 15R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

- 2.14.1 Designation: 33L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system:
4-box VASI on left

- 2.14.1 Designation: 10
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

- 2.14.1 Designation: 28
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system:
4-box VASI on left

- 2.14.1 Designation: 04
- 2.14.4 Visual approach slope indicator system:
4-box VASI on left

- 2.14.1 Designation: 22
- 2.14.4 Visual approach slope indicator system:
4-box VASI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 115.1 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: CD/P
- 2.18.3 Service designation: 118.05 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 119.4 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 127.8 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 243 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 257.8 MHz

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: Localizer for runway 15L.
Magnetic variation: 11W
- 2.19.2 ILS identification: UQC
- 2.19.5 Coordinates: 39-10-31.22N / 76-39-00.00W
- 2.19.6 Site elevation: 102 ft

- 2.19.1 ILS type: Outer Marker for runway 15L.
Magnetic variation: 11W
- 2.19.2 ILS identification: UQC
- 2.19.5 Coordinates: 39-14-55.34N / 76-43-16.63W
- 2.19.6 Site elevation: 301 ft

- 2.19.1 ILS type: Glide Slope for runway 15L.
Magnetic variation: 11W
- 2.19.2 ILS identification: UQC
- 2.19.5 Coordinates: 39-11-00.00N / 76-39-44.24W
- 2.19.6 Site elevation: 138 ft

2.19.1 ILS type: Middle Marker for runway 15L.
Magnetic variation: 11W
2.19.2 ILS identification: UQC
2.19.5 Coordinates: 39-11-37.14N /
76-40-00.00W
2.19.6 Site elevation: 180 ft

2.19.1 ILS type: Localizer for runway 33R.
Magnetic variation: 11W
2.19.2 ILS identification: BWI
2.19.5 Coordinates: 39-11-16.97N /
76-39-50.99W
2.19.6 Site elevation: 135 ft

2.19.1 ILS type: Glide Slope for runway 33R.
Magnetic variation: 11W
2.19.2 ILS identification: BWI
2.19.5 Coordinates: 39-10-40.05N /
76-39-21.19W
2.19.6 Site elevation: 110 ft

2.19.1 ILS type: Middle Marker for runway 33R.
Magnetic variation: 11W
2.19.2 ILS identification: BWI
2.19.5 Coordinates: 39-10-00.00N /
76-38-48.58W
2.19.6 Site elevation: 80 ft

2.19.1 ILS type: DME for runway 33R. Magnetic
variation: 11W
2.19.2 ILS identification: BWI
2.19.5 Coordinates: 39-11-18.90N /
76-39-48.50W
2.19.6 Site elevation: 129 ft

2.19.1 ILS type: Localizer for runway 15R.
Magnetic variation: 11W
2.19.2 ILS identification: FND
2.19.5 Coordinates: 39-09-36.97N /
76-39-31.44W
2.19.6 Site elevation: 102 ft

2.19.1 ILS type: Glide Slope for runway 15R.
Magnetic variation: 11W
2.19.2 ILS identification: FND
2.19.5 Coordinates: 39-10-56.54N /
76-40-49.44W
2.19.6 Site elevation: 132 ft

2.19.1 ILS type: Middle Marker for runway 15R.
Magnetic variation: 11W

2.19.2 ILS identification: FND
2.19.5 Coordinates: 39-11-33.15N /
76-41-19.11W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 15R.
Magnetic variation: 11W
2.19.2 ILS identification: FND
2.19.5 Coordinates: 39-14-13.45N /
76-43-52.10W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 33L.
Magnetic variation: 11W
2.19.2 ILS identification: RUX
2.19.5 Coordinates: 39-11-10.77N /
76-40-58.34W
2.19.6 Site elevation: 132 ft

2.19.1 ILS type: Glide Slope for runway 33L.
Magnetic variation: 11W
2.19.2 ILS identification: RUX
2.19.5 Coordinates: 39-10-00.00N /
76-39-48.83W
2.19.6 Site elevation: 129 ft

2.19.1 ILS type: Outer Marker for runway 33L.
Magnetic variation: 11W
2.19.2 ILS identification: RUX
2.19.5 Coordinates: 39-06-36.92N /
76-36-43.69W
2.19.6 Site elevation: 151 ft

2.19.1 ILS type: Middle Marker for runway 33L.
Magnetic variation: 11W
2.19.2 ILS identification: RUX
2.19.5 Coordinates: 39-09-29.15N /
76-39-26.74W
2.19.6 Site elevation: 92 ft

2.19.1 ILS type: DME for runway 33L. Magnetic
variation: 11W
2.19.2 ILS identification: RUX
2.19.5 Coordinates: 39-11-00.00N /
76-41-00.00W
2.19.6 Site elevation: 127 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic
variation: 11W
2.19.2 ILS identification: BAL
2.19.5 Coordinates: 39-10-20.59N /

76-38-54.29W

2.19.6 Site elevation: 138 ft

2.19.1 ILS type: Glide Slope for runway 10.
Magnetic variation: 11W

2.19.2 ILS identification: BAL

2.19.5 Coordinates: 39-10-24.02N /
76-41-00.00W

2.19.6 Site elevation: 138 ft

2.19.1 ILS type: Outer Marker for runway 10.
Magnetic variation: 11W

2.19.2 ILS identification: BAL

2.19.5 Coordinates: 39-10-45.89N /
76-46-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 10.
Magnetic variation: 11W

2.19.2 ILS identification: BAL

2.19.5 Coordinates: 39-10-31.24N /
76-41-27.11W

2.19.6 Site elevation: 131 ft

2.19.1 ILS type: Middle Marker for runway 10.
Magnetic variation: 11W

2.19.2 ILS identification: BAL

2.19.5 Coordinates: 39-10-30.85N /
76-41-53.99W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic
variation: 11W

2.19.2 ILS identification: OEH

2.19.5 Coordinates: 39-10-29.45N /
76-41-28.96W

2.19.6 Site elevation: 137 ft

2.19.1 ILS type: Middle Marker for runway 28.
Magnetic variation: 11W

2.19.2 ILS identification: OEH

2.19.5 Coordinates: 39-10-18.69N /
76-38-22.68W

2.19.6 Site elevation: 55 ft

2.19.1 ILS type: Outer Marker for runway 28.
Magnetic variation: 11W

2.19.2 ILS identification: OEH

2.19.5 Coordinates: 39-09-56.02N /
76-31-00.00W

2.19.6 Site elevation: 39 ft

2.19.1 ILS type: Glide Slope for runway 28.
Magnetic variation: 11W

2.19.2 ILS identification: OEH

2.19.5 Coordinates: 39-10-18.84N /
76-39-28.42W

2.19.6 Site elevation: 130 ft

General Remarks:

AIRCRAFT PARKED AT GATE POSITIONS D-15; 16; ENCROACH RUNWAY 04/22 7:1 (FAR 77) TO HEIGHT OF 58'.

PRACTICE LANDING & APPROACH BY TURBO-POWERED AIRCRAFT PROHIBITED 2200-0600; PRACTICE LANDING & TAKE-OFF BY B-747 AIRCRAFT PROHIBITED RUNWAY 15R/33L.

CONT MOWING OPERATIONS ADJACENT ALL RUNWAYS & TAXIWAYS - APR THRU NOV.

NO APRON PARKING FOR UNSCHEDULED AIR CARRIER.

DEER & BIRDS OCCASIONALLY ON & IN THE VICINITY OF AIRPORT.

DISTRACTING LIGHTS (GOLF DRIVING RANGE) RIGHT SIDE EXTENDED CENTERLINE RUNWAY 33L FROM APPROACH END RUNWAY TO 1/4 MI FINAL.

NOISE ABATEMENT PROCEDURES IN EFFECT - RESTRICTION FOR RUNWAY 15L/33R EXCEPT FOR EMERGENCIES OR MERCY FLIGHTS CONTACT AIRPORT MANAGER FOR INFORMATION.

MAJOR CONSTRUCTION ON AIRPORT DAILY; AIRCRAFT MOVEMENT & PARKING AREAS

SUBJECT TO SHORT NOTICE CHANGE/CLOSURE. FOR CURRENT INFORMATION PHONE BWI OPERATIONS CENTER 410-859-7018.

AIRCRAFT ON VISUAL APPROACHES EXPECT TO MAINTAIN 3000 FT UNTIL 10 DME FROM BALANCE VORTAC; DEPARTURE AIRCRAFT SHOULD EXPECT TURNS BASED ON BALTIMORE DME.

TAXIING PROHIBITED BETWEEN GATE C16 & ADJACENT BUILDING STRUCTURE SW OF PIER C.

RUNWAY 15R DEICE PAD, POSITION # 1, 2 & 3 ARE RESTRICTED TO AIRCRAFT WITH A WINGSPAN OF 135 FT OR LESS, POSITION #4 IS RESTRICTED TO AIRCRAFT WITH A WINGSPAN OF 156 FT OR LESS & POSITION #5 IS RESTRICTED TO AIRCRAFT WITH 214 FT OR LESS.

TAXIWAY "S", SOUTH OF RUNWAY 22, RESTRICTED TO AIRCRAFT 60000 LBS. & LESS

GENERAL AVIATION AIRCRAFT CONTACT UNICOM PRIOR TO ARRIVING AT GENERAL AVIATION RAMP FOR SECURITY PURPOSES.

RUNWAYS 04/22, 10/28, 15L/33R: PAVEMENT CONDITION IS FAIR WITH NUMEROUS CRACKS ON ALL SURFACES.

TAXIWAY "A" RESTRICTED TO AIRCRAFT WITH WINGSPAN OF 171 FT OR LESS. DESIGN GROUP IV.

TAXILANES A-1 AND H, RESTRICTED TO GROUP III AIRCRAFT WITH MAX WINGSPAN OF 118 FEET.

CONCOURSE A - ALTERNATE DEICING AREA IS RESTRICTED TO B737-800 SIZE AIRCRAFT WITH WINGLETS OR SMALLER ON SPOTS 6, 7A, AND 8A. B737-700 SIZE AIRCRAFT WITH WINGLETS OR SMALLER ARE RESTRICTED TO SPOTS 7B AND 8B.

RUNWAY 28 DE-ICE PAD LANE 1 RESTRICTED TO AIRCRAFT WITH WINGSPAN 171 FT OR LESS, LANE 2 RESTRICTED TO AIRCRAFT WITH WINGSPAN 135 FT OR LESS, LANE 3 IS USED BY LARGE AIRCRAFT MAX WINGSPAN 215 FT AND WHEN IN USE- LANES 2 AND 4 ARE UNAVAILABLE. LANES 4, 5 AND 6 ARE RESTRICTED TO AIRCRAFT WINGSPAN 135 FT OR LESS.

TAXIWAY "P" BETWEEN TAXIWAY "P1" & TAXIWAY "C" RESTRICTED TO WINGSPANS OF 171 FT OR LESS.

RUNWAY 04/22 CLOSED EXCEPT FOR TAXI. RUNWAY 04/22 RESTRICTIONS APPLY EXCEPT FOR EXCESSIVE CROSSWINDS; EMERGENCIES; OR NON-AVAILABILITY OF OTHER RUNWAYS.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE-C ON ALL TAXIWAYS AND RUNWAYS.

Boston, MA
General Edward Lawrence Logan Intl
ICAO Identifier KBOS

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 42-21-46.70N / 71-00-23.10W
- 2.2.2 From City: 1 Miles E Of Boston, MA
- 2.2.3 Elevation: 20 ft
- 2.2.5 Magnetic variation: 16W (1995)
- 2.2.6 Airport Contact: Edward Freni
LOGAN INTERNATIONAL AIRPORT
East Boston, MA 2128
(617-567-5400)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 9/1/1972

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 09
- 2.10.1.b Type of obstacle: Boat (158 ft). Lighted

- 2.10.1.a. Runway designation: 27
- 2.10.1.b Type of obstacle: Boat (45 ft). Lighted

- 2.10.1.a. Runway designation: 04L
- 2.10.1.b Type of obstacle: Boat (161 ft). Not Lighted or Marked

- 2.10.1.a. Runway designation: 22R
- 2.10.1.b Type of obstacle: Boat (44 ft). Not Lighted or Marked

- 2.10.1.a. Runway designation: 04R
- 2.10.1.b Type of obstacle: Boat (157 ft). Lighted

- 2.10.1.a. Runway designation: 22L

- 2.10.1.b Type of obstacle: Boat (45 ft). Not Lighted or Marked

- 2.10.1.a. Runway designation: 15R
- 2.10.1.b Type of obstacle: Trees (62 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 140 ft from Centerline

- 2.10.1.a. Runway designation: 33L
- 2.10.1.b Type of obstacle: Boat (160 ft). Not Lighted or Marked

- 2.10.1.a. Runway designation: 14
- 2.10.1.b Type of obstacle: Bldg (174 ft). Lighted
- 2.10.1.c Location of obstacle: 70 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 77
- 2.12.3 Dimensions: 7000 ft x 150 ft
- 2.12.5 Coordinates: 42-21-20.72N / 71-00-46.42W
- 2.12.6 Threshold elevation: 17 ft
- 2.12.6 Touchdown zone elevation: 17 ft

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 257
- 2.12.3 Dimensions: 7000 ft x 150 ft
- 2.12.5 Coordinates: 42-21-36.78N / 70-59-15.73W
- 2.12.6 Threshold elevation: 14 ft
- 2.12.6 Touchdown zone elevation: 17 ft

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 20
- 2.12.3 Dimensions: 7861 ft x 150 ft
- 2.12.5 Coordinates: 42-21-28.76N / 71-00-51.62W
- 2.12.6 Threshold elevation: 14 ft
- 2.12.6 Touchdown zone elevation: 14 ft

- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 200
- 2.12.3 Dimensions: 7861 ft x 150 ft
- 2.12.5 Coordinates: 42-22-41.85N / 71-00-16.26W
- 2.12.6 Threshold elevation: 15 ft
- 2.12.6 Touchdown zone elevation: 15 ft

- 2.12.1 Designation: 04R

2.12.2 True Bearing: 20
2.12.3 Dimensions: 10005 ft x 150 ft
2.12.5 Coordinates: 42-21-00.00N /
71-00-42.46W
2.12.6 Threshold elevation: 19 ft
2.12.6 Touchdown zone elevation: 18 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 200
2.12.3 Dimensions: 10005 ft x 150 ft
2.12.5 Coordinates: 42-22-36.84N /
70-59-57.45W
2.12.6 Threshold elevation: 14 ft
2.12.6 Touchdown zone elevation: 16 ft

2.12.1 Designation: 15L
2.12.2 True Bearing: 135
2.12.3 Dimensions: 2557 ft x 100 ft
2.12.5 Coordinates: 42-22-24.89N /
71-00-32.86W
2.12.6 Threshold elevation: 15 ft
2.12.6 Touchdown zone elevation: 15 ft

2.12.1 Designation: 33R
2.12.2 True Bearing: 315
2.12.3 Dimensions: 2557 ft x 100 ft
2.12.5 Coordinates: 42-22-00.00N /
71-00-00.00W
2.12.6 Threshold elevation: 14 ft
2.12.6 Touchdown zone elevation: 14 ft

2.12.1 Designation: 15R
2.12.2 True Bearing: 135
2.12.3 Dimensions: 10083 ft x 150 ft
2.12.5 Coordinates: 42-22-27.38N /
71-01-00.00W
2.12.6 Threshold elevation: 19 ft
2.12.6 Touchdown zone elevation: 17 ft

2.12.1 Designation: 33L
2.12.2 True Bearing: 315
2.12.3 Dimensions: 10083 ft x 150 ft
2.12.5 Coordinates: 42-21-16.74N /
70-59-29.71W
2.12.6 Threshold elevation: 15 ft
2.12.6 Touchdown zone elevation: 16 ft

2.12.1 Designation: 14
2.12.2 True Bearing: 125
2.12.3 Dimensions: 5000 ft x 100 ft
2.12.5 Coordinates: 42-21-23.75N /

71-01-23.79W
2.12.6 Threshold elevation: 17 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 305
2.12.3 Dimensions: 5000 ft x 100 ft
2.12.5 Coordinates: 42-20-54.96N /
71-00-29.69W
2.12.6 Threshold elevation: 20 ft
2.12.6 Touchdown zone elevation: 20 ft

AD 2.13 Declared distances

2.13.1 Designation: 09
2.13.2 Takeoff run available: 7000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 7000
2.13.5 Landing distance available: 7000

2.13.1 Designation: 27
2.13.2 Takeoff run available: 7000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 7000
2.13.5 Landing distance available: 7000

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 7861
2.13.3 Takeoff distance available: 7861
2.13.4 Accelerate-stop distance available: 7861
2.13.5 Landing distance available: 7861

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 7861
2.13.3 Takeoff distance available: 7861
2.13.4 Accelerate-stop distance available: 7861
2.13.5 Landing distance available: 7046

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 10005
2.13.3 Takeoff distance available: 10005
2.13.4 Accelerate-stop distance available: 10005
2.13.5 Landing distance available: 8851

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 10005
2.13.3 Takeoff distance available: 10005
2.13.4 Accelerate-stop distance available: 10005
2.13.5 Landing distance available: 8806

2.13.1 Designation: 15L
2.13.2 Takeoff run available: 2557
2.13.3 Takeoff distance available: 2557

2.13.4 Accelerate–stop distance available: 2557
2.13.5 Landing distance available: 2557

2.13.1 Designation: 33R
2.13.2 Takeoff run available: 2557
2.13.3 Takeoff distance available: 2557
2.13.4 Accelerate–stop distance available: 2557
2.13.5 Landing distance available: 2557

2.13.1 Designation: 15R
2.13.2 Takeoff run available: 10083
2.13.3 Takeoff distance available: 10083
2.13.4 Accelerate–stop distance available: 10083
2.13.5 Landing distance available: 9203

2.13.1 Designation: 33L
2.13.2 Takeoff run available: 10083
2.13.3 Takeoff distance available: 10083
2.13.4 Accelerate–stop distance available: 10083
2.13.5 Landing distance available: 10083

2.13.1 Designation: 14
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate–stop distance available: 5000
2.13.5 Landing distance available: 5000

2.13.1 Designation: 32
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate–stop distance available: 5000
2.13.5 Landing distance available: 5000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 27
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 04L
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 22R
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 04R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 22L
2.14.4 Visual approach slope indicator system:
4–light PAPI on right

2.14.1 Designation: 15R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 33L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4–light PAPI on right

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: CD/P PRE TAXI
CLNC
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 124.725 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P (ARR/DEP RYS
04R/22L 09/27)
2.18.3 Service designation: 128.8 MHz

2.18.1 Service designation: LCL/P (ARR/DEP RYS
4L/22R 15R/33L 15L/33R)
2.18.3 Service designation: 128.8 MHz

2.18.1 Service designation: LCL/P (ARR/DEP RY
14/32)
2.18.3 Service designation: 128.8 MHz

- 2.18.1 Service designation: GATE CTL
- 2.18.3 Service designation: 134.05 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 243 MHz

- 2.18.1 Service designation: LCL/P CD/P
- 2.18.3 Service designation: 257.8 MHz

- 2.18.1 Service designation: GND CTL/S
- 2.18.3 Service designation: 121.75 MHz

- 2.18.1 Service designation: LCL/S (ARR/DEP RYS 04R/22L, 09/27)
- 2.18.3 Service designation: 132.225 MHz

- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 127.875 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 135 MHz
- 2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 16W
- 2.19.2 ILS identification: DGU
- 2.19.5 Coordinates: 42-21-16.64N / 71-01-00.00W
- 2.19.6 Site elevation: 18 ft

- 2.19.1 ILS type: DME for runway 27. Magnetic variation: 16W
- 2.19.2 ILS identification: DGU
- 2.19.5 Coordinates: 42-21-15.70N / 71-00-55.78W
- 2.19.6 Site elevation: 28 ft

- 2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 16W
- 2.19.2 ILS identification: DGU
- 2.19.5 Coordinates: 42-21-31.48N / 70-59-28.43W
- 2.19.6 Site elevation: 13 ft

- 2.19.1 ILS type: Localizer for runway 04R. Magnetic variation: 16W
- 2.19.2 ILS identification: BOS
- 2.19.5 Coordinates: 42-22-55.97N / 70-59-48.19W

- 2.19.6 Site elevation: 18 ft

- 2.19.1 ILS type: Glide Slope for runway 04R. Magnetic variation: 16W
- 2.19.2 ILS identification: BOS
- 2.19.5 Coordinates: 42-21-21.82N / 71-00-24.55W
- 2.19.6 Site elevation: 10 ft

- 2.19.1 ILS type: Outer Marker for runway 04R. Magnetic variation: 16W
- 2.19.2 ILS identification: BOS
- 2.19.5 Coordinates: 42-16-25.52N / 71-02-56.95W
- 2.19.6 Site elevation: 6 ft

- 2.19.1 ILS type: Inner Marker for runway 04R. Magnetic variation: 16W
- 2.19.2 ILS identification: BOS
- 2.19.5 Coordinates: 42-21-00.00N / 71-00-39.91W
- 2.19.6 Site elevation: 118 ft

- 2.19.1 ILS type: Middle Marker for runway 04R. Magnetic variation: 16W
- 2.19.2 ILS identification: BOS
- 2.19.5 Coordinates: 42-20-53.18N / 71-00-47.62W
- 2.19.6 Site elevation: 12 ft

- 2.19.1 ILS type: DME for runway 04R. Magnetic variation: 16W
- 2.19.2 ILS identification: BOS
- 2.19.5 Coordinates: 42-22-57.54N / 70-59-51.06W
- 2.19.6 Site elevation: 35 ft

- 2.19.1 ILS type: Localizer for runway 22L. Magnetic variation: 16W
- 2.19.2 ILS identification: LQN
- 2.19.5 Coordinates: 42-21-00.00N / 71-00-44.24W
- 2.19.6 Site elevation: 15 ft

- 2.19.1 ILS type: DME for runway 22L. Magnetic variation: 16W
- 2.19.2 ILS identification: LQN
- 2.19.5 Coordinates: 42-22-57.54N / 70-59-51.06W
- 2.19.6 Site elevation: 35 ft

2.19.1 ILS type: Outer Marker for runway 22L.
Magnetic variation: 16W
2.19.2 ILS identification: LQN
2.19.5 Coordinates: 42-27-00.00N /
70-57-47.83W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: DME for runway 33L. Magnetic
variation: 16W
2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-21-27.28N /
70-59-32.94W
2.19.6 Site elevation: 27 ft

2.19.1 ILS type: Glide Slope for runway 22L.
Magnetic variation: 16W
2.19.2 ILS identification: LQN
2.19.5 Coordinates: 42-22-17.00N /
71-00-11.99W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Middle Marker for runway 33L.
Magnetic variation: 16W
2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-20-58.45N /
70-59-00.00W
2.19.6 Site elevation: 20 ft

2.19.1 ILS type: Localizer for runway 15R.
Magnetic variation: 16W
2.19.2 ILS identification: MDC
2.19.5 Coordinates: 42-21-24.31N /
70-59-34.15W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Localizer for runway 33L.
Magnetic variation: 16W
2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-22-37.57N /
71-01-18.09W
2.19.6 Site elevation: 16 ft

2.19.1 ILS type: Glide Slope for runway 15R.
Magnetic variation: 16W
2.19.2 ILS identification: MDC
2.19.5 Coordinates: 42-22-14.70N /
71-00-42.42W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Glide Slope for runway 33L.
Magnetic variation: 16W
2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-21-26.64N /
70-59-34.71W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: DME for runway 15R. Magnetic
variation: 16W
2.19.2 ILS identification: MDC
2.19.5 Coordinates: 42-21-27.28N /
70-59-32.94W
2.19.6 Site elevation: 27 ft

2.19.1 ILS type: Outer Marker for runway 33L.
Magnetic variation: 16W
2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-18-11.14N /
70-55-18.75W
2.19.6 Site elevation: 99999 ft

General Remarks:

BIRDS ON & IN THE VICINITY OF AIRPORT.

NOISE SENSITIVE AREA – HELICOPTERS OPERATING WITHIN THE CONTROL ZONE ARE
REQUIRED TO MAINT THE HIGHEST POSSIBLE ALTITUDE.

BETWEEN 0000-0600 – RUNWAY 15R IS PREFERENTIAL NIGHT RUNWAY FOR TAKE-OFF &
RUNWAY 33L IS PREFERENTIAL NIGHT RUNWAY FOR LANDING.

FOR NOISE ABATEMENT PROCEDURES CALL 617-561-1636 0900-1700 MON-FRI.

NO REMAINING OVERNIGHT PARKING FOR NON-TENANT CHARTER AIRCRAFT WITHOUT
PRIOR MASSPORT PERMISSION.

TERMINAL E; NORTH & SOUTH CARGO ARRIVALS CONTACT MASSPORT GATE CONTROL ON

FREQ 131.1 BEFORE ENTERING/DEPARTING RAMP AREA.

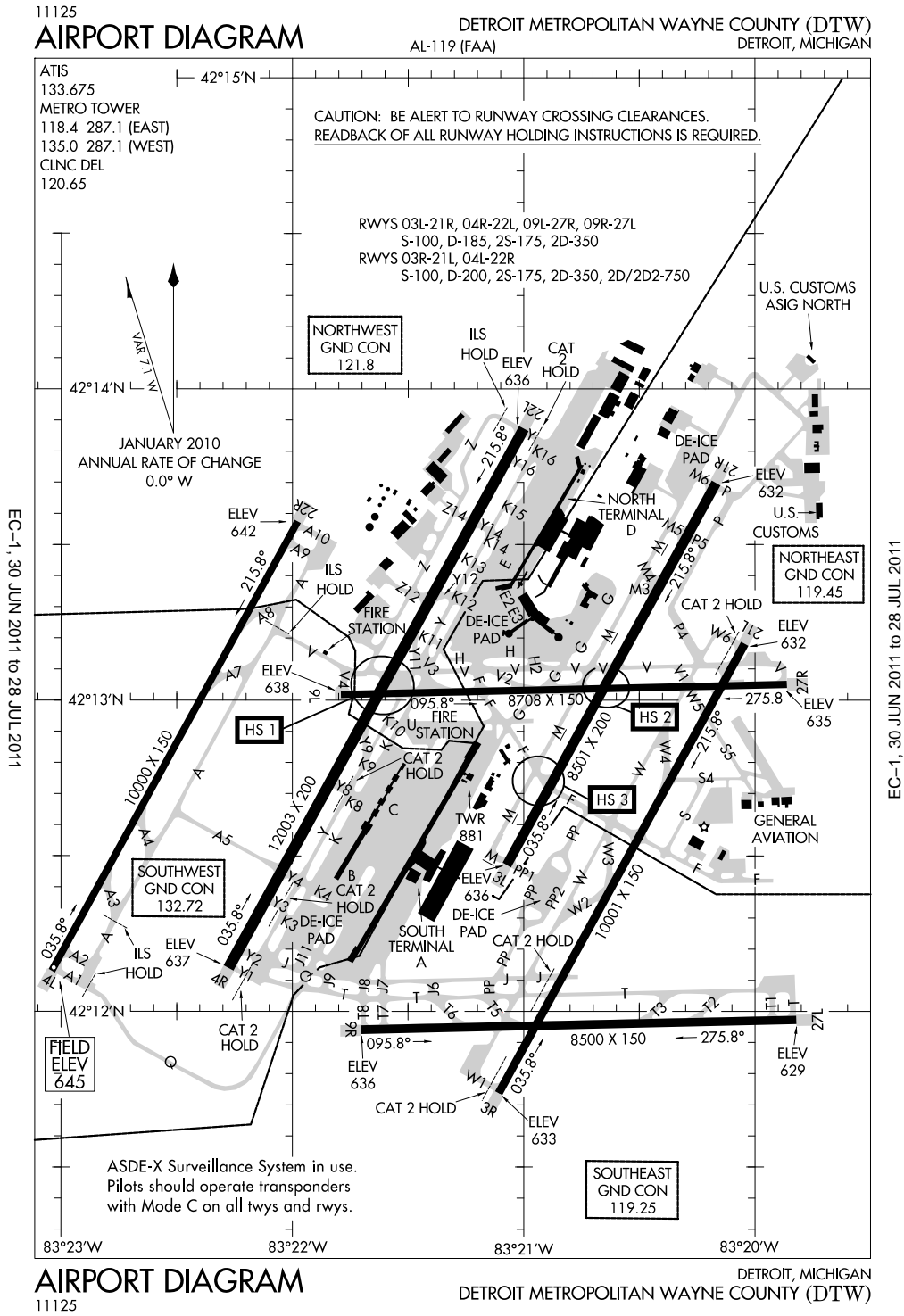
NUMEROUS CRANES ON & IN THE VICINITY OF OF AIRPORT UP TO & INCLUDING 250 FT.
MSL.

RY14/32 UNIDIRECTIONAL; NO LANDINGS RUNWAY 14; NO TAKEOFFS RUNWAY 32.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH
MODE C ON ALL TAXIWAYS AND RUNWAYS.

PILOTS SHOULD COMPLETE ALL CALCULATIONS PRIOR TO PUSHBACK FROM GATE.

Detroit, Michigan
Detroit Metropolitan Wayne County
ICAO Identifier KDTW



Detroit, MI
Detroit Metropolitan Wayne County
ICAO Identifier KDTW

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 42-12-44.80N / 83-21-12.20W
2.2.2 From City: 15 Miles S Of Detroit, MI
2.2.3 Elevation: 645 ft
2.2.5 Magnetic variation: 6W (1990)
2.2.6 Airport Contact: Genelle Allen
L C SMITH TERMINAL MEZZANINE
Detroit, MI 48242 (734-942-3550)
2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: 100LL,A
2.4.4 De-icing facilities: None
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF
Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 04R
2.10.1.b Type of obstacle: Tree (88 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 1059 ft from Centerline
- 2.10.1.a. Runway designation: 22L
2.10.1.b Type of obstacle: Rr (26 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 632 ft from Centerline
- 2.10.1.a. Runway designation: 03R
2.10.1.b Type of obstacle: Trees (69 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 935 ft from Centerline
- 2.10.1.a. Runway designation: 21L

- 2.10.1.b Type of obstacle: Berm (5 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 496 ft from Centerline

- 2.10.1.a. Runway designation: 03L
2.10.1.b Type of obstacle: Pole (21 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 576 ft from Centerline

- 2.10.1.a. Runway designation: 21R
2.10.1.b Type of obstacle: Pole (74 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 557 ft from Centerline

- 2.10.1.a. Runway designation: 09L
2.10.1.b Type of obstacle: Ant (116 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 459 ft from Centerline

- 2.10.1.a. Runway designation: 04L
2.10.1.b Type of obstacle: Pole (60 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 372 ft from Centerline

- 2.10.1.a. Runway designation: 22R
2.10.1.b Type of obstacle: Ant (73 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 831 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 04R
2.12.2 True Bearing: 29
2.12.3 Dimensions: 12003 ft x 200 ft
2.12.5 Coordinates: 42-12-00.00N / 83-22-16.57W
2.12.6 Threshold elevation: 637 ft
2.12.6 Touchdown zone elevation: 638 ft

- 2.12.1 Designation: 22L
2.12.2 True Bearing: 209
2.12.3 Dimensions: 12003 ft x 200 ft
2.12.5 Coordinates: 42-13-52.37N / 83-20-59.97W
2.12.6 Threshold elevation: 636 ft
2.12.6 Touchdown zone elevation: 637 ft

2.12.1 Designation: 03R
2.12.2 True Bearing: 29
2.12.3 Dimensions: 10001 ft x 150 ft
2.12.5 Coordinates: 42-11-44.21N /
83-21-00.00W
2.12.6 Threshold elevation: 633 ft
2.12.6 Touchdown zone elevation: 633 ft

2.12.1 Designation: 21L
2.12.2 True Bearing: 209
2.12.3 Dimensions: 10001 ft x 150 ft
2.12.5 Coordinates: 42-13-10.86N /
83-20-00.00W
2.12.6 Threshold elevation: 632 ft
2.12.6 Touchdown zone elevation: 632 ft

2.12.1 Designation: 03L
2.12.2 True Bearing: 29
2.12.3 Dimensions: 8501 ft x 200 ft
2.12.5 Coordinates: 42-12-28.20N /
83-21-00.00W
2.12.6 Threshold elevation: 636 ft
2.12.6 Touchdown zone elevation: 636 ft

2.12.1 Designation: 21R
2.12.2 True Bearing: 209
2.12.3 Dimensions: 8501 ft x 200 ft
2.12.5 Coordinates: 42-13-41.85N /
83-20-10.11W
2.12.6 Threshold elevation: 632 ft
2.12.6 Touchdown zone elevation: 634 ft

2.12.1 Designation: 09L
2.12.2 True Bearing: 89
2.12.3 Dimensions: 8708 ft x 150 ft
2.12.5 Coordinates: 42-13-00.00N /
83-21-47.40W
2.12.6 Threshold elevation: 638 ft
2.12.6 Touchdown zone elevation: 640 ft

2.12.1 Designation: 27R
2.12.2 True Bearing: 269
2.12.3 Dimensions: 8708 ft x 150 ft
2.12.5 Coordinates: 42-13-00.00N /
83-19-51.71W
2.12.6 Threshold elevation: 635 ft
2.12.6 Touchdown zone elevation: 635 ft

2.12.1 Designation: 09R
2.12.2 True Bearing: 89
2.12.3 Dimensions: 8500 ft x 150 ft

2.12.5 Coordinates: 42-11-56.46N /
83-21-42.22W
2.12.6 Threshold elevation: 636 ft
2.12.6 Touchdown zone elevation: 636 ft

2.12.1 Designation: 27L
2.12.2 True Bearing: 269
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.5 Coordinates: 42-11-58.34N /
83-19-49.33W
2.12.6 Threshold elevation: 629 ft
2.12.6 Touchdown zone elevation: 630 ft

2.12.1 Designation: 04L
2.12.2 True Bearing: 29
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.5 Coordinates: 42-12-00.00N /
83-23-00.00W
2.12.6 Threshold elevation: 645 ft
2.12.6 Touchdown zone elevation: 645 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 209
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.5 Coordinates: 42-13-34.48N /
83-21-58.61W
2.12.6 Threshold elevation: 642 ft
2.12.6 Touchdown zone elevation: 642 ft

2.12.1 Designation: 04X
2.12.2 True Bearing: 29
2.12.3 Dimensions: 0 ft x 0 ft

2.12.1 Designation: 22X
2.12.2 True Bearing: 209
2.12.3 Dimensions: 0 ft x 0 ft

AD 2.13 Declared distances

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 12003
2.13.3 Takeoff distance available: 12003
2.13.4 Accelerate-stop distance available: 12003
2.13.5 Landing distance available: 12003

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 12003
2.13.3 Takeoff distance available: 12003
2.13.4 Accelerate-stop distance available: 12003
2.13.5 Landing distance available: 12003

2.13.1 Designation: 03R

2.13.2 Takeoff run available: 10001
2.13.3 Takeoff distance available: 10001
2.13.4 Accelerate-stop distance available: 10001
2.13.5 Landing distance available: 10001

2.13.1 Designation: 21L
2.13.2 Takeoff run available: 10001
2.13.3 Takeoff distance available: 10001
2.13.4 Accelerate-stop distance available: 10001
2.13.5 Landing distance available: 10001

2.13.1 Designation: 03L
2.13.2 Takeoff run available: 8501
2.13.3 Takeoff distance available: 8501
2.13.4 Accelerate-stop distance available: 8501
2.13.5 Landing distance available: 8501

2.13.1 Designation: 21R
2.13.2 Takeoff run available: 8501
2.13.3 Takeoff distance available: 8501
2.13.4 Accelerate-stop distance available: 8501
2.13.5 Landing distance available: 8501

2.13.1 Designation: 09L
2.13.2 Takeoff run available: 8708
2.13.3 Takeoff distance available: 8708
2.13.4 Accelerate-stop distance available: 8618
2.13.5 Landing distance available: 8618

2.13.1 Designation: 27R
2.13.2 Takeoff run available: 8708
2.13.3 Takeoff distance available: 8708
2.13.4 Accelerate-stop distance available: 8708
2.13.5 Landing distance available: 8708

2.13.1 Designation: 09R
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate-stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 27L
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate-stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000

2.13.5 Landing distance available: 10000

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.10 Remarks: Also Has SSALR.

2.14.1 Designation: 22L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.1 Designation: 03R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on right
2.14.10 Remarks: ALSF2 Required When RVR/Visibility Is 6000/1 Mile Or Less. SSALR Operated When RVR/Visibility Is 6000/1 Mile.

2.14.1 Designation: 21L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 03L
2.14.4 Visual approach slope indicator system: 4-light PAPI on right
2.14.10 Remarks: Unusable 8 Degrees Left/Right Course.

2.14.1 Designation: 21R
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 27R
2.14.2 Approach lighting system: MALSR: 1400

feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 27L

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 04L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 22R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

**AD 2.18 Air traffic services communication
facilities**

2.18.1 Service designation: APCH/S DEP/S

2.18.3 Service designation: 118.575 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 118.95 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 118.95 MHz

2.18.1 Service designation: CD PRE TAXI CLNC

2.18.3 Service designation: 120.65 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 124.05 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 126.85 MHz

2.18.1 Service designation: RDR

2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 132.72 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 133.675 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 134.3 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 134.3 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: AIR-EVAC

2.18.3 Service designation: 259.6 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 363.2 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 119.25 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 119.45 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: DEP/P CLASS B

2.18.3 Service designation: 239.275 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 124.25 MHz

2.18.1 Service designation: PRM RY 4L/22R

2.18.3 Service designation: 127.05 MHz
2.18.1 Service designation: PRM RY 4R/22L
2.18.3 Service designation: 135.775 MHz

2.18.1 Service designation: PRM RY 3R/21L
2.18.3 Service designation: 128.35 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 287.1 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 135 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 128.125 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Outer Marker for runway 04R.
Magnetic variation: 6W
2.19.2 ILS identification: DTW
2.19.5 Coordinates: 42-07-12.37N /
83-25-54.19W
2.19.6 Site elevation: 631 ft

2.19.1 ILS type: DME for runway 04R. Magnetic
variation: 6W
2.19.2 ILS identification: DTW
2.19.5 Coordinates: 42-13-59.69N /
83-20-50.36W
2.19.6 Site elevation: 650 ft

2.19.1 ILS type: Middle Marker for runway 04R.
Magnetic variation: 6W
2.19.2 ILS identification: DTW
2.19.5 Coordinates: 42-11-44.10N /
83-22-34.50W
2.19.6 Site elevation: 642 ft

2.19.1 ILS type: Localizer for runway 04R.
Magnetic variation: 6W
2.19.2 ILS identification: DTW
2.19.5 Coordinates: 42-14-00.00N /
83-20-53.38W
2.19.6 Site elevation: 636 ft

2.19.1 ILS type: Glide Slope for runway 04R.
Magnetic variation: 6W

2.19.2 ILS identification: DTW
2.19.5 Coordinates: 42-12-18.94N /
83-22-14.84W
2.19.6 Site elevation: 634 ft

2.19.1 ILS type: Inner Marker for runway 04R.
Magnetic variation: 6W
2.19.2 ILS identification: DTW
2.19.5 Coordinates: 42-12-00.00N /
83-22-22.38W
2.19.6 Site elevation: 636 ft

2.19.1 ILS type: Localizer for runway 22L.
Magnetic variation: 6W
2.19.2 ILS identification: DWC
2.19.5 Coordinates: 42-11-59.54N /
83-22-23.06W
2.19.6 Site elevation: 636 ft

2.19.1 ILS type: DME for runway 22L. Magnetic
variation: 6W
2.19.2 ILS identification: DWC
2.19.5 Coordinates: 42-13-59.69N /
83-20-50.36W
2.19.6 Site elevation: 652 ft

2.19.1 ILS type: Outer Marker for runway 22L.
Magnetic variation: 6W
2.19.2 ILS identification: DWC
2.19.5 Coordinates: 42-18-20.74N /
83-17-40.65W
2.19.6 Site elevation: 626 ft

2.19.1 ILS type: Glide Slope for runway 22L.
Magnetic variation: 6W
2.19.2 ILS identification: DWC
2.19.5 Coordinates: 42-13-43.86N /
83-21-12.29W
2.19.6 Site elevation: 636 ft

2.19.1 ILS type: Middle Marker for runway 22L.
Magnetic variation: 6W
2.19.2 ILS identification: DWC
2.19.5 Coordinates: 42-14-21.64N /
83-20-38.75W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 03R.
Magnetic variation: 6W
2.19.2 ILS identification: HUU
2.19.5 Coordinates: 42-13-20.38N /

83-19-55.63W

2.19.6 Site elevation: 635 ft

2.19.1 ILS type: Glide Slope for runway 03R.

Magnetic variation: 6W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-11-51.13N /

83-20-54.98W

2.19.6 Site elevation: 630 ft

2.19.1 ILS type: Outer Marker for runway 03R.

Magnetic variation: 6W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-06-27.60N /

83-24-57.66W

2.19.6 Site elevation: 625 ft

2.19.1 ILS type: Middle Marker for runway 03R.

Magnetic variation: 6W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-11-20.09N /

83-21-24.29W

2.19.6 Site elevation: 633 ft

2.19.1 ILS type: Inner Marker for runway 03R.

Magnetic variation: 6W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-11-36.55N /

83-21-12.14W

2.19.6 Site elevation: 630 ft

2.19.1 ILS type: DME for runway 03R. Magnetic variation: 6W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-11-34.31N /

83-21-00.00W

2.19.6 Site elevation: 630 ft

2.19.1 ILS type: Localizer for runway 21L.

Magnetic variation: 6W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-11-34.94N /

83-21-13.32W

2.19.6 Site elevation: 631 ft

2.19.1 ILS type: Glide Slope for runway 21L.

Magnetic variation: 6W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-12-58.50N /

83-20-00.00W

2.19.6 Site elevation: 630 ft

2.19.1 ILS type: Middle Marker for runway 21L.

Magnetic variation: 6W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-13-38.34N /

83-19-46.25W

2.19.6 Site elevation: 630 ft

2.19.1 ILS type: Outer Marker for runway 21L.

Magnetic variation: 6W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-18-00.00N /

83-16-20.34W

2.19.6 Site elevation: 604 ft

2.19.1 ILS type: DME for runway 21L. Magnetic variation: 6W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-11-34.31N /

83-21-00.00W

2.19.6 Site elevation: 630 ft

2.19.1 ILS type: Localizer for runway 27R.

Magnetic variation: 6W

2.19.2 ILS identification: DMI

2.19.5 Coordinates: 42-13-00.00N /

83-22-00.00W

2.19.6 Site elevation: 639 ft

2.19.1 ILS type: Middle Marker for runway 27R.

Magnetic variation: 6W

2.19.2 ILS identification: DMI

2.19.5 Coordinates: 42-13-00.00N /

83-19-10.55W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 27R.

Magnetic variation: 6W

2.19.2 ILS identification: DMI

2.19.5 Coordinates: 42-13-12.02N /

83-12-11.92W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 27R.

Magnetic variation: 6W

2.19.2 ILS identification: DMI

2.19.5 Coordinates: 42-12-58.36N /

83-20-00.00W

2.19.6 Site elevation: 630 ft

2.19.1 ILS type: Outer Marker for runway 27L.

Magnetic variation: 6W
2.19.2 ILS identification: EPA
2.19.5 Coordinates: 42-12-00.00N /
83-12-39.63W
2.19.6 Site elevation: 600 ft

2.19.1 ILS type: Localizer for runway 27L.
Magnetic variation: 6W
2.19.2 ILS identification: EPA
2.19.5 Coordinates: 42-11-56.23N /
83-21-55.64W
2.19.6 Site elevation: 635 ft

2.19.1 ILS type: Middle Marker for runway 27L.
Magnetic variation: 6W
2.19.2 ILS identification: EPA
2.19.5 Coordinates: 42-11-59.00N /
83-19-11.92W
2.19.6 Site elevation: 626 ft

2.19.1 ILS type: Glide Slope for runway 27L.
Magnetic variation: 6W
2.19.2 ILS identification: EPA
2.19.5 Coordinates: 42-11-54.66N /
83-20-00.00W
2.19.6 Site elevation: 626 ft

2.19.1 ILS type: DME for runway 04L. Magnetic
variation: 6W
2.19.2 ILS identification: HJT
2.19.5 Coordinates: 42-13-41.90N /
83-21-48.73W
2.19.6 Site elevation: 650 ft

2.19.1 ILS type: Localizer for runway 04L.
Magnetic variation: 6W
2.19.2 ILS identification: HJT
2.19.5 Coordinates: 42-13-43.23N /
83-21-52.16W
2.19.6 Site elevation: 642 ft

2.19.1 ILS type: Glide Slope for runway 04L.
Magnetic variation: 6W
2.19.2 ILS identification: HJT
2.19.5 Coordinates: 42-12-18.95N /
83-23-00.00W
2.19.6 Site elevation: 641 ft

2.19.1 ILS type: Inner Marker for runway 04L.
Magnetic variation: 6W
2.19.2 ILS identification: HJT

2.19.5 Coordinates: 42-12-00.00N /
83-23-00.00W
2.19.6 Site elevation: 646 ft
2.19.1 ILS type: DME for runway 22R. Magnetic
variation: 6W
2.19.2 ILS identification: JKI
2.19.5 Coordinates: 42-13-41.92N /
83-21-48.73W
2.19.6 Site elevation: 638 ft

2.19.1 ILS type: Localizer for runway 22R.
Magnetic variation: 6W
2.19.2 ILS identification: JKI
2.19.5 Coordinates: 42-11-59.07N /
83-23-00.00W
2.19.6 Site elevation: 645 ft

2.19.1 ILS type: Glide Slope for runway 22R.
Magnetic variation: 6W
2.19.2 ILS identification: JKI
2.19.5 Coordinates: 42-13-27.23N /
83-22-10.00W
2.19.6 Site elevation: 637 ft

2.19.1 ILS type: DME for runway 04X. Magnetic
variation: 6W
2.19.2 ILS identification: ALA
2.19.5 Coordinates: 42-11-57.11N /
83-23-00.00W
2.19.6 Site elevation: 643 ft

2.19.1 ILS type: Glide Slope for runway 04X.
Magnetic variation: 6W
2.19.2 ILS identification: ALA
2.19.5 Coordinates: 42-12-19.05N /
83-23-00.00W
2.19.6 Site elevation: 640 ft

2.19.1 ILS type: Localizer for runway 04X.
Magnetic variation: 6W
2.19.2 ILS identification: ALA
2.19.5 Coordinates: 42-13-33.40N /
83-21-50.94W
2.19.6 Site elevation: 639 ft

2.19.1 ILS type: Localizer for runway 22X.
Magnetic variation: 6W
2.19.2 ILS identification: BZB
2.19.5 Coordinates: 42-11-56.26N /
83-23-00.00W
2.19.6 Site elevation: 642 ft

2.19.1 ILS type: Glide Slope for runway 22X.
Magnetic variation: 6W
2.19.2 ILS identification: BZB
2.19.5 Coordinates: 42-13-27.35N /
83-22-10.30W
2.19.6 Site elevation: 638 ft

2.19.1 ILS type: DME for runway 22X. Magnetic
variation: 6W
2.19.2 ILS identification: BZB
2.19.5 Coordinates: 42-11-57.11N /
83-23-00.00W
2.19.6 Site elevation: 643 ft

General Remarks:

BRIGHTLY LIGHTED PARKING LOT 2.6 NAUTICAL MILE SW OF AIRPORT.

BE ALERT BIRDS, WATERFOWL, ON & IN THE VICINITY OF AIRPORT.

RUNWAY 21R DEPS BE ALERT FOR 'OPTICAL ILLUSION', AIRCRAFT TAXIING ON TAXIWAY 'T'
MAY APPEAR AS THOUGH CROSSING RUNWAY 21R CENTERLINE.

AIRCRAFT ON TAXIWAY 'F' AND TAXIWAY 'V' DO NOT BLOCK FIRE STATION EXITS.

TAXIWAY 'G' N OF TAXIWAY 'V' IS A NON-MOVEMENT AREA.

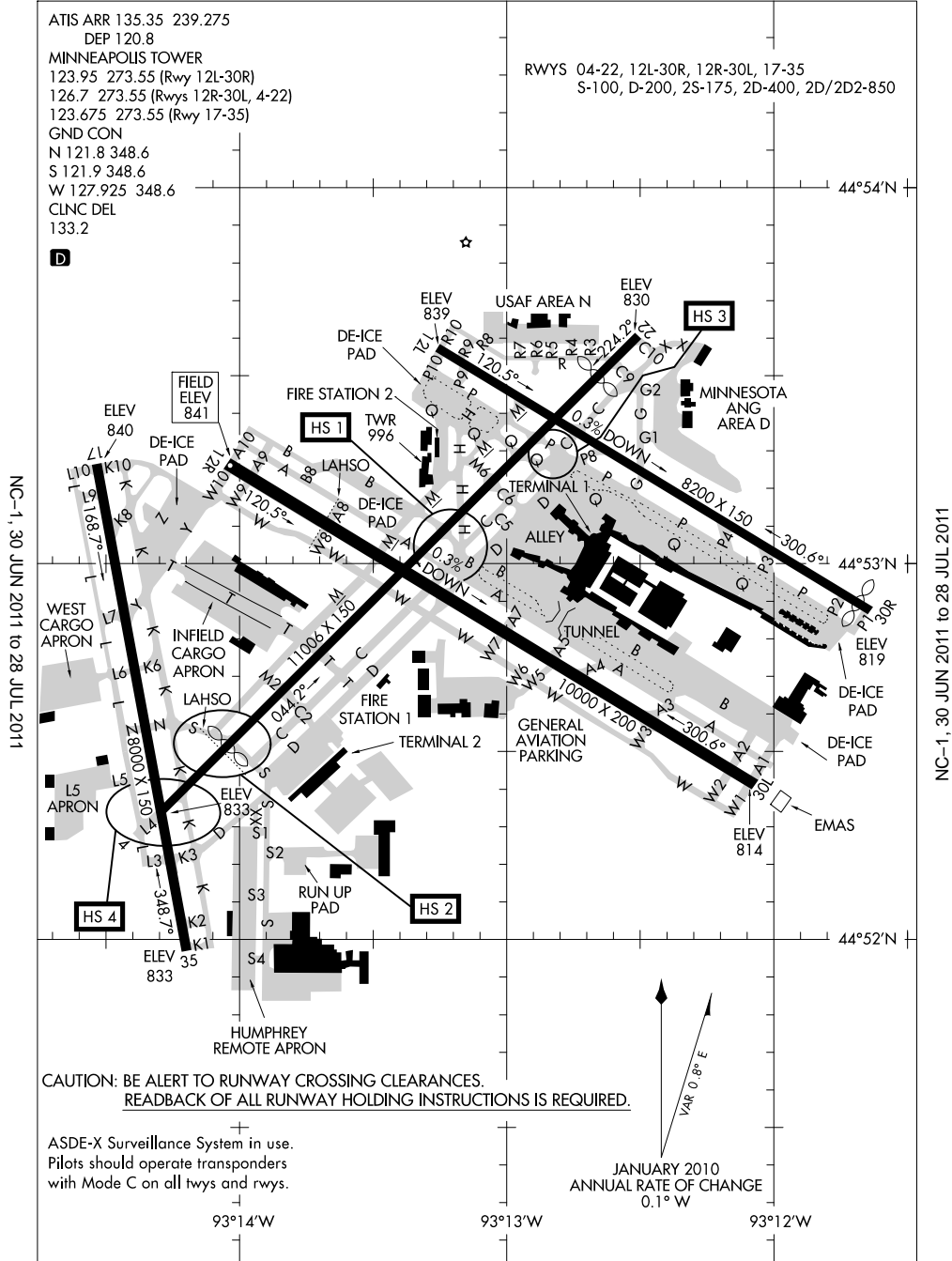
RUNWAY 22L DEPS BE ALERT FOR OPTICAL ILLUSION, AIRCRAFT TAXIING ON TAXIWAY Q
MAY APPEAR AS THOUGH CROSSING RUNWAY 22L CENTERLINE.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH
MODE C ON ALL TAXIWAYS & RUNWAYS.

UNIDIRECTIONAL STOPBARS ON RUNWAY 27R WHEN BEING USED FOR TAXI.

Minneapolis, Minnesota Minneapolis-St. Paul International (Wold-Chamberlain) ICAO Identifier KMSP

11013 AIRPORT DIAGRAM MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)
AL-264 (FAA) MINNEAPOLIS, MINNESOTA



AIRPORT DIAGRAM MINNEAPOLIS, MINNESOTA
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)
11013

Minneapolis, MN
Minneapolis-St Paul Intl/Wold-Chamberlain
ICAO Identifier KMSP

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 44-52-55.04N / 93-13-18.36W
- 2.2.2 From City: 6 Miles SW Of Minneapolis, MN
- 2.2.3 Elevation: 841 ft
- 2.2.5 Magnetic variation: 2E (1995)
- 2.2.6 Airport Contact: Steve Wareham
4300 GLUMACK SUITE 3000
St Paul, MN 55111
(612-725-6464)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 12L
- 2.10.1.b Type of obstacle: Tree (61 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 667 ft from Centerline

- 2.10.1.a. Runway designation: 30R
- 2.10.1.b Type of obstacle: Tree (13 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 272 ft from Centerline

- 2.10.1.a. Runway designation: 12R
- 2.10.1.b Type of obstacle: Tree (36 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 634 ft from Centerline

- 2.10.1.a. Runway designation: 30L
- 2.10.1.b Type of obstacle: Tree (36 ft). Lighted
- 2.10.1.c Location of obstacle: 562 ft from Centerline

- 2.10.1.a. Runway designation: 04
- 2.10.1.b Type of obstacle: Tree (101 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 834 ft from Centerline

- 2.10.1.a. Runway designation: 22
- 2.10.1.b Type of obstacle: Tree (66 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 636 ft from Centerline

- 2.10.1.a. Runway designation: 17
- 2.10.1.b Type of obstacle: Tree (52 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 732 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 12L
- 2.12.2 True Bearing: 121
- 2.12.3 Dimensions: 8200 ft x 150 ft
- 2.12.5 Coordinates: 44-53-34.62N / 93-13-15.55W
- 2.12.6 Threshold elevation: 838 ft
- 2.12.6 Touchdown zone elevation: 839 ft

- 2.12.1 Designation: 30R
- 2.12.2 True Bearing: 301
- 2.12.3 Dimensions: 8200 ft x 150 ft
- 2.12.5 Coordinates: 44-52-52.51N / 93-11-38.27W
- 2.12.6 Threshold elevation: 819 ft
- 2.12.6 Touchdown zone elevation: 823 ft

- 2.12.1 Designation: 12R
- 2.12.2 True Bearing: 121
- 2.12.3 Dimensions: 10000 ft x 200 ft
- 2.12.5 Coordinates: 44-53-16.04N / 93-14-00.00W
- 2.12.6 Threshold elevation: 841 ft
- 2.12.6 Touchdown zone elevation: 841 ft

- 2.12.1 Designation: 30L
- 2.12.2 True Bearing: 301
- 2.12.3 Dimensions: 10000 ft x 200 ft

2.12.5 Coordinates: 44-52-24.67N /
93-12-00.00W
2.12.6 Threshold elevation: 814 ft
2.12.6 Touchdown zone elevation: 823 ft

2.12.1 Designation: 04
2.12.2 True Bearing: 45
2.12.3 Dimensions: 11006 ft x 150 ft
2.12.5 Coordinates: 44-52-20.15N /
93-14-17.92W
2.12.6 Threshold elevation: 833 ft
2.12.6 Touchdown zone elevation: 832 ft

2.12.1 Designation: 22
2.12.2 True Bearing: 225
2.12.3 Dimensions: 11006 ft x 150 ft
2.12.5 Coordinates: 44-53-36.98N /
93-12-29.83W
2.12.6 Threshold elevation: 830 ft
2.12.6 Touchdown zone elevation: 828 ft

2.12.1 Designation: 17
2.12.2 True Bearing: 170
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.5 Coordinates: 44-53-15.91N /
93-14-32.10W
2.12.6 Threshold elevation: 840 ft
2.12.6 Touchdown zone elevation: 840 ft
2.12.7 Slope: 0.1DOWN

2.12.1 Designation: 35
2.12.2 True Bearing: 350
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.5 Coordinates: 44-51-58.24N /
93-14-11.92W
2.12.6 Threshold elevation: 833 ft
2.12.6 Touchdown zone elevation: 834 ft
2.12.7 Slope: 0.1UP

AD 2.13 Declared distances

2.13.1 Designation: 12L
2.13.2 Takeoff run available: 8200
2.13.3 Takeoff distance available: 8200
2.13.4 Accelerate-stop distance available: 7620
2.13.5 Landing distance available: 7620

2.13.1 Designation: 30R
2.13.2 Takeoff run available: 8200
2.13.3 Takeoff distance available: 8200
2.13.4 Accelerate-stop distance available: 8200
2.13.5 Landing distance available: 8000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 30R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 12R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 30L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 04
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 22
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 17
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 35
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III

configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 120.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CLASS B IC
2.18.3 Service designation: 121.2 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: CLASS B IC
2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: CD/P PRE TAXI
CLNC
2.18.3 Service designation: 133.2 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.35 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 273.55 MHz

2.18.1 Service designation: DEP/S
2.18.3 Service designation: 284.7 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 335.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 357.4 MHz

2.18.1 Service designation: GND METERING
2.18.3 Service designation: 133.57 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 124.7 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 127.925 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.75 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 282.675 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 118.72 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 123.675 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 132.975 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 126.95 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 324.3 MHz

2.18.1 Service designation: CLASS B IC
2.18.3 Service designation: 134.7 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 239.275 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: ARS CMD POST
2.18.3 Service designation: 138.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 12L.

Magnetic variation: 2E
2.19.2 ILS identification: PJJ
2.19.5 Coordinates: 44-52-50.33N /
93-11-33.25W
2.19.6 Site elevation: 813 ft

2.19.1 ILS type: Outer Marker for runway 12L.
Magnetic variation: 2E
2.19.2 ILS identification: PJJ
2.19.5 Coordinates: 44-56-37.77N /
93-20-26.52W
2.19.6 Site elevation: 900 ft

2.19.1 ILS type: Glide Slope for runway 12L.
Magnetic variation: 2E
2.19.2 ILS identification: PJJ
2.19.5 Coordinates: 44-53-30.64N /
93-12-57.01W
2.19.6 Site elevation: 830 ft

2.19.1 ILS type: DME for runway 12L. Magnetic
variation: 2E
2.19.2 ILS identification: PJJ
2.19.5 Coordinates: 44-53-00.00N /
93-11-47.05W
2.19.6 Site elevation: 813 ft

2.19.1 ILS type: Inner Marker for runway 12L.
Magnetic variation: 2E
2.19.2 ILS identification: PJJ
2.19.5 Coordinates: 44-53-39.68N /
93-13-25.89W
2.19.6 Site elevation: 833 ft

2.19.1 ILS type: Middle Marker for runway 12L.
Magnetic variation: 2E
2.19.2 ILS identification: PJJ
2.19.5 Coordinates: 44-53-47.98N /
93-13-46.30W
2.19.6 Site elevation: 832 ft

2.19.1 ILS type: Outer Marker for runway 30R.
Magnetic variation: 2E
2.19.2 ILS identification: INN
2.19.5 Coordinates: 44-49-57.40N /
93-05-00.00W
2.19.6 Site elevation: 821 ft

2.19.1 ILS type: DME for runway 30R. Magnetic
variation: 2E
2.19.2 ILS identification: INN

2.19.5 Coordinates: 44-53-00.00N /
93-11-48.84W
2.19.6 Site elevation: 813 ft

2.19.1 ILS type: Glide Slope for runway 30R.
Magnetic variation: 2E
2.19.2 ILS identification: INN
2.19.5 Coordinates: 44-53-00.00N /
93-11-48.83W
2.19.6 Site elevation: 813 ft

2.19.1 ILS type: Middle Marker for runway 30R.
Magnetic variation: 2E
2.19.2 ILS identification: INN
2.19.5 Coordinates: 44-52-38.68N /
93-11-00.00W
2.19.6 Site elevation: 705 ft

2.19.1 ILS type: Localizer for runway 30R.
Magnetic variation: 2E
2.19.2 ILS identification: INN
2.19.5 Coordinates: 44-53-39.81N /
93-13-27.53W
2.19.6 Site elevation: 846 ft

2.19.1 ILS type: Glide Slope for runway 12R.
Magnetic variation: 2E
2.19.2 ILS identification: HKZ
2.19.5 Coordinates: 44-53-00.00N /
93-13-53.53W
2.19.6 Site elevation: 835 ft

2.19.1 ILS type: Outer Marker for runway 12R.
Magnetic variation: 2E
2.19.2 ILS identification: HKZ
2.19.5 Coordinates: 44-56-14.87N /
93-21-00.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 12R.
Magnetic variation: 2E
2.19.2 ILS identification: HKZ
2.19.5 Coordinates: 44-53-29.37N /
93-14-33.50W
2.19.6 Site elevation: 819 ft

2.19.1 ILS type: DME for runway 12R. Magnetic
variation: 2E
2.19.2 ILS identification: HKZ
2.19.5 Coordinates: 44-52-28.40N /
93-12-23.96W

2.19.6 Site elevation: 830 ft

2.19.1 ILS type: Localizer for runway 12R.
Magnetic variation: 2E

2.19.2 ILS identification: HKZ

2.19.5 Coordinates: 44-52-20.74N /
93-11-55.17W

2.19.6 Site elevation: 813 ft

2.19.1 ILS type: Inner Marker for runway 12R.
Magnetic variation: 2E

2.19.2 ILS identification: HKZ

2.19.5 Coordinates: 44-53-20.87N /
93-14-12.67W

2.19.6 Site elevation: 839 ft

2.19.1 ILS type: Glide Slope for runway 30L.
Magnetic variation: 2E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-52-26.97N /
93-12-20.22W

2.19.6 Site elevation: 812 ft

2.19.1 ILS type: Inner Marker for runway 30L.
Magnetic variation: 2E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-52-19.78N /
93-11-52.60W

2.19.6 Site elevation: 809 ft

2.19.1 ILS type: Localizer for runway 30L.
Magnetic variation: 2E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-53-19.63N /
93-14-11.16W

2.19.6 Site elevation: 838 ft

2.19.1 ILS type: DME for runway 30L. Magnetic
variation: 2E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-52-28.40N /
93-12-23.96W

2.19.6 Site elevation: 830 ft

2.19.1 ILS type: Middle Marker for runway 30L.
Magnetic variation: 2E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-52-10.08N /
93-11-30.30W

2.19.6 Site elevation: 698 ft

2.19.1 ILS type: Outer Marker for runway 30L.
Magnetic variation: 2E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-49-32.68N /
93-05-28.78W

2.19.6 Site elevation: 880 ft

2.19.1 ILS type: Glide Slope for runway 04.
Magnetic variation: 2E

2.19.2 ILS identification: APL

2.19.5 Coordinates: 44-52-40.53N /
93-13-55.93W

2.19.6 Site elevation: 826 ft

2.19.1 ILS type: Outer Marker for runway 04.
Magnetic variation: 2E

2.19.2 ILS identification: APL

2.19.5 Coordinates: 44-49-26.67N /
93-18-21.81W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 04. Magnetic
variation: 2E

2.19.2 ILS identification: APL

2.19.5 Coordinates: 44-53-40.12N /
93-12-25.40W

2.19.6 Site elevation: 830 ft

2.19.1 ILS type: Middle Marker for runway 04.
Magnetic variation: 2E

2.19.2 ILS identification: APL

2.19.5 Coordinates: 44-52-19.77N /
93-14-18.50W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 22. Magnetic
variation: 2E

2.19.2 ILS identification: SIJ

2.19.5 Coordinates: 44-52-13.10N /
93-14-27.83W

2.19.6 Site elevation: 830 ft

2.19.1 ILS type: Outer Marker for runway 22.
Magnetic variation: 2E

2.19.2 ILS identification: SIJ

2.19.5 Coordinates: 44-57-00.00N /
93-07-23.39W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 22.
Magnetic variation: 2E

2.19.2 ILS identification: SIJ
2.19.5 Coordinates: 44-53-55.58N /
93-12-00.00W
2.19.6 Site elevation: 821 ft

2.19.1 ILS type: Localizer for runway 17. Magnetic
variation: 3E
2.19.2 ILS identification: TJZ
2.19.5 Coordinates: 44-51-48.38N /
93-14-00.00W
2.19.6 Site elevation: 830 ft

2.19.1 ILS type: DME for runway 17. Magnetic
variation: 3E
2.19.2 ILS identification: TJZ
2.19.5 Coordinates: 44-53-25.29N /
93-14-38.30W
2.19.6 Site elevation: 822 ft

2.19.1 ILS type: Localizer for runway 35. Magnetic
variation: 2E
2.19.2 ILS identification: BMA
2.19.5 Coordinates: 44-53-25.72N /
93-14-34.65W

2.19.6 Site elevation: 840 ft

2.19.1 ILS type: Inner Marker for runway 35.
Magnetic variation: 2E
2.19.2 ILS identification: BMA
2.19.5 Coordinates: 44-51-48.33N /
93-14-00.00W
2.19.6 Site elevation: 833 ft

2.19.1 ILS type: DME for runway 35. Magnetic
variation: 2E
2.19.2 ILS identification: BMA
2.19.5 Coordinates: 44-53-25.29N /
93-14-38.30W
2.19.6 Site elevation: 822 ft

2.19.1 ILS type: Glide Slope for runway 35.
Magnetic variation: 2E
2.19.2 ILS identification: BMA
2.19.5 Coordinates: 44-52-00.00N /
93-14-19.75W
2.19.6 Site elevation: 832 ft

General Remarks:

TRAINING FLIGHTS PROHIBITED. GA FLIGHTS MUST TERMINATE AT THE FBO OR US
CUSTOMS UNLESS APPROVED BY AIRPORT MANAGER.

FOR NOISE ABATEMENT PROCEDURES CALL (612) 726-9411; NO STAGE 1 CATEGORY CIVIL
AIRCRAFT; NIGHTTIME HRS ARE 2230-0600.

BIRDS ON & IN THE VICINITY OF AIRPORT.

SIGNATURE FLIGHT SUPPORT 128.95

MILITARY REMARKS: ARFC 934 AW: OPR 1300--400Z++ MON-THU, 1300-2230Z++ FRI, CLOSED
WEEKEND AND HOLIDAY, CONTACT BASE OPERATIONS FOR OPR HRS DURING UNIT
TRAINING ASSEMBLY WEEKEND. TRANSMIT AIRCRAFT MUST OPR 1300-2145Z++ MON-FRI,
EXCEPT HOLIDAY UNLESS DIRECTLY SUPPORTING 934 AW OR OTHER SPECIAL
CIRCUMSTANCES.

MILITARY RESTRICTED: NO HAZARD CL/DIV 1.1 OR 1.2 EXPLOSIVES PERMITTED. LOADING
OR UNLOADING OF HAZARD CL/DIV 1.3, 1.4, 1.5 OR 1.6 MUST BE APPROVE BY AIRPORT
DIRECT PRIOR TO FLIGHT.

COMPLEX GEOMETRY AT RUNWAY 04 APPROACH END. RUNWAY 04 DEPARTURES CHECK
COMPASS TO VERIFY CORRECT RUNWAY HEADING.

VEHICLES PARKED ALONG SOUTH END OF TAXIWAY 'S'.

133 AW BASE OPERATIONS – 324.3 REMARKS: (CALL LIGHTHOUSE).

COMMUNICATIONS: MINNEAPOLIS AIR RESERVE STATION JOINT COMMAND POST – 252.1
REMARKS: CALL NORTHSTAR.

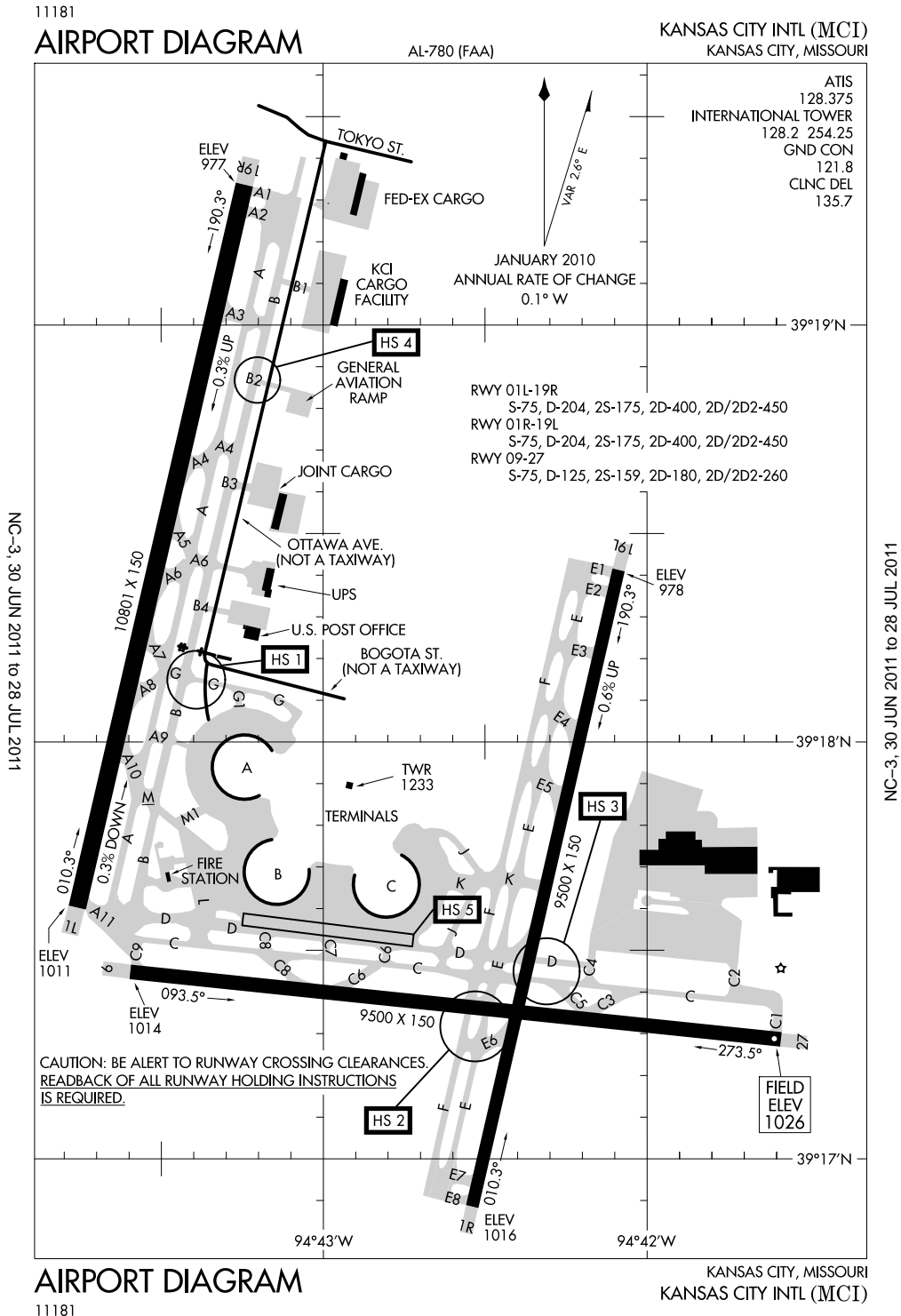
934 AW BASE OPERATIONS – PILOT TO DISPATCH 282.675 REMARKS: (CALL VIKING OPS).

REMARKS: AFRC 934 AW: CONTACT PILOT TO DISPATCH (VIKING OPS) 20 MIN PRIOR
LANDING.

ASDE-X SURVEILLANCE SYSTEM IN USE. PILOTS SHOULD OPERATE TRANSPONDERS WITH
MODE C ON ALL TAXIWAYS AND RUNWAYS

ALL UNSCHEDULED AIRCRAFT AT TERMINAL 2-HUMPHREY ARE REQUIRED TO CONTACT
TERMINAL 2 GATE CONTROL ON 122.95 OR CALL 612-726-5742 PRIOR TO ARR.

**Kansas City, Missouri
Kansas City International
ICAO Identifier KMCI**



Kansas City, MO
Kansas City Intl
ICAO Identifier KMCI

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-17-51.38N / 94-42-50.06W
- 2.2.2 From City: 15 Miles NW Of Kansas City, MO
- 2.2.3 Elevation: 1026 ft
- 2.2.5 Magnetic variation: 5E (1990)
- 2.2.6 Airport Contact: Mr. David W. Bowen
P.O. BOX 20047
Kansas City, MO 64195
(816-243-5248)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 96
- 2.12.3 Dimensions: 9500 ft x 150 ft
- 2.12.5 Coordinates: 39-17-27.10N / 94-43-35.73W
- 2.12.6 Threshold elevation: 1014 ft
- 2.12.6 Touchdown zone elevation: 1014 ft

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 276
- 2.12.3 Dimensions: 9500 ft x 150 ft
- 2.12.5 Coordinates: 39-17-17.08N / 94-41-35.59W
- 2.12.6 Threshold elevation: 1026 ft
- 2.12.6 Touchdown zone elevation: 1026 ft

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 13

- 2.12.3 Dimensions: 10801 ft x 150 ft
- 2.12.5 Coordinates: 39-17-36.01N / 94-43-45.54W
- 2.12.6 Threshold elevation: 1011 ft
- 2.12.6 Touchdown zone elevation: 1011 ft

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 193
- 2.12.3 Dimensions: 10801 ft x 150 ft
- 2.12.5 Coordinates: 39-19-20.05N / 94-43-14.79W
- 2.12.6 Threshold elevation: 977 ft
- 2.12.6 Touchdown zone elevation: 988 ft

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 13
- 2.12.3 Dimensions: 9500 ft x 150 ft
- 2.12.5 Coordinates: 39-16-53.24N / 94-42-32.39W
- 2.12.6 Threshold elevation: 1016 ft
- 2.12.6 Touchdown zone elevation: 1016 ft

- 2.12.1 Designation: 19L
- 2.12.2 True Bearing: 193
- 2.12.3 Dimensions: 9500 ft x 150 ft
- 2.12.5 Coordinates: 39-18-24.74N / 94-42-00.00W
- 2.12.6 Threshold elevation: 978 ft
- 2.12.6 Touchdown zone elevation: 994 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 09
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

- 2.14.1 Designation: 27
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 01L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 19R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 01R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 19L

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

**AD 2.18 Air traffic services communication
facilities**

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 118.9 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 124.7 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 124.7 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 125.75 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 128.2 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 135.7 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 254.25 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 284.7 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 294.7 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 294.7 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 120.95 MHz

2.18.1 Service designation: DEP/P IC

2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 128.375 MHz

2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 09. Magnetic
variation: 5E

2.19.2 ILS identification: RNI

2.19.5 Coordinates: 39-17-16.02N /
94-41-22.95W

2.19.6 Site elevation: 1020 ft

2.19.1 ILS type: DME for runway 09. Magnetic
variation: 5E

2.19.2 ILS identification: RNI

2.19.5 Coordinates: 39-17-18.91N /
94-41-21.70W

2.19.6 Site elevation: 1032 ft

2.19.1 ILS type: Middle Marker for runway 09.
Magnetic variation: 5E

2.19.2 ILS identification: RNI

2.19.5 Coordinates: 39-17-30.00N /
94-44-10.10W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 09.
Magnetic variation: 5E

2.19.2 ILS identification: RNI

2.19.5 Coordinates: 39-17-21.08N /
94-43-22.95W

2.19.6 Site elevation: 1010 ft

2.19.1 ILS type: Outer Marker for runway 09.
Magnetic variation: 5E

2.19.2 ILS identification: RNI

2.19.5 Coordinates: 39-18-00.00N /
94-51-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic
variation: 5E

2.19.2 ILS identification: UQY

2.19.5 Coordinates: 39-17-28.63N /
94-43-54.07W

2.19.6 Site elevation: 1014 ft

2.19.1 ILS type: Glide Slope for runway 27.
Magnetic variation: 5E

2.19.2 ILS identification: UQY

2.19.5 Coordinates: 39-17-15.72N /
94-41-50.27W

2.19.6 Site elevation: 1016 ft

2.19.1 ILS type: DME for runway 27. Magnetic
variation: 5E

2.19.2 ILS identification: UQY

2.19.5 Coordinates: 39-17-25.69N /
94-43-54.58W

2.19.6 Site elevation: 1014 ft

2.19.1 ILS type: Localizer for runway 01L.
Magnetic variation: 5E

2.19.2 ILS identification: DOT

2.19.5 Coordinates: 39-19-29.68N /
94-43-11.95W

2.19.6 Site elevation: 972 ft

2.19.1 ILS type: Glide Slope for runway 01L.
Magnetic variation: 5E

2.19.2 ILS identification: DOT

2.19.5 Coordinates: 39-17-48.27N /
94-43-47.13W

2.19.6 Site elevation: 1002 ft

2.19.1 ILS type: Outer Marker for runway 01L.
Magnetic variation: 5E

2.19.2 ILS identification: DOT

2.19.5 Coordinates: 39-13-15.20N /
94-44-59.70W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 01L.
Magnetic variation: 5E

2.19.2 ILS identification: DOT

2.19.5 Coordinates: 39-17-00.00N /
94-43-53.30W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 01L. Magnetic
variation: 5E

2.19.2 ILS identification: DOT

2.19.5 Coordinates: 39-19-30.05N /
94-43-00.00W

2.19.6 Site elevation: 976 ft

2.19.1 ILS type: Localizer for runway 19R.
Magnetic variation: 3E

2.19.2 ILS identification: PAJ

2.19.5 Coordinates: 39-17-23.80N /
94-43-49.14W

2.19.6 Site elevation: 1017 ft

2.19.1 ILS type: Glide Slope for runway 19R.
Magnetic variation: 3E

2.19.2 ILS identification: PAJ

2.19.5 Coordinates: 39-19-11.06N /
94-43-22.67W

2.19.6 Site elevation: 976 ft

2.19.1 ILS type: Outer Marker for runway 19R.
Magnetic variation: 3E

2.19.2 ILS identification: PAJ

2.19.5 Coordinates: 39-24-51.80N /
94-41-36.10W

2.19.6 Site elevation: 893 ft

2.19.1 ILS type: Inner Marker for runway 19R.
Magnetic variation: 3E

2.19.2 ILS identification: PAJ

2.19.5 Coordinates: 39-19-30.10N /
94-43-11.80W

2.19.6 Site elevation: 969 ft

2.19.1 ILS type: Middle Marker for runway 19R.
Magnetic variation: 3E

2.19.2 ILS identification: PAJ
2.19.5 Coordinates: 39-19-49.40N /
94-43-00.00W
2.19.6 Site elevation: 960 ft

2.19.1 ILS type: DME for runway 19R. Magnetic
variation: 3E
2.19.2 ILS identification: PAJ
2.19.5 Coordinates: 39-17-25.77N /
94-43-51.97W
2.19.6 Site elevation: 1011 ft

2.19.1 ILS type: Localizer for runway 01R.
Magnetic variation: 3E
2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-18-34.40N /
94-42-00.00W
2.19.6 Site elevation: 963 ft

2.19.1 ILS type: Middle Marker for runway 01R.
Magnetic variation: 3E
2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-16-27.60N /
94-42-40.00W
2.19.6 Site elevation: 993 ft

2.19.1 ILS type: DME for runway 01R. Magnetic
variation: 3E
2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-18-35.63N /
94-42-00.00W
2.19.6 Site elevation: 969 ft

2.19.1 ILS type: Inner Marker for runway 01R.
Magnetic variation: 3E
2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-16-45.10N /
94-42-34.80W
2.19.6 Site elevation: 1010 ft

2.19.1 ILS type: Glide Slope for runway 01R.

General Remarks:

WATERFOWL ON AND IN THE VICINITY OF AIRPORT.

WINDSHEAR ALERT SYSTEM ON AIRPORT.

NOISE ABATEMENT PROCEDURES IN EFFECT 2200-0600 WITH LANDING ON RUNWAYS 01L &
19L; TAKEOFFS ON RUNWAYS 01R & 19R.

MILITARY AIRCRAFT MAY BE CHARGED RAMP/PARKING FEES.

Magnetic variation: 3E
2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-17-00.00N /
94-42-24.22W
2.19.6 Site elevation: 1010 ft

2.19.1 ILS type: Localizer for runway 19L.
Magnetic variation: 5E
2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-16-43.59N /
94-42-35.24W
2.19.6 Site elevation: 1011 ft

2.19.1 ILS type: DME for runway 19L. Magnetic
variation: 5E
2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-16-43.62N /
94-42-38.55W
2.19.6 Site elevation: 1016 ft

2.19.1 ILS type: Glide Slope for runway 19L.
Magnetic variation: 5E
2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-18-13.95N /
94-42-00.00W
2.19.6 Site elevation: 977 ft

2.19.1 ILS type: Middle Marker for runway 19L.
Magnetic variation: 5E
2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-18-51.60N /
94-41-57.40W
2.19.6 Site elevation: 958 ft

2.19.1 ILS type: Outer Marker for runway 19L.
Magnetic variation: 5E
2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-23-12.92N /
94-40-37.14W
2.19.6 Site elevation: 830 ft

FLIGHT NOTIFICATION SERVICE (ADCUS) AVAILABLE AT GATE 90.

COYOTE ON & IN THE VICINITY OF AIRPORT.

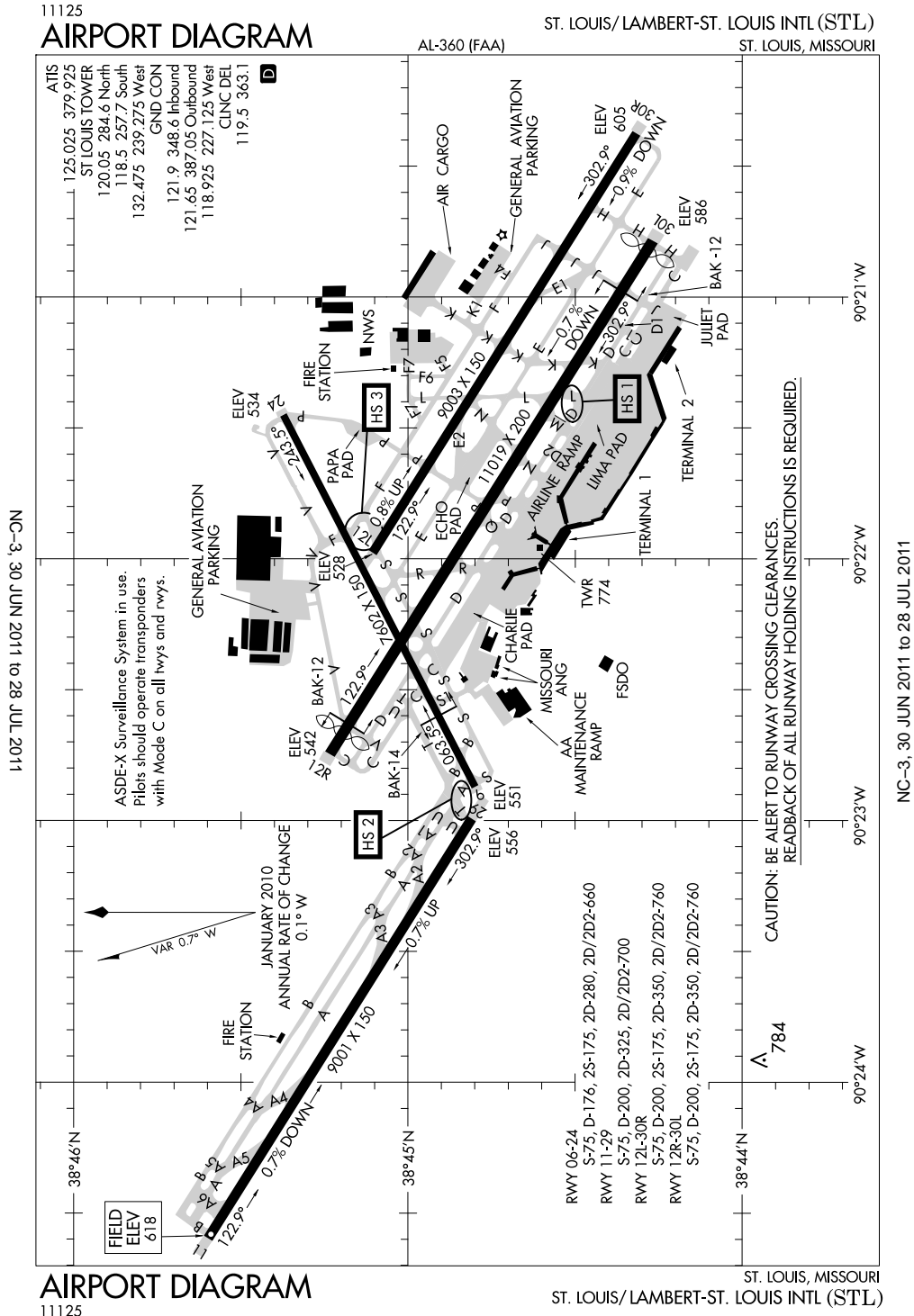
PRIOR PERMISSION REQUIRED TO PARK AT AIRLINE GATES CONTACT RESPECTIVE AIRLINE.

WHEN USING HIGH-SPEED EXITS C5 & C6 CONTINUE UNTIL FIRST PARALLEL TAXIWAY,
THEN USE EXTREME CAUTION WHEN TURNING IN EXCESS OF 90 DEGREES.

NO AIRCRAFT PARKING ON POSTAL APRON.

PUSHBACK CLEARANCE REQUIRED AT GATES 45 THRU 57 IN TERMINAL B AND GATES 72, 73
AND 76 IN TERMINAL C, PUSHBACK FROM THESE GATES ENTERS TAXIWAY D.

St. Louis, Missouri
Lambert-St. Louis International
ICAO Identifier KSTL



St Louis, MO
Lambert-St Louis Intl
ICAO Identifier KSTL

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 38-44-55.31N / 90-22-12.10W
- 2.2.2 From City: 10 Miles NW Of St Louis, MO
- 2.2.3 Elevation: 618 ft
- 2.2.5 Magnetic variation: 0E (2000)
- 2.2.6 Airport Contact: Ms. Rhonda Hamm-Niebruegge
BOX 10212
St Louis, MO 63145
(314-426-8000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 06
- 2.10.1.b Type of obstacle: Tree (31 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 250 ft from Centerline

- 2.10.1.a. Runway designation: 24
- 2.10.1.b Type of obstacle: Sign (18 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 450 ft from Centerline

- 2.10.1.a. Runway designation: 12L
- 2.10.1.b Type of obstacle: Bldg (54 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 600 ft from Centerline

- 2.10.1.a. Runway designation: 30R
- 2.10.1.b Type of obstacle: Twr (42 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 580 ft from Centerline

- 2.10.1.a. Runway designation: 12R
- 2.10.1.b Type of obstacle: Road (30 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 30L
- 2.10.1.b Type of obstacle: Sign (86 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 900 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 63
- 2.12.3 Dimensions: 7602 ft x 150 ft
- 2.12.5 Coordinates: 38-44-48.04N / 90-22-52.43W
- 2.12.6 Threshold elevation: 551 ft
- 2.12.6 Touchdown zone elevation: 551 ft

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 243
- 2.12.3 Dimensions: 7602 ft x 150 ft
- 2.12.5 Coordinates: 38-45-22.38N / 90-21-27.02W
- 2.12.6 Threshold elevation: 534 ft
- 2.12.6 Touchdown zone elevation: 534 ft

- 2.12.1 Designation: 30X
- 2.12.3 Dimensions: 0 ft x 0 ft

- 2.12.1 Designation: 12X
- 2.12.3 Dimensions: 0 ft x 0 ft

- 2.12.1 Designation: 11
- 2.12.2 True Bearing: 122
- 2.12.3 Dimensions: 9001 ft x 150 ft
- 2.12.5 Coordinates: 38-45-35.83N / 90-24-35.55W
- 2.12.6 Threshold elevation: 618 ft
- 2.12.6 Touchdown zone elevation: 618 ft

- 2.12.1 Designation: 29
- 2.12.2 True Bearing: 302

2.12.3 Dimensions: 9001 ft x 150 ft
2.12.5 Coordinates: 38-44-48.46N /
90-22-59.39W
2.12.6 Threshold elevation: 556 ft
2.12.6 Touchdown zone elevation: 580 ft

2.12.1 Designation: 12L
2.12.2 True Bearing: 122
2.12.3 Dimensions: 9003 ft x 150 ft
2.12.5 Coordinates: 38-45-00.00N /
90-21-58.66W
2.12.6 Threshold elevation: 528 ft
2.12.6 Touchdown zone elevation: 541 ft

2.12.1 Designation: 30R
2.12.2 True Bearing: 302
2.12.3 Dimensions: 9003 ft x 150 ft
2.12.5 Coordinates: 38-44-18.99N /
90-20-22.51W
2.12.6 Threshold elevation: 604 ft
2.12.6 Touchdown zone elevation: 604 ft

2.12.1 Designation: 12R
2.12.2 True Bearing: 122
2.12.3 Dimensions: 11019 ft x 200 ft
2.12.5 Coordinates: 38-45-14.05N /
90-22-44.97W
2.12.6 Threshold elevation: 542 ft
2.12.6 Touchdown zone elevation: 540 ft

2.12.1 Designation: 30L
2.12.2 True Bearing: 302
2.12.3 Dimensions: 11019 ft x 200 ft
2.12.5 Coordinates: 38-44-16.01N /
90-20-47.27W
2.12.6 Threshold elevation: 586 ft
2.12.6 Touchdown zone elevation: 583 ft

AD 2.13 Declared distances

2.13.1 Designation: 06
2.13.2 Takeoff run available: 7602
2.13.3 Takeoff distance available: 7602
2.13.4 Accelerate-stop distance available: 7352
2.13.5 Landing distance available: 7352

2.13.1 Designation: 24
2.13.2 Takeoff run available: 7602
2.13.3 Takeoff distance available: 7602
2.13.4 Accelerate-stop distance available: 7602
2.13.5 Landing distance available: 7602

2.13.1 Designation: 11
2.13.2 Takeoff run available: 9001
2.13.3 Takeoff distance available: 9001
2.13.4 Accelerate-stop distance available: 9001
2.13.5 Landing distance available: 9001

2.13.1 Designation: 29
2.13.2 Takeoff run available: 9001
2.13.3 Takeoff distance available: 9001
2.13.4 Accelerate-stop distance available: 9001
2.13.5 Landing distance available: 9001

2.13.1 Designation: 12L
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003
2.13.4 Accelerate-stop distance available: 9003
2.13.5 Landing distance available: 9003

2.13.1 Designation: 30R
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003
2.13.4 Accelerate-stop distance available: 9003
2.13.5 Landing distance available: 9003

2.13.1 Designation: 12R
2.13.2 Takeoff run available: 11019
2.13.3 Takeoff distance available: 11019
2.13.4 Accelerate-stop distance available: 11019
2.13.5 Landing distance available: 10562

2.13.1 Designation: 30L
2.13.2 Takeoff run available: 11019
2.13.3 Takeoff distance available: 11019
2.13.4 Accelerate-stop distance available: 11019
2.13.5 Landing distance available: 10819

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 24
2.14.2 Approach lighting system: MAL: 1400 feet medium intensity approach lighting system
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 11

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 29

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 12L

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 30R

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.10 Remarks: ALSF2 Unmonitored Except When RVR Visbelow 1800 Ft.

2.14.1 Designation: 12R

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 30L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.10 Remarks: PAPI Offset 5 Degrees S To Accommodate LDA/DME Approach To Runway 30L.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 128.1 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: DEP/S

2.18.3 Service designation: 126.55 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 120.05 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND CTL OUTBOUND/P

2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND CTL INBOUND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 123.7 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 124.2 MHz

2.18.1 Service designation: DEP/S

2.18.3 Service designation: 124.25 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 132.125 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 254.3 MHz

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 257.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 307.05 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 306.2 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 338.25 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 335.5 MHz

2.18.1 Service designation: GND CTL
INBOUND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 360.6 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 363.1 MHz

2.18.1 Service designation: DEP/S
2.18.3 Service designation: 270.35 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 353.9 MHz

2.18.1 Service designation: GND METER EAST
2.18.3 Service designation: 127.55 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 125.025 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 379.925 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND CTL
OUTBOUND/P
2.18.3 Service designation: 387.05 MHz
2.18.1 Service designation: GND METER EAST
2.18.3 Service designation: 360.2 MHz

2.18.1 Service designation: GND METER WEST
2.18.3 Service designation: 121.075 MHz

2.18.1 Service designation: GND METER WEST
2.18.3 Service designation: 346.35 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 132.475 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 239.275 MHz

2.18.1 Service designation: GND CTL/P
2.18.3 Service designation: 118.925 MHz

2.18.1 Service designation: GND CTL/P
2.18.3 Service designation: 227.125 MHz

2.18.1 Service designation: PRM
2.18.3 Service designation: 278.3 MHz

2.18.1 Service designation: PRM
2.18.3 Service designation: 351.9 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 121.02 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 06.
Magnetic variation: 0E
2.19.2 ILS identification: JAK
2.19.5 Coordinates: 38-44-54.80N /
90-22-39.84W
2.19.6 Site elevation: 536 ft

2.19.1 ILS type: Localizer for runway 06. Magnetic
variation: 0E
2.19.2 ILS identification: JAK
2.19.5 Coordinates: 38-45-25.79N /
90-21-18.61W
2.19.6 Site elevation: 541 ft

2.19.1 ILS type: DME for runway 06. Magnetic
variation: 0E
2.19.2 ILS identification: JAK
2.19.5 Coordinates: 38-44-39.67N /
90-23-00.00W
2.19.6 Site elevation: 556 ft

2.19.1 ILS type: Localizer for runway 24. Magnetic
variation: 0E

2.19.2 ILS identification: STL
2.19.5 Coordinates: 38-44-43.52N /
90-23-00.00W
2.19.6 Site elevation: 545 ft

2.19.1 ILS type: DME for runway 24. Magnetic
variation: 0E
2.19.2 ILS identification: STL
2.19.5 Coordinates: 38-44-39.67N /
90-23-00.00W
2.19.6 Site elevation: 540 ft

2.19.1 ILS type: Glide Slope for runway 24.
Magnetic variation: 0E
2.19.2 ILS identification: STL
2.19.5 Coordinates: 38-45-13.62N /
90-21-37.59W
2.19.6 Site elevation: 529 ft

2.19.1 ILS type: Middle Marker for runway 24.
Magnetic variation: 0E
2.19.2 ILS identification: STL
2.19.5 Coordinates: 38-45-37.15N /
90-20-50.60W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 24.
Magnetic variation: 0E
2.19.2 ILS identification: STL
2.19.5 Coordinates: 38-47-16.98N /
90-16-43.91W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 30X. Magnetic
variation: 0E
2.19.2 ILS identification: RMK
2.19.5 Coordinates: 38-45-34.14N / 90-23-30.20W
2.19.6 Site elevation: 583 ft

2.19.1 ILS type: Localizer for runway 30X.
Magnetic variation: 0E
2.19.2 ILS identification: RMK
2.19.5 Coordinates: 38-45-33.46N /
90-23-28.96W
2.19.6 Site elevation: 580 ft

2.19.1 ILS type: Glide Slope for runway 30X.
Magnetic variation: 0E
2.19.2 ILS identification: RMK
2.19.5 Coordinates: 38-44-28.10N /
90-21-00.00W

2.19.6 Site elevation: 564 ft

2.19.1 ILS type: DME for runway 12X. Magnetic
variation: 0E
2.19.2 ILS identification: LDZ
2.19.5 Coordinates: 38-44-10.39N /
90-20-12.05W
2.19.6 Site elevation: 616 ft

2.19.1 ILS type: Glide Slope for runway 12X.
Magnetic variation: 0E
2.19.2 ILS identification: LDZ
2.19.5 Coordinates: 38-44-58.22N /
90-21-50.34W
2.19.6 Site elevation: 534 ft

2.19.1 ILS type: Inner Marker for runway 12X.
Magnetic variation: 0E
2.19.2 ILS identification: LDZ
2.19.5 Coordinates: 38-45-11.93N /
90-22-00.00W
2.19.6 Site elevation: 530 ft

2.19.1 ILS type: Middle Marker for runway 12X.
Magnetic variation: 0E
2.19.2 ILS identification: LDZ
2.19.5 Coordinates: 38-45-21.22N /
90-22-28.71W
2.19.6 Site elevation: 545 ft

2.19.1 ILS type: Localizer for runway 12X.
Magnetic variation: 0E
2.19.2 ILS identification: LDZ
2.19.5 Coordinates: 38-44-13.67N /
90-20-11.72W
2.19.6 Site elevation: 602 ft

2.19.1 ILS type: Outer Marker for runway 12X.
Magnetic variation: 0E
2.19.2 ILS identification: LDZ
2.19.5 Coordinates: 38-48-00.00N /
90-28-29.10W
2.19.6 Site elevation: 446 ft

2.19.1 ILS type: Inner Marker for runway 11.
Magnetic variation: 0E
2.19.2 ILS identification: OGZ
2.19.5 Coordinates: 38-45-40.35N /
90-24-44.74W
2.19.6 Site elevation: 614 ft
2.19.1 ILS type: DME for runway 11. Magnetic

variation: 0E
2.19.2 ILS identification: OGZ
2.19.5 Coordinates: 38-44-36.71N /
90-22-41.69W
2.19.6 Site elevation: 548 ft

2.19.1 ILS type: Glide Slope for runway 11.
Magnetic variation: 0E
2.19.2 ILS identification: OGZ
2.19.5 Coordinates: 38-45-26.04N /
90-24-25.38W
2.19.6 Site elevation: 598 ft

2.19.1 ILS type: Localizer for runway 11. Magnetic
variation: 0E
2.19.2 ILS identification: OGZ
2.19.5 Coordinates: 38-44-38.72N /
90-22-39.63W
2.19.6 Site elevation: 545 ft

2.19.1 ILS type: Inner Marker for runway 29.
Magnetic variation: 0E
2.19.2 ILS identification: RQN
2.19.5 Coordinates: 38-44-41.36N /
90-22-44.97W
2.19.6 Site elevation: 541 ft

2.19.1 ILS type: Localizer for runway 29. Magnetic
variation: 0E
2.19.2 ILS identification: RQN
2.19.5 Coordinates: 38-45-41.35N /
90-24-46.77W
2.19.6 Site elevation: 613 ft

2.19.1 ILS type: DME for runway 29. Magnetic
variation: 0E
2.19.2 ILS identification: RQN
2.19.5 Coordinates: 38-45-43.83N /
90-24-44.64W
2.19.6 Site elevation: 608 ft

2.19.1 ILS type: Glide Slope for runway 29.
Magnetic variation: 0E
2.19.2 ILS identification: RQN
2.19.5 Coordinates: 38-44-49.83N /
90-23-11.86W
2.19.6 Site elevation: 556 ft

2.19.1 ILS type: Localizer for runway 12L.
Magnetic variation: 0E
2.19.2 ILS identification: ABW

2.19.5 Coordinates: 38-45-20.83N /
90-21-11.28W
2.19.6 Site elevation: 566 ft

2.19.1 ILS type: DME for runway 12L. Magnetic
variation: 0E
2.19.2 ILS identification: ABW
2.19.5 Coordinates: 38-45-23.25N /
90-21-00.00W
2.19.6 Site elevation: 563 ft

2.19.1 ILS type: DME for runway 30R. Magnetic
variation: 0E
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-45-14.12N /
90-22-00.00W
2.19.6 Site elevation: 546 ft

2.19.1 ILS type: Middle Marker for runway 30R.
Magnetic variation: 0E
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-44-00.00N /
90-19-57.56W
2.19.6 Site elevation: 534 ft

2.19.1 ILS type: Inner Marker for runway 30R.
Magnetic variation: 0E
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-44-14.66N / 90-20-13.78W
2.19.6 Site elevation: 576 ft

2.19.1 ILS type: Outer Marker for runway 30R.
Magnetic variation: 0E
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-41-46.48N /
90-15-44.59W
2.19.6 Site elevation: 530 ft

2.19.1 ILS type: Localizer for runway 30R.
Magnetic variation: 0E
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-45-11.41N /
90-22-00.00W
2.19.6 Site elevation: 530 ft

2.19.1 ILS type: Glide Slope for runway 30R.
Magnetic variation: 0E
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-44-21.96N /
90-20-38.02W
2.19.6 Site elevation: 592 ft

- 2.19.1 ILS type: Localizer for runway 12R.
Magnetic variation: 0E
2.19.2 ILS identification: LMR
2.19.5 Coordinates: 38-44-11.62N /
90-20-38.31W
2.19.6 Site elevation: 589 ft
- 2.19.1 ILS type: Outer Marker for runway 12R.
Magnetic variation: 0E
2.19.2 ILS identification: LMR
2.19.5 Coordinates: 38-48-00.00N /
90-28-29.10W
2.19.6 Site elevation: 446 ft
- 2.19.1 ILS type: Glide Slope for runway 12R.
Magnetic variation: 0E
2.19.2 ILS identification: LMR
2.19.5 Coordinates: 38-45-00.00N /
90-22-24.90W
2.19.6 Site elevation: 528 ft
- 2.19.1 ILS type: Middle Marker for runway 12R.
Magnetic variation: 0E
2.19.2 ILS identification: LMR
2.19.5 Coordinates: 38-45-32.78N /
90-23-23.72W
2.19.6 Site elevation: 99999 ft
- 2.19.1 ILS type: DME for runway 12R. Magnetic
variation: 0E
2.19.2 ILS identification: LMR
2.19.5 Coordinates: 38-44-10.45N /
- 90-20-42.27W
2.19.6 Site elevation: 597 ft
- 2.19.1 ILS type: Localizer for runway 30L.
Magnetic variation: 0E
2.19.2 ILS identification: BKY
2.19.5 Coordinates: 38-45-17.29N /
90-22-51.53W
2.19.6 Site elevation: 549 ft
- 2.19.1 ILS type: Glide Slope for runway 30L.
Magnetic variation: 0E
2.19.2 ILS identification: BKY
2.19.5 Coordinates: 38-44-27.94N /
90-21-00.00W
2.19.6 Site elevation: 564 ft
- 2.19.1 ILS type: Middle Marker for runway 30L.
Magnetic variation: 0E
2.19.2 ILS identification: BKY
2.19.5 Coordinates: 38-44-00.00N /
90-20-20.21W
2.19.6 Site elevation: 590 ft
- 2.19.1 ILS type: Outer Marker for runway 30L.
Magnetic variation: 0E
2.19.2 ILS identification: BKY
2.19.5 Coordinates: 38-41-45.98N /
90-15-44.21W
2.19.6 Site elevation: 530 ft

General Remarks:

NO DESIGNATED TAXILANES OR APRON TAXIWAYS LOCATED ON AIR CARRIER RAMPS.

WAIVER TO CONDUCT SIMULTANEOUS APPROACHES TO PARALLEL RUNWAYS SEPARATED BY 1,300 FT IN EFFECT.

WG TIP CLEARANCE WITH GROUND VEH NOT ADEQUATE ALONG N SIDE OF MAIN TERMINAL APRON.

MISC: MILITARY AIRCRAFT PLANNING TO ARR WHEN WX IS ANTICIPATED TO BE LESS THAN 1200'/5 MUST FILE F;T PLAN BEFORE 0900Z++.

ASDE-X SURVEILLANCE SYSTEM I USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

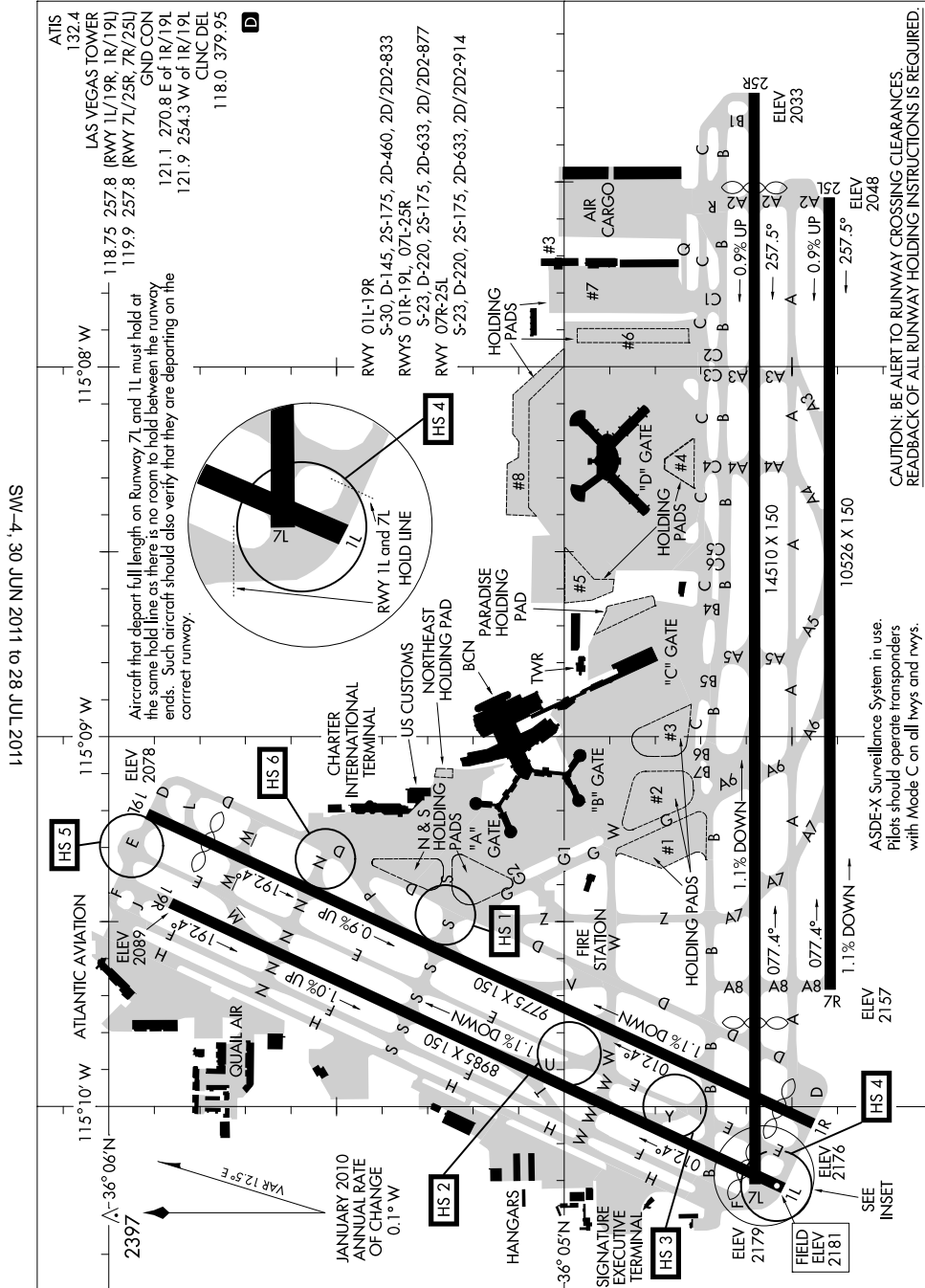
NO SERVICE AT MISSOURI ANG RAMP. BASE RE-ALIGNMENT IN PROCESS.

ARRESTING GEAR: A-G ARE KEPT IN RECESSED POSITION UNTIL REQ FOR USE. TOWER MUST BE NOTIFIED AT LEAST 5 SECOND PRIOR TO ENGAGEMENT SO THAT CABLE MAY BE RAISED.

ARRESTING GEAR: RUNWAY 06 1450 FT; RUNWAY 12R 1090 FT & RUNWAY 30L 1300 FT FROM THR.

**Las Vegas, Nevada
McCarran International
ICAO Identifier KLAS**

11181 AIRPORT DIAGRAM LAS VEGAS/McCARRAN INTL (LAS)
AL-662 (FAA) LAS VEGAS, NEVADA



AIRPORT DIAGRAM LAS VEGAS, NEVADA
11181 LAS VEGAS/McCARRAN INTL (LAS)

SW-4, 30 JUN 2011 to 28 JUL 2011

SW-4, 30 JUN 2011 to 28 JUL 2011

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
REARBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

Las Vegas, NV
Mc Carran Intl
ICAO Identifier KLAS

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 36-04-48.20N / 115-09-00.00W
- 2.2.2 From City: 5 Miles S Of Las Vegas, NV
- 2.2.3 Elevation: 2181 ft
- 2.2.5 Magnetic variation: 15E (1980)
- 2.2.6 Airport Contact: Randall H. Walker
5757 WAYNE NEWTON BLVD
Las Vegas, NV 89119
(702-261-5211)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 07L
- 2.10.1.b Type of obstacle: Hangar (25 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 07R
- 2.10.1.b Type of obstacle: Pole (53 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 540 ft from Centerline

- 2.10.1.a. Runway designation: 01L
- 2.10.1.b Type of obstacle: Rr (48 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 19R
- 2.10.1.b Type of obstacle: Fence (25 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 150 ft from Centerline

- 2.10.1.a. Runway designation: 01R
- 2.10.1.b Type of obstacle: Rr (41 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 600 ft from Centerline

- 2.10.1.a. Runway designation: 19L
- 2.10.1.b Type of obstacle: Pole (17 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 17 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 07L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 14510 ft x 150 ft
- 2.12.5 Coordinates: 36-04-34.92N / 115-10-12.68W
- 2.12.6 Threshold elevation: 2179 ft
- 2.12.6 Touchdown zone elevation: 2155 ft
- 2.12.7 Slope: 1.1DOWN

- 2.12.1 Designation: 25R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 14510 ft x 150 ft
- 2.12.5 Coordinates: 36-04-35.06N / 115-07-15.96W
- 2.12.6 Threshold elevation: 2033 ft
- 2.12.6 Touchdown zone elevation: 2067 ft
- 2.12.7 Slope: 1.9UP

- 2.12.1 Designation: 07R
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 10526 ft x 150 ft
- 2.12.5 Coordinates: 36-04-25.06N / 115-09-41.16W
- 2.12.6 Threshold elevation: 2157 ft
- 2.12.6 Touchdown zone elevation: 2157 ft
- 2.12.7 Slope: 1.1DOWN

- 2.12.1 Designation: 25L
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 10526 ft x 150 ft
- 2.12.5 Coordinates: 36-04-25.16N / 115-07-32.96W
- 2.12.6 Threshold elevation: 2048 ft

2.12.6 Touchdown zone elevation: 2068 ft
2.12.7 Slope: 0.9UP

2.12.1 Designation: 01L
2.12.2 True Bearing: 25
2.12.3 Dimensions: 8985 ft x 150 ft
2.12.5 Coordinates: 36-04-31.20N /
115-10-13.29W
2.12.6 Threshold elevation: 2181 ft
2.12.6 Touchdown zone elevation: 2176 ft
2.12.7 Slope: 1.1DOWN

2.12.1 Designation: 19R
2.12.2 True Bearing: 205
2.12.3 Dimensions: 8985 ft x 150 ft
2.12.5 Coordinates: 36-05-51.76N /
115-09-27.19W
2.12.6 Threshold elevation: 2089 ft
2.12.6 Touchdown zone elevation: 2117 ft
2.12.7 Slope: 1UP

2.12.1 Designation: 01R
2.12.2 True Bearing: 25
2.12.3 Dimensions: 9775 ft x 150 ft
2.12.5 Coordinates: 36-04-27.28N /
115-10-00.00W
2.12.6 Threshold elevation: 2176 ft
2.12.6 Touchdown zone elevation: 2170 ft
2.12.7 Slope: 1.1DOWN

2.12.1 Designation: 19L
2.12.2 True Bearing: 205
2.12.3 Dimensions: 9775 ft x 150 ft
2.12.5 Coordinates: 36-05-54.93N /
115-09-12.78W
2.12.6 Threshold elevation: 2078 ft
2.12.6 Touchdown zone elevation: 2113 ft
2.12.7 Slope: 0.9UP

AD 2.13 Declared distances

2.13.1 Designation: 07L
2.13.2 Takeoff run available: 14510
2.13.3 Takeoff distance available: 15099
2.13.4 Accelerate-stop distance available: 14099
2.13.5 Landing distance available: 11966

2.13.1 Designation: 25R
2.13.2 Takeoff run available: 14510
2.13.3 Takeoff distance available: 15155
2.13.4 Accelerate-stop distance available: 14155
2.13.5 Landing distance available: 12755

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 8985
2.13.3 Takeoff distance available: 8985
2.13.4 Accelerate-stop distance available: 8985
2.13.5 Landing distance available: 8401

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 8985
2.13.3 Takeoff distance available: 9397
2.13.4 Accelerate-stop distance available: 8397
2.13.5 Landing distance available: 8397

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 9775
2.13.3 Takeoff distance available: 10172
2.13.4 Accelerate-stop distance available: 9441
2.13.5 Landing distance available: 8681

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 9775
2.13.3 Takeoff distance available: 10175
2.13.4 Accelerate-stop distance available: 9685
2.13.5 Landing distance available: 8745

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 07R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 19R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 19L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD
2.18.3 Service designation: 118 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.75 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.9 MHz

2.18.1 Service designation: VFR FINAL APCH
2.18.3 Service designation: 120.45 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: RAMP CON
2.18.3 Service designation: 124.4 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.9 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 125.9 MHz

2.18.1 Service designation: RAMP CON
2.18.3 Service designation: 127.9 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 132.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 379.15 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 379.15 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 379.15 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 379.15 MHz

2.18.1 Service designation: CD
2.18.3 Service designation: 379.95 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 125.025 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.02 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 125.02 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 125.02 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 353.7 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 353.7 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 254.3 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 307.25 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 270.8 MHz

2.18.1 Service designation: RAMP CON
2.18.3 Service designation: 129.175 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 25R.
Magnetic variation: 15E

2.19.2 ILS identification: LAS

2.19.5 Coordinates: 36-04-32.08N /
115-07-46.67W

2.19.6 Site elevation: 2046 ft

2.19.1 ILS type: Outer Marker for runway 25R.

Magnetic variation: 15E

2.19.2 ILS identification: LAS

2.19.5 Coordinates: 36-04-35.71N /
115-01-16.98W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 25R.

Magnetic variation: 15E

2.19.2 ILS identification: LAS

2.19.5 Coordinates: 36-04-35.10N /
115-06-44.40W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 25R. Magnetic
variation: 15E

2.19.2 ILS identification: LAS

2.19.5 Coordinates: 36-04-30.52N /
115-10-19.17W

2.19.6 Site elevation: 2203 ft

2.19.1 ILS type: Localizer for runway 25R.

Magnetic variation: 15E

2.19.2 ILS identification: LAS

2.19.5 Coordinates: 36-04-34.91N /
115-10-19.18W

2.19.6 Site elevation: 2187 ft

2.19.1 ILS type: Localizer for runway 25L.

Magnetic variation: 15E

2.19.2 ILS identification: RLE

2.19.5 Coordinates: 36-04-25.05N /
115-09-53.34W

2.19.6 Site elevation: 2168 ft

2.19.1 ILS type: Glide Slope for runway 25L.

Magnetic variation: 15E

2.19.2 ILS identification: RLE

2.19.5 Coordinates: 36-04-21.99N /
115-07-46.66W

2.19.6 Site elevation: 2051 ft

2.19.1 ILS type: DME for runway 01L. Magnetic
variation: 14E

2.19.2 ILS identification: CUA

2.19.5 Coordinates: 36-06-00.00N /
115-09-25.07W

2.19.6 Site elevation: 2092 ft

2.19.1 ILS type: Glide Slope for runway 01L.
Magnetic variation: 14E

2.19.2 ILS identification: CUA

2.19.5 Coordinates: 36-04-49.14N /
115-10-00.00W

2.19.6 Site elevation: 2159 ft

2.19.1 ILS type: Localizer for runway 01L.

Magnetic variation: 14E

2.19.2 ILS identification: CUA

2.19.5 Coordinates: 36-06-00.00N /
115-09-21.99W

2.19.6 Site elevation: 2079 ft

General Remarks:

EXTENSIVE GLIDER/SOARING OPERATIONS WEEKENDS & HOLS; SR-SS; LAS R187/020;
ALTITUDES UP TO BUT NOT INCLUDING FL180. GLIDERS REMAIN CLEAR OF THE TCA BUT
OTHERWISE OPERATE WITHIN THE ENTIRE SW QUADRANT OF THE TCA VEIL.

ALL NON-STD RUNWAY OPERATIONS PRIOR PERMISSION REQUIRED FROM DEPT OF
AVIATION.

TURBOJET DEPS NOT PERMITTED ON RUNWAY 01R/19L OR RUNWAY 01L/19R 2000-0800.
EXCEPTIONS FOR WX OR OPERATIONAL NECESSITY.

AIRCRAFT MAY EXPERIENCE REFLECTION OF SUN FROM GLASS HOTELS LOCATED NW OF
AIRPORT. REFLECTION MAY OCCUR AT VARIOUS ALTITUDES HEADINGS & DISTANCES FROM
AIRPORT.

DIRECTIONAL TAXIWAY SIGNS WILL BE INCOMPLETE DUE TO CONSTRUCTION.

GENERAL AVIATION PARKING VERY LIMITED. FOR PARKING AVAILABILITY CONTACT EITHER FBO (702) 736-1830 OR (702) 739-1100.

RUNWAY 01L/19R 496000 LBS GROSS WEIGHT FOR L-1011; 555000 LBS GROSS WEIGHT FOR DC-10; 602500 LBS GROSS WEIGHT FOR MD-11.

RUNWAY 07L 589 FT CLEARWAY; RUNWAY 25R 645 FT CLEARWAY.

LIGHTED GOLF RANGE 1400 FT SOUTH OF RUNWAYS 01L/19R AND 01R/19L.

TIEDOWN FEE.

(E98) PLUS 64 SHELTERS & 24 SHEDS.

AIRCRAFT USING FULL LENGTH DEP ON RUNWAY 07L USE MINIMAL POWER UNTIL PASSING THE POWER-UP POINT ON RUNWAY. POWER-UP POINT IS 348 FT EAST OF BALST PAD AND MARKED WITH SIGN AND STANDARD MARKINGS FOR BEGINNING OF RUNWAY.

TAXIWAY C NO CENTERLINE LIGHTS WEST OF TAXIWAY B4, HAS EDGE LIGHTS ON SOUTH SIDE OF TAXIWAY IN THIS AREA.

LARGE NUMBERS OF BIRDS AND BATS IN THE VICINITY OF OF AIRPORT BETWEEN SUNSET AND SUNRISE.

AIRCRAFT DEPARTING RUNWAY 19R USE MINIMAL POWER UNTIL PASSING THE RUNWAY THRESHOLD. RUNWAY 19R THRESHOLD HAS STANDARD RUNWAY MARKINGS AND IS 780 FT SOUTH OF THE BLAST PAD.

AIRCRAFT OPER NEAR THE INTERSECTION OF TAXIWAYS S, D, G AND THE NORTH END OF TAXIWAY Z SHOULD BE ALERT AS THERE ARE CLOSELY ALIGNED TAXIWAY CENTERLINES AND RADIUS TURNS.

AIRCRAFT THAT DEPART FULL LENGTH OF RUNWAYS 01L AND 07L MUST HOLD AT THE SAME HOLD LINE AS THERE IS NO ROOM TO HOLD BETWEEN THE RUNWAY ENDS AND SUCH AIRCRAFT SHOULD VERIFY THAT THEY ARE ON THE CORRECT RUNWAY.

GENERAL AVIATION CUSTOMS AND IMMIGRATION LOCATED WEST SIDE OF AIRFIELD BETWEEN FBO'S.

AIRCRAFT LARGER THAN B757 PRIOR PERMISSION REQUIRED FROM DEPT OF AVIATION TO USE TAXIWAY H.

NUMEROUS HELICOPTER OPERATIONS ON WEST SIDE OF AIRPORT.

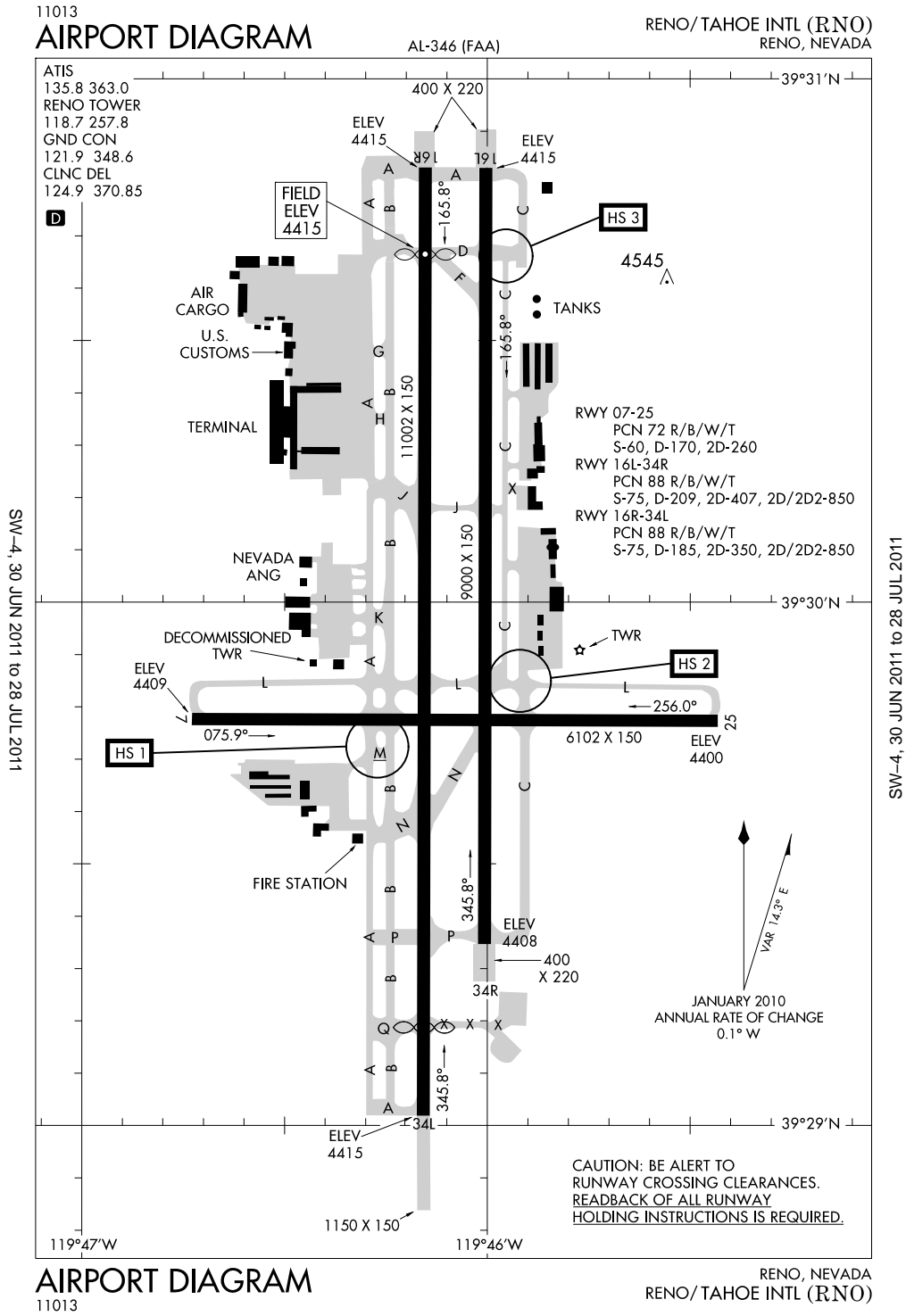
AIRCRAFT TAXIING WESTBOUND ON TAXIWAY B NEAR TAXIWAY E USE CAUTION NOT TO ENTER THE RUNWAY ON TAXIWAY Y. AIRCRAFT TAXIING WESTBOUND ON TAXIWAY W NEAR TAXIWAY E USE CAUTION NOT TO ENTER THE RUNWAY ON TAXIWAY U.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH

MODE C ON ALL TAXIWAYS AND RUNWAYS.

GENERAL AVIATION AIRCRAFT REQUIRING IMMIGRATION/CUSTOMS SERVICES MUST CONTACT DEPARTMENT OF AVIATION FOR PARKING ARRANGEMENTS MINIMUM 2 HRS PRIOR TO ARRIVAL 702-261-4411. GENERAL AVIATION AIRCRAFT USING THE WEST SIDE CUSTOMS FACILITY MUST CONTACT RAMP CONTROL 124.4.

Reno, Nevada
Reno/Tahoe International
ICAO Identifier KRNO



Reno, NV
Reno/Tahoe Intl
ICAO Identifier KRNO

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-29-56.80N / 119-46-00.00W
- 2.2.2 From City: 3 Miles SE Of Reno, NV
- 2.2.3 Elevation: 4415 ft
- 2.2.5 Magnetic variation: 16E (1985)
- 2.2.6 Airport Contact: Krys T. Bart
P O BOX 12490
Reno, NV 89510
(775-328-6400)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 07
- 2.10.1.b Type of obstacle: Pole (118 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 25
- 2.10.1.b Type of obstacle: Tree (44 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 275 ft from Centerline

- 2.10.1.a. Runway designation: 34L
- 2.10.1.b Type of obstacle: Gnd (243 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 1500 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 07
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 6102 ft x 150 ft
- 2.12.4 PCN: 72 R/B/W/T
- 2.12.5 Coordinates: 39-29-46.63N / 119-46-43.82W
- 2.12.6 Threshold elevation: 4409 ft
- 2.12.6 Touchdown zone elevation: 4409 ft

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 6102 ft x 150 ft
- 2.12.4 PCN: 72 R/B/W/T
- 2.12.5 Coordinates: 39-29-46.37N / 119-45-25.99W
- 2.12.6 Threshold elevation: 4400 ft
- 2.12.6 Touchdown zone elevation: 4402 ft

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 88 R/B/W/T
- 2.12.5 Coordinates: 39-30-49.82N / 119-46-00.00W
- 2.12.6 Threshold elevation: 4415 ft
- 2.12.6 Touchdown zone elevation: 4415 ft

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 88 R/B/W/T
- 2.12.5 Coordinates: 39-29-20.89N / 119-46-00.00W
- 2.12.6 Threshold elevation: 4408 ft
- 2.12.6 Touchdown zone elevation: 4408 ft

- 2.12.1 Designation: 16R
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 11002 ft x 150 ft
- 2.12.4 PCN: 88 R/B/W/T
- 2.12.5 Coordinates: 39-30-49.84N / 119-46-00.00W
- 2.12.6 Threshold elevation: 4415 ft
- 2.12.6 Touchdown zone elevation: 4415 ft

- 2.12.1 Designation: 34L
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 11002 ft x 150 ft
- 2.12.4 PCN: 88 R/B/W/T
- 2.12.5 Coordinates: 39-29-00.00N /

119–46–00.00W
2.12.6 Threshold elevation: 4415 ft
2.12.6 Touchdown zone elevation: 4410 ft

AD 2.13 Declared distances

2.13.1 Designation: 07
2.13.2 Takeoff run available: 6102
2.13.3 Takeoff distance available: 6102
2.13.4 Accelerate–stop distance available: 5854
2.13.5 Landing distance available: 5854

2.13.1 Designation: 25
2.13.2 Takeoff run available: 6102
2.13.3 Takeoff distance available: 6102
2.13.4 Accelerate–stop distance available: 6102
2.13.5 Landing distance available: 6102

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 25
2.14.4 Visual approach slope indicator system:
4–light PAPI on left
2.14.10 Remarks: PAPI Not To Be Used Beyond 2
Nm Due To Rapidly Rising Mountainous Terrain

2.14.1 Designation: 16L
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 34R
2.14.4 Visual approach slope indicator system:
4–light PAPI on left
2.14.10 Remarks: PAPI Not To Be Used Beyond 6
Nm Due To High Terrain.

2.14.1 Designation: 16R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 34L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.10 Remarks: PAPI Not To Be Used Beyond 6
Nm Due To High Terrain.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 124.9 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 135.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: ANG/OPS
2.18.3 Service designation: 280 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: ANG COMD
POST/BASEOPS
2.18.3 Service designation: 8780 MHz
2.18.6 Remarks: Callsign – Caprock.

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 363 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 370.85 MHz

2.18.1 Service designation: ANG COMD
POST/BASEOPS
2.18.3 Service designation: 378.4 MHz
2.18.6 Remarks: Callsign – Caprock.

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 16E

2.19.2 ILS identification: RNO

2.19.5 Coordinates: 39-28-48.05N / 119-46-00.00W

2.19.6 Site elevation: 4410 ft

2.19.1 ILS type: Glide Slope for runway 16R.

Magnetic variation: 16E

2.19.2 ILS identification: RNO

2.19.5 Coordinates: 39-30-28.10N / 119-46-00.00W

2.19.6 Site elevation: 4408 ft

2.19.1 ILS type: Outer Marker for runway 16R.

Magnetic variation: 16E

2.19.2 ILS identification: RNO

2.19.5 Coordinates: 39-36-27.48N / 119-46-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 16R.

Magnetic variation: 16E

2.19.2 ILS identification: RNO

2.19.5 Coordinates: 39-31-10.35N / 119-46-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 16R.

Magnetic variation: 16E

2.19.2 ILS identification: RNO

2.19.5 Coordinates: 39-28-49.52N / 119-46-00.00W

2.19.6 Site elevation: 4420 ft

2.19.1 ILS type: Localizer for runway 34L.

Magnetic variation: 16E

2.19.2 ILS identification: AGY

2.19.5 Coordinates: 39-30-59.98N / 119-46-00.00W

2.19.6 Site elevation: 4418 ft

2.19.1 ILS type: DME for runway 34L. Magnetic variation: 16E

2.19.2 ILS identification: AGY

2.19.5 Coordinates: 39-31-00.00N / 119-46-12.58W

2.19.6 Site elevation: 4419 ft

2.19.1 ILS type: Glide Slope for runway 34L.

Magnetic variation: 16E

2.19.2 ILS identification: AGY

2.19.5 Coordinates: 39-29-19.55N / 119-46-00.00W

2.19.6 Site elevation: 4402 ft

General Remarks:

WATERFOWL ALL QUADRANTS ALL SEASONS. CONCENTRATED NW OF RUNWAY 16R AND E OF RUNWAY 16L.

24 HRS PRIOR PERMISSION REQUIRED FOR TRANSIENT AIRCRAFT PARKING WITH WINGSPANS GREATER THAN 75'.

TAXIWAY C BETWEEN TAXIWAY L & TAXIWAY D RESTRICTED TO AIRCRAFT 60000 LBS OR LESS.

NOISE SENSITIVE AREA ALL QUADS. PILOTS OF TURBOJET AIRCRAFT USE RECOMMENDED NOISE ABATEMENT PROCS; AVAILABLE ON REQUEST.

NOISE NOTE CONT: PILOTS OF NON-TURBOJET AIRCRAFT USE BEST ABATEMENT PROCS AND SETTINGS. AVOID AS MUCH AS FEASIBLE FLYING OVER POPULATED AREAS.

MILITARY AIRCRAFT: TRANSIENT AIRCRAFT EXECUTE STRAIGHT-IN FULL STOP APPROACH. OVERHEAD PATTERN NOT AUTH FOR TRANSIENT AIRCRAFT.

MILITARY AIRCRAFT: NOISE ABATEMENT CRITICAL TERMINATE AFTERBURNER ASAP THEN CLIMB TO 6500 FT MSL ASAP.

GLIDER/SOARING OPER 30-50 MILES SOUTH OF AIRPORT DURING VFR WEATHER & MOUNTAIN WAVE WIND CONDITIONS 1100 TO SS.

PURE JET TOUCH & GO LOW APPROACH & PRACTICE INSTRUMENT APPROACHES ARE PROHIBITED; AIRCRAFT OVER 12500 LBS REQUIRE PRIOR WRITTEN APPROVAL FOR TRAINING FLIGHTS; FOR FURTHER INFORMATION CONTACT AIRPORT OPERATIONS 1-877-736-6359.

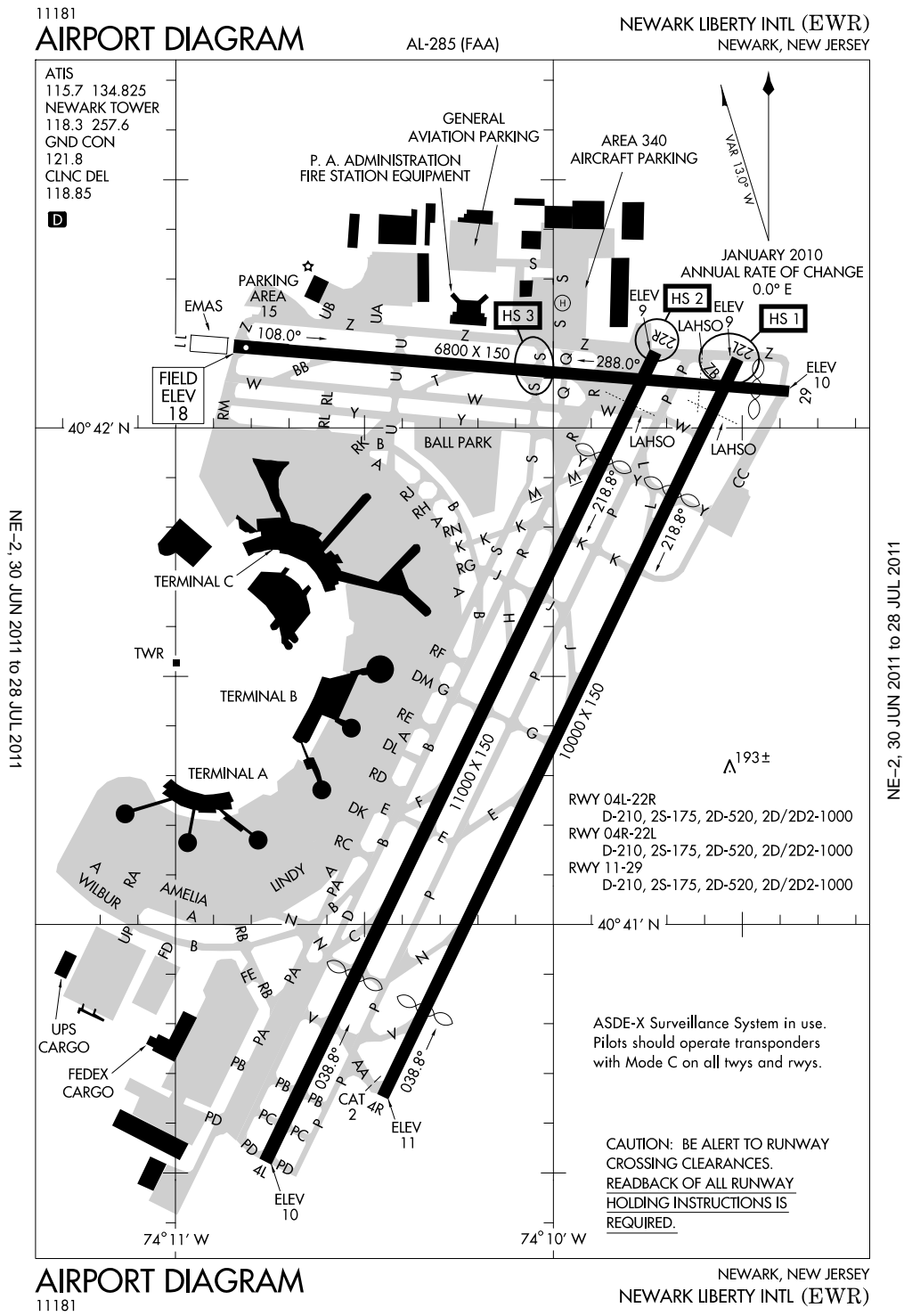
TAXIWAY C BETWEEN TAXIWAY L AND TAXIWAY D CLOSED TO AIR CARRIER AIRCRAFT.

TAXIWAY A BETWEEN NORTH TAXIWAY B AND TAXIWAY D CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 149 FT.

ALL COMMERCIAL AIRCRAFT CONTACT GROUND CONTROL FOR ADVISORIES PRIOR TO PUSH BACK ON THE TERMINAL RAMP.

INTENSIVE GLIDER ACTIVITY IN THE VICINITY OF AIRPORT AND SURROUNDING AREAS UP TO 18,000 FT.

Newark, New Jersey
Newark Liberty International
ICAO Identifier KEWR



Newark, NJ
Newark Liberty Intl
ICAO Identifier KEWR

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 40-41-33.00N / 74-10-00.00W
- 2.2.2 From City: 3 Miles S Of Newark, NJ
- 2.2.3 Elevation: 18 ft
- 2.2.5 Magnetic variation: 13W (1985)
- 2.2.6 Airport Contact: John S. Jacoby
BUILDING #1- CONRAD ROAD
Newark, NJ 7114 (973-961-6000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 29
- 2.10.1.b Type of obstacle: Bldg (24 ft). Lighted
- 2.10.1.c Location of obstacle: 450 ft from Centerline

- 2.10.1.a. Runway designation: 11
- 2.10.1.b Type of obstacle: Ant (81 ft). Lighted
- 2.10.1.c Location of obstacle: 550 ft from Centerline

- 2.10.1.a. Runway designation: 04L
- 2.10.1.b Type of obstacle: Tree (59 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 550 ft from Centerline

- 2.10.1.a. Runway designation: 22R
- 2.10.1.b Type of obstacle: Pole (30 ft). Not Lighted or Marked

- 2.10.1.c Location of obstacle: 400 ft from Centerline

- 2.10.1.a. Runway designation: 22L
- 2.10.1.b Type of obstacle: Pole (32 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 04R
- 2.10.1.b Type of obstacle: Pole (51 ft). Lighted
- 2.10.1.c Location of obstacle: 575 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 40 ft x 40 ft

- 2.12.1 Designation: 11
- 2.12.2 True Bearing: 95
- 2.12.3 Dimensions: 6800 ft x 150 ft
- 2.12.5 Coordinates: 40-42-10.10N / 74-10-50.55W
- 2.12.6 Threshold elevation: 18 ft
- 2.12.6 Touchdown zone elevation: 18 ft

- 2.12.1 Designation: 29
- 2.12.2 True Bearing: 275
- 2.12.3 Dimensions: 6800 ft x 150 ft
- 2.12.5 Coordinates: 40-42-00.00N / 74-09-22.59W
- 2.12.6 Threshold elevation: 10 ft
- 2.12.6 Touchdown zone elevation: 10 ft

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 26
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.5 Coordinates: 40-40-31.37N / 74-10-46.02W
- 2.12.6 Threshold elevation: 10 ft
- 2.12.6 Touchdown zone elevation: 10 ft

- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 206
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.5 Coordinates: 40-42-00.00N / 74-09-43.83W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 10 ft

- 2.12.1 Designation: 04R

- 2.12.2 True Bearing: 26
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 40-40-39.30N / 74-10-27.28W
- 2.12.6 Threshold elevation: 11 ft
- 2.12.6 Touchdown zone elevation: 11 ft

- 2.12.1 Designation: 22L
- 2.12.2 True Bearing: 206
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 40-42-00.00N / 74-09-30.73W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 10 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 11
- 2.13.2 Takeoff run available: 6800
- 2.13.3 Takeoff distance available: 6800
- 2.13.4 Accelerate-stop distance available: 6800
- 2.13.5 Landing distance available: 6800

- 2.13.1 Designation: 29
- 2.13.2 Takeoff run available: 6800
- 2.13.3 Takeoff distance available: 6800
- 2.13.4 Accelerate-stop distance available: 6800
- 2.13.5 Landing distance available: 6502

- 2.13.1 Designation: 04L
- 2.13.2 Takeoff run available: 11000
- 2.13.3 Takeoff distance available: 11000
- 2.13.4 Accelerate-stop distance available: 11000
- 2.13.5 Landing distance available: 8460

- 2.13.1 Designation: 22R
- 2.13.2 Takeoff run available: 11000
- 2.13.3 Takeoff distance available: 11000
- 2.13.4 Accelerate-stop distance available: 11000
- 2.13.5 Landing distance available: 9560

- 2.13.1 Designation: 04R
- 2.13.2 Takeoff run available: 10000
- 2.13.3 Takeoff distance available: 10000
- 2.13.4 Accelerate-stop distance available: 10000
- 2.13.5 Landing distance available: 8810

- 2.13.1 Designation: 22L
- 2.13.2 Takeoff run available: 10000
- 2.13.3 Takeoff distance available: 10000
- 2.13.4 Accelerate-stop distance available: 10000
- 2.13.5 Landing distance available: 8206

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 11
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

- 2.14.1 Designation: 29
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on right

- 2.14.1 Designation: 04L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.10 Remarks: Runway 04L P4L Unusable 5 Degs L Of Centerline .

- 2.14.1 Designation: 22R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 04R
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 22L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 115.7 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.3 MHz

- 2.18.1 Service designation: CD/P PRE TAXI CLNC

2.18.3 Service designation: 118.85 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 127.85 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 134.05 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P CLASS B
2.18.3 Service designation: 257.6 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 134.825 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/S
2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: GATE HOLD
2.18.3 Service designation: 132.45 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 11. Magnetic variation: 13W
2.19.2 ILS identification: GPR
2.19.5 Coordinates: 40-42-00.00N / 74-10-00.00W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Glide Slope for runway 11. Magnetic variation: 13W
2.19.2 ILS identification: GPR
2.19.5 Coordinates: 40-42-10.84N / 74-10-35.03W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: DME for runway 11. Magnetic variation: 13W
2.19.2 ILS identification: GPR
2.19.5 Coordinates: 40-42-00.00N / 74-10-00.00W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Outer Marker for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-35-37.20N / 74-13-48.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-40-21.10N / 74-10-52.50W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-42-17.37N / 74-09-38.64W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: DME for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-42-15.25N / 74-09-33.96W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Glide Slope for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-41-00.00N / 74-10-22.50W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Localizer for runway 22R. Magnetic variation: 13W

2.19.2 ILS identification: JNN
2.19.5 Coordinates: 40-40-23.38N / 74-10-51.10W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Glide Slope for runway 22R. Magnetic variation: 13W

2.19.2 ILS identification: JNN
2.19.5 Coordinates: 40-41-47.33N / 74-09-54.13W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Outer Marker for runway 22R.

Magnetic variation: 13W
2.19.2 ILS identification: JNN
2.19.5 Coordinates: 40-45-54.50N /
74-07-16.70W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: DME for runway 22R. Magnetic
variation: 13W
2.19.2 ILS identification: JNN
2.19.5 Coordinates: 40-42-15.25N /
74-09-33.96W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Localizer for runway 22L.
Magnetic variation: 13W
2.19.2 ILS identification: LSQ
2.19.5 Coordinates: 40-40-31.65N /
74-10-32.15W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: DME for runway 22L. Magnetic
variation: 13W
2.19.2 ILS identification: LSQ
2.19.5 Coordinates: 40-41-43.55N /
74-09-41.63W
2.19.6 Site elevation: 24 ft

2.19.1 ILS type: Glide Slope for runway 22L.
Magnetic variation: 13W
2.19.2 ILS identification: LSQ
2.19.5 Coordinates: 40-41-43.69N /
74-09-41.73W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Middle Marker for runway 22L.
Magnetic variation: 13W
2.19.2 ILS identification: LSQ
2.19.5 Coordinates: 40-42-23.50N /
74-09-20.91W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Outer Marker for runway 22L.
Magnetic variation: 13W
2.19.2 ILS identification: LSQ
2.19.5 Coordinates: 40-45-54.50N /

74-07-16.70W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 04R.
Magnetic variation: 13W
2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-40-57.59N /
74-10-00.00W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Middle Marker for runway 04R.
Magnetic variation: 13W
2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-40-26.62N /
74-10-35.32W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Inner Marker for runway 04R.
Magnetic variation: 13W
2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-40-41.48N /
74-10-23.17W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 04R.
Magnetic variation: 13W
2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-36-26.40N /
74-13-00.00W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Localizer for runway 04R.
Magnetic variation: 13W
2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-42-15.94N /
74-09-25.84W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: DME for runway 04R. Magnetic
variation: 13W
2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-41-43.55N /
74-09-41.63W
2.19.6 Site elevation: 24 ft

General Remarks:

FLOCKS OF BIRDS ON & IN THE VICINITY OF AIRPORT.

FOR NOISE RESTRICTIONS CALL 212-435-3779 DURING NORMAL BUSINESS HOURS.

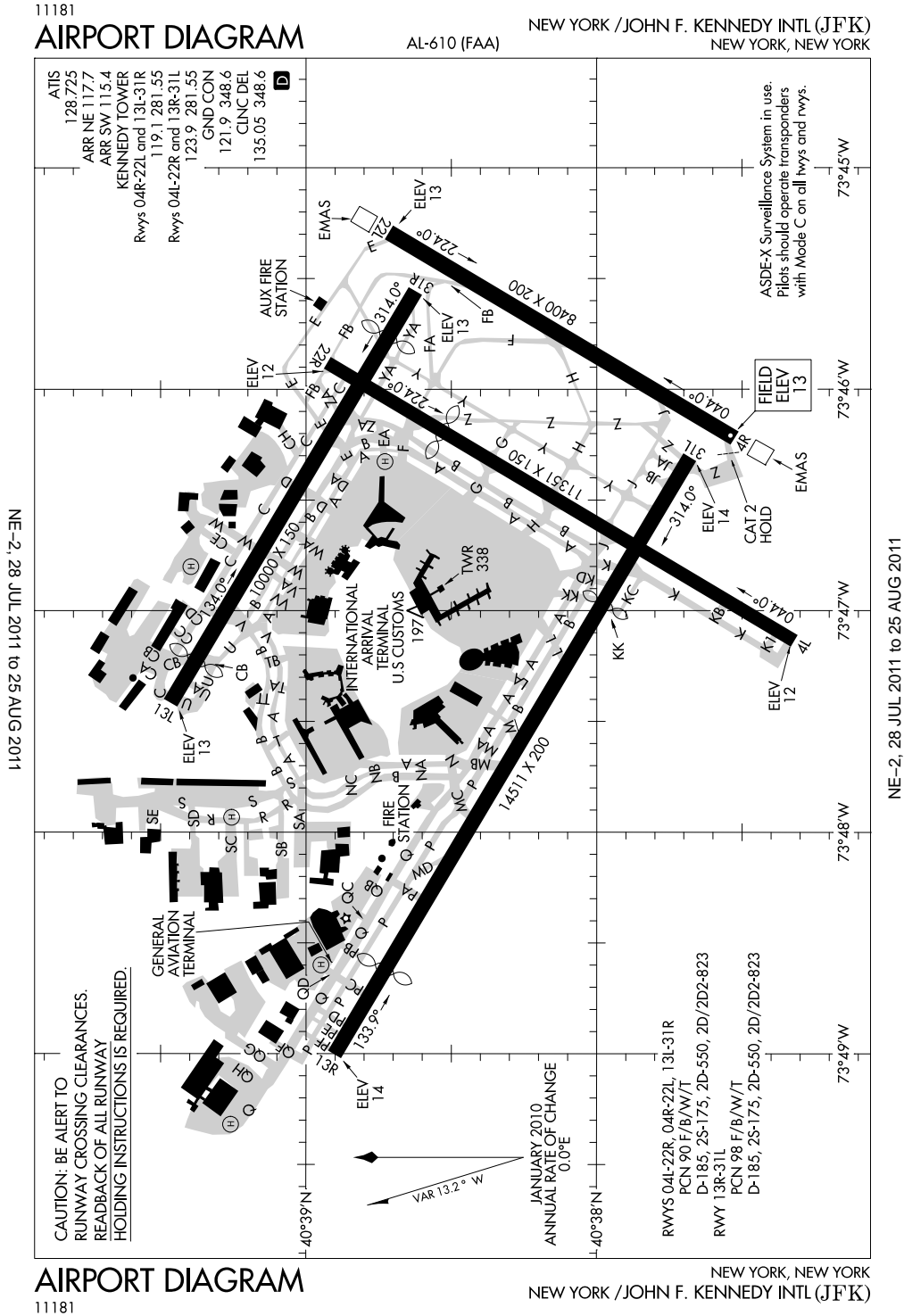
PARA-SAIL & BANNER TOWING OPERATIONS 1000 FT & BELOW IN UPPER & LOWER NEW YORK BAYS INCLUDING ROCKAWAY INLET INDEFINITELY.

TAXIWAY Z BETWEEN TAXIWAY U & UB RESTRICTED TO NARROW BODY AIRCRAFT INDEFINITELY.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

RUNWAYS 04R & 04L DEPARTURES USE UPPER ANTENNA FOR ATC COMMUNICATIONS.

**New York, New York
John F. Kennedy International
ICAO Identifier KJFK**



New York, NY
John F Kennedy Intl
ICAO Identifier KJFK

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 40-38-23.10N / 73-46-44.13W
- 2.2.2 From City: 13 Miles SE Of New York, NY
- 2.2.3 Elevation: 13 ft
- 2.2.5 Magnetic variation: 14W (2000)
- 2.2.6 Airport Contact: Jerry Spampinato
BLDG 14
Jamaica, NY 11430
(718-244-3501)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 22R
- 2.10.1.b Type of obstacle: Fence (10 ft). Lighted
- 2.10.1.c Location of obstacle: 300 ft from Centerline

- 2.10.1.a. Runway designation: 13L
- 2.10.1.b Type of obstacle: Road (14 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 31
- 2.12.3 Dimensions: 11351 ft x 150 ft
- 2.12.4 PCN: 90 F/B/W/T
- 2.12.5 Coordinates: 40-37-19.26N / 73-47-00.00W
- 2.12.6 Threshold elevation: 12 ft

- 2.12.6 Touchdown zone elevation: 12 ft
- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 211
- 2.12.3 Dimensions: 11351 ft x 150 ft
- 2.12.4 PCN: 90 F/B/W/T
- 2.12.5 Coordinates: 40-38-55.65N / 73-45-52.80W
- 2.12.6 Threshold elevation: 12 ft
- 2.12.6 Touchdown zone elevation: 13 ft

- 2.12.1 Designation: 04R
- 2.12.2 True Bearing: 31
- 2.12.3 Dimensions: 8400 ft x 200 ft
- 2.12.4 PCN: 90 F/B/W/T
- 2.12.5 Coordinates: 40-37-31.53N / 73-46-13.25W
- 2.12.6 Threshold elevation: 13 ft
- 2.12.6 Touchdown zone elevation: 13 ft

- 2.12.1 Designation: 22L
- 2.12.2 True Bearing: 211
- 2.12.3 Dimensions: 8400 ft x 200 ft
- 2.12.4 PCN: 90 F/B/W/T
- 2.12.5 Coordinates: 40-38-42.85N / 73-45-17.51W
- 2.12.6 Threshold elevation: 13 ft
- 2.12.6 Touchdown zone elevation: 13 ft

- 2.12.1 Designation: H1
- 2.12.3 Dimensions: 60 ft x 60 ft

- 2.12.1 Designation: 13R
- 2.12.2 True Bearing: 121
- 2.12.3 Dimensions: 14511 ft x 200 ft
- 2.12.4 PCN: 90 F/B/W/T
- 2.12.5 Coordinates: 40-38-54.10N / 73-49-00.00W
- 2.12.6 Threshold elevation: 14 ft
- 2.12.6 Touchdown zone elevation: 13 ft

- 2.12.1 Designation: 31L
- 2.12.2 True Bearing: 301
- 2.12.3 Dimensions: 14511 ft x 200 ft
- 2.12.4 PCN: 90 F/B/W/T
- 2.12.5 Coordinates: 40-37-40.78N / 73-46-18.41W
- 2.12.6 Threshold elevation: 14 ft
- 2.12.6 Touchdown zone elevation: 13 ft

- 2.12.1 Designation: H2
- 2.12.3 Dimensions: 60 ft x 60 ft

2.12.1 Designation: H3
2.12.3 Dimensions: 60 ft x 60 ft

2.12.1 Designation: H4
2.12.3 Dimensions: 60 ft x 60 ft

2.12.1 Designation: 13L
2.12.2 True Bearing: 121
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 90 F/B/W/T
2.12.5 Coordinates: 40–39–27.95N /
73–47–24.86W
2.12.6 Threshold elevation: 13 ft
2.12.6 Touchdown zone elevation: 13 ft

2.12.1 Designation: 31R
2.12.2 True Bearing: 301
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 90 F/B/W/T
2.12.5 Coordinates: 40–38–37.41N /
73–45–33.40W
2.12.6 Threshold elevation: 12 ft
2.12.6 Touchdown zone elevation: 13 ft

AD 2.13 Declared distances

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 11351
2.13.3 Takeoff distance available: 11351
2.13.4 Accelerate–stop distance available: 11351
2.13.5 Landing distance available: 11351

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 11351
2.13.3 Takeoff distance available: 11351
2.13.4 Accelerate–stop distance available: 11351
2.13.5 Landing distance available: 8655

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 8400
2.13.3 Takeoff distance available: 8400
2.13.4 Accelerate–stop distance available: 8400
2.13.5 Landing distance available: 8400

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 8400
2.13.3 Takeoff distance available: 8400
2.13.4 Accelerate–stop distance available: 8400
2.13.5 Landing distance available: 8400

2.13.1 Designation: 13R

2.13.2 Takeoff run available: 14511
2.13.3 Takeoff distance available: 14511
2.13.4 Accelerate–stop distance available: 14511
2.13.5 Landing distance available: 12468

2.13.1 Designation: 31L
2.13.2 Takeoff run available: 14511
2.13.3 Takeoff distance available: 14511
2.13.4 Accelerate–stop distance available: 14511
2.13.5 Landing distance available: 11248

2.13.1 Designation: 13L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 9095

2.13.1 Designation: 31R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 8970

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04L
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 04R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 22L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.10 Remarks: Runway 22L PAPI Horizontal
Offset 4 Degrees To Left. Non Standard Light
Spacing.

2.14.1 Designation: 13R
2.14.2 Approach lighting system: LDIN: Lead–in
light system

2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.10 Remarks: Runway 13R First P4L

Horizontal Offset 22 Degs Left.
ry 13R Has Second P4L With Transitional
Threshold Crossing Height And 3.00 Degrees Vgsi.

2.14.1 Designation: 31L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 13L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
12-box VASI on both sides
2.14.10 Remarks: Runway 13L VASI Unusable
Left Of Centerline .

2.14.1 Designation: 31R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 115.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 117.7 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: GATE HOLD
2.18.3 Service designation: 125.05 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 128.725 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P PRE TAXI
CLNC
2.18.3 Service designation: 135.05 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz
2.18.1 Service designation: LCL/P
2.18.3 Service designation: 281.55 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 281.55 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 281.55 MHz

2.18.1 Service designation: GND/P CD/P PRE
TAXI CLNC
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 125.25 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 04L.
Magnetic variation: 14W
2.19.2 ILS identification: HIQ
2.19.5 Coordinates: 40-39-00.00N /
73-45-46.62W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: DME for runway 04L. Magnetic
variation: 14W
2.19.2 ILS identification: HIQ
2.19.5 Coordinates: 40-37-43.82N /
73-46-40.58W
2.19.6 Site elevation: 24 ft

2.19.1 ILS type: Outer Marker for runway 04L.
Magnetic variation: 14W
2.19.2 ILS identification: HIQ
2.19.5 Coordinates: 40-35-00.00N /
73-48-56.17W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Glide Slope for runway 04L.
Magnetic variation: 14W
2.19.2 ILS identification: HIQ

2.19.5 Coordinates: 40-37-27.27N /
73-46-58.14W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Middle Marker for runway 22R.
Magnetic variation: 14W
2.19.2 ILS identification: JOC
2.19.5 Coordinates: 40-39-00.00N /
73-45-46.80W
2.19.6 Site elevation: 99999 ft
2.19.1 ILS type: Localizer for runway 22R.
Magnetic variation: 14W
2.19.2 ILS identification: JOC
2.19.5 Coordinates: 40-37-44.50N /
73-46-43.09W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Glide Slope for runway 22R.
Magnetic variation: 14W
2.19.2 ILS identification: JOC
2.19.5 Coordinates: 40-38-21.28N /
73-46-13.92W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: DME for runway 22R. Magnetic
variation: 14W
2.19.2 ILS identification: JOC
2.19.5 Coordinates: 40-38-53.29N /
73-45-12.18W
2.19.6 Site elevation: 29 ft

2.19.1 ILS type: Localizer for runway 04R.
Magnetic variation: 14W
2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-38-51.57N /
73-45-10.68W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: DME for runway 04R. Magnetic
variation: 14W
2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-38-53.29N /
73-45-13.18W
2.19.6 Site elevation: 29 ft

2.19.1 ILS type: Glide Slope for runway 04R.
Magnetic variation: 14W
2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-37-42.10N /
73-46-11.03W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: Inner Marker for runway 04R.
Magnetic variation: 14W
2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-37-23.90N /
73-46-19.10W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Middle Marker for runway 04R.
Magnetic variation: 14W
2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-37-00.00N /
73-46-30.60W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Localizer for runway 22L.
Magnetic variation: 14W
2.19.2 ILS identification: IWY
2.19.5 Coordinates: 40-37-27.51N /
73-46-16.39W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Outer Marker for runway 22L.
Magnetic variation: 14W
2.19.2 ILS identification: IWY
2.19.5 Coordinates: 40-43-31.10N /
73-41-35.40W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 22L.
Magnetic variation: 14W
2.19.2 ILS identification: IWY
2.19.5 Coordinates: 40-38-33.32N /
73-45-20.81W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: DME for runway 22L. Magnetic
variation: 14W
2.19.2 ILS identification: IWY
2.19.5 Coordinates: 40-37-43.82N /
73-46-40.58W
2.19.6 Site elevation: 24 ft

2.19.1 ILS type: Inner Marker for runway 22L.
Magnetic variation: 14W
2.19.2 ILS identification: IWY
2.19.5 Coordinates: 40-38-51.13N /
73-45-11.04W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Middle Marker for runway 22L.

Magnetic variation: 14W
2.19.2 ILS identification: IWY
2.19.5 Coordinates: 40-39-12.30N /
73-44-54.50W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 31L.
Magnetic variation: 14W
2.19.2 ILS identification: MOH
2.19.5 Coordinates: 40-35-27.30N /
73-41-00.00W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Localizer for runway 31L.
Magnetic variation: 14W
2.19.2 ILS identification: MOH
2.19.5 Coordinates: 40-38-59.65N /
73-49-12.42W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: Glide Slope for runway 31L.
Magnetic variation: 14W
2.19.2 ILS identification: MOH
2.19.5 Coordinates: 40-37-59.87N /
73-47-00.00W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Middle Marker for runway 31L.
Magnetic variation: 14W
2.19.2 ILS identification: MOH
2.19.5 Coordinates: 40-37-39.50N /
73-46-15.80W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Localizer for runway 13L.
Magnetic variation: 14W
2.19.2 ILS identification: TLK
2.19.5 Coordinates: 40-38-30.69N /
73-45-18.57W
2.19.6 Site elevation: 14 ft

2.19.1 ILS type: Glide Slope for runway 13L.
Magnetic variation: 14W
2.19.2 ILS identification: TLK
2.19.5 Coordinates: 40-39-14.74N /
73-47-00.00W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: Outer Marker for runway 13L.
Magnetic variation: 14W
2.19.2 ILS identification: TLK

2.19.5 Coordinates: 40-41-40.70N /
73-52-00.00W
2.19.6 Site elevation: 126 ft

2.19.1 ILS type: Middle Marker for runway 13L.
Magnetic variation: 14W
2.19.2 ILS identification: TLK
2.19.5 Coordinates: 40-39-37.10N /
73-47-44.80W
2.19.6 Site elevation: 11 ft

2.19.1 ILS type: DME for runway 13L. Magnetic
variation: 14W
2.19.2 ILS identification: TLK
2.19.5 Coordinates: 40-38-33.37N /
73-45-18.32W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: Middle Marker for runway 31R.
Magnetic variation: 14W
2.19.2 ILS identification: RTH
2.19.5 Coordinates: 40-38-25.00N /
73-45-00.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 31R. Magnetic
variation: 14W
2.19.2 ILS identification: RTH
2.19.5 Coordinates: 40-38-33.37N /
73-45-18.32W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: Outer Marker for runway 31R.
Magnetic variation: 14W
2.19.2 ILS identification: RTH
2.19.5 Coordinates: 40-35-50.70N /
73-39-26.60W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 31R.
Magnetic variation: 14W
2.19.2 ILS identification: RTH
2.19.5 Coordinates: 40-39-30.78N /
73-47-31.09W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Glide Slope for runway 31R.
Magnetic variation: 14W
2.19.2 ILS identification: RTH
2.19.5 Coordinates: 40-38-50.33N /
73-45-51.02W

2.19.6 Site elevation: 11 ft

General Remarks:

FLOCKS OF BIRDS ON & IN THE VICINITY OF AIRPORT.

LDIN RUNWAY 13L USES 1000' LIGHT STATION OF THE APPROACH LIGHT SYSTEM ONLY WITH CRI VOR APPROACHES & IS ANGLED TOWARD AQUEDUCT; ALSO 5 SEQUENCE FLASHING LIGHTS FROM 1200-2000' & A 5 SEQUENCE FLASHING LIGHTS GROUPING APPROXIMATELY 1 MI FROM RUNWAY +1 ADJACENT FORMING APPROACH. APPROACH GATE ANGLED 35 DEGS S OF RUNWAY 13L CENTERLINE DESIGNED TO PROVIDE EARLIER IDENT OF RUNWAY ENVI.

FOR NOISE RESTRICTIONS CALL 212-435-3685 DURING NORMAL BUSINESS HOURS.

AIRCRAFT PROHIBITED IN THE RUNUP BLOCK AREAS AT TAXIWAY Z. TO BE USED FOR TURN AROUND ONLY.

PARA-SAIL & BANNER TOWING OPERATIONS 1000 FT & BELOW IN UPPER & LOWER NEW YORK BAYS INCLUDING ROCKAWAY INLET INDEFINITELY..

SPECIAL AIR TRAFFIC RULES-PART 93 HIGH DENSITY AIRPORT. PRIOR RESERVATION REQUIRED. SEE AERONAUTICAL INFORMATION MANUAL.

GA TRAFFIC CONTACT AIRPORT OPERATIONS ON UNICOM FOR PARKING DIRECTIONS

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

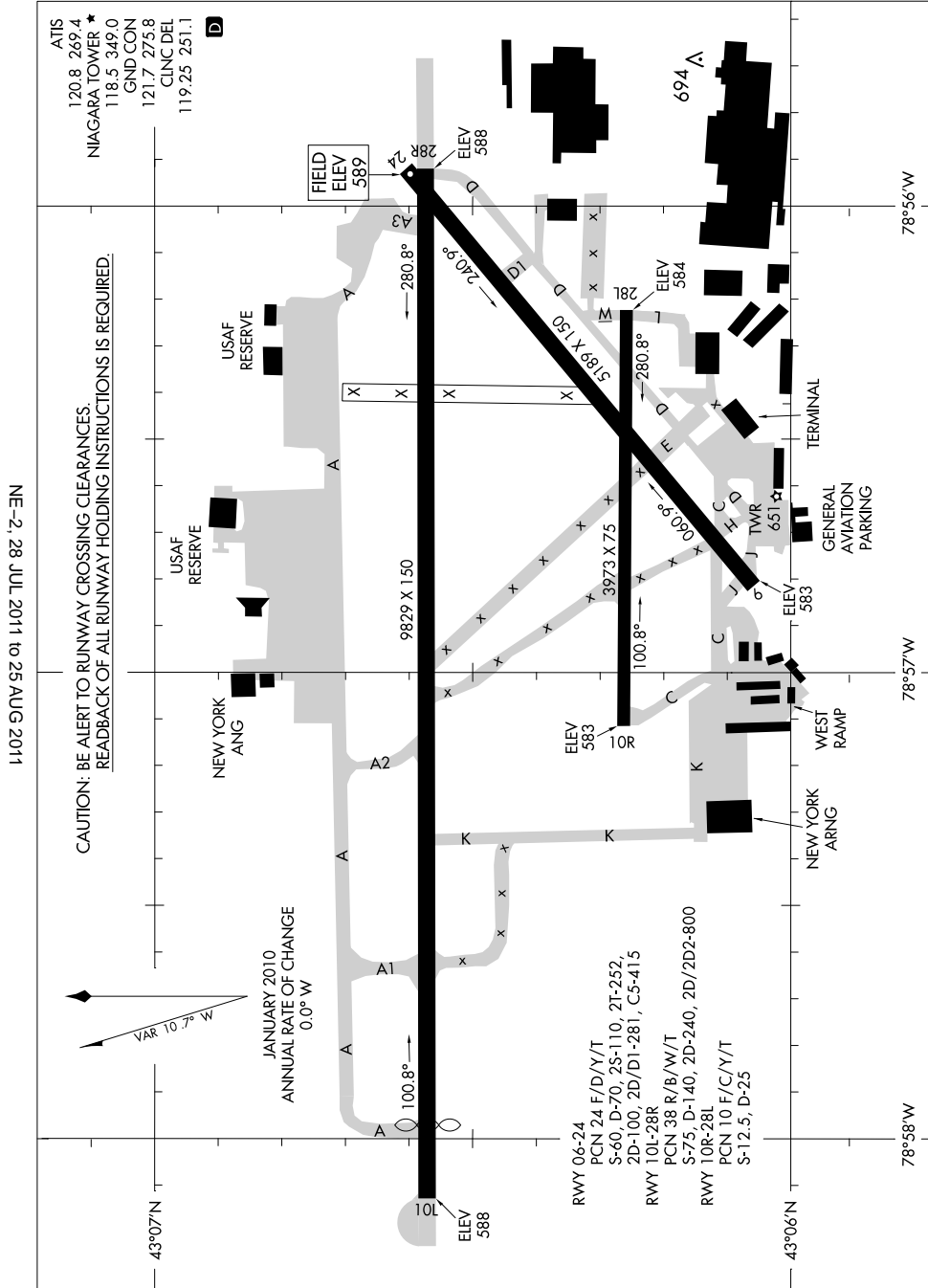
TAXIWAY Q AT HANGAR 19 TOW IN/OUT ONLY.

RUNWAY 13R HAS TWO (2) PAPI - P4L SYSTEMS.

CONVERGING OPERATIONS ON RUNWAYS 13R AND 22L CONDUCTED BY WAY OF ARRIVAL DISTANCE WINDOW.

Niagara Falls, New York
Niagara Falls International
ICAO Identifier KIAG

11181 AIRPORT DIAGRAM AL-614 (FAA) NIAGARA FALLS INTL (IAG)
NIAGARA FALLS, NEW YORK



NE-2, 28 JUL 2011 to 25 AUG 2011

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

NE-2, 28 JUL 2011 to 25 AUG 2011

AIRPORT DIAGRAM
11181

NIAGARA FALLS, NEW YORK
NIAGARA FALLS INTL (IAG)

Niagara Falls, NY
Niagara Falls Intl
ICAO Identifier KIAG

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 43–06–26.40N / 78–56–46.30W
- 2.2.2 From City: 4 Miles E Of Niagara Falls, NY
- 2.2.3 Elevation: 589 ft
- 2.2.5 Magnetic variation: 10W (1985)
- 2.2.6 Airport Contact: Mr. Pascal Cohen
2035 NIAGARA FALL BLVD
Niagara Falls, NY 14304
(716–855–6450)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 7/1/1974
- 2.6.4 Remarks: ARFF Index E Equipment Coverage Provided.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 06
- 2.10.1.b Type of obstacle: Tree (46 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 290 ft from Centerline

- 2.10.1.a. Runway designation: 24
- 2.10.1.b Type of obstacle: Tree (59 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 320 ft from Centerline

- 2.10.1.a. Runway designation: 10L
- 2.10.1.b Type of obstacle: Tree (52 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 480 ft from

Centerline

- 2.10.1.a. Runway designation: 28R
- 2.10.1.b Type of obstacle: Tree (37 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 400 ft from Centerline

- 2.10.1.a. Runway designation: 10R
- 2.10.1.b Type of obstacle: Tree (64 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 60 ft from Centerline

- 2.10.1.a. Runway designation: 28L
- 2.10.1.b Type of obstacle: Stack (59 ft). Lighted
- 2.10.1.c Location of obstacle: 120 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 50
- 2.12.3 Dimensions: 5189 ft x 150 ft
- 2.12.4 PCN: 24 F/D/Y/T
- 2.12.5 Coordinates: 43–06–00.00N / 78–56–48.96W
- 2.12.6 Threshold elevation: 582 ft
- 2.12.6 Touchdown zone elevation: 584 ft

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 230
- 2.12.3 Dimensions: 5189 ft x 150 ft
- 2.12.4 PCN: 24 F/D/Y/T
- 2.12.5 Coordinates: 43–06–36.35N / 78–55–55.26W
- 2.12.6 Threshold elevation: 589 ft
- 2.12.6 Touchdown zone elevation: 589 ft

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 9829 ft x 150 ft
- 2.12.4 PCN: 38 R/B/W/T
- 2.12.5 Coordinates: 43–06–34.35N / 78–58–00.00W
- 2.12.6 Threshold elevation: 588 ft
- 2.12.6 Touchdown zone elevation: 589 ft

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 9829 ft x 150 ft
- 2.12.4 PCN: 38 R/B/W/T
- 2.12.5 Coordinates: 43–06–34.16N /

78-55-55.28W
2.12.6 Threshold elevation: 588 ft
2.12.6 Touchdown zone elevation: 588 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 3973 ft x 75 ft
2.12.4 PCN: 10 F/C/Y/T
2.12.5 Coordinates: 43-06-15.60N /
78-57-00.00W
2.12.6 Threshold elevation: 583 ft
2.12.6 Touchdown zone elevation: 584 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 3973 ft x 75 ft
2.12.4 PCN: 10 F/C/Y/T
2.12.5 Coordinates: 43-06-15.51N /
78-56-13.46W
2.12.6 Threshold elevation: 584 ft
2.12.6 Touchdown zone elevation: 585 ft

AD 2.13 Declared distances

2.13.1 Designation: 06
2.13.2 Takeoff run available: 5189
2.13.3 Takeoff distance available: 5189
2.13.4 Accelerate-stop distance available: 5189
2.13.5 Landing distance available: 5189

2.13.1 Designation: 24
2.13.2 Takeoff run available: 5189
2.13.3 Takeoff distance available: 5189
2.13.4 Accelerate-stop distance available: 5189
2.13.5 Landing distance available: 5189

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 9829
2.13.3 Takeoff distance available: 10829
2.13.4 Accelerate-stop distance available: 9829
2.13.5 Landing distance available: 9129

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 9829
2.13.3 Takeoff distance available: 10529
2.13.4 Accelerate-stop distance available: 9129
2.13.5 Landing distance available: 9129

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 3973
2.13.3 Takeoff distance available: 3973
2.13.4 Accelerate-stop distance available: 3973

2.13.5 Landing distance available: 3973

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 3973
2.13.3 Takeoff distance available: 3973
2.13.4 Accelerate-stop distance available: 3973
2.13.5 Landing distance available: 3973

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 24
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 10L
2.14.4 Visual approach slope indicator system:
4-box VASI on left

2.14.1 Designation: 28R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 10R
2.14.4 Visual approach slope indicator system:
2-light PAPI on left

2.14.1 Designation: 28L
2.14.4 Visual approach slope indicator system:
2-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 119.25 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 120.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 251.1 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 269.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P
2.18.3 Service designation: 275.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 349 MHz

2.18.1 Service designation: NG-OPNS
2.18.3 Service designation: 41 MHz

2.18.1 Service designation: AFR-OPS
2.18.3 Service designation: 340.24 MHz

2.18.1 Service designation: 914 AG COMD POST
2.18.3 Service designation: 340.025 MHz

2.19.2 ILS identification: IAG
2.19.5 Coordinates: 43-06-34.36N /
78-58-18.82W
2.19.6 Site elevation: 586 ft

2.19.1 ILS type: Outer Marker for runway 28R.
Magnetic variation: 10W
2.19.2 ILS identification: IAG
2.19.5 Coordinates: 43-06-32.53N /
78-50-18.16W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 28R.
Magnetic variation: 10W
2.19.2 ILS identification: IAG
2.19.5 Coordinates: 43-06-30.09N /
78-56-16.64W
2.19.6 Site elevation: 583 ft

2.19.1 ILS type: Middle Marker for runway 28R.
Magnetic variation: 10W
2.19.2 ILS identification: IAG
2.19.5 Coordinates: 43-06-33.97N /
78-55-00.00W
2.19.6 Site elevation: 587 ft

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 28R.
Magnetic variation: 10W

General Remarks:

EXTENSIVE AIRCRAFT ACTIVITY OPERATING IN THE VICINITY OF US/CANADIAN FALLS ALL ALTITUDES.

HEAVY CONCENTRATIONS OF GULLS-BLACKBIRDS-STARLINGS UP TO 5000 AGL ON & IN THE VICINITY OF AIRPORT.

AIRCRAFT WITH SEATING CAPACITY IN EXCESS OF 30 PASSENGERS AUTH ONLY USE OF RUNWAY 10L/28R.

TAXIWAY E RESTRICTED TO 12500 LBS OR LESS.

TAXIWAY "E" CLOSED PERMANENTLY BETWEEN TAXIWAYS "C" AND "D".

TAXIWAY "E" CLOSED INDEFINITELY FROM RUNWAY 10L/28R TO RUNWAY 06/24.

ALL MILITARY AIRCRAFT ONLY OPERATIONS RESTRICTED DURING BIRD WATCH CONDITIONS. MODERATE - TAKE-OFF & LANDING PERMISSION ONLY WHEN DEP/ARR ROUTE AVOIDS IDENTIFIED BIRD ACTIVITY; NO LOCAL IFR/VFR TRAFFIC PATTERN ACTIVITY. SEVERE - TAKE-OFF & LANDING PROHIBITED WO OG/CC APPROVAL; CONTACT COMMAND POST FOR CURRENT BIRD WATCH CONDITIONS.

ALL MILITARY AIRCRAFT ONLY MINIMAL CLASSIFIED MATERIALS AVAILABLE; AIRCREWS SHOULD ARRIVE WITH APPROPRIATE AMOUNT TO COMPLETE THEIR MISSION.

BEARING STRENGTH RUNWAY 06/24: ST110 TT145 SBTT281 TDT415 TRT252.

JASU: 2(A/M32A-86) 1(AM32A-60) 1(MA-1A).

FUEL: J8(MIL) A, A+.

FLUID: SP LOX.

OIL: O-148(MIL).

REMARKS: SEE FLIGHT INFORMATION PUBLICATION AP/1 SUPPLEMENTARY AIRPORT REMARK.

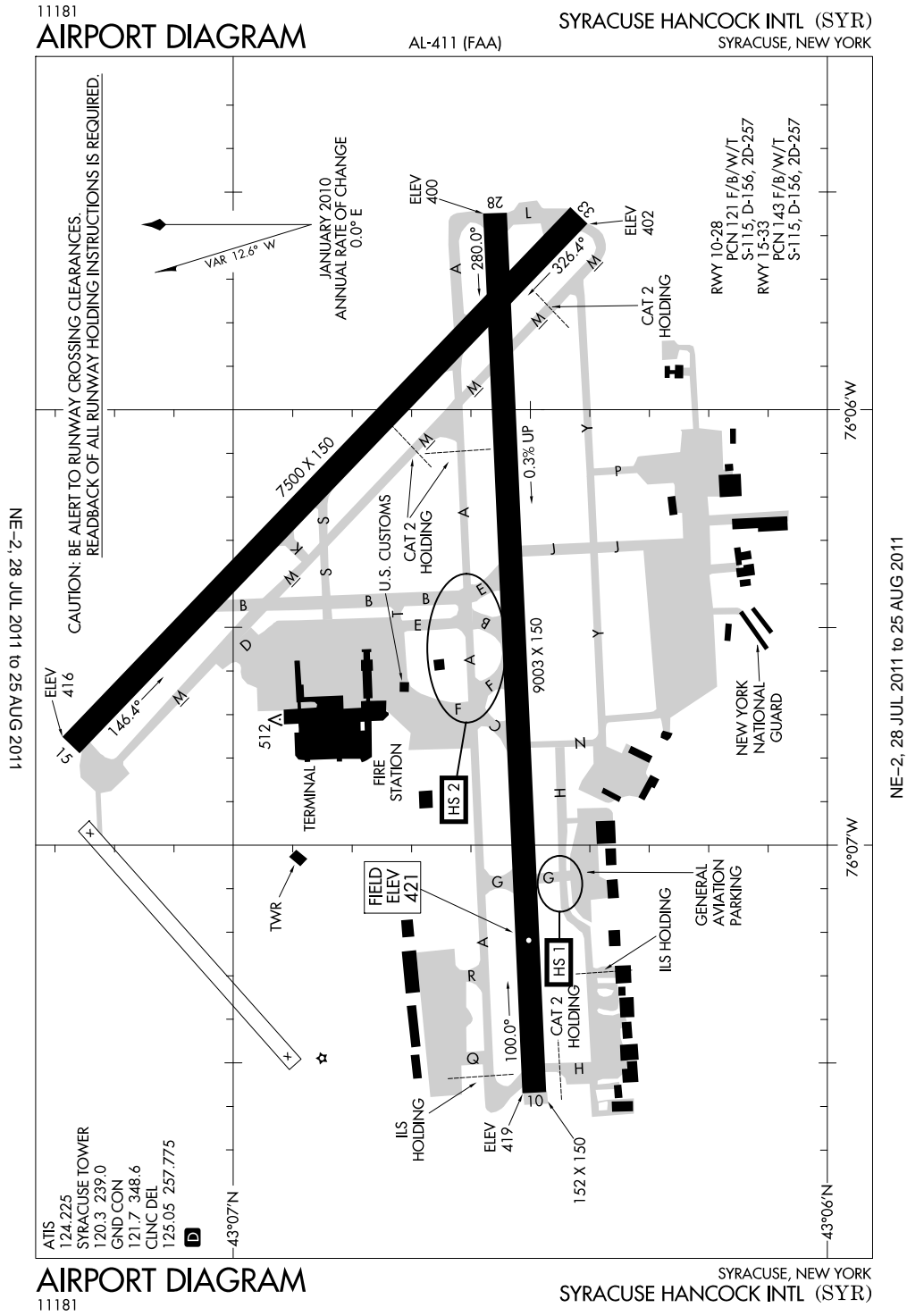
MISC: LOCAL MISSION AIRCRAFT HAVE PRIORITY FOR DEICING; FULL AIRCRAFT DEICING FOR C-17 AND C-5 AIRCRAFT NOT AVAILABLE.

REMARKS-CAUTION: NIGHT VISION DEVICE OPERATIONS PERIODICALLY CONDUCTED IN THE AIRPORT TRAFFIC AREA.

CUSTOMS/AGRICULTURE/IMIGRATION -: AVAILABLE FOR ALL MILITARY WITH 72 HR PRIOR NOTICE. CREW, PASSENGER, CARGO ORGIN, DESTINATION AND PRE-CLEARED INFORMATION REQUIRE 1 HR PRIOR LANDING. CONTACT 914TH OSF, SSI/OSA DSN 238-2176, C717-236-2176, FAX DSN 238-2380, C716-236-2380 FOR RESTRICTED INFORMATION AND REQUIRE PRIOR PERMISSION REQUIRED.

REMARKS - MISC: FOR CURRENT MILITARY RUNWAY CONDITION READING (RCR) CALL OR CONTACT 914 AW COMMAND POST, 914 AW BASE OPERATIONS, OR 107 ANG COMMAND POST.

Syracuse, New York
Syracuse Hancock International
ICAO Identifier KSYR



Syracuse, NY
Syracuse Hancock Intl
ICAO Identifier KSYR

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 43-06-40.27N / 76-06-22.72W
- 2.2.2 From City: 4 Miles NE Of Syracuse, NY
- 2.2.3 Elevation: 421 ft
- 2.2.5 Magnetic variation: 13W (2000)
- 2.2.6 Airport Contact: Rory McMahon
1000 COL EILEEN COLLINS BLVD
Syracuse, NY 13212 (315-454-3263)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 15
- 2.10.1.b Type of obstacle: Trees (51 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 380 ft from Centerline

- 2.10.1.a. Runway designation: 33
- 2.10.1.b Type of obstacle: Tree (34 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 520 ft from Centerline

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Trees (80 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 287 ft from Centerline

- 2.10.1.a. Runway designation: 10

- 2.10.1.b Type of obstacle: Trees (64 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 686 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 134
- 2.12.3 Dimensions: 7500 ft x 150 ft
- 2.12.4 PCN: 143 F/B/W/T
- 2.12.5 Coordinates: 43-07-16.43N / 76-06-46.21W
- 2.12.6 Threshold elevation: 416 ft
- 2.12.6 Touchdown zone elevation: 417 ft

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 314
- 2.12.3 Dimensions: 7500 ft x 150 ft
- 2.12.4 PCN: 143 F/B/W/T
- 2.12.5 Coordinates: 43-06-25.13N / 76-05-33.28W
- 2.12.6 Threshold elevation: 402 ft
- 2.12.6 Touchdown zone elevation: 409 ft

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 87
- 2.12.3 Dimensions: 9003 ft x 150 ft
- 2.12.4 PCN: 121 F/B/W/T
- 2.12.5 Coordinates: 43-06-29.52N / 76-07-34.15W
- 2.12.6 Threshold elevation: 419 ft
- 2.12.6 Touchdown zone elevation: 421 ft

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 267
- 2.12.3 Dimensions: 9003 ft x 150 ft
- 2.12.4 PCN: 121 F/B/W/T
- 2.12.5 Coordinates: 43-06-33.51N / 76-05-32.91W
- 2.12.6 Threshold elevation: 400 ft
- 2.12.6 Touchdown zone elevation: 413 ft
- 2.12.7 Slope: 0.3UP

- AD 2.13 Declared distances**
- 2.13.1 Designation: 15
- 2.13.2 Takeoff run available: 7500
- 2.13.3 Takeoff distance available: 7500
- 2.13.4 Accelerate-stop distance available: 7500
- 2.13.5 Landing distance available: 7500

- 2.13.1 Designation: 33

2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate–stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 10
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003
2.13.4 Accelerate–stop distance available: 9003
2.13.5 Landing distance available: 9003

2.13.1 Designation: 28
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003
2.13.4 Accelerate–stop distance available: 9003
2.13.5 Landing distance available: 9003

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15
2.14.2 Approach lighting system: MALS: 1400 feet medium intensity approach lighting system
2.14.4 Visual approach slope indicator system: 4–box VASI on left

2.14.1 Designation: 33
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 10
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–box VASI on left

2.14.1 Designation: 28
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 118.85 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 125.05 MHz

2.18.1 Service designation: APCH/P DEP/P CLASS C
2.18.3 Service designation: 126.125 MHz

2.18.1 Service designation: APCH/P DEP/P CLASS C IC
2.18.3 Service designation: 134.275 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 239 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: AR OPS
2.18.3 Service designation: 245.3 MHz

2.18.1 Service designation: APCH/P DEP/P CLASS C IC
2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: IC
2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 379.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 257.775 MHz

2.18.1 Service designation: APCH/P DEP/P CLASS C
2.18.3 Service designation: 269.125 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 124.225 MHz
2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 13W
2.19.2 ILS identification: SYR

2.19.5 Coordinates: 43-06-28.94N /
76-07-51.66W
2.19.6 Site elevation: 417 ft

2.19.1 ILS type: DME for runway 28. Magnetic
variation: 13W

2.19.2 ILS identification: SYR
2.19.5 Coordinates: 43-06-31.84N /
76-05-20.74W
2.19.6 Site elevation: 406 ft

2.19.1 ILS type: Glide Slope for runway 28.

Magnetic variation: 13W
2.19.2 ILS identification: SYR
2.19.5 Coordinates: 43-06-39.47N /
76-05-46.43W
2.19.6 Site elevation: 404 ft

2.19.1 ILS type: Outer Marker for runway 28.

Magnetic variation: 13W
2.19.2 ILS identification: SYR
2.19.5 Coordinates: 43-06-43.94N /
76-00-00.00W
2.19.6 Site elevation: 403 ft

2.19.1 ILS type: Inner Marker for runway 28.

Magnetic variation: 13W
2.19.2 ILS identification: SYR
2.19.5 Coordinates: 43-06-34.10N /
76-05-18.52W
2.19.6 Site elevation: 395 ft

2.19.1 ILS type: Middle Marker for runway 28.

Magnetic variation: 13W

General Remarks:

NO CHARTER OPER THRU PASSENGER TERMINAL BUILDING WITHOUT PRIOR PERMISSION.

NOISE ABATEMENT PROCEDURES IN EFFECT.

DEER/COYOTE/BIRDS ON IN THE VICINITY OF AIRPORT.

NO JET ENGINE MAINT RUNS ABOVE IDLE BETWEEN 2300-0600.

NO TRANSIENT AIRCRAFT PARKING ON MAIN TERMINAL RAMP.

DIRECT CUSTOM NOTIFICATION IS REQUIRED. HOURS OF NOTIFICATION ARE MON-SAT
0800-1700. ARRIVALS OUTSIDE OF THESE HRS MUST MAKE ARRANGEMENTS DURING
REGULAR WORK HRS; CALL 315-455-2271.

AIRPORT SURFACE DETECTION EQUIPMENT (ASDE) BEING TESTED AT SYRACUSE AIRPORT;

ALL AIRCRAFT REQUESTED TO OPR TRANSPONDERS WHILE ON AIRPORT SURFACE.

FIELD CONDITION REPORTS RECORDING AVAILABLE CALL 315-455-3444.

HEAVY AIRCRAFT CONTACT AIRPORT COMMISSIONER FOR PARK AVAILABLE AT C315-455-3263. MILITARY PARK RAMP UNLIGHTED. LIMITED METRO AVAIL AT DSN 243-2185. C315-233-2185 OR CONTACT OWS DSN 576-9755/9702. ALL TRANSIENT AIRCRAFT REQ NOISE ABATEMENT BRIEFING.

RESTRICTED – TAXI U NOT USED. USE TAXI J TO ENTER ANG RAMP.

COMMUNICATIONS – ANG – OPERATIONS – 139.625 379.5 REMARKS: (COBRA OPS) CONTACT ANG OPERATIONS 15 MIN PRIOR TO ARR.

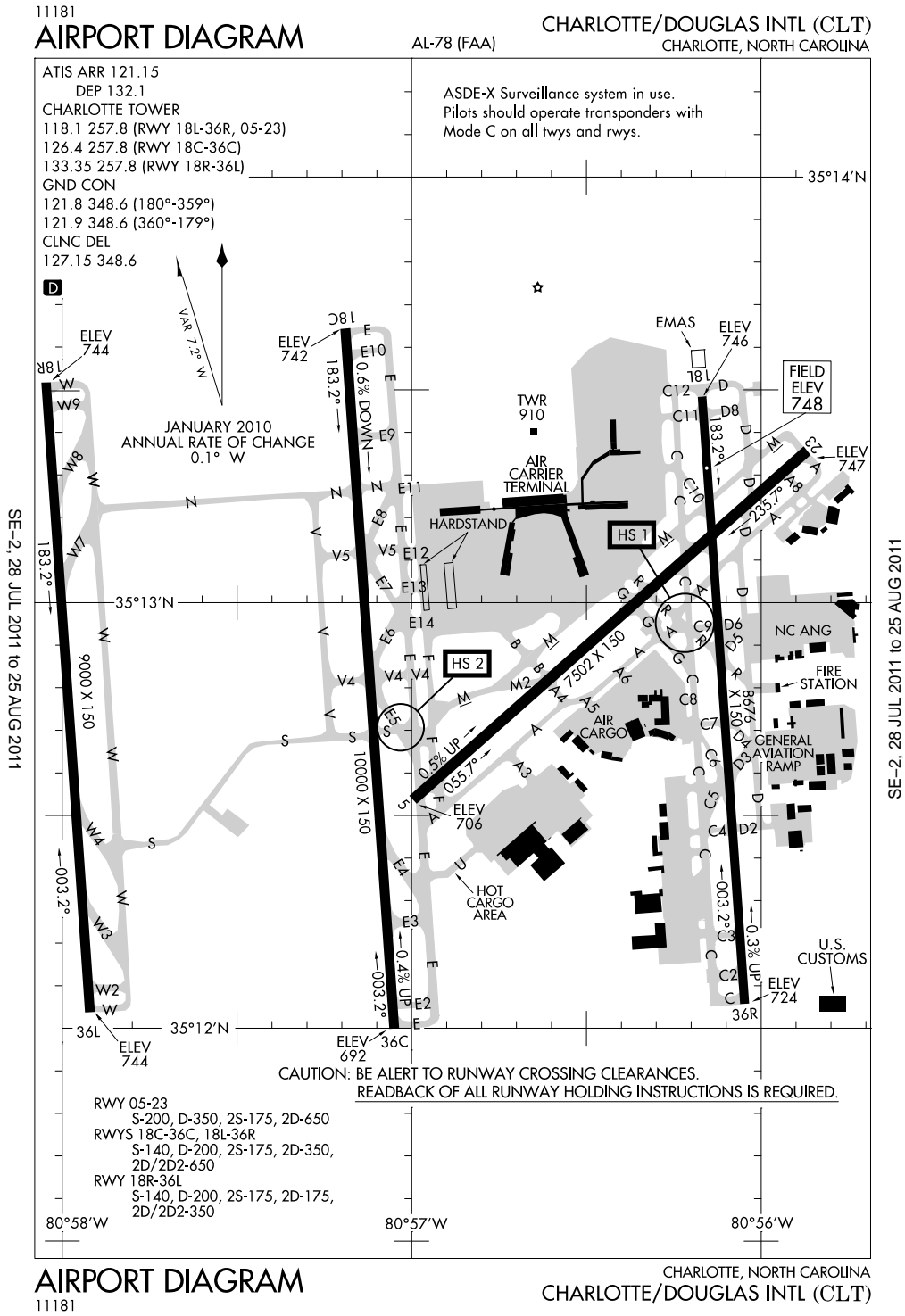
RESTRICTED: TAXIWAY J AND P SOUTH OF TAXIWAY Y CLOSED TO CIVIL OPERATIONS.

CAUTION: TAXIWAY J AND P SOUTH OF TAXIWAY Y AND ANG RAMP HAVE UNCTL VEH AND EQUIPMENT TRAFFIC.

ANG: OPR 1100-2000Z++ WEEKEND EXCEPT HOLIDAY. PRIOR PERMISSION REQUIRED TRANSMIT AIRCRAFT OFFICIAL BUSINESS ONLY. AIRFIELD MANAGER DSN 243-2208, AFTER DUTY HR CONTACT C315-530-2520. PRIOR PERMISSION REQUIRED FOR ALL TRANSIENT AIRCRAFT DUE LIMITED TRANSMIT SERVICE. NOTIFY AIRFIELD MANAGER OF ESTIMATED TIME OF ARRIVAL DELAY OVER 30 MIN OR MSN CANCEL IS REQUIRE.

ANG: HEAVY AIRCRAFT CONTACT AIRPORT COMMISSIONER FOR PARK AVAILABLE AT C315-455-3666. MILITARY PARK RAMP UNLIGHTED. ALL TRANSIENT AIRCRAFT REQUIRE NS ABATEMENT BRIEFING.

Charlotte, North Carolina Charlotte/Douglas International ICAO Identifier KCLT



Charlotte, NC
Charlotte/Douglas Intl
ICAO Identifier KCLT

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 35-12-49.47N / 80-56-56.65W
- 2.2.2 From City: 4 Miles W Of Charlotte, NC
- 2.2.3 Elevation: 748 ft
- 2.2.5 Magnetic variation: 7W (2000)
- 2.2.6 Airport Contact: Jerry Orr
PO BOX 19066
Charlotte, NC 28219
(704-359-4000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 18L
- 2.10.1.b Type of obstacle: Rr (19 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 18C
- 2.10.1.b Type of obstacle: Road (25 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 425 ft from Centerline

- 2.10.1.a. Runway designation: 05
- 2.10.1.b Type of obstacle: Trees (38 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 300 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 18L
- 2.12.2 True Bearing: 176
- 2.12.3 Dimensions: 8676 ft x 150 ft
- 2.12.5 Coordinates: 35-13-29.04N / 80-56-10.17W
- 2.12.6 Threshold elevation: 746 ft
- 2.12.6 Touchdown zone elevation: 748 ft
- 2.12.7 Slope: 0.2DOWN

- 2.12.1 Designation: 36R
- 2.12.2 True Bearing: 356
- 2.12.3 Dimensions: 8676 ft x 150 ft
- 2.12.5 Coordinates: 35-12-00.00N / 80-56-00.00W
- 2.12.6 Threshold elevation: 724 ft
- 2.12.6 Touchdown zone elevation: 727 ft
- 2.12.7 Slope: 0.3UP

- 2.12.1 Designation: 18C
- 2.12.2 True Bearing: 176
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 35-13-38.63N / 80-57-11.41W
- 2.12.6 Threshold elevation: 742 ft
- 2.12.6 Touchdown zone elevation: 742 ft
- 2.12.7 Slope: 0.6DOWN

- 2.12.1 Designation: 36C
- 2.12.2 True Bearing: 356
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 35-11-59.97N / 80-57-00.00W
- 2.12.6 Threshold elevation: 692 ft
- 2.12.6 Touchdown zone elevation: 707 ft
- 2.12.7 Slope: 0.4UP

- 2.12.1 Designation: 05
- 2.12.2 True Bearing: 48
- 2.12.3 Dimensions: 7502 ft x 150 ft
- 2.12.5 Coordinates: 35-12-32.23N / 80-56-59.81W
- 2.12.6 Threshold elevation: 706 ft
- 2.12.6 Touchdown zone elevation: 716 ft
- 2.12.7 Slope: 0.5DOWN

- 2.12.1 Designation: 23
- 2.12.2 True Bearing: 228
- 2.12.3 Dimensions: 7502 ft x 150 ft
- 2.12.5 Coordinates: 35-13-21.42N / 80-55-52.12W

2.12.6 Threshold elevation: 747 ft
2.12.6 Touchdown zone elevation: 747 ft
2.12.7 Slope: 0.5UP

2.12.1 Designation: 18R
2.12.2 True Bearing: 176
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.5 Coordinates: 35-13-31.02N /
80-58-00.00W
2.12.6 Threshold elevation: 744 ft
2.12.6 Touchdown zone elevation: 744 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 356
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.5 Coordinates: 35-12-00.00N /
80-57-55.07W
2.12.6 Threshold elevation: 744 ft
2.12.6 Touchdown zone elevation: 744 ft

AD 2.13 Declared distances

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 8676
2.13.3 Takeoff distance available: 8676
2.13.4 Accelerate-stop distance available: 8676
2.13.5 Landing distance available: 8676

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 8676
2.13.3 Takeoff distance available: 8676
2.13.4 Accelerate-stop distance available: 8676
2.13.5 Landing distance available: 8676

2.13.1 Designation: 18C
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 36C
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 05
2.13.2 Takeoff run available: 7502
2.13.3 Takeoff distance available: 7502
2.13.4 Accelerate-stop distance available: 7092
2.13.5 Landing distance available: 7092

2.13.1 Designation: 23
2.13.2 Takeoff run available: 7502
2.13.3 Takeoff distance available: 7502
2.13.4 Accelerate-stop distance available: 7502
2.13.5 Landing distance available: 7502

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 18L
2.14.4 Visual approach slope indicator system:
6-box VASI on right
2.14.10 Remarks: VASI Upwind Threshold
Crossing Height 90.9' GA 3.25 Deg; Dwnd
Threshold Crossing Height 52.4' GA 2.75 Deg.

2.14.1 Designation: 36R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 18C
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 36C
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 05
2.14.2 Approach lighting system: MALSR: 1400

feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 23

2.14.4 Visual approach slope indicator system:
4-box VASI on right

2.14.1 Designation: 18R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 36L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P (RYS 18L/36R
& 05/23)

2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B IC

2.18.3 Service designation: 120.05 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B IC

2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 121.15 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B IC

2.18.3 Service designation: 124 MHz

2.18.1 Service designation: LCL/P (RY 18C-36C)

2.18.3 Service designation: 126.4 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 127.15 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 132.1 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P DEP/P
CLASS B IC

2.18.3 Service designation: 134.75 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B IC

2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: GND/P CD/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B IC

2.18.3 Service designation: 128.32 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS B IC

2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: LC/P

2.18.3 Service designation: 133.35 MHz

2.18.1 Service designation: ALCP

2.18.3 Service designation: 292.25 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 18L.
Magnetic variation: 7W

2.19.2 ILS identification: VKQ

2.19.5 Coordinates: 35-11-50.60N /

80-56-00.00W

2.19.6 Site elevation: 719 ft

2.19.1 ILS type: Glide Slope for runway 18L.
Magnetic variation: 7W

2.19.2 ILS identification: VKQ

2.19.5 Coordinates: 35-13-19.26N /
80-56-00.00W

2.19.6 Site elevation: 744 ft

2.19.1 ILS type: Outer Marker for runway 18L.
Magnetic variation: 7W

2.19.2 ILS identification: VKQ

2.19.5 Coordinates: 35-20-19.08N /
80-56-41.44W

2.19.6 Site elevation: 717 ft

2.19.1 ILS type: Middle Marker for runway 18L.
Magnetic variation: 7W

2.19.2 ILS identification: VKQ

2.19.5 Coordinates: 35-14-00.00N /
80-56-14.34W

2.19.6 Site elevation: 739 ft

2.19.1 ILS type: Localizer for runway 36R.
Magnetic variation: 7W

2.19.2 ILS identification: BQC

2.19.5 Coordinates: 35-13-33.71N /
80-56-10.57W

2.19.6 Site elevation: 741 ft

2.19.1 ILS type: Glide Slope for runway 36R.
Magnetic variation: 7W

2.19.2 ILS identification: BQC

2.19.5 Coordinates: 35-12-14.00N /
80-55-58.90W

2.19.6 Site elevation: 717 ft

2.19.1 ILS type: Inner Marker for runway 36R.
Magnetic variation: 7W

2.19.2 ILS identification: BQC

2.19.5 Coordinates: 35-11-54.22N /
80-56-00.00W

2.19.6 Site elevation: 710 ft

2.19.1 ILS type: Middle Marker for runway 36R.
Magnetic variation: 7W

2.19.2 ILS identification: BQC

2.19.5 Coordinates: 35-11-40.26N /
80-56-00.00W

2.19.6 Site elevation: 700 ft

2.19.1 ILS type: DME for runway 36R. Magnetic
variation: 7W

2.19.2 ILS identification: BQC

2.19.5 Coordinates: 35-13-33.74N /
80-56-13.65W

2.19.6 Site elevation: 744 ft

2.19.1 ILS type: Outer Marker for runway 36R.
Magnetic variation: 7W

2.19.2 ILS identification: BQC

2.19.5 Coordinates: 35-05-26.62N /
80-55-33.97W

2.19.6 Site elevation: 616 ft

2.19.1 ILS type: Middle Marker for runway 18C.
Magnetic variation: 7W

2.19.2 ILS identification: PEP

2.19.5 Coordinates: 35-14-00.00N /
80-57-13.65W

2.19.6 Site elevation: 703 ft

2.19.1 ILS type: Outer Marker for runway 18C.
Magnetic variation: 7W

2.19.2 ILS identification: PEP

2.19.5 Coordinates: 35-20-12.02N /
80-57-48.14W

2.19.6 Site elevation: 737 ft

2.19.1 ILS type: Localizer for runway 18C.
Magnetic variation: 7W

2.19.2 ILS identification: PEP

2.19.5 Coordinates: 35-11-50.60N /
80-57-00.00W

2.19.6 Site elevation: 687 ft

2.19.1 ILS type: Glide Slope for runway 18C.
Magnetic variation: 7W

2.19.2 ILS identification: PEP

2.19.5 Coordinates: 35-13-26.91N /
80-57-15.23W

2.19.6 Site elevation: 731 ft

2.19.1 ILS type: Outer Marker for runway 36C.
Magnetic variation: 7W

2.19.2 ILS identification: DQG

2.19.5 Coordinates: 35-05-43.52N /
80-56-26.77W

2.19.6 Site elevation: 593 ft

2.19.1 ILS type: Localizer for runway 36C.

Magnetic variation: 7W
2.19.2 ILS identification: DQG
2.19.5 Coordinates: 35-13-53.95N /
80-57-12.73W
2.19.6 Site elevation: 750 ft

2.19.1 ILS type: Inner Marker for runway 36C.
Magnetic variation: 7W
2.19.2 ILS identification: DQG
2.19.5 Coordinates: 35-11-48.73N /
80-57-00.00W
2.19.6 Site elevation: 680 ft

2.19.1 ILS type: Glide Slope for runway 36C.
Magnetic variation: 7W
2.19.2 ILS identification: DQG
2.19.5 Coordinates: 35-12-00.00N /
80-57-00.00W
2.19.6 Site elevation: 691 ft

2.19.1 ILS type: Middle Marker for runway 36C.
Magnetic variation: 7W
2.19.2 ILS identification: DQG
2.19.5 Coordinates: 35-11-34.90N /
80-57-00.00W
2.19.6 Site elevation: 679 ft

2.19.1 ILS type: Localizer for runway 05. Magnetic
variation: 7W
2.19.2 ILS identification: CLT
2.19.5 Coordinates: 35-13-24.50N /
80-55-47.88W
2.19.6 Site elevation: 738 ft

2.19.1 ILS type: Outer Marker for runway 05.
Magnetic variation: 7W
2.19.2 ILS identification: CLT
2.19.5 Coordinates: 35-09-29.30N /
81-01-14.12W
2.19.6 Site elevation: 691 ft

2.19.1 ILS type: Middle Marker for runway 05.
Magnetic variation: 7W
2.19.2 ILS identification: CLT
2.19.5 Coordinates: 35-12-10.91N /
80-57-29.16W
2.19.6 Site elevation: 732 ft

2.19.1 ILS type: Glide Slope for runway 05.
Magnetic variation: 7W
2.19.2 ILS identification: CLT

2.19.5 Coordinates: 35-12-43.05N /
80-56-52.18W
2.19.6 Site elevation: 695 ft

2.19.1 ILS type: DME for runway 23. Magnetic
variation: 7W
2.19.2 ILS identification: APU
2.19.5 Coordinates: 35-12-21.29N /
80-57-10.05W
2.19.6 Site elevation: 706 ft

2.19.1 ILS type: Localizer for runway 23. Magnetic
variation: 7W
2.19.2 ILS identification: APU
2.19.5 Coordinates: 35-12-24.08N /
80-57-11.02W
2.19.6 Site elevation: 704 ft

2.19.1 ILS type: Glide Slope for runway 23.
Magnetic variation: 7W
2.19.2 ILS identification: APU
2.19.5 Coordinates: 35-13-12.15N /
80-56-00.00W
2.19.6 Site elevation: 738 ft

2.19.1 ILS type: DME for runway 18R. Magnetic
variation: 7W
2.19.2 ILS identification: RGS
2.19.5 Coordinates: 35-12-13.28N /
80-58-00.00W
2.19.6 Site elevation: 732 ft

2.19.1 ILS type: Glide Slope for runway 18R.
Magnetic variation: 7W
2.19.2 ILS identification: RGS
2.19.5 Coordinates: 35-13-20.08N /
80-58-00.00W
2.19.6 Site elevation: 733 ft

2.19.1 ILS type: Localizer for runway 18R.
Magnetic variation: 7W
2.19.2 ILS identification: RGS
2.19.5 Coordinates: 35-11-51.86N /
80-57-54.19W
2.19.6 Site elevation: 738 ft

2.19.1 ILS type: Inner Marker for runway 18R.
Magnetic variation: 7W
2.19.2 ILS identification: RGS
2.19.5 Coordinates: 35-13-38.82N /
80-58-00.00W

2.19.6 Site elevation: 739 ft

2.19.1 ILS type: DME for runway 36L. Magnetic variation: 7W

2.19.2 ILS identification: XUU

2.19.5 Coordinates: 35-13-19.81N /

80-58-00.00W

2.19.6 Site elevation: 733 ft

2.19.1 ILS type: Glide Slope for runway 36L.

Magnetic variation: 7W

2.19.2 ILS identification: XUU

2.19.5 Coordinates: 35-12-12.99N /

80-58-00.00W

2.19.6 Site elevation: 732 ft

2.19.1 ILS type: Localizer for runway 36L.

Magnetic variation: 7W

2.19.2 ILS identification: XUU

2.19.5 Coordinates: 35-13-41.39N /

80-58-00.00W

2.19.6 Site elevation: 738 ft

2.19.1 ILS type: Inner Marker for runway 36L.

Magnetic variation: 7W

2.19.2 ILS identification: XUU

2.19.5 Coordinates: 35-11-54.43N /

80-57-54.41W

2.19.6 Site elevation: 739 ft

General Remarks:

RUNWAY SURFACE CONDITION INFORMATION DURING DUTY HRS PHONE ANG OPERATIONS V583-9177/9144 OR AIRBORNE 292.2.

NOISE ABATEMENT PROCEDURE IN EFFECT 2300-0700; LAND ON RUNWAY 05 TAKE-OFF RUNWAY 23.

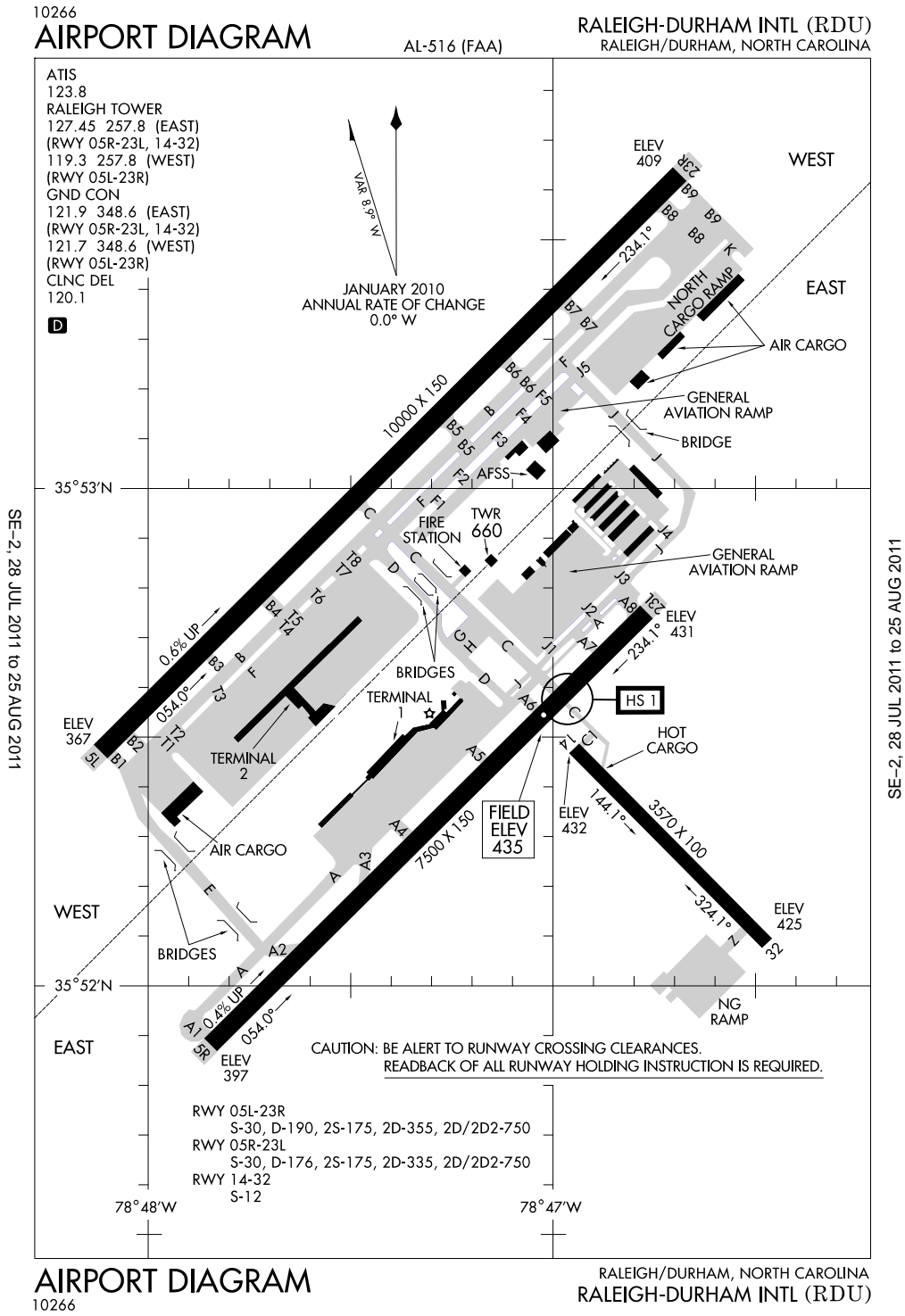
BE ALERT FOR FLOCKS OF MIGRATORY BIRDS ON & IN THE VICINITY OF AIRPORT.

TAXIWAY E13 CLOSED INDEFINITELY.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

ANG: CONTACT NEWSREEL 292.25 30 MIN PRIOR LANDING. AMOPS/COMD POST - 292.25 (CALL NEWSREEL).

Raleigh-Durham, North Carolina
Raleigh-Durham International
ICAO Identifier KRDU



Raleigh/Durham, NC
Raleigh-Durham Intl
ICAO Identifier KRDU

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 35-52-39.50N / 78-47-14.90W
- 2.2.2 From City: 9 Miles NW Of Raleigh/Durham, NC
- 2.2.3 Elevation: 435 ft
- 2.2.5 Magnetic variation: 7W (1985)
- 2.2.6 Airport Contact: John C. Brantley
P.O. BOX 80001
Rdu Airport, NC 27623
(919-840-7702)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 32
- 2.10.1.b Type of obstacle: Trees (120 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 1 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 05L
- 2.12.2 True Bearing: 45
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 35-52-28.02N / 78-48-00.00W
- 2.12.6 Threshold elevation: 367 ft
- 2.12.6 Touchdown zone elevation: 384 ft

- 2.12.1 Designation: 23R
- 2.12.2 True Bearing: 225
- 2.12.3 Dimensions: 10000 ft x 150 ft

- 2.12.5 Coordinates: 35-53-37.76N / 78-46-40.92W
- 2.12.6 Threshold elevation: 409 ft
- 2.12.6 Touchdown zone elevation: 409 ft

- 2.12.1 Designation: 05R
- 2.12.2 True Bearing: 45
- 2.12.3 Dimensions: 7500 ft x 150 ft
- 2.12.5 Coordinates: 35-51-52.67N / 78-47-50.42W
- 2.12.6 Threshold elevation: 397 ft
- 2.12.6 Touchdown zone elevation: 420 ft

- 2.12.1 Designation: 23L
- 2.12.2 True Bearing: 225
- 2.12.3 Dimensions: 7500 ft x 150 ft
- 2.12.5 Coordinates: 35-52-44.98N / 78-46-45.82W
- 2.12.6 Threshold elevation: 431 ft
- 2.12.6 Touchdown zone elevation: 435 ft

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 135
- 2.12.3 Dimensions: 3570 ft x 100 ft
- 2.12.5 Coordinates: 35-52-30.11N / 78-46-57.64W
- 2.12.6 Threshold elevation: 432 ft
- 2.12.6 Touchdown zone elevation: 432 ft

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 315
- 2.12.3 Dimensions: 3570 ft x 100 ft
- 2.12.5 Coordinates: 35-52-00.00N / 78-46-27.05W
- 2.12.6 Threshold elevation: 425 ft
- 2.12.6 Touchdown zone elevation: 429 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 05L
- 2.13.2 Takeoff run available: 10000
- 2.13.3 Takeoff distance available: 10000
- 2.13.4 Accelerate-stop distance available: 10000
- 2.13.5 Landing distance available: 10000

- 2.13.1 Designation: 23R
- 2.13.2 Takeoff run available: 10000
- 2.13.3 Takeoff distance available: 10000
- 2.13.4 Accelerate-stop distance available: 10000
- 2.13.5 Landing distance available: 10000

- 2.13.1 Designation: 05R

2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate–stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 23L
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate–stop distance available: 7500
2.13.5 Landing distance available: 7500

AD 2.14 Approach and runway lighting

2.14.1 Designation: 05L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 23R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 05R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 23L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 123.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: FINAL CTL
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 127.45 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: RDR
2.18.3 Service designation: 134.3 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 307.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 392.1 MHz

2.18.1 Service designation: FINAL CTL
2.18.3 Service designation: 395 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 353.675 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 353.675 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 05L. Magnetic variation: 7W
2.19.2 ILS identification: GKK
2.19.5 Coordinates: 35-53-47.52N / 78-46-27.57W
2.19.6 Site elevation: 411 ft

2.19.1 ILS type: Localizer for runway 05L. Magnetic variation: 7W
2.19.2 ILS identification: GKK
2.19.5 Coordinates: 35-53-48.07N / 78-46-28.19W
2.19.6 Site elevation: 409 ft

2.19.1 ILS type: Glide Slope for runway 05L. Magnetic variation: 7W
2.19.2 ILS identification: GKK
2.19.5 Coordinates: 35-52-37.80N / 78-48-00.00W
2.19.6 Site elevation: 366 ft

2.19.1 ILS type: Middle Marker for runway 05L. Magnetic variation: 7W
2.19.2 ILS identification: GKK
2.19.5 Coordinates: 35-52-00.00N / 78-48-41.35W
2.19.6 Site elevation: 334 ft

2.19.1 ILS type: DME for runway 23R. Magnetic variation: 9W
2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-52-19.51N /

78-48-13.82W
2.19.6 Site elevation: 370 ft

2.19.1 ILS type: Middle Marker for runway 23R. Magnetic variation: 9W
2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-53-54.73N / 78-46-19.97W
2.19.6 Site elevation: 410 ft

2.19.1 ILS type: Inner Marker for runway 23R. Magnetic variation: 9W
2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-53-43.88N / 78-46-33.36W
2.19.6 Site elevation: 402 ft

2.19.1 ILS type: Localizer for runway 23R. Magnetic variation: 9W
2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-52-21.03N / 78-48-15.70W
2.19.6 Site elevation: 359 ft

2.19.1 ILS type: Glide Slope for runway 23R. Magnetic variation: 9W
2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-53-32.48N / 78-46-54.35W
2.19.6 Site elevation: 396 ft

2.19.1 ILS type: Localizer for runway 05R. Magnetic variation: 7W
2.19.2 ILS identification: RDU
2.19.5 Coordinates: 35-52-47.95N / 78-46-42.16W
2.19.6 Site elevation: 417 ft

2.19.1 ILS type: Glide Slope for runway 05R. Magnetic variation: 7W
2.19.2 ILS identification: RDU
2.19.5 Coordinates: 35-51-57.02N / 78-47-38.17W
2.19.6 Site elevation: 400 ft

2.19.1 ILS type: Middle Marker for runway 05R. Magnetic variation: 7W
2.19.2 ILS identification: RDU
2.19.5 Coordinates: 35-51-26.40N / 78-48-22.84W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 05R.
Magnetic variation: 7W
2.19.2 ILS identification: RDU
2.19.5 Coordinates: 35-47-48.98N /
78-52-58.70W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 23L.
Magnetic variation: 7W
2.19.2 ILS identification: LEI
2.19.5 Coordinates: 35-51-48.70N /
78-47-55.32W
2.19.6 Site elevation: 365 ft

2.19.1 ILS type: Outer Marker for runway 23L.
Magnetic variation: 7W
2.19.2 ILS identification: LEI

2.19.5 Coordinates: 35-55-38.51N /
78-43-19.67W
2.19.6 Site elevation: 500 ft

2.19.1 ILS type: Middle Marker for runway 23L.
Magnetic variation: 7W
2.19.2 ILS identification: LEI
2.19.5 Coordinates: 35-53-00.00N /
78-46-24.99W
2.19.6 Site elevation: 376 ft

2.19.1 ILS type: Glide Slope for runway 23L.
Magnetic variation: 7W
2.19.2 ILS identification: LEI
2.19.5 Coordinates: 35-52-36.26N /
78-46-52.29W
2.19.6 Site elevation: 430 ft

General Remarks:

NO JET ENGINE MAINTENANCE RUNS BETWEEN 0000-0600.

NATIONAL GUARD PRIOR PERMISSION REQUIRED FOR LANDING CONTACT V582-9181
C(919)664-9181.

NATIONAL GUARD 24 HR PRIOR PERMISSION REQUIRED FOR JET AIRCRAFT & TRANSMIT
MILITARY AIRCRAFT - 919-840-2111.

FOUR ENGINE AIRCRAFT WITH WINGSPAN OVER 171 FT & GROUP V MUST USE RUNWAY
05L/23R.

NO APPROVAL REQUIRED FOR PUSHBACK AT TERMINAL GATES UNLESS AIRCRAFT
REQUIRES USE OF TAXIWAY. CONTACT ATC PRIOR TO PUSHING ONTO TAXIWAY.

PRIOR PERMISSION REQUIRED FOR ALL MILITARY AIRCRAFT F/W - R/W & UNSCHEDULED
CHARTER FLIGHTS WITH 30 OR MORE PASSENGERS. MILITARY PRACTICE APPROACHES
REQUIRE APPROVAL. 24 HOURS PRIOR NOTICE REQUIRED. CONTACT AIRPORT OPERATIONS
DSN 528-9181, C919-664-6181/ 919-840-2111.

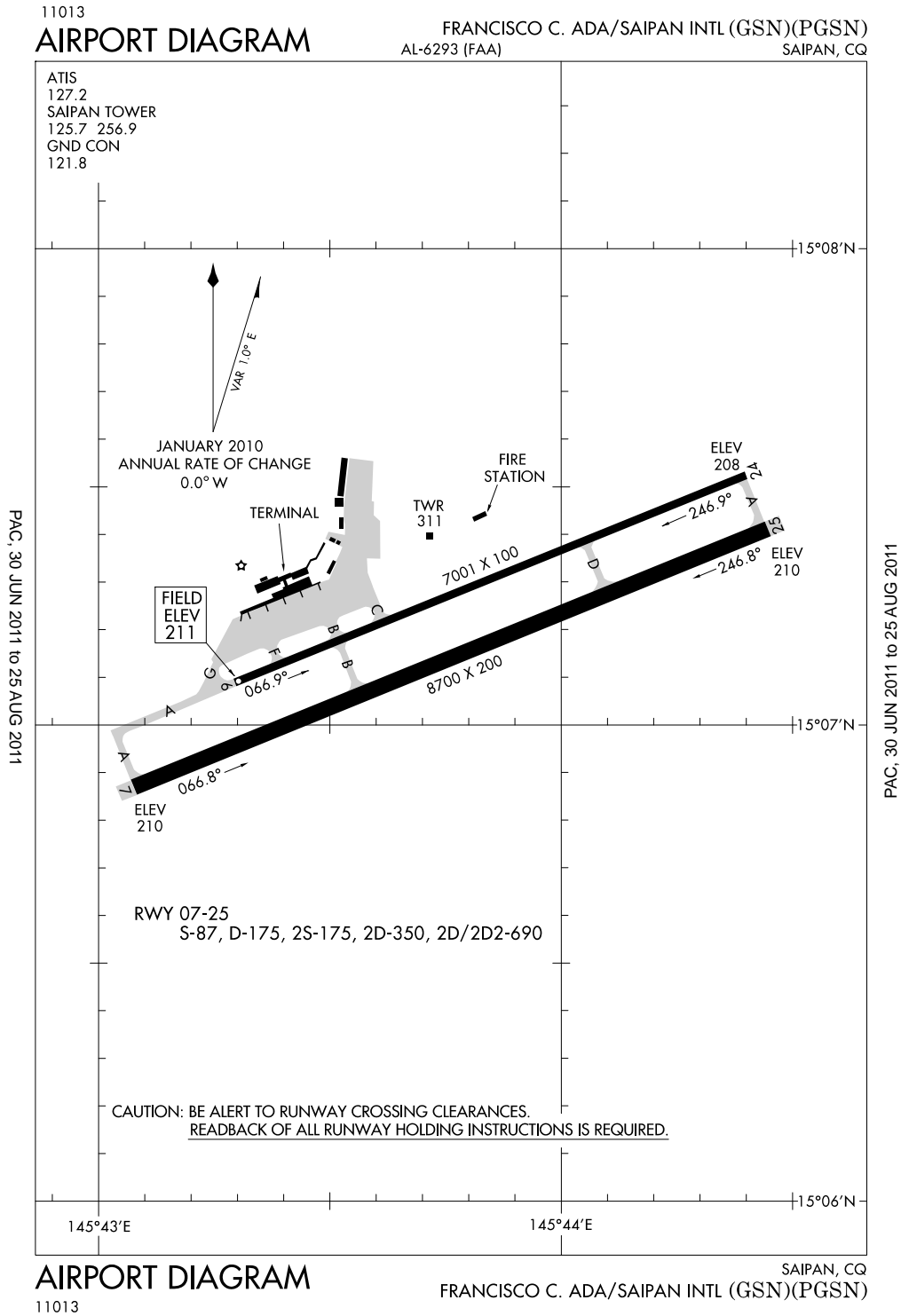
AIRPORT CLOSED TO AIRSHIPS.

TAXIWAY E BEHIND SOUTH CARGO 4 & TAXIWAY J BEHIND CORPORATE HANGARS NOT
VISIBLE FROM ATCT.

CRAN 75 FT AGL.76 NAUTICAL MILE FROM APPROACH END RUNWAY 05R.

ARRANGE: LIMITED PARK. ARRANGE OPERATIONS DSN 582-9181 C919-664-6181. RAMP
CLOSED TO ALL F/W EXCEPT ARMY & MILITARY TRANSPORT WITH PRIOR PERMISSION
REQUIRED, FACILITY HRS 1300-2130Z++ MON=FRI EXCEPT HOLIDAY. MAKE APPT FOR AFTER
DUTY HRS. NO FUEL EXCARNG FERRY AIRCRAFT. OSACOM FLIGHT DET DSN 582-9248,
C919-664-6248.

North Mariana Islands, Saipan Island
Francisco C. Ada/Saipan International
ICAO Identifier PGSN



Saipan Island, CQ
Francisco C. Ada/Saipan Intl
ICAO Identifier PGSN

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 15-07-12.92N / 145-43-47.94E
- 2.2.2 From City: 4 Miles SW Of Saipan Island, Cq
- 2.2.3 Elevation: 211 ft
- 2.2.5 Magnetic variation: 2E (1985)
- 2.2.6 Airport Contact: Edward M. Deleon Guerrero
PO BOX 501055
Saipan, MP 96950
(670-237-6500/01)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 1/1/1978
- 2.6.4 Remarks: Closed To Unscheduled Aircraft Operations With More Than 30 Passenger Seats Except Prior Permission Required Call Or Write Airport Manager
670-237-6500/670-483-1512(Cell); P.O. Box 501055 Saipan Mp 96950.

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 07
- 2.12.2 True Bearing: 68
- 2.12.3 Dimensions: 8700 ft x 200 ft
- 2.12.5 Coordinates: 15-06-52.11N / 145-43-00.00E
- 2.12.6 Threshold elevation: 210 ft
- 2.12.6 Touchdown zone elevation: 215 ft

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 248
- 2.12.3 Dimensions: 8700 ft x 200 ft
- 2.12.5 Coordinates: 15-07-24.70N /

- 145-44-26.79E
- 2.12.6 Threshold elevation: 210 ft
- 2.12.6 Touchdown zone elevation: 210 ft

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 68
- 2.12.3 Dimensions: 7001 ft x 100 ft
- 2.12.5 Coordinates: 15-07-00.00N / 145-43-17.64E
- 2.12.6 Threshold elevation: 211 ft
- 2.12.6 Touchdown zone elevation: 211 ft

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 248
- 2.12.3 Dimensions: 7001 ft x 100 ft
- 2.12.5 Coordinates: 15-07-31.57N / 145-44-23.86E
- 2.12.6 Threshold elevation: 208 ft
- 2.12.6 Touchdown zone elevation: 208 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 07
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left
- 2.14.10 Remarks: Restricted To 2.5nm & 5 Degrees Left & Right Of Runway Centerline Due To Intensity.

- 2.14.1 Designation: 25
- 2.14.4 Visual approach slope indicator system: 6-box VASI on left
- 2.14.10 Remarks: Restricted Beyond 2.5 Nm Due To Intensity.
vasi Upwind Threshold Crossing Height 105 Ft
Glide Angle 3.25; Downwind Threshold Crossing Height 60 Ft Glide Angle 3.00. Threshold Crossing Height 105 Ft Applies To VASI 6 High Angle.

- 2.14.1 Designation: 06
- 2.14.4 Visual approach slope indicator system: PVASI on left

- 2.14.1 Designation: 24
- 2.14.4 Visual approach slope indicator system: PVASI on left

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: Localizer for runway 07. Magnetic

variation: 2E
2.19.2 ILS identification: GSN
2.19.5 Coordinates: 15-07-26.58N /
145-44-31.52E
2.19.6 Site elevation: 211 ft

Magnetic variation: 2E
2.19.2 ILS identification: GSN
2.19.5 Coordinates: 15-06-58.69N /
145-43-13.05E
2.19.6 Site elevation: 208 ft

2.19.1 ILS type: DME for runway 07. Magnetic
variation: 2E
2.19.2 ILS identification: GSN
2.19.5 Coordinates: 15-07-29.14N /
145-44-30.86E
2.19.6 Site elevation: 223 ft

2.19.1 ILS type: Middle Marker for runway 07.
Magnetic variation: 2E
2.19.2 ILS identification: GSN
2.19.5 Coordinates: 15-06-41.60N /
145-42-38.10E
2.19.6 Site elevation: 86 ft

2.19.1 ILS type: Glide Slope for runway 07.

General Remarks:

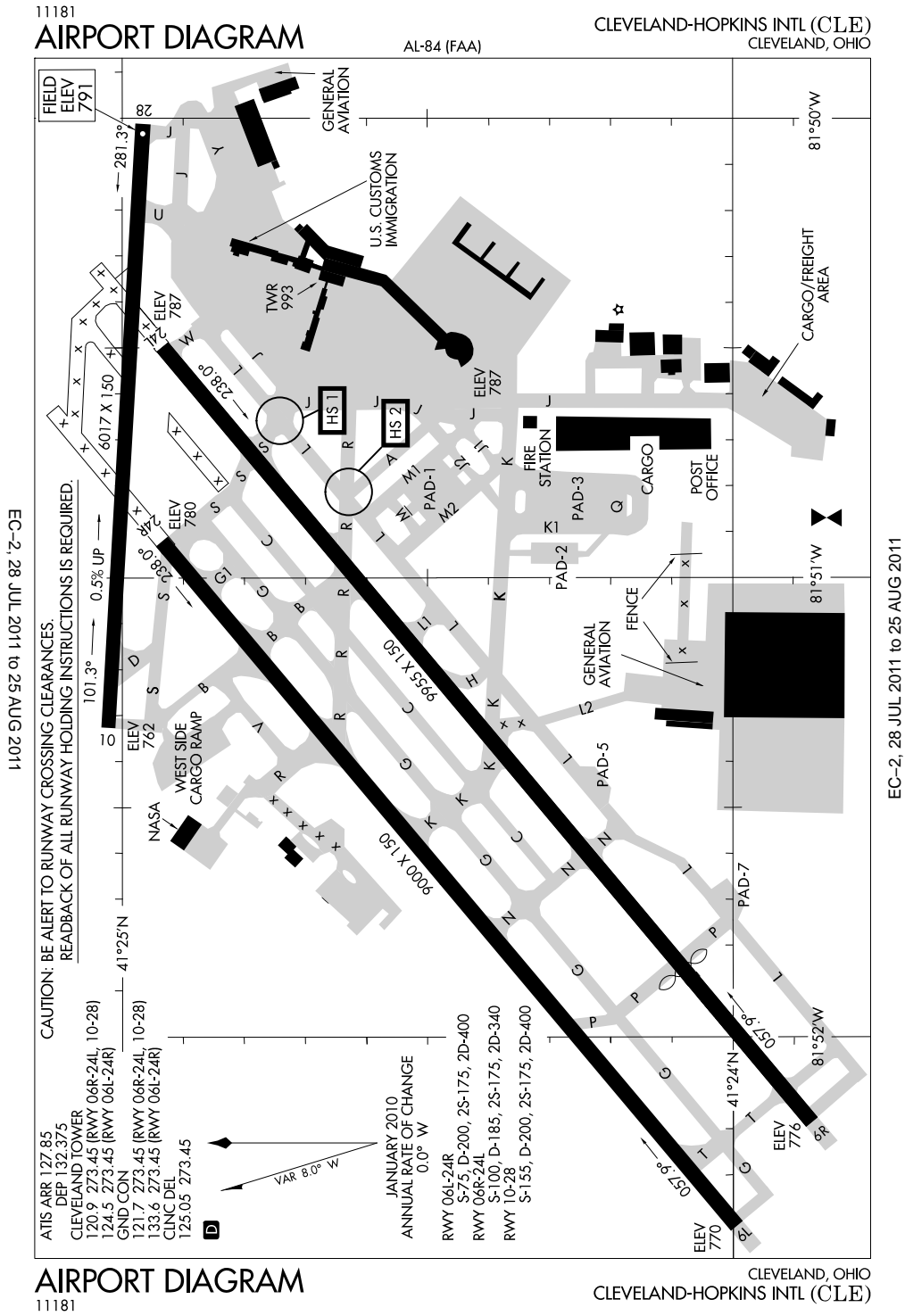
IMMIGRATION & CUSTOMS AVAILABLE DURING SCHEDULED OPERATIONS. OTHER TIMES
PRIOR ARRANGEMENTS MUST BE MADE WITH CBP PORT DIRECTOR CALL (670)288-0025/26.

FOR AIRPORT SECURITY CALL (670) 237-6529.

RUNWAY 07/25 CLOSED 1600 - 0000 AND 0500 - 1300.

RUNWAY 06/24 OPEN FOR TAXIING ONLY (NOT AVABL FOR LANDING & TKOFF) 1300 - 1600 AND
0000 - 0500 OTHER TIMES BY NOTAM.

Cleveland, Ohio
Cleveland-Hopkins International
ICAO Identifier KCLE



Cleveland, OH
Cleveland-Hopkins Intl
ICAO Identifier KCLE

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 41-24-33.90N / 81-51-17.93W
- 2.2.2 From City: 9 Miles SW Of Cleveland, OH
- 2.2.3 Elevation: 791 ft
- 2.2.5 Magnetic variation: 7W (1990)
- 2.2.6 Airport Contact: Ricky Smith
5300 RIVERSIDE DR
Cleveland, OH 44135
(216-265-6000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 06R
- 2.10.1.b Type of obstacle: Trees (80 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 370 ft from Centerline

- 2.10.1.a. Runway designation: 10
- 2.10.1.b Type of obstacle: Road (6 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Pole (25 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 630 ft from Centerline

- 2.10.1.a. Runway designation: 06L

- 2.10.1.b Type of obstacle: Trees (97 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 847 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 06R
- 2.12.2 True Bearing: 50
- 2.12.3 Dimensions: 9955 ft x 150 ft
- 2.12.5 Coordinates: 41-23-51.85N / 81-52-11.38W
- 2.12.6 Threshold elevation: 776 ft
- 2.12.6 Touchdown zone elevation: 777 ft

- 2.12.1 Designation: 24L
- 2.12.2 True Bearing: 230
- 2.12.3 Dimensions: 9955 ft x 150 ft
- 2.12.5 Coordinates: 41-24-55.14N / 81-50-31.37W
- 2.12.6 Threshold elevation: 786 ft
- 2.12.6 Touchdown zone elevation: 786 ft

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 93
- 2.12.3 Dimensions: 6017 ft x 150 ft
- 2.12.5 Coordinates: 41-25-00.00N / 81-51-19.61W
- 2.12.6 Threshold elevation: 762 ft
- 2.12.6 Touchdown zone elevation: 782 ft

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 273
- 2.12.3 Dimensions: 6017 ft x 150 ft
- 2.12.5 Coordinates: 41-24-58.01N / 81-50-00.00W
- 2.12.6 Threshold elevation: 791 ft
- 2.12.6 Touchdown zone elevation: 791 ft

- 2.12.1 Designation: 06L
- 2.12.2 True Bearing: 50
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 41-23-59.53N / 81-52-24.56W
- 2.12.6 Threshold elevation: 770 ft
- 2.12.6 Touchdown zone elevation: 772 ft

- 2.12.1 Designation: 24R
- 2.12.2 True Bearing: 230
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 41-24-56.75N / 81-50-54.14W

2.12.6 Threshold elevation: 780 ft
2.12.6 Touchdown zone elevation: 780 ft

2.12.1 Designation: 06X
2.12.3 Dimensions: 0 ft x 0 ft

2.12.1 Designation: 24X
2.12.3 Dimensions: 0 ft x 0 ft

AD 2.13 Declared distances

2.13.1 Designation: 06R
2.13.5 Landing distance available: 8029

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 24L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on right

2.14.1 Designation: 10
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 28
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on right

2.14.1 Designation: 06L
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 24R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III

configuration
2.14.4 Visual approach slope indicator system: 4–light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: CD/P PTC
2.18.3 Service designation: 125.05 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: RAMP CONTROL
2.18.3 Service designation: 129.17 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 118.15 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 128.25 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 127.85 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 132.375 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 135.225 MHz

2.18.1 Service designation: LC/P
2.18.3 Service designation: 124.5 MHz

2.18.1 Service designation: GROUND METERING
2.18.3 Service designation: 127.275 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 126.55 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 133.6 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 126.35 MHz

2.18.1 Service designation: LDA PRM RY
06L/24R
2.18.3 Service designation: 118.975 MHz

2.18.1 Service designation: LDA PRM RY
06R/24L
2.18.3 Service designation: 135.875 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 354.025 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 346.325 MHz

2.18.1 Service designation: LCL/P GND/P CD/P
2.18.3 Service designation: 273.45 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Outer Marker for runway 24L.
Magnetic variation: 7W
2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-28-00.00N /
81-43-35.83W
2.19.6 Site elevation: 736 ft

2.19.1 ILS type: Localizer for runway 24L.
Magnetic variation: 7W
2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-24-00.00N /
81-51-57.82W
2.19.6 Site elevation: 765 ft

2.19.1 ILS type: Glide Slope for runway 24L.
Magnetic variation: 7W
2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-24-52.35N /
81-50-30.48W
2.19.6 Site elevation: 782 ft

2.19.1 ILS type: Middle Marker for runway 24L.

Magnetic variation: 7W
2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-25-22.70N /
81-49-43.90W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 24L. Magnetic
variation: 7W
2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-23-44.36N /
81-52-17.92W
2.19.6 Site elevation: 772 ft

2.19.1 ILS type: Glide Slope for runway 06R.
Magnetic variation: 7W
2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-24-00.00N /
81-51-38.41W
2.19.6 Site elevation: 765 ft

2.19.1 ILS type: Inner Marker for runway 06R.
Magnetic variation: 7W
2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-23-57.23N /
81-52-00.00W
2.19.6 Site elevation: 760 ft

2.19.1 ILS type: Middle Marker for runway 06R.
Magnetic variation: 7W
2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-23-44.19N /
81-52-23.50W
2.19.6 Site elevation: 768 ft

2.19.1 ILS type: Outer Marker for runway 06R.
Magnetic variation: 7W
2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-20-19.06N /
81-57-51.96W
2.19.6 Site elevation: 800 ft

2.19.1 ILS type: DME for runway 06R. Magnetic
variation: 7W
2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-25-00.00N /
81-50-11.59W
2.19.6 Site elevation: 786 ft

2.19.1 ILS type: Localizer for runway 06R.
Magnetic variation: 7W
2.19.2 ILS identification: CLE

2.19.5 Coordinates: 41-25-00.00N /
81-50-15.50W
2.19.6 Site elevation: 786 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic
variation: 7W
2.19.2 ILS identification: PXP
2.19.5 Coordinates: 41-25-00.00N /
81-51-21.25W
2.19.6 Site elevation: 756 ft

2.19.1 ILS type: Glide Slope for runway 28.
Magnetic variation: 7W
2.19.2 ILS identification: PXP
2.19.5 Coordinates: 41-25-00.00N /
81-50-12.31W
2.19.6 Site elevation: 786 ft

2.19.1 ILS type: Outer Marker for runway 28.
Magnetic variation: 7W
2.19.2 ILS identification: PXP
2.19.5 Coordinates: 41-24-34.70N /
81-42-32.40W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 28.
Magnetic variation: 7W
2.19.2 ILS identification: PXP
2.19.5 Coordinates: 41-24-55.88N /
81-49-10.69W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 28. Magnetic
variation: 7W
2.19.2 ILS identification: PXP
2.19.5 Coordinates: 41-24-58.45N /
81-51-23.43W
2.19.6 Site elevation: 760 ft

2.19.1 ILS type: DME for runway 06L. Magnetic
variation: 7W
2.19.2 ILS identification: LIZ
2.19.5 Coordinates: 41-25-11.94N /
81-50-35.68W
2.19.6 Site elevation: 783 ft
2.19.1 ILS type: Glide Slope for runway 06L.
Magnetic variation: 7W
2.19.2 ILS identification: LIZ
2.19.5 Coordinates: 41-24-00.00N /
81-52-17.53W
2.19.6 Site elevation: 764 ft

2.19.1 ILS type: Localizer for runway 06L.
Magnetic variation: 7W
2.19.2 ILS identification: LIZ
2.19.5 Coordinates: 41-25-10.19N /
81-50-32.90W
2.19.6 Site elevation: 779 ft

2.19.1 ILS type: Inner Marker for runway 06L.
Magnetic variation: 7W
2.19.2 ILS identification: LIZ
2.19.5 Coordinates: 41-23-53.93N /
81-52-33.42W
2.19.6 Site elevation: 781 ft

2.19.1 ILS type: DME for runway 24R. Magnetic
variation: 7W
2.19.2 ILS identification: PVY
2.19.5 Coordinates: 41-25-11.94N /
81-50-35.68W
2.19.6 Site elevation: 783 ft

2.19.1 ILS type: Localizer for runway 24R.
Magnetic variation: 7W
2.19.2 ILS identification: PVY
2.19.5 Coordinates: 41-23-53.08N /
81-52-34.75W
2.19.6 Site elevation: 760 ft

2.19.1 ILS type: Glide Slope for runway 24R.
Magnetic variation: 7W
2.19.2 ILS identification: PVY
2.19.5 Coordinates: 41-24-53.01N /
81-51-00.00W
2.19.6 Site elevation: 768 ft

2.19.1 ILS type: Inner Marker for runway 24R.
Magnetic variation: 7W
2.19.2 ILS identification: PVY
2.19.5 Coordinates: 41-25-00.00N /
81-50-47.32W
2.19.6 Site elevation: 777 ft

2.19.1 ILS type: Glide Slope for runway 06X.
Magnetic variation: 7W
2.19.2 ILS identification: EYU
2.19.5 Coordinates: 41-24-00.00N /
81-51-38.26W
2.19.6 Site elevation: 765 ft

2.19.1 ILS type: DME for runway 06X. Magnetic

variation: 7W
2.19.2 ILS identification: EYU
2.19.5 Coordinates: 41-25-00.00N /
81-50-00.00W
2.19.6 Site elevation: 786 ft

2.19.1 ILS type: Localizer for runway 06X.
Magnetic variation: 7W
2.19.2 ILS identification: EYU
2.19.5 Coordinates: 41-25-00.00N /
81-50-00.00W
2.19.6 Site elevation: 786 ft

2.19.1 ILS type: DME for runway 24X. Magnetic
variation: 7W
2.19.2 ILS identification: FVZ
2.19.5 Coordinates: 41-25-00.00N /

81-50-00.00W
2.19.6 Site elevation: 786 ft

2.19.1 ILS type: Localizer for runway 24X.
Magnetic variation: 7W
2.19.2 ILS identification: FVZ
2.19.5 Coordinates: 41-23-56.45N /
81-51-51.38W
2.19.6 Site elevation: 764 ft

2.19.1 ILS type: Glide Slope for runway 24X.
Magnetic variation: 7W
2.19.2 ILS identification: FVZ
2.19.5 Coordinates: 41-24-52.26N /
81-50-30.45W
2.19.6 Site elevation: 782 ft

General Remarks:

DEER & BIRDS INCLUDING WATERFOWL ON & IN THE VICINITY OF AIRPORT.

ADVISE CUSTOMS AVAILABLE MON-FRI 0700-2100; SAT/SUN 0900-1700; ALL REQUEST FOR SERVICE MUST BE MADE WITH THE U.S. CUSTOMS SERVICE OFFICE LOCATED AT GATE A-14 CALL (216) 267-3600 DURING LISTED HOURS.

NASA GLENN RESEARCH CENTER; NASA RAMP PRIOR PERMISSION REQUIRED CALL 216-433-2020; 0800-1730 MON-FRI. CONTACT NASA OPERATIONS ON FREQ 122.925 WITHIN 50 NAUTICAL MILE.

TAXIWAY 'L2' CLOSED BETWEEN RUNWAY 06R/24L & TAXIWAY 'L'. AREA MARKED WITH LIGHTED BARRICADES & REFLECTORS.

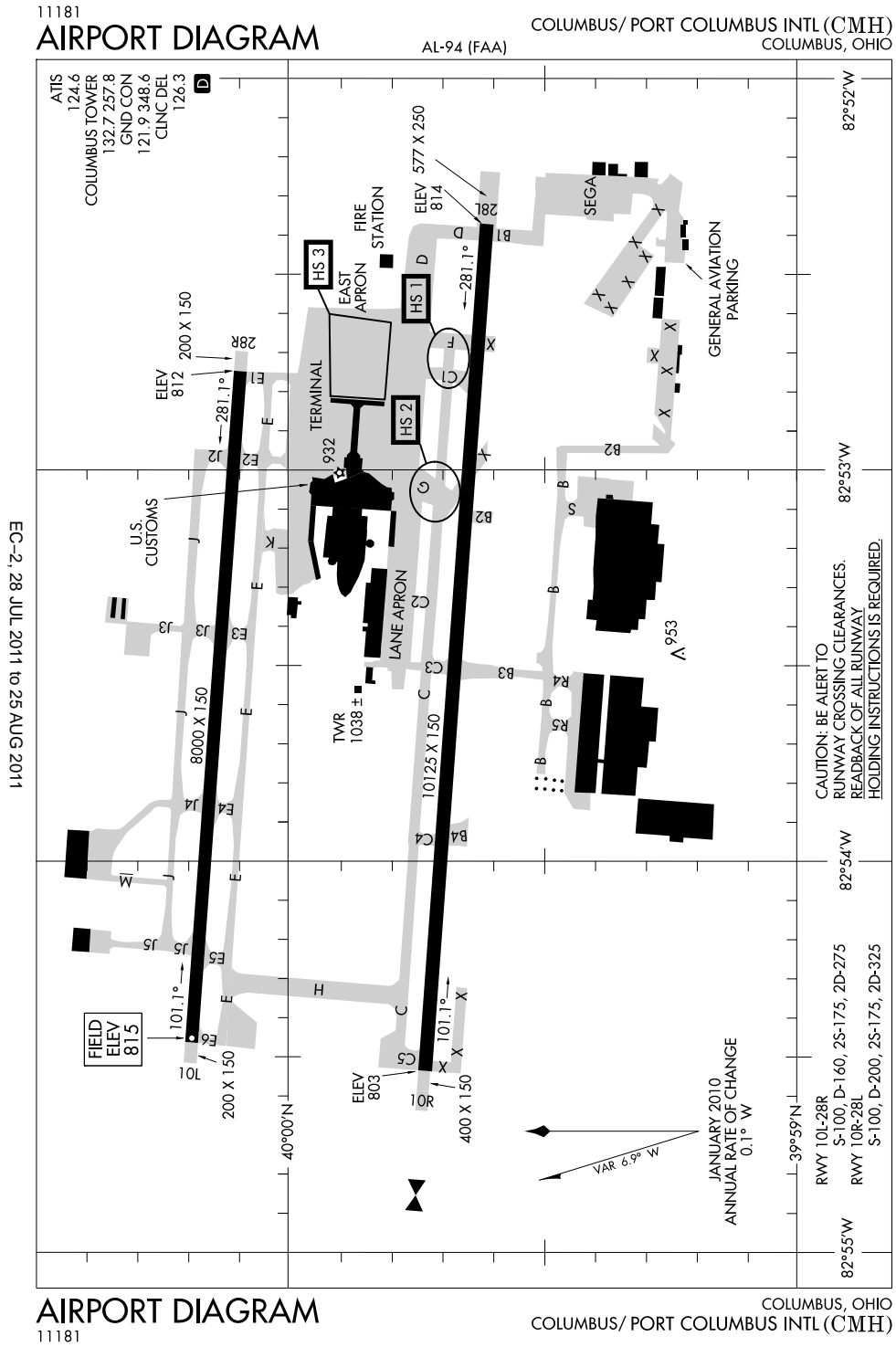
PAD 2 RESTRICTED TO GROUP II AIRCRAFT, LESS THAN 79 FT WINGSPAN.

ALL APPROACHES ARE OVER NOISE SENSITIVE AREAS. AIRPORT LATE NIGHT NOISE ABATEMENT PROCEDURES ARE IN EFFECT 2300-0600. ADDITIONAL NOISE ABATEMENT PROCEDURES ARE IN EFFECT CALL AIRPORT MANAGER NORMAL BUSINESS HRS AT 216-265-6090.

THE FOLLOWING TAXIWAYS ARE CLOSED ANNUALLY FR 15 OCT THRU 15 APR TO SUPPORT DEICING OPERATIONS AT CLE: TAXIWAY M; TAXIWAY M1 BETWEEN TAXIWAY L & TAXIWAY J1; TAXIWAY M2 BETWEEN TAXIWAY L & TAXIWAY J1; TAXIWAY J2 BETWEEN TAXIWAY A & TAXIWAY K.

RAMP AREA NORTH CONCOURSE B BETWEEN GATES D1, D28 CLOSED EXCEPT AIRCRAFT WINGSPAN LESS THAN 86 FT.

Columbus, Ohio
Port Columbus International
ICAO Identifier KCMH



Columbus, OH
Port Columbus Intl
ICAO Identifier KCMH

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-59-52.70N / 82-53-30.80W
- 2.2.2 From City: 6 Miles E Of Columbus, OH
- 2.2.3 Elevation: 815 ft
- 2.2.5 Magnetic variation: 5W (1990)
- 2.2.6 Airport Contact: Elaine Roberts, A.A.E.
COLUMBUS RGNL ARPT AUTH
Columbus, OH 43219 (614-239-4000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 94
- 2.12.3 Dimensions: 8000 ft x 150 ft
- 2.12.5 Coordinates: 40-00-11.53N / 82-54-27.49W
- 2.12.6 Threshold elevation: 815 ft
- 2.12.6 Touchdown zone elevation: 815 ft

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 274
- 2.12.3 Dimensions: 8000 ft x 150 ft
- 2.12.5 Coordinates: 40-00-00.00N / 82-52-44.97W
- 2.12.6 Threshold elevation: 812 ft
- 2.12.6 Touchdown zone elevation: 813 ft

- 2.12.1 Designation: 10R
- 2.12.2 True Bearing: 94
- 2.12.3 Dimensions: 10125 ft x 150 ft

- 2.12.5 Coordinates: 39-59-44.05N / 82-54-32.18W
- 2.12.6 Threshold elevation: 803 ft
- 2.12.6 Touchdown zone elevation: 810 ft

- 2.12.1 Designation: 28L
- 2.12.2 True Bearing: 274
- 2.12.3 Dimensions: 10125 ft x 150 ft
- 2.12.5 Coordinates: 39-59-36.71N / 82-52-22.43W
- 2.12.6 Threshold elevation: 814 ft
- 2.12.6 Touchdown zone elevation: 814 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 10L
- 2.13.2 Takeoff run available: 8000
- 2.13.3 Takeoff distance available: 8000
- 2.13.4 Accelerate-stop distance available: 8000
- 2.13.5 Landing distance available: 8000

- 2.13.1 Designation: 28R
- 2.13.2 Takeoff run available: 8000
- 2.13.3 Takeoff distance available: 8000
- 2.13.4 Accelerate-stop distance available: 8000
- 2.13.5 Landing distance available: 8000

- 2.13.1 Designation: 10R
- 2.13.2 Takeoff run available: 10125
- 2.13.3 Takeoff distance available: 10125
- 2.13.4 Accelerate-stop distance available: 10125
- 2.13.5 Landing distance available: 10125

- 2.13.1 Designation: 28L
- 2.13.2 Takeoff run available: 10125
- 2.13.3 Takeoff distance available: 10125
- 2.13.4 Accelerate-stop distance available: 10125
- 2.13.5 Landing distance available: 10125

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 10L
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 28R
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system:

4-light PAPI on right

2.14.1 Designation: 10R

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 28L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 119.65 MHz

2.18.1 Service designation: CLASS C

2.18.3 Service designation: 120.2 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 124.6 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P DEP/P IC

2.18.3 Service designation: 125.95 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 126.3 MHz

2.18.1 Service designation: CLASS C

2.18.3 Service designation: 132.3 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 132.7 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: CLASS C

2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 353.9 MHz

2.18.1 Service designation: CLASS C

2.18.3 Service designation: 317.775 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 338.225 MHz

2.18.1 Service designation: APCH/P DEP/P IC

2.18.3 Service designation: 371.975 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10L.

Magnetic variation: 5W

2.19.2 ILS identification: CBP

2.19.5 Coordinates: 40-00-00.00N / 82-52-32.03W

2.19.6 Site elevation: 799 ft

2.19.1 ILS type: Glide Slope for runway 10L.

Magnetic variation: 5W

2.19.2 ILS identification: CBP

2.19.5 Coordinates: 40-00-14.28N / 82-54-14.87W

2.19.6 Site elevation: 810 ft

2.19.1 ILS type: Outer Marker for runway 10L.

Magnetic variation: 5W

2.19.2 ILS identification: CBP

2.19.5 Coordinates: 40-00-36.46N / 83-01-44.26W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 10L.

Magnetic variation: 5W

2.19.2 ILS identification: CBP

2.19.5 Coordinates: 40-00-12.93N / 82-54-52.25W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 10L. Magnetic variation: 5W
2.19.2 ILS identification: CBP
2.19.5 Coordinates: 40-00-00.00N / 82-54-41.03W
2.19.6 Site elevation: 822 ft

2.19.1 ILS type: DME for runway 28R. Magnetic variation: 5W
2.19.2 ILS identification: ONB
2.19.5 Coordinates: 40-00-00.00N / 82-54-41.03W
2.19.6 Site elevation: 822 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic variation: 5W
2.19.2 ILS identification: ONB
2.19.5 Coordinates: 40-00-12.27N / 82-54-40.56W
2.19.6 Site elevation: 812 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic variation: 5W
2.19.2 ILS identification: ONB
2.19.5 Coordinates: 40-00-00.00N / 82-52-56.99W
2.19.6 Site elevation: 808 ft

2.19.1 ILS type: Outer Marker for runway 28R. Magnetic variation: 5W
2.19.2 ILS identification: ONB
2.19.5 Coordinates: 39-59-46.26N / 82-46-18.93W
2.19.6 Site elevation: 1040 ft

2.19.1 ILS type: Outer Marker for runway 10R. Magnetic variation: 5W
2.19.2 ILS identification: AQI
2.19.5 Coordinates: 40-00-00.00N / 83-01-45.46W
2.19.6 Site elevation: 748 ft

2.19.1 ILS type: Middle Marker for runway 10R. Magnetic variation: 5W
2.19.2 ILS identification: AQI
2.19.5 Coordinates: 39-59-46.12N / 82-55-00.00W
2.19.6 Site elevation: 812 ft

2.19.1 ILS type: DME for runway 10R. Magnetic variation: 5W

2.19.2 ILS identification: AQI
2.19.5 Coordinates: 39-59-47.82N / 82-54-46.60W
2.19.6 Site elevation: 820 ft

2.19.1 ILS type: Localizer for runway 10R. Magnetic variation: 5W
2.19.2 ILS identification: AQI
2.19.5 Coordinates: 39-59-35.98N / 82-52-00.00W
2.19.6 Site elevation: 811 ft

2.19.1 ILS type: Glide Slope for runway 10R. Magnetic variation: 5W
2.19.2 ILS identification: AQI
2.19.5 Coordinates: 39-59-39.93N / 82-54-20.65W
2.19.6 Site elevation: 805 ft

2.19.1 ILS type: DME for runway 28L. Magnetic variation: 5W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-47.82N / 82-54-46.60W
2.19.6 Site elevation: 820 ft

2.19.1 ILS type: Glide Slope for runway 28L. Magnetic variation: 5W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-41.39N / 82-52-35.19W
2.19.6 Site elevation: 812 ft

2.19.1 ILS type: Outer Marker for runway 28L. Magnetic variation: 5W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-10.25N / 82-45-15.67W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 28L. Magnetic variation: 5W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-44.78N / 82-54-45.21W
2.19.6 Site elevation: 804 ft

2.19.1 ILS type: Middle Marker for runway 28L. Magnetic variation: 5W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-34.84N /

82-51-48.16W
2.19.6 Site elevation: 787 ft

General Remarks:

MODEL AIRCRAFT TRAFFIC WITHIN A 1 NAUTICAL MILE RADIUS OF A POINT 8 NAUTICAL MILE ON A 010 DEGREE BEARING FROM THE AIRPORT; SURFACE - 5000 FT AGL; SR-SS DAILY.

BIRDS IN THE VICINITY OF AIRPORT.

C-3 PAVEMENT (NORTH OF TAXIWAY C) IS 35 FT WIDE; RESTRICTED TO AIRCRAFT 50000 LBS OR LESS WITH WINGSPAN LESS THAN 79 FT.

BE ALERT: RUNWAY 10L/28R RESTRICTIONS ON STAGE I & II TURBOJET AIRCRAFT 2200-0800 & ON STAGE III TURBOJET AIRCRAFT 2200-0700. PRACTICE APPROACHES FOR HIGH NOISE LEVEL TYPE AIRCRAFT INCLUDING NON-STAGE III MILITARY JET AIRCRAFT SHALL NOT BE APPROVED UNLESS RUNWAY 10R/28L IS IN USE & THE APPROACH TERMINATES IN A FULL STOP TAXI-BACK OPN.

ALL SURFACES AROUND TERMINAL; NORTH OF TAXIWAY 'C' & SOUTH OF TAXIWAY 'E' ARE NON-MOVEMENT AREAS.

TAXIWAY 'F' LIGHTS SOUTH OF TAXIWAY 'G' OUT OF SERVICE INDEFINITELY.

NOISE BARRIER LOCATED AT SE SIDE OF AIRFIELD RESTRICTED TO AIRCRAFT WITH WINGSPAN LESS THAN 79 FT.

PERSONNEL AND EQUIPMENT WORKING ADJACENT ALL RUNWAYS AND TAXIWAYS.

TO REQUEST LANDING RIGHTS CONTACT US CUSTOMS BETWEEN 1230-0300Z, MON-FRI AT 614-497-1865.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVAILABLE.

TAXIWAY L1 RESTRICTED TO AIRCRAFT WITH WINGSPAN LESS THAN 118 FT.

TAXIWAY L2 RESTRICTED TO AIRCRAFT WITH WINGSPAN LESS THAN 118 FT.

TAXIWAY B3 S OF TAXIWAY B RESTRICTED TO AIRCRAFT WITH WINGSPAN LESS THAN 79 FT.

TAXIWAY J2 RESTRICTED TO AIRCRAFT WITH WINGSPAN LESS THAN 120 FT.

TAXIWAY B BETWEEN TAXIWAYS B4 AND B5 RESTRICTED TO AIRCRAFT WITH WINGSPAN LESS THAN 126 FT.

TAXIWAYS F AND G, SOUTH OF TAXIWAY B, RESTRICTED TO AIRCRAFT WEIGHING 45000 LBS OR LESS.

BE ALERT: LARGE AREAS OF CONSTRUCTION S OF RUNWAY 10R/28L. S AIRFIELD ACCESS ROUTES WILL CHANGE FREQUENTLY.

Portland, OR
Portland Intl
ICAO Identifier KPDX

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 45-35-19.35N / 122-35-48.73W
- 2.2.2 From City: 4 Miles NE Of Portland, OR
- 2.2.3 Elevation: 31 ft
- 2.2.5 Magnetic variation: 20E (1980)
- 2.2.6 Airport Contact: Daren Griffin
7000 NE AIRPORT WAY
Portland, OR 97218
(503-460-4125)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 21
- 2.10.1.b Type of obstacle: Road (19 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 28R
- 2.10.1.b Type of obstacle: Road (32 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 408 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 45
- 2.12.3 Dimensions: 6000 ft x 150 ft
- 2.12.4 PCN: 34 F/A/X/T
- 2.12.5 Coordinates: 45-34-56.73N / 122-37-00.00W

- 2.12.6 Threshold elevation: 22 ft
- 2.12.6 Touchdown zone elevation: 23 ft

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 225
- 2.12.3 Dimensions: 6000 ft x 150 ft
- 2.12.4 PCN: 34 F/A/X/T
- 2.12.5 Coordinates: 45-35-38.61N / 122-36-00.00W
- 2.12.6 Threshold elevation: 26 ft
- 2.12.6 Touchdown zone elevation: 26 ft

- 2.12.1 Designation: 10R
- 2.12.2 True Bearing: 119
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.4 PCN: 63 F/A/X/T
- 2.12.5 Coordinates: 45-35-42.53N / 122-37-17.30W
- 2.12.6 Threshold elevation: 23 ft
- 2.12.6 Touchdown zone elevation: 24 ft

- 2.12.1 Designation: 28L
- 2.12.2 True Bearing: 299
- 2.12.3 Dimensions: 11000 ft x 150 ft
- 2.12.4 PCN: 63 F/A/X/T
- 2.12.5 Coordinates: 45-34-49.85N / 122-35-00.00W
- 2.12.6 Threshold elevation: 23 ft
- 2.12.6 Touchdown zone elevation: 23 ft

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 119
- 2.12.3 Dimensions: 9825 ft x 150 ft
- 2.12.4 PCN: 63 F/A/X/T
- 2.12.5 Coordinates: 45-35-47.45N / 122-36-00.00W
- 2.12.6 Threshold elevation: 30 ft
- 2.12.6 Touchdown zone elevation: 30 ft

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 299
- 2.12.3 Dimensions: 9825 ft x 150 ft
- 2.12.4 PCN: 63 F/A/X/T
- 2.12.5 Coordinates: 45-35-00.00N / 122-33-59.26W
- 2.12.6 Threshold elevation: 31 ft
- 2.12.6 Touchdown zone elevation: 31 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 03
- 2.13.2 Takeoff run available: 6000

2.13.3 Takeoff distance available: 6000
2.13.4 Accelerate-stop distance available: 6000
2.13.5 Landing distance available: 6000

2.13.1 Designation: 21
2.13.2 Takeoff run available: 6000
2.13.3 Takeoff distance available: 6000
2.13.4 Accelerate-stop distance available: 6000
2.13.5 Landing distance available: 6000

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 11000
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 11000
2.13.5 Landing distance available: 11000

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 11000
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 11000
2.13.5 Landing distance available: 11000

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 9825
2.13.3 Takeoff distance available: 9825
2.13.4 Accelerate-stop distance available: 9825
2.13.5 Landing distance available: 8535

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 9825
2.13.3 Takeoff distance available: 9825
2.13.4 Accelerate-stop distance available: 9825
2.13.5 Landing distance available: 9290

AD 2.14 Approach and runway lighting

2.14.1 Designation: 03
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 21
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 10R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 28L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 10L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 28R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: DEP/P CLASS C
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 120.125 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC DEP/S
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: APCH FINAL CTL
2.18.3 Service designation: 126.9 MHz

2.18.1 Service designation: DEP/S RDR
2.18.3 Service designation: 127.85 MHz

2.18.1 Service designation: AFR OPNS
2.18.3 Service designation: 138.45 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: AFR OPNS
2.18.3 Service designation: 252.8 MHz

2.18.1 Service designation: ANG OPNS
2.18.3 Service designation: 280.5 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: COMD POST
2.18.3 Service designation: 288.9 MHz

2.18.1 Service designation: DEP/S
2.18.3 Service designation: 290.3 MHz

2.18.1 Service designation: APCH/S RDR
2.18.3 Service designation: 294.7 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 299.2 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 123.775 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 251.125 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 132.275 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 128.35 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 269.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: ANG OPS/COMD
POST
2.18.3 Service designation: 281.2 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 21. Magnetic
variation: 20E
2.19.2 ILS identification: GPO
2.19.5 Coordinates: 45-34-52.48N /
122-37-00.00W
2.19.6 Site elevation: 33 ft

2.19.1 ILS type: Localizer for runway 21. Magnetic
variation: 20E
2.19.2 ILS identification: GPO
2.19.5 Coordinates: 45-34-54.38N /
122-37-00.00W
2.19.6 Site elevation: 16 ft

2.19.1 ILS type: Localizer for runway 10R.
Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-34-43.53N /
122-34-45.82W
2.19.6 Site elevation: 20 ft

2.19.1 ILS type: DME for runway 10R. Magnetic
variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-34-46.74N /
122-34-45.23W
2.19.6 Site elevation: 36 ft

2.19.1 ILS type: Glide Slope for runway 10R.
Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-35-33.90N /
122-37-00.00W
2.19.6 Site elevation: 16 ft

2.19.1 ILS type: Outer Marker for runway 10R.
Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-37-24.12N /
122-41-48.15W
2.19.6 Site elevation: 26 ft

2.19.1 ILS type: Middle Marker for runway 10R.
Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-35-58.13N /
122-37-57.39W
2.19.6 Site elevation: 25 ft

2.19.1 ILS type: Inner Marker for runway 10R.
Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-35-46.71N /
122-37-28.03W
2.19.6 Site elevation: 17 ft

2.19.1 ILS type: Localizer for runway 28L.
Magnetic variation: 20E
2.19.2 ILS identification: JMJ
2.19.5 Coordinates: 45-35-50.52N /
122-37-37.81W
2.19.6 Site elevation: 25 ft

2.19.1 ILS type: DME for runway 28L. Magnetic
variation: 20E
2.19.2 ILS identification: JMJ
2.19.5 Coordinates: 45-34-46.74N /
122-34-45.23W
2.19.6 Site elevation: 36 ft

2.19.1 ILS type: Glide Slope for runway 28L.
Magnetic variation: 20E
2.19.2 ILS identification: JMJ
2.19.5 Coordinates: 45-34-52.63N /
122-35-16.71W
2.19.6 Site elevation: 20 ft

2.19.1 ILS type: Localizer for runway 10L.
Magnetic variation: 20E
2.19.2 ILS identification: VDG
2.19.5 Coordinates: 45-34-55.53N /
122-33-46.85W
2.19.6 Site elevation: 29 ft

2.19.1 ILS type: DME for runway 10L. Magnetic
variation: 20E
2.19.2 ILS identification: VDG
2.19.5 Coordinates: 45-35-47.95N /

122-36-13.55W
2.19.6 Site elevation: 26 ft

2.19.1 ILS type: Glide Slope for runway 10L.
Magnetic variation: 20E
2.19.2 ILS identification: VDG
2.19.5 Coordinates: 45-35-10.93N /
122-34-16.40W
2.19.6 Site elevation: 31 ft

2.19.1 ILS type: Glide Slope for runway 28R.
Magnetic variation: 20E
2.19.2 ILS identification: IAP
2.19.5 Coordinates: 45-35-00.00N /
122-34-25.01W
2.19.6 Site elevation: 23 ft

2.19.1 ILS type: Outer Marker for runway 28R.
Magnetic variation: 20E
2.19.2 ILS identification: IAP
2.19.5 Coordinates: 45-32-28.06N /
122-27-44.78W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 28R.
Magnetic variation: 20E
2.19.2 ILS identification: IAP
2.19.5 Coordinates: 45-34-44.97N /
122-33-19.90W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 28R.
Magnetic variation: 20E
2.19.2 ILS identification: IAP
2.19.5 Coordinates: 45-35-52.30N /
122-36-12.47W
2.19.6 Site elevation: 26 ft

2.19.1 ILS type: DME for runway 28R. Magnetic
variation: 20E
2.19.2 ILS identification: IAP
2.19.5 Coordinates: 45-35-47.95N /
122-36-13.55W
2.19.6 Site elevation: 27 ft

General Remarks:

AIRPORT CLOSED TO NON-POWERED AIRCRAFT EXCEPT IN EMERGENCY.

TAXIWAY T BETWEEN EXITS B5 & B6 CLOSED TO AIRCRAFT WITH WINGSPAN OF 118 FT AND

GREATER.

MIGRATORY & WINTERING FLOCKS OF LARGE WATERFOWL ON & IN THE VICINITY OF AIRPORT. HEAVY SEAGULL ACTIVITY SEP THRU APR; EXPECT HIGH NUMBER OF BIRDS YEAR AROUND; CHECK LOCAL ADVISORIES.

NOISE ABATEMENT PROCEDURES IN EFFECT; CALL NOISE OFFICE AT 503-460-4100. RUNWAY 28L ARRIVALS ARE NOISE SENSITIVE, EXPECT APPROACH TO 28R WITH TRANSITION TO 28L.

180 DEGREE TURNS BY AIRCRAFT WEIGHING IN EXCESS OF 12500 LBS PROHIBITED ON ALL RUNWAYS & TAXIWAYS.

UNCONTROLLED TRAFFIC AT PEARSON FIELD VANCOUVER AIRMET 3 NAUTICAL MILE W OF RUNWAY 10L THRESHOLD ON EXTENDED CENTERLINE.

(E143-20) LOCALIZER ONLY.RWY 21.

(E94) WSFO/WSO/FW/RFC.

AREA OF TAXIWAY T BETWEEN M AND E3 NOT VISIBLE FROM TOWER.

TAXIWAY F BETWEEN RUNWAY 10R/28L AND TAXIWAY C CLOSED TO AIRCRAFT OVER 65,000 LBS.

TAXIWAY F CLOSED TO NON PART 139 AIRCRAFT WITH WINGSPAN GREATER THAN 194 FT.

TAXIWAY F CLOSED TO PART 139 AIRCRAFT WITH WINGSPAN GREATER THAN 108 FT.

AIRCRAFT AUTHORIZE TO UTILIZE THE NORTHWEST RAMP OR THE NORTH RAMP WILL BE TOWED TO/FROM THESE RAMPS.

AT THE WEST END ARM/DEARM AREA ON TAXIWAY C NO AIRCRAFT OF ANY TYPE MAY TAXI PAST THE ARM/DEARM AREA WHILE IT IS BEING USED.

BEARING STRENGTH: RUNWAY 03-21 ST 175, RUNWAY 10L-28R ST175, RUNWAY 10R-28L ST175.

JASU - (AM32A-60) 4(A/M32A-86) (MC-11) 1(MA-1A).

FUEL - A (AIR BP - FLIGHTCRAFT INC., C503-331-4220) J8(MIL) (NC-100LL, A)

FLUID - LHOXRB.

OIL - O-128-133-148(MIL).

MISC: FLIGHT NOTIFICATION SERVICE, ADVISE CUSTOMS, AVAILABLE.

ANG: PRIOR PERMISSION REQUIRED/OFFICIAL BUSINESS ONLY. BASE OPERATIONS OPR 1500-2300Z++ MON-FRI EXCEPT HOLIDAY.; DSN 638-4390, C503-335-4390. CONTACT BASE OPERATIONS 15 MIN PRIOR TO LANDING AND AFTER DEP ON 281.2. TRANSIENT QUARTERS NOT AVAILABLE.

TAXIWAY V CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 135 FT. AIRCRAFT WITH WINGSPAN GREATER THAN 91 FT PROHIBITED FROM TURNING WESTBOUND ONTO TAXIWAY A FROM TAXIWAY V UNLESS UNDER TOW.

ANG: SEE FLIGHT INFORMATION PUBLICATION AP/1 FOR SUPPLEMENTARY AIRPORT INFORMATION. HAZARDOUS BIRD CONDITION EXIST. PHASE 1 MAY-OCT, PHASE II NOV-APR. CURRENT BIRD WATCH CONDITIONS ARE NOT REPORTED ON AUTOMATIC TERMINAL INFORMATION SERVICE.

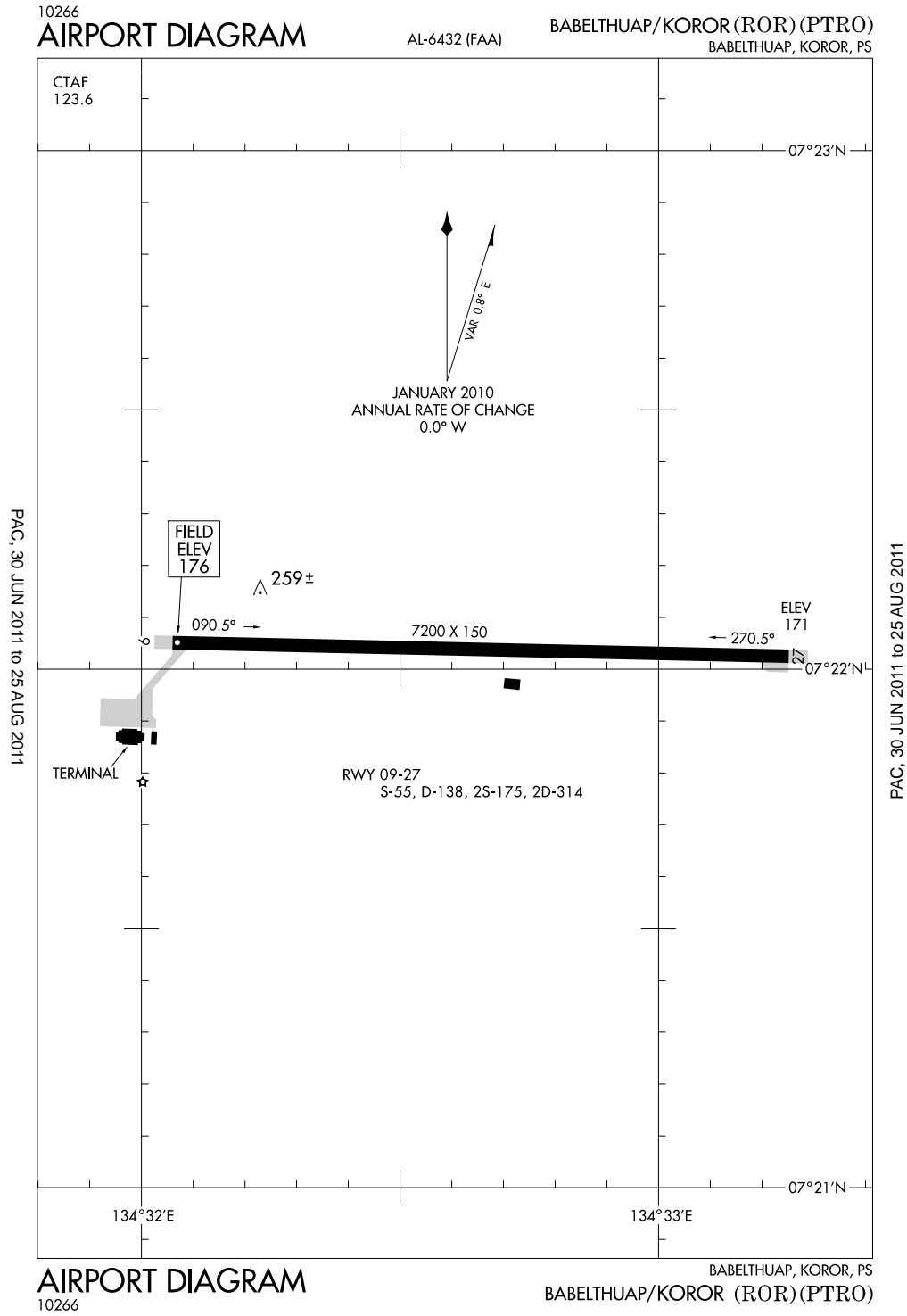
TAXIWAY W BETWEEN TAXIWAY A & THE GENERAL AVIATION RAMP CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 95 FT. AIRCRAFT WITH WINGSPAN BETWEEN 79 FT AND 95 FT MUST BE TOWED. TAXIWAY K BETWEEN THE NORTH RAMP AND THE GENERAL AVIATION RAMP CLOSED TO THROUGH TRAFFIC.

NONSTANDARD YELLOW PARK SPOT DESIGNATORS AND EQUIPMENT TOOL BOX LOCATION PAINTED ON RAMP. LOAD BEARING EDGE ON EAST RAMP NOT MRK. PLEASE CONTACT BASE OPERATIONS OR REQ FOLLOW ME IF NOT FAMILIAR WITH PANGB PARK PROCEDURES.

CONSTRUCTION ON RUNWAY 10R-28L IN PROGRESS. SEE NOTAMS FOR CURRENT INFORMATION.

EXISTING A-G WILL BE REMOVED DURING S RUNWAY REHAB ESTIMATE 01 APR - 30 APR 2011. NEW BARRIER SYS AVAILABLE APPROXIMATELY 30 NOV 2011. REVIEW LOCAL NOTAMS FOR UPDATED STATUS.

**Babelthuap Island
Babelthuap/Koror
ICAO Identifier PTRO**



Babelthuap Island, PW
Babelthuap/Koror
ICAO Identifier PTRO

2.10.1.b Type of obstacle: Trees (11 ft). Not
Lighted or Marked
2.10.1.c Location of obstacle: 75 ft from Centerline

**AD 2.2 Aerodrome geographical and
administrative data**

2.2.1 Reference Point: 07-22-00.00N /
134-32-39.40E
2.2.2 From City: 4 Miles NE Of Babelthuap Island,
Pw
2.2.3 Elevation: 176 ft
2.2.5 Magnetic variation: 1E (1990)
2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL
Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: 115,A1
2.4.4 De-icing facilities: None
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 27

AD 2.12 Runway physical characteristics

2.12.1 Designation: 09
2.12.2 True Bearing: 91
2.12.3 Dimensions: 7200 ft x 150 ft
2.12.5 Coordinates: 07-22-00.00N /
134-32-00.00E
2.12.6 Threshold elevation: 176 ft
2.12.6 Touchdown zone elevation: 176 ft

2.12.1 Designation: 27
2.12.2 True Bearing: 271
2.12.3 Dimensions: 7200 ft x 150 ft
2.12.5 Coordinates: 07-22-00.00N /
134-33-15.17E
2.12.6 Threshold elevation: 171 ft
2.12.6 Touchdown zone elevation: 176 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 27
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

General Remarks:

ALL UNSCHEDULED FLIGHTS MUST FILE A FLIGHT PLAN AT LEAST 7 DAYS PRIOR TO
ARRIVAL AND ALL FLIGHTS MUST CONTACT KOROR COMMUNICATIONS ON 123.6 AT LEAST
20 MINUTES PRIOR TO ARRIVAL.

AIRCRAFT RESCUE AND FIRE FIGHTING AVAILABLE 2 HRS PRIOR TO SCHEDULE AIRCRAFT
ARR AND UNTIL 1 HR AFTER DEP.

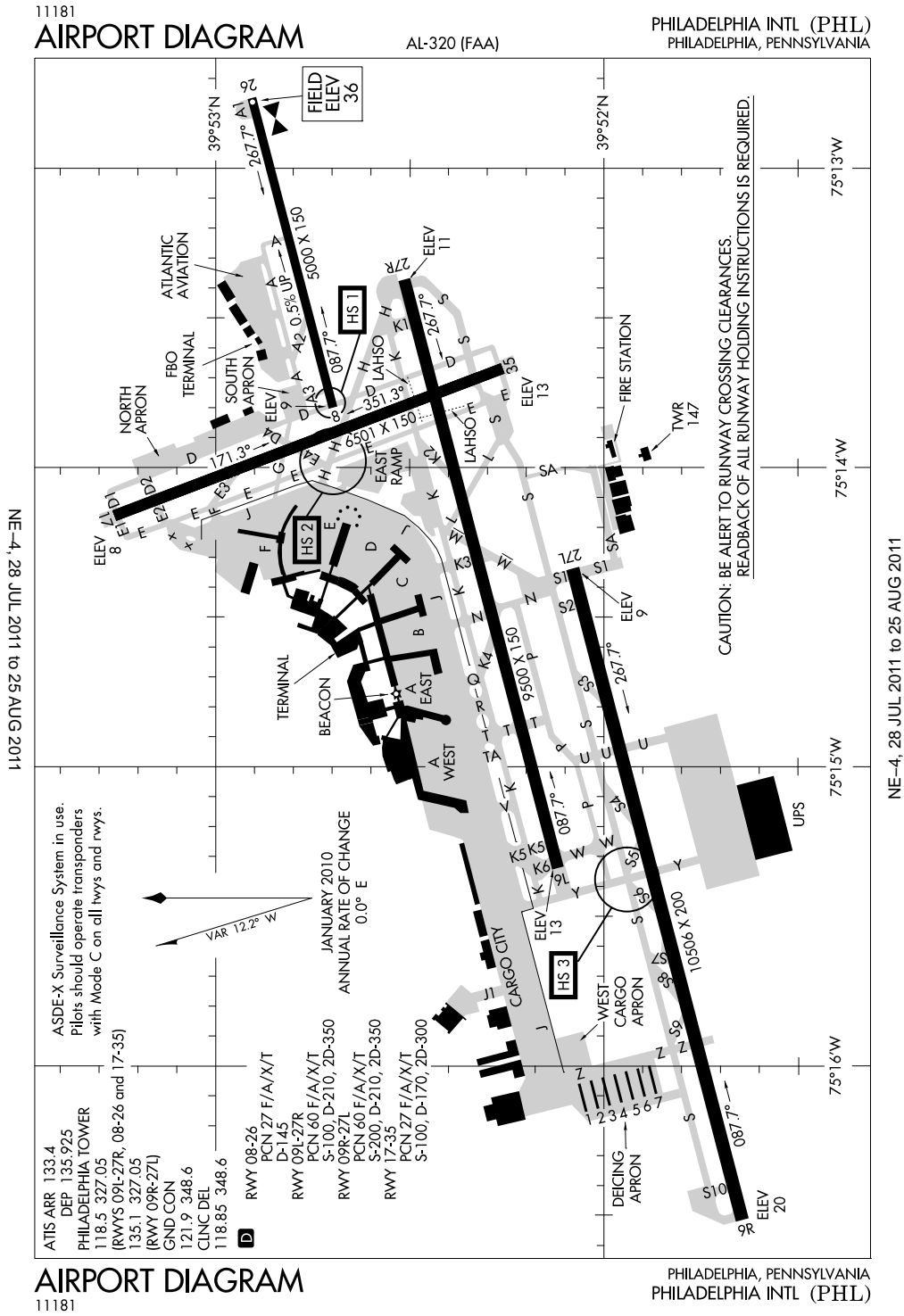
CAUTION: LARGE NUMBER OF BIRDS ON RUNWAY AT NIGHT.

ALL AIRCRAFT EXCEEDING 100000 LBS GROSS WEIGHT TAXI TO THR TURN AROUND
BEFORE TAXING TO APRON. AIRCRAFT UNDER 100000 LBS GROSS WEIGHT MAY MAKE A
TURN AROUND WHERE FEASIBLE.

ENTRY PERMIT REQUIRED CALL 011-680-488-2498 FAX 011-680-488-4385; LANDING PERMIT
REQUIRED MUST GIVE SEVEN DAYS NOTICE CALL 011-680-488-2111 FAX 011-680-488-3207.

(E94) WX STATION 5 MI FROM AIRPORT.

**Philadelphia, Pennsylvania
Philadelphia International
ICAO Identifier KPHL**



Philadelphia, PA
Philadelphia Intl
ICAO Identifier KPHL

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 39-52-20.10N / 75-14-27.12W
- 2.2.2 From City: 5 Miles SW Of Philadelphia, PA
- 2.2.3 Elevation: 36 ft
- 2.2.5 Magnetic variation: 10W (1980)
- 2.2.6 Airport Contact: Mark Gale
DIV OF AVIATION TERMINAL E
Philadelphia, PA 19153
(215-937-6914)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 09L
- 2.10.1.b Type of obstacle: Gnd (17 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 460 ft from Centerline

- 2.10.1.a. Runway designation: 27R
- 2.10.1.b Type of obstacle: Boat (189 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 09R
- 2.10.1.b Type of obstacle: Trees (11 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 360 ft from Centerline

- 2.10.1.a. Runway designation: 27L

- 2.10.1.b Type of obstacle: Boat (189 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 17
- 2.10.1.b Type of obstacle: Pole (49 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 560 ft from Centerline

- 2.10.1.a. Runway designation: 35
- 2.10.1.b Type of obstacle: Boat (189 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 08
- 2.10.1.b Type of obstacle: Bldg (190 ft). Lighted
- 2.10.1.c Location of obstacle: 200 ft from Centerline

- 2.10.1.a. Runway designation: 26
- 2.10.1.b Type of obstacle: Fence (5 ft). Lighted
- 2.10.1.c Location of obstacle: 280 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09L
- 2.12.2 True Bearing: 75
- 2.12.3 Dimensions: 9500 ft x 150 ft
- 2.12.4 PCN: 60 F/A/X/T
- 2.12.5 Coordinates: 39-52-00.00N / 75-15-20.39W
- 2.12.6 Threshold elevation: 13 ft
- 2.12.6 Touchdown zone elevation: 13 ft

- 2.12.1 Designation: 27R
- 2.12.2 True Bearing: 255
- 2.12.3 Dimensions: 9500 ft x 150 ft
- 2.12.4 PCN: 60 F/A/X/T
- 2.12.5 Coordinates: 39-52-30.79N / 75-13-22.44W
- 2.12.6 Threshold elevation: 11 ft
- 2.12.6 Touchdown zone elevation: 11 ft

- 2.12.1 Designation: 09R
- 2.12.2 True Bearing: 75
- 2.12.3 Dimensions: 10506 ft x 200 ft
- 2.12.4 PCN: 60 F/A/X/T
- 2.12.5 Coordinates: 39-51-38.92N / 75-16-30.70W
- 2.12.6 Threshold elevation: 20 ft

2.12.6 Touchdown zone elevation: 21 ft

2.12.1 Designation: 27L

2.12.2 True Bearing: 255

2.12.3 Dimensions: 10506 ft x 200 ft

2.12.4 PCN: 60 F/A/X/T

2.12.5 Coordinates: 39-52-00.00N /
75-14-20.27W

2.12.6 Threshold elevation: 9 ft

2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 17

2.12.2 True Bearing: 159

2.12.3 Dimensions: 6501 ft x 150 ft

2.12.4 PCN: 27 F/A/X/T

2.12.5 Coordinates: 39-53-15.57N /
75-14-00.00W

2.12.6 Threshold elevation: 8 ft

2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 35

2.12.2 True Bearing: 339

2.12.3 Dimensions: 6501 ft x 150 ft

2.12.4 PCN: 27 F/A/X/T

2.12.5 Coordinates: 39-52-15.57N /
75-13-40.13W

2.12.6 Threshold elevation: 13 ft

2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 08

2.12.2 True Bearing: 75

2.12.3 Dimensions: 5000 ft x 150 ft

2.12.4 PCN: 27 F/A/X/T

2.12.5 Coordinates: 39-52-42.02N /
75-13-48.04W

2.12.6 Threshold elevation: 9 ft

2.12.6 Touchdown zone elevation: 20 ft

2.12.1 Designation: 26

2.12.2 True Bearing: 256

2.12.3 Dimensions: 5000 ft x 150 ft

2.12.4 PCN: 27 F/A/X/T

2.12.5 Coordinates: 39-52-54.38N /
75-12-45.94W

2.12.6 Threshold elevation: 36 ft

2.12.6 Touchdown zone elevation: 36 ft

AD 2.13 Declared distances

2.13.1 Designation: 09L

2.13.2 Takeoff run available: 9500

2.13.3 Takeoff distance available: 9500

2.13.4 Accelerate-stop distance available: 9500

2.13.5 Landing distance available: 9500

2.13.1 Designation: 27R

2.13.2 Takeoff run available: 9500

2.13.3 Takeoff distance available: 9500

2.13.4 Accelerate-stop distance available: 9500

2.13.5 Landing distance available: 9500

2.13.1 Designation: 09R

2.13.2 Takeoff run available: 10506

2.13.3 Takeoff distance available: 10506

2.13.4 Accelerate-stop distance available: 10506

2.13.5 Landing distance available: 10506

2.13.1 Designation: 27L

2.13.2 Takeoff run available: 10506

2.13.3 Takeoff distance available: 10506

2.13.4 Accelerate-stop distance available: 10506

2.13.5 Landing distance available: 10506

2.13.1 Designation: 17

2.13.2 Takeoff run available: 6501

2.13.3 Takeoff distance available: 6501

2.13.4 Accelerate-stop distance available: 6501

2.13.5 Landing distance available: 6501

2.13.1 Designation: 35

2.13.2 Takeoff run available: 6501

2.13.3 Takeoff distance available: 6501

2.13.4 Accelerate-stop distance available: 6501

2.13.5 Landing distance available: 6501

2.13.1 Designation: 08

2.13.2 Takeoff run available: 5000

2.13.3 Takeoff distance available: 5000

2.13.4 Accelerate-stop distance available: 5000

2.13.5 Landing distance available: 5000

2.13.1 Designation: 26

2.13.2 Takeoff run available: 5000

2.13.3 Takeoff distance available: 5000

2.13.4 Accelerate-stop distance available: 5000

2.13.5 Landing distance available: 5000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:

4-light PAPI on left

2.14.1 Designation: 27R

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 09R

2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.1 Designation: 27L

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 17

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 26

2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system: 4-light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 118.35 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 118.85 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 119.75 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 119.75 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 119.75 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/S

2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 123.8 MHz

2.18.1 Service designation: APCH/P AT OR BELOW 5000 FT.

2.18.3 Service designation: 123.8 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: FINAL APCH

2.18.3 Service designation: 125.4 MHz

2.18.1 Service designation: APCH/P ABOVE 5000 FT

2.18.3 Service designation: 126.6 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 126.85 MHz

2.18.1 Service designation: APCH/P AT OR BELOW 5000 FT.

2.18.3 Service designation: 126.85 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 127.35 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 127.35 MHz

2.18.1 Service designation: APCH/P AT OR BELOW 5000 FT.

2.18.3 Service designation: 127.35 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 128.4 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 128.4 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 128.4 MHz

2.18.1 Service designation: APCH/P ABOVE 5000 FT.

2.18.3 Service designation: 128.4 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: APCH/P AT OR BLO 5000 FT.

2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: APCH/P AT OR BLO 5000 FT.

2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 269.25 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 269.25 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 269.25 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 273.575 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 273.575 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 273.575 MHz

2.18.1 Service designation: APCH/P ABOVE 5000 FT

2.18.3 Service designation: 273.575 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 291.7 MHz

2.18.1 Service designation: APCH/P AT OR BLO 5000 FT.

2.18.3 Service designation: 291.7 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: APCH/P ABOVE 5000 FT IC

2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 319.15 MHz

2.18.1 Service designation: IC

2.18.3 Service designation: 319.15 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 320.1 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 320.1 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 320.1 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 320.1 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 323.1 MHz

2.18.1 Service designation: CD/P GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 133.4 MHz

- 2.18.4 Hours of operation: 24
- 2.18.1 Service designation: D-ATIS
- 2.18.3 Service designation: 135.925 MHz
- 2.18.4 Hours of operation: 24
- 2.18.1 Service designation: ILS PRM LCL/P
- 2.18.3 Service designation: 118.5 MHz
- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.5 MHz
- 2.18.1 Service designation: ILS PRM LCL/P
- 2.18.3 Service designation: 135.1 MHz
- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 135.1 MHz
- 2.18.1 Service designation: ILS PRM LCL/P
- 2.18.3 Service designation: 327.05 MHz
- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 327.05 MHz
- 2.18.1 Service designation: ILS PRM MONITOR/P
- 2.18.3 Service designation: 123.6 MHz
- 2.18.1 Service designation: ILS PRM MONITOR/P
- 2.18.3 Service designation: 120.425 MHz
- 2.18.1 Service designation: CLASS B
- 2.18.3 Service designation: 133.875 MHz
- 2.18.1 Service designation: CLASS B
- 2.18.3 Service designation: 133.875 MHz

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: DME for runway 09L. Magnetic variation: 10W
- 2.19.2 ILS identification: VII
- 2.19.5 Coordinates: 39-52-35.47N / 75-13-11.51W
- 2.19.6 Site elevation: 20 ft
- 2.19.1 ILS type: Outer Marker for runway 09L. Magnetic variation: 10W
- 2.19.2 ILS identification: VII
- 2.19.5 Coordinates: 39-50-29.30N / 75-22-57.40W
- 2.19.6 Site elevation: 47 ft

- 2.19.1 ILS type: Middle Marker for runway 09L. Magnetic variation: 10W
- 2.19.2 ILS identification: VII
- 2.19.5 Coordinates: 39-52-00.00N / 75-15-55.00W
- 2.19.6 Site elevation: 9 ft
- 2.19.1 ILS type: Localizer for runway 09L. Magnetic variation: 10W
- 2.19.2 ILS identification: VII
- 2.19.5 Coordinates: 39-52-33.38N / 75-13-00.00W
- 2.19.6 Site elevation: 9 ft
- 2.19.1 ILS type: Glide Slope for runway 09L. Magnetic variation: 10W
- 2.19.2 ILS identification: VII
- 2.19.5 Coordinates: 39-52-00.00N / 75-15-00.00W
- 2.19.6 Site elevation: 10 ft
- 2.19.1 ILS type: DME for runway 27R. Magnetic variation: 10W
- 2.19.2 ILS identification: PDP
- 2.19.5 Coordinates: 39-52-35.46N / 75-13-11.51W
- 2.19.6 Site elevation: 22 ft
- 2.19.1 ILS type: Glide Slope for runway 27R. Magnetic variation: 10W
- 2.19.2 ILS identification: PDP
- 2.19.5 Coordinates: 39-52-24.05N / 75-13-35.81W
- 2.19.6 Site elevation: 8 ft
- 2.19.1 ILS type: Localizer for runway 27R. Magnetic variation: 10W
- 2.19.2 ILS identification: PDP
- 2.19.5 Coordinates: 39-52-00.00N / 75-15-32.93W
- 2.19.6 Site elevation: 10 ft
- 2.19.1 ILS type: Outer Marker for runway 27R. Magnetic variation: 10W
- 2.19.2 ILS identification: PDP
- 2.19.5 Coordinates: 39-54-00.00N / 75-05-41.51W
- 2.19.6 Site elevation: 99999 ft
- 2.19.1 ILS type: Middle Marker for runway 27R. Magnetic variation: 10W

2.19.2 ILS identification: PDP
2.19.5 Coordinates: 39-52-38.00N /
75-12-46.40W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 09R.
Magnetic variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-50-29.30N /
75-22-57.40W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 09R.
Magnetic variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-51-36.74N /
75-16-41.58W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 09R.
Magnetic variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-51-31.82N /
75-17-00.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 09R.
Magnetic variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-52-00.00N /
75-14-00.00W
2.19.6 Site elevation: 8 ft

2.19.1 ILS type: DME for runway 09R. Magnetic
variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-52-00.00N /
75-14-00.00W
2.19.6 Site elevation: 18 ft

2.19.1 ILS type: Glide Slope for runway 09R.
Magnetic variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-51-37.82N /
75-16-15.73W
2.19.6 Site elevation: 15 ft

2.19.1 ILS type: Localizer for runway 27L.
Magnetic variation: 10W
2.19.2 ILS identification: GLC
2.19.5 Coordinates: 39-51-36.27N /

75-16-43.95W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Glide Slope for runway 27L.
Magnetic variation: 10W
2.19.2 ILS identification: GLC
2.19.5 Coordinates: 39-51-58.71N /
75-14-31.14W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Middle Marker for runway 27L.
Magnetic variation: 10W
2.19.2 ILS identification: GLC
2.19.5 Coordinates: 39-52-12.91N /
75-13-40.55W
2.19.6 Site elevation: 21 ft

2.19.1 ILS type: DME for runway 27L. Magnetic
variation: 10W
2.19.2 ILS identification: GLC
2.19.5 Coordinates: 39-52-00.00N /
75-14-00.00W
2.19.6 Site elevation: 19 ft

2.19.1 ILS type: Outer Marker for runway 17.
Magnetic variation: 10W
2.19.2 ILS identification: MYY
2.19.5 Coordinates: 39-58-30.97N /
75-16-44.21W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 17. Magnetic
variation: 10W
2.19.2 ILS identification: MYY
2.19.5 Coordinates: 39-52-00.00N /
75-13-35.55W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Glide Slope for runway 17.
Magnetic variation: 10W
2.19.2 ILS identification: MYY
2.19.5 Coordinates: 39-53-00.00N /
75-14-00.00W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Middle Marker for runway 17.
Magnetic variation: 10W
2.19.2 ILS identification: MYY
2.19.5 Coordinates: 39-53-43.20N /
75-14-27.10W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 17. Magnetic variation: 10W

2.19.2 ILS identification: MYY

2.19.5 Coordinates: 39-52-00.00N / 75-13-39.56W

2.19.6 Site elevation: 11 ft

2.19.1 ILS type: DME for runway 26. Magnetic variation: 10W

2.19.2 ILS identification: LLH

2.19.5 Coordinates: 39-52-42.22N / 75-13-32.38W

2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Glide Slope for runway 26. Magnetic variation: 10W

2.19.2 ILS identification: LLH

2.19.5 Coordinates: 39-52-49.37N / 75-12-58.35W

2.19.6 Site elevation: 23 ft

2.19.1 ILS type: Localizer for runway 26. Magnetic variation: 10W

2.19.2 ILS identification: LLH

2.19.5 Coordinates: 39-52-42.38N / 75-13-31.83W

2.19.6 Site elevation: 8 ft

General Remarks:

BIRDS ON & IN THE VICINITY OF AIRPORT.

RUNWAYS 27L, 27R & 35 SHIP CHANNEL (DELAWARE RIVER) MAX HEIGHT OF SHIPS 189 FT.
RUNWAY 26 SHIP CHANNEL (SCHUYLKILL) MAX HEIGHT OF SHIPS 149 FT.

AIRPORT IS LOCATED IN A NOISE SENSITIVE AREA. AIRPORT NOISE ABATEMENT TAKEOFF PROCEDURES ARE TO BE USED.

TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM EQUIPPED ACFT-TCAS ALERT MAY BE CAUSED BY TRANSPONDER EQUIPPED SHIPS LOCATED PHL NAVAL BASE 3 NAUTICAL MILE E.

UNLIGHTED STACK 288 FT MSL (271 FT AGL) 2.3 NAUTICAL MILE SW OF AIRPORT.

RUNWAY 09R ROLLOUT RUNWAY VISUAL RANGE USED FOR RUNWAY 09L MIDPOINT RUNWAY VISUAL RANGE.

ALL ENGINE RUNUPS REQUIRE PRIOR PERMISSION REQUIRED FROM DUTY OPERATIONS OFFICER AT 937-6914/6800; RUNUPS 20 MIN MAXIMUM.

ALL AIRCRAFT TRAVELING ON TAXIWAY J MUST USE MINIMUM POWER WHEN TURNING SOUTH DUE TO JETBLAST CONCERNS.

TAXIWAY J BETWEEN TAXIWAYS K3 AND Q RESTRICTED TO AIRCRAFT WITH WINGSPANS 171 FT AND LESS.

ONLY NOSE-IN PARKING PERMITTED ON NORTH & EAST REMOTE APRONS. PRIOR PERMISSION REQUIRED FROM AIRPORT OPERATIONS FOR ALL AIRCRAFT PARKING ON NORTH & EAST REMOTE APRONS; CONTACT 215-937-6914/6800.

POSSIBLE UNMARKED SHIP OBSTRUCTION TRANSITING EAST OR WESTBOUND ALONG THE DELAWARE RIVER REACHING HEIGHTS OF 189' - BE ALERT WHEN APPROACHING PHL RUNWAY 35 AND WHENEVER CIRCLING OR VISUALLY APPROACHING ALL OTHER RUNWAYS.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

Pittsburgh, PA
Pittsburgh Intl
ICAO Identifier KPIT

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 40-29-29.30N / 80-13-58.30W
- 2.2.2 From City: 12 Miles NW Of Pittsburgh, PA
- 2.2.3 Elevation: 1203 ft
- 2.2.5 Magnetic variation: 8W (1995)
- 2.2.6 Airport Contact: Bradley D. Penrod
PO BOX 12370, SUITE. 4000
Pittsburgh, PA 15231
(412-472-3510)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 28C
- 2.10.1.b Type of obstacle: Trees (130 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 980 ft from Centerline

- 2.10.1.a. Runway designation: 14
- 2.10.1.b Type of obstacle: Pole (26 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 28R
- 2.10.1.b Type of obstacle: Trees (38 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 680 ft from Centerline

- 2.10.1.a. Runway designation: 10L
- 2.10.1.b Type of obstacle: Trees (55 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline

- 2.10.1.a. Runway designation: 10R
- 2.10.1.b Type of obstacle: Trees (166 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 700 ft from Centerline

- 2.10.1.a. Runway designation: 28L
- 2.10.1.b Type of obstacle: Trees (78 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 680 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 10C
- 2.12.2 True Bearing: 92
- 2.12.3 Dimensions: 9708 ft x 150 ft
- 2.12.4 PCN: 47 R/B/X/T
- 2.12.5 Coordinates: 40-29-23.54N / 80-14-46.54W
- 2.12.6 Threshold elevation: 1141 ft
- 2.12.6 Touchdown zone elevation: 1141 ft

- 2.12.1 Designation: 28C
- 2.12.2 True Bearing: 272
- 2.12.3 Dimensions: 9708 ft x 150 ft
- 2.12.4 PCN: 47 R/B/X/T
- 2.12.5 Coordinates: 40-29-20.25N / 80-12-40.96W
- 2.12.6 Threshold elevation: 1134 ft
- 2.12.6 Touchdown zone elevation: 1134 ft

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 136
- 2.12.3 Dimensions: 8101 ft x 150 ft
- 2.12.4 PCN: 48 R/B/X/T
- 2.12.5 Coordinates: 40-29-45.65N / 80-13-29.52W
- 2.12.6 Threshold elevation: 1148 ft
- 2.12.6 Touchdown zone elevation: 1148 ft
- 2.12.7 Slope: 0.5DOWN

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 316
- 2.12.3 Dimensions: 8101 ft x 150 ft
- 2.12.4 PCN: 48 R/B/X/T

2.12.5 Coordinates: 40-28-47.69N /
80-12-17.22W
2.12.6 Threshold elevation: 1114 ft
2.12.6 Touchdown zone elevation: 1123 ft
2.12.7 Slope: 0.3UP

2.12.1 Designation: 10L
2.12.2 True Bearing: 92
2.12.3 Dimensions: 10502 ft x 150 ft
2.12.4 PCN: 49 R/B/X/T
2.12.5 Coordinates: 40-30-00.00N /
80-16-16.26W
2.12.6 Threshold elevation: 1203 ft
2.12.6 Touchdown zone elevation: 1203 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 272
2.12.3 Dimensions: 10502 ft x 150 ft
2.12.4 PCN: 49 R/B/X/T
2.12.5 Coordinates: 40-30-00.00N /
80-14-00.00W
2.12.6 Threshold elevation: 1174 ft
2.12.6 Touchdown zone elevation: 1174 ft
2.12.7 Slope: 0.3UP

2.12.1 Designation: 10R
2.12.2 True Bearing: 92
2.12.3 Dimensions: 11500 ft x 200 ft
2.12.4 PCN: 48 R/B/X/T
2.12.5 Coordinates: 40-29-12.22N /
80-15-00.00W
2.12.6 Threshold elevation: 1135 ft
2.12.6 Touchdown zone elevation: 1135 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 272
2.12.3 Dimensions: 11500 ft x 200 ft
2.12.4 PCN: 48 R/B/X/T
2.12.5 Coordinates: 40-29-00.00N /
80-12-38.13W
2.12.6 Threshold elevation: 1122 ft
2.12.6 Touchdown zone elevation: 1125 ft
2.12.7 Slope: 0.3UP

2.12.1 Designation: H1
2.12.3 Dimensions: 60 ft x 60 ft

AD 2.13 Declared distances

2.13.1 Designation: 10C
2.13.2 Takeoff run available: 9708
2.13.3 Takeoff distance available: 9708

2.13.4 Accelerate-stop distance available: 9708
2.13.5 Landing distance available: 9708

2.13.1 Designation: 28C
2.13.2 Takeoff run available: 9708
2.13.3 Takeoff distance available: 9708
2.13.4 Accelerate-stop distance available: 9708
2.13.5 Landing distance available: 9708

2.13.1 Designation: 14
2.13.2 Takeoff run available: 8101
2.13.3 Takeoff distance available: 8101
2.13.4 Accelerate-stop distance available: 7366
2.13.5 Landing distance available: 7366

2.13.1 Designation: 32
2.13.2 Takeoff run available: 8101
2.13.3 Takeoff distance available: 8101
2.13.4 Accelerate-stop distance available: 7801
2.13.5 Landing distance available: 7466

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10502
2.13.5 Landing distance available: 10502

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10102
2.13.5 Landing distance available: 10102

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10C
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 28C

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 14

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 32

2.14.2 Approach lighting system: MALS: 1400 feet
medium intensity approach lighting system

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 10L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.10 Remarks: ALSF2/SSALR Is A Dual Mode
System & Controlled By ATCt & Remote
Monitored.

2.14.1 Designation: 28R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 10R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 28L

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

**AD 2.18 Air traffic services communication
facilities**

2.18.1 Service designation: LCL/P IC

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 119.35 MHz

2.18.1 Service designation: APCH/P CLASS B

2.18.3 Service designation: 121.25 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/P CLASS B IC

2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: APCH/P CLASS B

2.18.3 Service designation: 124.15 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 124.75 MHz

2.18.1 Service designation: CD/P PRE TAXI
CLNC

2.18.3 Service designation: 126.75 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 127.8 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 135.025 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 270.325 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: CP

2.18.3 Service designation: 252.1 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 291.7 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 338.2 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 353.7 MHz

2.18.1 Service designation: OPS
2.18.3 Service designation: 36.35 MHz

2.18.1 Service designation: APCH/P CLASS B
2.18.3 Service designation: 360.8 MHz

2.18.1 Service designation: APCH/P CLASS B
2.18.3 Service designation: 279.625 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 285.575 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 336.2 MHz

2.18.1 Service designation: ANG-OPS
2.18.3 Service designation: 311 MHz

2.18.1 Service designation: DEP/S
2.18.3 Service designation: 125.275 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 127.25 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P CLASS B
2.18.3 Service designation: 133.7 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10C.
Magnetic variation: 8W
2.19.2 ILS identification: BGY
2.19.5 Coordinates: 40-29-19.91N /
80-12-28.02W
2.19.6 Site elevation: 1136 ft

2.19.1 ILS type: Glide Slope for runway 10C.
Magnetic variation: 8W
2.19.2 ILS identification: BGY
2.19.5 Coordinates: 40-29-19.33N /
80-14-32.79W
2.19.6 Site elevation: 1134 ft

2.19.1 ILS type: Localizer for runway 28C.

Magnetic variation: 8W
2.19.2 ILS identification: XXX
2.19.5 Coordinates: 40-29-23.76N /
80-14-54.62W
2.19.6 Site elevation: 1136 ft

2.19.1 ILS type: Glide Slope for runway 28C.
Magnetic variation: 8W
2.19.2 ILS identification: XXX
2.19.5 Coordinates: 40-29-25.79N /
80-12-54.47W
2.19.6 Site elevation: 1131 ft

2.19.1 ILS type: Localizer for runway 32. Magnetic
variation: 8W
2.19.2 ILS identification: TQW
2.19.5 Coordinates: 40-29-50.41N /
80-13-35.46W
2.19.6 Site elevation: 1139 ft

2.19.1 ILS type: Glide Slope for runway 32.
Magnetic variation: 8W
2.19.2 ILS identification: TQW
2.19.5 Coordinates: 40-28-52.66N /
80-12-29.14W
2.19.6 Site elevation: 1112 ft

2.19.1 ILS type: Middle Marker for runway 32.
Magnetic variation: 8W
2.19.2 ILS identification: TQW
2.19.5 Coordinates: 40-28-25.30N /
80-11-49.10W
2.19.6 Site elevation: 1100 ft

2.19.1 ILS type: Outer Marker for runway 32.
Magnetic variation: 8W
2.19.2 ILS identification: TQW
2.19.5 Coordinates: 40-25-53.20N /
80-08-44.60W
2.19.6 Site elevation: 1180 ft

2.19.1 ILS type: Glide Slope for runway 28R.
Magnetic variation: 8W
2.19.2 ILS identification: HFE
2.19.5 Coordinates: 40-30-00.00N /
80-14-14.60W
2.19.6 Site elevation: 1166 ft

2.19.1 ILS type: Outer Marker for runway 28R.
Magnetic variation: 8W
2.19.2 ILS identification: HFE

2.19.5 Coordinates: 40-29-58.85N /
80-07-00.00W

2.19.6 Site elevation: 938 ft

2.19.1 ILS type: Localizer for runway 28R.
Magnetic variation: 8W

2.19.2 ILS identification: HFE

2.19.5 Coordinates: 40-30-00.00N /
80-16-31.33W

2.19.6 Site elevation: 1214 ft

2.19.1 ILS type: Middle Marker for runway 28R.
Magnetic variation: 8W

2.19.2 ILS identification: HFE

2.19.5 Coordinates: 40-30-00.00N /
80-13-26.81W

2.19.6 Site elevation: 1164 ft

2.19.1 ILS type: Glide Slope for runway 10L.
Magnetic variation: 8W

2.19.2 ILS identification: LXB

2.19.5 Coordinates: 40-30-11.93N /
80-15-59.90W

2.19.6 Site elevation: 1200 ft

2.19.1 ILS type: Inner Marker for runway 10L.
Magnetic variation: 8W

2.19.2 ILS identification: LXB

2.19.5 Coordinates: 40-30-00.00N /
80-16-27.00W

2.19.6 Site elevation: 1172 ft

2.19.1 ILS type: Outer Marker for runway 10L.
Magnetic variation: 8W

2.19.2 ILS identification: LXB

2.19.5 Coordinates: 40-30-17.54N /
80-21-59.03W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 10L.
Magnetic variation: 8W

2.19.2 ILS identification: LXB

2.19.5 Coordinates: 40-30-00.00N /
80-16-48.80W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 10L.
Magnetic variation: 8W

2.19.2 ILS identification: LXB

2.19.5 Coordinates: 40-30-00.00N /
80-13-47.19W

2.19.6 Site elevation: 1170 ft

2.19.1 ILS type: Glide Slope for runway 10R.
Magnetic variation: 8W

2.19.2 ILS identification: GUT

2.19.5 Coordinates: 40-29-15.34N /
80-14-53.77W

2.19.6 Site elevation: 1130 ft

2.19.1 ILS type: Outer Marker for runway 10R.
Magnetic variation: 8W

2.19.2 ILS identification: GUT

2.19.5 Coordinates: 40-29-14.90N /
80-22-13.90W

2.19.6 Site elevation: 1081 ft

2.19.1 ILS type: Middle Marker for runway 10R.
Magnetic variation: 8W

2.19.2 ILS identification: GUT

2.19.5 Coordinates: 40-29-13.15N /
80-15-42.43W

2.19.6 Site elevation: 1155 ft

2.19.1 ILS type: Localizer for runway 10R.
Magnetic variation: 8W

2.19.2 ILS identification: GUT

2.19.5 Coordinates: 40-29-00.00N /
80-12-34.12W

2.19.6 Site elevation: 1117 ft

2.19.1 ILS type: Inner Marker for runway 10R.
Magnetic variation: 8W

2.19.2 ILS identification: GUT

2.19.5 Coordinates: 40-29-12.54N /
80-15-18.88W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 28L.
Magnetic variation: 8W

2.19.2 ILS identification: PFS

2.19.5 Coordinates: 40-29-12.64N /
80-15-23.03W

2.19.6 Site elevation: 1141 ft

2.19.1 ILS type: Middle Marker for runway 28L.
Magnetic variation: 8W

2.19.2 ILS identification: PFS

2.19.5 Coordinates: 40-29-00.00N /
80-12-00.00W

2.19.6 Site elevation: 1069 ft

2.19.1 ILS type: Glide Slope for runway 28L.
Magnetic variation: 8W
2.19.2 ILS identification: PFS
2.19.5 Coordinates: 40-29-00.00N /
80-12-51.24W
2.19.6 Site elevation: 1118 ft

2.19.1 ILS type: Outer Marker for runway 28L.
Magnetic variation: 8W
2.19.2 ILS identification: PFS
2.19.5 Coordinates: 40-29-00.00N /
80-06-00.00W
2.19.6 Site elevation: 1043 ft

General Remarks:

DEER & BIRDS ON & IN THE VICINITY OF AIRPORT.

ALL JETS DEPARTING RUNWAY 28R MUST BE ALIGNED WITHIN RUNWAY PRIOR TO APPLYING TAKE-OFF POWER.

AIRCRAFT USING TAXIWAY 'N' PROHIBITED TO STOP ON OVERPASS AREA DUE TO POSSIBLE EMERGENCY EVACUATION HAZARD.

ANG AIRCRAFT MUST CONTACT TANKER 303.0/FTR OPERATIONS 293.7 BEFORE CROSSING RUNWAY 28L TO OBTAIN CLEARANCE TO ENTER.

TERMINAL TAXILANES E OF CONCOURSES A & B RESTRD TO GROUP 3 AIRCRAFT & SMALLER.

RUNWAY 10C & 28C DEPARTURES: DO NOT APPLY TAKEOFF THRUST PRIOR TO RUNWAY THRESHOLD.

TERMINAL APRON CONTROL FREQS ARE 130.77 FOR NORTH APRON; 131.37 FOR SOUTH APRON.

ATCT IS AUTHORIZED TO HAVE AIRCRAFT LINE-UP & WAIT ON RUNWAYS 28L AT TAXIWAY 'P' DURING HRS OF DARKNESS. THE SPECIFIC RUNWAY SHALL BE USED ONLY FOR DEPARTURES & THE INTERSECTION MUST BE VISIBLE FROM ATCT.

TAXIWAY F CLOSED INDEFINITELY FROM TAXIWAY P TO RUNWAY 32.

SERVICE-JASU: (ANG) (A/M32A-86) (AM 32-95; (AFRC - 2(A/M32-86 (AM32-95).

SERVICE-FLUID: LPOX L/H NIT.

SERVICE-OIL: O-156.

SERVICE-TRAN ALERT: NO PRIORITY BASIS.

TAXIWAY "Y" CLOSED INDEFINITE; ACCESS TO COMMUTER APRON AVAILABLE BY WAY OF TAXIWAY "Y1" AND "Y2".

AFRC: CALL PITT COMMAND POST PRIOR TO ENTRY TO S RAMP, MAIN RAMP.

ANG: OPR 1130-2030Z++ MON-FRI EXCEPT HOLIDAY (CLOSED EVERY OTH MON).

ANG: OPR 1130-2030Z++MON-FRI EXCEPT HOLIDAY. CLOSED EVERY OTHER MON. OFFICIAL

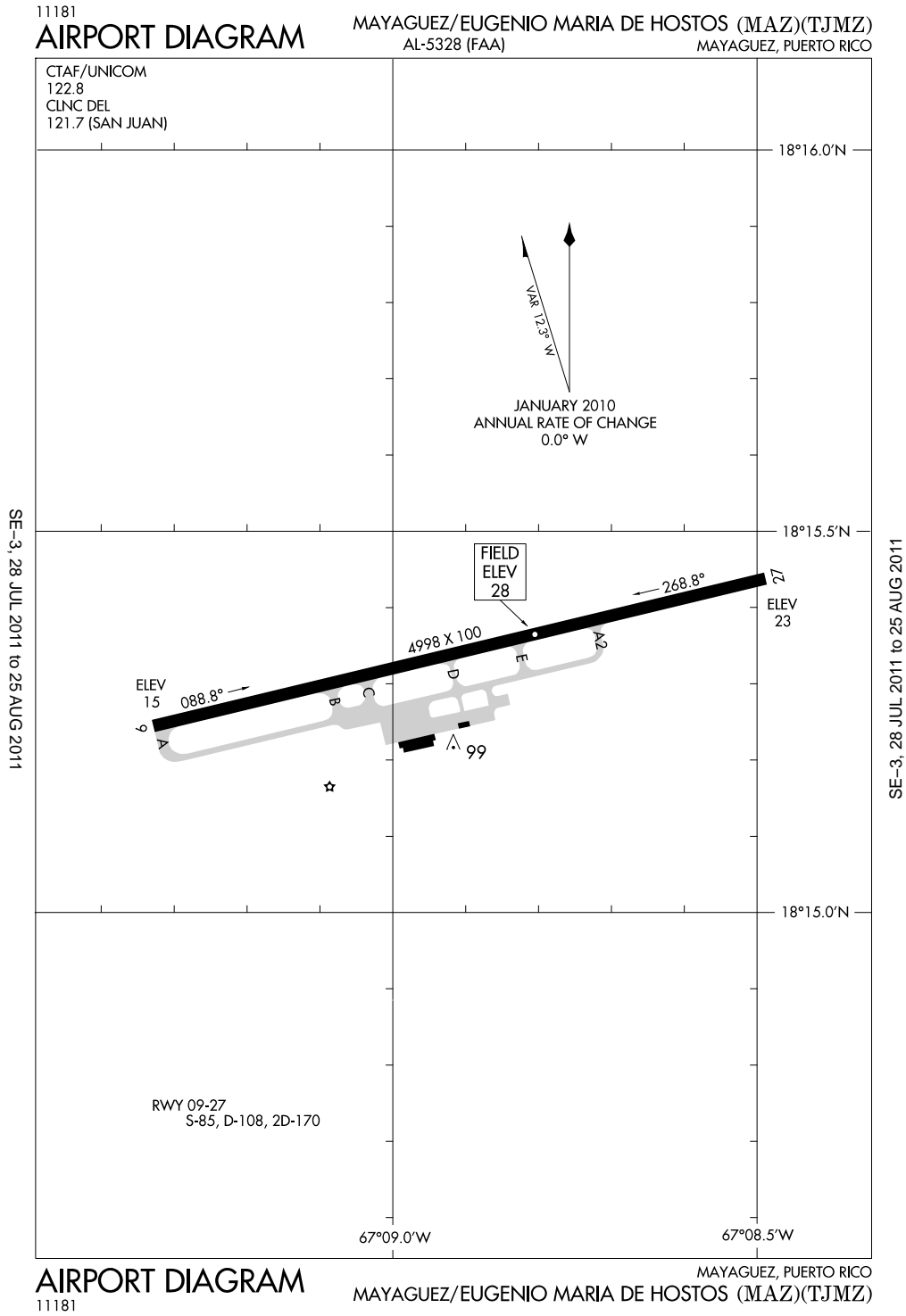
BUSINESS ONLY. PRIOR PERMISSION REQUIRED 48 HR PRIOR NOTICE REQUIRE. CALL DSN 294-7374/7260, C412-776-7374/7260.

AFRC: MIN 48HR PRIOR NOTICE REQUIRE FOR C5, C141 DUE TO LIMITED PARKING, LIGHT, AND SERVICE. NO TRANSIENT SERVICE. TRANSIENT AIRCRAFT CALL FBO AVIATION CENTER C412-472-6700. NORMAL DUTY HR 1330-0400Z++ EXCEPT HOLIDAY. UNIT TRAINING ASSEMBLY 1300-2100Z++ SAT. AND SUN.

PERSONNEL AND EQUIPMENT WORKING ADJACENT ALL RUNWAYS.

TAXIWAY G INTERSECTION AT RUNWAY 10L/28R RIGHT TURN NOT AUTHORIZED.

Mayaguez, Puerto Rico Eugenio Maria De Hostos ICAO Identifier TJMZ



Mayaguez, PR
Eugenio Maria De Hostos
ICAO Identifier TJMZ

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 18-15-20.50N / 67-08-54.50W
- 2.2.2 From City: 3 Miles N Of Mayaguez, PR
- 2.2.3 Elevation: 28 ft
- 2.2.5 Magnetic variation: 10W (1985)
- 2.2.6 Airport Contact: Lelis Suarez
BOX 710
Mayaguez, PR 709
(787-832-3390)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, 1030-0230 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: None
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: None
- 2.6.4 Remarks: No ARFF Services Provided To Unscheduled Aircraft 0 Operations With More Than 30 Passenger Seats 2300-0600 Except 24 Hr Prior Permission Required; Call Airport Manager 787-832-3390 Or 787-833-0148.

General Remarks:

1200' TOWER /1207' MSL/ 9 NAUTICAL MILE NNW.

BIRDS ON AND IN THE VICINITY OF RUNWAY CAUTION ADVISED UNTIL FURTHER NOTICE.

CRANE 70 FT AGL SOUTH APPROACH END RUNWAY 9.

AVIATION GASOLINE UNAVAILABLE.

PERSONNEL AND EQUIPMENT WORKING RUNWAY 09/27 1100-2100Z DAILY.

AD 2.10 Aerodrome obstacles

- 2.10.1.a Runway designation: 09
- 2.10.1.b Type of obstacle: Poles (44 ft). Lighted
- 2.10.1.c Location of obstacle: 75 ft from Centerline

- 2.10.1.a Runway designation: 27
- 2.10.1.b Type of obstacle: Trees (65 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 450 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 76
- 2.12.3 Dimensions: 4998 ft x 100 ft
- 2.12.5 Coordinates: 18-15-14.68N / 67-09-19.73W
- 2.12.6 Threshold elevation: 15 ft
- 2.12.6 Touchdown zone elevation: 28 ft

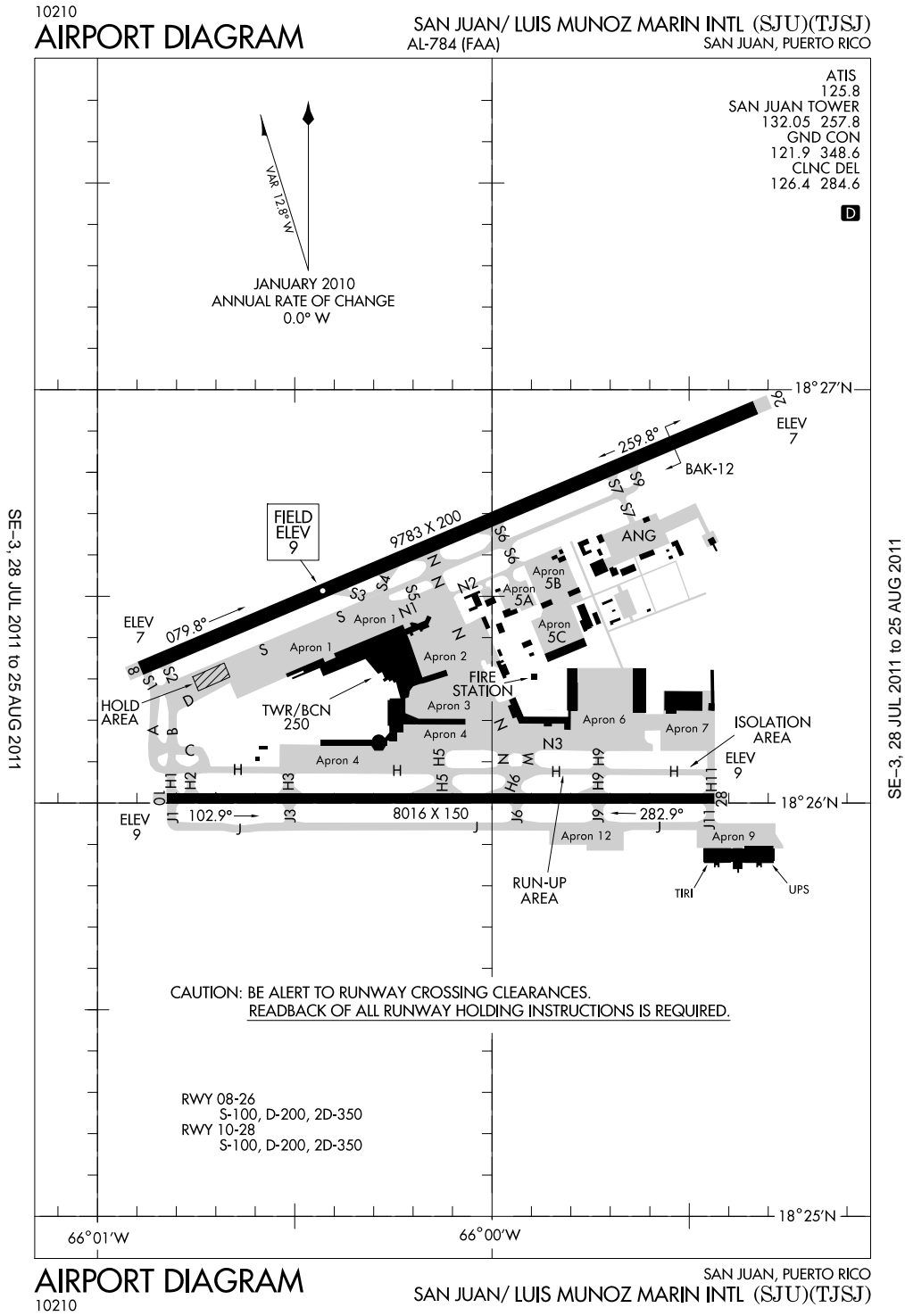
- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 256
- 2.12.3 Dimensions: 4998 ft x 100 ft
- 2.12.5 Coordinates: 18-15-26.25N / 67-08-29.30W
- 2.12.6 Threshold elevation: 23 ft
- 2.12.6 Touchdown zone elevation: 28 ft

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 09
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 27
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

San Juan, Puerto Rico
Luis Munoz Marin International
ICAO Identifier TJSJ



San Juan, PR
Luis Munoz Marin Intl
ICAO Identifier TJSJ

Lighted or Marked
2.10.1.c Location of obstacle: 800 ft from
Centerline

**AD 2.2 Aerodrome geographical and
administrative data**

- 2.2.1 Reference Point: 18-26-21.46N /
66-00-00.00W
- 2.2.2 From City: 3 Miles SE Of San Juan, PR
- 2.2.3 Elevation: 9 ft
- 2.2.5 Magnetic variation: 11W (1985)
- 2.2.6 Airport Contact: Arnaldo Deleo
GPO BOX 362829
San Juan, PR 936
(787-791-3840)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL
Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,115,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF
Index I D certified on 5/1/2005

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 10
- 2.10.1.b Type of obstacle: Tree (50 ft). Not
Lighted or Marked
- 2.10.1.c Location of obstacle: 300 ft from
Centerline

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Trees (24 ft). Not
Lighted or Marked

- 2.10.1.a. Runway designation: 08
- 2.10.1.b Type of obstacle: Tree (59 ft). Not
Lighted or Marked
- 2.10.1.c Location of obstacle: 300 ft from
Centerline

- 2.10.1.a. Runway designation: 26
- 2.10.1.b Type of obstacle: Tree (72 ft). Not

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 8016 ft x 150 ft
- 2.12.5 Coordinates: 18-26-00.00N /
66-00-49.42W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 8016 ft x 150 ft
- 2.12.5 Coordinates: 18-26-00.00N /
65-59-26.16W
- 2.12.6 Threshold elevation: 9 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 67
- 2.12.3 Dimensions: 9783 ft x 200 ft
- 2.12.5 Coordinates: 18-26-19.50N /
66-00-53.50W
- 2.12.6 Threshold elevation: 7 ft
- 2.12.6 Touchdown zone elevation: 9 ft

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 247
- 2.12.3 Dimensions: 9783 ft x 200 ft
- 2.12.5 Coordinates: 18-26-57.42N /
65-59-19.98W
- 2.12.6 Threshold elevation: 7 ft
- 2.12.6 Touchdown zone elevation: 7 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 10
- 2.13.2 Takeoff run available: 8016
- 2.13.3 Takeoff distance available: 8016
- 2.13.4 Accelerate-stop distance available: 8016
- 2.13.5 Landing distance available: 8016

- 2.13.1 Designation: 28
- 2.13.2 Takeoff run available: 8016
- 2.13.3 Takeoff distance available: 8016
- 2.13.4 Accelerate-stop distance available: 8016
- 2.13.5 Landing distance available: 8016

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 28
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 08
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 119.4 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 125.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD PRE TAXI CLNC
2.18.3 Service designation: 126.4 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: CD
2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC

2.18.3 Service designation: 290.2 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 132.05 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10. Magnetic
variation: 11W

2.19.2 ILS identification: CLA
2.19.5 Coordinates: 18-26-00.00N /
65-59-15.53W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: Glide Slope for runway 10.
Magnetic variation: 11W
2.19.2 ILS identification: CLA
2.19.5 Coordinates: 18-25-57.56N /
66-00-39.05W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Middle Marker for runway 10.
Magnetic variation: 11W
2.19.2 ILS identification: CLA
2.19.5 Coordinates: 18-26-00.00N /
66-01-15.39W
2.19.6 Site elevation: 1 ft

2.19.1 ILS type: Outer Marker for runway 10.
Magnetic variation: 11W
2.19.2 ILS identification: CLA
2.19.5 Coordinates: 18-26-00.00N /
66-05-00.00W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Localizer for runway 08. Magnetic
variation: 11W
2.19.2 ILS identification: SJU
2.19.5 Coordinates: 18-27-00.00N /
65-59-11.41W
2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Glide Slope for runway 08.
Magnetic variation: 11W
2.19.2 ILS identification: SJU
2.19.5 Coordinates: 18-26-27.04N /
66-00-45.58W
2.19.6 Site elevation: 4 ft

2.19.1 ILS type: Middle Marker for runway 08.
Magnetic variation: 11W
2.19.2 ILS identification: SJU
2.19.5 Coordinates: 18-26-00.00N /
66-01-24.60W
2.19.6 Site elevation: 99999 ft

Magnetic variation: 11W
2.19.2 ILS identification: SJU
2.19.5 Coordinates: 18-24-31.82N /
66-05-21.83W
2.19.6 Site elevation: 10 ft

2.19.1 ILS type: Outer Marker for runway 08.

General Remarks:

NOT LATER THAN 48 HR PRIOR PERMISSION REQUIRED FOR PARKING OF MILITARY, GENERAL AVIATION & DC3 AIRCRAFT OR LARGER. SEND PRIOR PERMISSION REQUIRED TO PUERTO RICO PORT AUTH AT 787-253-0979, 787-791-2908, 939-630-8862. AIRCRAFT WITHOUT CREDIT W PRPA MUST PAY ALL CHARGES BEFORE DEPARTURE.

24 HR PRIOR PERMISSION REQUIRED FOR ALL MILITARY TRANSPORT AIRCRAFT. C5'S NOT AUTHORIZED DUE TO CONSTRUCTION.

TAXIWAY JULIET CLOSED TO AIRCRAFT WITH GREATER THAN 118 FT WINGSPAN.

PERSONNEL AND EQUIPMENT WORKING N RUNWAY 8/26 ALONG TREE AREA. OBST CRANE 50 FT AGL 300 FT N RUNWAY 8/26 CL 1100-1800 MON-FRI.

APRON 12 AVAILABLE FOR GA AIRCRAFT ONLY.

Memphis, TN
Memphis Intl
ICAO Identifier KMEM

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 35-02-32.70N / 89-58-36.00W
- 2.2.2 From City: 3 Miles S Of Memphis, TN
- 2.2.3 Elevation: 341 ft
- 2.2.5 Magnetic variation: 1E (2000)
- 2.2.6 Airport Contact: Larry D Cox
2491 WINCHESTER RD.
Memphis, TN 38116
(901-922-8000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/21/1973
- 2.6.4 Remarks: Index D ARFF Equipment Available 24 Hours Per Day, 7 Days Per Week.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 09
- 2.10.1.b Type of obstacle: Pole (28 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 600 ft from Centerline

- 2.10.1.a. Runway designation: 27
- 2.10.1.b Type of obstacle: Pole (34 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 300 ft from Centerline

- 2.10.1.a. Runway designation: 36R
- 2.10.1.b Type of obstacle: Ant (18 ft). Lighted
- 2.10.1.c Location of obstacle: 400 ft from Centerline

- 2.10.1.a. Runway designation: 36L
- 2.10.1.b Type of obstacle: Road (21 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 600 ft from Centerline

- 2.10.1.a. Runway designation: 18C
- 2.10.1.b Type of obstacle: Pole (65 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 803 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 92
- 2.12.3 Dimensions: 8946 ft x 150 ft
- 2.12.4 PCN: 92 R/B/W/T
- 2.12.5 Coordinates: 35-03-31.04N / 89-59-00.00W
- 2.12.6 Threshold elevation: 253 ft
- 2.12.6 Touchdown zone elevation: 259 ft
- 2.12.7 Slope: 0.1UP

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 272
- 2.12.3 Dimensions: 8946 ft x 150 ft
- 2.12.4 PCN: 92 R/B/W/T
- 2.12.5 Coordinates: 35-03-28.01N / 89-57-21.08W
- 2.12.6 Threshold elevation: 292 ft
- 2.12.6 Touchdown zone elevation: 292 ft
- 2.12.7 Slope: 0.6DOWN

- 2.12.1 Designation: 18L
- 2.12.2 True Bearing: 179
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 82 R/C/W/T
- 2.12.5 Coordinates: 35-02-55.74N / 89-58-22.63W
- 2.12.6 Threshold elevation: 278 ft
- 2.12.6 Touchdown zone elevation: 301 ft

- 2.12.1 Designation: 36R
- 2.12.2 True Bearing: 359
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 82 R/C/W/T
- 2.12.5 Coordinates: 35-01-26.74N / 89-58-20.75W
- 2.12.6 Threshold elevation: 335 ft
- 2.12.6 Touchdown zone elevation: 335 ft

2.12.1 Designation: 18R
2.12.2 True Bearing: 179
2.12.3 Dimensions: 9320 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-02-58.16N /
89-59-14.79W
2.12.6 Threshold elevation: 288 ft
2.12.6 Touchdown zone elevation: 295 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 359
2.12.3 Dimensions: 9320 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-25.98N /
89-59-12.81W
2.12.6 Threshold elevation: 321 ft
2.12.6 Touchdown zone elevation: 321 ft

2.12.1 Designation: 18C
2.12.2 True Bearing: 179
2.12.3 Dimensions: 11120 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-03-16.54N /
89-58-34.21W
2.12.6 Threshold elevation: 271 ft
2.12.6 Touchdown zone elevation: 290 ft

2.12.1 Designation: 36C
2.12.2 True Bearing: 359
2.12.3 Dimensions: 11120 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-26.58N /
89-58-31.90W
2.12.6 Threshold elevation: 341 ft
2.12.6 Touchdown zone elevation: 341 ft

AD 2.13 Declared distances

2.13.1 Designation: 09
2.13.2 Takeoff run available: 8946
2.13.3 Takeoff distance available: 8946
2.13.4 Accelerate-stop distance available: 8946
2.13.5 Landing distance available: 8946

2.13.1 Designation: 27
2.13.2 Takeoff run available: 8946
2.13.3 Takeoff distance available: 8946
2.13.4 Accelerate-stop distance available: 8946
2.13.5 Landing distance available: 8946

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 9000

2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 9320
2.13.3 Takeoff distance available: 9320
2.13.4 Accelerate-stop distance available: 9320
2.13.5 Landing distance available: 9127

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 9320
2.13.3 Takeoff distance available: 9320
2.13.4 Accelerate-stop distance available: 9320
2.13.5 Landing distance available: 9320

2.13.1 Designation: 18C
2.13.2 Takeoff run available: 11120
2.13.3 Takeoff distance available: 11120
2.13.4 Accelerate-stop distance available: 11120
2.13.5 Landing distance available: 11120

2.13.1 Designation: 36C
2.13.2 Takeoff run available: 11120
2.13.3 Takeoff distance available: 11120
2.13.4 Accelerate-stop distance available: 11120
2.13.5 Landing distance available: 11120

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.1 Designation: 27
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 18L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 36R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.10 Remarks: ALSF2 Unmonitored.

2.14.1 Designation: 18R

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 36L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 18C

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 36C

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

**AD 2.18 Air traffic services communication
facilities**

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: APCH/P CLASS B IC

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: IC

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 124.15 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 124.65 MHz

2.18.1 Service designation: CD/P PTC

2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: APCH/P CLASS B IC

2.18.3 Service designation: 125.8 MHz

2.18.1 Service designation: FINAL

2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 127.75 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: ANG CP

2.18.3 Service designation: 138.1 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: FINAL

2.18.3 Service designation: 263.6 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 284.7 MHz

2.18.1 Service designation: APCH/P CLASS B IC

2.18.3 Service designation: 291.6 MHz

2.18.1 Service designation: IC

2.18.3 Service designation: 291.6 MHz

2.18.1 Service designation: APCH/P CLASS B IC

2.18.3 Service designation: 338.3 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 385.45 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 379.2 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 119.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 128.425 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121 MHz

2.18.1 Service designation: FINAL
2.18.3 Service designation: 120.925 MHz

2.18.1 Service designation: FINAL RADAR 9/27
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: SATELLITE
2.18.3 Service designation: 134.2 MHz

2.18.1 Service designation: ANG CP
2.18.3 Service designation: 353.45 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 1E
2.19.2 ILS identification: MEM
2.19.5 Coordinates: 35-03-27.64N / 89-57-00.00W
2.19.6 Site elevation: 297 ft

2.19.1 ILS type: Glide Slope for runway 09. Magnetic variation: 1E
2.19.2 ILS identification: MEM
2.19.5 Coordinates: 35-03-27.21N / 89-58-56.22W
2.19.6 Site elevation: 253 ft

2.19.1 ILS type: Outer Marker for runway 09. Magnetic variation: 1E
2.19.2 ILS identification: MEM
2.19.5 Coordinates: 35-03-42.16N / 90-04-17.75W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 09. Magnetic variation: 1E
2.19.2 ILS identification: MEM
2.19.5 Coordinates: 35-03-32.06N / 89-59-45.42W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 1E
2.19.2 ILS identification: JIM
2.19.5 Coordinates: 35-03-24.48N / 89-57-36.25W
2.19.6 Site elevation: 277 ft

2.19.1 ILS type: Outer Marker for runway 27. Magnetic variation: 1E
2.19.2 ILS identification: JIM
2.19.5 Coordinates: 35-03-21.52N / 89-51-53.89W
2.19.6 Site elevation: 326 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 1E
2.19.2 ILS identification: JIM
2.19.5 Coordinates: 35-03-31.29N / 89-59-17.56W
2.19.6 Site elevation: 253 ft

2.19.1 ILS type: Middle Marker for runway 27. Magnetic variation: 1E
2.19.2 ILS identification: JIM
2.19.5 Coordinates: 35-03-27.13N / 89-56-49.73W
2.19.6 Site elevation: 304 ft

2.19.1 ILS type: Localizer for runway 18L. Magnetic variation: 1E
2.19.2 ILS identification: EXS
2.19.5 Coordinates: 35-01-16.82N / 89-58-20.55W
2.19.6 Site elevation: 315 ft

2.19.1 ILS type: DME for runway 18L. Magnetic variation: 1E
2.19.2 ILS identification: EXS
2.19.5 Coordinates: 35-01-16.86N / 89-58-19.30W
2.19.6 Site elevation: 382 ft

2.19.1 ILS type: Glide Slope for runway 18L. Magnetic variation: 1E
2.19.2 ILS identification: EXS
2.19.5 Coordinates: 35-02-46.77N / 89-58-17.63W
2.19.6 Site elevation: 279 ft

2.19.1 ILS type: Localizer for runway 36R.

Magnetic variation: 1E

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-03-00.00N /
89-58-22.84W

2.19.6 Site elevation: 279 ft

2.19.1 ILS type: DME for runway 36R. Magnetic
variation: 1E

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-03-00.00N /
89-58-19.67W

2.19.6 Site elevation: 281 ft

2.19.1 ILS type: Glide Slope for runway 36R.

Magnetic variation: 1E

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-01-37.99N /
89-58-16.18W

2.19.6 Site elevation: 324 ft

2.19.1 ILS type: Inner Marker for runway 36R.

Magnetic variation: 1E

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-01-18.39N /
89-58-20.58W

2.19.6 Site elevation: 324 ft

2.19.1 ILS type: Middle Marker for runway 36R.

Magnetic variation: 1E

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-01-00.00N /
89-58-20.21W

2.19.6 Site elevation: 305 ft

2.19.1 ILS type: DME for runway 36L. Magnetic
variation: 1E

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-03-00.00N /
89-59-17.33W

2.19.6 Site elevation: 286 ft

2.19.1 ILS type: Glide Slope for runway 36L.

Magnetic variation: 1E

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-01-38.77N /
89-59-17.90W

2.19.6 Site elevation: 307 ft

2.19.1 ILS type: Middle Marker for runway 36L.

Magnetic variation: 1E

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-00-55.71N /
89-59-12.14W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 36L.

Magnetic variation: 1E

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 34-57-13.77N /
89-59-00.00W

2.19.6 Site elevation: 320 ft

2.19.1 ILS type: Inner Marker for runway 36L.

Magnetic variation: 1E

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-01-17.41N /
89-59-12.63W

2.19.6 Site elevation: 321 ft

2.19.1 ILS type: Localizer for runway 36L.

Magnetic variation: 1E

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-03-00.00N /
89-59-14.98W

2.19.6 Site elevation: 276 ft

2.19.1 ILS type: Glide Slope for runway 18R.

Magnetic variation: 1E

2.19.2 ILS identification: OOI

2.19.5 Coordinates: 35-02-48.70N /
89-59-18.49W

2.19.6 Site elevation: 285 ft

2.19.1 ILS type: Middle Marker for runway 18R.

Magnetic variation: 1E

2.19.2 ILS identification: OOI

2.19.5 Coordinates: 35-03-24.11N /
89-59-15.34W

2.19.6 Site elevation: 251 ft

2.19.1 ILS type: Outer Marker for runway 18R.

Magnetic variation: 1E

2.19.2 ILS identification: OOI

2.19.5 Coordinates: 35-07-44.20N /
89-59-23.09W

2.19.6 Site elevation: 306 ft

2.19.1 ILS type: Localizer for runway 18R.

Magnetic variation: 1E

2.19.2 ILS identification: OOI

2.19.5 Coordinates: 35-01-19.31N /

89-59-12.67W
2.19.6 Site elevation: 325 ft

2.19.1 ILS type: Glide Slope for runway 18C.
Magnetic variation: 1E
2.19.2 ILS identification: SDU
2.19.5 Coordinates: 35-03-00.00N /
89-58-37.51W
2.19.6 Site elevation: 273 ft

2.19.1 ILS type: Outer Marker for runway 18C.
Magnetic variation: 1E
2.19.2 ILS identification: SDU
2.19.5 Coordinates: 35-07-45.23N /
89-58-37.90W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 18C.
Magnetic variation: 1E
2.19.2 ILS identification: SDU
2.19.5 Coordinates: 35-01-10.23N /
89-58-31.56W
2.19.6 Site elevation: 346 ft

2.19.1 ILS type: Middle Marker for runway 18C.
Magnetic variation: 1E
2.19.2 ILS identification: SDU
2.19.5 Coordinates: 35-03-51.13N /
89-58-34.92W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 36C.
Magnetic variation: 1E

2.19.2 ILS identification: TSE
2.19.5 Coordinates: 35-01-17.65N /
89-58-31.71W
2.19.6 Site elevation: 318 ft

2.19.1 ILS type: Middle Marker for runway 36C.
Magnetic variation: 1E
2.19.2 ILS identification: TSE
2.19.5 Coordinates: 35-01-00.00N /
89-58-31.42W
2.19.6 Site elevation: 326 ft

2.19.1 ILS type: DME for runway 36C. Magnetic
variation: 1E
2.19.2 ILS identification: TSE
2.19.5 Coordinates: 35-03-22.23N /
89-58-37.26W
2.19.6 Site elevation: 253 ft

2.19.1 ILS type: Localizer for runway 36C.
Magnetic variation: 1E
2.19.2 ILS identification: TSE
2.19.5 Coordinates: 35-03-22.50N /
89-58-34.34W
2.19.6 Site elevation: 261 ft

2.19.1 ILS type: Glide Slope for runway 36C.
Magnetic variation: 1E
2.19.2 ILS identification: TSE
2.19.5 Coordinates: 35-01-38.08N /
89-58-36.94W
2.19.6 Site elevation: 330 ft

General Remarks:

ALL TRANSIENT AIRCRAFT REQUIRE -FOLLOW ME- ASSIST ENTERING ANG RAMP. USE OF ANG RAMP REQUIRES PRIOR PERMISSION REQUIRED V966-8131 -FOR OFFICIAL BUSINESS ONLY-.

HELICOPTER OPERATIONS PROHIBITED TO/FROM TERMINAL BUILDING.

LARGE FLOCKS OF BIRDS IN THE VICINITY OF AIRPORT.

PORTIONS OF TAXIWAY A EAST OF TAXIWAY A1 NOT VISIBLE FROM ATCT.

TAXIWAY N NORTH OF TAXIWAY V, TAXIWAY C NORTH OF TAXIWAY V AND TAXIWAY S NORTH OF TAXIWAY V DESIGNATED AS NON-MOVEMENT AREAS.

LARGE & HEAVY EASTBOUND AIRCRAFT ON TAXIWAY V FOR RUNWAY 27 HOLD SHORT AT MINIMUM THRUST AREA SIGN.

PRIOR PERMISSION REQUIRED FOR TAXI CLEARANCE ON TAXIWAY 'N' NORTH OF TAXIWAY 'V', TAXIWAY 'S' NORTH TAXIWAY 'V', AND TAXIWAY 'C' NORTH OF TAXIWAY 'V' CONTACT FEDEX RAMP ATCT ON FREQ 131.5.

IF POSSIBLE ALL AIRCRAFT CONDUCT GROUND OPERATIONS WITH TRANSPONDERS ON.

TAXIWAY V BETWEEN TAXIWAY B AND APPROACH END RUNWAY 27 RESTRICTED TO AIRCRAFT WITH WINGSPANS OF 171 FT 6 INCHES OR LESS.

TAXIWAY V BETWEEN TAXIWAY S TAXIWAY Y RESTRICTED TO AIRCRAFT WITH TAIL HEIGHTS LESS THAN 65 FT 10 INCHES.

ANG-PRIOR PERMISSION REQUIRED DSN 726-7131, C901-291-7131. OPER 1245-2215Z MON - FRI AND CLOSED ALTITUDE MON & HOLIDAY DUE TO ALTERNATE WORK SCHEDULE. TRANSIENT AIRCRAFT MAINT NOT AVAILABLE. REFUEL SERVICE FOR OTHER THAN C5 AIRCRAFT REQUIRE QUALIFIED CREW CHIEF OR CREWMEMBERS. NON-C5 AIRCRAFT SUPPORT PROVIDED BY CONTRACT FBO ON FIELD.

CONTACT RAMP CONTROL ON 121.8 FOR ENTRY ON TO ANG RAMP. ANG FREQS 138.95 341.75. AFTER HRS CONTACT COMMAND POST AT DSN 726-7148 OR SECURITY FORCES AT DSN 726-7101.

READ BACK ALL HOLD SHORT INSTRUCTIONS REQUIRED.

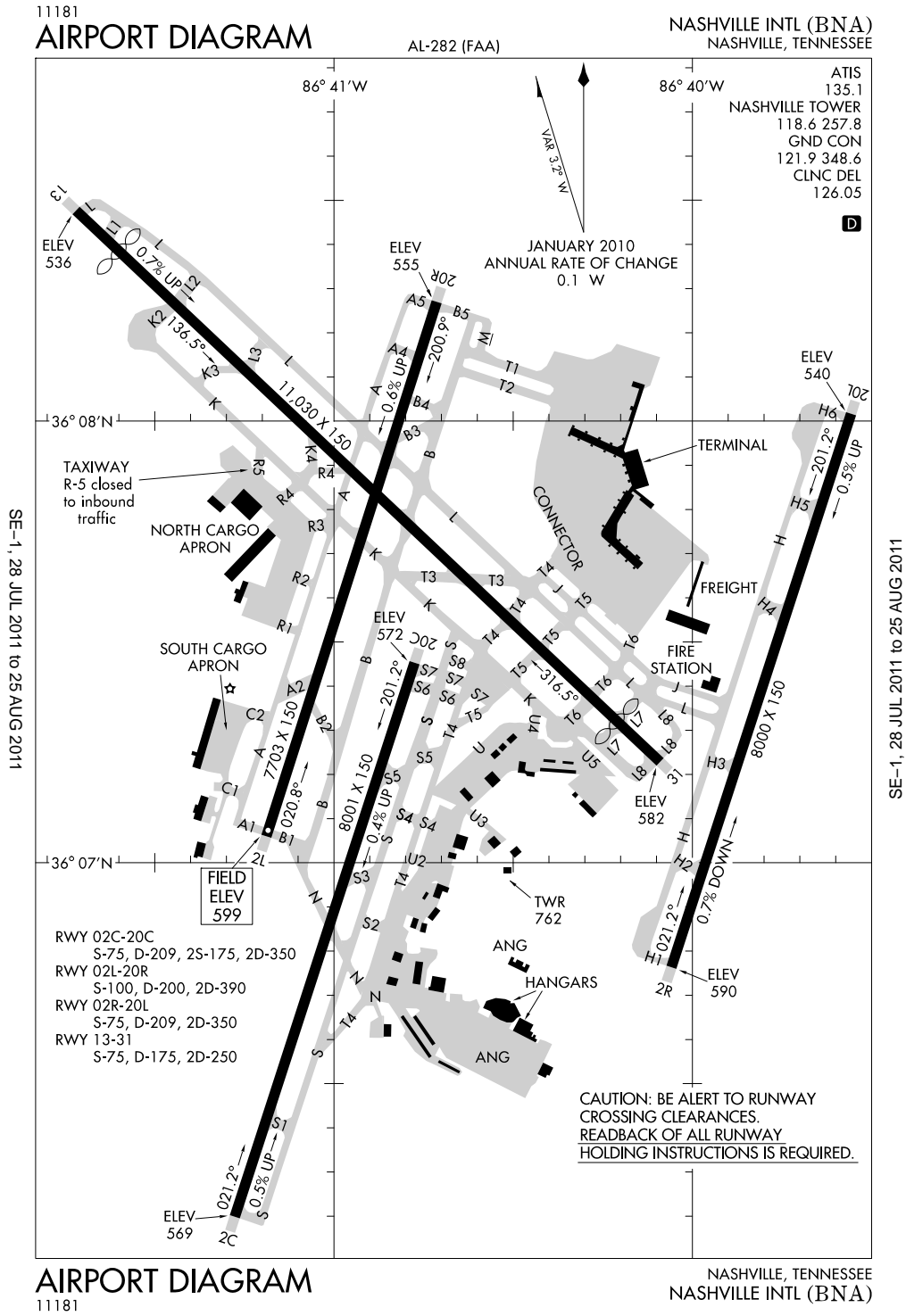
MILITARY AIRCRAFT WITH WINGSPANS GREATER THAN 171 FT SHOULD NOT TAXI ON TAXIWAY N BETWEEN TAXIWAY M7 AND TAXIWAY T NOR ON TAXIWAY J NORTH OF TAXIWAY C3.

AIRPORT CLOSED TO C5 AND LARGER EXCEPT PRIOR PERMISSION REQUIRED AIRPORT MANAGER 901-922-8117.

ANG: BASH PHASE TWO PERIOD ACTIVE FROM SEPTEMBER THROUGH MARCH.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

Nashville, Tennessee Nashville International ICAO Identifier KBNA



Nashville, TN
Nashville Intl
ICAO Identifier KBNA

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 36-07-28.10N / 86-40-41.50W
- 2.2.2 From City: 5 Miles SE Of NASHville, TN
- 2.2.3 Elevation: 599 ft
- 2.2.5 Magnetic variation: 3W (2010)
- 2.2.6 Airport Contact: Raul Regalado
ONE TERMINAL DR. SUITE 501
Nashville, TN 37214
(615-275-1600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 13
- 2.10.1.b Type of obstacle: Trees. Not Lighted or Marked
- 2.10.1.a. Runway designation: 31
- 2.10.1.b Type of obstacle: Tree. Not Lighted or Marked

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 13
- 2.12.2 True Bearing: 133
- 2.12.3 Dimensions: 11030 ft x 150 ft
- 2.12.5 Coordinates: 36-08-28.60N / 86-41-43.28W
- 2.12.6 Threshold elevation: 536 ft
- 2.12.6 Touchdown zone elevation: 567 ft
- 2.12.1 Designation: 31

- 2.12.2 True Bearing: 313
- 2.12.3 Dimensions: 11030 ft x 150 ft
- 2.12.5 Coordinates: 36-07-13.79N / 86-40-00.00W
- 2.12.6 Threshold elevation: 582 ft
- 2.12.6 Touchdown zone elevation: 577 ft

- 2.12.1 Designation: 02C
- 2.12.2 True Bearing: 18
- 2.12.3 Dimensions: 8001 ft x 150 ft
- 2.12.5 Coordinates: 36-06-11.99N / 86-41-16.66W
- 2.12.6 Threshold elevation: 569 ft
- 2.12.6 Touchdown zone elevation: 587 ft

- 2.12.1 Designation: 20C
- 2.12.2 True Bearing: 198
- 2.12.3 Dimensions: 8001 ft x 150 ft
- 2.12.5 Coordinates: 36-07-27.24N / 86-40-46.55W
- 2.12.6 Threshold elevation: 572 ft
- 2.12.6 Touchdown zone elevation: 588 ft

- 2.12.1 Designation: 02L
- 2.12.2 True Bearing: 18
- 2.12.3 Dimensions: 7703 ft x 150 ft
- 2.12.5 Coordinates: 36-07-00.00N / 86-41-11.31W
- 2.12.6 Threshold elevation: 598 ft
- 2.12.6 Touchdown zone elevation: 599 ft

- 2.12.1 Designation: 20R
- 2.12.2 True Bearing: 198
- 2.12.3 Dimensions: 7703 ft x 150 ft
- 2.12.5 Coordinates: 36-08-16.23N / 86-40-42.84W
- 2.12.6 Threshold elevation: 555 ft
- 2.12.6 Touchdown zone elevation: 578 ft

- 2.12.1 Designation: 02R
- 2.12.2 True Bearing: 18
- 2.12.3 Dimensions: 8000 ft x 150 ft
- 2.12.5 Coordinates: 36-06-45.77N / 86-40-00.00W
- 2.12.6 Threshold elevation: 590 ft
- 2.12.6 Touchdown zone elevation: 590 ft

- 2.12.1 Designation: 20L
- 2.12.2 True Bearing: 198
- 2.12.3 Dimensions: 8000 ft x 150 ft
- 2.12.5 Coordinates: 36-08-00.00N /

86-39-33.40W
2.12.6 Threshold elevation: 540 ft
2.12.6 Touchdown zone elevation: 550 ft

AD 2.13 Declared distances

2.13.1 Designation: 13
2.13.2 Takeoff run available: 10288
2.13.3 Takeoff distance available: 11029
2.13.4 Accelerate-stop distance available: 10288
2.13.5 Landing distance available: 9487

2.13.1 Designation: 31
2.13.2 Takeoff run available: 10228
2.13.3 Takeoff distance available: 11029
2.13.4 Accelerate-stop distance available: 10228
2.13.5 Landing distance available: 9487

2.13.1 Designation: 02C
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 20C
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 02L
2.13.2 Takeoff run available: 7702
2.13.3 Takeoff distance available: 7702
2.13.4 Accelerate-stop distance available: 7702
2.13.5 Landing distance available: 7702

2.13.1 Designation: 20R
2.13.2 Takeoff run available: 7702
2.13.3 Takeoff distance available: 7702
2.13.4 Accelerate-stop distance available: 7702
2.13.5 Landing distance available: 7702

2.13.1 Designation: 02R
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 20L
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000

2.13.5 Landing distance available: 8000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 13
2.14.4 Visual approach slope indicator system:
6-box VASI on left

2.14.1 Designation: 02C
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 20C
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 02L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.1 Designation: 20R
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 02R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 20L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CLASS C IC
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: DEP/P CLASS C
2.18.3 Service designation: 119.35 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 120.6 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: CD/P PTC
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 127.175 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: ALCP
2.18.3 Service designation: 314.4 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 317.45 MHz

2.18.1 Service designation: APCH/P CLASS C IC
2.18.3 Service designation: 360.7 MHz

2.18.1 Service designation: DEP/P CLASS C
2.18.3 Service designation: 385.55 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 387 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.1 MHz
2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 31. Magnetic variation: 3W
2.19.2 ILS identification: PNO
2.19.5 Coordinates: 36-08-30.65N / 86-41-45.97W

2.19.6 Site elevation: 540 ft

2.19.1 ILS type: Middle Marker for runway 31. Magnetic variation: 3W
2.19.2 ILS identification: PNO
2.19.5 Coordinates: 36-06-57.26N / 86-39-44.59W
2.19.6 Site elevation: 547 ft

2.19.1 ILS type: Outer Marker for runway 31. Magnetic variation: 3W
2.19.2 ILS identification: PNO
2.19.5 Coordinates: 36-03-16.09N / 86-34-51.59W
2.19.6 Site elevation: 520 ft

2.19.1 ILS type: Glide Slope for runway 31. Magnetic variation: 3W
2.19.2 ILS identification: PNO
2.19.5 Coordinates: 36-07-28.27N / 86-40-18.60W
2.19.6 Site elevation: 566 ft

2.19.1 ILS type: Localizer for runway 02C. Magnetic variation: 3W
2.19.2 ILS identification: EZN
2.19.5 Coordinates: 36-07-31.97N / 86-40-44.66W
2.19.6 Site elevation: 574 ft

2.19.1 ILS type: Glide Slope for runway 02C. Magnetic variation: 3W
2.19.2 ILS identification: EZN
2.19.5 Coordinates: 36-06-22.64N / 86-41-16.89W
2.19.6 Site elevation: 571 ft

2.19.1 ILS type: Localizer for runway 02L. Magnetic variation: 3W
2.19.2 ILS identification: BNA
2.19.5 Coordinates: 36-08-24.27N / 86-40-39.69W
2.19.6 Site elevation: 548 ft

2.19.1 ILS type: DME for runway 02L. Magnetic variation: 3W
2.19.2 ILS identification: BNA
2.19.5 Coordinates: 36-08-26.46N / 86-40-42.35W
2.19.6 Site elevation: 548 ft

2.19.1 ILS type: Glide Slope for runway 02L.
Magnetic variation: 3W
2.19.2 ILS identification: BNA
2.19.5 Coordinates: 36-07-12.95N /
86-41-00.00W
2.19.6 Site elevation: 591 ft

2.19.1 ILS type: Outer Marker for runway 02L.
Magnetic variation: 3W
2.19.2 ILS identification: BNA
2.19.5 Coordinates: 36-01-51.60N /
86-43-18.44W
2.19.6 Site elevation: 985 ft

2.19.1 ILS type: Middle Marker for runway 02L.
Magnetic variation: 3W
2.19.2 ILS identification: BNA
2.19.5 Coordinates: 36-06-35.04N /
86-41-22.51W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 02L.
Magnetic variation: 3W
2.19.2 ILS identification: BNA
2.19.5 Coordinates: 36-06-54.83N /
86-41-14.80W
2.19.6 Site elevation: 595 ft

2.19.1 ILS type: Outer Marker for runway 20R.
Magnetic variation: 3W
2.19.2 ILS identification: VIY
2.19.5 Coordinates: 36-12-13.70N /
86-39-00.00W
2.19.6 Site elevation: 433 ft

2.19.1 ILS type: Glide Slope for runway 20R.
Magnetic variation: 3W
2.19.2 ILS identification: VIY
2.19.5 Coordinates: 36-08-00.00N /
86-40-42.76W
2.19.6 Site elevation: 555 ft

2.19.1 ILS type: Localizer for runway 20R.
Magnetic variation: 3W
2.19.2 ILS identification: VIY
2.19.5 Coordinates: 36-06-49.68N /
86-41-16.79W
2.19.6 Site elevation: 587 ft

2.19.1 ILS type: Glide Slope for runway 02R.
Magnetic variation: 3W

2.19.2 ILS identification: UQU
2.19.5 Coordinates: 36-06-56.01N /
86-39-54.74W
2.19.6 Site elevation: 577 ft

2.19.1 ILS type: Inner Marker for runway 02R.
Magnetic variation: 3W
2.19.2 ILS identification: UQU
2.19.5 Coordinates: 36-06-37.69N /
86-40-00.00W
2.19.6 Site elevation: 569 ft

2.19.1 ILS type: Middle Marker for runway 02R.
Magnetic variation: 3W
2.19.2 ILS identification: UQU
2.19.5 Coordinates: 36-06-19.86N /
86-40-13.85W
2.19.6 Site elevation: 607 ft

2.19.1 ILS type: DME for runway 02R. Magnetic
variation: 3W
2.19.2 ILS identification: UQU
2.19.5 Coordinates: 36-08-00.00N /
86-39-34.22W
2.19.6 Site elevation: 545 ft

2.19.1 ILS type: Localizer for runway 02R.
Magnetic variation: 3W
2.19.2 ILS identification: UQU
2.19.5 Coordinates: 36-08-00.00N /
86-39-31.13W
2.19.6 Site elevation: 536 ft

2.19.1 ILS type: Localizer for runway 20L.
Magnetic variation: 3W
2.19.2 ILS identification: SSX
2.19.5 Coordinates: 36-06-30.06N /
86-40-00.00W
2.19.6 Site elevation: 614 ft

2.19.1 ILS type: Middle Marker for runway 20L.
Magnetic variation: 3W
2.19.2 ILS identification: SSX
2.19.5 Coordinates: 36-08-25.51N /
86-39-23.69W
2.19.6 Site elevation: 610 ft

2.19.1 ILS type: DME for runway 20L. Magnetic
variation: 3W
2.19.2 ILS identification: SSX
2.19.5 Coordinates: 36-06-30.96N /

86-40-12.89W

2.19.6 Site elevation: 621 ft

2.19.1 ILS type: Glide Slope for runway 20L.

Magnetic variation: 3W

General Remarks:

2.19.2 ILS identification: SSX

2.19.5 Coordinates: 36-07-50.03N /
86-39-33.12W

2.19.6 Site elevation: 534 ft

READ BACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVAILABLE.

PILOTS COMPLY WITH ALL HOLD SHORT INSTRUCTIONS PARTICULARLY AT TAXIWAY K & RUNWAY 20C APPROACH; TAXIWAY L8 & RUNWAY 31 APPROACH; TAXIWAY L AT RUNWAY 13 APPROACH; AND TAXIWAY H AT RUNWAY 31 APPROACH.

ALL TURBOJET RUNWAYS HAVE NOISE ABATEMENT PROCEDURES. MILITARY FIGHTER/ATTACK/TRAINER TURBOJETS USE RUNWAY 13/31 FOR ARRIVAL & DEPARTURE.

LIGHTED JET BLAST FENCE 598 MSL 1100 FT SE OF RUNWAY 31 THRESHOLD.

LIGHTED JET BLAST FENCE 568 FT MSL 1167 FT NW RUNWAY 13 THRESHOLD.

NO UNAUTHORIZED 180 DEGREE TURNS FOR AIRCRAFT OVER 12500 LBS ON ASPHALT SURFACES.

NO FLIGHT OVER MAIN TERMINAL BUILDING IS PERMITTED.

BIRD ACTIVITY ON & IN THE VICINITY OF AIRPORT.

DO NOT CONFUSE 150 FT WIDE TAXIWAY S FOR RUNWAY 20C.

'C' CONCOURSE TAXILANES ARE; INNER TAXILANE FOR OUTBOUND TRAFFIC & OUTER TAXILANE FOR INBOUND TRAFFIC.

FENCE CONSTRUCTION NE RAMP APRON 'D' CONCOURSE LIGHTED.

NO FLIGHTS OVER AIR NATIONAL GUARD RAMP.

CAUTION: BASH PHASE I: RUNS FROM 1 APRIL THROUGH 30 SEPTEMBER EACH YEAR. PHASE II RUNS FROM 1 OCTOBER THROUGH 31 MARCH EACH YEAR DUE TO ITS PROXIMITY TO THE FOUR MAJOR MIGRATORY FLYWAYS. SEE AP/1 FOR MORE INFORMATION.

ANG: OFFICIAL BUSINESS ONLY, PRIOR PERMISSION REQUIRED DSN 844-8119.

ANG: CALL SIGN MUSIC CITY OPERATIONS.

Dallas-Fort Worth, TX
Dallas/Fort Worth Intl
ICAO Identifier KDFW

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 32-53-48.58N / 97-02-16.79W
- 2.2.2 From City: 12 Miles NW Of Dallas-Fort Worth, TX
- 2.2.3 Elevation: 607 ft
- 2.2.5 Magnetic variation: 6E (2000)
- 2.2.6 Airport Contact: Jeffrey Fegan
CHIEF EXECUTIVE OFFICER
Dallas-Ft Worth, TX 75261
(972-973-3112)
- 2.2.7 Traffic: IFR/VFR
- 2.2.8 Remarks: And Dallas Co.

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 7/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 17L
- 2.10.1.b Type of obstacle: Ant (150 ft). Lighted
- 2.10.1.c Location of obstacle: 798 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 18L
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 13400 ft x 200 ft
- 2.12.5 Coordinates: 32-54-56.88N / 97-03-00.00W
- 2.12.6 Threshold elevation: 602 ft
- 2.12.6 Touchdown zone elevation: 602 ft

- 2.12.1 Designation: 36R
- 2.12.2 True Bearing: 0

- 2.12.3 Dimensions: 13400 ft x 200 ft
- 2.12.5 Coordinates: 32-52-44.30N / 97-03-00.00W
- 2.12.6 Threshold elevation: 575 ft
- 2.12.6 Touchdown zone elevation: 580 ft

- 2.12.1 Designation: 18R
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 13400 ft x 150 ft
- 2.12.5 Coordinates: 32-54-56.93N / 97-03-16.71W
- 2.12.6 Threshold elevation: 607 ft
- 2.12.6 Touchdown zone elevation: 607 ft

- 2.12.1 Designation: 36L
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 13400 ft x 150 ft
- 2.12.5 Coordinates: 32-52-44.35N / 97-03-17.40W
- 2.12.6 Threshold elevation: 582 ft
- 2.12.6 Touchdown zone elevation: 588 ft

- 2.12.1 Designation: 17C
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 13401 ft x 150 ft
- 2.12.5 Coordinates: 32-54-56.55N / 97-01-33.49W
- 2.12.6 Threshold elevation: 562 ft
- 2.12.6 Touchdown zone elevation: 562 ft

- 2.12.1 Designation: 35C
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 13401 ft x 150 ft
- 2.12.5 Coordinates: 32-52-43.96N / 97-01-34.22W
- 2.12.6 Threshold elevation: 562 ft
- 2.12.6 Touchdown zone elevation: 562 ft

- 2.12.1 Designation: 13L
- 2.12.2 True Bearing: 135
- 2.12.3 Dimensions: 9000 ft x 200 ft
- 2.12.5 Coordinates: 32-54-45.20N / 97-01-17.32W
- 2.12.6 Threshold elevation: 553 ft
- 2.12.6 Touchdown zone elevation: 553 ft

- 2.12.1 Designation: 31R
- 2.12.2 True Bearing: 315
- 2.12.3 Dimensions: 9000 ft x 200 ft
- 2.12.5 Coordinates: 32-53-41.93N / 97-00-00.00W

2.12.6 Threshold elevation: 508 ft
2.12.6 Touchdown zone elevation: 523 ft

2.12.1 Designation: 13R
2.12.2 True Bearing: 139
2.12.3 Dimensions: 9301 ft x 150 ft
2.12.5 Coordinates: 32-54-34.47N /
97-04-59.28W
2.12.6 Threshold elevation: 591 ft
2.12.6 Touchdown zone elevation: 591 ft

2.12.1 Designation: 31L
2.12.2 True Bearing: 319
2.12.3 Dimensions: 9301 ft x 150 ft
2.12.5 Coordinates: 32-53-24.97N /
97-03-47.79W
2.12.6 Threshold elevation: 577 ft
2.12.6 Touchdown zone elevation: 581 ft

2.12.1 Designation: 17L
2.12.2 True Bearing: 180
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.5 Coordinates: 32-53-53.95N /
97-00-35.20W
2.12.6 Threshold elevation: 524 ft
2.12.6 Touchdown zone elevation: 545 ft

2.12.1 Designation: 35R
2.12.2 True Bearing: 0
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.5 Coordinates: 32-52-29.85N /
97-00-35.67W
2.12.6 Threshold elevation: 575 ft
2.12.6 Touchdown zone elevation: 575 ft

2.12.1 Designation: 17R
2.12.2 True Bearing: 180
2.12.3 Dimensions: 13401 ft x 200 ft
2.12.5 Coordinates: 32-54-56.60N /
97-01-47.58W
2.12.6 Threshold elevation: 566 ft
2.12.6 Touchdown zone elevation: 566 ft

2.12.1 Designation: 35L
2.12.2 True Bearing: 0
2.12.3 Dimensions: 13401 ft x 200 ft
2.12.5 Coordinates: 32-52-44.02N /
97-01-48.29W
2.12.6 Threshold elevation: 563 ft
2.12.6 Touchdown zone elevation: 564 ft

AD 2.13 Declared distances

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400
2.13.4 Accelerate-stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400
2.13.4 Accelerate-stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400
2.13.4 Accelerate-stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400
2.13.4 Accelerate-stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 17C
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate-stop distance available: 13401
2.13.5 Landing distance available: 13401

2.13.1 Designation: 35C
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate-stop distance available: 13401
2.13.5 Landing distance available: 13401

2.13.1 Designation: 13L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 8375

2.13.1 Designation: 31R
2.13.2 Takeoff run available: 8375
2.13.3 Takeoff distance available: 8375
2.13.4 Accelerate-stop distance available: 8375
2.13.5 Landing distance available: 8375

2.13.1 Designation: 13R
2.13.2 Takeoff run available: 9301
2.13.3 Takeoff distance available: 9301

2.13.4 Accelerate–stop distance available: 9301
2.13.5 Landing distance available: 9301

2.13.1 Designation: 31L
2.13.2 Takeoff run available: 9301
2.13.3 Takeoff distance available: 9301
2.13.4 Accelerate–stop distance available: 9301
2.13.5 Landing distance available: 9301

2.13.1 Designation: 17L
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate–stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 35R
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate–stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 17R
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate–stop distance available: 13401
2.13.5 Landing distance available: 13401

2.13.1 Designation: 35L
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate–stop distance available: 13401
2.13.5 Landing distance available: 13401

AD 2.14 Approach and runway lighting

2.14.1 Designation: 18L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 36R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left
2.14.1 Designation: 18R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III

configuration
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 36L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 17C
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 35C
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 13L
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 31R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 13R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 31L
2.14.4 Visual approach slope indicator system: 4–light PAPI on left

2.14.1 Designation: 17L
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system

with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 35R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 17R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 35L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CLASS B NW
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 118.55 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 119.875 MHz

2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.85 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 124.15 MHz

2.18.1 Service designation: CLASS B NE

2.18.3 Service designation: 124.3 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 124.825 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 125.025 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.125 MHz

2.18.1 Service designation: CLASS B SE
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 126.475 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 126.55 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 128.25 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 133.525 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 133.625 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 134.9 MHz

2.18.1 Service designation: CLASS B SW
2.18.3 Service designation: 135.975 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 284.65 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 290.35 MHz

2.18.1 Service designation: CLASS B NW
2.18.3 Service designation: 306.95 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 319.85 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 323.05 MHz

2.18.1 Service designation: CLASS B SE

2.18.3 Service designation: 343.65 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 363.15 MHz

2.18.1 Service designation: CLASS B SW

2.18.3 Service designation: 379.9 MHz

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 263.025 MHz

2.18.1 Service designation: CLASS B NE

2.18.3 Service designation: 282.275 MHz

2.18.1 Service designation: D–ATIS

2.18.3 Service designation: 123.775 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS

2.18.3 Service designation: 135.925 MHz

2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 18L.

Magnetic variation: 4E

2.19.2 ILS identification: CIX

2.19.5 Coordinates: 32–52–33.61N /

97–03–00.00W

2.19.6 Site elevation: 570 ft

2.19.1 ILS type: Middle Marker for runway 18L.

Magnetic variation: 4E

2.19.2 ILS identification: CIX

2.19.5 Coordinates: 32–55–00.00N /

97–03–00.00W

2.19.6 Site elevation: 600 ft

2.19.1 ILS type: DME for runway 18L. Magnetic variation: 4E

2.19.2 ILS identification: CIX

2.19.5 Coordinates: 32–55–00.00N /

97–03–00.00W

2.19.6 Site elevation: 0 ft

2.19.1 ILS type: Outer Marker for runway 18L.

Magnetic variation: 4E

2.19.2 ILS identification: CIX

2.19.5 Coordinates: 32–59–42.30N /

97–02–58.02W

2.19.6 Site elevation: 571 ft

2.19.1 ILS type: Glide Slope for runway 18L.

Magnetic variation: 4E

2.19.2 ILS identification: CIX

2.19.5 Coordinates: 32–54–26.25N /

97–03–00.00W

2.19.6 Site elevation: 593 ft

2.19.1 ILS type: Localizer for runway 36R.

Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32–55–00.00N /

97–03–00.00W

2.19.6 Site elevation: 595 ft

2.19.1 ILS type: Glide Slope for runway 36R.

Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32–52–54.85N /

97–03–00.00W

2.19.6 Site elevation: 577 ft

2.19.1 ILS type: Outer Marker for runway 36R.

Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32–47–34.94N /

97–03–00.00W

2.19.6 Site elevation: 523 ft

2.19.1 ILS type: DME for runway 36R. Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32–55–00.00N /

97–03–00.00W

2.19.6 Site elevation: 0 ft

2.19.1 ILS type: Middle Marker for runway 36R.

Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32–52–17.10N /

97–03–00.00W

2.19.6 Site elevation: 560 ft

2.19.1 ILS type: Localizer for runway 18R.

Magnetic variation: 4E

2.19.2 ILS identification: VYN

2.19.5 Coordinates: 32-52-33.93N /
97-03-17.46W
2.19.6 Site elevation: 580 ft

2.19.1 ILS type: Glide Slope for runway 18R.
Magnetic variation: 4E
2.19.2 ILS identification: VYN
2.19.5 Coordinates: 32-54-25.17N /
97-03-21.58W
2.19.6 Site elevation: 598 ft

2.19.1 ILS type: Inner Marker for runway 18R.
Magnetic variation: 4E
2.19.2 ILS identification: VYN
2.19.5 Coordinates: 32-54-44.35N /
97-03-16.79W
2.19.6 Site elevation: 604 ft

2.19.1 ILS type: DME for runway 18R. Magnetic
variation: 4E
2.19.2 ILS identification: VYN
2.19.5 Coordinates: 32-52-34.09N /
97-03-12.60W
2.19.6 Site elevation: 584 ft

2.19.1 ILS type: Outer Marker for runway 18R.
Magnetic variation: 4E
2.19.2 ILS identification: VYN
2.19.5 Coordinates: 32-59-42.30N /
97-02-58.02W
2.19.6 Site elevation: 571 ft

2.19.1 ILS type: Middle Marker for runway 18R.
Magnetic variation: 4E
2.19.2 ILS identification: VYN
2.19.5 Coordinates: 32-55-00.00N /
97-03-16.70W
2.19.6 Site elevation: 600 ft

2.19.1 ILS type: Outer Marker for runway 36L.
Magnetic variation: 4E
2.19.2 ILS identification: BXN
2.19.5 Coordinates: 32-47-34.94N /
97-03-00.00W
2.19.6 Site elevation: 523 ft

2.19.1 ILS type: Middle Marker for runway 36L.
Magnetic variation: 4E
2.19.2 ILS identification: BXN
2.19.5 Coordinates: 32-52-15.86N /
97-03-17.54W

2.19.6 Site elevation: 542 ft

2.19.1 ILS type: DME for runway 36L. Magnetic
variation: 4E
2.19.2 ILS identification: BXN
2.19.5 Coordinates: 32-52-34.09N /
97-03-12.60W
2.19.6 Site elevation: 585 ft

2.19.1 ILS type: Glide Slope for runway 36L.
Magnetic variation: 4E
2.19.2 ILS identification: BXN
2.19.5 Coordinates: 32-52-54.41N /
97-03-22.04W
2.19.6 Site elevation: 580 ft

2.19.1 ILS type: Localizer for runway 36L.
Magnetic variation: 4E
2.19.2 ILS identification: BXN
2.19.5 Coordinates: 32-54-23.19N /
97-03-21.01W
2.19.6 Site elevation: 598 ft

2.19.1 ILS type: Localizer for runway 17C.
Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-52-33.15N /
97-01-34.28W
2.19.6 Site elevation: 563 ft

2.19.1 ILS type: DME for runway 17C. Magnetic
variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-52-34.13N /
97-01-39.65W
2.19.6 Site elevation: 560 ft

2.19.1 ILS type: Inner Marker for runway 17C.
Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-55-00.00N /
97-01-33.46W
2.19.6 Site elevation: 562 ft

2.19.1 ILS type: Middle Marker for runway 17C.
Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-55-00.00N /
97-01-33.35W
2.19.6 Site elevation: 561 ft

2.19.1 ILS type: Outer Marker for runway 17C.
Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-59-44.75N /
97-01-46.52W
2.19.6 Site elevation: 525 ft

2.19.1 ILS type: Glide Slope for runway 17C.
Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-54-45.64N /
97-01-28.77W
2.19.6 Site elevation: 558 ft

2.19.1 ILS type: DME for runway 35C. Magnetic
variation: 4E
2.19.2 ILS identification: PKQ
2.19.5 Coordinates: 32-52-34.13N /
97-01-39.65W
2.19.6 Site elevation: 575 ft

2.19.1 ILS type: Outer Marker for runway 35C.
Magnetic variation: 4E
2.19.2 ILS identification: PKQ
2.19.5 Coordinates: 32-48-00.00N /
97-01-38.86W
2.19.6 Site elevation: 480 ft

2.19.1 ILS type: Inner Marker for runway 35C.
Magnetic variation: 4E
2.19.2 ILS identification: PKQ
2.19.5 Coordinates: 32-52-35.30N /
97-01-34.26W
2.19.6 Site elevation: 563 ft

2.19.1 ILS type: Glide Slope for runway 35C.
Magnetic variation: 4E
2.19.2 ILS identification: PKQ
2.19.5 Coordinates: 32-52-54.33N /
97-01-29.47W
2.19.6 Site elevation: 557 ft

2.19.1 ILS type: Localizer for runway 35C.
Magnetic variation: 4E
2.19.2 ILS identification: PKQ
2.19.5 Coordinates: 32-55-00.00N /
97-01-33.45W
2.19.6 Site elevation: 558 ft
2.19.1 ILS type: Middle Marker for runway 35C.
Magnetic variation: 4E
2.19.2 ILS identification: PKQ

2.19.5 Coordinates: 32-52-16.34N /
97-01-34.37W
2.19.6 Site elevation: 559 ft

2.19.1 ILS type: Localizer for runway 31R.
Magnetic variation: 4E
2.19.2 ILS identification: RRA
2.19.5 Coordinates: 32-54-47.86N /
97-01-20.46W
2.19.6 Site elevation: 552 ft

2.19.1 ILS type: Glide Slope for runway 31R.
Magnetic variation: 4E
2.19.2 ILS identification: RRA
2.19.5 Coordinates: 32-53-51.74N /
97-00-00.00W
2.19.6 Site elevation: 509 ft

2.19.1 ILS type: DME for runway 31R. Magnetic
variation: 4E
2.19.2 ILS identification: RRA
2.19.5 Coordinates: 32-54-46.09N /
97-01-22.58W
2.19.6 Site elevation: 548 ft

2.19.1 ILS type: Outer Marker for runway 31R.
Magnetic variation: 4E
2.19.2 ILS identification: RRA
2.19.5 Coordinates: 32-49-51.37N /
96-55-27.13W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 31R.
Magnetic variation: 4E
2.19.2 ILS identification: RRA
2.19.5 Coordinates: 32-53-20.76N /
96-59-38.13W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 13R.
Magnetic variation: 4E
2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-54-24.13N /
97-04-54.08W
2.19.6 Site elevation: 588 ft

2.19.1 ILS type: Outer Marker for runway 13R.
Magnetic variation: 4E
2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-58-20.35N /
97-08-45.76W

2.19.6 Site elevation: 605 ft

2.19.1 ILS type: DME for runway 13R. Magnetic variation: 4E
2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-53-16.07N / 97-03-42.77W
2.19.6 Site elevation: 590 ft

2.19.1 ILS type: Middle Marker for runway 13R. Magnetic variation: 4E
2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-54-55.16N / 97-05-20.58W
2.19.6 Site elevation: 610 ft

2.19.1 ILS type: Localizer for runway 13R. Magnetic variation: 4E
2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-53-17.78N / 97-03-40.40W
2.19.6 Site elevation: 577 ft

2.19.1 ILS type: Localizer for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-52-19.44N / 97-00-35.73W
2.19.6 Site elevation: 584 ft

2.19.1 ILS type: DME for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-52-18.74N / 97-00-40.18W
2.19.6 Site elevation: 577 ft

2.19.1 ILS type: Glide Slope for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-53-45.23N / 97-00-31.14W
2.19.6 Site elevation: 526 ft

2.19.1 ILS type: Outer Marker for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-58-00.00N / 97-00-26.70W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-54-00.00N / 97-00-35.26W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-54-24.15N / 97-00-35.04W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 35R. Magnetic variation: 4E
2.19.2 ILS identification: AJQ
2.19.5 Coordinates: 32-54-00.00N / 97-00-35.15W
2.19.6 Site elevation: 519 ft

2.19.1 ILS type: DME for runway 35R. Magnetic variation: 4E
2.19.2 ILS identification: AJQ
2.19.5 Coordinates: 32-52-18.74N / 97-00-40.18W
2.19.6 Site elevation: 577 ft

2.19.1 ILS type: Middle Marker for runway 35R. Magnetic variation: 4E
2.19.2 ILS identification: AJQ
2.19.5 Coordinates: 32-52-00.00N / 97-00-35.82W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 35R. Magnetic variation: 4E
2.19.2 ILS identification: AJQ
2.19.5 Coordinates: 32-48-20.28N / 97-00-26.58W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 35R. Magnetic variation: 4E
2.19.2 ILS identification: AJQ
2.19.5 Coordinates: 32-52-22.61N / 97-00-35.71W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 35R. Magnetic variation: 4E
2.19.2 ILS identification: AJQ

2.19.5 Coordinates: 32-52-43.44N /
97-00-30.90W

2.19.6 Site elevation: 559 ft

2.19.1 ILS type: Glide Slope for runway 17R.
Magnetic variation: 4E

2.19.2 ILS identification: JHZ

2.19.5 Coordinates: 32-54-45.82N /
97-01-43.06W

2.19.6 Site elevation: 562 ft

2.19.1 ILS type: Outer Marker for runway 17R.
Magnetic variation: 4E

2.19.2 ILS identification: JHZ

2.19.5 Coordinates: 32-59-44.75N /
97-01-46.52W

2.19.6 Site elevation: 525 ft

2.19.1 ILS type: Localizer for runway 17R.
Magnetic variation: 4E

2.19.2 ILS identification: JHZ

2.19.5 Coordinates: 32-52-34.13N /
97-01-48.35W

2.19.6 Site elevation: 558 ft

2.19.1 ILS type: Middle Marker for runway 17R.
Magnetic variation: 4E

2.19.2 ILS identification: JHZ

2.19.5 Coordinates: 32-55-26.68N /
97-01-47.42W

2.19.6 Site elevation: 561 ft

2.19.1 ILS type: DME for runway 17R. Magnetic
variation: 4E

2.19.2 ILS identification: JHZ

2.19.5 Coordinates: 32-52-33.67N /
97-01-53.66W

General Remarks:

BIRDS ON & IN THE VICINITY OF AIRPORT.

PRIOR PERMISSION REQUIRED FROM THE PRIMARY TENANT AIRLINES TO OPERATE WITHIN THE CENTRAL TERMINAL AREA. PROPER MINIMUM OBJECT FREE AREA DISTANCES MAY NOT BE MAINTAINED FOR RAMP/APRON TAXILANES.

PRIOR PERMISSION REQUIRED FROM AIRPORT OPERATIONS FOR GENERAL AVIATION AIRCRAFT TO PROCEED TO AIRLINE TERMINAL GATE EXCEPT GENERAL AVIATION FACILITY.

STANDARD SAWED GROOVING 160 FT WIDE FULL LENGTH RUNWAYS 13L/31R; 18L/36R & 17R/35L. STANDARD GROOVING 130 FT WIDE FULL LENGTH RUNWAYS 17L/35R; 18R/36L;

2.19.6 Site elevation: 0 ft

2.19.1 ILS type: Glide Slope for runway 35L.
Magnetic variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-52-54.98N /
97-01-43.53W

2.19.6 Site elevation: 559 ft

2.19.1 ILS type: Middle Marker for runway 35L.
Magnetic variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-52-17.25N /
97-01-48.43W

2.19.6 Site elevation: 554 ft

2.19.1 ILS type: Localizer for runway 35L.
Magnetic variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-55-00.00N /
97-01-47.52W

2.19.6 Site elevation: 566 ft

2.19.1 ILS type: DME for runway 35L. Magnetic
variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-52-33.67N /
97-01-53.66W

2.19.6 Site elevation: 0 ft

2.19.1 ILS type: Outer Marker for runway 35L.
Magnetic variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-48-00.00N /
97-01-38.86W

2.19.6 Site elevation: 499 ft

13R/31L & 17C/35C.

AIRPORT UNDER CONSTRUCTION; PERSONNEL AND EQUIPMENT WORKING IN MOVEMENT AREAS.

TAKE-OFF DISTANCE FOR RUNWAY 17R FROM TAXIWAY EMERGENCY GEAR IS 13082 FT & FROM TAXIWAY EH IS 12816 FT.

LAND & HOLD SHORT SIGNS ON RUNWAY 17C AT TAXIWAY 'B' 10,460 FT S OF RUNWAY 17C THRESHOLD; RUNWAY 18R AT TAXIWAY 'B' 10,100 FT S OF RUNWAY 18R THRESHOLD; RUNWAY 35C AT TAXIWAY 'EJ' 9050 FT N OF RUNWAY 35C THRESHOLD; RUNWAY 36L AT TAXIWAY 'Z' 10,650 FT N OF RUNWAY 36L THRESHOLD; LIGHTED & MARKED WITH IN-PAVEMENT PULSATING WHITE LIGHTS.

TAKE-OFF DISTANCE FOR RUNWAY 36R FROM TAXIWAY WAYPOINT IS 12,815 FT; FROM TAXIWAY WQ IS 13,082 FT.

TAKE-OFF DISTANCE FOR RUNWAY 17L FROM TAXIWAY Q2 IS 8196 FT.

TAXIWAYS MAY REQUIRE JUDGMENTAL OVERSTEERING FOR LARGE AIRCRAFT.

TAKE-OFF DISTANCE FOR RUNWAY 35R FROM TAXIWAY Q9 IS 8196 FT.

TAKE-OFF DISTANCE FOR RUNWAY 35L FROM TAXIWAY EQ IS 13084 FT & FROM TAXIWAY EN ROUTE PENETRATION IS 12811 FT.

AIRCRAFT EXITING BY WAY OF APRON ENTRANCE/EXIT POINTS 42; 43 & 44 CONTACT GROUND CONTROL PRIOR TO TAXIING.

APRON ENTRANCE/EXIT POINTS 22, 24, 105, 107, & 122 CLOSED TO AIRCRAFT WITH WINGSPAN 125 FT & GREATER.

APRON ENTRANCE/EXIT POINTS 5, 7, 42 & 44 CLOSED TO AIRCRAFT WITH WINGSPAN 118 FT & GREATER.

FREQUENT GROUND SUPPORT EQUIPMENT UNDER ESCORT CROSSING TAXIWAYS A & B AT TAXIWAY HA.

AIRCRAFT PUSHING BACK OR POWERING BACK ON TERMINAL B APRON HAVE RIGHT OF WAY.

TAXIWAY EDGE REFLECTORS ALONG ALL TAXIWAYS.

TERMINAL B APRON TAXILANE BETWEEN APRON ENTRANCE/EXIT POINT TAXILANES 110 & 115 CLOSED TO AIRCRAFT WITH WINGSPAN 118 FT AND GREATER.

TAKE-OFF DISTANCE FOR RUNWAY 18L FROM TAXIWAY WG IS 13,082; FROM TAXIWAY WH IS 12,815.

PRIOR PERMISSION REQUIRED GA OPERATIONS 2200-0600; CALL AIRPORT OPERATIONS 972-973-3112.

TAXIWAY G11 EAST OF TAXIWAY G CLOSED TO AIRCRAFT WITH WINGSPAN 125 FT & GREATER.

APRON ENTRANCE/EXIT POINT 124 CLOSED TO AIRCRAFT WITH WINGSPAN 200 FT AND GREATER.

TAXIWAY A5 CLOSED TO AIRCRAFT WITH WINGSPAN 171 FT AND GREATER.

TAKE-OFF DISTANCE FOR RUNWAY 17C FROM TAXIWAY EMERGENCY GEAR IS 13,082 FT.

TAKE-OFF DISTANCE FOR RUNWAY 18R FROM TAXIWAY WG IS 13,082 FT.

APRON ENTRANCE/EXIT POINTS 52 & 53 CLOSED TO AIRCRAFT WITH WINGSPAN 171 FT & GREATER.

AIRCRAFT USING GATES D6-D17 MUST OBTAIN APPROVAL FROM DFW RAMP TOWER 129.95 PRIOR TO ENTERING RAMP & PRIOR TO PUSHBACK 0530-2230. USE EXTREME CARE AT OTHER TIMES.

APRON ENTRANCE/EXIT POINT 45 CLOSED 2200-0800.

APRON ENTRANCE/EXIT POINTS 32, 33, 34, 35, 36, 37, 38 & 39 CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 135 FT.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

PRIOR PERMISSION REQUIRED AIRCRAFT WITH WINGSPAN 215 FT OR GREATER (GROUP VI) CALL AIRPORT OPERATIONS 972-973-3112 FOR FOLLOW-ME SERVICES WHILE TAXIING TO & FROM RAMP & RUNWAYS.

RAMP AREA 1E CLOSED EXCEPT PRIOR PERMISSION REQUIRED CALL 972-973-3121.

RUNWAY VISUAL SCREEN 20 FT AGL 1180 FT S APPROACH END RUNWAY 35C.

RUNWAY VISUAL SCREEN 22 FT AGL 1179 FT S APPROACH END RUNWAY 35L.

El Paso, TX
El Paso Intl
ICAO Identifier KELP

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 31-48-26.10N / 106-22-39.20W
- 2.2.2 From City: 4 Miles NE Of El Paso, TX
- 2.2.3 Elevation: 3959 ft
- 2.2.5 Magnetic variation: 11E (1985)
- 2.2.6 Airport Contact: Monica Lombrana
6701 CONVAIR RD
El Paso, TX 79925
(915-780-4749)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1+,B+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 04
- 2.12.2 True Bearing: 50
- 2.12.3 Dimensions: 12020 ft x 150 ft
- 2.12.5 Coordinates: 31-48-00.00N / 106-23-59.46W
- 2.12.6 Threshold elevation: 3917 ft
- 2.12.6 Touchdown zone elevation: 3923 ft

- 2.12.1 Designation: 22
- 2.12.2 True Bearing: 230
- 2.12.3 Dimensions: 12020 ft x 150 ft
- 2.12.5 Coordinates: 31-49-22.01N / 106-22-12.78W
- 2.12.6 Threshold elevation: 3949 ft
- 2.12.6 Touchdown zone elevation: 3949 ft

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 88

- 2.12.3 Dimensions: 5499 ft x 75 ft
- 2.12.5 Coordinates: 31-48-20.58N / 106-22-11.46W
- 2.12.6 Threshold elevation: 3952 ft
- 2.12.6 Touchdown zone elevation: 3957 ft

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 268
- 2.12.3 Dimensions: 5499 ft x 75 ft
- 2.12.5 Coordinates: 31-48-22.17N / 106-21-00.00W
- 2.12.6 Threshold elevation: 3949 ft
- 2.12.6 Touchdown zone elevation: 3951 ft

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 93
- 2.12.3 Dimensions: 9025 ft x 150 ft
- 2.12.5 Coordinates: 31-48-00.00N / 106-23-31.85W
- 2.12.6 Threshold elevation: 3925 ft
- 2.12.6 Touchdown zone elevation: 3937 ft

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 273
- 2.12.3 Dimensions: 9025 ft x 150 ft
- 2.12.5 Coordinates: 31-48-00.00N / 106-21-47.47W
- 2.12.6 Threshold elevation: 3958 ft
- 2.12.6 Touchdown zone elevation: 3958 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 04
- 2.13.2 Takeoff run available: 12020
- 2.13.3 Takeoff distance available: 12020
- 2.13.4 Accelerate-stop distance available: 12020
- 2.13.5 Landing distance available: 12020

- 2.13.1 Designation: 22
- 2.13.2 Takeoff run available: 12020
- 2.13.3 Takeoff distance available: 12020
- 2.13.4 Accelerate-stop distance available: 12449
- 2.13.5 Landing distance available: 12020

- 2.13.1 Designation: 08L
- 2.13.2 Takeoff run available: 5493
- 2.13.3 Takeoff distance available: 5493
- 2.13.4 Accelerate-stop distance available: 5493
- 2.13.5 Landing distance available: 5493

- 2.13.1 Designation: 26R
- 2.13.2 Takeoff run available: 5493

2.13.3 Takeoff distance available: 5493
2.13.4 Accelerate-stop distance available: 5493
2.13.5 Landing distance available: 5493

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 9025
2.13.3 Takeoff distance available: 9025
2.13.4 Accelerate-stop distance available: 9025
2.13.5 Landing distance available: 9025

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 9025
2.13.3 Takeoff distance available: 9025
2.13.4 Accelerate-stop distance available: 9025
2.13.5 Landing distance available: 9025

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 22
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 08R
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 26L
2.14.2 Approach lighting system: Omnidirectional
approach lighting system
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 120 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: UTILITY
2.18.3 Service designation: 121.3 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: CD/P PTC
2.18.3 Service designation: 125 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 254.3 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 263 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P CLASS C
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 379.1 MHz

2.18.1 Service designation: APCH/P CLASS C
2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: DEP/P CLASS C
2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: APCH/P CLASS C IC
2.18.3 Service designation: 124.25 MHz

2.18.1 Service designation: APCH/P CLASS C IC
2.18.3 Service designation: 298.85 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 239.275 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 04. Magnetic
variation: 11E

2.19.2 ILS identification: ETF
2.19.5 Coordinates: 31-47-58.72N /
106-24-13.53W

2.19.6 Site elevation: 3926 ft

2.19.1 ILS type: Localizer for runway 04. Magnetic

variation: 11E
2.19.2 ILS identification: ETF
2.19.5 Coordinates: 31-49-28.45N /
106-22-00.00W
2.19.6 Site elevation: 3950 ft

Magnetic variation: 11E
2.19.2 ILS identification: ELP
2.19.5 Coordinates: 31-49-17.29N /
106-22-26.60W
2.19.6 Site elevation: 3940 ft

2.19.1 ILS type: Localizer for runway 22. Magnetic
variation: 11E
2.19.2 ILS identification: ELP
2.19.5 Coordinates: 31-47-55.92N /
106-24-12.90W
2.19.6 Site elevation: 3911 ft

2.19.1 ILS type: DME for runway 22. Magnetic
variation: 11E
2.19.2 ILS identification: ELP
2.19.5 Coordinates: 31-47-58.72N /
106-24-13.53W
2.19.6 Site elevation: 3926 ft

2.19.1 ILS type: Middle Marker for runway 22.
Magnetic variation: 11E
2.19.2 ILS identification: ELP
2.19.5 Coordinates: 31-49-33.88N /
106-21-56.93W
2.19.6 Site elevation: 3947 ft

2.19.1 ILS type: Outer Marker for runway 22.
Magnetic variation: 11E
2.19.2 ILS identification: ELP
2.19.5 Coordinates: 31-51-37.02N /
106-19-00.00W
2.19.6 Site elevation: 3940 ft

2.19.1 ILS type: Glide Slope for runway 22.

General Remarks:

24 HR PRIOR PERMISSION REQUIRED CLASS A EXPLOSIVES CONTACT 915-780-4749.

CAUTION: BIGGS AAF 2NM NW RUNWAY 21 CAN BE MISTAKEN FOR ELP RUNWAY 22.

SAILPLANE & ULTRALIGHT OPERATIONS IN THE VICINITY OF HORIZON AIRPORT 8
NAUTICAL MILE ESE.

NORTH BOUND TRAFFIC PROHIBITED ON TAXIWAY F SOUTH OF TAXIWAY E.

TAXIWAY A SOUTH OF TAXIWAY E; TAXIWAYS B & C; TAXIWAY J NE OF TAXIWAY K1;
TAXIWAY K NE OF TAXIWAY K1 BETWEEN TAXIWAY J & NORTH CARGO RAMP; TAXIWAYS U
& V SOUTH OF TAXIWAY L; & TAXIWAY K2 NOT VISIBLE FROM ATCT.

HOLDING POSITION MARKINGS FOR RUNWAY 8R APPROACH AND RUNWAY 4/22 ARE IN
CLOSE PROXIMITY TO THE TERMINAL APRON; REVIEW AIRPORT DIAGRAM PRIOR TO
PUSHBACK FROM THE GATE.

MILITARY USERS SHOULD REVIEW NOISE ABATEMENT PROCEDURES LISTED FOR BIGGS
AAF.

NOISE ABATEMENT PROCEDURES IN EFFECT, CONTACT ATCT FOR DETAILS.

ENGINE POWER IS RESTRICTED TO IDLE POWER ON ONE ENGINE AT A TIME FOR MAX 5 MIN
ON ANY TERMINAL OR PARKING APRONS, CROSS-BLEED STARTS OR OTHER PRE DEP
ACTIVITY ON MOVEMENT AREAS ONLY, MAINT OR OTHER REQUIREMENT NEEDING
LONGER OR HIGHER POWER CONTACT TOWER FOR DIRECTIONS TO DESIGNATED RUNUP
AREAS.

611 FT AGL UNLIGHTED SMOKESTACK 8 MILES WSW OF AIRPORT.

Houston, TX
George Bush Intercontinental/Houston
ICAO Identifier KIAH

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 29-59-00.00N / 95-20-29.19W
- 2.2.2 From City: 15 Miles N Of Houston, TX
- 2.2.3 Elevation: 97 ft
- 2.2.5 Magnetic variation: 5E (2000)
- 2.2.6 Airport Contact: Mary Case
PO BOX 60106
Houston, TX 77205
(281-230-3100)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 15L
- 2.12.2 True Bearing: 152
- 2.12.3 Dimensions: 12001 ft x 150 ft
- 2.12.5 Coordinates: 29-59-16.40N / 95-21-28.33W
- 2.12.6 Threshold elevation: 96 ft
- 2.12.6 Touchdown zone elevation: 96 ft

- 2.12.1 Designation: 33R
- 2.12.2 True Bearing: 332
- 2.12.3 Dimensions: 12001 ft x 150 ft
- 2.12.5 Coordinates: 29-57-31.55N / 95-20-24.19W
- 2.12.6 Threshold elevation: 86 ft
- 2.12.6 Touchdown zone elevation: 89 ft

- 2.12.1 Designation: 15R
- 2.12.2 True Bearing: 152

- 2.12.3 Dimensions: 9999 ft x 150 ft
- 2.12.5 Coordinates: 29-59-16.10N / 95-21-41.03W
- 2.12.6 Threshold elevation: 97 ft
- 2.12.6 Touchdown zone elevation: 97 ft

- 2.12.1 Designation: 33L
- 2.12.2 True Bearing: 332
- 2.12.3 Dimensions: 9999 ft x 150 ft
- 2.12.5 Coordinates: 29-57-48.75N / 95-20-47.58W
- 2.12.6 Threshold elevation: 88 ft
- 2.12.6 Touchdown zone elevation: 91 ft

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 9402 ft x 150 ft
- 2.12.5 Coordinates: 29-59-36.30N / 95-21-17.87W
- 2.12.6 Threshold elevation: 96 ft
- 2.12.6 Touchdown zone elevation: 97 ft

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 9402 ft x 150 ft
- 2.12.5 Coordinates: 29-59-36.38N / 95-19-30.95W
- 2.12.6 Threshold elevation: 94 ft
- 2.12.6 Touchdown zone elevation: 97 ft

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 29-58-39.33N / 95-20-00.00W
- 2.12.6 Threshold elevation: 92 ft
- 2.12.6 Touchdown zone elevation: 92 ft

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 10000 ft x 150 ft
- 2.12.5 Coordinates: 29-58-39.41N / 95-18-00.00W
- 2.12.6 Threshold elevation: 86 ft
- 2.12.6 Touchdown zone elevation: 88 ft

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 9000 ft x 150 ft
- 2.12.5 Coordinates: 30-00-25.78N / 95-21-31.65W

2.12.6 Threshold elevation: 92 ft
2.12.6 Touchdown zone elevation: 96 ft

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.5 Coordinates: 30-00-25.86N /
95-19-49.29W
2.12.6 Threshold elevation: 95 ft
2.12.6 Touchdown zone elevation: 97 ft

AD 2.13 Declared distances

2.13.1 Designation: 15L
2.13.2 Takeoff run available: 12001
2.13.3 Takeoff distance available: 12001
2.13.4 Accelerate-stop distance available: 12001
2.13.5 Landing distance available: 12001

2.13.1 Designation: 33R
2.13.2 Takeoff run available: 12001
2.13.3 Takeoff distance available: 12001
2.13.4 Accelerate-stop distance available: 12001
2.13.5 Landing distance available: 12001

2.13.1 Designation: 15R
2.13.2 Takeoff run available: 9999
2.13.3 Takeoff distance available: 9999
2.13.4 Accelerate-stop distance available: 9999
2.13.5 Landing distance available: 9999

2.13.1 Designation: 33L
2.13.2 Takeoff run available: 9999
2.13.3 Takeoff distance available: 9999
2.13.4 Accelerate-stop distance available: 9999
2.13.5 Landing distance available: 9999

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 9402
2.13.3 Takeoff distance available: 9402
2.13.4 Accelerate-stop distance available: 9402
2.13.5 Landing distance available: 9402

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 9402
2.13.3 Takeoff distance available: 9402
2.13.4 Accelerate-stop distance available: 9402
2.13.5 Landing distance available: 9402

2.13.1 Designation: 09
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 27
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15L
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 33R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.1 Designation: 15R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 33L
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 08R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 26L
2.14.2 Approach lighting system: ALSF2: Standard

2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration	2.18.3 Service designation: 121.7 MHz
2.14.4 Visual approach slope indicator system: 4-light PAPI on right	2.18.1 Service designation: CLASS B
2.14.1 Designation: 09	2.18.3 Service designation: 123.8 MHz
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights	2.18.1 Service designation: DEP/P
2.14.4 Visual approach slope indicator system: 4-light PAPI on right	2.18.3 Service designation: 123.8 MHz
2.14.1 Designation: 27	2.18.1 Service designation: D-ATIS
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration	2.18.3 Service designation: 124.05 MHz
2.14.4 Visual approach slope indicator system: 4-light PAPI on left	2.18.4 Hours of operation: 24
2.14.1 Designation: 08L	2.18.1 Service designation: APCH/P IC
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration	2.18.3 Service designation: 124.35 MHz
2.14.1 Designation: 26R	2.18.1 Service designation: LCL/P IC
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration	2.18.3 Service designation: 125.35 MHz
2.14.1 Designation: 26R	2.18.1 Service designation: LCL/P IC
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration	2.18.3 Service designation: 127.3 MHz
2.18.1 Service designation: DEP/P	2.18.1 Service designation: CD/P
2.18.3 Service designation: 119.7 MHz	2.18.3 Service designation: 128.1 MHz
2.18.1 Service designation: CLASS B	2.18.1 Service designation: DEP/P
2.18.3 Service designation: 119.7 MHz	2.18.3 Service designation: 133.6 MHz
2.18.1 Service designation: APCH/P IC	2.18.1 Service designation: CLASS B
2.18.3 Service designation: 120.05 MHz	2.18.3 Service designation: 133.6 MHz
2.18.1 Service designation: EMERG	2.18.1 Service designation: CLASS B
2.18.3 Service designation: 121.5 MHz	2.18.3 Service designation: 134.45 MHz
2.18.1 Service designation: GND/P IC	2.18.1 Service designation: LCL/P IC
	2.18.3 Service designation: 135.15 MHz
	2.18.1 Service designation: CLASS B
	2.18.3 Service designation: 257.2 MHz
	2.18.1 Service designation: DEP/P
	2.18.3 Service designation: 257.2 MHz
	2.18.1 Service designation: CLASS B
	2.18.3 Service designation: 257.7 MHz
	2.18.1 Service designation: DEP/P
	2.18.3 Service designation: 257.7 MHz
	2.18.1 Service designation: CLASS B
	2.18.3 Service designation: 281.4 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 281.4 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 284 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 316.15 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 379.1 MHz

2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 119.95 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 288.25 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 290.2 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 120.725 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Middle Marker for runway 15L.
Magnetic variation: 5E
2.19.2 ILS identification: HSQ
2.19.5 Coordinates: 29-59-44.91N /
95-21-45.76W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 15L.
Magnetic variation: 5E
2.19.2 ILS identification: HSQ
2.19.5 Coordinates: 29-57-22.82N /
95-20-18.86W
2.19.6 Site elevation: 83 ft

2.19.1 ILS type: Outer Marker for runway 15L.
Magnetic variation: 5E
2.19.2 ILS identification: HSQ
2.19.5 Coordinates: 30-04-29.27N /
95-24-46.16W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 33R.
Magnetic variation: 5E
2.19.2 ILS identification: CDG
2.19.5 Coordinates: 29-57-00.00N /
95-20-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 33R.
Magnetic variation: 5E
2.19.2 ILS identification: CDG
2.19.5 Coordinates: 29-53-33.65N /
95-17-56.01W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 33R.
Magnetic variation: 5E
2.19.2 ILS identification: CDG
2.19.5 Coordinates: 29-59-23.39N /
95-21-32.60W
2.19.6 Site elevation: 94 ft

2.19.1 ILS type: Glide Slope for runway 33R.
Magnetic variation: 5E
2.19.2 ILS identification: CDG
2.19.5 Coordinates: 29-57-38.81N /
95-20-33.46W
2.19.6 Site elevation: 81 ft

2.19.1 ILS type: Glide Slope for runway 15R.
Magnetic variation: 5E
2.19.2 ILS identification: LKM
2.19.5 Coordinates: 29-59-00.00N /
95-21-39.03W
2.19.6 Site elevation: 91 ft

2.19.1 ILS type: Localizer for runway 15R.
Magnetic variation: 5E
2.19.2 ILS identification: LKM
2.19.5 Coordinates: 29-57-39.40N /
95-20-41.87W
2.19.6 Site elevation: 84 ft

2.19.1 ILS type: DME for runway 08R. Magnetic
variation: 3E
2.19.2 ILS identification: IAH
2.19.5 Coordinates: 29-59-38.92N /
95-21-31.30W
2.19.6 Site elevation: 109 ft

2.19.1 ILS type: Outer Marker for runway 08R.
Magnetic variation: 3E
2.19.2 ILS identification: IAH
2.19.5 Coordinates: 29-59-36.55N /
95-28-20.43W
2.19.6 Site elevation: 117 ft

2.19.1 ILS type: Glide Slope for runway 08R.
Magnetic variation: 3E
2.19.2 ILS identification: IAH
2.19.5 Coordinates: 29-59-40.32N /
95-21-00.00W
2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Inner Marker for runway 08R.
Magnetic variation: 3E
2.19.2 ILS identification: IAH
2.19.5 Coordinates: 29-59-36.29N /
95-21-29.37W
2.19.6 Site elevation: 94 ft

2.19.1 ILS type: Middle Marker for runway 08R.
Magnetic variation: 3E
2.19.2 ILS identification: IAH
2.19.5 Coordinates: 29-59-36.24N /
95-21-51.93W
2.19.6 Site elevation: 94 ft

2.19.1 ILS type: Localizer for runway 08R.
Magnetic variation: 3E
2.19.2 ILS identification: IAH
2.19.5 Coordinates: 29-59-36.39N /
95-19-19.59W
2.19.6 Site elevation: 91 ft

2.19.1 ILS type: Outer Marker for runway 26L.
Magnetic variation: 3E
2.19.2 ILS identification: JYV
2.19.5 Coordinates: 29-59-36.04N /
95-12-54.15W
2.19.6 Site elevation: 75 ft

2.19.1 ILS type: DME for runway 26L. Magnetic
variation: 3E
2.19.2 ILS identification: JYV
2.19.5 Coordinates: 29-59-38.92N /
95-21-31.30W
2.19.6 Site elevation: 109 ft

2.19.1 ILS type: Glide Slope for runway 26L.
Magnetic variation: 3E
2.19.2 ILS identification: JYV
2.19.5 Coordinates: 29-59-39.54N /
95-19-42.80W
2.19.6 Site elevation: 88 ft

2.19.1 ILS type: Localizer for runway 26L.
Magnetic variation: 3E

2.19.2 ILS identification: JYV
2.19.5 Coordinates: 29-59-36.29N /
95-21-31.28W
2.19.6 Site elevation: 93 ft

2.19.1 ILS type: Middle Marker for runway 26L.
Magnetic variation: 3E
2.19.2 ILS identification: JYV
2.19.5 Coordinates: 29-59-36.42N /
95-18-57.72W
2.19.6 Site elevation: 91 ft

2.19.1 ILS type: Inner Marker for runway 26L.
Magnetic variation: 3E
2.19.2 ILS identification: JYV
2.19.5 Coordinates: 29-59-36.39N /
95-19-20.60W
2.19.6 Site elevation: 93 ft

2.19.1 ILS type: Glide Slope for runway 09.
Magnetic variation: 3E
2.19.2 ILS identification: UYO
2.19.5 Coordinates: 29-58-35.39N /
95-19-50.68W
2.19.6 Site elevation: 86 ft

2.19.1 ILS type: Middle Marker for runway 09.
Magnetic variation: 3E
2.19.2 ILS identification: UYO
2.19.5 Coordinates: 29-58-39.36N /
95-20-32.49W
2.19.6 Site elevation: 92 ft

2.19.1 ILS type: Outer Marker for runway 09.
Magnetic variation: 3E
2.19.2 ILS identification: UYO
2.19.5 Coordinates: 29-58-44.10N /
95-26-00.00W
2.19.6 Site elevation: 105 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic
variation: 3E
2.19.2 ILS identification: UYO
2.19.5 Coordinates: 29-58-39.41N /
95-17-57.58W
2.19.6 Site elevation: 81 ft

2.19.1 ILS type: DME for runway 09. Magnetic
variation: 3E
2.19.2 ILS identification: UYO
2.19.5 Coordinates: 29-58-35.38N /

95-20-13.58W
2.19.6 Site elevation: 100 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 3E
2.19.2 ILS identification: GHI
2.19.5 Coordinates: 29-58-39.33N / 95-20-15.29W
2.19.6 Site elevation: 87 ft

2.19.1 ILS type: DME for runway 27. Magnetic variation: 3E
2.19.2 ILS identification: GHI
2.19.5 Coordinates: 29-58-35.38N / 95-20-13.58W
2.19.6 Site elevation: 100 ft

2.19.1 ILS type: Outer Marker for runway 27. Magnetic variation: 3E
2.19.2 ILS identification: GHI
2.19.5 Coordinates: 29-58-41.04N / 95-13-20.44W
2.19.6 Site elevation: 80 ft

2.19.1 ILS type: Inner Marker for runway 27. Magnetic variation: 3E
2.19.2 ILS identification: GHI
2.19.5 Coordinates: 29-58-39.41N / 95-17-59.16W
2.19.6 Site elevation: 85 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 3E
2.19.2 ILS identification: GHI
2.19.5 Coordinates: 29-58-35.44N / 95-18-20.86W
2.19.6 Site elevation: 81 ft

2.19.1 ILS type: Middle Marker for runway 27. Magnetic variation: 3E
2.19.2 ILS identification: GHI
2.19.5 Coordinates: 29-58-39.42N / 95-17-37.46W
2.19.6 Site elevation: 83 ft

2.19.1 ILS type: Glide Slope for runway 08L. Magnetic variation: 3E
2.19.2 ILS identification: BZU
2.19.5 Coordinates: 30-00-29.75N / 95-21-18.69W

2.19.6 Site elevation: 88 ft
2.19.1 ILS type: Localizer for runway 08L. Magnetic variation: 3E
2.19.2 ILS identification: BZU
2.19.5 Coordinates: 30-00-25.87N / 95-19-37.01W
2.19.6 Site elevation: 94 ft

2.19.1 ILS type: DME for runway 08L. Magnetic variation: 3E
2.19.2 ILS identification: BZU
2.19.5 Coordinates: 30-00-30.07N / 95-19-37.07W
2.19.6 Site elevation: 90 ft

2.19.1 ILS type: Inner Marker for runway 08L. Magnetic variation: 3E
2.19.2 ILS identification: BZU
2.19.5 Coordinates: 30-00-25.77N / 95-21-40.86W
2.19.6 Site elevation: 92 ft

2.19.1 ILS type: Glide Slope for runway 26R. Magnetic variation: 3E
2.19.2 ILS identification: OND
2.19.5 Coordinates: 30-00-29.81N / 95-20-00.00W
2.19.6 Site elevation: 91 ft

2.19.1 ILS type: Localizer for runway 26R. Magnetic variation: 3E
2.19.2 ILS identification: OND
2.19.5 Coordinates: 30-00-25.78N / 95-21-43.93W
2.19.6 Site elevation: 91 ft

2.19.1 ILS type: DME for runway 26R. Magnetic variation: 3E
2.19.2 ILS identification: OND
2.19.5 Coordinates: 30-00-21.58N / 95-21-44.35W
2.19.6 Site elevation: 84 ft

2.19.1 ILS type: Inner Marker for runway 26R. Magnetic variation: 3E
2.19.2 ILS identification: OND
2.19.5 Coordinates: 30-00-25.87N / 95-19-40.42W
2.19.6 Site elevation: 96 ft

General Remarks:

BIRDS ON & IN VICINITY OF AIRPORT.

TAXIWAYS 'RA', 'RB' & 'SC' NORTH OF TAXIWAY 'SB' ARE DESIGNATED NON-MOVEMENT AREAS OPERATED BY COA RAMP CONTROL.

CAUTION: APPROACH END RUNWAY 26L BRIGHT LIGHTS APPROXIMATELY ONE MILE FROM THRESHOLD & 900 FT S OF CENTERLINE.

9 FT AGL UNMARKED SECURITY FENCE ADJACENT TO FBO & CORPORATE BASE OPERATOR RAMPS AND NONMOVEMENT AREA TAXILANES. HELICOPTER HOVER/TAXI RESTRICTED TO HARD SURFACE MOVEMENT AREAS ONLY.

TAXIWAY 'NR' CLOSED TO AIRCRAFT WITH WINGSPANS GREATER THAN 125 FT BETWEEN TAXIWAY 'WD' & TAXIWAY 'WB'.

TAXIWAY 'SF' BETWEEN THE SOUTH RAMP & TAXIWAY 'NB' IS DESIGNATED NON-MOVEMENT AREAS.

FOR FLIGHT PLAN FILING CALL 1-800-WX-BRIEF.

DUAL TAXIWAY OPERATIONS TAXIWAY NK BETWEEN TAXIWAY NB & NORTH RAMP; WEST CENTERLINE RESTRICTED TO AIRCRAFT MAX WINGSPANS 125 FT & EAST CENTERLINE MAX WINGSPANS 214 FT.

THE FOLLOWING MOVEMENT AREAS ARE NOT VISIBLE FROM THE ATCT: PORTIONS OF TAXIWAYS 'WA' & 'WB' FROM TAXIWAY 'WH' TO THE APPROACH END RUNWAY 33R; TAXIWAYS 'WA' & 'WB' FROM TAXIWAY 'WD' NORTH FOR 400 FT; TAXIWAY 'WD' FROM TAXIWAY 'WA' TO TAXIWAY 'NR'; TAXIWAY 'NR'; TAXIWAY 'WL' FROM RUNWAY 15L TO TAXIWAY 'WB' & TAXIWAY 'WM'.

NORTH RAMP NORTH & SOUTH TAXI LANES CLOSED TO AIRCRAFT WITH WINGSPANS GREATER THAN 125 FT.

NORTH RAMP CONNECTOR RESTRICTED TO AIRCRAFT WITH WINGSPAN 125 FT AND BELOW.

RUNWAY 15L/33R MAGNETIC ANOMALIES MAY AFFECT COMPASS HEADING FOR TAKE-OFF.

TAXIWAYS AIRMET & WESTBOUND MAGNETIC ANOMALIES MAY AFFECT COMPASS HEADING.

NORTH RAMP NORTH TAXILANE BETWEEN TAXIWAY NG/SPOT 6 CLOSED FROM 2100-0800.

NORTH RAMP TAXILANE BETWEEN TAXIWAYS NF & NR RESTRICTED TO AIRCRAFT WITH WINGSPAN 125 FT & BELOW.

TAXIWAY WC WEST OF RUNWAY 15R/33L RESTRICTED TO AIRCRAFT WITH 118 FT WINGSPAN AND BELOW.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH

MODE C ON ALL TAXIWAYS AND RUNWAYS.

NOISE SENSITIVE AREA NORTH, EAST AND WEST OF AIRPORT.

TAXIWAY LANE RC CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 135 FT.

NJ TAXILANE BETWEEN SPOT 10 AND THE NORTH RAMP CONNECTOR CLOSED TO WINGSPANS OVER 135 FT.

Laredo, TX
Laredo Intl
ICAO Identifier KLRD

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 27-32-37.68N / 99-27-41.52W
- 2.2.2 From City: 3 Miles NE Of Laredo, TX
- 2.2.3 Elevation: 508 ft
- 2.2.5 Magnetic variation: 8E (1985)
- 2.2.6 Airport Contact: Jose Flores
5210 BOB BULLOCK LOOP
Laredo, TX 78041
(956-795-2000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 7/1/1975

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 32
- 2.10.1.b Type of obstacle: Road (12 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 250 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 147
- 2.12.3 Dimensions: 5928 ft x 150 ft
- 2.12.5 Coordinates: 27-32-58.03N / 99-28-00.00W
- 2.12.6 Threshold elevation: 505 ft
- 2.12.6 Touchdown zone elevation: 508 ft

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 327
- 2.12.3 Dimensions: 5928 ft x 150 ft

- 2.12.5 Coordinates: 27-32-00.00N / 99-27-24.66W
- 2.12.6 Threshold elevation: 467 ft
- 2.12.6 Touchdown zone elevation: 494 ft
- 2.12.7 Slope: 0.6UP

- 2.12.1 Designation: 17R
- 2.12.2 True Bearing: 183
- 2.12.3 Dimensions: 7711 ft x 150 ft
- 2.12.5 Coordinates: 27-33-14.34N / 99-27-45.16W
- 2.12.6 Threshold elevation: 504 ft
- 2.12.6 Touchdown zone elevation: 504 ft

- 2.12.1 Designation: 35L
- 2.12.2 True Bearing: 3
- 2.12.3 Dimensions: 7711 ft x 150 ft
- 2.12.5 Coordinates: 27-31-58.06N / 99-27-48.99W
- 2.12.6 Threshold elevation: 484 ft
- 2.12.6 Touchdown zone elevation: 497 ft
- 2.12.7 Slope: 0.3UP

- 2.12.1 Designation: 17L
- 2.12.2 True Bearing: 183
- 2.12.3 Dimensions: 8236 ft x 150 ft
- 2.12.5 Coordinates: 27-33-22.93N / 99-27-33.60W
- 2.12.6 Threshold elevation: 499 ft
- 2.12.6 Touchdown zone elevation: 499 ft
- 2.12.7 Slope: 0.2DOWN

- 2.12.1 Designation: 35R
- 2.12.2 True Bearing: 3
- 2.12.3 Dimensions: 8236 ft x 150 ft
- 2.12.5 Coordinates: 27-32-00.00N / 99-27-37.69W
- 2.12.6 Threshold elevation: 474 ft
- 2.12.6 Touchdown zone elevation: 487 ft
- 2.12.7 Slope: 0.4UP

AD 2.13 Declared distances

- 2.13.1 Designation: 14
- 2.13.2 Takeoff run available: 5928
- 2.13.3 Takeoff distance available: 5928
- 2.13.4 Accelerate-stop distance available: 5928
- 2.13.5 Landing distance available: 5928

- 2.13.1 Designation: 32
- 2.13.2 Takeoff run available: 5928
- 2.13.3 Takeoff distance available: 5928

2.13.4 Accelerate–stop distance available: 5928
2.13.5 Landing distance available: 5928

2.13.1 Designation: 17R
2.13.2 Takeoff run available: 7711
2.13.3 Takeoff distance available: 7711
2.13.4 Accelerate–stop distance available: 7711
2.13.5 Landing distance available: 7711

2.13.1 Designation: 35L
2.13.2 Takeoff run available: 7711
2.13.3 Takeoff distance available: 7711
2.13.4 Accelerate–stop distance available: 7711
2.13.5 Landing distance available: 7711

2.13.1 Designation: 17L
2.13.2 Takeoff run available: 8236
2.13.3 Takeoff distance available: 8236
2.13.4 Accelerate–stop distance available: 8236
2.13.5 Landing distance available: 8236

2.13.1 Designation: 35R
2.13.2 Takeoff run available: 8236
2.13.3 Takeoff distance available: 8236
2.13.4 Accelerate–stop distance available: 8236
2.13.5 Landing distance available: 8236

AD 2.14 Approach and runway lighting

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system:
4–box VASI on left

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system:
4–box VASI on left

2.14.1 Designation: 17R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4–box VASI on left

2.14.1 Designation: 35L
2.14.4 Visual approach slope indicator system:
4–box VASI on left

2.14.1 Designation: 17L
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.9 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 125.775 MHz
2.18.4 Hours of operation: 24

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 17R.
Magnetic variation: 8E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–33–00.00N /
99–27–41.22W
2.19.6 Site elevation: 498 ft

2.19.1 ILS type: Middle Marker for runway 17R.
Magnetic variation: 8E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–33–41.55N /
99–27–43.80W
2.19.6 Site elevation: 484 ft

2.19.1 ILS type: Localizer for runway 17R.
Magnetic variation: 8E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–31–51.74N /
99–27–49.30W
2.19.6 Site elevation: 476 ft

2.19.1 ILS type: Outer Marker for runway 17R.
Magnetic variation: 8E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–38–32.52N /
99–27–29.32W
2.19.6 Site elevation: 675 ft

2.19.1 ILS type: DME for runway 17R. Magnetic
variation: 8E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–31–50.97N /

99-27-46.56W
2.19.6 Site elevation: 476 ft

General Remarks:

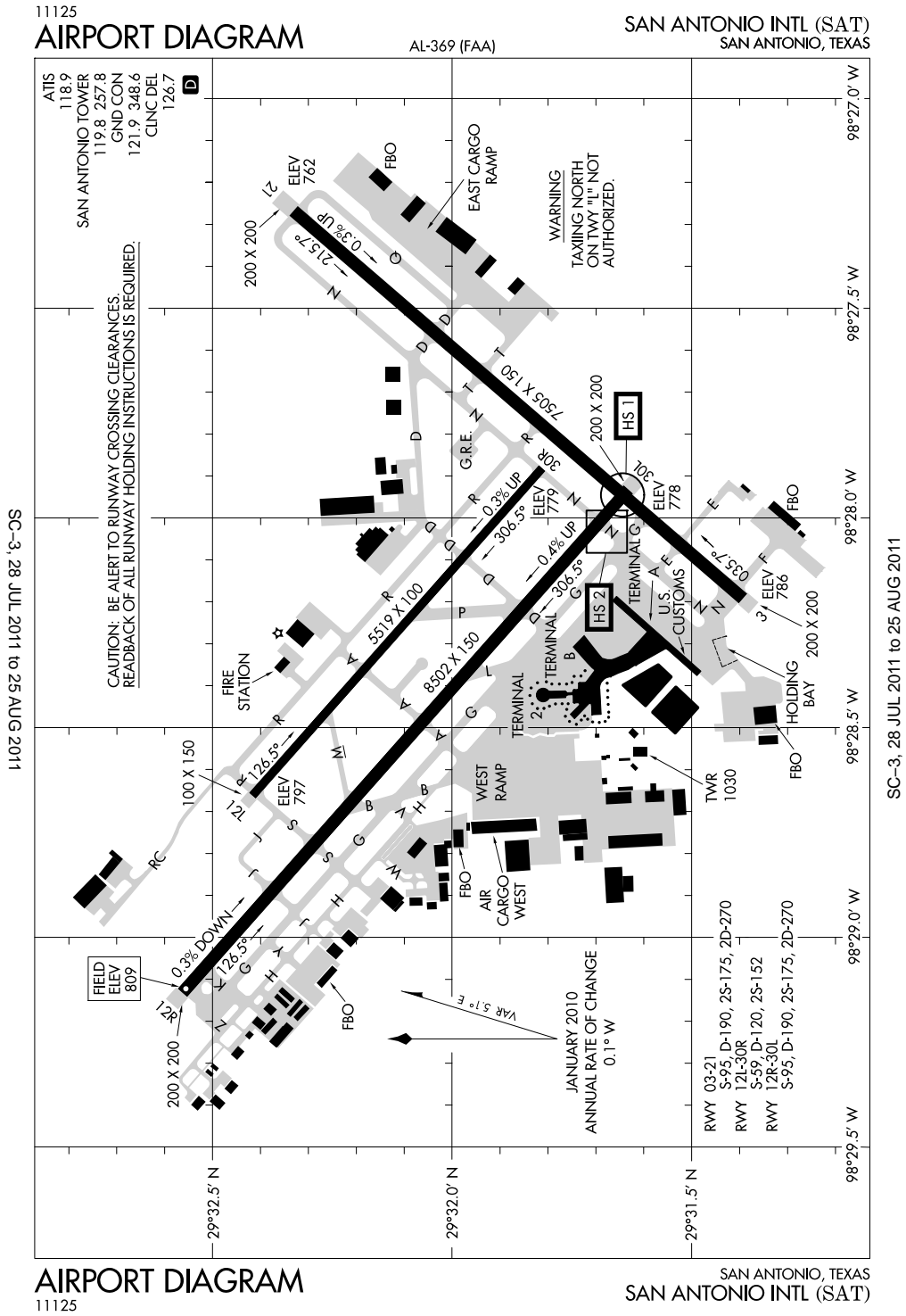
5' LINE OF SIGHT NOT AVAILABLE BETWEEN ENDS OF RUNWAY 14/32.

RUNWAY 14/32 RESTRICTED TO AIRCRAFT LESS THAN 60,000 LBS DTW.

TAXIWAY C CLOSED BETWEEN RUNWAY 17L/35R & RUNWAY 17R INDEFINITELY.

EMAS ARRESTOR BED PARTIALLY DAMAGED, POTENTIAL DEGRADED PERFORMANCE FOR OFF RUNWAY CENTERLINE ENGAGEMENT.

San Antonio, Texas
San Antonio International
ICAO Identifier KSAT



San Antonio, TX
San Antonio Intl
ICAO Identifier KSAT

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 29-32-00.00N / 98-28-11.20W
- 2.2.2 From City: 7 Miles N Of San Antonio, TX
- 2.2.3 Elevation: 809 ft
- 2.2.5 Magnetic variation: 8E (1980)
- 2.2.6 Airport Contact: Frank R. Miller
9800 AIRPORT BLVD
San Antonio, TX 78216
(210-207-3450)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 30L
- 2.10.1.b Type of obstacle: Bldg (79 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 300 ft from Centerline

- 2.10.1.a. Runway designation: 03
- 2.10.1.b Type of obstacle: Pole (46 ft). Lighted
- 2.10.1.c Location of obstacle: 225 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 12L
- 2.12.2 True Bearing: 132
- 2.12.3 Dimensions: 5519 ft x 100 ft
- 2.12.5 Coordinates: 29-32-25.07N / 98-28-39.71W
- 2.12.6 Threshold elevation: 797 ft

2.12.6 Touchdown zone elevation: 797 ft

- 2.12.1 Designation: 30R
- 2.12.2 True Bearing: 312
- 2.12.3 Dimensions: 5519 ft x 100 ft
- 2.12.5 Coordinates: 29-31-48.78N / 98-27-53.02W
- 2.12.6 Threshold elevation: 779 ft
- 2.12.6 Touchdown zone elevation: 788 ft

- 2.12.1 Designation: 12R
- 2.12.2 True Bearing: 132
- 2.12.3 Dimensions: 8502 ft x 150 ft
- 2.12.5 Coordinates: 29-32-33.89N / 98-29-00.00W
- 2.12.6 Threshold elevation: 809 ft
- 2.12.6 Touchdown zone elevation: 809 ft

- 2.12.1 Designation: 30L
- 2.12.2 True Bearing: 312
- 2.12.3 Dimensions: 8502 ft x 150 ft
- 2.12.5 Coordinates: 29-31-38.00N / 98-27-55.99W
- 2.12.6 Threshold elevation: 778 ft
- 2.12.6 Touchdown zone elevation: 790 ft

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 41
- 2.12.3 Dimensions: 7505 ft x 150 ft
- 2.12.5 Coordinates: 29-31-23.64N / 98-28-11.66W
- 2.12.6 Threshold elevation: 786 ft
- 2.12.6 Touchdown zone elevation: 786 ft

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 221
- 2.12.3 Dimensions: 7505 ft x 150 ft
- 2.12.5 Coordinates: 29-32-19.90N / 98-27-16.17W
- 2.12.6 Threshold elevation: 762 ft
- 2.12.6 Touchdown zone elevation: 773 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 12L
- 2.13.2 Takeoff run available: 5519
- 2.13.3 Takeoff distance available: 5519
- 2.13.4 Accelerate-stop distance available: 5519
- 2.13.5 Landing distance available: 5519

- 2.13.1 Designation: 30R
- 2.13.2 Takeoff run available: 5519

2.13.3 Takeoff distance available: 5519
2.13.4 Accelerate–stop distance available: 5519
2.13.5 Landing distance available: 5519

2.13.1 Designation: 12R
2.13.2 Takeoff run available: 8502
2.13.3 Takeoff distance available: 8502
2.13.4 Accelerate–stop distance available: 8502
2.13.5 Landing distance available: 8502

2.13.1 Designation: 30L
2.13.2 Takeoff run available: 8502
2.13.3 Takeoff distance available: 8502
2.13.4 Accelerate–stop distance available: 8502
2.13.5 Landing distance available: 8502

2.13.1 Designation: 03
2.13.2 Takeoff run available: 7505
2.13.3 Takeoff distance available: 7505
2.13.4 Accelerate–stop distance available: 7505
2.13.5 Landing distance available: 7505

2.13.1 Designation: 21
2.13.2 Takeoff run available: 7505
2.13.3 Takeoff distance available: 7505
2.13.4 Accelerate–stop distance available: 7505
2.13.5 Landing distance available: 7505

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12L
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 30R
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 12R
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 30L
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 03
2.14.2 Approach lighting system: MALS: 1400 feet
medium intensity approach lighting system
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

2.14.1 Designation: 21
2.14.4 Visual approach slope indicator system:
4–light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P
CLASS C

2.18.3 Service designation: 118.05 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 118.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.8 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 121.2 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 124.45 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 125.1 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 127.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 128.05 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 251.125 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 307 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 317.5 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 285.45 MHz

2.18.1 Service designation: AS ASGND
2.18.3 Service designation: 239.025 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 335.625 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 290.225 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 12R. Magnetic
variation: 5E
2.19.2 ILS identification: ANT

2.19.5 Coordinates: 29-31-29.11N /
98-27-49.94W
2.19.6 Site elevation: 791 ft

2.19.1 ILS type: Glide Slope for runway 12R.
Magnetic variation: 5E
2.19.2 ILS identification: ANT
2.19.5 Coordinates: 29-32-28.99N /
98-28-54.82W
2.19.6 Site elevation: 801 ft

2.19.1 ILS type: Middle Marker for runway 12R.
Magnetic variation: 5E
2.19.2 ILS identification: ANT
2.19.5 Coordinates: 29-32-55.58N /
98-29-35.87W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 12R.
Magnetic variation: 5E
2.19.2 ILS identification: ANT
2.19.5 Coordinates: 29-36-27.45N /
98-34-10.92W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 12R.
Magnetic variation: 5E
2.19.2 ILS identification: ANT
2.19.5 Coordinates: 29-31-31.31N /
98-27-47.38W
2.19.6 Site elevation: 771 ft

2.19.1 ILS type: Inner Marker for runway 12R.
Magnetic variation: 5E
2.19.2 ILS identification: ANT
2.19.5 Coordinates: 29-32-38.99N /
98-29-14.51W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 30L.
Magnetic variation: 8E
2.19.2 ILS identification: IZR
2.19.5 Coordinates: 29-32-37.61N /
98-29-12.74W
2.19.6 Site elevation: 809 ft

2.19.1 ILS type: DME for runway 30L. Magnetic
variation: 8E
2.19.2 ILS identification: IZR
2.19.5 Coordinates: 29-31-29.11N /
98-27-49.94W

2.19.6 Site elevation: 791 ft

2.19.1 ILS type: Outer Marker for runway 30L.
Magnetic variation: 8E

2.19.2 ILS identification: IZR

2.19.5 Coordinates: 29-28-00.00N /
98-23-19.32W

2.19.6 Site elevation: 692 ft

2.19.1 ILS type: Glide Slope for runway 30L.
Magnetic variation: 8E

2.19.2 ILS identification: IZR

2.19.5 Coordinates: 29-31-47.90N /
98-28-00.00W

2.19.6 Site elevation: 778 ft

2.19.1 ILS type: Middle Marker for runway 30L.
Magnetic variation: 8E

2.19.2 ILS identification: IZR

2.19.5 Coordinates: 29-31-20.34N /
98-27-33.19W

2.19.6 Site elevation: 761 ft

2.19.1 ILS type: Outer Marker for runway 03.
Magnetic variation: 8E

2.19.2 ILS identification: SAT

2.19.5 Coordinates: 29-28-28.61N /
98-31-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 03. Magnetic
variation: 8E

2.19.2 ILS identification: SAT

2.19.5 Coordinates: 29-32-33.45N /
98-27-00.00W

2.19.6 Site elevation: 749 ft

2.19.1 ILS type: Glide Slope for runway 03.
Magnetic variation: 8E

2.19.2 ILS identification: SAT

2.19.5 Coordinates: 29-31-27.70N /
98-28-00.00W

2.19.6 Site elevation: 777 ft

2.19.1 ILS type: Middle Marker for runway 03.
Magnetic variation: 8E

2.19.2 ILS identification: SAT

2.19.5 Coordinates: 29-31-00.00N /
98-28-35.26W

2.19.6 Site elevation: 99999 ft

General Remarks:

TAXIWAY L CLOSED NORTHBOUND.

NUMEROUS FLOCKS OF BIRDS IN THE VICINITY OF AIRPORT.

GLIDER/SOARING OPERATIONS APPROXIMATELY 17 MILES NW OF AIRPORT DURING VFR.

TAXIWAY D NON-MOVEMENT AREA FROM TAXIWAY N TO 500 FT W OF TAXIWAY N.

NOISE SENSITIVE AREAS EXIST ON ALL SIDES OF THE AIRPORT: AT THE PILOT'S
DISCRETION CLIMB AS QUICKLY & QUIETLY AS SAFELY POSSIBLE ON DEP & USE
CONSIDERATION WHEN FLYING OVER POPULATED AREAS BY MINIMIZING FLIGHT & HIGH
POWER SETTINGS. ENGINE-UPS ARE PERMITTED BETWEEN 0600-2300.

AIRCRAFT TAXIING ON RUNWAY 03 NE BOUND LOOK FOR HOLD SHORT TO RUNWAY 30L.

AIRCRAFT TAXIING ON TAXIWAY N SW BOUND LOOK FOR HOLD SHORT TO RUNWAY 30R.

PERSONNEL AND EQUIPMENT WORKING ON & ALONG TAXIWAYS AND RAMPS AREAS AT
VARIOUS TIMES.

GROUND RUN-UP ENCLOSURE AVAILABLE 24 HRS.

TERMINAL GATE A1 USE ONLY WITH PRIOR PERMISSION REQUIRED CALL OPERATIONS
210-413-4928.

RUNWAY 12L NOT AVAILABLE FOR AIR CARRIER OPERATIONS.

THE FOLLOWING TAXIWAYS ARE NOT AVAILABLE FOR AIRCRAFT 59,000 LBS OR OVER:
TAXIWAYS A & J NORTH OF RUNWAY 12R/30L; TAXIWAYS W, M, P, TAXIWAY H NW OF
TAXIWAY Z AND TAXIWAY E EAST OF RUNWAY 03/21.

TAXIWAY Z CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 118 FT.

C130 AND C141 TYPE AIRCRAFT SHALL PARK ON WEST RAMP TO CLEAR CUSTOMS.

GA AIRCRAFT CLEARING U.S. CUSTOMS AT TERMINAL A BE ALERT FOR PERSONNEL &
EQUIPMENT WHILE TAXIING TO AND FROM THE ASSIGNED CUSTOMS CLEARANCE
LOCATIONS.

TAXIWAY Q ENTRANCE/EXIT AT AIR CARGO EAST CLOSED TO AIRCRAFT WITH WINGSPAN
GREATER THAN 118 FT.

INNER RAMP TAXILANE NORTH & EAST OF TERMINAL A IS CLOSED TO AIRCRAFT WITH
WINGSPAN GREATER THAN 118 FT EXCEPT FOR AIRCRAFT CROSSING THE INNER RAMP TO
GATES A12 TO A16.

PRIOR PERMISSION REQUIRED WITH AIRPORT OPERATIONS FOR AIRCRAFT POWERING
BACK FROM TERMINAL GATES.

TAXIWAYS L & B CLOSED TO AIRCRAFT WITH WINGSPANS GREATER THAN 118 FT EXITING
RUNWAY 30L.

A BARRICADED PAVEMENT ELEVATION CHANGE EXISTS ALONG THE EASTERN SIDE OF THE
WEST RAMP.

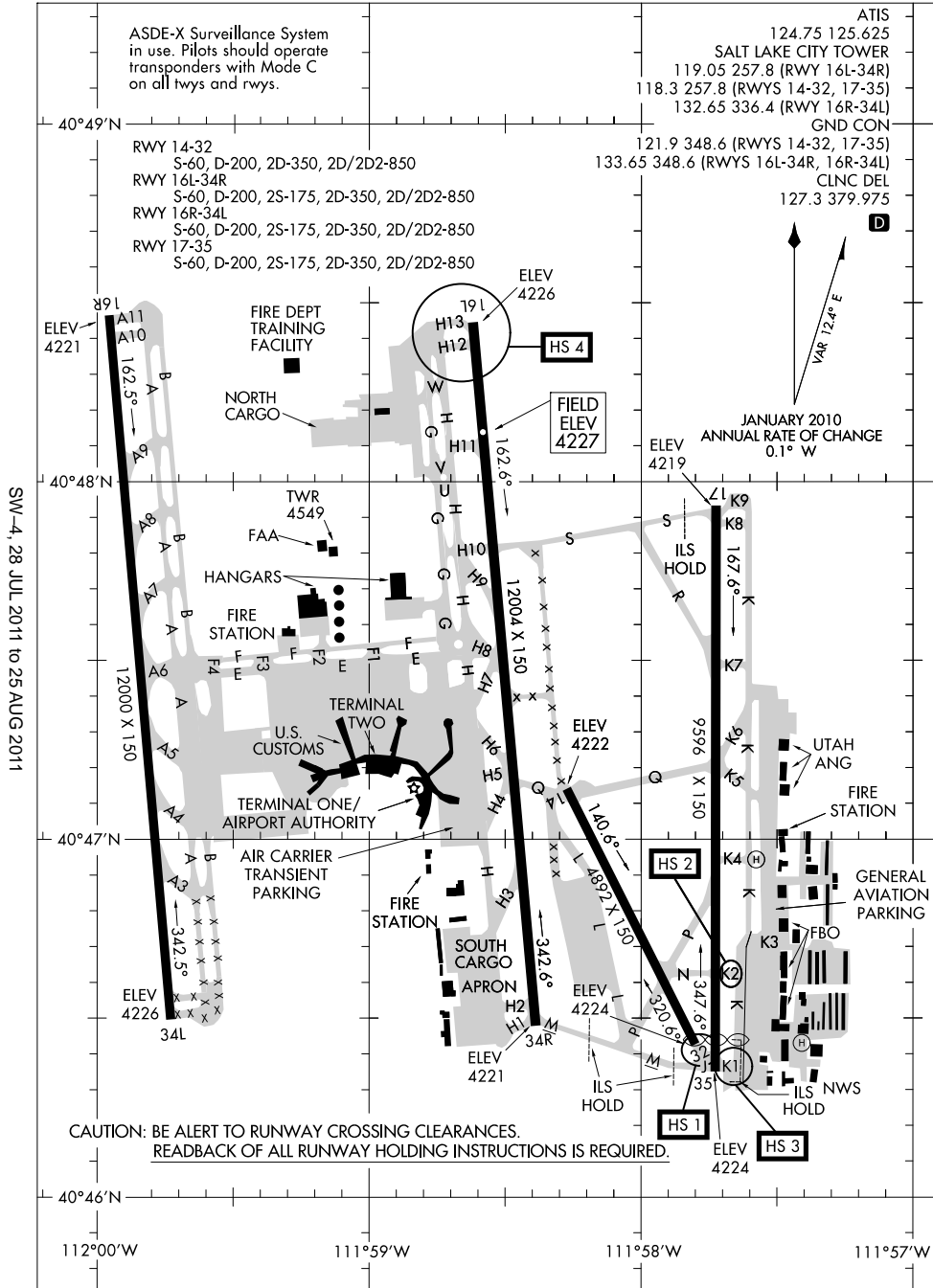
FREQUENT RUBBER ACCUMULATION NW 2500 RUNWAY 12R/30L

AIRCRAFT TRANSITIONING TO OR FROM THE INNER RAMP NORTH OF TERMINAL B BE
ALERT FOR VEHICLE LANE.

AIRCRAFT AT TERMINAL A & B CONTACT GROUND CONTROL PRIOR TO PUSH FOR
ADVISORIES.

Salt Lake City, Utah
Salt Lake City International
ICAO Identifier KSLC

11181 **AIRPORT DIAGRAM** AL-365 (FAA) **SALT LAKE CITY INTL (SLC)**
SALT LAKE CITY, UTAH



AIRPORT DIAGRAM SALT LAKE CITY, UTAH
11181 **SALT LAKE CITY INTL (SLC)**

Salt Lake City, UT
Salt Lake City Intl
ICAO Identifier KSLC

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 40-47-18.20N / 111-58-39.98W
- 2.2.2 From City: 3 Miles W Of Salt Lake City, UT
- 2.2.3 Elevation: 4227 ft
- 2.2.5 Magnetic variation: 14E (1995)
- 2.2.6 Airport Contact: Maureen Riley
P.O. BOX 145550
Salt Lake City, UT 84114
(801-575-2401)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 35
- 2.10.1.b Type of obstacle: Ant (14 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 250 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 175
- 2.12.3 Dimensions: 12004 ft x 150 ft
- 2.12.5 Coordinates: 40-48-26.80N / 111-58-36.97W
- 2.12.6 Threshold elevation: 4226 ft
- 2.12.6 Touchdown zone elevation: 4227 ft

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 355
- 2.12.3 Dimensions: 12004 ft x 150 ft

- 2.12.5 Coordinates: 40-46-28.68N / 111-58-23.25W
- 2.12.6 Threshold elevation: 4221 ft
- 2.12.6 Touchdown zone elevation: 4222 ft

- 2.12.1 Designation: 16R
- 2.12.2 True Bearing: 175
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 40-48-27.99N / 111-59-57.42W
- 2.12.6 Threshold elevation: 4221 ft
- 2.12.6 Touchdown zone elevation: 4223 ft

- 2.12.1 Designation: 34L
- 2.12.2 True Bearing: 355
- 2.12.3 Dimensions: 12000 ft x 150 ft
- 2.12.5 Coordinates: 40-46-29.90N / 111-59-43.69W
- 2.12.6 Threshold elevation: 4226 ft
- 2.12.6 Touchdown zone elevation: 4226 ft

- 2.12.1 Designation: 17
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 9596 ft x 150 ft
- 2.12.5 Coordinates: 40-47-56.10N / 111-57-43.46W
- 2.12.6 Threshold elevation: 4218 ft
- 2.12.6 Touchdown zone elevation: 4219 ft

- 2.12.1 Designation: 35
- 2.12.2 True Bearing: 360
- 2.12.3 Dimensions: 9596 ft x 150 ft
- 2.12.5 Coordinates: 40-46-21.29N / 111-57-43.44W
- 2.12.6 Threshold elevation: 4224 ft
- 2.12.6 Touchdown zone elevation: 4224 ft

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 153
- 2.12.3 Dimensions: 4892 ft x 150 ft
- 2.12.5 Coordinates: 40-47-00.00N / 111-58-16.45W
- 2.12.6 Threshold elevation: 4222 ft
- 2.12.6 Touchdown zone elevation: 4222 ft

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 333
- 2.12.3 Dimensions: 4892 ft x 150 ft
- 2.12.5 Coordinates: 40-46-25.51N / 111-57-47.58W
- 2.12.6 Threshold elevation: 4224 ft

2.12.6 Touchdown zone elevation: 4224 ft

2.12.1 Designation: HF

2.12.3 Dimensions: 60 ft x 60 ft

2.12.1 Designation: HB

2.12.3 Dimensions: 60 ft x 60 ft

2.12.5 Coordinates: 40-46-27.08N /
111-57-24.06W

2.12.6 Threshold elevation: 4220 ft

AD 2.13 Declared distances

2.13.1 Designation: 16L

2.13.2 Takeoff run available: 12004

2.13.3 Takeoff distance available: 12004

2.13.4 Accelerate-stop distance available: 12004

2.13.5 Landing distance available: 12004

2.13.1 Designation: 34R

2.13.2 Takeoff run available: 12004

2.13.3 Takeoff distance available: 12004

2.13.4 Accelerate-stop distance available: 12004

2.13.5 Landing distance available: 12004

2.13.1 Designation: 16R

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 34L

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 17

2.13.2 Takeoff run available: 9597

2.13.3 Takeoff distance available: 9597

2.13.4 Accelerate-stop distance available: 9597

2.13.5 Landing distance available: 9597

2.13.1 Designation: 35

2.13.2 Takeoff run available: 9597

2.13.3 Takeoff distance available: 9597

2.13.4 Accelerate-stop distance available: 9597

2.13.5 Landing distance available: 9273

2.13.1 Designation: 14

2.13.2 Takeoff run available: 4892

2.13.3 Takeoff distance available: 4892

2.13.4 Accelerate-stop distance available: 4892

2.13.5 Landing distance available: 4892

2.13.1 Designation: 32

2.13.2 Takeoff run available: 4892

2.13.3 Takeoff distance available: 4892

2.13.4 Accelerate-stop distance available: 4892

2.13.5 Landing distance available: 4892

AD 2.14 Approach and runway lighting

2.14.1 Designation: 16L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 34R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 16R

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 34L

2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 17

2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights

2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 35

2.14.2 Approach lighting system: MALSR: 1400

feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 14

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 32

2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 119.05 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: APCH/P DEP P IC

2.18.3 Service designation: 124.3 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 124.75 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 124.9 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 126.25 MHz

2.18.1 Service designation: CD/P PRE-TAXI
CLNC PRE-DEP CLNC

2.18.3 Service designation: 127.3 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 128.1 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 132.65 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 135.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: APCH/S DEP/S

2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: CLASS B

2.18.3 Service designation: 319.25 MHz

2.18.1 Service designation: ANG-OPNS

2.18.3 Service designation: 303 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 307.05 MHz

2.18.1 Service designation: ANG-OPNS

2.18.3 Service designation: 311 MHz

2.18.1 Service designation: APCH/P DEP/P IC

2.18.3 Service designation: 322.3 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 353.6 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 336.4 MHz

2.18.1 Service designation: AS ASGND

2.18.3 Service designation: 377.2 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 133.65 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 379.975 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 125.625 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 353.825 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 16L.

Magnetic variation: 12E

2.19.2 ILS identification: MOY

2.19.5 Coordinates: 40-46-18.49N /

111-58-22.06W

2.19.6 Site elevation: 4222 ft

2.19.1 ILS type: DME for runway 16L. Magnetic variation: 12E

2.19.2 ILS identification: MOY

2.19.5 Coordinates: 40-46-18.71N /

111-58-18.11W

2.19.6 Site elevation: 4236 ft

2.19.1 ILS type: Glide Slope for runway 16L.

Magnetic variation: 12E

2.19.2 ILS identification: MOY

2.19.5 Coordinates: 40-48-17.80N /

111-58-30.70W

2.19.6 Site elevation: 4222 ft

2.19.1 ILS type: Middle Marker for runway 16L.

Magnetic variation: 12E

2.19.2 ILS identification: MOY

2.19.5 Coordinates: 40-48-55.10N /

111-58-40.28W

2.19.6 Site elevation: 4217 ft

2.19.1 ILS type: Inner Marker for runway 16L.

Magnetic variation: 12E

2.19.2 ILS identification: MOY

2.19.5 Coordinates: 40-48-35.68N /

111-58-38.00W

2.19.6 Site elevation: 4223 ft

2.19.1 ILS type: Localizer for runway 34R.

Magnetic variation: 12E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-48-36.65N /

111-58-38.11W

2.19.6 Site elevation: 4221 ft

2.19.1 ILS type: Glide Slope for runway 34R.

Magnetic variation: 12E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-46-39.32N /

111-58-19.28W

2.19.6 Site elevation: 4217 ft

2.19.1 ILS type: Inner Marker for runway 34R.

Magnetic variation: 12E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-46-20.33N /

111-58-22.29W

2.19.6 Site elevation: 4222 ft

2.19.1 ILS type: Outer Marker for runway 34R.

Magnetic variation: 12E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-40-52.21N /

111-57-46.57W

2.19.6 Site elevation: 4310 ft

2.19.1 ILS type: DME for runway 34R. Magnetic variation: 12E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-46-22.87N /

111-58-25.99W

2.19.6 Site elevation: 9999 ft

2.19.1 ILS type: Middle Marker for runway 34R.

Magnetic variation: 12E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-46-00.00N /

111-58-18.28W

2.19.6 Site elevation: 4221 ft

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 12E

2.19.2 ILS identification: UAT

2.19.5 Coordinates: 40-46-19.62N /

111-59-46.36W

2.19.6 Site elevation: 9999 ft

2.19.1 ILS type: Glide Slope for runway 16R.

Magnetic variation: 12E

2.19.2 ILS identification: UAT
2.19.5 Coordinates: 40-48-17.29N /
112-00-00.00W
2.19.6 Site elevation: 4216 ft

2.19.1 ILS type: Inner Marker for runway 16R.
Magnetic variation: 12E
2.19.2 ILS identification: UAT
2.19.5 Coordinates: 40-48-37.20N /
111-59-58.20W
2.19.6 Site elevation: 4218 ft

2.19.1 ILS type: Middle Marker for runway 16R.
Magnetic variation: 12E
2.19.2 ILS identification: UAT
2.19.5 Coordinates: 40-48-56.30N /
112-00-00.00W
2.19.6 Site elevation: 4215 ft

2.19.1 ILS type: Localizer for runway 16R.
Magnetic variation: 12E
2.19.2 ILS identification: UAT
2.19.5 Coordinates: 40-46-19.93N /
111-59-42.52W
2.19.6 Site elevation: 4225 ft

2.19.1 ILS type: Localizer for runway 34L.
Magnetic variation: 12E
2.19.2 ILS identification: UUH
2.19.5 Coordinates: 40-48-36.86N /
112-00-00.00W
2.19.6 Site elevation: 4216 ft

2.19.1 ILS type: DME for runway 34L. Magnetic
variation: 12E
2.19.2 ILS identification: UUH
2.19.5 Coordinates: 40-46-19.62N /
111-59-46.36W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 34L.
Magnetic variation: 12E
2.19.2 ILS identification: UUH
2.19.5 Coordinates: 40-46-38.78N /
111-59-53.04W
2.19.6 Site elevation: 4218 ft

2.19.1 ILS type: Localizer for runway 17. Magnetic
variation: 12E
2.19.2 ILS identification: BNT

2.19.5 Coordinates: 40-46-10.06N /
111-57-43.44W
2.19.6 Site elevation: 4225 ft
2.19.1 ILS type: DME for runway 17. Magnetic
variation: 12E
2.19.2 ILS identification: BNT
2.19.5 Coordinates: 40-46-10.06N /
111-57-46.86W
2.19.6 Site elevation: 4238 ft

2.19.1 ILS type: Glide Slope for runway 17.
Magnetic variation: 12E
2.19.2 ILS identification: BNT
2.19.5 Coordinates: 40-47-45.73N /
111-57-49.95W
2.19.6 Site elevation: 4214 ft

2.19.1 ILS type: Middle Marker for runway 17.
Magnetic variation: 12E
2.19.2 ILS identification: BNT
2.19.5 Coordinates: 40-48-23.40N /
111-57-43.40W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Glide Slope for runway 35.
Magnetic variation: 12E
2.19.2 ILS identification: UTJ
2.19.5 Coordinates: 40-46-35.13N /
111-57-48.64W
2.19.6 Site elevation: 4219 ft

2.19.1 ILS type: Localizer for runway 35. Magnetic
variation: 12E
2.19.2 ILS identification: UTJ
2.19.5 Coordinates: 40-48-00.00N /
111-57-43.46W
2.19.6 Site elevation: 4218 ft

2.19.1 ILS type: DME for runway 35. Magnetic
variation: 12E
2.19.2 ILS identification: UTJ
2.19.5 Coordinates: 40-46-10.06N /
111-57-46.86W
2.19.6 Site elevation: 4238 ft

2.19.1 ILS type: Outer Marker for runway 35.
Magnetic variation: 12E
2.19.2 ILS identification: UTJ
2.19.5 Coordinates: 40-40-52.21N /
111-57-46.57W

2.19.6 Site elevation: 4310 ft

General Remarks:

CAUTION: FLOCK OF BIRDS ON AND IN VICINITY OF AIRPORT.

HELIPADS B AND F LOCATED ON GENERAL AVIATION APRONS.

SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM & LOW VISIBILITY TAXI PROCEDURES.

DUE TO TRAFFIC VOLUME, LOCAL DEPARTURE AND ARR OPERATIONS ARE DISCOURAGED AND DELAYS CAN BE EXPECTED BETWEEN 1000-1200 AND 2000-2300.

SPECIAL VFR IS NOT RECOMMEND AT THE AIRPORT, IF REQUIRED, EXPECT DELAYS.

ANG RAMP – OPR 1430-2230Z++ MON-THU. CLOSED FRI-SUN AND HOLIDAY. OFFICIAL BUSINESS ONLY PRIOR PERMISSION REQUIRED ALL AIRCRAFT 48 HR PRIOR NOTICE (PPR VALID 1HR +/- ETA). TRANSIENT PRK/SVC EXTREMELY LIMITED. BASE OPERATIONS DSN 245-2274, C801-245-2274; CIRCULAR POLARIZATION DSN 245-2416/2417, C801-245-2416/2417. ALL AIRCRAFT CONTACT ANG OPERATIONS (UTAH CONTROL) 20 MIN OUT WTH ESTIMATED TIME OF ARRIVAL AND REQ.

ANG RAMP – ALL AIRCRAFT CONTACT UTAH CONTROL WITH LANDING & DEP TIMES. PHASE II WILDLIFE ACT DURING MIGRATION/MORNING/EVENING HRS FR OCT-APR. CONTACT CIRCULAR POLARIZATION FOR CURRENT BIRD-WATCH CONDITION. MILITARY ALTITUDE HILL AFB (KHIF) 25 NAUTICAL MILE NORTH.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

SEE FLIGHT INFORMATION PUBLICATION AP/1 SUPPLEMENTARY AIRPORT INFORMATION.

COMMUNICATIONS-ANG OPERATIONS: CALL UTAH CONTROL.

USE CAUTION FOR EXTENSIVE PARAGLIDING OPERATIONS IN THE VICINITY OF POINT OF THE MOUNTAIN.

TAXIWAY A CLOSED S OF TAXIWAY A3 UNTIL 31 OCT 2012.

TAXIWAY B CLOSED S OF TAXIWAY A3 UNTIL 31 OCT 2012.

TAXIWAY A1 CLOSED UNTIL 31 OCT 2012. TAXIWAY A2 CLOSED UNTIL 31 OCT 2012.

RUNWAY 16R/34L PERSONNEL AND EQUIPMENT WORKING S 4000 FT.

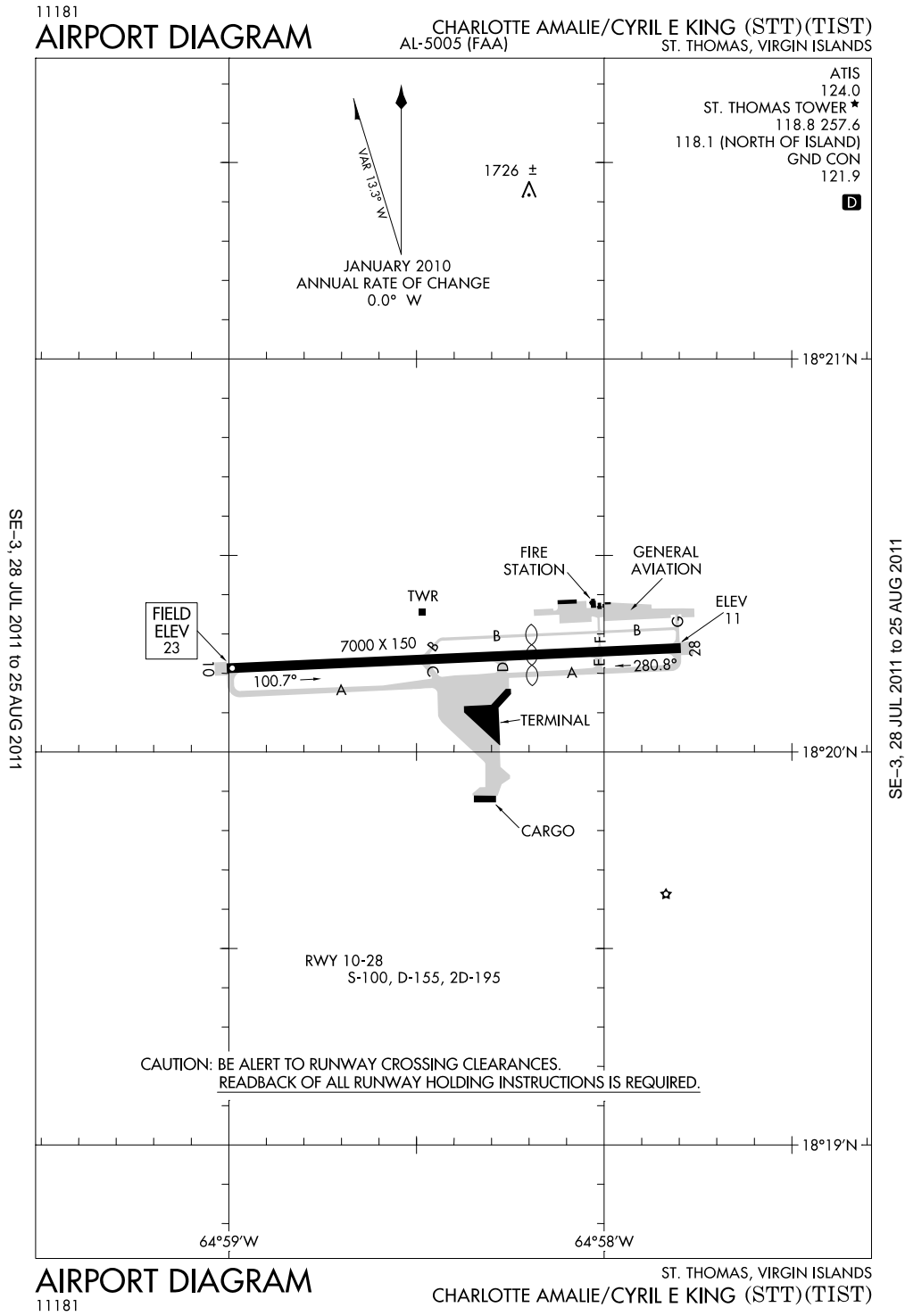
RUNWAY 34L SMGCS DEP UNAVAILABLE.

TAXIWAY A3 LENGTH AVAILABLE 8700 FT.

TAXIWAY A3 JET BLAST HAZARD USE MINIMUM POWER UNTIL ALIGNED WITH RUNWAY.

RUNWAY 34L FULL LENGTH AVAILABLE UPON REQUEST - MAKE REQUEST PRIOR TO TAXI -
BACK TAXI REQUIRED.

Charlotte Amalie St. Thomas, Virgin Islands Cyril E. King ICAO Identifier TIST



**Charlotte Amalie, VI
Cyril E King
ICAO Identifier TIST**

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 18-20-14.30N / 64-58-24.10W
- 2.2.2 From City: 2 Miles W Of Charlotte Amalie, VI
- 2.2.3 Elevation: 23 ft
- 2.2.5 Magnetic variation: 13W (2000)
- 2.2.6 Airport Contact: Mr. Jose Nazario
CYRIL E. KING AIRPORT
St Thomas, VI 802
(340-774-5100)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, 0700-2300 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973
- 2.6.4 Remarks: Closed To Unscheduled Aircraft Operations With More Than 30 Passenger Seats Except 24 Hrs Prior Permission Required Call Airport Manager 340-774-5100.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Pole (28 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 400 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 87
- 2.12.3 Dimensions: 7000 ft x 150 ft
- 2.12.5 Coordinates: 18-20-12.72N / 64-59-00.00W
- 2.12.6 Threshold elevation: 23 ft

- 2.12.6 Touchdown zone elevation: 23 ft

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 267
- 2.12.3 Dimensions: 7000 ft x 150 ft
- 2.12.5 Coordinates: 18-20-15.81N / 64-57-47.75W
- 2.12.6 Threshold elevation: 11 ft
- 2.12.6 Touchdown zone elevation: 15 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 10
- 2.13.2 Takeoff run available: 7000
- 2.13.3 Takeoff distance available: 7000
- 2.13.4 Accelerate-stop distance available: 7000
- 2.13.5 Landing distance available: 7000

- 2.13.1 Designation: 28
- 2.13.2 Takeoff run available: 7000
- 2.13.3 Takeoff distance available: 7000
- 2.13.4 Accelerate-stop distance available: 6000
- 2.13.5 Landing distance available: 3700

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 10
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.1 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.8 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: ATIS
- 2.18.3 Service designation: 124 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 243 MHz

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 257.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 10. Magnetic variation: 13W

2.19.2 ILS identification: TMN

2.19.5 Coordinates: 18-20-18.76N / 64-57-39.49W

2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 13W

2.19.2 ILS identification: TMN

2.19.5 Coordinates: 18-20-16.17N / 64-57-39.21W

2.19.6 Site elevation: 15 ft

2.19.1 ILS type: Glide Slope for runway 10. Magnetic variation: 13W

2.19.2 ILS identification: TMN

2.19.5 Coordinates: 18-20-10.74N / 64-58-48.30W

2.19.6 Site elevation: 14 ft

General Remarks:

AIRCRAFT THAT BACK TAXI FOR DEP ON RUNWAY 28 SHALL MAKE THEIR 180 DEGREE TURN COUNTERCLOCKWISE.

NOISE SENSITIVE AREA: AVOID OVERFLIGHTS OF WATER ISLAND LOCATED 2 MI SE OF AIRPORT.

PILOTS MAY ENCOUNTER FALSE ILLUSORY INDICATIONS DURING NIGHT VISUAL APPROACHES TO RUNWAY 10 WHEN USING VISUAL CUES FOR VERTICAL GUIDANCE; RECOMMEND USE OF THE ILS GS & FREQUENT CROSS REFERENCE WITH THE AIRCRAFT ALTITUDE TO MAINTAIN THE PROPER APPROACH PROFILE.

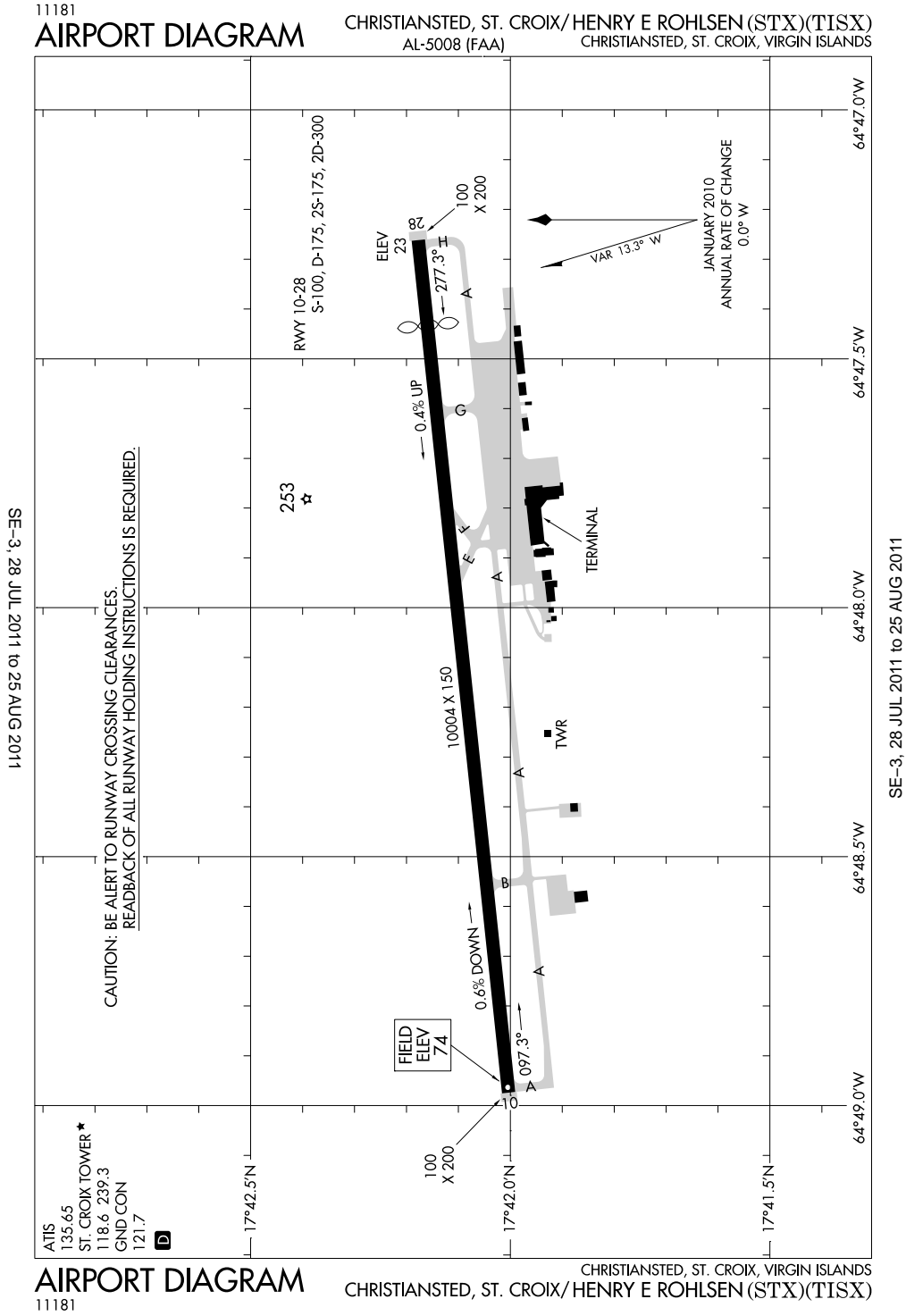
LIGHTS ON HILL 4 NAUTICAL MILE SE OF AIRPORT MAY BE MISTAKEN FOR RUNWAY 10/28 WHEN MAKING A VISUAL APPROACH FROM THE SOUTH.

RUNWAY 10 DEPS MAINTAIN RUNWAY HEADING UNTIL REACHING DEP END OF RUNWAY BEFORE TURNING ON COURSE OR ASSIGNED HEADING UNLESS OTHERWISE AUTHORIZED BY ATCT.

AIRCRAFT RESCUE AND FIRE FIGHTING UNAVAILABLE 2300-0630.

PILOTS CONTACT GROUND CONTROL PRIOR TO PUSHBACK.

**Christiansted St. Croix
Henry E Rohlsen
ICAO Identifier TISX**



Christiansted, VI
Henry E Rohlsen
ICAO Identifier TISX

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 17-42-00.00N / 64-48-00.00W
- 2.2.2 From City: 6 Miles SW Of Christiansted, VI
- 2.2.3 Elevation: 74 ft
- 2.2.5 Magnetic variation: 13W (2000)
- 2.2.6 Airport Contact: Mr. David Mapp
P.O. BOX 1134
St Croix, VI 821
(340-778-1012)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, 0500-2300 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A1+
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973
- 2.6.4 Remarks: Closed To Unscheduled Aircraft Operations With More Than 30 Passenger Seats Except 24 Hrs Prior Permission Required Contact Airport Manager 340-778-1012 Or 340-778-1033(Fax). ARFF Service Unavailable 2300-0500.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 28
- 2.10.1.b Type of obstacle: Bldg (217 ft). Marked
- 2.10.1.c Location of obstacle: 800 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 84
- 2.12.3 Dimensions: 10004 ft x 150 ft
- 2.12.5 Coordinates: 17-42-00.00N / 64-48-58.45W
- 2.12.6 Threshold elevation: 74 ft

- 2.12.6 Touchdown zone elevation: 74 ft

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 264
- 2.12.3 Dimensions: 10004 ft x 150 ft
- 2.12.5 Coordinates: 17-42-10.62N / 64-47-15.54W
- 2.12.6 Threshold elevation: 22 ft
- 2.12.6 Touchdown zone elevation: 40 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 10
- 2.13.2 Takeoff run available: 10004
- 2.13.3 Takeoff distance available: 10004
- 2.13.4 Accelerate-stop distance available: 9000
- 2.13.5 Landing distance available: 9000

- 2.13.1 Designation: 28
- 2.13.2 Takeoff run available: 10004
- 2.13.3 Takeoff distance available: 10004
- 2.13.4 Accelerate-stop distance available: 10004
- 2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 10
- 2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 28
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.6 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.7 MHz

- 2.18.1 Service designation: ATIS
- 2.18.3 Service designation: 135.65 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: LCL/P

2.18.3 Service designation: 239.3 MHz

64-48-21.03W

2.19.6 Site elevation: 48 ft

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.19.1 ILS type: Outer Marker for runway 10.

Magnetic variation: 10W

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 10W

2.19.2 ILS identification: STX

2.19.2 ILS identification: STX

2.19.5 Coordinates: 17-41-30.90N / 64-53-00.00W

2.19.5 Coordinates: 17-42-11.44N /

2.19.6 Site elevation: 99999 ft

64-47-00.00W

2.19.6 Site elevation: 23 ft

2.19.1 ILS type: Middle Marker for runway 10.

Magnetic variation: 10W

2.19.1 ILS type: Glide Slope for runway 10.

Magnetic variation: 10W

2.19.2 ILS identification: STX

2.19.2 ILS identification: STX

2.19.5 Coordinates: 17-41-59.40N /

2.19.5 Coordinates: 17-42-00.00N /

64-49-00.00W

2.19.6 Site elevation: 99999 ft

General Remarks:

APPROACH TO RUNWAY 28 SOMETIMES OBSCURED BY SMOKE FROM LANDFILL LOCATED E OF AIRPORT.

RUNWAY 10 AND 28 100' X 200' BLAST PAD.

BIRDS & WILDLIFE ON & IN THE VICINITY OF AIRPORT.

TAXI INTO POSITION AND HOLD PROCEDURES NO LONGER IN EFFECT.

Everett, WA
Snohomish County (Paine Fld)
ICAO Identifier KPAE

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 47-54-25.15N / 122-16-53.66W
- 2.2.2 From City: 6 Miles SW Of Everett, WA
- 2.2.3 Elevation: 606 ft
- 2.2.5 Magnetic variation: 20E (1990)
- 2.2.6 Airport Contact: David T Waggoner
3220 100TH ST SW
Everett, WA 98204
(425-388-5125)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: MAY-OCT Months, ALL Days, 0700-2100 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 11/1/1974
- 2.6.4 Remarks: Airport Closed To Aircraft Operations With More Than 30 Passenger Seats 2100-0700 Except Prior Permission Required Contact Airport Operations 425-388-5110/5480. For Addl ARFF Capability Contact Airport Operations 425-388-5110.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 11
- 2.10.1.b Type of obstacle: Trees (9 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 100 ft from Centerline

- 2.10.1.a. Runway designation: 29
- 2.10.1.b Type of obstacle: Trees (46 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 0 ft from Centerline

- 2.10.1.a. Runway designation: 16L

- 2.10.1.b Type of obstacle: Pole (9 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 100 ft from Centerline

- 2.10.1.a. Runway designation: 34R
- 2.10.1.b Type of obstacle: Pole (25 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 125 ft from Centerline

- 2.10.1.a. Runway designation: 34L
- 2.10.1.b Type of obstacle: Trees (125 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 930 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 11
- 2.12.2 True Bearing: 134
- 2.12.3 Dimensions: 4514 ft x 75 ft
- 2.12.5 Coordinates: 47-54-37.49N / 122-17-12.38W
- 2.12.6 Threshold elevation: 561 ft
- 2.12.6 Touchdown zone elevation: 603 ft

- 2.12.1 Designation: 29
- 2.12.2 True Bearing: 314
- 2.12.3 Dimensions: 4514 ft x 75 ft
- 2.12.5 Coordinates: 47-54-00.00N / 122-16-24.84W
- 2.12.6 Threshold elevation: 600 ft
- 2.12.6 Touchdown zone elevation: 603 ft

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 3000 ft x 75 ft
- 2.12.5 Coordinates: 47-54-23.12N / 122-16-18.12W
- 2.12.6 Threshold elevation: 597 ft
- 2.12.6 Touchdown zone elevation: 606 ft

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 360
- 2.12.3 Dimensions: 3000 ft x 75 ft
- 2.12.5 Coordinates: 47-53-53.52N / 122-16-17.78W
- 2.12.6 Threshold elevation: 596 ft
- 2.12.6 Touchdown zone elevation: 606 ft

- 2.12.1 Designation: 16R

2.12.2 True Bearing: 179
2.12.3 Dimensions: 9010 ft x 150 ft
2.12.5 Coordinates: 47-55-16.80N /
122-17-00.00W
2.12.6 Threshold elevation: 563 ft
2.12.6 Touchdown zone elevation: 570 ft

2.12.1 Designation: 34L
2.12.2 True Bearing: 359
2.12.3 Dimensions: 9010 ft x 150 ft
2.12.5 Coordinates: 47-53-47.90N /
122-17-00.00W
2.12.6 Threshold elevation: 578 ft
2.12.6 Touchdown zone elevation: 584 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 11
2.14.4 Visual approach slope indicator system:
2-box VASI on left

2.14.1 Designation: 29
2.14.4 Visual approach slope indicator system:
2-box VASI on right

2.14.1 Designation: 16L
2.14.4 Visual approach slope indicator system:
2-light PAPI on left

2.14.1 Designation: 34R
2.14.4 Visual approach slope indicator system:
2-light PAPI on right

2.14.1 Designation: 16R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 34L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: LCL/P(ACFT ARR E
OF CNTRLN OR DEP RY 16L/34R)
2.18.3 Service designation: 120.2 MHz

2.18.1 Service designation: LCL/P(ACFT ARR W

OF CNTRLN OR DEP RY 16R/34L)
2.18.3 Service designation: 132.95 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 126.75 MHz

2.18.1 Service designation: ATIS (425-355-9797)
2.18.3 Service designation: 128.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 256.7 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 339.8 MHz

2.18.1 Service designation: AR-OPNS
2.18.3 Service designation: 34.1 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 16R.
Magnetic variation: 20E
2.19.2 ILS identification: PAE
2.19.5 Coordinates: 47-53-33.98N /
122-17-00.00W
2.19.6 Site elevation: 565 ft

2.19.1 ILS type: Glide Slope for runway 16R.
Magnetic variation: 20E
2.19.2 ILS identification: PAE
2.19.5 Coordinates: 47-55-00.00N /
122-17-13.66W
2.19.6 Site elevation: 562 ft

2.19.1 ILS type: Outer Marker for runway 16R.
Magnetic variation: 20E
2.19.2 ILS identification: PAE
2.19.5 Coordinates: 48-03-10.00N /
122-17-19.50W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 16R.
Magnetic variation: 20E
2.19.2 ILS identification: PAE
2.19.5 Coordinates: 47-55-53.80N /
122-17-00.00W
2.19.6 Site elevation: 99999 ft

General Remarks:

RUNWAYS 11/29 & 16L/34R CLOSED BETWEEN 2100-0700; LARGE AIRCRAFT FLY W PATTERN OVER WATER; SMALL AIRCRAFT FLY E PATTERN OVER AIRPORT.

NOISE SENSITIVE AIRPORT; FOR NOISE ABATEMENT PROCEDURES & TRAFFIC PROCEDURES CALL AIRPORT OPERATIONS 425-388-5125.

IF ACCESS TO BOEING RAMP REQUIRE CONTACT BOEING FLIGHT DISPATCH (206) 655-3421 FOR APPROVAL DURING NORMAL DUTY HRS.

IT IS REQUESTED THAT PILOTS ADHERE TO THE FOLLOWING NOISE ABATEMENT PROCEDURES UNLESS OTHERWISE INSTRUCTED BY ATCT, ITINERANT ARRIVAL AND LOW APPROACH OF SMALL AIRCRAFT OVER 250 HORSEPOWER AUTHORIZED ON RUNWAYS 29, 16L AND 34R.

BE ALERT TO CONVERGE TRAFFIC ON BASE TO FINAL LEGS RUNWAYS 16R/34L 2100-0700.

AVOID OVERFLIGHT OF BOEING RAMP - NE CORNER OF AIRPORT DUE TO JET BLAST.

TRAINING FLIGHTS DISCOURAGED AFTER 2200. RUNWAY 16R-34L TOUCH AND GO LANDING PROHIBITED MON-FRI FORM 0700-0900.

TAXIWAY E LIGHTS OUT OF SERVICE INDEFINITELY.

AVOID INTERSECTION DEPS FROM RUNWAYS 16L/34R & 29. AVOID INTERSECTION DEPS FROM RUNWAY 11 EXCEPT FROM TAXIWAY DELTA 1 INTERSECTION.

FLOCKS OF LARGE & SMALL BIRDS IN THE VICINITY OF AIRPORT.

RUNWAY 34L DEPS DISCOURAGED IN CALM WIND CONDITIONS.

ITINERANT DEP OF SMALL AIRCRAFT OVER 250 HORSEPOWER ON RUNWAYS 11 AND 34R.

TAXIWAY A-2 RESTRICTED TO 30,000 LBS.

AREAS NOT VISIBLE FROM ATCT INCLUDE E EDGE OF S 1200 FT OF TAXIWAY A, TAXIWAY E FROM SE CORNER OF WEST HANGARS TO TAXIWAY A, MID SECTION OF OUTER TERMINAL RAMP, TAXIWAY H FROM NW EDGE OF WEST HANGARS TO TAXIWAY E, NE EDGE OF INNER TERMINAL RAMP.

RUNWAYS 16L/34R AND 11/29 LIMITED TO HELIPOINT 8,000 LBS OR LESS.

TAXIWAY C CLOSED BETWEEN TAXIWAY D1 AND TAXIWAY A.

TAXIWAY W CLOSED INDEFINITE.

Seattle, WA
Seattle-Tacoma Intl
ICAO Identifier KSEA

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 47-26-59.60N / 122-18-42.40W
- 2.2.2 From City: 10 Miles S Of Seattle, WA
- 2.2.3 Elevation: 433 ft
- 2.2.5 Magnetic variation: 17E (2010)
- 2.2.6 Airport Contact: Mark Reis
BOX 68727
Seattle, WA 98168
(206-787-4682)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100LL,A,A1
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: No
- 2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 34C
- 2.10.1.b Type of obstacle: Tree (131 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 700 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 16R
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 8500 ft x 150 ft
- 2.12.4 PCN: 89 R/B/W/T
- 2.12.5 Coordinates: 47-27-49.81N / 122-19-00.00W
- 2.12.6 Threshold elevation: 415 ft
- 2.12.6 Touchdown zone elevation: 415 ft
- 2.12.7 Slope: 0.6DOWN

- 2.12.1 Designation: 34L

- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 8500 ft x 150 ft
- 2.12.4 PCN: 89 R/B/W/T
- 2.12.5 Coordinates: 47-26-25.92N / 122-19-00.00W
- 2.12.6 Threshold elevation: 356 ft
- 2.12.6 Touchdown zone elevation: 379 ft
- 2.12.7 Slope: 0.8UP

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 11901 ft x 150 ft
- 2.12.4 PCN: 110 R/B/W/T
- 2.12.5 Coordinates: 47-27-49.66N / 122-18-27.90W
- 2.12.6 Threshold elevation: 432 ft
- 2.12.6 Touchdown zone elevation: 432 ft
- 2.12.7 Slope: 0.6DOWN

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 11901 ft x 150 ft
- 2.12.4 PCN: 110 R/B/W/T
- 2.12.5 Coordinates: 47-25-52.22N / 122-18-28.94W
- 2.12.6 Threshold elevation: 347 ft
- 2.12.6 Touchdown zone elevation: 372 ft
- 2.12.7 Slope: 0.8UP

- 2.12.1 Designation: 16C
- 2.12.2 True Bearing: 180
- 2.12.3 Dimensions: 9426 ft x 150 ft
- 2.12.4 PCN: 71 R/B/W/T
- 2.12.5 Coordinates: 47-27-49.71N / 122-18-39.55W
- 2.12.6 Threshold elevation: 430 ft
- 2.12.6 Touchdown zone elevation: 430 ft
- 2.12.7 Slope: 0.6DOWN

- 2.12.1 Designation: 34C
- 2.12.2 True Bearing: 0
- 2.12.3 Dimensions: 9426 ft x 150 ft
- 2.12.4 PCN: 71 R/B/W/T
- 2.12.5 Coordinates: 47-26-16.69N / 122-18-40.36W
- 2.12.6 Threshold elevation: 363 ft
- 2.12.6 Touchdown zone elevation: 387 ft
- 2.12.7 Slope: 0.8UP

AD 2.13 Declared distances

- 2.13.1 Designation: 16R

2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate-stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 34L
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate-stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 16L
2.13.2 Takeoff run available: 11901
2.13.3 Takeoff distance available: 11901
2.13.4 Accelerate-stop distance available: 11901
2.13.5 Landing distance available: 11901

2.13.1 Designation: 34R
2.13.2 Takeoff run available: 11901
2.13.3 Takeoff distance available: 11901
2.13.4 Accelerate-stop distance available: 11901
2.13.5 Landing distance available: 11901

2.13.1 Designation: 16C
2.13.2 Takeoff run available: 9426
2.13.3 Takeoff distance available: 9426
2.13.4 Accelerate-stop distance available: 9426
2.13.5 Landing distance available: 9426

2.13.1 Designation: 34C
2.13.2 Takeoff run available: 9426
2.13.3 Takeoff distance available: 9426
2.13.4 Accelerate-stop distance available: 9426
2.13.5 Landing distance available: 9426

AD 2.14 Approach and runway lighting

2.14.1 Designation: 16R
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4-light PAPI on right

2.14.1 Designation: 34L
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 16L
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration

2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 34R
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 16C
2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

2.14.1 Designation: 34C
2.14.2 Approach lighting system: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights
2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 118 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 119.2 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 119.2 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 119.2 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: CLASS B 2.18.3 Service designation: 120.4 MHz	2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 290.9 MHz
2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 120.4 MHz	2.18.1 Service designation: CLASS B 2.18.3 Service designation: 290.9 MHz
2.18.1 Service designation: EMERG 2.18.3 Service designation: 121.5 MHz	2.18.1 Service designation: CLASS B 2.18.3 Service designation: 290.9 MHz
2.18.1 Service designation: APCH/S DEP/S 2.18.3 Service designation: 123.9 MHz	2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 290.9 MHz
2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 125.9 MHz	2.18.1 Service designation: APCH/S DEP/S 2.18.3 Service designation: 338.2 MHz
2.18.1 Service designation: CLASS B 2.18.3 Service designation: 125.9 MHz	2.18.1 Service designation: CLASS B 2.18.3 Service designation: 269.125 MHz
2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 125.9 MHz	2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 269.125 MHz
2.18.1 Service designation: CLASS B 2.18.3 Service designation: 125.9 MHz	2.18.1 Service designation: APCH/S DEP/S 2.18.3 Service designation: 269.125 MHz
2.18.1 Service designation: GATE CTL 2.18.3 Service designation: 126.25 MHz	2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 125.6 MHz
2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 126.5 MHz	2.18.1 Service designation: GND CON 2.18.3 Service designation: 121.7 MHz
2.18.1 Service designation: CLASS B 2.18.3 Service designation: 126.5 MHz	2.18.1 Service designation: NORTH RAMP/CARGO 2.18.3 Service designation: 126.87 MHz
2.18.1 Service designation: EMERG 2.18.3 Service designation: 243 MHz	2.18.1 Service designation: SOUTH RAMP 2.18.3 Service designation: 122.27 MHz
2.18.1 Service designation: DEP/P 2.18.3 Service designation: 284.7 MHz	2.18.1 Service designation: APCH/P 2.18.3 Service designation: 133.65 MHz
2.18.1 Service designation: CLASS B 2.18.3 Service designation: 284.7 MHz	2.18.1 Service designation: APCH/P 2.18.3 Service designation: 273.45 MHz
2.18.1 Service designation: CLASS B 2.18.3 Service designation: 284.7 MHz	2.18.1 Service designation: LCL/P 2.18.3 Service designation: 120.95 MHz
2.18.1 Service designation: CLASS B 2.18.3 Service designation: 290.9 MHz	2.18.1 Service designation: LCL/P 2.18.3 Service designation: 119.9 MHz
2.18.1 Service designation: APCH/P DEP/P 2.18.3 Service designation: 290.9 MHz	2.18.1 Service designation: LCL/P 2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 377.15 MHz

2.18.1 Service designation: CLASS B
2.18.3 Service designation: 377.15 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Inner Marker for runway 16R.
Magnetic variation: 17E
2.19.2 ILS identification: CJL
2.19.5 Coordinates: 47-27-58.22N /
122-19-00.00W
2.19.6 Site elevation: 379 ft

2.19.1 ILS type: Localizer for runway 16R.
Magnetic variation: 17E
2.19.2 ILS identification: CJL
2.19.5 Coordinates: 47-26-15.92N /
122-19-00.00W
2.19.6 Site elevation: 344 ft

2.19.1 ILS type: Glide Slope for runway 16R.
Magnetic variation: 17E
2.19.2 ILS identification: CJL
2.19.5 Coordinates: 47-27-38.46N /
122-19-00.00W
2.19.6 Site elevation: 406 ft

2.19.1 ILS type: DME for runway 16R. Magnetic
variation: 17E
2.19.2 ILS identification: CJL
2.19.5 Coordinates: 47-26-15.62N /
122-18-59.94W
2.19.6 Site elevation: 364 ft

2.19.1 ILS type: Localizer for runway 34L.
Magnetic variation: 17E
2.19.2 ILS identification: BEJ
2.19.5 Coordinates: 47-27-59.78N /
122-19-00.00W
2.19.6 Site elevation: 371 ft

2.19.1 ILS type: Glide Slope for runway 34L.
Magnetic variation: 17E
2.19.2 ILS identification: BEJ
2.19.5 Coordinates: 47-26-34.93N /
122-18-59.99W
2.19.6 Site elevation: 359 ft

2.19.1 ILS type: DME for runway 34L. Magnetic
variation: 17E
2.19.2 ILS identification: BEJ
2.19.5 Coordinates: 47-26-15.62N /
122-18-59.94W
2.19.6 Site elevation: 364 ft

2.19.1 ILS type: Localizer for runway 16L.
Magnetic variation: 17E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-25-45.81N /
122-18-29.00W
2.19.6 Site elevation: 338 ft

2.19.1 ILS type: Glide Slope for runway 16L.
Magnetic variation: 17E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-27-38.94N /
122-18-33.82W
2.19.6 Site elevation: 425 ft

2.19.1 ILS type: Middle Marker for runway 16L.
Magnetic variation: 17E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-28-20.04N /
122-18-39.69W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 16L.
Magnetic variation: 17E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-31-56.60N /
122-18-25.00W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 16L. Magnetic
variation: 17E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-26-00.00N /
122-18-22.68W
2.19.6 Site elevation: 369 ft

2.19.1 ILS type: DME for runway 34R. Magnetic
variation: 17E
2.19.2 ILS identification: SEA
2.19.5 Coordinates: 47-26-00.00N /
122-18-22.68W
2.19.6 Site elevation: 369 ft

2.19.1 ILS type: Glide Slope for runway 34R.
Magnetic variation: 17E

2.19.2 ILS identification: SEA
2.19.5 Coordinates: 47-26-00.00N /
122-18-23.03W
2.19.6 Site elevation: 355 ft

2.19.1 ILS type: Middle Marker for runway 34R.
Magnetic variation: 17E
2.19.2 ILS identification: SEA
2.19.5 Coordinates: 47-25-18.10N /
122-18-29.30W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 34R.
Magnetic variation: 17E
2.19.2 ILS identification: SEA
2.19.5 Coordinates: 47-27-54.27N /
122-18-27.86W
2.19.6 Site elevation: 428 ft

2.19.1 ILS type: Localizer for runway 16C.
Magnetic variation: 17E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-26-00.00N /
122-18-40.43W
2.19.6 Site elevation: 355 ft

2.19.1 ILS type: DME for runway 16C. Magnetic
variation: 17E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-26-00.00N /
122-18-44.23W
2.19.6 Site elevation: 370 ft

2.19.1 ILS type: Glide Slope for runway 16C.
Magnetic variation: 17E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-27-38.69N /
122-18-45.46W
2.19.6 Site elevation: 418 ft

2.19.1 ILS type: Outer Marker for runway 16C.
Magnetic variation: 17E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-31-56.59N /
122-18-25.04W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Inner Marker for runway 16C.
Magnetic variation: 17E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-27-58.58N /
122-18-39.29W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 16C.
Magnetic variation: 17E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-28-20.04N /
122-18-39.69W
2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Localizer for runway 34C.
Magnetic variation: 17E
2.19.2 ILS identification: TUC
2.19.5 Coordinates: 47-27-54.35N /
122-18-39.51W
2.19.6 Site elevation: 422 ft

2.19.1 ILS type: DME for runway 34C. Magnetic
variation: 17E
2.19.2 ILS identification: TUC
2.19.5 Coordinates: 47-26-00.00N /
122-18-44.23W
2.19.6 Site elevation: 370 ft

2.19.1 ILS type: Glide Slope for runway 34C.
Magnetic variation: 17E
2.19.2 ILS identification: TUC
2.19.5 Coordinates: 47-26-25.60N /
122-18-46.17W
2.19.6 Site elevation: 367 ft

2.19.1 ILS type: Middle Marker for runway 34C.
Magnetic variation: 17E
2.19.2 ILS identification: TUC
2.19.5 Coordinates: 47-25-49.76N /
122-18-42.14W
2.19.6 Site elevation: 289 ft

General Remarks:

BIRD FLOCKS WITHIN AIRPORT VICINITY – CHECK LOCAL ADVISORYS.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVAILABLE.

BETWEEN THE HRS OF 2200-0700 THE USE OF EXTENDED REVERSE THRUST IS DISCOURAGED BEYOND WHAT IS NECESSARY FOR OPERATIONAL OR SAFETY REASONS. NOISE ABATEMENT PROCEDURES IN EFFECT BETWEEN 2200-0600. FOR FURTHER INFORMATION CONTACT SEA NOISE ABATEMENT OFFICE AT 206-787-7496.

HELICOPTERS LANDING & DEPARTING AVOID OVERFLYING FUEL FARM LOCATED AT THE SE CORNER OF THE AIRPORT.

(E110) CONTINUOUS POWER AIRPORT.

(E94) WSO/WSFO.

TAXIWAY A SOUTH OF TAXIWAY G RESTRICTED TO AIRCRAFT WITH WINGSPAN 225 FT AND SMALLER.

DO NOT MISTAKE TAXIWAY T FOR LANDING SURFACE.

ACCESS TO AIR CARGO 4 PARKING AND CARGO AREAS RESTRICTED TO AIRCRAFT WITH WINGSPANS OF 118 FT OR LESS.

TAXIWAY FOR CORPORATE HANGAR RAMP LIMITED TO AIRCRAFT WITH 104 FT OR LESS WINGSPAN FOR TAXI OPERATIONS. GA CUSTOMS PARKING IS VERY LIMITED.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE C ON ALL TAXIWAYS AND RUNWAYS.

PRIOR PERMISSION REQUIRED FOR ALL GENERAL AVIATION PARKING AND SERVICES, CONTACT 206-433-5481.

TAXILANE W RESTRICTED TO WINGSPAN OF 135 FT OR LESS. SEATTLE RAMP TOWER PROVIDES ADVISORY CONTROL ONLY.

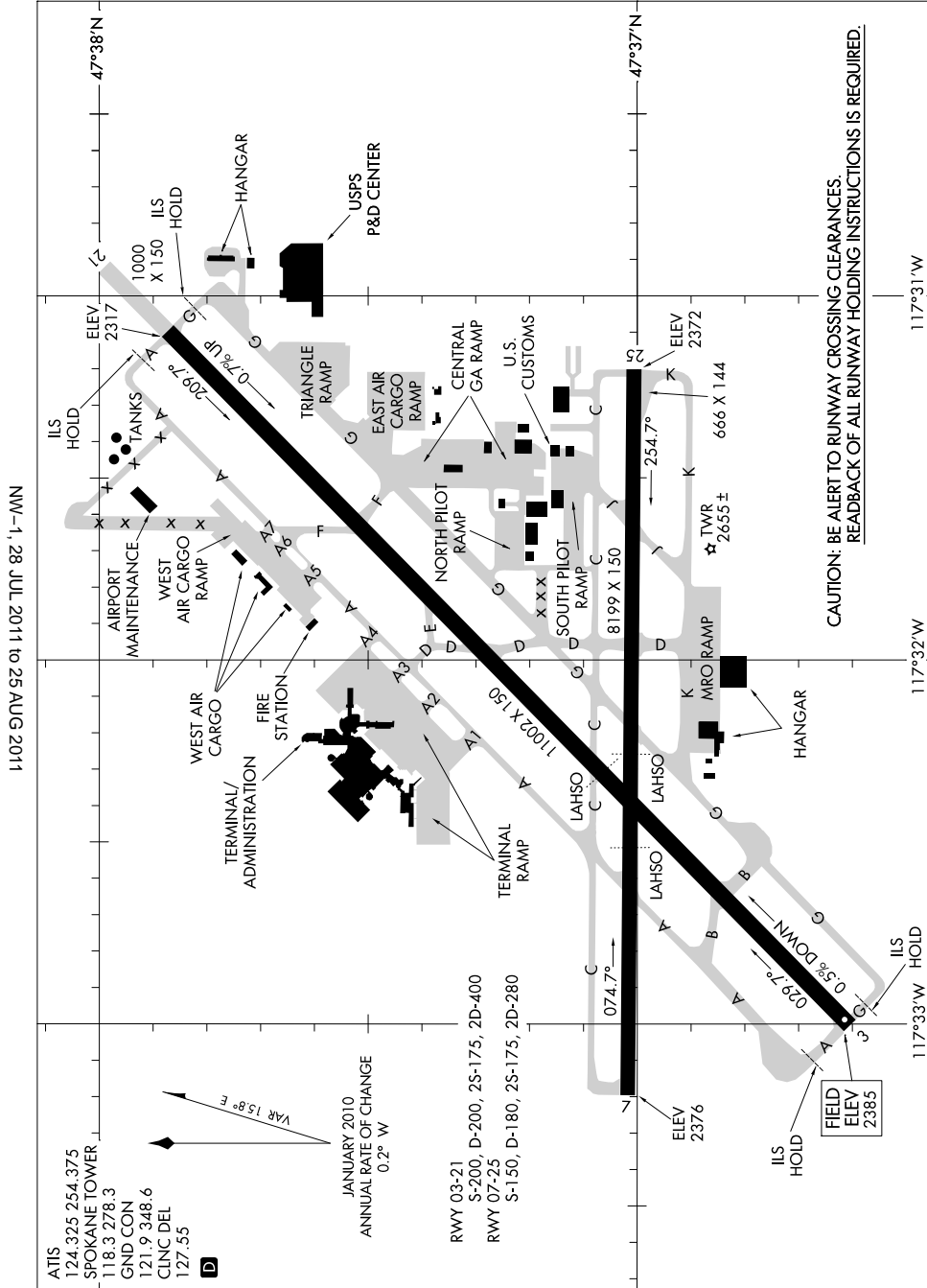
**Spokane, Washington
Spokane International
ICAO Identifier KEGG**

10322

AIRPORT DIAGRAM

AL-403 (FAA)

SPOKANE INTL (GEG)
SPOKANE, WASHINGTON



AIRPORT DIAGRAM

SPOKANE, WASHINGTON
SPOKANE INTL (GEG)

10322

Spokane, WA
Spokane Intl
ICAO Identifier KEGG

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 47-37-00.00N / 117-32-00.00W
- 2.2.2 From City: 5 Miles SW Of Spokane, WA
- 2.2.3 Elevation: 2385 ft
- 2.2.5 Magnetic variation: 18E (2000)
- 2.2.6 Airport Contact: Ryland Davis
9000 W AIRPORT DR.
Spokane, WA 99224
(509-455-6455)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 – 2.3.11: ALL Months, ALL Days, 0600-2200 Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
- 2.4.2 Fuel types: 100,100LL,A
- 2.4.4 De-icing facilities: None
- 2.4.5 Hangar space: Yes
- 2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I B certified on 5/1/1973

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 21
- 2.10.1.b Type of obstacle: Gnd (9 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 500 ft from Centerline
- 2.10.1.a. Runway designation: 25
- 2.10.1.b Type of obstacle: Tree (69 ft). Not Lighted or Marked
- 2.10.1.c Location of obstacle: 365 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 45
- 2.12.3 Dimensions: 11002 ft x 150 ft
- 2.12.5 Coordinates: 47-36-36.29N / 117-33-00.00W

- 2.12.6 Threshold elevation: 2385 ft
- 2.12.6 Touchdown zone elevation: 2385 ft
- 2.12.7 Slope: 0.7DOWN

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 225
- 2.12.3 Dimensions: 11002 ft x 150 ft
- 2.12.5 Coordinates: 47-37-52.38N / 117-31-00.00W
- 2.12.6 Threshold elevation: 2317 ft
- 2.12.6 Touchdown zone elevation: 2346 ft
- 2.12.7 Slope: 0.7UP

- 2.12.1 Designation: 07
- 2.12.2 True Bearing: 90
- 2.12.3 Dimensions: 8199 ft x 150 ft
- 2.12.5 Coordinates: 47-37-00.00N / 117-33-11.76W
- 2.12.6 Threshold elevation: 2376 ft
- 2.12.6 Touchdown zone elevation: 2376 ft

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 270
- 2.12.3 Dimensions: 8199 ft x 150 ft
- 2.12.5 Coordinates: 47-37-00.00N / 117-31-12.10W
- 2.12.6 Threshold elevation: 2372 ft
- 2.12.6 Touchdown zone elevation: 2373 ft

AD 2.13 Declared distances

- 2.13.1 Designation: 03
- 2.13.2 Takeoff run available: 11002
- 2.13.3 Takeoff distance available: 11002
- 2.13.4 Accelerate-stop distance available: 11002
- 2.13.5 Landing distance available: 11002

- 2.13.1 Designation: 21
- 2.13.2 Takeoff run available: 11002
- 2.13.3 Takeoff distance available: 11002
- 2.13.4 Accelerate-stop distance available: 11002
- 2.13.5 Landing distance available: 11002

- 2.13.1 Designation: 07
- 2.13.2 Takeoff run available: 8199
- 2.13.3 Takeoff distance available: 8199
- 2.13.4 Accelerate-stop distance available: 8199
- 2.13.5 Landing distance available: 8199

- 2.13.1 Designation: 25
- 2.13.2 Takeoff run available: 8199
- 2.13.3 Takeoff distance available: 8199

- 2.13.4 Accelerate-stop distance available: 8199
- 2.13.5 Landing distance available: 8199

AD 2.14 Approach and runway lighting

- 2.14.1 Designation: 03
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

- 2.14.1 Designation: 21
- 2.14.2 Approach lighting system: ALSF2: Standard 2400 feet high intensity approach lighting system with sequenced flashers, category II or III configuration
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left
- 2.14.10 Remarks: ALSF 2 May Be Operated As SSALR During Favorable Wx Conditions.

- 2.14.1 Designation: 07
- 2.14.4 Visual approach slope indicator system: 4-box VASI on left

- 2.14.1 Designation: 25
- 2.14.4 Visual approach slope indicator system: 4-light PAPI on left

AD 2.18 Air traffic services communication facilities

- 2.18.1 Service designation: LCL/P
- 2.18.3 Service designation: 118.3 MHz

- 2.18.1 Service designation: EMERG
- 2.18.3 Service designation: 121.5 MHz

- 2.18.1 Service designation: GND/P
- 2.18.3 Service designation: 121.9 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS C IC
- 2.18.3 Service designation: 123.75 MHz

- 2.18.1 Service designation: ATIS
- 2.18.3 Service designation: 124.325 MHz
- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: CD/P
- 2.18.3 Service designation: 127.55 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS C IC

- 2.18.3 Service designation: 133.35 MHz

- 2.18.1 Service designation: EMERG

- 2.18.3 Service designation: 243 MHz

- 2.18.1 Service designation: ATIS

- 2.18.3 Service designation: 254.375 MHz

- 2.18.4 Hours of operation: 24

- 2.18.1 Service designation: APCH/P DEP/P CLASS C IC

- 2.18.3 Service designation: 263 MHz

- 2.18.1 Service designation: APCH/P DEP/P CLASS C IC

- 2.18.3 Service designation: 282.25 MHz

- 2.18.1 Service designation: GND/P

- 2.18.3 Service designation: 348.6 MHz

- 2.18.1 Service designation: APCH/S DEP/S

- 2.18.3 Service designation: 372.9 MHz

- 2.18.1 Service designation: LCL/P

- 2.18.3 Service designation: 278.3 MHz

AD 2.19 Radio navigation and landing aids

- 2.19.1 ILS type: DME for runway 03. Magnetic variation: 16E

- 2.19.2 ILS identification: OLJ

- 2.19.5 Coordinates: 47-36-32.05N / 117-33-15.10W

- 2.19.6 Site elevation: 2371 ft

- 2.19.1 ILS type: Inner Marker for runway 03. Magnetic variation: 16E

- 2.19.2 ILS identification: OLJ

- 2.19.5 Coordinates: 47-36-30.06N / 117-33-00.00W

- 2.19.6 Site elevation: 2381 ft

- 2.19.1 ILS type: Localizer for runway 03. Magnetic variation: 16E

- 2.19.2 ILS identification: OLJ

- 2.19.5 Coordinates: 47-37-59.15N / 117-30-55.57W

- 2.19.6 Site elevation: 2313 ft

2.19.1 ILS type: Middle Marker for runway 03.

Magnetic variation: 16E

2.19.2 ILS identification: OLJ

2.19.5 Coordinates: 47-36-29.40N /
117-33-10.64W

2.19.6 Site elevation: 2378 ft

2.19.1 ILS type: Glide Slope for runway 03.

Magnetic variation: 16E

2.19.2 ILS identification: OLJ

2.19.5 Coordinates: 47-36-47.56N /
117-32-51.88W

2.19.6 Site elevation: 2372 ft

2.19.1 ILS type: Localizer for runway 21. Magnetic
variation: 16E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-36-29.20N /
117-33-10.95W

2.19.6 Site elevation: 2380 ft

2.19.1 ILS type: Glide Slope for runway 21.

Magnetic variation: 16E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-37-48.71N /
117-31-19.65W

2.19.6 Site elevation: 2322 ft

2.19.1 ILS type: Inner Marker for runway 21.

General Remarks:

BE ALERT TO TURBULENCE OVER SMOKE STACKS 1 MILE EAST OF AIRPORT.

WATERFOWL & BIRDS ON & IN THE VICINITY OF AIRPORT.

TAXIWAY K UNLIGHTED ON RAMP SIDE ALONG MAINTENANCE RAMP AND IS
UNAVAILABLE BELOW 1200 RUNWAY VISUAL RANGE UNLESS UNDER ESCORT BY "FOLLOW
ME".

MILITARY TRANSIENT AIRCRAFT REQUIRING SUPPORT AT KEGG MUST CONTACT FBO FOR
SERVICE. FAIRCHILD AFB DETACHMENT HAS NO TRANSIENT ALERT, FLEET SERVICE, CREW
TRANSPORTATION, AIRCRAFT PARKING, OR COMMAND AND CONTROL SERVICES FOR
TRANSIENT AIRCRAFT.

Magnetic variation: 16E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-38-00.00N /
117-30-49.60W

2.19.6 Site elevation: 96 ft

2.19.1 ILS type: Outer Marker for runway 21.

Magnetic variation: 16E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-40-37.34N /
117-27-00.00W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: DME for runway 21. Magnetic
variation: 16E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-36-32.05N /
117-33-15.10W

2.19.6 Site elevation: 2380 ft

2.19.1 ILS type: Middle Marker for runway 21.

Magnetic variation: 16E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-38-16.92N /
117-30-28.82W

2.19.6 Site elevation: 2233 ft

Milwaukee, WI
General Mitchell Intl
ICAO Identifier KMKE

AD 2.2 Aerodrome geographical and administrative data

- 2.2.1 Reference Point: 42-56-49.96N / 87-53-48.23W
2.2.2 From City: 5 Miles S Of Milwaukee, WI
2.2.3 Elevation: 723 ft
2.2.5 Magnetic variation: 2W (1995)
2.2.6 Airport Contact: C.B. Bateman
5300 S HOWELL AVE
Milwaukee, WI 53207
(414-747-5300)
2.2.7 Traffic: IFR/VFR

AD 2.3 Operational hours

- 2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

- 2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: 100LL,A
2.4.4 De-icing facilities: None
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

- 2.6.1 Aerodrome category for firefighting: ARFF Index I C certified on 5/1/1973
2.6.4 Remarks: ARFF Index D Equip Available Upon Request.

AD 2.10 Aerodrome obstacles

- 2.10.1.a. Runway designation: 13
2.10.1.b Type of obstacle: Pole (33 ft). Lighted
2.10.1.c Location of obstacle: 69 ft from Centerline

2.10.1.a. Runway designation: 31
2.10.1.b Type of obstacle: Rr (42 ft). Lighted
2.10.1.c Location of obstacle: 295 ft from Centerline

2.10.1.a. Runway designation: 07L
2.10.1.b Type of obstacle: Tree (44 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 187 ft from Centerline

2.10.1.a. Runway designation: 25R

- 2.10.1.b Type of obstacle: Pole (77 ft). Lighted
2.10.1.c Location of obstacle: 195 ft from Centerline

- 2.10.1.a. Runway designation: 07R
2.10.1.b Type of obstacle: Tree (80 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 305 ft from Centerline

- 2.10.1.a. Runway designation: 25L
2.10.1.b Type of obstacle: Pole (41 ft). Lighted
2.10.1.c Location of obstacle: 464 ft from Centerline

- 2.10.1.a. Runway designation: 19L
2.10.1.b Type of obstacle: Tree (125 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 463 ft from Centerline

- 2.10.1.a. Runway designation: 01L
2.10.1.b Type of obstacle: Tree (82 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 985 ft from Centerline

- 2.10.1.a. Runway designation: 19R
2.10.1.b Type of obstacle: Fence (6 ft). Not Lighted or Marked
2.10.1.c Location of obstacle: 404 ft from Centerline

AD 2.12 Runway physical characteristics

- 2.12.1 Designation: 13
2.12.2 True Bearing: 132
2.12.3 Dimensions: 5538 ft x 150 ft
2.12.5 Coordinates: 42-57-29.28N / 87-54-12.33W
2.12.6 Threshold elevation: 671 ft
2.12.6 Touchdown zone elevation: 670 ft

2.12.1 Designation: 31
2.12.2 True Bearing: 312
2.12.3 Dimensions: 5538 ft x 150 ft
2.12.5 Coordinates: 42-56-52.50N / 87-53-17.21W
2.12.6 Threshold elevation: 669 ft
2.12.6 Touchdown zone elevation: 670 ft

2.12.1 Designation: 07L

2.12.2 True Bearing: 72
2.12.3 Dimensions: 4800 ft x 100 ft
2.12.5 Coordinates: 42-57-00.00N /
87-54-19.15W
2.12.6 Threshold elevation: 672 ft
2.12.6 Touchdown zone elevation: 672 ft

2.12.1 Designation: 25R
2.12.2 True Bearing: 252
2.12.3 Dimensions: 4800 ft x 100 ft
2.12.5 Coordinates: 42-57-24.81N /
87-53-17.88W
2.12.6 Threshold elevation: 674 ft
2.12.6 Touchdown zone elevation: 674 ft

2.12.1 Designation: 07R
2.12.2 True Bearing: 72
2.12.3 Dimensions: 7761 ft x 150 ft
2.12.5 Coordinates: 42-56-22.34N /
87-54-57.05W
2.12.6 Threshold elevation: 723 ft
2.12.6 Touchdown zone elevation: 723 ft

2.12.1 Designation: 25L
2.12.2 True Bearing: 252
2.12.3 Dimensions: 7761 ft x 150 ft
2.12.5 Coordinates: 42-56-46.46N /
87-53-18.02W
2.12.6 Threshold elevation: 670 ft
2.12.6 Touchdown zone elevation: 683 ft

2.12.1 Designation: 01R
2.12.2 True Bearing: 7
2.12.3 Dimensions: 4183 ft x 150 ft
2.12.5 Coordinates: 42-56-21.76N /
87-53-32.51W
2.12.6 Threshold elevation: 677 ft
2.12.6 Touchdown zone elevation: 677 ft

2.12.1 Designation: 19L
2.12.2 True Bearing: 187
2.12.3 Dimensions: 4183 ft x 150 ft
2.12.5 Coordinates: 42-57-00.00N /
87-53-25.49W
2.12.6 Threshold elevation: 670 ft
2.12.6 Touchdown zone elevation: 674 ft

2.12.1 Designation: 01L
2.12.2 True Bearing: 7
2.12.3 Dimensions: 9690 ft x 200 ft
2.12.5 Coordinates: 42-55-52.73N /

87-53-51.02W
2.12.6 Threshold elevation: 704 ft
2.12.6 Touchdown zone elevation: 704 ft

2.12.1 Designation: 19R
2.12.2 True Bearing: 187
2.12.3 Dimensions: 9690 ft x 200 ft
2.12.5 Coordinates: 42-57-27.70N /
87-53-34.78W
2.12.6 Threshold elevation: 673 ft
2.12.6 Touchdown zone elevation: 672 ft

AD 2.13 Declared distances

2.13.1 Designation: 13
2.13.2 Takeoff run available: 5538
2.13.3 Takeoff distance available: 5538
2.13.4 Accelerate-stop distance available: 5538
2.13.5 Landing distance available: 4797

2.13.1 Designation: 31
2.13.2 Takeoff run available: 5538
2.13.3 Takeoff distance available: 5538
2.13.4 Accelerate-stop distance available: 5538
2.13.5 Landing distance available: 5334

2.13.1 Designation: 07R
2.13.2 Takeoff run available: 7761
2.13.3 Takeoff distance available: 7761
2.13.4 Accelerate-stop distance available: 7761
2.13.5 Landing distance available: 7761

2.13.1 Designation: 25L
2.13.2 Takeoff run available: 7761
2.13.3 Takeoff distance available: 7761
2.13.4 Accelerate-stop distance available: 7761
2.13.5 Landing distance available: 7328

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 690
2.13.3 Takeoff distance available: 9690
2.13.4 Accelerate-stop distance available: 9690
2.13.5 Landing distance available: 8950

AD 2.14 Approach and runway lighting

2.14.1 Designation: 13
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 31
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 07L
2.14.4 Visual approach slope indicator system:
4-box VASI on left

2.14.1 Designation: 25R
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 07R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 25L
2.14.4 Visual approach slope indicator system:
4-light PAPI on left

2.14.1 Designation: 01L
2.14.2 Approach lighting system: ALSF2: Standard
2400 feet high intensity approach lighting system
with sequenced flashers, category II or III
configuration
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

2.14.1 Designation: 19R
2.14.2 Approach lighting system: MALSR: 1400
feet medium intensity approach lighting system
with runway alignment indicator lights
2.14.4 Visual approach slope indicator system:
4-light PAPI on right

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P CLASS C
2.18.3 Service designation: 118 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 119.65 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 120.8 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 126.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: APCH/P CLASS C IC
2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 127.85 MHz

2.18.1 Service designation: OPNS
2.18.3 Service designation: 139.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C IC
2.18.3 Service designation: 307 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 325.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: APCH/P DEP/P
CLASS C
2.18.3 Service designation: 317.725 MHz

2.18.1 Service designation: OPNS
2.18.3 Service designation: 311 MHz

2.18.1 Service designation: 128ARW (ANG) CMD
POST
2.18.3 Service designation: 321 MHz

2.18.1 Service designation: UPSET CTL
2.18.3 Service designation: 6761 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 127 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 263.075 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 07R. Magnetic variation: 2W

2.19.2 ILS identification: GMF

2.19.5 Coordinates: 42-56-22.80N / 87-55-00.00W

2.19.6 Site elevation: 730 ft

2.19.1 ILS type: Glide Slope for runway 07R. Magnetic variation: 2W

2.19.2 ILS identification: GMF

2.19.5 Coordinates: 42-56-22.25N / 87-54-40.36W

2.19.6 Site elevation: 706 ft

2.19.1 ILS type: Outer Marker for runway 07R. Magnetic variation: 2W

2.19.2 ILS identification: GMF

2.19.5 Coordinates: 42-54-32.56N / 88-02-27.51W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 07R. Magnetic variation: 2W

2.19.2 ILS identification: GMF

2.19.5 Coordinates: 42-56-12.13N / 87-55-35.49W

2.19.6 Site elevation: 744 ft

2.19.1 ILS type: Localizer for runway 07R. Magnetic variation: 2W

2.19.2 ILS identification: GMF

2.19.5 Coordinates: 42-56-48.89N / 87-53-00.00W

2.19.6 Site elevation: 668 ft

2.19.1 ILS type: DME for runway 25L. Magnetic variation: 2W

2.19.2 ILS identification: PXY

2.19.5 Coordinates: 42-56-22.86N / 87-55-00.00W

2.19.6 Site elevation: 720 ft

2.19.1 ILS type: Localizer for runway 25L. Magnetic variation: 2W

2.19.2 ILS identification: PXY

2.19.5 Coordinates: 42-56-19.99N / 87-55-00.00W

2.19.6 Site elevation: 720 ft

2.19.1 ILS type: Localizer for runway 01L.

Magnetic variation: 2W

2.19.2 ILS identification: MKE

2.19.5 Coordinates: 42-57-49.95N / 87-53-30.97W

2.19.6 Site elevation: 713 ft

2.19.1 ILS type: Glide Slope for runway 01L. Magnetic variation: 2W

2.19.2 ILS identification: MKE

2.19.5 Coordinates: 42-56-00.00N / 87-53-43.04W

2.19.6 Site elevation: 691 ft

2.19.1 ILS type: Outer Marker for runway 01L. Magnetic variation: 2W

2.19.2 ILS identification: MKE

2.19.5 Coordinates: 42-50-22.60N / 87-54-46.83W

2.19.6 Site elevation: 678 ft

2.19.1 ILS type: Inner Marker for runway 01L. Magnetic variation: 2W

2.19.2 ILS identification: MKE

2.19.5 Coordinates: 42-55-44.65N / 87-53-52.40W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Middle Marker for runway 01L. Magnetic variation: 2W

2.19.2 ILS identification: MKE

2.19.5 Coordinates: 42-55-26.50N / 87-53-55.50W

2.19.6 Site elevation: 701 ft

2.19.1 ILS type: DME for runway 01L. Magnetic variation: 2W

2.19.2 ILS identification: MKE

2.19.5 Coordinates: 42-57-50.93N / 87-53-27.40W

2.19.6 Site elevation: 714 ft

2.19.1 ILS type: Localizer for runway 19R. Magnetic variation: 2W

2.19.2 ILS identification: BLY

2.19.5 Coordinates: 42-55-38.30N / 87-53-53.48W

2.19.6 Site elevation: 710 ft

2.19.1 ILS type: Glide Slope for runway 19R. Magnetic variation: 2W

2.19.2 ILS identification: BLY

2.19.5 Coordinates: 42-57-00.00N /
87-53-32.52W
2.19.6 Site elevation: 666 ft

2.19.1 ILS type: Middle Marker for runway 19R.
Magnetic variation: 2W
2.19.2 ILS identification: BLY
2.19.5 Coordinates: 42-57-46.59N /
87-53-31.53W

2.19.6 Site elevation: 99999 ft

2.19.1 ILS type: Outer Marker for runway 19R.
Magnetic variation: 2W
2.19.2 ILS identification: BLY
2.19.5 Coordinates: 43-03-36.06N /
87-52-36.26W
2.19.6 Site elevation: 99999 ft

General Remarks:

RUNWAY 07L/25R CLOSED TO ALL JET AIRCRAFT.

TAXIWAY 'A' CLOSED FROM TAXIWAY 'R' TO 'E' & TAXIWAY 'E' CLOSED FROM TAXIWAY 'T' TO 'M' AND TAXIWAY 'T' CLOSED NORTH RUNWAY 07R/25L AIRCRAFT WITH TAIL HEIGHT GREATER THAN 54.5 FT DURING CAT II & III OPERATIONS.

RUNWAY 13/31 CLOSED JET AIRCRAFT WITHOUT PRIOR PERMISSION REQUIRED AIRPORT MANAGER - CALL 414-747-5325.

TRAINING FLIGHTS INVOLVING SUCCESSIVE USE OF ANY RUNWAY PROHIBITED 2200-0600.

RUNWAYS 13/31 & 01R/19L & 07L/25R CLOSED EXCEPT LIGHT WEIGHT SINGLE ENGINE AIRCRAFT 2200-0600 DAILY.

BIRDS ON & IN THE VICINITY OF AIRPORT.

PREFERRED USAGE BY AIRCRAFT BETWEEN 2200-0600 IS TAKE-OFF RUNWAY 19R & LANDING RUNWAY 01L.

ALL APPROACHES ARE OVER NOISE SENSITIVE AREAS; ALL TURBOJET AIRCRAFT SHOULD REFRAIN FROM CONDUCTING MULTI VFR TRAFFIC PATTERN APPROACHES & DEPS WITHOUT PRIOR APPROVAL FROM AIRPORT MANAGER CALL C414-747-5325.

ANG: PRIOR PERMISSION REQUIRED ALL AIRCRAFT, 48HR PRIOR NOTICE, CONTACT AIRFIELD OPERATIONS DSN 580-8241, C414-944-8241. 128 ARW IS A FULLY OPERATIONAL KC-135R BASE WITH HRS OF OPERATION MON-FRI 1200Z-1930Z++ TUE-FRI, CLOSED HOLIDAY, SAT-SUN EXCEPT UNIT TMG, CALL FOR AVAILABLE.

ANG: ANY MDS'S (OTHER THAN KC-135) IS LIMITED TO STANDARD TRANSIENT MARSHALLING AND PARKING. NO TECHNICAL DATA AVAILABLE FOR TRANSIENT MAINTENANCE. FUEL AND AGE EQUIPMENT SUPPORT AVAILABLE FOR SELF-SERVICE. THERE ARE NO ADDITIONAL CONFIGURATION ITEMS SUPPORTED SUCH AS LANTIRN PODS, EDM PODS, ETC.

ANG: END OF RUNWAY FACILITIES, AIRCRAFT SHELTERS/REVTMENTS, AND ALERT FACILITIES ARE NOT AVAILABLE. AIRFIELD/AIRCRAFT PARKING CONCERNS INCLUDE: LIMITED STATIC GROUNDING POINTS AND NO AIRCRAFT TIE DOWN POINTS.

ANG: NO FLEET SERVICE/HOT CARGO PARKING AVAILABLE. CONTACT UPSET CTRL 20 MIN PRIOR TO ARR TO RECEIVE CURRENT BIRD WATCH CONDITION AND PARKING

INFORMATION.

ASDE-X SURVEILLANCE SYSTEM IN USE: PILOTS SHOULD OPERATE TRANSPONDERS WITH MODE 'C' ON ALL TAXIWAYS & RUNWAYS.

AIRCRAFT WITH WINGSPAN GREATER THAN 158 FT CANNOT PASS SIMULTANEOUSLY ON TAXIWAY 'A' & TAXIWAY 'B' BETWEEN TAXIWAY 'A1' & TAXIWAY 'A2'.

TAXIWAY 'S' & 'T' CLOSED BETWEEN RUNWAY 7R/25L & TAXIWAY 'R' DURING CAT II & CAT III OPERATIONS.

AIRCRAFT WITH WINGSPAN GREATER THAN 175 FT CANNOT PASS SIMULTANEOUSLY ON TAXIWAY 'E' & TAXIWAY 'Z'.

TAXIWAY B CLOSED BETWEEN TAXIWAY R AND TAXIWAY A1 TO AIRCRAFT WITH WINGSPAN GREATER THAN 117 FT WITHOUT PERMISSION FROM AIRPORT DIRECTOR AT 414-747-5325.

TAXIWAYS D1, F2, H, J, F1, P AND F (EAST OF RUNWAY 19R) CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 78 FT.

TAXIWAY F (WEST OF TAXIWAY Z) CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 117 FT UNLESS PERMISSION FROM AIRPORT DIRECTOR AT 414-747-5325.

RUNWAY 19R TAKE-OFF DISTANCE AVAILABLE 8,450 FT FROM INTERSECTION TAXIWAY V.

TAXIWAY V BETWEEN TAXIWAY D AND RUNWAY 7L/25R CLOSED TO AIRCRAFT WITH WINGSPAN GREATER THAN 170 FT WHEN RUNWAY 7L/25R IN USE.

TAXIWAY B BETWEEN TAXIWAY V AND TAXIWAY R CLOSED TO AFFECT WITH WINGSPAN GREATER THAN 170 FT.

HOLDING BAYS AT RUNWAYS 1L & 7R ARE IN USE, ASSOCIATED TAXIWAY ADJACENT TO BAY IS LIMITED TO AIRCRAFT WINGSPAN UP TO 137 FT.

HOLDING BAY AT RUNWAY 19R WHEN IN USE, TAXIWAY Z ADJACENT TO BAY IS LIMITED TO AIRCRAFT WITH WINGSPAN UP TO 170 FT.

RUNWAY 07L/25R NO AIRCRAFT 65,000 LBS OR GREATER ALLOWED TAXI BETWEEN TAXIWAY 'C' & TAXIWAY 'E'.

RUNWAY 01R-19L AVAILABLE TO AIR CARRIERS FOR TAXI ONLY.

INDEX

[References are to page numbers]

A

- Abbreviations, GEN 2.2-1
- Accident and Incident Reporting , ENR 1.16-1
 - Items To Be Reported, ENR 1.16-2
- Actual Navigation Performance (ANP), ENR 4.1-40
- Aerodrome Forecast (TAF), GEN 3.5-72
- Aeronautical Charts, GEN 3.2-1
- Aeronautical Fixed Telecommunications Network (AFTN), GEN 3.4-5
- Aeronautical Information Publication (AIP)
 - Publication Schedule, GEN 0.1-2
 - Structure, GEN 0.1-1
 - Subscription Information, GEN 0.1-3
- Aeronautical Publications, Distribution of, GEN 3.1-1
- AFTN. *See* Aeronautical Fixed Telecommunications Network (AFTN)
- AHRS. *See* Attitude Heading Reference System
- Air Defense Identification Zone (ADIZ), ENR 1.12-1
- Air Defense Identification Zone, Land-Based, ENR 1.12-1
- Air Route Traffic Control Center (ARTCC), GEN 3.3-2
 - ARTCC Communications, GEN 3.3-2
 - ARTCC Radio Frequency Outage, GEN 3.3-3
- Air Traffic Clearance. *See* Clearance
- Air Traffic Control, Pilot/Controller Roles and Responsibilities, ENR 1.1-62
- Aircraft
 - Lights, Use of, ENR 1.1-25
 - Unmanned, ENR 5.7-2
- Aircraft Suffixes, ENR 1.10-11
- Airport
 - Aircraft Arresting Devices, AD 1.1-27
 - Airport Advisory/Information Services, ENR 1.4-12
 - Fees and Charges, GEN 4.1-1
 - Fire Fighting Requirements, AD 1.1-3
 - Local Airport Advisory (LAA), GEN 3.3-8
 - Operations, ENR 1.1-1
 - Exiting the Runway after Landing, ENR 1.1-21
 - VFR Flights in Terminal Areas, ENR 1.1-16
 - Low Level Wind Shear/Microburst Detection Systems, ENR 1.1-12
 - Signals, Hand, ENR 1.1-21
 - Taxiing, ENR 1.1-14
 - Traffic Pattern, ENR 1.1-1, ENR 1.1-2, ENR 1.1-6
 - With Operating Control Tower, ENR 1.1-1
 - Without Operating Control Tower, GEN 3.3-7, GEN 3.3-17, ENR 1.1-6
 - Remote Airport Advisory (RAA), GEN 3.3-8, ENR 1.4-13
 - Remote Airport Information Service (RAIS), GEN 3.3-8, ENR 1.4-13
 - Reservations Procedures, GEN 3.3-15
 - Using Enhanced Computer Voice Reservation System (e-CVRS), GEN 3.3-15
 - Airport Lighting, AD 1.1-4
 - Airport Beacons, AD 1.1-16, AD 1.1-18
 - Approach Light Systems, AD 1.1-4
 - Obstruction Lighting, AD 1.1-18
 - Pilot-controlled Lighting, AD 1.1-13
 - Precision Approach Path Indicator (PAPI), AD 1.1-4
 - Runway Lighting, AD 1.1-5
 - Taxiway Lighting, AD 1.1-17
 - Visual Approach Slope Indicator (VASI), AD 1.1-4
 - Airport Markings, AD 1.1-19
 - Colors, AD 1.1-19
 - Holding Position Markings, AD 1.1-22
 - Other Markings, AD 1.1-23
 - Nonmovement Area Boundary Markings, AD 1.1-24
 - Temporarily Closed Runways and Taxiways, AD 1.1-24
 - VOR Checkpoint Markings, AD 1.1-24
 - Runway Markings, AD 1.1-20
 - Taxiway Markings, AD 1.1-21
 - Airport Operations
 - Intersection Takeoffs, ENR 1.1-16
 - Land and Hold Short , ENR 1.1-18
 - Airport Signs, AD 1.1-24
 - Destination Signs, AD 1.1-26
 - Direction Signs, AD 1.1-26
 - Information Signs, AD 1.1-26
 - Location Signs, AD 1.1-25
 - ILS Critical Area Boundary Sign, AD 1.1-26
 - Runway Boundary Sign, AD 1.1-26
 - Runway Location Sign, AD 1.1-25
 - Taxiway Location Sign, AD 1.1-25

[References are to page numbers]

- Mandatory Instruction Signs, AD 1.1-24
 - ILS Critical Area Holding Position Sign, AD 1.1-25
 - No Entry Sign, AD 1.1-25
 - Runway Approach Area Holding Position Sign, AD 1.1-25
 - Runway Holding Position Sign, AD 1.1-25
 - Runway Distance Remaining Signs, AD 1.1-27
 - Airport Surface Detection Equipment – Model X (ASDE-X), ENR 1.1-42
 - Airport Use, AD 1.1-1 *See also* Airport, Reservations Procedures
 - Airspace, ENR 1.4-1
 - Classes, ENR 1.4-1, ENR 1.4-3, ENR 1.4-4
 - Controlled, ENR 1.4-3
 - IFR Requirements, ENR 1.4-3
 - VFR Requirements, ENR 1.4-3
 - Operating Rules and Requirements, ENR 1.4-4, ENR 1.4-6, ENR 1.4-11
 - Radar Vectors in, ENR 1.1-65, ENR 3.5-2
 - Speed Adjustments in, ENR 1.1-65
 - VFR Corridors, ENR 1.4-14
 - VFR Transition Routes, ENR 1.4-14
 - Flights Over Charted U.S. Wildlife Refuges, Parks and Forest Service Areas, ENR 5.6-2
 - National Security Area, ENR 5.1-2
 - Obstructions to Flight. *See* Flight Hazards, Potential
 - Parachute Jump Aircraft Operations, ENR 5.1-4
 - Special Use, ENR 5.1-1
 - Alert Areas, ENR 5.2-1
 - Controlled Firing Areas, ENR 5.2-1
 - Military Operations Area (MOA), ENR 5.2-1
 - Military Training Routes, ENR 5.2-1
 - Prohibited Areas, ENR 5.1-1
 - Restricted Areas, ENR 5.1-1
 - Warning Areas, ENR 5.1-2
 - Temporary Flight Restriction, ENR 5.1-2
 - Terminal Radar Service Area, ENR 1.1-60
 - Terminal Radar Service Area (TRSA), ENR 1.4-15
 - VFR Flyways, ENR 1.4-13
 - VFR Routes, Published, ENR 1.4-13
 - VFR Weather Minimums, ENR 1.4-2
- Airways and Route Systems. *See* Navigation
- Altimeter Setting Procedures, ENR 1.7-1
- Altitude
 - Mandatory, ENR 1.5-21
 - Maximum, ENR 1.5-21
 - Minimum, ENR 1.5-21
- ANP. *See* Actual Navigation Performance
- Approach Control Service for VFR Arriving Aircraft, GEN 3.3-7
- Approaches, ENR 1.5-7, ENR 1.5-41
 - Approach and Landing Minimums, ENR 1.5-16
 - Approach Clearance, ENR 1.5-10
 - Contact Approach, ENR 1.1-63
 - Differences between ILS and ILS/PRM Approaches, ENR 1.5-54
 - ILS Minimums, ENR 4.1-8
 - ILS/MLS Approaches to Parallel Runways, ENR 1.5-43, ENR 1.5-46, ENR 1.5-47
 - Instrument Approach, ENR 1.1-64
 - Instrument Approach Procedure Charts, ENR 1.5-19 *See also* Aeronautical Charts
 - Minimum Vectoring Altitudes, ENR 1.5-34
 - Missed Approach, ENR 1.1-64, ENR 1.5-61
 - Missed Approach, GPS, ENR 4.1-33
 - Monitoring of Instrument Approaches, ENR 1.5-43
 - No-Gyro Approach, ENR 1.5-43
 - Overhead Approach Maneuver, ENR 1.5-65
 - Practice Instrument Approaches, ENR 1.1-17
 - Precision Approach, ENR 1.5-42
 - Side-step Maneuver, ENR 1.5-16
 - Simultaneous Close Parallel ILS PRM Approaches, ENR 1.5-49
 - Simultaneous Converging Instrument Approaches, ENR 1.5-55
 - Surveillance Approach, ENR 1.5-42
 - Timed Approaches From a Holding Fix, ENR 1.5-55
 - Vertical Descent Angle (VDA), ENR 1.5-35
 - Visual, ENR 1.1-67
 - Visual Descent Points, ENR 1.5-34, ENR 1.5-60
- Area Navigation (RNAV), ENR 1.19-1, ENR 4.1-39, ENR 4.1-41
- Area Navigation (RNAV) Routes, ENR 3.3-1
- Area Navigation (RNAV) Standard Terminal Arrival (STAR), ENR 1.5-7
- ARFF (Aircraft Rescue and Fire Fighting) Emergency Hand Signals, GEN 3.7-1
- ARFF (Aircraft Rescue and Fire Fighting) Radio Call Sign, GEN 3.7-1
- ARTCC. *See* Air Route Traffic Control Center (ARTCC)
- ATS Routes, ENR 3.1-1
 - Lower ATS Routes, ENR 3.1-1
 - Upper ATS Routes, ENR 3.2-1
- Attitude Heading Reference System (AHRS), ENR 4.1-22

[References are to page numbers]

Automated Terminal Information Service (ATIS).
See Meteorological Services

Automated Weather Observation System (AWOS) .
See AWOS

Automated Weather Sensor System (AWSS), GEN
3.3-17, GEN 3.5-29

Automatic Flight Information Service (AFIS) –
Alaska FSSs Only. See AFIS

Aviation Safety Reporting Program, ENR 1.16-1

B

Bird Activity, ENR 5.6-1
Reporting Bird and Other Wildlife Activities,
ENR 5.6-1
Reporting Bird Strikes, ENR 5.6-1

C

Call Signs
Aircraft, GEN 3.4-6
Ground Station, GEN 3.4-8

Charts. See Aeronautical Charts

Class C Airspace, Outer Area, ENR 1.4-6

Clearance
Adherence to, ENR 1.1-30
Air Traffic Control, ENR 1.1-26
Amended, ENR 1.1-27
Clearance Items, ENR 1.1-26
Pilot Responsibilities, ENR 1.1-29
Special VFR, ENR 1.1-28
VFR-On-Top, ENR 1.1-29
VFR/IFR Flights, ENR 1.1-30

CNF. See Computer Navigation Fix

Collision Avoidance, ENR 1.15-8

Common Traffic Advisory Frequency (CTAF). See
Radio Communications

Communications. See Radio Communications

Computer Navigation Fix (CNF), ENR 4.1-30

Controlled Airspace. See Airspace, Controlled

Conversion Tables, GEN 2.6-1

Cruising Altitudes, ENR 1.4-2, ENR 1.4-13

Customs. See U.S. Customs

D

Declared Distances, ENR 1.1-8

Density Altitude. See Flight Hazards, Potential

Departure Control, ENR 1.5-68
Abbreviated IFR Departure Clearance
Procedures, ENR 1.5-68

Departure Procedures, ENR 1.5-65 See also Global
Positioning System (GPS)
Clearance Void Times, ENR 1.5-67
Departure Restrictions, ENR 1.5-66, ENR
1.5-67
Hold for Release, ENR 1.5-67
Instrument Departure Procedures (DP), ENR
1.5-70
Pre-Taxi Clearance Procedures, ENR 1.5-65
Release Times, ENR 1.5-67
Taxi Clearance, ENR 1.5-66

Departure, Instrument, ENR 1.1-68

Differences From ICAO Standards, Recommended
Practices and Procedures, GEN 1.7-1

Discrete Emergency Frequency, GEN 3.7-1

DUATS. See Meteorological Services

E

EFVS. See Enhanced Flight Vision Systems

ELT. See Emergency Locator Transmitters

Emergency
Aircraft Rescue and Fire Fighting
Communications, GEN 3.7-1
Aircraft, Overdue, GEN 3.6-5
Body Signals, GEN 3.6-6
Direction Finding Instrument Approach
Procedure, GEN 3.6-14
Distress and Urgency Communications, GEN
3.6-12
Ditching Procedures, GEN 3.6-15
Fuel Dumping, GEN 3.6-19
Obtaining Assistance, GEN 3.6-13
VFR Search and Rescue Protection, GEN 3.6-5

Emergency Locator Transmitters, GEN 3.6-2

Enhanced Flight Vision Systems, ENR 1.5-57

EPE. See Estimate of Position Error

Estimate of Position Error (EPE), ENR 4.1-40

[References are to page numbers]

F

Fees and Charges. *See* Airport
Final Guard, ENR 1.4-13
FIS. *See* Flight Information Services
Flight Hazards, Potential, ENR 5.7-1
 Density Altitude, ENR 5.7-4
 Laser Operations, ENR 5.7-10
 Mountain Flying, ENR 5.7-3
 Mountain Wave, ENR 5.7-5
 Obstructions, ENR 5.7-1
 VFR in Congested Area, ENR 5.7-1
Flight Information Services, GEN 3.5-23
Flight Management System (FMS), ENR 1.19-3
Flight Management System Procedures, ENR 1.5-7
Flight Plan, ENR 1.10-1, ENR 1.11-1
 Aircraft Suffixes, ENR 1.10-11
 Airways/Jet Routes Depiction, ENR 1.10-13
 Area Navigation (RNAV), ENR 1.10-14
 Canceling, ENR 1.10-18
 Change, ENR 1.10-18, ENR 1.10-21
 Composite (VFR/IFR Flights), ENR 1.10-17
 Direct Flights, ENR 1.10-14
 Flight Plan Form, ENR 1.10-16
 Flight Plan Requirements, ENR 1.10-8
 Defense VFR, ENR 1.10-12
 IFR, ENR 1.10-12
 VFR, ENR 1.10-8
 International Flight Plan, ENR 1.10-20
 Operations Associated with ADIZ, ENR 1.12-1
 Preflight Preparation, ENR 1.10-1
Flight Service Station (FSS), GEN 3.1-5
Fly Visual to Airport, ENR 1.5-35
FMSP. *See* Flight Management System Procedures
Forms, Bird Strike Incident/Ingestion Report, ENR 5.6-3
Frequencies. *See* Radio Communications
FSS. *See* Flight Service Station (FSS)
Fuel Advisory, Minimum, ENR 1.1-68

G

GBAS. *See* Ground Based Augmentation System
GBAS Landing System (GLS), ENR 4.1-38

Global Navigation Satellite System (GNSS), ENR 4.1-38
Global Positioning System, GPS Approach Procedures, ENR 4.1-29
Global Positioning System (GPS), ENR 4.1-22
 Departures, ENR 4.1-31
 Missed Approach, ENR 4.1-33
 Receiver Autonomous Integrity Monitoring (RAIM), ENR 4.1-29
GLS. *See* GBAS Landing System
GPS Approach Procedures, ENR 4.1-29
GPS IFR Equipment Classes/Categories, ENR 4.1-27
GPS NOTAM's/Aeronautical Information, ENR 4.1-29
Ground Based Augmentation System (GBAS), ENR 4.1-39
Gulf of Mexico Grid System, ENR 6.1-6

H

Half-Way Signs, ENR 5.7-4
Hazard, Thermal Plumes, ENR 5.7-14
Hazardous Area Reporting Service, GEN 3.4-13
 Block Island, GEN 3.4-14
 Cape Cod, GEN 3.4-15
 Great Lakes, GEN 3.4-15
 Long Island Sound, GEN 3.4-13
HDTA. *See* High Density Traffic Airports
Helicopter
 IFR Operations, ENR 6.1-1
 Special Operations, ENR 6.2-1
High Altitude Destinations. *See* IFR Operations to High Altitude Destinations
High Density Traffic Airports, GEN 3.3-15
Holding Instructions. *See* Clearance Items
Holding Pattern
 Airspeeds, ENR 1.5-1
 ATC Holding Instructions, ENR 1.5-1
 Distance Measuring Equipment (DME), ENR 1.5-4
 Entry Procedures, ENR 1.5-4
 Nonstandard, ENR 1.5-6
 Timing, ENR 1.5-4

[References are to page numbers]

I

ICAO Standards, Recommended Practices and Procedures. *See* Differences From ICAO Standards, Recommended Practices and Procedures

Icing Terms, GEN 3.5-43

IFR Operations to High Altitude Destinations, ENR 1.10-17

Inertial Navigation System, ENR 4.1-22

Inertial Reference Unit (IRU), ENR 4.1-22

INS. *See* Internal Navigation System

Instrument Departure. *See* Departure, Instrument

Instrument Departure Procedures (DP), ENR 1.5-70

Instrument Landing System, Locators, Compass, ENR 4.1-4

Instrument Landing System (ILS), ENR 4.1-4 *See also* Approaches Frequency Table, ENR 4.1-7

Instrument Meteorological Conditions (IMC), ENR 1.5-70

Integrated Terminal Weather System, ENR 1.1-12

Intersection Takeoffs. *See* Airport Operations

IRU. *See* Inertial Reference Unit

ITWS. *See* Integrated Terminal Weather System

J

Jet Route System. *See* Navigation

L

Land and Hold Short Operations. *See* Airport Operations

Law Enforcement Operations by Civil and Military Organizations, ENR 1.12-6

Light Amplification by Stimulated Emission of Radiation (Laser) Operations. *See* Flight Hazards, Potential

Lighting. *See* Airport Lighting

Line Up and Wait, ENR 1.5-66

LLWAS. *See* Low Level Wind Shear Alert System

Local Airport Advisory (LAA), GEN 3.3-8, ENR 1.4-13

Localizer Performance with Vertical Guidance, ENR 4.1-35

LORAN, ENR 4.1-14
LORAN Status Information, ENR 4.1-21

Low Level Wind Shear Alert System (LLWAS), ENR 1.1-12

Low Level Wind Shear/Microburst Detection Systems, ENR 1.1-12

Lower ATS Routes, ENR 3.1-1
Low Altitude ATS Route Structure, ENR 3.1-1

LPV. *See* Localizer Performance with Vertical Guidance

LUAW, ENR 1.5-66

M

Medical Facts for Pilots, ENR 1.15-1
Carbon Monoxide Poisoning in Flight, ENR 1.15-5
Certification, ENR 1.15-1
Decompression Sickness after Scuba Diving, ENR 1.15-4
Effects of Altitude, ENR 1.15-3
Ear Block, ENR 1.15-4
Hypoxia, ENR 1.15-3
Sinus Block, ENR 1.15-4
Hyperventilation in Flight, ENR 1.15-4
Illusions, ENR 1.15-5
Personal Checklist, ENR 1.15-2
Scanning for Other Aircraft, ENR 1.15-7
Vision in Flight, ENR 1.15-6

Meteorological Services, GEN 3.5-1, GEN 3.5-33
Automatic Terminal Information Service (ATIS), GEN 3.3-14
Categorical Outlook, GEN 3.5-20
Cloud Heights, Reporting, GEN 3.5-37
Direct User Access System (DUATS), GEN 3.5-4
En Route Flight Advisory Service (EFAS), GEN 3.5-9
Hazardous In-flight Weather Advisory Service (HIWAS), GEN 3.5-22, GEN 3.5-77
ICAO Weather Formats, GEN 3.5-65
Inflight Aviation Weather Advisories, GEN 3.5-10
Inflight Weather Broadcasts, GEN 3.5-22
Low Level Wind Shear Alert System (LLWAS), GEN 3.5-50
Meteorological Broadcasts, GEN 3.5-77

[References are to page numbers]

Pilot Weather Report (PIREP), GEN 3.5-39
Prevailing Visibility, Reporting, GEN 3.5-38
Runway Visual Range (RVR), GEN 3.5-36
Telephone Information Briefing Service (TIBS),
GEN 3.5-22
Terminal Doppler Weather Radar (TDWR), GEN
3.5-51
Terminal Weather Information for Pilots (TWIP),
GEN 3.5-55
Weather Briefings
Abbreviated, GEN 3.5-8
Inflight, GEN 3.5-9
Outlook, GEN 3.5-9
Preflight, GEN 3.5-7
Standard, GEN 3.5-7
Weather Deviations and Other Contingencies in
Oceanic Controlled Airspace, GEN 3.5-35
Weather Observation Service Standards, GEN
3.5-30, GEN 3.5-32
Weather Observing Programs, GEN 3.5-31
Automated Surface Observation System
(ASOS), GEN 3.5-29
Automated Weather Observing System
(AWOS), GEN 3.5-27
Manual Observations, GEN 3.5-26
Microwave Landing System (MLS), ENR 4.1-11 *See
also Approaches*
Military NOTAMs, ENR 1.10-7
Military Training Routes. *See* Airspace, Special Use
Minimum Navigation Performance Specifications
(MNPS) Airspace, ENR 1.17-1
Minimum Safe Altitudes, ENR 1.5-22
Mountain Flying. *See* Flight Hazards, Potential
Mountain Wave. *See* Flight Hazards, Potential
MSA. *See* Minimum Safe Altitudes

N

National Security and Interception Procedures, ENR
1.12-1, ENR 1.12-4
National Security Area. *See* Airspace
NAVAID Identifier Removal During Maintenance,
ENR 4.1-42
NAVAID User Reports, ENR 4.1-42
Navigation. *See also* Global Positioning System
(GPS)
Adhering to Airways or Routes, ENR 3.5-3
Airway or Route Course Changes, ENR 3.5-2

Airways and Route Systems, ENR 3.5-1
Changeover Points, ENR 3.5-2
LORAN, ENR 4.1-14
Navigation, Radio, GEN 3.4-1
Nondirectional Radio Beacon, GEN 3.4-3
Navigation Aids, ENR 4.1-1
Navigation Reference System (NRS), ENR 1.10-15
Navigational, Inertial Navigation System, ENR
4.1-22
Near Midair Collision Reporting, ENR 1.16-2
Investigation, ENR 1.16-3
Notice to Airmen
NOTAM Contractions, ENR 1.10-3
NOTAM D, ENR 1.10-6
Notices To Airmen (NOTAM) Service, GEN 3.1-2,
ENR 1.10-2

O

Operational Information System (OIS), ENR
1.10-12
Overhead Approach Maneuver. *See* Approaches

P

Parachute Jump Aircraft Operations. *See* Airspace
Phonetic Alphabet. *See* Radio Communications,
Phonetic Alphabet
Pilot Visits to Air Traffic Facilities, GEN 3.3-2
PIREP. *See* Meteorological Services, Pilot Weather
Report
Pointer NOTAMs, ENR 1.10-7
Position Reporting, GEN 3.3-4
Position Reporting Requirements, GEN 3.3-4
Pre-departure Clearance Procedures, ENR 1.5-65
Precipitation Static, ENR 5.7-9
Precision Approach Systems, ENR 4.1-38
Procedure Turns, ENR 1.5-11
Published Instrument Approach Procedure Visual
Segment, ENR 1.5-35
Air Traffic Control Radar Beacon System, ENR
1.1-36
Capabilities, ENR 1.1-35

[References are to page numbers]

R

- Radar, ENR 1.1–35
 - Precision Approach , ENR 1.1–37
 - Surveillance, ENR 1.1–37
- Radar Services Provided by ATC, ENR 1.1–46
 - Aircraft Conflict Alert, ENR 1.1–46
 - Offshore Controlled Airspace, ENR 1.1–62
 - Radar Assistance to VFR Aircraft, ENR 1.1–48
 - Radar Traffic Information Service, ENR 1.1–46
 - Terrain/Obstruction Alert, ENR 1.1–46
- Radio Communications, GEN 3.4–6
 - Common Traffic Advisory Frequency (CTAF), GEN 3.3–7
 - Contact Procedures, GEN 3.4–11
 - Directions, GEN 3.4–10
 - Failure, GEN 3.4–10, GEN 3.4–21
 - For Aircraft on International or Overseas Flights, GEN 3.4–17, GEN 3.4–21
 - Phonetic Alphabet, GEN 3.4–8
 - Phraseology, GEN 3.4–8
 - Radio Technique, GEN 3.4–6
 - Speed, GEN 3.4–10
 - UNICOM/MULTICOM , GEN 3.3–12, GEN 3.3–13
- Radio Navigation Aids
 - Distance Measuring Equipment, ENR 4.1–3, ENR 4.1–6
 - Nondirectional Radio Beacon, ENR 4.1–1
 - Tactical Air Navigation, ENR 4.1–4
 - VHF Direction Finder, ENR 4.1–1
 - VHF Omni-directional Radio Range, ENR 4.1–1
- Receiver Autonomous Integrity Monitoring (RAIM). *See* Global Positioning System (GPS)
- REL. *See* Runway Entrance Lights
- Remote Airport Advisory (RAA), GEN 3.3–8, ENR 1.4–13
- Remote Airport Information Service (RAIS), GEN 3.3–8, ENR 1.4–13
- Required Navigation Performance (RNP), ENR 1.19–1, ENR 4.1–39
- Required Navigation Performance (RNP) Operations, ENR 1.10–19, ENR 4.1–41
- Reservations. *See* Airport, Reservations Procedures
- RNAV. *See* Area Navigation
- RNP. *See* Required Navigation Performance; Required Navigation Performance (RNP)

Runway

- Entrance Lights, AD 1.1–10, AD 1.1–11
- Status Light (RWSL) System, AD 1.1–12, AD 1.1–13

Runway Intersection Lights (RIL), AD 1.1–11

- RWSL System, Runway Status Light (RWSL) System. *See* Runway Status Light (RWSL) System

S

SCAT–I DGPS. *See* Special Category I Differential GPS

Seaplane Safety, ENR 5.7–6

Search and Rescue, GEN 3.6–1

Security Identification Display Area, AD 1.1–27

Separation

- IFR, Standards, ENR 1.1–32
- Runway, ENR 1.1–34
- Visual, ENR 1.1–34, ENR 1.1–67

SIDA. *See* Security Identifications Display Area

Signs, Half-Way, ENR 5.7–4

Special Category I Differential GPS (SCAT–I DGPS), ENR 4.1–39

Special Instrument Approach Procedures, ENR 1.5–41

Special Use Airspace (SUA) NOTAMs, ENR 1.10–7

Standard Terminal Arrival, ENR 1.5–7

STAR. *See* Standard Terminal Arrival

T

Takeoff Hold Lights (THL), AD 1.1–11

TDWR. *See* Terminal Doppler Weather Radar

Temporary Flight Restrictions. *See* Airspace

Terminal Arrival Area (TAA), ENR 1.5–22

Terminal Doppler Weather Radar, ENR 1.1–12

THL. *See* Takeoff Hold Lights

Time, Conversion from UTC to Standard Time, GEN 3.4–10

Timekeeping Procedures, ENR 1.17–1, ENR 1.18–1

TLS. *See* Transponder Landing System

[References are to page numbers]

Tower En Route Control (TEC), ENR 1.1-61
Traffic Advisories, ENR 1.1-66
Traffic Advisories, At Airports Without Operating Control Towers, GEN 3.3-7
Traffic Alert and Collision Avoidance System (TCAS I & II), ENR 1.1-69
Traffic Information Service (TIS), ENR 1.1-70, ENR 1.1-77
Traffic Pattern. *See* Airport, Operations
Transponder Landing System (TLS), ENR 4.1-39
Transponder Operation, ENR 1.1-43
Automatic Altitude Reporting, ENR 1.1-43
Code Changes, ENR 1.1-44
Emergency, ENR 1.1-45
Ident Feature, ENR 1.1-44
Mode C Requirements, ENR 1.1-44
Under Visual Flight Rules, ENR 1.1-45
TRSA. *See* Airspace, Terminal Radar Service Area

U

Unidentified Flying Objects (UFO), ENR 1.16-3
U.S. Customs Requirements
Entry, Transit, and Departure of Aircraft, GEN 1.2-1
Entry, Transit, and Departure of Cargo, GEN 1.4-1
Entry, Transit, and Departure of Passengers and Crew, GEN 1.3-1
U.S. Customs Service, Locations, GEN 1.1-2
U.S. Differences From ICAO Standards. *See* Differences From ICAO Standards, Recommended Practices and Procedures
Units of Measurement, GEN 2.1-1
Unmanned Aircraft, ENR 5.7-2
Upper ATS Routes, ENR 3.2-1

High Altitude ATS Route Structure, ENR 3.2-1

V

VCOA. *See* Visual Climb Over the Airport
VFR Flyways. *See* Airspace
VFR-on-top, ENR 1.1-68
Visual Approach. *See* Approaches
Visual Climb Over the Airport (VCOA), ENR 1.5-72
Visual Meteorological Conditions (VMC), ENR 1.5-70
Visual Segment, ENR 1.5-35
Visual Separation, ENR 1.1-67
Volcanic Ash, Flight Operations in, ENR 5.7-7
Volcanic Ash, Reporting, GEN 3.5-56
Form, GEN 3.5-85
VOR Receiver Check, ENR 4.1-2
Vortex Avoidance Procedures, GEN 3.5-62

W

Wake Turbulence, GEN 3.5-58
Weather Briefings. *See* Meteorological Services
Weather Conversion Table, GEN 3.5-3
Weather Hazards
Microbursts, GEN 3.5-46
Thunderstorm Flying, GEN 3.5-57
Thunderstorms, GEN 3.5-56
Weather Minimums. *See* Airspace, VFR Weather Minimums
Weather Radar Services, GEN 3.5-33
Weather System Processor, ENR 1.1-12
Wide Area Augmentation System (WAAS), ENR 4.1-34
Wildlife Refuges, Parks, and Forest Service Areas. *See* Airspace
WSP, ENR 1.1-12