



Blackbird Instrument School



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REFERENCES



- CNAF M-3710.7 (Formerly OPNAV 3710)
- INAV FTI (2016)
- INST NATOPS
- Instrument Flight Planning Workbook, T-6B
- INST Procedures Handbook (FAA)
- INST Flying Handbook (FAA)
- General Planning (GP)



AIM



- Bridge the gap from the academic and simulator world to real world Instrument flying



OVERVIEW



- DD-175 Exercise
- Weather and Flight Planning
- Point to Point
- Holding
- Approach Plates and Brief
- DA/Hs / MDAs
- Circling
- Miscellaneous
- CCX Expectations



PUBS CHECK



- Contact your IP the day prior!
- Make sure you have the most current (2016) INAV FTI!
- Before each flight, check to make sure you have all applicable pubs up to date
 - IFR high and low sectionals
 - Approach plates
 - IFR Supp
 - FIH
 - STARs



DD-175 Exercise



- IFR from KNSE to KTCL with a Terminal Delay at MGM (TCL2 Canned Route)
- Sky Vector Route
- Blank DD-175



DD-175



AUTHORITY: 10 USC 8012 and EO 9397. PRINCIPAL PURPOSE: To aid in accurate identification of personnel participating in the filed flight.	PRIVACY ACT STATEMENT ROUTINE USES: To provide data required to process flight plans with appropriate air traffic service authorities. A file is retained by the agency processing the flight plan. DISCLOSURE: Voluntary; however, failure to provide the SSN could result in denial of flight plan processing.	DATE	AIRCRAFT CALL SIGN	AIRCRAFT DESG AND TD CODE
BASE OPERATIONS USE				

-Item (1) DATE - Enter date of flight in local time.

-Item (2) CALLSIGN - VV – Navy “VV2E123

c. UNITED STATES NAVY/UNITED STATES MARINE

CORPS Fleet and Training Command aircraft shall have the option of utilizing approved aircraft tactical call signs or a radio call sign consisting of service code from item (2)a, above with assigned letter(s) or number(s) from tail marking and not less than 2 nor more than 3 numbers; i.e., VVAB101 or VV2C40. If a tactical call sign is used, it will be entered as spoken; i.e., “BB123”. Tactical call signs shall not exceed 7 characters/numbers and shall be a pronounceable word.

-Item (3) DESG and CODE – TEX2/G

Model

AT-6, T-6 Texan 2

Type Designator

TEX2*

GNSS	No Transponder	/N
	Transponder w/ no mode C	/S
	Transponder w/ mode C	/G



Climb Phase



- Climb at Max Range Climb airspeed until reaching CA
- ITT climb & cruise pwr settings and cruise settings – Why?
- FMS switches from TERM to EN ROUTE
- Passing 17,999' MSL...



En Route Phase



- Determine Max Range airspeed
- Changover Points
- Acquiring ATIS – When? How?
- Determining divert airfield(s) en route?
 - Imagine DEGA ring
 - Blue/Green/Brown
- Prepare for the descent and terminal area
 - A,B,C Technique



Terminal Area



Making the Approach Request

- Make Check-In call first
- Be clear and descriptive
- State # of App's if repeating the same APR more than once
- Include holding or PTP when applicable
- Don't forgot to include how the approach request will terminate
- Be adaptable/flexible!
 - ATC won't always be able to accommodate your exact request



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

- Item (4) TYPE FLIGHT PLAN - Enter "I" (IFR) or "V" (VFR) as appropriate for that segment.

- Item (5) TAS - Item (5) TRUE AIRSPEED - Enter TAS to be maintained at initial cruising altitude/Flight Level. This entry is not required for VFR local flights.

GOUGE – Cruising altitude X 4 + IAS = TAS

$$12,000 \times 4 = 48$$

$$200 + 48 = 248$$

$$\text{TAS} = \sim 248$$

- Item (6) POINT OF DEPARTURE - Enter the four-character ICAO location identifier of the departure airport, or three character identifier for a Navigational Aid, or the fix where IFR will begin. If there is no location identifier, enter the installation name. Use of four-character identifiers for airports helps prevent ATC system errors and potential delays.



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

- Item (7) PROPOSED DEPARTURE TIME (Z) - Enter the proposed departure time in Coordinated Universal Time (UTC); allow sufficient time for Base Operations to process the flight plan. For activation of an airborne segment (e.g., after an enroute delay), enter the proposed time for beginning that segment.



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

- Item (8) ALTITUDE

a. For IFR flight, enter the initial cruising altitude/Flight Level in hundreds of feet (e.g., enter 6000 feet as "60", 15,000 feet as "150", FL300 as "300", etc.). For VFR flight, enter the initial cruising altitude in hundreds of feet (e.g., enter 8500 feet as "85"). For IFR/VFR-on-top, enter "OTP" and an altitude if so desired (e.g., "OTP" or "OTP 125"). WEST IS EVEN, EAST IS ODD.

b. If a subsequent enroute altitude change(s) is planned, enter the requested altitude/Flight Level and location of the change in the REMARKS.

c. If an altitude block is desired, enter the lower altitude of the requested block, the letter "B", and the top of the block (e.g., 240B270).



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

- Item (9) ROUTE OF FLIGHT

- a. For composite flight plans, do not combine IFR and VFR route segments on the same line.
- b. If a radar departure or VFR climb is desired enter this request in the REMARKS. When there is more than one departure airfield on the flight plan, if needed for clarification, add the airfield identifier to the remark to indicate which airfield the departure radar departure or VFR climb is for. The first point in the route of flight should be the planned Navigational Aid or fix for entering the enroute structure; ie. VOR, TACAN, TACAN/DME fix, named intersection, etc.
- c. If a Standard Instrument Departure is used, enter the SID coded identifier (if none is available, enter the SID name and number), following by either the SID termination point, or the transition fix (e.g., JUNCTION-FIVE DEPARTURE, enter "JCT5.JCT", or JUNCTION-FIVE with ABILENE TRANSITION, enter "JCT5.ABI")



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

- Item (9) ROUTE OF FLIGHT CONTINUED

d. Clearly define the route of flight by using Navigational Aid identifiers, fix radial distances, airway/jet route designations, named intersections, latitude/longitude coordinates and/or RNAV waypoints. The absence of airway identifiers between fixes/Navigational Aids indicates direct flight. To transition from one airway to another enter the designations of the two airways, separated either by a space (e.g., YKM V4 V187 TCM), or by the fix where the airways intersect (e.g., V33 FAGED V286).



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

- Item (9) ROUTE OF FLIGHT CONTINUED

e. For VFR flight plans the last fix entered is the point from which the final leg is begun to the destination.

f. For IFR flight plans the last fix entered is either:

- (1) The identifier of the nearest appropriate Initial Approach Fix, Navigational Aid, first point of intended landing, or published fix which most clearly establishes the route of flight to the destination or
- (2) The coded identifier of a Standard Terminal Arrival (STAR), e.g. "BOIDS9," placed after the transition fix.



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

- Item (9) ROUTE OF FLIGHT CONTINUED

h. STOPOVER FLIGHT PLANS – Stopover flight plans are utilized by pilots whenever stops at more than one airport are intended. In many instances, a particular destination is too distant to reach in one flight. Therefore, it is necessary to make one or more fueling stops in order to reach the final destination airport. It also saves the pilot the trouble of having to file a separate flight plan at each airport.

(1) Each leg after the initial leg of a stopover flight plan is entered as described in ITEMS (4) through (11).

(2) In parenthesis following the last entry of successive legs, enter the hours of fuel on board (e.g., (3+30)).

If an alternate is required, enter the airport identifier and the ETE to the alternate in parenthesis with the fuel on board entry (e.g., 3+30 KSKF 0+30).



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

-Item (9) ROUTE OF FLIGHT CONTINUED

i. ENROUTE DELAYS – An enroute delay flight plan is used for flights that intend to delay at an airport, area, or geographical point enroute before proceeding to the destination

(1) TERMINAL AREA DELAY - Enter the delay location airport identifier as the last item in the route of flight. Do not make an entry in the TO block; enter the time required to fly the segment in the ETE block. Explain the delay as a remark on the next line in the ROUTE OF FLIGHT block; do not make entries in any other blocks on this line. Precede the delay remark with a circled "R" to indicate that the information to following should be transmitted as a remark. Enter the delay location identifier, enter "D" and the length of the delay, and the airport of the final destination (e.g. (R) BSM D0+15 RND). Complete ITEMS (4) through (11) for the subsequent leg of flight.



DD-175



	TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE

-Item (10) TO - Enter four-character location ICAO identifier of full stop or final destination airport (as appropriate) opposite the last line entry in the ROUTE OF FLIGHT. If there is no location identifier enter the installation name. Use of four-character identifiers for airports helps prevent ATC system errors and potential delays.

Item (11) ESTIMATED TIME ENROUTE

a. VFR FLIGHT PLAN - The time from take-off to a position over the destination airport, including known or preplanned en route delays (practice air work approaches, landings, etc.).

b. IFR FLIGHT PLAN - The time from take-off or departure from a Terminal or Special Use Airspace en route delay location to the last fix shown in the ROUTE OF FLIGHT exclusive of planned en route delays.



DD-175



REMARKS						
RANK AND HONOR CODE						
FUEL ON BD	ALTN AIRFIELD	ETE TO ALTN	NOTAMS	WEATHER	WT AND BALANCE	AIRCRAFT SERIAL NUMBER, UNIT, AND HOME STATION
SIGNATURE OF APPROVAL AUTHORITY	CREW/PASSENGER LIST			ACTUAL DEP TIME (Z)	BASE OPERATIONS USE	
	ATTACHED	SEE PSGR				

Item (12) REMARKS - Enter information essential to safe and efficient control of air traffic. Service codes and other pertinent information should also be included in this section.

PPR (number) - PPR number, if applicable.

Item (13) RANK/HONOR CODE - See paragraph 4-3 (FLIGHT PLAN VIP CODES).

Item (14) FUEL ON BOARD - Enter total time that an aircraft can stay aloft while flying the planned profile with the fuel available at initial take-off using procedures recommended in the appropriate flight manual/NATOPS.



DD-175



REMARKS						
RANK AND HONOR CODE						
FUEL ON BD	ALTN AIRFIELD	ETE TO ALTN	NOTAMS	WEATHER	WT AND BALANCE	AIRCRAFT SERIAL NUMBER, UNIT, AND HOME STATION
SIGNATURE OF APPROVAL AUTHORITY	CREW/PASSENGER LIST			ACTUAL DEP TIME (Z)	BASE OPERATIONS USE	
	ATTACHED	SEE PSGR				

-Item (15) ALTERNATE AIRFIELD - Alternate airports will be selected on the basis of criteria contained in appropriate service directives. If IFR on a stopover flight plan, the alternate listed is for the first point of intended landing. Alternates required for subsequent stops will be included in the ROUTE OF FLIGHT section of the flight plan. Use four-character ICAO location identifier to indicate alternate airports. If there is no location identifier, enter the installation name. Use of four-character identifiers for airports helps prevent ATC system errors and potential delays.

-Item (16) ETE TO ALTERNATE - Enter the time required to fly from original destination to the alternate airport, based on flight at the last cruising altitude.

-Items (17) and (18) NOTAMS/WEATHER - Included as a preflight reminder and may be used as directed locally.



DD-175



- **GP CHAPTER 4**
- **READ IT!!!**



WEATHER AND PLANNING



- Naval Aviators shall be thoroughly familiar with weather conditions for the area in which flight is contemplated. (4.8.3.1)
- To decrease the probability of midair collisions, all flights in naval aircraft shall be conducted in accordance with IFR to the maximum extent **practicable**. (5.3.1.1)
- The primary method for requesting and obtaining flight route weather briefings ashore is online through the web-enabled Flight Weather Briefer (FWB) system (<https://fwb.metoc.navy.mil>) (4.8.3.1)
- Naval aviators shall request a DD-175-1 flight route weather brief from a DoD qualified forecaster whenever a DD-175/DD-1801 flight plan is filed. (4.8.3.2)



WEATHER AND PLANNING



- Alternate Airfield (4.8.4.3)

DESTINATION WEATHER ETA plus and minus 1 hour	ALTERNATE WEATHER ETA plus and minus 1 hour	
0 — 0 up to but not including Published minimums	3,000 — 3 or better	
Published minimums up to but not including 3,000 — 3 (single-piloted absolute minimums 200 — 1/2) (single-piloted helicopter/tilt-rotor absolute minimums 200-1/4)	NON-PRECISION	PRECISION
	* Published minimums plus 300-1	* Published minimums plus 200-1/2
3,000 — 3 or better	No alternate required	
* In the case of single-piloted or other aircraft with only one operable UHF/VHF transceiver, radar approach (PAR/ASR) minimums shall not be used as the basis for selection of an alternate airfield.		



WEATHER AND PLANNING



- Filing to an airfield with forecast below minimums (4.8.4.2)
 - IFR flight plans may be filed for destination at which the forecasted weather is below the appropriate minimums provided a suitable alternate airfield is forecast to have at least 3,000-foot ceiling and 3-statute-mile visibility during the period 1 hour before ETA until 1 hour after ETA.



WEATHER AND PLANNING



- Alternate Airfield (4.8.4.3)
 - An alternate airfield is required when the weather at the destination is forecast to be less than 3,000-foot ceiling and 3-statute-mile visibility during the period 1 hour before ETA until 1 hour after ETA (CNATRA aircraft shall always have an alternate).
 - Note: If an alternate airfield is required, it must have a published approach compatible with installed operable aircraft navigation equipment that can be flown without the use of two-way radio communication whenever either one of the following conditions is met:
 - a. The destination lacks the above described approach.
 - b. The forecasted weather at the alternate is below 3,000-foot ceiling and 3-statute-mile visibility during the period 1 hour before ETA until 1 hour after ETA.



WEATHER AND PLANNING



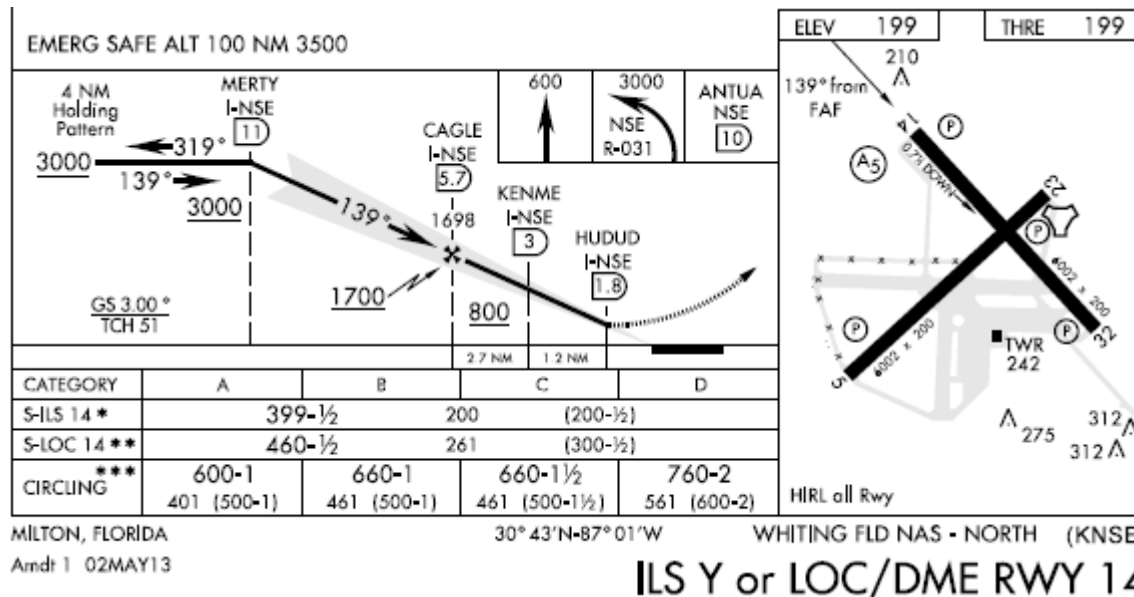
- Takeoff Minimums (5.3.4.1)
 - Standard instrument rating - Published minimums for the available non-precision approach, but not less than 300-foot ceiling and 1-statute mile visibility. When a precision approach compatible with installed and operable aircraft equipment is available, with published minimums less than 300/1, takeoff is authorized provided the weather is at least equal to the precision approach minimums for the landing runway in use, but in no case when the weather is less than 200-foot ceiling and 1/2-statute-mile visibility/2,400-foot runway visual range (RVR).



WEATHER AND PLANNING



- Can you take off?
 - RWY 14 (WX is 200-1)
 - RWY 14 (WX is 300-1/2)
 - (GS OTS UFN)
 - RWY 5 (WX is 600-1/2)





TYPICAL FLIGHT PROFILE



- Ground ops
 - Loading NAVAIDS/FMS
- Takeoff/Departure
 - Getting on the route
- Enroute procedures
 - ATIS (when to get / radio management, fuel, divert / emergency options)
- Checking in with Approach with your request (not Center)
- Requesting and flying multiple approaches
 - To include airfields not your destination



POINT TO POINT



Purpose is to fly in the most direct path from a starting points to a radial and DME from a station

Procedures:

- Tune and identify the NAVAID
- Set the desired radial in the CDI
- Turn to a heading approximately halfway between the head of the bearing pointer an the head of the CDI
 - Adjustments may be made to the rollout heading. If going to a smaller DME, favor the head of the needle. If going to a larger DME, favor the desired radial.
- Update the heading enroute and make appropriate corrections



POINT TO POINT

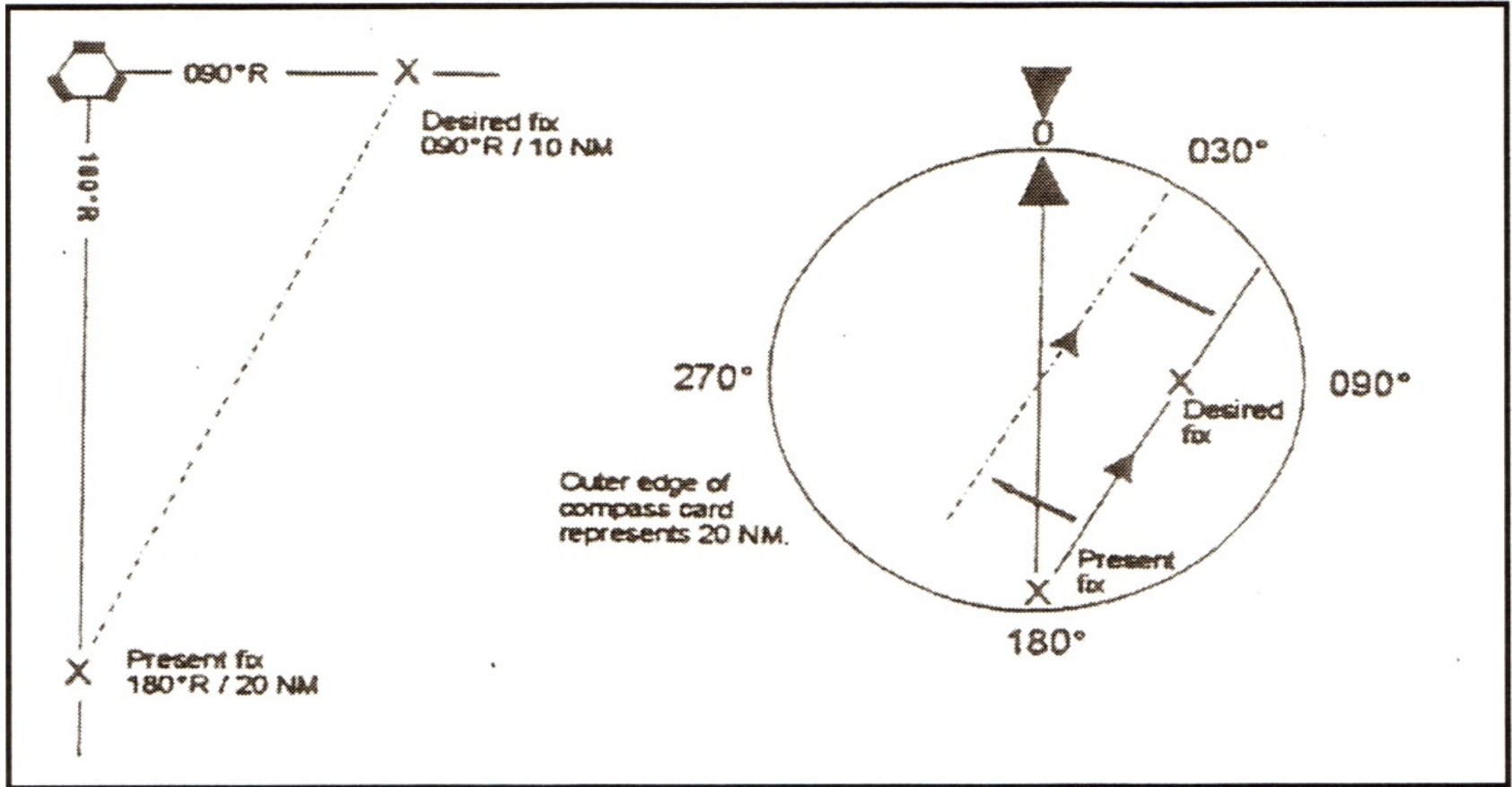


Pencil Method:

- Establish the fix with the greater distance (20 NM) at the edge of the compass card on its radial (180°)
- Establish the remaining fix (90° radial/10 NM) along its radial at a proportionate distance from the center of the card (halfway).
- Draw an imaginary line with the aid of a pencil, finger, etc **FROM** the aircraft's present position **through** the next fix. Move the "line" to the center of the card and read the no-wind heading to the desired fix (approx 30° in this case).
- Turn to the updated heading
- Visually determine if the line that connects the two fixes is vertical. This line represents the desired track. If it is vertical, you are on the correct heading at that instant. Apply any wind corrections that are required to remain on the proper track.
- If the line is not vertical, turn the aircraft to make it so.



POINT TO POINT





HOLDING

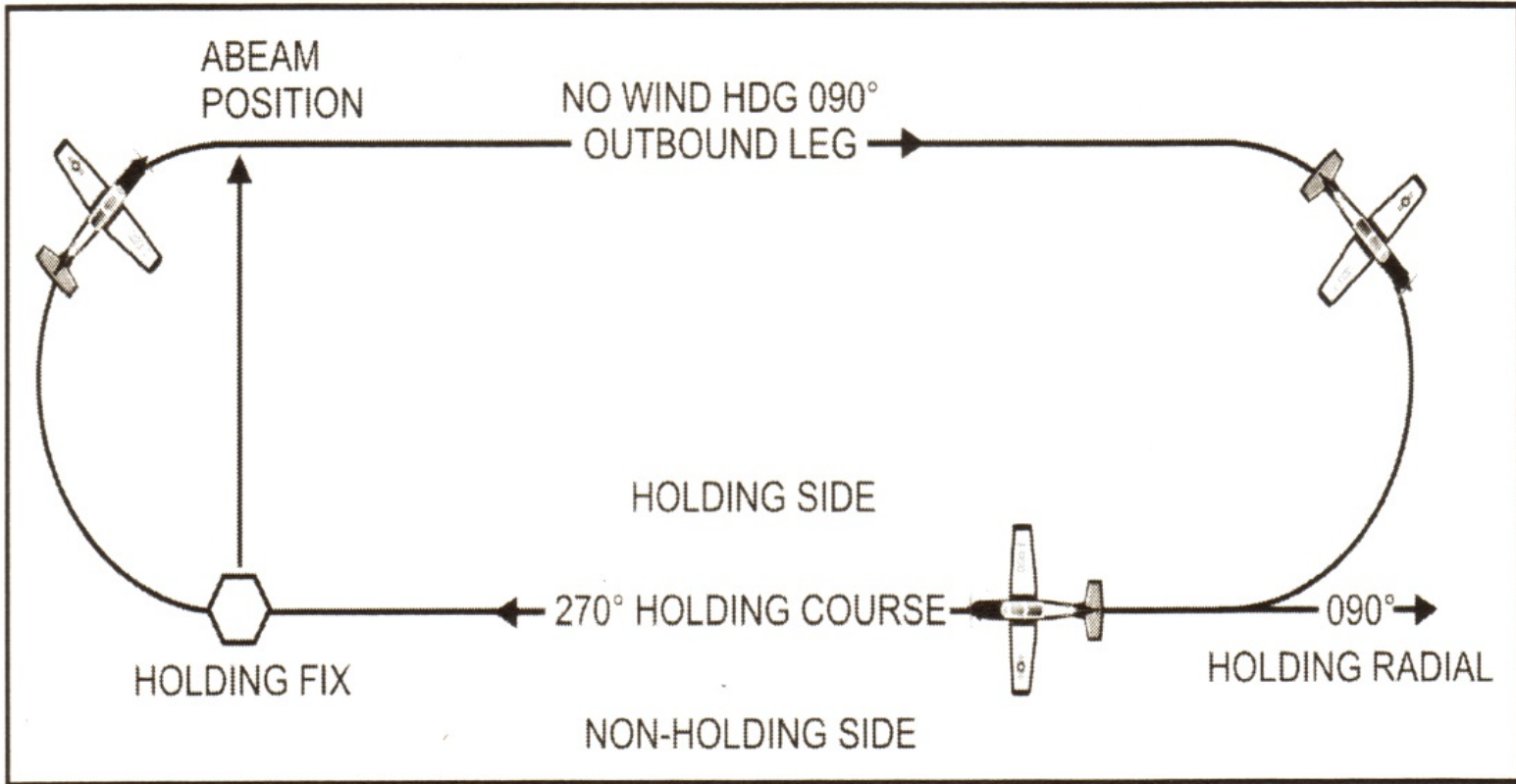


Holding is a predetermined maneuver which keeps the aircraft within a specified airspace while awaiting further clearance from ATC.

- Slow to holding airspeed 5nm prior to reaching the holding fix
- ATC should issue holding clearance at least 5 minutes before reaching clearance limit. Clearance includes:
 - Direction to hold from the holding fix
 - Name of the holding fix
 - Radial, course, bearing, airway, or route to which to hold
 - Leg length in miles if DME is to be used
 - Direction of turn if left turns are to be made
 - Time to expect further clearance (EFC)



HOLDING





HOLDING



Holding Entry

- Sector A (Teardrop): If the reciprocal is between the heading index and 70° to the right of the heading index, make a teardrop entry. This is accomplished by turning in the shortest direction (left or right) to a heading that is 30° less than the reciprocal of the holding course.
- Sector B (Parallel): If the reciprocal is between the heading index and 110° to the left of the heading index, make a left turn to parallel the reciprocal of the holding course.
- Sector C (Direct): If the reciprocal of the holding course does not meet the criteria listed above, turn right to the reciprocal of the holding course.



HOLDING

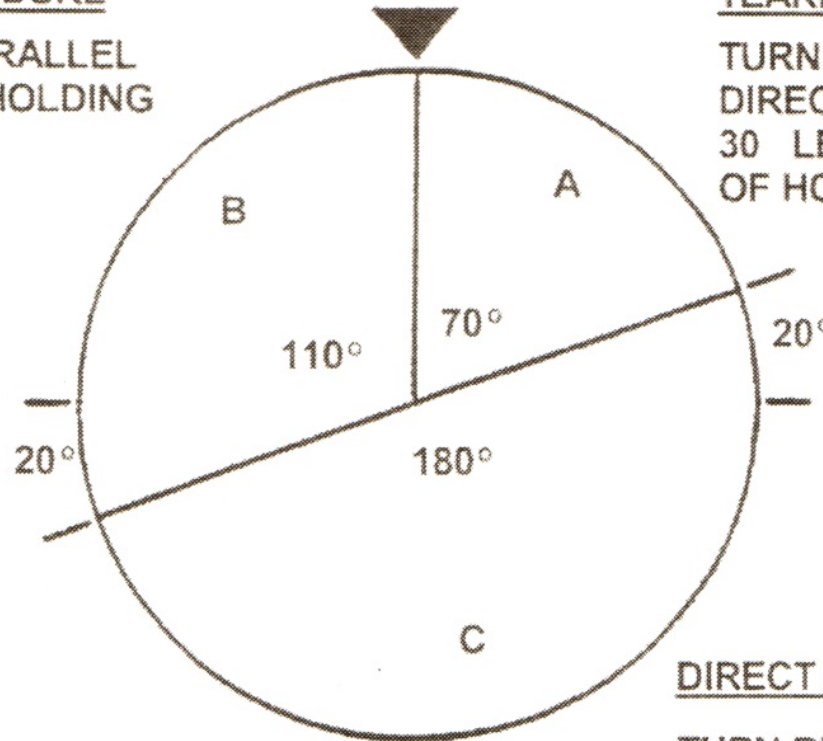


PARALLEL PROCEDURE

TURN LEFT TO PARALLEL
RECIPROCAL OF HOLDING
COURSE

TEARDROP PROCEDURE

TURN IN SHORTEST
DIRECTION TO HEADING
30° LESS THAN RECIPROCAL
OF HOLDING COURSE



DIRECT ENTRY PROCEDURE

TURN RIGHT TO RECIPROCAL
OF HOLDING COURSE



HOLDING

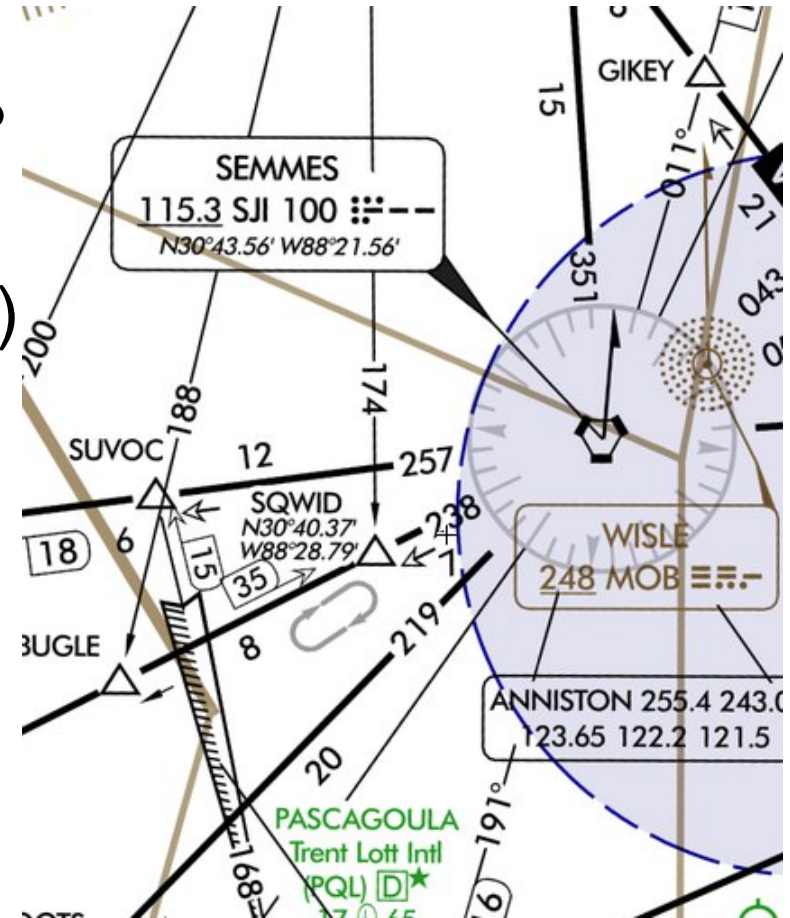


Which entry method at SQWID?

- Use reciprocal of holding course (usually same a radial)

Your heading into the fix:

- 090
- 270
- 242
- 060

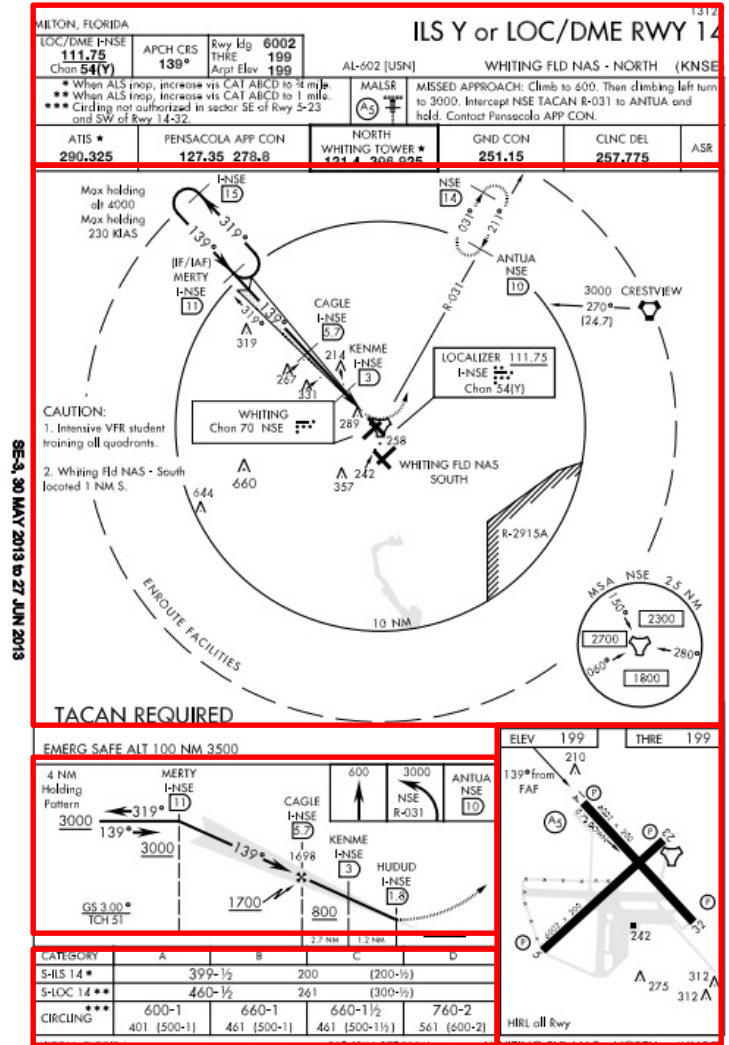




APPROACH PLATES



- Pilot Briefing Information
- Plan View
- Profile View
- Landing Minima Section
- Aerodrome Sketch



SE-9, 30 MAY 2013 to 27 JUN 2013

SE-9, 30 MAY 2013 to 27 JUN 2013



APPROACH PLATES



- **Aircraft Approach Category**
 - A grouping of aircraft based on an approach speed of 1.3 times the stall speed in the landing configuration at maximum gross weight. Each category provides 300' of obstacle clearance at MDA within the circling radius.
 - The T-6B is an Approach Category B aircraft based on approach speed of 91 to <121KIAS.
 - (Can self-impose an increase in category, but can never go down)



APPROACH BRIEF



- Approach name and page number
- NAVAIDS required
- Course to set the CDI
- Weather minimums
- Segment altitudes, including decision altitude (DA) or minimum descent altitude (MDA)
- Timing
- Missed approach or climb-out instructions
- Unusual or other noteworthy items peculiar to the approach (“Trouble Ts”, FAC not same as RWY heading, circling plan, etc.)



APPROACH BRIEF



- Trouble T, A, and A/NA



IFR Takeoff Minimums and (Obstacle) Departure Procedures



Alternate minimums not standard

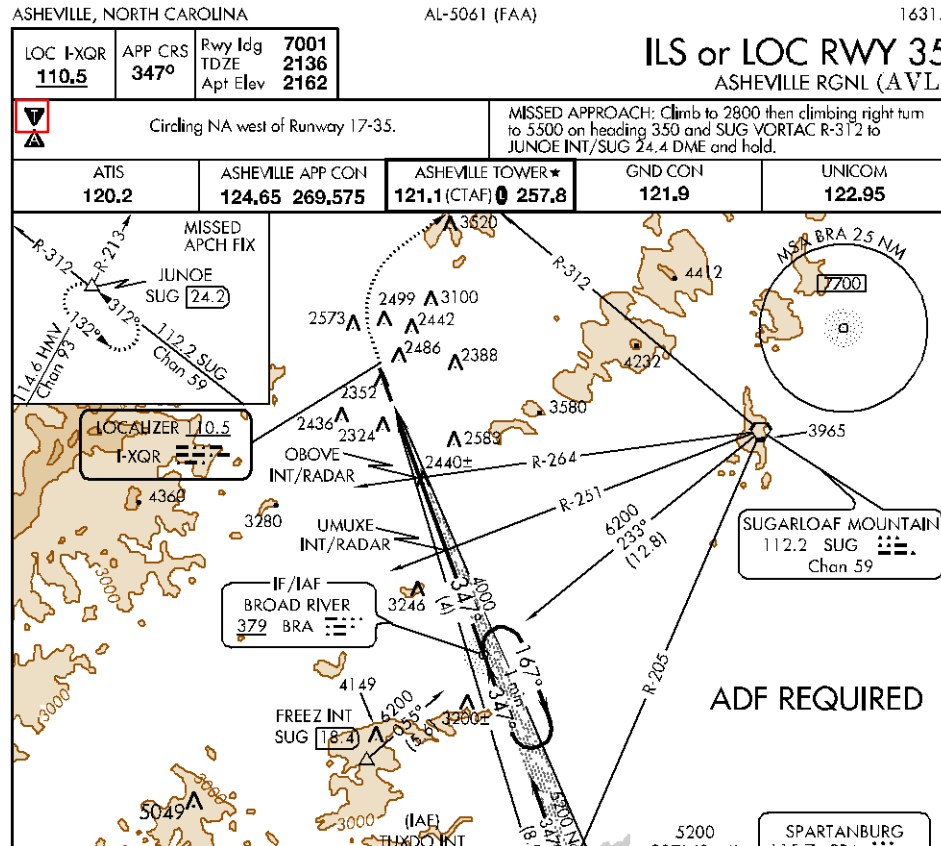


Alternate minimums not authorized



APPROACH BRIEF

- “Trouble T” example:
 - If there is a “T”, refer to the front of the approach plate





APPROACH BRIEF



- “Trouble T” example:
 - “T” Section in front of approach plates

ASHEVILLE, NC

ASHEVILLE RGNL (AVL)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 15344 (FAA)

TAKEOFF MINIMUMS: **Rwy 17**, std. w/ min. climb of 250' per NM to 4600 or 3600-3 for climb in visual conditions. **Rwy 35**, std. w/ min. climb of 410' per NM to 5700 or 3600-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 17**, climb heading 167° to 4600 before proceeding on course. **Rwy 35**, climb heading 347° to 5700 before proceeding on course.

VCOA: **Rwy 17**, obtain ATC approval for climb in visual conditions when requesting IFR clearance. Climb in visual conditions to cross Asheville Rgnl airport at or above 5600 before proceeding on course. Note: VCOA NA at night. **Rwy 35**, obtain ATC approval for climb in visual conditions when requesting IFR clearance. For climb in visual conditions to cross Asheville Rgnl airport at or above 5600 before proceeding on course. Note: VCOA NA at night.

NOTE: **Rwy 17**, trees beginning 79' from DER, 452' right of centerline, up to 73' AGL/2144' MSL. **Rwy 35**, vehicle on road 44' from DER, 202' left of centerline, 15' AGL/2166' MSL. Trees beginning 65' from DER, 245' left of centerline, up to 92' AGL/2232' MSL. Trees beginning 701' from DER, 16' left of centerline, up to 65' AGL/2197' MSL.



DA / MDA



- Pilots may not operate an aircraft at any airport below the authorized MDA or continue an approach below the authorized DA unless:
 1. The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal descent rate using normal maneuvers.
 2. The flight visibility is not less than that prescribed for the approach procedure being used.
 3. AT DA OR MDA, DO NOT ASK THE IP IF THE RUNWAY IS IN SIGHT!



DH(A) / MDA



(Continued)

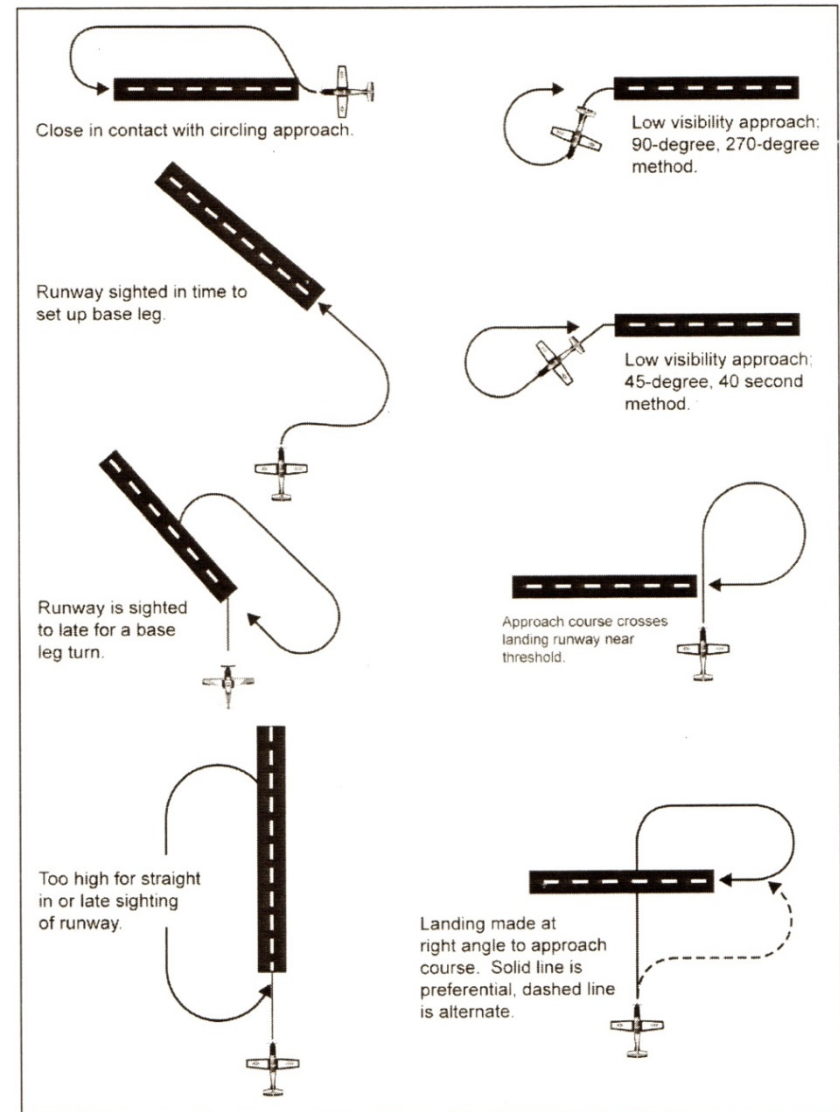
3. At least one of the following visual references for the intended runway is visible and identifiable to the pilot:
 - a. Approach light system
 - b. Threshold
 - c. Threshold markings
 - d. Threshold lights
 - e. Runway End Identifier Lights (REIL)
 - f. Visual Approach Slope Indicator (VASI)
 - g. Touchdown zone or touchdown zone markings
 - h. Touchdown zone lights
 - i. Runway or runway markings
 - j. Runway lights



CIRCLING



- Used when a runway is not aligned within 30° of the Final Approach Course (FAC) of the instrument procedure
- Always used on “-A” and “-B” approaches
 - For example, VOR-A at MOB





CIRCLING



STANDARD CIRCLING APPROACH MANEUVERING RADIUS

Circling approach protected areas developed prior to late 2012 used the radius distances shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category. The approaches using standard circling approach areas can be identified by the absence of the **C** symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
All Altitudes	1.3	1.5	1.7	2.3	4.5

C EXPANDED CIRCLING APPROACH MANEUVERING AIRSPACE RADIUS

Circling approach protected areas developed after late 2012 use the radius distance shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category, and the altitude of the circling MDA, which accounts for true airspeed increase with altitude. The approaches using expanded circling approach areas can be identified by the presence of the **C** symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
1000 or less	1.3	1.7	2.7	3.6	4.5
1001-3000	1.3	1.8	2.8	3.7	4.6
3001-5000	1.3	1.8	2.9	3.8	4.8
5001-7000	1.3	1.9	3.0	4.0	5.0
7001-9000	1.4	2.0	3.2	4.2	5.3
9001 and above	1.4	2.1	3.3	4.4	5.5



CIRCLING



- How to determine Category

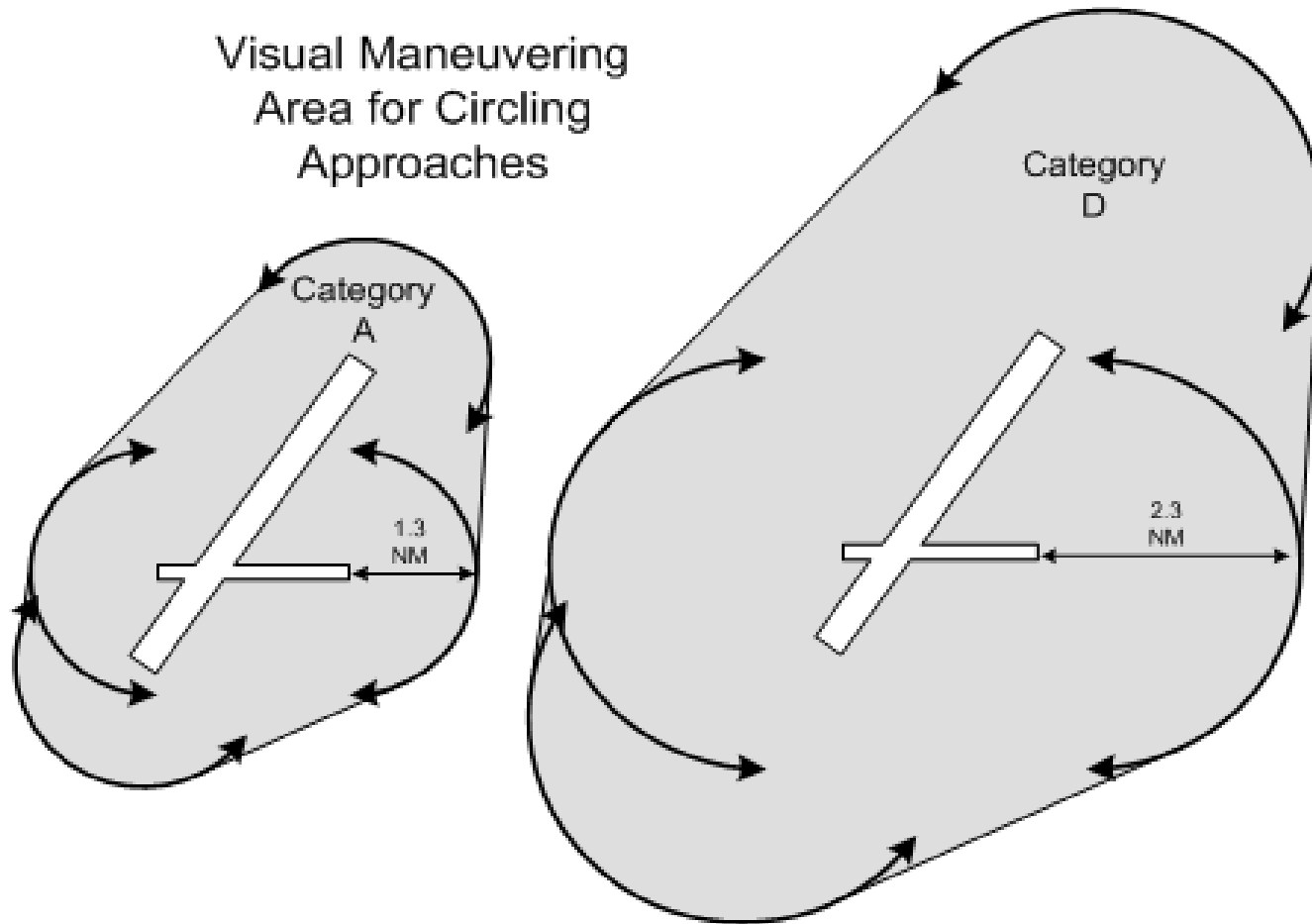
Category	Maneuver Speed (knots)	Circling Area (NM)
A	0-90	1.3
B	91-120	1.5
C	121-140	1.7
D	141-165	2.3
E	166+	4.5



CIRCLING



Visual Maneuvering Area for Circling Approaches



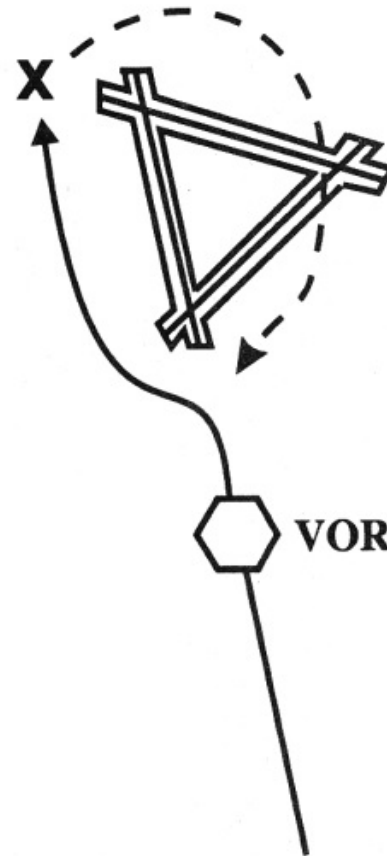


CIRCLING

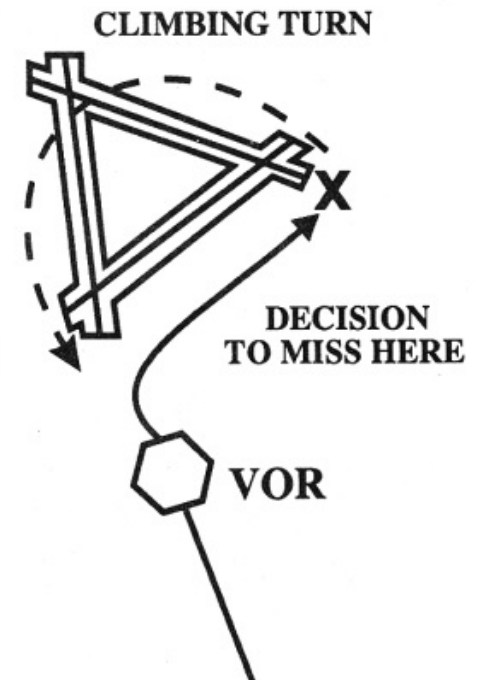


- Missed Approach
 - If visual reference with the runway environment is lost while circling to land from an instrument approach, the missed approach specified for that particular procedure must be followed.
 - To get established on the prescribed missed approach course, the pilot should make an initial climbing turn toward the landing runway and continue the turn until established on the missed approach course.

**DECISION TO MISS
HERE**



CLIMBING TURN





MISCELLANEOUS



- Misunderstanding ATC instructions
 - Always clarify w/ ATC if you are uncertain of instructions – *if there is any doubt, there is no doubt*
- How to copy a clearance – CRAFT
- 60/1 Rule
- H-A-C
- What defines *Established* on an approach
- Executing climbout vs. a Missed Approach



MISCELLANEOUS V-A-C-A-T-O-R-S



AIM 5-3-3. Additional Reports

- a. The following reports should be made to ATC or FSS facilities without a specific ATC request:
 - 1. *At all times.*
 - (a) When vacating any previously assigned altitude or flight level for a newly assigned altitude or flight level.
 - (b) When an altitude change will be made if operating on a clearance specifying VFR-on-top.
 - (c) When *unable* to climb/descend at a rate of a least 500 feet per minute.
 - (d) When approach has been missed. (Request clearance for specific action; i.e., to alternative airport, another approach, etc.)
 - (e) Change in the average true airspeed (at cruising altitude) when it varies by 5 percent or 10 knots (whichever is greater) from that filed in the flight plan.
 - **(f) The time and altitude or flight level upon reaching a holding fix or point to which cleared.**
 - **(g) When leaving any assigned holding fix or point.**
 - **NOTE-**
The reports in subparagraphs (f) and (g) may be omitted by pilots of aircraft involved in instrument training at military terminal area facilities when radar service is being provided.



CCX EXPECTATIONS



- Expect to possibly be scheduled for a XC sometime after I3200 block Sims so plan accordingly and be available those weekends!
- You will be scheduled for 6 events and those events will range from the following:
 - Any/All I4200 block
 - Any/All I4300 block
 - Possible I4490
 - N4101 and/or N4201 and C4901 if not complete already



CCX EXPECTATIONS



- Think of a destination and IP you'd like to go with. Feel free to contact him/her, but your On-Wing will have priority.
 - The destination is ultimately up to the IP
 - Be prepared to plan and brief at least a day prior
 - Discuss items/EP's NX QOD
 - Gathering required pubs
 - Flight Planning with Chart/WX prep



CCX EXPECTATIONS



- If not CCX, and doing local ops
 - Expect at least 2 flights a day, possibly 3
 - Always show up with a plan to execute the event(s)
 - Required *current* pubs/charts
 - NOTAMs checked
 - Contract fuel available
 - Plan to get all your required approaches/maneuvers for block
 - DD-175, DD-175-1, and jet log for I4200-I4490



QUESTIONS

