CHAPTER 4

TRAINING

REVISED MARCH 2012

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ANNEXES

CHAPTER 4

TRAINING

1. GENERAL.

   a. Requirement. Air Operations Program (AOP) managers, aerial supervisors, pilots, and flight officers shall be required to receive and satisfactorily complete training specified in this chapter.

   b. Training Types. The Department shall provide phase, recurrent, and if necessary, remedial training to AOP personnel.

   c. Specialized Training Materials. Office of Air Operations (OAO) will maintain a library of training videos and audio cassettes. Units may request training material directly from OAO.

   d. Instrument Procedure Trainers. Instrument procedure trainers approved by OAO may be used in accordance with the provisions of this manual and Federal Aviation Regulation (FAR) 61.57(e).

   e. Evaluation Standard. All evaluation grading for crewmembers (CHP 93D, Helicopter Training Checkride Evaluation; CHP 93E, Airplane Training Checkride Evaluation; CHP 93K, Flight Crew Performance Evaluation, or CHP 93Q, Flight Officer Evaluation) shall be predicated upon the Federal Aviation Administration (FAA) practical test standards, the Department's maneuver/event standards, and demonstrated level of skill, knowledge, and performance required to be designated and/or to maintain that appropriate crewmember position.

2. MANAGEMENT TRAINING.

   a. Due to its complex nature, AOP managers involved in the program will require familiarization training outlined in Annex A to assist them with their program responsibilities and duties.

   b. Familiarization Training. All special services commanders (SSC) and OAO managers new to the AOP should receive familiarization training from OAO personnel. Office of Air Operations will arrange SSC training as the need arises. Initial training is also available for field Division commanders and assistant chiefs and will be provided upon request. Program managers should also pursue air operations specialized training. Requests for this training shall be coordinated through OAO and will be provided as Office of Primary Interest (OPI) Out-Service Training funds are available.

c. Recurrent Training. Field Division SSCs are encouraged to attend unit training days and safety meetings, whenever possible, to stay informed of current issues and concerns of unit personnel.

3. AERIAL SUPERVISOR TRAINING.

a. Familiarization Training. All new aerial supervisors shall receive familiarization training as outlined in Annex A from OAO personnel. The training will be tailored by OAO based on identified needs and prior program experience. Further, aerial supervisors should pursue air operations specialized training. Requests for this training shall be coordinated through OAO and will be provided as OPI Out-Service Training funds are available.

b. Recurrent Training. All aerial supervisors are required to attend aerial supervisors' meetings whenever possible.

c. Remedial Training. Field Division SSCs may coordinate with OAO to obtain remedial training for aerial supervisors. The training will be tailored by OAO based on identified needs. Remedial training performed by OAO will be documented by memorandum and forwarded to the affected SSC within 30 days following conclusion of the training.

4. PILOT TRAINING.

a. General. Except as otherwise indicated, this training may be conducted by the appropriate chief pilot, designee, or a unit training pilot.

b. Phase Training. Trainees shall undergo Phase Training contained in Annex B or C. Failure to successfully complete any phase of this training is cause for termination from flight training and rejection from permanent assignment as a pilot.

c. Recurrent Training. Each pilot shall receive the following minimum flight training:

(1) Contact Training. Three hours of flight training quarterly.

(a) Where flight officers are assigned, one-hour may be utilized for crew coordination training. It may also be conducted by the aerial supervisor.

(b) A minimum of one-hour should be completed within 90 days of the previous training flight.

(c) Appropriate ground instruction and briefings should be given to enhance training.

(d) Flight training received from an alternate source specifically approved by OAO may be applied towards meeting this requirement.

(2) Instrument Training. A minimum of three instrument approaches and a holding procedure (hood, procedures trainer, or actual instrument conditions) shall be completed quarterly. When conducting simulated instrument flight in other than instrument meteorological conditions (IMC) or instrument procedures training, the pilot shall wear a view limiting device which limits/restricts vision to the cockpit instruments. Each of the following qualifies as instrument training:

(a) Instrument currency flights with a safety pilot who is departmentally certified in that aircraft.

(b) Instrument proficiency training.

1 Except as otherwise indicated, each pilot shall receive a minimum of one-hour instrument training quarterly from the unit training pilot, the chief pilot, or designee.

2 Pilots shall maintain instrument currency in accordance with FAR 61.57(c)(1).

(3) Night Training.

(a) Each pilot shall maintain night currency as described in FAR 61.57(b) at all times. In the event night currency lapses, notification shall be made via memorandum through channels to OAO. The memorandum shall include the reason for the lapse and the plan for reestablishing currency. OAO shall be notified in writing when the pilot regains night currency.

(b) Each pilot is required to complete a night proficiency flight annually with the training pilot, the chief pilot, or designee. This flight shall be a minimum of one-hour and shall include normal and emergency procedures.

(4) Mountain Training. Each pilot is required to complete one-hour of mountain proficiency flight annually with the unit training pilot, the chief pilot, or designee. Helicopter proficiency flights shall include pinnacle and confined area landings above 6,000 feet mean sea level. Airplane proficiency flight shall include landing and departure at an airport with a density altitude above 6,500 feet.

(5) External Load Training. As required in Chapter 11, Helicopter External Load Operations.

(6) Biennial Flight Review. Per FAR 61.56.

(7) Training for removal of any flight restriction.

d. Flight Evaluation/Training Results. A pilot who does not complete or is rated as "Needs Improvement" (NI) for any maneuver/event listed on the appropriate evaluation checklist (CHP 93D or CHP 93E) may not act as a pilot in command (PIC) of a departmental aircraft. The pilot's "No PIC" status shall remain in effect until the overall performance evaluation has been rated a "Satisfactory" by the chief pilot or designee.

(1) In any subsequent evaluation, in addition to the maneuvers/tasks rated as "NI" the chief pilot/designee or unit training pilot has the discretion to reevaluate the pilot on any or all maneuvers/tasks.

(2) If a pilot fails to meet performance standards, immediate corrective action is necessary. The pilot will be placed on interim reporting consistent with the provisions of Highway Patrol Manual (HPM) 10.10, Performance Appraisal Manual, Chapter 3, Performance Appraisal Process for Officer, and a training action plan will be developed.

(3) The training action plan to correct deficiencies can be brief, but will include at minimum, a provision that the pilot will receive a maximum of two hours flight training for each failed maneuver/event. This training will be conducted by the unit training pilot. Upon completion of the training action plan, the chief pilot or designee will conduct a reevaluation.

(4) If, after completion of the training action plan and upon initial reevaluation, the pilot's overall performance rating remains "Unsatisfactory" and the rating is based on maneuvers/events previously identified and rated as "NI," grounds for removal for cause from flight status exist. Any removal for cause action will be in accordance with the provisions of HPM 9.1, Employee Relations Manual, Chapter 14, Removal for Cause from Specialty Pay Positions.

(5) If upon initial reevaluation, an overall performance rating of "Unsatisfactory" is due solely to a rating of "NI" for maneuvers/events that were previously performed satisfactorily, or were not previously identified/rated, a maximum of two hours flight training will be allowed for each failed maneuver/event. This additional training will be conducted by the chief pilot or designee.

(6) Upon completion of the additional flight training, a second reevaluation will be conducted by the chief pilot or designee. If the pilot is rated as "NI" in any maneuver/event with an overall performance rating of "Unsatisfactory," the pilot will be removed from flight status for cause in accordance with the provisions of HPM 9.1, Chapter 14.

e. Noncompliance. Pilots not meeting recurrent training requirements shall not act as PIC of departmental aircraft until:

(1) The training requirements are met, or

(2) The Division commander or SSC temporarily rescinds the restriction until training requirements are met.

(a) The rescinded restriction shall be documented on a CHP 92, Pilot's Monthly Flight Time Report, submitted for the month concluding the quarter. The CHP 92 shall also include a brief explanation of why the training requirements were not met.

(b) Unless otherwise indicated by the appropriate chief pilot, the pilot must satisfactorily complete appropriate training to correct deficient requirements as soon as possible.

f. Exceptions. Office of Air Operation's pilots and unit training pilots are exempt from the training specified in paragraphs 4.c.(1); 4.c.(2)(b)1; 4.c.(3); and 4.c.(4). Office of Air Operation's pilots are also exempt from training specified in paragraph 4.c.(2).

g. Maneuvers.

(1) Maneuvers to be performed during pilot training are identified on the CHP 93D, 93E, and 93K. Maneuver standards are identified in Annexes B and C.

(2) Touchdown autorotations, excluding hovering autorotations, are prohibited in departmental helicopters, except when performed during OAO conducted training in the training helicopter.

h. Documentation. Except as indicated, the chief pilot or designee, or the unit training pilot, shall document all training given on the appropriate CHP 93D, CHP 93E, or CHP 93K. Unless specifically requested, chief pilots shall not be evaluated by the unit training pilots.

i. Distribution. Completed CHP 93D, CHP 93E, or CHP 93K forms shall be distributed as follows:

(1) Original – pilot's unit file.

(2) Copy – OAO.

(3) Copy – pilot.

j. Unit Training Pilots.

(1) Unit training pilots shall provide a minimum of three hours of flight training per quarter.

(a) Where flight officers are assigned, one-hour may be crew coordination training.

(b) A minimum of one-hour of flight training given shall be completed within 90 days of the last training given.

(2) Helicopter unit training pilots shall perform a minimum of one hands on iteration of each external load task annually.

(3) Unit training pilots and the appropriate chief pilot should meet at least biennially to discuss training techniques.

(4) Unit training pilots are encouraged to visit other units to observe pilot and/or crew training. Visits must be approved by the involved field Divisions.

5. FLIGHT OFFICER TRAINING.

a. General. The designated unit flight officer (training officer), appropriate unit training pilot, or OAO flight officer coordinator or designee, may conduct training.

b. Phase Training. Trainees shall undergo Phase Training contained in Annex D. Failure to successfully complete any phase of this training is cause for termination from flight training and rejection from permanent assignment as a flight officer. Flight officer training shall not be considered complete, and a trainee shall not be assigned to flight officer duty, until the trainee successfully passes a flight officer final checkride by the OAO flight officer coordinator or designee.

c. Recurrent Training. Each flight officer shall attend the following minimum training, every five years:

(1) Helicopter Emergency Egress Device (HEED).

(2) High altitude training.

(3) Survival training. (Or more often if deemed necessary by OAO.)

(4) External load training consistent with Chapter 11.

d. Documentation. The chief pilot or designee, unit training pilot, designated training flight officer, and/or the aerial supervisor shall document all training given on the appropriate CHP 93K or 93Q.

e. Distribution. Completed CHP 93K or 93Q forms shall be distributed as follows:

(1) Original – flight officer's unit file.

(2) Copy to OAO.

(3) Copy to flight officer.

6. SPECIAL DUTY TRAINING.

a. General. Aerial supervisors, pilots, and flight officers may be required to perform special duties within their respective air units. The assignments will be made by the field Division SSC following consultation with OAO. Examples of special duty positions include training officers, maintenance officers, safety officers, and aviation life support equipment (ALSE) officers.

b. Special Duty Training. Office of Air Operations will coordinate special duty training for newly assigned personnel within Division units. The training will be tailored by OAO based on prior experience. Units shall notify OAO when this training is required for their personnel.

c. Recurrent Training. Recurrent training will be conducted or coordinated as needed by OAO for each special duty assignment.

d. Remedial Training. Field Division SSCs may coordinate with OAO to obtain remedial training for special duty personnel. The training will be tailored by OAO based on identified needs. Training performed or coordinated by OAO will be documented by memorandum and forwarded to the affected field Division SSC within 30 days following conclusion of the training.

7. OUT-SERVICE TRAINING.

a. The unique and critical nature of missions performed by members of the AOP require specific knowledge to optimize job performance.

b. The OAO commander shall approve all aviation training.

(1) A CHP 50, Request for Out-Service Training, related to OAO funded training shall be forwarded to the OAO training coordinator for processing.

(2) Office of Air Operations will prepare and submit required CHP 50s for training involving personnel from multiple air units.

ANNEX A

TRAINING CURRICULUM

Division Commanders/Assistant Chiefs

1. Introduction

    - AOP - role and structure
    - Personnel - primary and special duty assignments
    - CHP aircraft - description and limitations

2. Safety/Emergency medical services

    - Historical
    - Accident trends
    - Special considerations of law enforcement flying
    - ALSE
    - Quarterly safety meetings
    - Flight restrictions
    - Observed Hazard Report (OHR)

3. Operations

    - Emergency/High risk mission authorization
    - Off-site landings and departures
    - Operations in conjunction with allied agencies
    - Passenger transportation
    - Unit evaluations - formal and self evaluations

4. Personnel transactions

    - Pilot and flight officer selection and testing
    - Assignment and transfer
    - Flight physicals
    - Removal from flight duty
    - Alternate range pay

5. Training

    - Pilot training - initial and recurrent
    - Flight officer training - initial and recurrent
    - Pilot certification - semiannual checkrides
    - Emergency medical technician - paramedic (EMT-P) certification
    - Pilot trainee program

ANNEX A

TRAINING CURRICULUM *(continued)*

- Out-service training

6. Disaster and emergency operations

    - Aircraft request procedures
    - Operational control
    - Remote landing sites, fuel, and communications
    - Temporary flight restrictions – notice to airmen (NOTAM) - FAR 91.137
    - Aviation as part of incident command system (ICS)

7. Maintenance

    - Introduction
    - Approval and coordination
    - Aircraft and equipment inspections
    - Maintenance manuals
    - Logbooks
    - Aircraft status and maintenance chart
    - Maintenance by CHP personnel
    - Skybooks
    - Vendor maintenance
    - X numbers
    - Special delegations
    - Requisition process
    - CHP 297, Aircraft Job Tag
    - Invoice approval
    - Fuel purchases
    - Fuel summary report
    - Shipping
    - Maintenance officer survival guide

8. Reporting

    - CHP 92 - Pilot's Monthly Flight Time Report
    - CHP 93 - Aircraft/Flight/Duty Report
    - CHP 93B - Summary of Aircraft Services
    - CHP 93F - Airplane Flight Hour Log
    - CHP 93S - Helicopter Flight Hour Log

ANNEX A

TRAINING CURRICULUM *(continued)*

9. Accidents, incidents, and occurrences

    - Terminology - CHP and National Transportation Safety Board (NTSB) Part 830
    - CHP reporting/Notification criteria
    - Investigation responsibilities
    - Removal from flight duty
    - Board of inquiry
    - Pre-accident plan

10. Budgeting

    - OAO responsibilities
    - Division responsibilities
    - Facility coordination

Special Services Commanders

1. Introduction

    - AOP - role and structure
    - Personnel - primary and special duty assignments
    - Aviation terminology
    - CHP aircraft - description and limitations

2. Safety/Emergency medical services

    - Historical
    - Accident trends
    - Special considerations of law enforcement flying
    - ALSE
    - Quarterly safety meetings
    - Flight restrictions
    - OHR

3. Operations

    - Selected FARs
    - Emergency/High risk mission authorization
    - Off-site landings and departures
    - Operations in conjunction with allied agencies
    - Passenger transportation
    - Daily airworthiness checks

ANNEX A

TRAINING CURRICULUM *(continued)*

- Fuel reserves and refueling
- Unit evaluations - formal and self evaluations
- Asset forfeiture of aircraft

4. Personnel transactions

    - Pilot and flight officer selection and testing
    - Assignment and transfer
    - Flight physicals
    - Removal from flight duty
    - Alternate range pay

5. Training

    - Pilot training - initial and recurrent
    - Flight officer training - initial and recurrent
    - Pilot certification - semiannual checkrides
    - EMT-P certification
    - Pilot trainee program
    - Program managers - out-service training

6. Disaster and emergency operations

    - Aircraft request procedures
    - Headquarters training aircraft
    - Operational control
    - Remote landing sites, fuel, and communications
    - Temporary flight restrictions - NOTAM - FAR 91.137
    - Aviation as part of ICS

7. Maintenance

    - Introduction
    - Approval and coordination
    - Aircraft and equipment inspections
    - Maintenance manuals
    - Logbooks
    - Aircraft status and maintenance chart
    - Maintenance by CHP personnel
    - Skybooks
    - Vendor maintenance

ANNEX A

TRAINING CURRICULUM *(continued)*

- X numbers
- Special delegations
- Requisition process
- CHP 297
- Invoice approval
- Fuel purchases
- Fuel summary report
- Shipping
- Maintenance officer survival guide

8. Reporting

    - CHP 92
    - CHP 93
    - CHP 93B
    - CHP 93F
    - CHP 93S

9. Accidents, incidents, and occurrences

    - Terminology - CHP and NTSB Part 830
    - CHP reporting/Notification criteria
    - Investigation responsibilities
    - Removal from flight duty
    - Board of inquiry
    - Pre-accident plan

10. Budgeting

    - OAO responsibilities
    - Division responsibilities
    - Facility coordination

11. Safety presentation

ANNEX A

TRAINING CURRICULUM *(continued)*

Aerial Supervisors

1. Introduction

    - AOP - role and structure
    - Personnel - primary and special duty assignments
    - Aviation terminology
    - CHP aircraft - description and limitations

2. Safety/Emergency medical services

    - Historical
    - Accident trends
    - Special considerations of law enforcement flying
    - ALSE
    - Quarterly safety meetings
    - Flight restrictions
    - OHR

3. Operations

    - Selected FARs
    - Emergency/High risk mission authorization
    - Off-site landings and departures
    - Operations in conjunction with allied agencies
    - Passenger transportation
    - Daily airworthiness checks
    - Fuel reserves and refueling
    - Unit evaluations - formal and self evaluations
    - Asset forfeiture of aircraft

4. Personnel transactions

    - Pilot and flight officer selection and testing
    - Assignment and transfer
    - Flight physicals
    - Removal from flight duty
    - Alternate range pay

ANNEX A

TRAINING CURRICULUM *(continued)*

5. Training

    - Pilot training - initial and recurrent
    - Flight officer training - initial and recurrent
    - Pilot certification - semiannual checkrides
    - EMT-P certification
    - Pilot trainee program
    - Out-service training

6. Disaster and emergency operations

    - Aircraft request procedures
    - Headquarters training aircraft
    - Operational control
    - Remote landing sites, fuel, and communications
    - Temporary flight restrictions - NOTAM - FAR 91.137
    - Aviation as part of ICS

7. Maintenance

    - Introduction
    - Approval and coordination
    - Aircraft and equipment inspections
    - Maintenance manuals
    - Logbooks
    - Aircraft status and maintenance chart
    - Maintenance by CHP personnel
    - Skybooks
    - Vendor maintenance
    - X numbers
    - Special delegations
    - Requisition process
    - CHP 297
    - Invoice approval
    - Fuel purchases
    - Fuel summary report
    - Shipping
    - Maintenance officer survival guide

ANNEX A

TRAINING CURRICULUM *(continued)*

8. Reporting

    - CHP 92
    - CHP 93
    - CHP 93B
    - CHP 93F
    - CHP 93S

9. Accidents, incidents, and occurrences

    - Terminology - CHP and NTSB Part 830
    - CHP reporting/notification criteria
    - Investigation responsibilities
    - Removal from flight duty
    - Board of inquiry
    - Pre-accident plan

10. Budgeting

    - OAO responsibilities
    - Division responsibilities
    - Facility coordination

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING

Initial departmental helicopter pilot training will consist of three phases not to exceed a total of 60 flight hours. Phase I will not exceed the hours listed and consists of aircraft transition training and commercial pilot maneuvers. Phase II will not exceed the hours listed and consists of aircraft instrument flight training. Phase III will not exceed the hours listed and consists of CHP mission specific training. Each phase has specific tasks and completion standards.

In no event shall flight training hours be exceeded for any phase. Upon completion of each phase, the pilot shall be given a checkride by the chief pilot or designee. All tasks within each phase shall be successfully completed in order to proceed to the next phase. A pilot can only remediate in two tasks per phase. They will be given two additional flight hours of training for each specific task failed. Upon successful completion of this training, an additional checkride by the chief pilot or designee shall be given. If the pilot again fails the remediation task, they shall be removed from flight training status and removed from the Pilot Eligibility List. They shall not be allowed to retest for the Pilot Eligibility List until one-year from that date.

If, at any time during any phase of training, a pilot is not demonstrating a level of performance consistent with satisfactory completion in the time allotted, a progress evaluation flight shall be scheduled with the chief pilot. If, in the opinion of the chief pilot, satisfactory progress has not been made, training shall be terminated and the pilot shall be removed from flight training status and removed from the Pilot Eligibility List. They shall not be allowed to retest for the Pilot Eligibility List for one-year from that date.

Satisfactory performance to meet the requirements for phase completion is based on the pilot's ability to safely:

1. Perform each task within the approved standards set forth in the appropriate FAA Commercial and Instrument Practical Test book.

2. Demonstrate mastery of the aircraft with the successful outcome of each task performed.

3. Demonstrate sound judgment, aeronautical decision making, and skilled competencies in cockpit resource management.

4. Demonstrate single-pilot competence if the aircraft is type certificated for single-pilot operations.

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

Additionally, typical areas of unsatisfactory performance and grounds for disqualification in training and phase checkrides are:

1. Any action or lack of action by the pilot that requires corrective intervention by the chief pilot or designee to maintain a safe flight.

2. Failure to use proper and effective visual scanning techniques to clear the area before and while performing flight maneuvers.

3. Consistently exceeding tolerances (airspeed, altitude, heading, etc.) stated in the FAA Practical Test Book or HPM 100.7.

4. Failure to take prompt corrective action when tolerances (airspeed, altitude, heading, etc.) are exceeded.

Phase I

Ground and flight training in all areas of operation identified in the attached syllabus.

No specific hour level maximum for ground instruction.

Phase I checkride will be administered by the chief pilot or designee. Performance in each task will be consistent with Practical Test Standards (PTS).

Phase II

Ground and flight training in all areas of operation contained in Commercial Pilot and/or Instrument Rating PTS as described in the appropriate syllabus.

No specific hour level maximum for ground instruction.

Phase II checkride will be administered by the chief pilot or designee. Performance in each task will be consistent with PTS.

Phase III

Ground and flight training in departmental mission operations including but not limited to: mountain flying, mountain confined area and pinnacle operations, medevac operations, night search with searchlight and forward looking infrared (FLIR), night medevac, night confined area and pinnacle operations, pursuits, speed enforcement, and vehicle surveillance.

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

No specific hour level maximum for ground instruction. Phase III checkride will be administered by the chief pilot or designee. Performance in each task will be consistent with PTS.

Phase I—(25 hours)

Ground Instruction (no hour limit).

Instruction in the following areas of operation listed in the Commercial Pilot PTS for Rotorcraft - Helicopter (FAA-S-8081-16A):

1. Preflight preparation.
2. Preflight procedures.
3. Airport and heliport operations.
4. Hovering maneuvers.
5. Takeoffs, landings, and go-arounds.
6. Performance maneuvers.
7. Navigation.
8. Emergency operations.
9. Special operations.
10. Postflight operations.

Additionally, instruction in area of operation 4, flight by reference to instruments (found in the Instrument Rating PTS - FAA-S-8081-4E).

Flight Instruction (25 hour maximum).

Instruction in the following areas of operation listed in the Commercial Pilot PTS for Rotorcraft - Helicopter (FAA-S-8081-16A):

1. Preflight operation.
2. Preflight procedures.

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

3. Airport and heliport operations.

4. Hovering maneuvers.

5. Takeoffs, landings, and go-arounds.

6. Performance maneuvers.

7. Navigation.

8. Emergency operations.

9. Special operations.

10. Postflight operations.

Additionally, instruction in area of operation 4, flight by reference to instruments (found in the Instrument Rating PTS - FAA-S-8081-4E).

Phase II—(20 hours)

Ground Instruction (no hour limit).

Instruction in the following areas of operation listed in the Instrument Rating PTS

(FAA-S-8081-4E):

1. Preflight operations.

2. Preflight procedures.

3. Air traffic control clearances and procedures.

4. Flight by reference to instruments.

5. Navigation systems.

6. Instrument approach procedures.

7. Emergency operations.

8. Postflight procedure.

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

Flight Instruction (20 hour maximum).

Instruction in the following areas of operation listed in the Instrument Rating PTS (FAA-S-8081-4E):

1. Preflight operations.
2. Preflight procedures.
3. Air traffic control clearances and procedures.
4. Flight by reference to instruments.
5. Navigation systems.
6. Instrument approach procedures.
7. Emergency operations.
8. Postflight procedure.

Phase III—(15 hours)

Ground Instruction (no hour limit).

1. Mountain operations.
2. Medevac operations.
3. Night operations.
4. FLIR.
5. Pursuit operations.
6. Crime scene operations.

Flight Instruction (15 hour maximum).

1. Mountain operations.

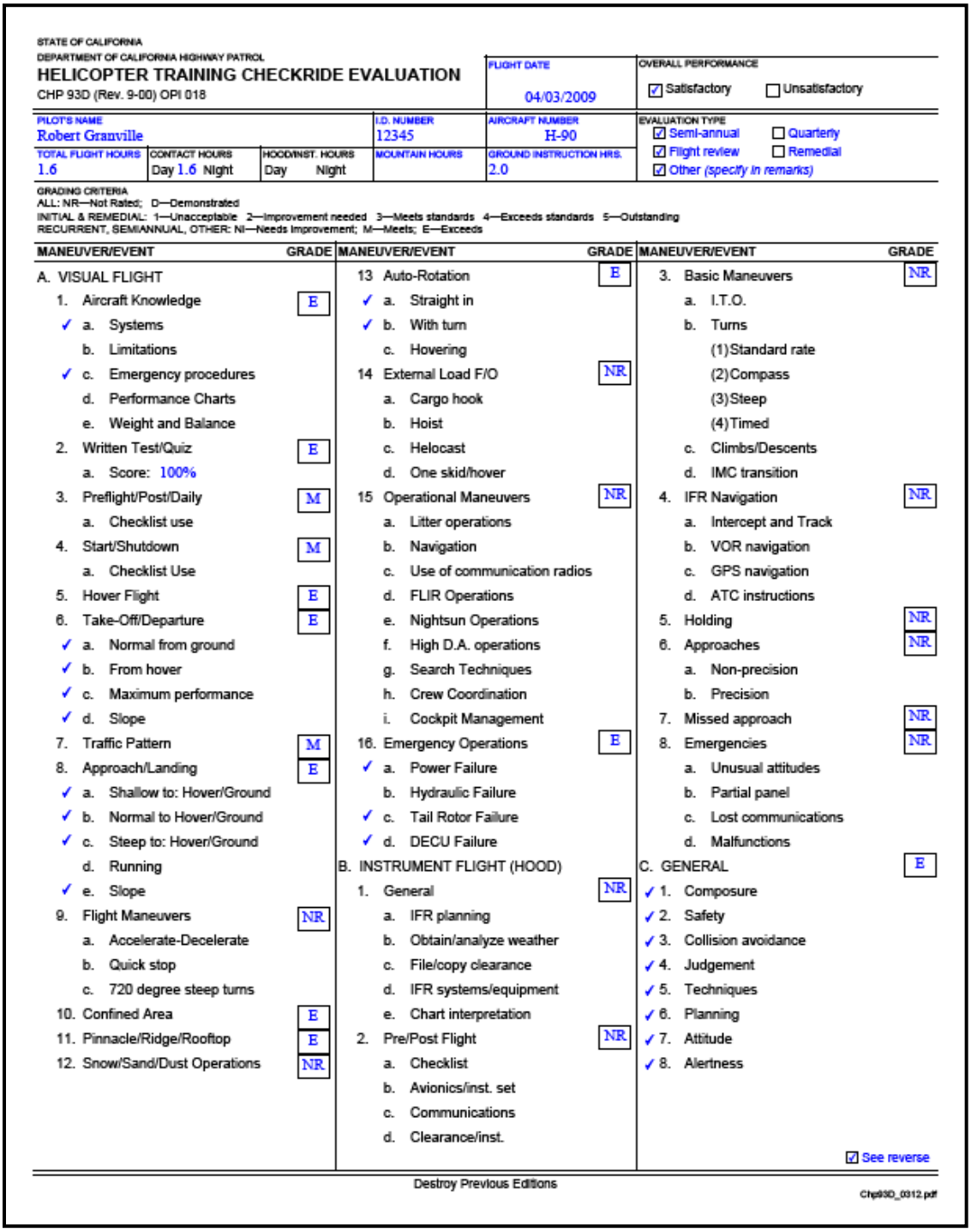
ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

2. Medevac operations.
3. Night operations.
4. FLIR.
5. Pursuit operations.
6. Crime scene operations.

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*



STATE OF CALIFORNIA
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

HELICOPTER TRAINING CHECKRIDE EVALUATION

CHP 93D (Rev. 9-00) OPI 018

FLIGHT DATE: 04/03/2009

OVERALL PERFORMANCE: ☑ Satisfactory ☐ Unsatisfactory

PILOT'S NAME	I.D. NUMBER	AIRCRAFT NUMBER	EVALUATION TYPE
Robert Granville	12345	H-90	☑ Semi-annual ☐ Quarterly ☑ Flight review ☐ Remedial ☑ Other *(specify in remarks)*

TOTAL FLIGHT HOURS	CONTACT HOURS	HOOD/INST. HOURS	MOUNTAIN HOURS	GROUND INSTRUCTION HRS.
1.6	Day 1.6 Night	Day Night		2.0

GRADING CRITERIA
ALL: NR—Not Rated; D—Demonstrated
INITIAL & REMEDIAL: 1—Unacceptable 2—Improvement needed 3—Meets standards 4—Exceeds standards 5—Outstanding
RECURRENT, SEMIANNUAL, OTHER: NI—Needs Improvement; M—Meets; E—Exceeds

MANEUVER/EVENT	GRADE
A. VISUAL FLIGHT	
1. Aircraft Knowledge	E
✓ a. Systems	
b. Limitations	
✓ c. Emergency procedures	
d. Performance Charts	
e. Weight and Balance	
2. Written Test/Quiz	E
a. Score: 100%	
3. Preflight/Post/Daily	M
a. Checklist use	
4. Start/Shutdown	M
a. Checklist Use	
5. Hover Flight	E
6. Take-Off/Departure	E
✓ a. Normal from ground	
✓ b. From hover	
✓ c. Maximum performance	
✓ d. Slope	
7. Traffic Pattern	M
8. Approach/Landing	E
✓ a. Shallow to: Hover/Ground	
✓ b. Normal to Hover/Ground	
✓ c. Steep to: Hover/Ground	
d. Running	
✓ e. Slope	
9. Flight Maneuvers	NR
a. Accelerate-Decelerate	
b. Quick stop	
c. 720 degree steep turns	
10. Confined Area	E
11. Pinnacle/Ridge/Rooftop	E
12. Snow/Sand/Dust Operations	NR
13 Auto-Rotation	E
✓ a. Straight in	
✓ b. With turn	
c. Hovering	
14 External Load F/O	NR
a. Cargo hook	
b. Hoist	
c. Helocast	
d. One skid/hover	
15 Operational Maneuvers	NR
a. Litter operations	
b. Navigation	
c. Use of communication radios	
d. FLIR Operations	
e. Nightsun Operations	
f. High D.A. operations	
g. Search Techniques	
h. Crew Coordination	
i. Cockpit Management	
16. Emergency Operations	E
✓ a. Power Failure	
b. Hydraulic Failure	
✓ c. Tail Rotor Failure	
✓ d. DECU Failure	
B. INSTRUMENT FLIGHT (HOOD)	
1. General	NR
a. IFR planning	
b. Obtain/analyze weather	
c. File/copy clearance	
d. IFR systems/equipment	
e. Chart interpretation	
2. Pre/Post Flight	NR
a. Checklist	
b. Avionics/inst. set	
c. Communications	
d. Clearance/inst.	
3. Basic Maneuvers	NR
a. I.T.O.	
b. Turns	
(1) Standard rate	
(2) Compass	
(3) Steep	
(4) Timed	
c. Climbs/Descents	
d. IMC transition	
4. IFR Navigation	NR
a. Intercept and Track	
b. VOR navigation	
c. GPS navigation	
d. ATC instructions	
5. Holding	NR
6. Approaches	NR
a. Non-precision	
b. Precision	
7. Missed approach	NR
8. Emergencies	NR
a. Unusual attitudes	
b. Partial panel	
c. Lost communications	
d. Malfunctions	
C. GENERAL	E
✓ 1. Composure	
✓ 2. Safety	
✓ 3. Collision avoidance	
✓ 4. Judgement	
✓ 5. Techniques	
✓ 6. Planning	
✓ 7. Attitude	
✓ 8. Alertness	

☑ See reverse

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ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

COMMENTS

OVERVIEW:

Departmental training pilot /annual flight evaluation and FAA Flight Review. The flight focused on skill, knowledge and instructional technique. All maneuvers were performed from the left seat.

VISUAL FLIGHT:

1.a-e. Prior to departing Napa Airport, I asked a series of questions related to the Eurocopter AS350 B-3 helicopter systems, limitations and emergency procedures. You were able to answer all questions completely and accurately. We also discussed the roles and responsibilities of a departmental training pilot.
2.a. You scored 100% on the written portion of the test. Great Job!
10./11. While demonstrating an off-site confined area landing, you explained proper "SBATT" and OGE performance assurance procedures prior to flying the final approach. We also discussed the need for a thorough check of the possible departure paths to ensure they are clear of obstacles. When we were on short final, you asked me to assist with clearing obstacles on the right and rear sides of the helicopter as you eased into the landing area. As I lifted off from the site as a student, you correctly assessed and corrected my need to maintain proper altitude. Good Job.
13.a/b. You explained and demonstrated several straight-in and 180-degree autorotations. When I flew the maneuvers as the student, you explained as I erred and assisted with the correct control inputs whenever necessary.
16. a/c/d. Good knowledge and instruction technique during all emergency operations.

GENERAL:

Overall this was a great flight. As you begin training Robert, maintain a positive attitude and accept nothing less than safe and precise practices. Fly safe and have fun!

Officer Granville, ID# 12345, has satisfactorily completed his departmental training pilot / annual flight evaluation and may act as pilot-in-command and departmental training pilot in the Eurocopter AS350 B-3 helicopter within his restrictions.

Robert Granville, holder of pilot certificate # 3000000, has satisfactorily completed a Flight Review per FAR 61.56. Gregory J. Draper # 2748134CFI exp 1/11.

FLIGHT RESTRICTIONS

1. May not act as pilot in command at less than ETL above 8,500 feet DA except landings and takeoffs at airports.

☐ None ☐ Reviewed ☐ Not reviewed

PILOT'S INITIALS	SUPERVISOR'S INITIALS	TRAINING PILOT'S INITIALS	EVALUATOR'S SIGNATURE & I.D. NUMBER
RG	PS	SD	

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ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

Helicopter Maneuver/Event Standards
CHP 93D

1. VISUAL FLIGHT.

   a. Aircraft Knowledge.

      (1) Exhibit knowledge of the elements related to operation and limitations of systems including flight controls, power plant, main and tail rotors, hydraulic, fuel and oil, electrical, flight instruments, anti-ice, and avionics.

      (2) Exhibit the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.

      (3) Exhibit knowledge of emergency procedures.

      (4) Exhibit ability to compute weight and balance, including adding, removing, and shifting weight.

      (5) Determine whether the computed performance, weight and center of gravity are within the helicopters capabilities and operating limitations.

   b. Written test/Quiz. Minimum score of 80 percent.

   c. Preflight/Post/Daily.

      (1) Exhibit use of prescribed checklist during preflight, postflight, and daily inspections.

      (2) Exhibit thoroughness in the conduct of each inspection, verifying that the helicopter is in condition for safe flight, noting any discrepancies, and determine if maintenance is required.

   d. Start/Shutdown. Conduct a proper start/shutdown while utilizing the prescribed checklist.

   e. Hover Flight.

      (1) Ascend to and maintain recommended hovering altitude, and descend from recommended hovering altitude in headwind, crosswind, and tailwind conditions.

(2) Maintain hovering altitude within +/- ½ foot of that altitude within 10 feet of the surface; if above 10 feet, +/-5 feet.

(3) Descend vertically to within 2 feet of the designated touchdown point.

(4) Maintain specified heading +/-10 degrees.

(5) Maintain constant rate of turn at pivot points while maintaining position +/-2 feet.

(6) Maintain ground track within 2 feet on straight legs.

(7) If on sloping surface, make a smooth transition from slope to stabilized hover parallel to the slope while maintaining heading +/-5 degrees.

f. Takeoff/Departure.

(1) Exhibits knowledge of the elements related to normal and maximum performance takeoff and climb, including factors affecting performance, to include height/velocity information.

(2) For normal takeoff. Accelerates to manufacturer's recommended climb airspeed, +/-5 knots.

(3) For maximum performance takeoff. Utilize the maximum available takeoff power in a vertical climb to clear all obstacles; transition to normal climb attitude, airspeed +/-5 knots, and power setting.

(4) Maintain proper ground track with crosswind correction, if necessary.

(5) Remain aware of possibility of wind shear and/or wake turbulence.

(6) Perform appropriate before takeoff check.

g. Traffic Pattern.

(1) Exhibit knowledge of the elements related to traffic pattern procedures at each class airspace airport, runway incursion avoidance, and collision and wake turbulence avoidance.

(2) Follow established traffic pattern procedures, instructions, and rules.

(3) Maintain proper spacing from other traffic or avoid the flow of fixed wing traffic.

(4) Maintain proper ground track with crosswind correction, if necessary, while remaining oriented with the runway and/or landing area in use.

(5) Maintain and hold traffic pattern altitude +/-100 feet, and appropriate airspeed +/-10 knots.

(6) Complete a before landing check.

h. Approach/Landing.

(1) Exhibit knowledge of the elements related to shallow, normal, steep, and crosswind approaches.

(2) Consider situations for use of each type of approach, including factors affecting performance data, and height/velocity information.

(3) Consider the wind condition, landing surface, and obstacles.

(4) Establish and maintain the recommended approach angle and rate of closure.

(5) Avoid situations that may result in settling-with-power.

(6) Maintain proper ground track with crosswind correction, if necessary.

(7) Arrive at the termination point, on the surface or at a stabilized hover, +/-2 feet.

(8) Utilize proper flight control technique after surface contact.

(9) Maintain positive control while lowering the down slope skid on sloping surface while maintaining heading throughout the slope operation, +/-5 degrees.

i. Flight Maneuvers.

(1) Accelerate/Decelerate.

(a) Begin maneuver at assigned airspeed +/-5 knots and assigned altitude +/- 50 feet.

(b) Properly coordinate all controls throughout the execution of the maneuver.

(c) Accelerate/decelerate to assigned airspeeds while maintaining altitude +/-100 feet and assigned heading +/-10 degrees.

(2) Quick Stop.

(a) Properly coordinate all controls throughout the execution of the maneuver.

(b) Maintain an altitude that will permit safe clearance between the tailboom and the surface.

(c) Decelerate and terminate in a stationary hover at the recommended hover altitude.

(d) Maintain heading throughout the maneuver +/-5 degrees.

(3) 720 Degree Steep Turns.

(a) From a designated heading at a specified altitude, enter a turn using an angle of bank of approximately 30 degrees.

(b) Maintain 30 degrees angle of bank for 360 degrees of turn to either left or right, roll out on original heading, then turn the opposite direction at 30 degrees angle of bank for 360 degrees of turn, and again roll out on the original heading.

(c) Maintain altitude within 100 feet, airspeed within 10 knots, 5 degrees of specified bank angle, and roll out within 10 degrees of specified heading.

(d) Use proper instrument cross-check and interpretation and apply the appropriate pitch, bank, power, and trim corrections.

j. Confined Area.

(1) Exhibit knowledge of the elements related to confined area operations.

(2) Accomplish a proper high and low reconnaissance utilizing, Suitability (size, surface, slope, security), Barriers, Approach, Touchdown, and Takeoff (SBATT).

(3) Determine wind conditions.

(4) Determine helicopter performance and complete a CHP 93N, Helicopter Load Calculation, (or determine performance on the helicopter vehicle management display [VEMD]).

(5) Perform an out of ground effect (OGE) hover (above the confined area) to verify helicopter performance.

(6) Track the selected approach path at an acceptable approach angle and rate of closure to the termination point.

(7) Avoid situations that can result in settling-with-power.

(8) Terminate at a hover or on the surface as conditions allow.

(9) Ensure firm skid contact on surface as collective is lowered.

(10) Select suitable takeoff point and perform an acceptable departure for the conditions present at the site.

k. Pinnacle/Ridge/Rooftop.

(1) Exhibit knowledge of the elements related to pinnacle/ridge/rooftop operations.

(2) Accomplish a proper high and low reconnaissance utilizing SBATT.

(3) Determine wind conditions.

(4) Determine helicopter performance and complete a CHP 93D (or determine performance on the helicopter VEMD).

(5) Perform an OGE hover (above the landing site) to verify helicopter performance.

(6) Track the selected approach path at an acceptable approach angle and rate of closure to the termination point.

(7) Avoid situations that can result in settling-with-power.

(8) Terminate at a hover or on the surface as conditions allow.

(9) Ensure firm skid contact as collective is lowered.

(10) Select a suitable takeoff point and perform an acceptable departure for conditions present at the site.

l. Snow/Sand/Dust Operations.

(1) Exhibit knowledge of the elements related to snow/sand/dust operations.

(2) Perform confined area or pinnacle operation as dictated by landing site.

(3) Select termination point near trees or terrain feature, if possible, to assist in maintaining ground reference.

(4) Terminate approach at a high hover to evaluate the effect of rotor wash on the snow/sand/dust.

(5) Be prepared for a go-around if visibility becomes inadequate for continuing the approach.

(6) Ensure stability of helicopter as collective is lowered.

(7) Perform maximum performance takeoff on departure.

m. Autorotation.

(1) Exhibit knowledge of the elements related to autorotations terminating with a power recovery to a hover.

(2) Select a suitable touchdown area.

(3) Initiate the maneuver at the proper point.

(4) Establish proper aircraft trim and autorotation airspeed +/-5 knots.

(5) Maintain rotor revolutions per minute (RPM) within normal limits.

(6) Compensate for wind speed and direction as necessary to avoid under/overshooting the selected landing area.

(7) Come to a hover within 50 feet of the designated point.

(8) Perform the hovering autorotation from a stationary hover into the wind at recommended altitude while maintaining established heading +/-5 degrees. Touch down with minimum sideward movement and no rearward movement.

n. External Load. Standards defined in HPM 100.7, Chapter 11.

o. Operational Maneuvers.

(1) Litter Operations.

(a) Properly friction/lock the flight controls with engine at idle speed.

(b) Properly remove and store the copilot's flight controls.

(c) Remove/relocate copilot seat as required and store/secure as necessary.

(d) Install bracket(s) and panels as necessary.

(e) Provide for personnel safety during loading of patient.

(f) Ensure that all doors/latches are secured prior to departure.

(2) Navigation.

(a) Exhibit knowledge of the elements relating to pilotage and dead reckoning, radio navigation, lost procedures, and procedures for diversion.

(b) Ability to fly to a checkpoint on a planned route by means of precomputed headings, ground speed, and elapsed times (without the aid of radio navigation aids).

(c) Identify and follow landmarks by relating surface features to chart symbols, and verifying the helicopter's position within one nautical mile.

(d) Locate the helicopter's position relative to radio navigation facilities or coordinates.

(e) Locate the helicopter's position using cross radials or coordinates.

(f) Select and divert to an appropriate alternate airport or heliport, or to an assigned airport or heliport.

(g) Make an accurate estimate of heading, ground speed, arrival time, and fuel consumption to the new destination.

(h) Maintain the appropriate altitude +/-100 feet and established heading +/-10 feet.

(3) Use of Communication Radios.

(a) Exhibit knowledge of the elements related to radio communications, radio failure, and air traffic control (ATC) light signals.

(b) Select appropriate frequencies for facilities to be used.

(c) Transmits using recommended phraseology.

(d) Acknowledge radio communications and comply with instructions.

(e) Use prescribed procedures following radio failure.

(f) Interpret and comply with ATC light signals.

(g) Exhibit working knowledge of law enforcement radios.

(4) Forward Looking Infrared Operations.

(a) Exhibit knowledge of Forward Looking Infrared (FLIR) and its uses.

(b) Maintain altitude +/-100 feet while orbiting a search area.

(c) Maintain orbit with crosswind corrections as necessary to assist flight officer in keeping the camera on target.

(d) Properly coordinate all controls throughout the orbit.

(5) Nightsun Operations.

(a) Exhibit knowledge of the Nightsun and its uses.

(b) Maintain altitude +/-100 feet while orbiting a search area.

(c) Maintain orbit with crosswind corrections as necessary to assist flight officer in keeping the light on target.

(d) Control the light on target while orbiting.

(e) Properly coordinate all controls throughout the orbit.

(6) High Density Altitude Operations.

(a) Exhibit knowledge of the elements related to operations in a high density altitude environment.

(b) Demonstrate confined area, pinnacle/ridge, external load, and search operations at Density Altitudes (DA) of 8,000 feet and above.

(7) Search Techniques.

(a) Exhibit knowledge of search techniques for lost and fleeing persons.

(b) Select suitable search technique for conditions present.

(c) Avoid situations that can result in settling-with-power.

(8) Crew Coordination. Exhibit knowledge of the elements related to efficient crew coordination procedures and related safety factors.

(9) Cockpit Management.

(a) Exhibit knowledge of the elements related to efficient cockpit management procedures and related safety factors.

(b) Organize and arrange material and equipment in a manner that makes the items readily available.

(c) Brief or cause the briefing of occupants on the use of safety belts, rotor blade avoidance, and emergency procedures.

(d) If applicable, brief crew appropriately.

(e) Complete prescribed checklists.

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

p. Emergency Operations.

(1) Power Failure.

(a) Exhibit knowledge of the elements related to a power failure at altitude or at a hover.

(b) Establish an autorotation and select a suitable landing area.

(c) Establish proper aircraft trim and autorotation airspeed +/-5 knots.

(d) Maintain rotor RPM within normal limits.

(e) Compensate for wind speed and direction as necessary to avoid over/undershooting selected landing area.

(f) Terminate approach with power at a safe altitude when directed by the examiner.

(g) If power failure from a hover, touchdown with minimum sideward movement and no rearward movement.

(2) Hydraulic Failure.

(a) Exhibit knowledge of the elements related to a hydraulic system failure.

(b) Establish proper airspeed, maintain control of the aircraft, and touchdown at recommended airspeed.

(3) Tail Rotor Failure.

(a) Exhibit knowledge of the elements related to tail rotor failures.

(b) Perform the proper procedure for conditions presented.

(4) Digital Engine Control Unit Failure.

(a) Exhibit knowledge of the elements related to failure of the Digital Engine Control Unit (DECU).

(b) Perform the proper procedure while maintaining main rotor RPM (NR) within the normal operating limits.

2. INSTRUMENT FLIGHT.

a. General.

(1) Instrument Flight Rules Planning.

(a) Exhibit knowledge of the elements of planning and instrument flight.

(b) Exhibit knowledge of the aircraft's performance capabilities by calculating estimated time of arrival and fuel requirements.

(2) Obtain/Analyze Weather.

(a) Exhibit adequate knowledge of the elements related to aviation weather information by obtaining, reading, and analyzing the applicable items.

(b) Correctly analyze the assembled weather information pertaining to the proposed route of flight and destination airport, and determine whether an alternate airport is required, and, if required, whether the selected alternate airport meets the regulatory requirements.

(3) File/Copy Clearance. Complete and file a flight plan in a manner that accurately reflects the conditions of the proposed flight.

(4) Instrument Flight Rules Systems/Equipment.

(a) Exhibit adequate knowledge of the elements related to applicable flight instrument systems and their operating characteristics to include: Pitot static, altimeter, airspeed indicator, vertical speed indicator, attitude indicator, horizontal situation indicator, magnetic compass, turn-and-slip indicator, heading indicator, and electrical systems.

(b) Exhibit adequate knowledge of the applicable aircraft navigation systems and their operating characteristics to include: Omni-directional range (VOR), distance measuring equipment (DME), instrument landing

system (ILS), marker beacon receivers/indicators, transponder/altitude encoding, automatic direction finder, and global positioning system (GPS).

b. Pre/Postflight.

(1) Performs preflight on instruments, avionics, and navigation equipment by following the aircraft checklist.

(2) Set appropriate communication and navigation frequencies as required for the flight.

(3) Communicate appropriately with ATC using standard phraseology.

(4) Clearance/Instructions.

(a) Copy correctly, in a timely manner, the ATC clearance as issued.

(b) Determine that it is possible to comply with ATC clearance.

(c) Correctly interpret ATC clearance received and, when necessary, request clarification, verification, or change.

(d) Read back correctly, in a timely manner, the ATC clearance in the sequence received.

(e) Set frequencies and transponder codes in compliance with the ATC clearance.

c. Basic Maneuvers.

(1) Instrument Takeoff.

(a) Exhibit adequate knowledge of the elements related to attitude instrument flying during instrument takeoff.

(b) From a hover, perform a normal takeoff profile and accelerate to recommended climb airspeed while establishing a positive rate of climb.

(c) Maintain heading within 10 degrees.

(d) Use proper instrument cross-check and interpretation and apply the appropriate pitch, bank, power, and trim corrections.

(2) Turns.

(a) Exhibit adequate knowledge of the elements related to attitude instrument flying during turning maneuvers.

(b) Maintain altitude within 100 feet, airspeed within 10 knots, angle of bank within 5 degrees of the specified bank angle (30 degrees for steep turns), and roll out on specified headings within 10 degrees.

(3) Climbs/Descents.

(a) Exhibit adequate knowledge of the elements related to attitude instrument flying during climbs and descents.

(b) Demonstrate climbs and descents at a specified rate or airspeed between specified altitudes in straight or turning flight.

(c) Establish the appropriate change of pitch, bank, and power to establish desired climb or descent performance.

(d) Maintain the specified rate of climb/descent within 100 feet per minute, airspeed within 10 knots, heading within 10 degrees, or if in a turning maneuver, within 5 degrees of the specified bank angle.

(e) Perform the level-off within 100 feet of the specified heading.

(f) Use proper cross-check and interpretation and apply the appropriate pitch, bank, power, and trim corrections.

(4) Instrument Meteorological Conditions Transition. Exhibit adequate knowledge of the elements related to inadvertent encounter with Instrument Meteorological Conditions (IMC) and the local standard operating procedures (SOP) for IMC recovery procedures.

d. Instrument Flight Rules Navigation.

(1) Exhibit adequate knowledge of the elements related to intercepting and tracking navigational systems and DME arcs.

(2) Tune and correctly identify the navigation facility.

(3) Set and correctly orient the radial to be intercepted on the horizontal situation indicator (HSI).

(4) Intercept the specified radial at a predetermined angle inbound or outbound from a navigational facility.

(5) Maintain airspeed within 10 knots, altitude within 100 feet and selected headings within 5 degrees.

(6) Apply proper correction to maintain a radial allowing no more than 10 degrees needle deflection on the HSI.

(7) Determine aircraft position relative to the navigational facility or from a waypoint in the case of GPS.

(8) Intercept a DME arc and maintain the arc within one nautical mile.

(9) Recognize a navigational receiver or facility failure and, when required, report the failure to ATC.

e. Holding.

(1) Exhibit adequate knowledge of the elements related to holding procedures.

(2) Explain and use an entry procedure that ensures the aircraft remains within the holding pattern airspace for a standard, non-standard, published, or non-published holding pattern.

(3) Recognize arrival at the holding fix and initiate the prompt entry into the holding pattern.

(4) Comply with ATC reporting requirements.

(5) Use proper timing criteria, where applicable, as required by altitude or ATC instructions.

(6) Comply with pattern leg length when a DME distance is specified.

(7) Use proper wind correction procedures to maintain the desired pattern and to arrive over the fix as close as possible to the specified time.

(8) Maintain airspeed within 10 knots, altitude within 100 feet, headings within 10 degrees, and tracks a selected course, radial, or bearing.

f. Approaches.

(1) Exhibit adequate knowledge of the elements related to an instrument approach procedure.

(2) Select and comply with the appropriate instrument procedures to be performed.

(3) Establish two-way communications with ATC, as appropriate, to the phase of flight or approach segment, and use proper radio communication phraseology and technique.

(4) Select, tune, identify, and confirm the operational status of ground and aircraft navigation equipment to be used for the approach procedure.

(5) Comply with all clearances issued by ATC or the examiner.

(6) Recognize if heading indicator and/or attitude indicator is inaccurate or inoperative, advise controller, and proceed with approach.

(7) Advise ATC or examiner anytime the aircraft is unable to comply with a clearance.

(8) Establish the appropriate aircraft configuration and airspeed considering turbulence and wind shear, and complete the aircraft checklist items appropriate to the phase of flight.

(9) For a non-precision approach, maintain, prior to beginning the final approach segment, altitude within 100 feet, heading within 10 degrees and allows less than a full-scale deflection of the course deviation indicator (CDI) or within 10 degrees in the case of a radio magnetic indicator (RMI), and maintain airspeed within 10 knots.

(10) For a precision approach, maintain, prior to beginning the final approach segment, specified altitude within 100 feet, heading or course within 10 degrees, and air speed within 10 knots.

(11) Apply the necessary adjustments to the published minimum descent altitude (MDA) or decision height (DH) and visibility criteria for the aircraft approach category when required, such as: Flight Data Center (FDC) and Class II NOTAM's, inoperative equipment, inoperative visual aids associated with the landing environment, and National Weather Service reporting factors and criteria.

(12) For non-precision approaches, establish a rate of descent and track that will ensure arrival at the MDA prior to reaching the missed approach point (MAP) with the aircraft continuously in a position from which descent to a landing on the intended runway can be made at a normal rate using normal maneuvers. Also, while on the final approach segment, allow no more than a three-quarter-scale deflection of the CDI or within 10 degrees in case of an RMI, and maintain air speed within 10 knots, and maintains the MDA, when reached, within +100 feet/-0 feet to the MAP.

(13) For precision approaches, establish an initial rate of descent at the point where the electronic glide slope is intercepted, which approximates that required for the aircraft to follow the glide slope to DH. Also, while on the final approach segment, as stated per PTS, maintain specified airspeed within 10 knots, and avoid descent below the DH before initiating a missed approach or transitioning to a normal landing approach.

(14) Execute the missed approach when the required visual references for the intended runway are not distinctly visible and identifiable at the MAP or on glide slope at the DH.

(15) Execute a normal landing from a straight-in or circling approach when instructed by the examiner.

g. Missed Approach.

(1) Exhibit adequate knowledge of the elements related to missed approach procedures associated with standard instrument approaches.

(2) Initiate the missed approach promptly by applying power and establishing a climb attitude.

(3) Report to ATC beginning the missed approach procedure.

(4) Comply with the published or alternate missed approach procedure.

(5) Advise ATC or examiner anytime the aircraft is unable to comply with a clearance, restriction, or climb gradient.

(6) Follow the recommended checklist items appropriate to the go-around procedure.

(7) Request, if appropriate, ATC clearance to the alternate airport, clearance limit, or as directed by the examiner.

(8) Maintain the recommended airspeed within 10 knots; heading, course, or bearing within 10 degrees; and altitude within 100 feet during the missed approach procedure.

h. Emergencies.

(1) Unusual Attitudes.

(a) Exhibit adequate knowledge of the elements related to attitude instrument flying during the recovery from unusual flight attitudes (both nose high and nose low).

(b) Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, and power corrections in the correct sequence to return to a stabilized level flight attitude.

(c) Any intervention by the examiner to prevent the aircraft from exceeding any operating limitations, or entering an unsafe flight condition shall be disqualifying.

(2) Partial Panel.

(a) Exhibit adequate knowledge of the elements related to attitude instrument flying without the use of the attitude indicator and/or the directional gyro.

(b) Perform straight-and-level flight, change of airspeed, constant airspeed climbs and descents, rate climbs and descents, and timed turns to magnetic headings without the use of the attitude indicator and/or the directional gyro.

(c) Perform recoveries from unusual attitudes without the use of the attitude indicator and/or the directional gyro.

(d) Demonstrate a non-precision instrument approach without gyro attitude and heading indicators.

(3) Lost Communications.

(a) Recognize loss of communications.

(b) Continue to destination according to flight plan.

(c) Know when to deviate from the flight plan.

(d) Know how to time the beginning of the approach at the destination. Recognize instrument and/or system malfunctions.

(4) Malfunctions. Recognize malfunction and take appropriate action.

3. GENERAL.

a. Composure. Demonstrate the ability to utilize proper control techniques while dividing attention both inside and/or outside the cockpit during distractions, while problem solving, and when under stress.

b. Safety.

(1) Demonstrate the use of safe flying practices such as: clearing turns, risk assessments, etc.

(2) Properly identify airspace, obstacles, and terrain features, including discussion of wire avoidance techniques.

c. Collision Avoidance.

(1) Demonstrate outside scanning ability to see and avoid other aircraft in flight.

(2) Demonstrate adequate knowledge of runway incursion avoidance.

ANNEX B

INITIAL HELICOPTER PILOT PHASE TRAINING *(continued)*

d. Judgment.

(1) Demonstrate appropriate decision-making abilities.

(2) Demonstrate ability to make appropriate go/no-go decisions.

e. Techniques. Demonstrate mastery of the aircraft with the successful outcome of each task performed never seriously in doubt.

f. Planning. Demonstrate adequate planning during preflight operations and while flying.

g. Attitude. Demonstrate a positive attitude.

h. Alertness. Demonstrate situational awareness at all times.

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ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING

Initial departmental airplane pilot training will consist of three phases not to exceed a total of 60 flight hours. Phase I will not exceed the hours listed and consists of aircraft transition training and commercial pilot maneuvers. Phase II will not exceed the hours listed and consists of aircraft instrument flight training. Phase III will not exceed the hours listed and consists of CHP mission specific training. Each phase has specific tasks and completion standards.

In no event shall flight training hours be exceeded for any phase. Upon completion of each phase, the pilot shall be given a checkride by the chief pilot or designee. All tasks within each phase shall be successfully completed in order to proceed to the next phase. A pilot can only remediate in two tasks per phase. They will be given two additional flight hours of training for each specific task failed. Upon successful completion of this training, an additional checkride by the chief pilot or designee shall be given. If the pilot again fails the remediation task, they shall be removed from flight training status and removed from the Pilot Eligibility List. They shall not be allowed to retest for the Pilot Eligibility List until one-year from that date.

If, at any time during any phase of training, a pilot trainee is not demonstrating a level of performance consistent with satisfactory completion in the time allotted, a progress evaluation flight shall be scheduled with the chief pilot. If, in the opinion of the chief pilot, satisfactory progress has not been made, training shall be terminated, and the pilot shall be removed from flight training status and removed from the Pilot Eligibility List. They shall not be allowed to retest for the Pilot Eligibility List for one-year from that date.

Satisfactory performance to meet the requirements for phase completion is based on the pilot's ability to safely:

1. Perform each task within the approved standards set forth in the appropriate FAA Commercial and Instrument Practical Test book.

2. Demonstrate mastery of the aircraft with the successful outcome of each task performed.

3. Demonstrate sound judgment, aeronautical decision making, and skilled competencies in cockpit resource management.

4. Demonstrate single-pilot competence if the aircraft is type certificated for single-pilot operations.

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

Additionally, typical areas of unsatisfactory performance and grounds for disqualification in training and phase checkrides are:

1. Any action or lack of action by the pilot trainee that requires corrective intervention by the chief pilot or designee to maintain safe flight.

2. Failure to use proper and effective visual scanning techniques to clear the area before and while performing flight maneuvers.

3. Consistently exceeding tolerances (airspeed, altitude, heading, etc.) stated in the FAA Practical Test book or HPM 100.7.

4. Failure to take prompt corrective action when tolerances (airspeed, altitude, heading, etc.) are exceeded.

Phase I

Ground and flight training in all areas of operation identified in the attached syllabus.

No specific hour level maximum for ground instruction.

Phase I checkride will be administered by the chief pilot or designee. Performance in each task will be consistent with PTS.

Phase II

Ground and flight training in all areas of operation contained in Commercial Pilot and/or Instrument Rating PTS as described in the appropriate syllabus.

No specific hour level maximum for ground instruction.

Phase II checkride will be administered by the chief pilot or designee. Performance in each task will be consistent with PTS.

Phase III

Ground and flight training in departmental mission operations: including but not limited to mountain flying, pursuits, speed enforcement, and vehicle surveillance.

No specific hour level maximum for ground instruction. Phase III checkride will be administered by the chief pilot or designee. Performance in each task will be consistent with PTS.

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

Phase I—(20 hours)

Ground (No time limitation).

Instruction in the following areas of operation listed in the CHP PTS and the FAA PTS (FAA-S-8081-12B, FAA-S-8081-4E, and FAA-S-8081-14A):

1. Know the following airspeeds and power settings:
   a. Best rate of climb airspeed (Vy).
   b. Best angle of climb airspeed (Vx).
   c. Stalling speed in the landing configuration (Vso).
   d. Stalling speed flaps retracted (Vs).
   e. Never exceed speed (Vne).
   f. Flap extension speed (Vfe).
   g. Maneuvering speed (Va).
   h. Maximum structural cruising speed (Vno).
   i. Approach airspeed for landing (Vref).
   j. Power setting for takeoff, climb, cruise, descent, traffic patterns, and landing.
2. Basic GPS operations and limitations.
3. Airspace.
4. FARs.
5. Radio communications.
6. Aircraft flight manual.
7. Identify aircraft systems and equipment.
8. Aircraft weight and balance.

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

9. Aircraft performance.

10. Air Operations Manual, HPM 100.7.

Flight (shall not exceed 20 hours in airplane). The pilot shall demonstrate competency in both the left and right pilot seats.

Instruction in the following areas of operation listed in the CHP PTS and the FAA PTS (FAA-S-8081-12B, FAA-S-8081-4E, and FAA-S-8081-14A):

Visual Flight Reference.

1. Use of checklists.
2. Pre/Postflight inspections.
3. Engine starting.
4. Taxiing.
5. Takeoff.
    a. Normal.
    b. Short-field.
    c. Soft-field.
    d. No flap.
6. Traffic pattern.
    a. Nontowered airport.
    b. Towered airport.
7. Landing.
    a. Normal.
    b. Short-field.

c. Soft-field.

d. No flap.

e. Stuck elevator trim.

f. Precision.

8. Emergency procedures.
9. Emergency descents.
10. Aborted landing and go-around.
11. Spin awareness.
12. Slow flight.
    a. Minimum controllable airspeed.
    b. Deceleration/Acceleration.
13. Power-on stalls/Recoveries.
14. Power-off stalls/Recoveries.
15. Steep turns.
16. Chandelles.
17. Ground reference maneuvers.

Instrument Flight Reference.

1. Straight-and-level flight.
2. Change in airspeed.
3. Turns.
    a. Standard rate.

b. Timed.

c. Compass.

4. Climbs/Descents.

   a. Constant airspeed.

   b. Constant rate.

5. Intercepting and tracking VOR radials.

6. Holding procedures.

Phase II—(30 hours)

Ground (No time limitation).

Instruction in the following areas of operation listed in the CHP PTS and the FAA PTS (FAA-S-8081-12B, FAA-S-8081-4E, and FAA-S-8081-14A):

1. All ground tasks from Phase I.
2. Aircraft flight manual.
3. Aircraft performance.
4. Explain aircraft engine, systems and equipment operation, and limitations.
5. Explain flight instruments, avionics and autopilot operation, and limitations.
6. Advanced GPS operation and limitations.
7. Aircraft power settings for precision and non-precision instrument approaches.
8. Aeronautical Information Manual (AIM).
9. Visual flight reference and instrument flight reference navigation charts.
10. Instrument approach charts.

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

11. Attitude instrument flying.

12. Aviation weather.

13. Hazards to flight.

14. Activity reporting.

Flight (shall not exceed 30 hours). The pilot shall demonstrate competency in both the left and right pilot seats.

Instruction in the following areas of operation listed in the CHP PTS and the FAA PTS (FAA-S-8081-12B, FAA-S-8081-4E, and FAA-S-8081-14A):

Visual Flight Reference.

1. All visual flight tasks from Phase I.

2. Takeoff - crosswind.

3. Landing - crosswind.

4. Spin awareness.

5. Night operations.

6. Aircraft system failures.

Instrument Flight Reference.

1. All instrument flight tasks from Phase I.

2. ILS approach.

3. Localizer approach.

4. VOR approach.

5. GPS approach.

6. All instrument approaches at varying airspeeds.

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

7. DME/GPS arcs.
8. Partial panel maneuvers and approaches.
    a. Basic maneuvers.
    b. Approaches.
    c. Unusual attitudes.
9. Turns – steep.
10. Climbs/Descents.
    a. Constant airspeed.
    b. Constant rate.
11. Slow flight.
12. Stalls/Recoveries.
13. Ability to copy and comply with ATC clearances.
14. Ability to communicate in ATC environment.

Phase III—(10 hours)

Ground (No time limitation).

Instruction in the following areas of operation listed in the CHP PTS and the FAA PTS (FAA-S-8081-12B, FAA-S-8081-4E, and FAA-S-8081-14A):

1. All ground tasks from Phase I and Phase II.
2. Unit SOP.
3. Area orientation and procedures.
4. Types of missions.

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

5. Aircraft maintenance and inspection requirements.

6. Activity reporting.

7. Human factors in decision making.

8. Risk management.

Flight (shall not exceed 10 hours). The pilot shall demonstrate competency in both the left and right pilot seats.

Instruction in the following areas of operation listed in the CHP PTS and the FAA PTS (FAA-S-8081-12B, FAA-S-8081-4E, and FAA-S-8081-14A):

Visual Flight Reference.

1. All visual flight tasks from Phase I and Phase II.

2. CHP missions.

   a. Speed enforcement.

   b. Search and rescue.

   c. Patrol.

   d. Mountain flight – actual.

   e. Low altitude orbit w/use of public address (PA) system.

3. Cross-country planning and flight – visual flight rules (VFR) (over 50 nautical miles point A-B).

4. High altitude operations.

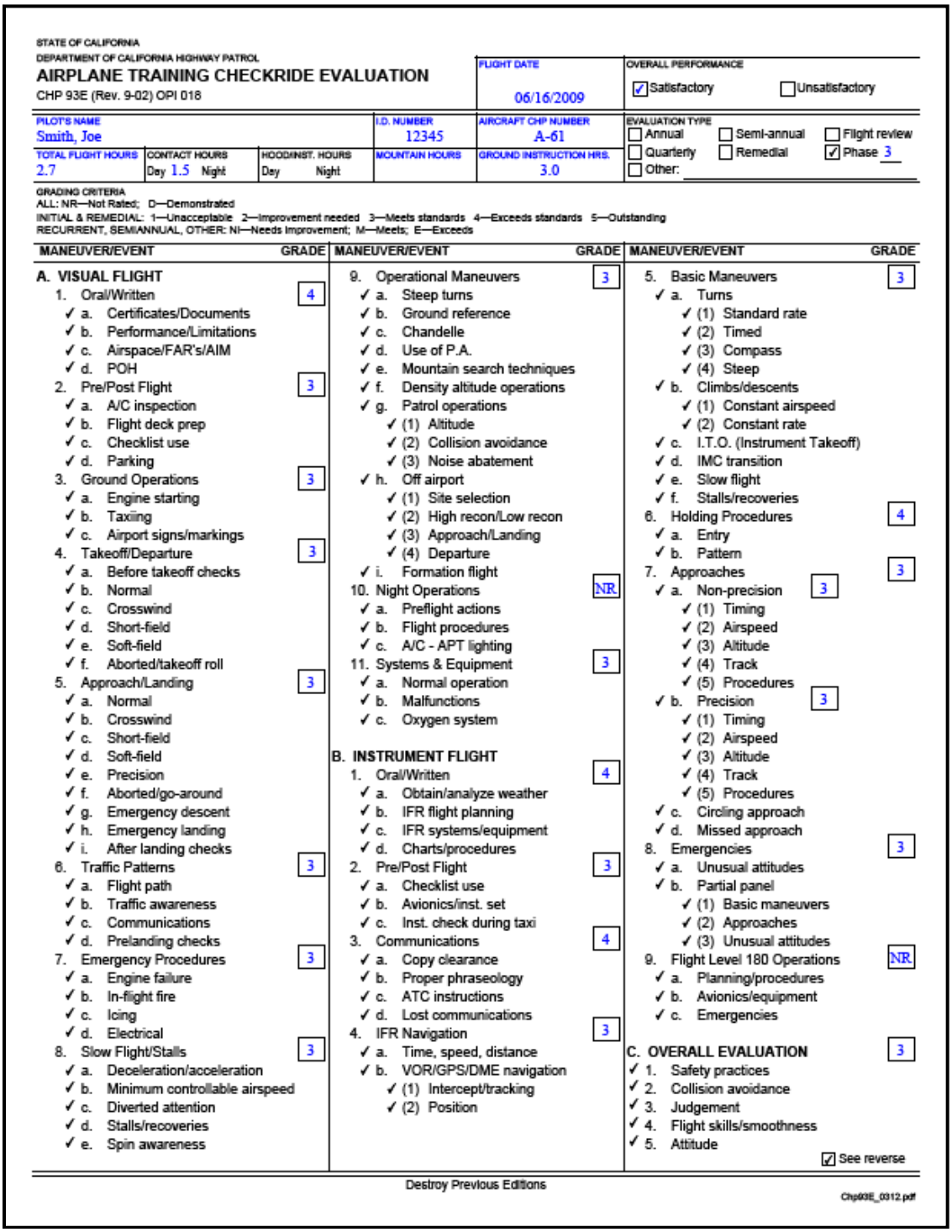
Instrument Flight Reference.

1. All instrument flight tasks from Phase I and Phase II.

2. Cross-country planning and flight - IFR (over 50 nautical miles point A-B).

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*



STATE OF CALIFORNIA
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

AIRPLANE TRAINING CHECKRIDE EVALUATION

CHP 93E (Rev. 9-02) OPI 018

FLIGHT DATE: 06/16/2009

OVERALL PERFORMANCE: ☑ Satisfactory ☐ Unsatisfactory

PILOT'S NAME	I.D. NUMBER	AIRCRAFT CHP NUMBER	EVALUATION TYPE
Smith, Joe	12345	A-61	☐ Annual ☐ Semi-annual ☐ Flight review ☐ Quarterly ☐ Remedial ☑ Phase 3 ☐ Other:

TOTAL FLIGHT HOURS	CONTACT HOURS	HOOD/INST. HOURS	MOUNTAIN HOURS	GROUND INSTRUCTION HRS.
2.7	Day 1.5 Night	Day Night		3.0

GRADING CRITERIA
ALL: NR—Not Rated; D—Demonstrated
INITIAL & REMEDIAL: 1—Unacceptable 2—Improvement needed 3—Meets standards 4—Exceeds standards 5—Outstanding
RECURRENT, SEMIANNUAL, OTHER: NI—Needs Improvement; M—Meets; E—Exceeds

MANEUVER/EVENT	GRADE
A. VISUAL FLIGHT	
1. Oral/Written	4
✓ a. Certificates/Documents	
✓ b. Performance/Limitations	
✓ c. Airspace/FAR's/AIM	
✓ d. POH	
2. Pre/Post Flight	3
✓ a. A/C inspection	
✓ b. Flight deck prep	
✓ c. Checklist use	
✓ d. Parking	
3. Ground Operations	3
✓ a. Engine starting	
✓ b. Taxiing	
✓ c. Airport signs/markings	
4. Takeoff/Departure	3
✓ a. Before takeoff checks	
✓ b. Normal	
✓ c. Crosswind	
✓ d. Short-field	
✓ e. Soft-field	
✓ f. Aborted/takeoff roll	
5. Approach/Landing	3
✓ a. Normal	
✓ b. Crosswind	
✓ c. Short-field	
✓ d. Soft-field	
✓ e. Precision	
✓ f. Aborted/go-around	
✓ g. Emergency descent	
✓ h. Emergency landing	
✓ i. After landing checks	
6. Traffic Patterns	3
✓ a. Flight path	
✓ b. Traffic awareness	
✓ c. Communications	
✓ d. Prelanding checks	
7. Emergency Procedures	3
✓ a. Engine failure	
✓ b. In-flight fire	
✓ c. Icing	
✓ d. Electrical	
8. Slow Flight/Stalls	3
✓ a. Deceleration/acceleration	
✓ b. Minimum controllable airspeed	
✓ c. Diverted attention	
✓ d. Stalls/recoveries	
✓ e. Spin awareness	
9. Operational Maneuvers	3
✓ a. Steep turns	
✓ b. Ground reference	
✓ c. Chandelle	
✓ d. Use of P.A.	
✓ e. Mountain search techniques	
✓ f. Density altitude operations	
✓ g. Patrol operations	
✓ (1) Altitude	
✓ (2) Collision avoidance	
✓ (3) Noise abatement	
✓ h. Off airport	
✓ (1) Site selection	
✓ (2) High recon/Low recon	
✓ (3) Approach/Landing	
✓ (4) Departure	
✓ i. Formation flight	
10. Night Operations	NR
✓ a. Preflight actions	
✓ b. Flight procedures	
✓ c. A/C - APT lighting	
11. Systems & Equipment	3
✓ a. Normal operation	
✓ b. Malfunctions	
✓ c. Oxygen system	
B. INSTRUMENT FLIGHT	
1. Oral/Written	4
✓ a. Obtain/analyze weather	
✓ b. IFR flight planning	
✓ c. IFR systems/equipment	
✓ d. Charts/procedures	
2. Pre/Post Flight	3
✓ a. Checklist use	
✓ b. Avionics/inst. set	
✓ c. Inst. check during taxi	
3. Communications	4
✓ a. Copy clearance	
✓ b. Proper phraseology	
✓ c. ATC instructions	
✓ d. Lost communications	
4. IFR Navigation	3
✓ a. Time, speed, distance	
✓ b. VOR/GPS/DME navigation	
✓ (1) Intercept/tracking	
✓ (2) Position	
5. Basic Maneuvers	3
✓ a. Turns	
✓ (1) Standard rate	
✓ (2) Timed	
✓ (3) Compass	
✓ (4) Steep	
✓ b. Climbs/descents	
✓ (1) Constant airspeed	
✓ (2) Constant rate	
✓ c. I.T.O. (Instrument Takeoff)	
✓ d. IMC transition	
✓ e. Slow flight	
✓ f. Stalls/recoveries	
6. Holding Procedures	4
✓ a. Entry	
✓ b. Pattern	
7. Approaches	3
✓ a. Non-precision	3
✓ (1) Timing	
✓ (2) Airspeed	
✓ (3) Altitude	
✓ (4) Track	
✓ (5) Procedures	
✓ b. Precision	3
✓ (1) Timing	
✓ (2) Airspeed	
✓ (3) Altitude	
✓ (4) Track	
✓ (5) Procedures	
✓ c. Circling approach	
✓ d. Missed approach	
8. Emergencies	3
✓ a. Unusual attitudes	
✓ b. Partial panel	
✓ (1) Basic maneuvers	
✓ (2) Approaches	
✓ (3) Unusual attitudes	
9. Flight Level 180 Operations	NR
✓ a. Planning/procedures	
✓ b. Avionics/equipment	
✓ c. Emergencies	
C. OVERALL EVALUATION	3
✓ 1. Safety practices	
✓ 2. Collision avoidance	
✓ 3. Judgement	
✓ 4. Flight skills/smoothness	
✓ 5. Attitude	

☑ See reverse

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ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

COMMENTS

ORAL/WRITTEN EVALUATION

You completed a comprehensive written and oral examination which included questions from the Federal Aviation Regulations, the Aeronautical Information Manual, FAA manuals, the Cessna T206H P.O.H., relevant avionics manuals, and HPM 100.7.

VFR EVALUATION

You used the airplane checklist as required during ground and flight operations. You demonstrated normal, short field, soft field, and no-flap takeoffs and landings. You experienced calm winds at one airport and a light crosswind at another airport. You demonstrated and discussed emergency procedures including in-flight fires, complete electrical system failure, and engine failure. You demonstrated steep turns, slow flight and stalls. You completed a simulated patrol mission and a simulated law enforcement observation mission including an orbit around a point at 500' AGL.

IFR EVALUATION

You demonstrated slow flight, stalls, steep turns, constant speed climbs, partial panel compass turns and timed turns, and partial panel unusual attitude recovery. You performed GPS/VOR navigation, tracking, intercepting, and orientation. You completed a simulated transportation mission in IFR conditions concluding with the ILS2 approach at the airport. You completed instrument holding procedures as published on the approach chart. You completed the LOC36L approach at the airport with simulated attitude instrument failure (partial panel) and failure of the autopilot.

FAA ENDORSEMENT

I certify that Mr. Joe Smith, holder of pilot certificate #1234567, has satisfactorily completed the flight review required by FAR 61.56(a) on 06/16/2009.

FLIGHT RESTRICTIONS

1. No off airport or Academy operations.
2. No takeoffs or landing which exceed a 10 knot crosswind component.
3. No takeoffs, landings, or flight operations that exceed a density altitude of 7,000 feet. This does not prohibit cross county flights.
4. Instrument approach minimum altitude and visibility are as follows: Double the minimum descent altitude for non-precision approaches and decision height for precision approaches. Minimum visibility for all approaches shall be one statute mile or greater.
5. Shall receive semiannual checkrides with the chief airplane pilot.
6. Shall receive 4.5 hours of flight training per quarter.

☐ None ☐ No changes ☐ Reviewed

PILOT'S INITIALS	SUPERVISOR'S INITIALS	TRAINING PILOT'S INITIALS	EXAMINER'S / INSTRUCTOR'S SIGNATURE & I.D. NUMBER
SD	FW	PS	

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ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

Airplane Maneuver/Event Standards
CHP 93E

1. VISUAL FLIGHT.

   a. Oral/Written.

      (1) Certificates/Documents. To determine that the pilot exhibits adequate knowledge of the elements related to certificates and documents by explaining and/or locating the following. In order to pass, a written minimum score of 80 percent must be obtained.

         (a) Commercial pilot certificate privileges and limitations.

         (b) Certificates, class, and duration as related to commercial pilot privileges.

         (c) Pilot logbook or flight records.

         (d) Departmental flight records.

         (e) Airworthiness and registration certificates.

         (f) Operating limitations, placards, instrument markings, Pilot's Operating Handbook (POH) and Airplane Flight Manual.

         (g) Weight and balance data and equipment list.

         (h) Airworthiness directives, compliance records, maintenance/inspection requirements, tests, and other appropriate records.

         (i) Exhibits adequate knowledge of the elements and procedures related to inoperative instruments and equipment by explaining:

            1 Limitations imposed on airplane operations with inoperative instruments or equipment.

            2 When a special flight permit is required.

            3 Procedures for obtaining a special flight permit.

(2) Performance/Limitations. To determine that the pilot exhibits adequate knowledge of the elements related to performance and limitations by explaining:

(a) The use of charts, tables, and appropriate data to determine performance, including takeoff, climb, cruise, endurance, landing distance, and the adverse effects of exceeding limitations.

(b) Describes the effects of various atmospheric conditions on the airplane's performance, to include calibrated airspeed, true airspeed, pressure altitude, and density altitude.

(c) Computes weight and balance, including adding, removing, and shifting weight. Determines if the weight and center of gravity will remain within limits during all phases of flight.

(d) Determines whether the computed performance is within the airplane's capabilities and operating limitations.

(3) Airspace/Federal Aviation Regulations/Aviation Information Manual. To determine that the pilot exhibits adequate knowledge of the elements related to the National Airspace System, the applicable laws of FARs and procedures of the AIM. To include, but not limited to the following:

(a) Weather minimums for all classes of airspace.

(b) Airspace classes, their boundaries, pilot certification, and airplane equipment.

(c) Special use airspace and other airspace.

(d) FAR Part 61.

(e) FAR Part 91.

(f) AIM, all chapters.

(g) HPM 100.7, Air Operations Manual.

(4) POH. To determine that the pilot exhibits adequate knowledge of the contents of the airplanes' POH to include the following:

(a) General information.

(b) Limitations.

(c) Emergency procedures.

(d) Normal procedures.

(e) Performance.

(f) Weight and balance/equipment list.

(g) Airplane and systems description.

(h) Handling, service, and maintenance.

(i) Supplements.

b. Pre/Postflight.

(1) Aircraft Inspection. To determine that the pilot exhibits adequate knowledge of the elements related to a preflight inspection including which items must be inspected, the reasons for checking each item, and how to detect possible defects.

(a) Inspects the airplane with reference to an appropriate checklist.

(b) Verifies the airplane is in condition for safe flight, notes any discrepancy, and determines whether the airplane requires maintenance.

(c) Locates and identifies switches, and circuit breakers pertinent to day and night operations.

(d) Checks that all documents and required equipment for the flight (night, IFR, etc.) is on board and operable.

(e) Uses sound professional judgment regarding go/no-go decision making, taking into consideration, weather, aircraft, and pilot's physical and mental status.

(f) Provides a thorough preflight briefing for all passengers.

(2) Flight Deck Prep. To determine that the pilot exhibits adequate knowledge of the elements related to efficient flight deck management procedures and related safety factors.

(a) Organizes and arranges material and equipment in a manner that makes the items readily available.

(b) Briefs or causes the briefing of occupants on the use of safety belts and emergency procedures.

(3) Checklist Use. To determine that the pilot uses and completes all appropriate checklists.

(4) Parking/Postflight Inspection. To determine that the pilot exhibits adequate knowledge of the elements related to ramp safety, parking hand signals, shutdown, securing, and postflight inspection.

(a) Parks the airplane properly, considering the safety of nearby persons and property.

(b) Follows the recommended procedure for engine shutdown, securing the flight deck, and deplaning passengers.

(c) Secures the airplane properly.

(d) Performs a satisfactory postflight inspection.

(e) Completes appropriate checklists.

c. Ground Operations.

(1) Engine Starting. To determine that the pilot exhibits adequate knowledge of the elements related to recommended engine starting procedures.

(a) The use of an external power source.

(b) Starting under various atmospheric conditions.

(c) Awareness of other persons and property during start.

(d) Aware of the effect of using incorrect starting procedures.

(e) Accomplishes recommended starting procedures.

(2) Taxiing. To determine that the pilot exhibits adequate knowledge of the elements related to recommended taxi procedures.

(a) The effect of wind on the airplane during taxiing and the appropriate control position for such conditions.

(b) Performs a brake check immediately after the airplane begins moving.

(c) Positions flight controls properly, considering the wind.

(d) Controls direction and speed without excessive use of brakes.

(e) Complies with airport markings, signals, and ATC clearances.

(f) Avoids other aircraft and hazards.

(g) Completes the appropriate checklist.

(3) Airport Signs and Markings. To determine that the pilot understands and complies with all airport markings.

d. Takeoff/Departure.

(1) Before Takeoff Checks. To determine that the pilot exhibits adequate knowledge of the elements related to the before takeoff check, including the reasons for checking each item and how to detect malfunctions. Includes:

(a) Positions the airplane properly considering other aircraft, wind, and surface conditions.

(b) Divides attention inside and outside the cockpit.

(c) Ensures the engine temperatures and pressures are suitable for run-up and takeoff.

(d) Accomplishes the before takeoff checks and ensures the airplane is in safe operating condition.

(e) Reviews takeoff performance airspeeds, takeoff distances, departure, and emergency procedures.

(f) Ensures no conflict with traffic prior to taxiing into takeoff position.

(g) Completes appropriate checklist.

(2) Normal. To determine that the pilot exhibits adequate knowledge of the elements related to a normal takeoff and climb. Includes:

(a) Positions the flight controls for the existing conditions.

(b) Clears the area, taxies into the takeoff position, and aligns the airplane on the runway centerline.

(c) Advances the throttle to takeoff power.

(d) Rotates at recommended climb airspeed, and accelerates to Vy, +/-5 knots.

(e) Retracts the flaps after a positive rate of climb is established.

(f) Maintains takeoff power to a safe maneuvering altitude, then sets climb power.

(g) Maintains directional control and proper wind-drift correction throughout the takeoff and climb.

(h) Completes appropriate checklists.

(i) Complies with noise abatement procedures.

(3) Crosswind. To determine that the pilot exhibits adequate knowledge of the elements related to crosswind takeoff and climb.

(a) Positions the flight controls for the existing conditions.

(b) Clears the area, taxies into the takeoff position, and aligns the airplane on the runway centerline.

(c) Advances the throttle to takeoff power.

(d) Rotates at recommended airspeed, and accelerates to Vy, +/-5 knots.

(e) Retracts the flaps after a positive rate of climb is established.

(f) Maintains takeoff power to a safe maneuvering altitude, then sets climb power.

(g) Maintains directional control and proper wind-drift correction throughout the takeoff and climb.

(h) Completes appropriate checklists.

(i) Complies with noise abatement procedures.

(4) Short-Field. To determine that the pilot exhibits adequate knowledge of the elements related to short-field takeoff and climb.

(a) Positions the flight controls and flaps for the existing conditions.

(b) Clears the area, taxies into position for maximum utilization of available takeoff area.

(c) Advances the throttle smoothly to takeoff power while holding the brakes.

(d) Releases brakes.

(e) Rotates at recommended airspeed.

(f) Climbs at recommended airspeed (+/-5 knots) and configuration until the obstacle is cleared, or until the airplane is at least 50 feet above the surface.

(g) After clearing the obstacle, accelerates to and maintains Vy +/-5 knots.

(h) Retracts the flaps after a positive rate of climb is established.

(i) Maintains takeoff power to a safe maneuvering altitude, then sets climb power.

(j) Maintains directional control and proper wind-drift correction throughout the takeoff and climb.

(k) Completes appropriate checklists.

(l) Complies with noise abatement procedures.

(5) Soft-Field. To determine that the pilot exhibits adequate knowledge of the elements related to soft-field takeoff and climb.

(a) Positions the flight controls and flaps for the existing conditions to maximize lift as quickly as possible.

(b) Clears the area, taxies onto the takeoff surface at a speed consistent with safety, and aligns the airplane without stopping while advancing the throttle smoothly to takeoff power.

(c) Establishes and maintains a pitch attitude that will transfer the weight of the airplane from the wheels to the wing.

(d) Remains in ground effect after takeoff while accelerating to Vx or Vy.

(e) Maintains Vx or Vy, +/-5 knots.

(f) Retracts the flaps after a positive rate of climb is established.

(g) Maintains takeoff power to a safe maneuvering altitude, then sets climb power.

(h) Maintains directional control and proper wind-drift correction throughout takeoff and climb.

(i) Completes appropriate checklists.

(j) Complies with noise abatement procedures.

(6) Aborted/Takeoff Roll. To determine that the pilot exhibits adequate knowledge of the elements related to the procedure used for aborted takeoff during the acceleration/takeoff roll prior to rotation.

(a) Identifies need for aborted takeoff.

(b) Utilizes the appropriate emergency procedures.

(c) Promptly and smoothly closes the throttle.

(d) Maintains directional control with the runway centerline while applying the brakes and nosewheel steering as necessary.

e. Approach/Landing.

(1) Normal. To determine that the pilot exhibits adequate knowledge of the elements related to normal approach and landing.

(a) Considers the wind conditions, landing surface, and obstructions.

(b) Selects a suitable touchdown point.

(c) Establishes the recommended approach and landing configuration and adjusts power and altitude as required.

(d) Maintains a stabilized approach and recommended airspeed with gust factor applied, +/-5 knots.

(e) Makes smooth, timely, and correct control application during the roundout and touchdown.

(f) Remains aware of the possibility of wind shear and/or wake turbulence.

(g) Touches down smoothly at approximate stalling speed, at a specified point at or within 200 feet beyond a specified point with no drift, and with the airplane's longitudinal axis aligned with, and over the runway centerline.

(h) Maintains crosswind correction and directional control throughout the approach and landing.

(i) Completes appropriate checklists.

(2) Crosswind. To determine that the pilot exhibits adequate knowledge of the elements related to crosswind approach and landing.

(a) Considers the wind conditions, landing surface, and obstructions.

(b) Selects a suitable touchdown point.

(c) Establishes the recommended approach and landing configuration, and adjusts power, and altitude as required.

(d) Maintains a stabilized approach and recommended airspeed with gust factor applied, +/-5 knots.

(e) Makes smooth, timely, and correct control application during the round out and touchdown.

(f) Remains aware of the possibility of wind shear and/or wake turbulence.

(g) Touches down smoothly at approximate stalling speed, at a specified point at or within 200 feet beyond a specified point with no drift, and with the airplane's longitudinal axis aligned with and over the runway centerline.

(h) Maintains crosswind correction and directional control throughout the approach and landing.

(i) Completes appropriate checklists.

(3) Short-Field. To determine that the pilot exhibits adequate knowledge of the elements related to short-field approach and landings.

(a) Considers wind conditions, landing surface, and obstructions.

(b) Selects the most suitable touchdown point that allows maximum use of the available landing surface.

(c) Establishes the recommended approach and landing configuration and adjusts power and pitch attitude as required for a short-field landing.

(d) Maintains a stabilized approach and recommended airspeed with gust factor applied +/-5 knots. Using proper pitch to maintain the recommended airspeed and power to regulate rate of descent.

(e) Makes smooth, timely, and correct control application during the round out and touchdown.

(f) Remains aware of the possibility of wind shear.

(g) Touches down at a specified point at or within 100 feet beyond the specified point, with little or no float, with no drift, and with the airplane's longitudinal axis aligned with and over the center of the landing surface.

(h) Maintains crosswind correction and directional control throughout the approach and landing.

(i) Applies brakes as necessary to stop in the shortest distance consistent with safety.

(j) Completes appropriate checklists.

(4) Soft-Field. To determine that the pilot exhibits adequate knowledge of the elements related to soft-field approach and landing.

(a) Considers the wind conditions, landing surface, and obstructions.

(b) Selects a suitable touchdown point.

(c) Establishes the recommended approach and landing configuration and adjusts power and pitch attitude as required.

(d) Maintains a stabilized approach and recommended airspeed with gust factor applied, +/-5 knots.

(e) Makes smooth, timely, and correct control application during round out and touchdown.

(f) Maintains crosswind correction and directional control throughout the approach and landing.

(g) Touches down at a specified point at or within 100 feet beyond the specified point, softly on the main wheels, with no drift, and with the airplane's longitudinal axis aligned with the landing surface.

(h) Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.

(i) Does not retract flaps, nor uses brakes, unless necessary.

(j) Completes appropriate checklists.

(5) Precision. To determine that the pilot exhibits adequate knowledge related to a power-off precision approach and landing to a location specified by the examining pilot.

(a) Exhibits knowledge of the elements related to precision approach and landing.

(b) Considers wind conditions, landing surface, and obstructions.

(c) Establishes the recommended approach and landing configuration required to safely reach the location specified by the examining pilot.

(d) Maintains a stabilized approach and recommended airspeed within +/- 5 knots (gust factor applied as appropriate for conditions).

(e) Makes smooth, timely and correct control application during the approach, flare, and landing.

(f) Remains aware of the possibility of wind shear.

(g) Touches down at a specified point at or within 100 feet beyond the specified point, with little or no float, with no drift, and with the airplane's longitudinal axis aligned with and over the center of the landing surface.

(h) Maintains crosswind correction and directional control throughout the approach and landing.

(i) Applies brakes, as necessary, to stop within the distance specified by the examining pilot, consistent with safety.

(j) Completes appropriate checklists.

(6) Aborted/Go-Around. To determine that the pilot exhibits adequate knowledge of the elements related to a go-around.

(a) Makes a timely decision to discontinue the approach to landing.

(b) Applies maximum allowable power immediately and establishes the pitch attitude that will stop the descent.

(c) Retracts flaps to approach setting.

(d) Trims the airplane to accelerate to Vy before the final flap retraction then climbs at Vy, +/-5 knots.

(e) Maneuvers to the side of runway/landing area to clear and avoid (simulated) conflicting traffic.

(f) Maintains maximum allowable power to a safe maneuvering altitude, then sets climb power.

(g) Maintains proper wind-drift correction and obstruction clearance throughout the transition to climb. Completes appropriate checklists.

(7) Emergency Approach and Landing. To determine that the pilot exhibits adequate knowledge of the elements related to emergency approach procedures.

(a) Establishes recommended best-glide airspeed, +/-10 knots, and configuration during simulated emergencies.

(b) Selects a suitable landing area, considering the possibility of an actual emergency landing.

(c) Attempts to determine the reason for the simulated malfunction.

(d) Varies airspeed, descent, and flight pattern as necessary, so as to arrive at selected landing area, considering altitude, wind, terrain, obstructions, and other factors.

(e) Prepares for low approach, landing, or go-around, as specified by the examining pilot.

(f) Completes appropriate checklists.

(g) Do not conduct a prolonged emergency approach during training, as this may cause damage to the engine, turbocharging system, and its components. Continuously monitor engine instruments for excessive cooling.

(8) Emergency Landing. To determine that the pilot exhibits knowledge of the elements related to an emergency descent.

(a) Recognizes situations, such as cockpit smoke and/or fire, that require an emergency descent.

(b) Establishes the emergency descent configuration and airspeed, and maintains that airspeed, +/-5 knots.

(c) Uses proper engine control settings.

(d) Exhibits orientation, division of attention, and proper planning.

(e) Maintains positive load factors during the descent.

(f) Completes appropriate checklists.

(9) After Landing Checks. To determine that the pilot exhibits adequate knowledge of the elements related to after landing procedures, including local and ATC procedures.

(a) Clears runway/landing area, taxies to suitable parking/refueling area using proper wind correction and obstacle clearance procedures.

(b) Completes appropriate checklists.

f. Traffic Patterns. To determine that the pilot exhibits adequate knowledge of the elements related to traffic patterns. This shall include procedures at controlled and uncontrolled airports, runway incursion and collision avoidance, wake turbulence avoidance, and approach procedure when wind shear is reported.

(1) Flight Path. To determine that the pilot exhibits adequate knowledge of the elements related to establishing and maintaining a proper flight path.

(a) Establishes an appropriate distance from the runway/landing area.

(b) Corrects for wind-drift to maintain proper ground track.

(c) Remains oriented with runway and landing area in use.

(d) Maintains and holds traffic pattern altitude +/-100 feet, and appropriate airspeed +/-10 knots.

(2) Traffic Awareness. To determine that the pilot exhibits an adequate awareness for other traffic in proximity to the pattern.

(a) Complies with established traffic pattern procedures.

(b) Maintains proper spacing from other traffic.

(3) Communications. To determine that the pilot utilizes proper communications procedures.

(a) Complies with and acknowledges all ATC clearances.

(b) Uses proper FAA phraseology while communicating.

(4) Prelanding Checks. Completes appropriate prelanding checklists.

g. Emergency Procedures. To determine that the pilot exhibits adequate knowledge and properly initiates appropriate emergency procedures consistent with the POH or departmental training policies and procedures during the following incidents:

(1) Engine Failures. Completes engine failure emergency procedures in compliance with the POH.

(2) In-Flight Fires. Completes in-flight fire emergency procedures in compliance with the POH.

(3) Icing. Completes icing emergency procedures in compliance with the POH.

(4) Electrical. Completes electrical emergency procedures in compliance with the POH.

h. Slow Flight/Stalls.

(1) Deceleration/Acceleration. To determine that the pilot exhibits adequate knowledge of the elements related to flight characteristics and controllability associated with maneuvering deceleration and acceleration during flight.

(a) Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet above ground level (AGL).

(b) Stabilizes and maintains the airspeed selected by the examining pilot, +/-5 knots.

(c) Establishes straight and level flight and level turns, with flaps selected as specified by the examining pilot.

(d) Maintains the specified altitude, +/-50 feet.

(e) Maintains the specified heading during straight flight, +/-10 degrees.

(f) Maintains specified bank angle, +/-10 degrees, during turning flight.

(g) Rolls out on specified headings, +/-10 degrees.

(h) Divides attention between airplane control and orientation.

(2) Minimum Controllable Airspeed. To determine that the pilot exhibits adequate knowledge of the elements related to flight characteristics and controllability associated with maneuvering during slow flight.

(a) Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL.

(b) Stabilizes and maintains the airspeed of 1.2 Vs, +/-5 knots.

(c) Establishes straight and level flight and level turns, with flaps selected as specified by the examining pilot.

(d) Maintains the specified altitude, +/-50 feet.

(e) Maintains the specified heading during straight flight, +/-10 degrees.

(f) Maintains specified bank angle, +/-10 degrees, during turning flight.

(g) Rolls out on specified headings, +/-10 degrees.

(h) Divides attention between airplane control and orientation.

(3) Diverted Attention. To determine that the pilot exhibits adequate knowledge and the ability to utilize proper control technique while dividing attention both inside and/or outside the flight deck and maintains safe flight.

(a) Maintains the specified altitude, +/-50 feet.

(b) Maintains the specified heading during straight flight, +/-10 degrees.

(c) Maintains specified bank angle, +/-10 degrees, during turning flight.

(d) Rolls out on specified headings, +/-10 degrees.

(e) Divides attention between airplane control and orientation.

(4) Stall/Recoveries.

(a) Power-Off. To determine that the pilot exhibits adequate knowledge of the elements related to aerodynamic factors associated with power-off stalls and how this relates to actual approach and landing situations.

1 Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.

2 Establishes a stabilized descent, in the approach or landing configuration, as specified by the examining pilot.

3 Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.

4 Maintains the specified heading +/-10 degrees, in straight flight, maintains a specified angle of bank, not to exceed 30 degrees, +0/-10 degrees, in turning flight, while inducing a stall.

5 Recognizes and announces the onset of the stall by identifying the first aerodynamic buffeting or decay of control effectiveness.

6 Recovers promptly as the stall occurs by simultaneously decreasing the pitch attitude, increasing power, and leveling the wings, with a minimum loss of altitude.

7 Retracts flaps to the recommended setting, after a positive rate of climb is established.

8 Accelerates to Vx or Vy speed before final flap retraction.

9 Returns to the altitude, heading, and airspeed specified by the examiner.

(b) Power-On. To determine that the pilot exhibits adequate knowledge of the elements related to aerodynamic factors associated with power-on stalls and how this relates to actual takeoff and departure situations.

1 Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.

2 Establishes the takeoff configuration and slow the airplane to normal lift-off speed.

3 Sets power to approximately 55-60 percent of full power.

4 Maintains the specified heading +/-10 degrees, in straight flight, maintains a specified angle of bank, not to exceed a 20 degree angle of bank, +/-10 degrees, in turning flight.

5 Recognizes and announces the onset of the stall by identifying the first aerodynamic buffeting or decay of control effectiveness.

6 Recovers promptly as the stall occurs, by simultaneously decreasing the pitch attitude, increasing power, and leveling the wings, with a minimum loss of altitude.

7 Retracts flaps after a positive rate of climb is established.

8 Returns to the altitude, heading, and airspeed specified by the examining pilot.

9 NOTE: In some high performance airplanes, the power setting may have to be reduced below the PTS guideline power setting to prevent excessively high pitch attitudes (greater than 30 degrees nose up).

(5) Spin Awareness. To determine that the pilot exhibits adequate knowledge of the elements related to spin awareness by explaining:

(a) Aerodynamic conditions required for a spin.

(b) Flight situations and conditions where unintentional spins may occur.

(c) Instrument indications during a spin and/or spiral.

(d) Techniques and procedures used to recognize and recover from unintentional spins.

i. Operational Maneuvers.

(1) Steep Turns. To determine that the pilot exhibits adequate knowledge of the elements related to steep turns.

(a) Selects an altitude that allows the task to be completed no lower than 1,500 feet AGL or the manufacturers recommended altitude, whichever is higher.

(b) Establishes and maintains the recommended entry speed, +/-5 knots.

(c) Enters a smooth, coordinated 360 degree steep turn with 50 degrees bank, +/-5 degrees, immediately followed by a 360 degree steep turn in the opposite direction.

(d) Divides attention between airplane control and orientation.

(e) Rolls out on the entry heading +/-10 degrees.

(f) Maintains the entry altitude throughout the maneuver, +/-100 feet, and airspeed +/-10 knots.

(2) Ground Reference. To determine that the pilot exhibits adequate knowledge of the elements related to circling a person or object on the surface, including relationship of groundspeed change to performance of the maneuver.

(a) Selects suitable altitude:

1 An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

2 Over congested area, city, town or settlement, or open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

3 Other than congested areas, an altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the airplane may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

(b) Attains proper configuration and airspeed prior to entry.

(c) Applies the necessary corrections so the line-of-sight with the person or object can be maintained.

(d) Does not exceed a maximum bank angle of 45 degrees.

(e) Maintains the specified altitude +/-50 feet.

(f) Exhibits proper orientation, division of attention, and planning.

(g) Applies the necessary wind-effect correction to maintain a constant distance from the person or object.

(h) Coordination of flight controls.

(i) Divides attention between airplane control and orientation.

(3) Chandelles. To determine the pilot exhibits adequate knowledge of the elements related to performance factors associated with chandelles.

(a) Selects a suitable altitude that will allow the maneuver to be performed no lower than 1,500 feet AGL.

(b) Establishes the entry configuration at an airspeed no greater than the maneuvering speed.

(c) Establishes approximately, but does not exceed, 30 degrees of bank.

(d) Simultaneously applies maximum power and continuously increasing pitch to maintain a smooth, coordinated climbing turn with constant bank to the 90 degree point.

(e) Begins a coordinated constant rate rollout from the 90 degree point to the 180 degree point maintaining specified power and a constant pitch attitude that will result in a rollout within +/-10 degrees of desired heading and airspeed within +5 knots of power-on stall speed.

(f) Reduces pitch attitude to resume straight-and-level flight at the final altitude attained, +/-50 feet.

(4) Use of Public Address. To determine that the pilot exhibits adequate knowledge of the elements related to operating an airplane while talking to person on the surface by use of the airplane public address (PA) system.

(a) Maintains the specified altitude +/-50 feet.

(b) Maintains specified airspeed +/-10 knots.

(c) Divides attention between airplane control and orientation.

(5) Mountain Search Technique. To determine the pilot exhibits adequate knowledge of the elements related to operating an airplane and the techniques used for searching for a person or object in mountainous terrain.

(a) Performs a reconnaissance of the search area checking terrain and hazards, and establishing escapes routes and emergency landing sites.

(b) Computes density altitude (DA).

(c) Checks airplane performance to ensure the airplane can climb at a rate appropriate for the weather conditions and the terrain.

(d) Checks mountain peak winds for potential wind shear.

(e) Identifies wind direction as it's related to the windward and leeward side of terrain.

(f) Ensures airplane has sufficient terrain clearance to maneuver and reverse course.

(g) Searches from highest to lowest terrain.

(h) Continuously monitors airplane engine instruments.

(i) Divides attention between airplane control and orientation.

(6) Density Altitude Operations. To determine the pilot exhibits adequate knowledge of the elements related to operating an airplane in density altitude conditions.

(a) Weather elements that constitute density altitude conditions.

(b) Effect on engine performance, propeller efficiency, and lift generated by the wings.

(c) Use of airplane performance charts.

(d) Indicated airspeed and groundspeed.

(e) Engine leaning procedures.

(f) Effects of headwinds, tailwinds, and crosswinds.

(g) Wind shear and identification of windward and leeward side of terrain.

(h) Height of surrounding terrain.

(i) Runway length, surface, and gradient.

(j) Ground effect.

(k) Monitors airplane engine instruments.

(l) Divides attention between airplane control and orientation to terrain.

(7) Patrol Operations. To determine the pilot exhibits adequate knowledge of the elements related to airplane patrol operations.

(a) Altitude. Selects suitable altitude for surface conditions.

(b) Collision Avoidance. Demonstrates knowledge of visual scanning and collision avoidance.

1 Various environmental conditions that degrade vision.

2 Various optical illusions.

3 “See and avoid” concept.

4 Practice of “time sharing” of attention inside and outside the flight deck.

5 Proper visual scanning technique.

6 Proper clearing procedures.

7 Importance of knowing blind spots.

8 Relationship between aircraft speed differential and collision risk.

9 Situations which involve the greatest collision risk.

10 Knowledge and demonstrated use of airplane recognition and avoidance equipment.

11 Selects appropriate lighting for atmospheric conditions.

(c) Noise Abatement. Uses noise abatement techniques.

(8) Off-Airport. To determine that the pilot exhibits adequate knowledge of the elements related to off-airport operations.

(a) Site Selection.

1 Selects an appropriate site.

2 Ensures the landing area will allow repositioning of the airplane for taxiing and takeoff.

(b) High Recon/Low Recon.

1 Performs a high reconnaissance of the intended landing area, considering winds, obstacles, escape routes, traffic conditions, animals, landing surface, etc.

2 Establishes the recommended approach and airspeed configuration for a low reconnaissance of the landing surface, with flaps and power set for best rate or best angle of climb.

3 Performs a low reconnaissance of the intended landing area in the direction of the intended landing, and maneuvers the airplane as low as safely practical in order to adequately check the condition and length of the landing surface and obstacles.

ANNEX C

INITIAL AIRPLANE PILOT PHASE TRAINING *(continued)*

(c) Approach/Landing.

1 Properly executes a best rate or best angle of climb and positions the airplane in an off-airport traffic pattern of 500 feet (only if FAR minimum safe altitudes can be complied with).

2 Establishes the recommended approach and landing configuration and adjusts power and pitch attitude as required for an off-airport landing (normal, short-field or soft-field procedure may be used for existing conditions).

3 Maintains a stabilized approach and recommended airspeed with gust factor applied +/-5 knots.

4 Makes smooth, timely, and correct control application during the round out and touchdown.

5 Remains aware of the possibility of wind shear.

6 Touches down at a specified point at or within 50 feet beyond the specified point, with little or no float, with no drift, and with the airplane's longitudinal axis aligned with and over the center of the landing surface.

7 Maintains crosswind correction and directional control throughout the approach and landing.

8 Applies brakes as necessary to stop in the shortest distance consistent with safety.

9 Completes appropriate checklists.

(d) Departure.

1 Considers runway environment and determines whether a normal, short-field or soft-field takeoff is to be used.

2 Positions the flight controls and flaps for the existing conditions.

3 Clears the area, taxies into position for maximum utilization of available takeoff area.

4 Advances the throttle to takeoff power.

5 Rotates at recommended airspeed for takeoff procedure selected (normal, short-field, or soft-field) and accelerates to proper climb airspeed (Vx or Vy, +/-5 knots).

6 Retracts the flaps after a positive rate of climb is established or as specified by the aircraft manufacturer.

7 Maintains takeoff power to a safe maneuvering altitude, then sets climb power.

8 Maintains directional control and proper wind-drift correction throughout the takeoff and climb.

9 Complies with noise abatement procedures.

10 Completes appropriate checklists.

(9) Formation Flight. To determine that the pilot exhibits adequate knowledge of the elements related to formation flight.

(a) Knows and can recite the terminology used in a departmental formation flight.

(b) Uses proper communication procedures.

(c) Properly maintains position in formation.

(d) Properly executes formation breakup procedures.

j. Night Operations. To determine that the pilot exhibits adequate knowledge of the elements of night operations.

(1) Preflight Actions.

(a) Night preflight inspection.

(b) Importance of assuring that the windshield and windows are clean.

(c) Engine roughness or overheat.

(2) Flight Procedures.

(a) Taxiing and orientation on an airport.

(b) Takeoff and climb-out.

(c) In-flight orientation.

(d) Importance of verifying the airplane's attitude by reference to flight instruments.

(e) Recovery from critical flight attitudes.

(f) Emergencies such as electrical failure, engine failure, and emergency landings.

(g) Approaches and landings with and without landing lights.

(h) Go-arounds.

(3) Aircraft and Airport Lighting.

(a) Factors related to night vision.

(b) Proper adjustment of interior lights.

(c) Disorientation and night optical illusions.

k. Systems and Equipment.

(1) Normal Operations. To determine that the pilot exhibits adequate knowledge of the normal operation of all airplane systems and equipment.

(2) Malfunctions. To determine that the pilot exhibits adequate knowledge of the elements related to causes, indications and pilot actions for various systems and equipment malfunctions, and follows the appropriate emergency checklists or procedures for the aircraft being flown.

(a) Analyzes the situation and takes appropriate action for the following simulated emergencies:

1 Partial power loss.

2 Engine failure during various phases of flight.

3 Engine roughness or overheat.

4 Loss of oil pressure.

5 Visual observation of oil on windscreen or side window(s).

6 Fuel starvation.

7 Smoke and fire.

8 Icing.

9 Pitot static/vacuum system and associated flight instruments.

10 Electrical.

11 Flaps.

12 Inadvertent door opening.

13 Any other emergency unique to the airplane being flown.

(3) Oxygen System. Exhibits adequate knowledge of the elements related to supplemental oxygen installed in the airplane by demonstrating or explaining:

(a) Supplemental oxygen requirements for flight crew and passengers when operating non-pressurized airplanes.

(b) Distinctions between “aviator breathing oxygen” and other types.

(c) Care and storage of high-pressure oxygen bottles.

(d) Operational characteristics of continuous flow, demand, and pressure-demand oxygen systems.

(e) Care and storage of high-pressure oxygen bottles.

2. INSTRUMENT FLIGHT.

a. Oral/Written.

(1) Obtain/Analyze Weather. To determine that the pilot exhibits adequate knowledge of the elements related to aviation weather information by obtaining, reading, and analyzing weather information pertaining to proposed route of flight and destination airport. Includes determining whether an alternate airport is required, and if required, whether the selected alternate airport meets the regulatory requirement by use of the following:

(a) Weather reports and forecasts.

(b) Pilot and radar reports.

(c) Surface analysis charts.

(d) Radar summary charts.

(e) Significant weather prognostics.

(f) Winds and temperatures aloft.

(g) Freezing level charts.

(h) Stability charts.

(i) Severe weather charts.

(j) Significant meteorological information and airmen's meteorological information.

(k) Automatic terminal information service reports.

(2) Instrument Flight Rules Flight Planning. To determine that the pilot exhibits adequate knowledge of the elements of IFR flight planning as assigned by the examining pilot.

(a) Exhibits knowledge of the aircraft's performance capabilities by calculating the estimated time enroute and total fuel requirements based upon factors such as:

1 Power settings.

2 Operating altitude or flight level.

3 Wind.

4 Fuel reserve requirements.

(b) Selects and correctly interprets the current and applicable enroute charts, departure procedure, arrival procedure, and instrument approach procedure.

(c) Obtains and correctly interprets NOTAM information.

(d) Determines the calculated performance is within the aircraft's capability and operating limitations.

(e) Completes a flight plan in a manner that accurately reflects the conditions of the proposed flight.

(f) Demonstrates adequate knowledge of GPS and Receiver Autonomous Integrity Monitoring capability.

(3) Instrument Flight Rules Systems/Equipment. To determine that the pilot exhibits adequate knowledge of the elements related to aircraft flight instrument systems and their operating characteristics to include:

(a) Pitot static.

(b) Altimeter.

(c) Airspeed indicator.

(d) Vertical speed indicator.

(e) Attitude indicator.

(f) Vertical speed indicator.

(g) Turn coordinator.

(h) Heading indicator.

(i) Electrical systems.

(j) Vacuum systems.

(k) Very high frequency (VHF) and VOR.

(l) DME.

(m) ILS.

(n) Marker beacon receiver/indicators.

(o) Transponder/altitude encoding.

(p) GPS.

(q) Operation of aircraft anti-icing/deicing systems and other methods to prevent icing of:

1 Airframe.

2 Propeller.

3 Fuel.

4 Pitot static.

(4) Charts/Procedures. To determine that the pilot exhibits adequate knowledge of the elements related to the use of IFR charts and procedures for their use.

(a) Properly selects the IFR charts for an IFR flight.

(b) Properly reads and deciphers the IFR chart, its symbols, and navigational courses and information.

b. Pre/Post Flight.

(1) Checklist Use. To perform preflight check of instruments, avionics, and navigation equipment by following the checklist for the airplane.

(2) Avionics/Instrument Set. To determine that the pilot exhibits adequate knowledge of the elements related to preflighting instruments, avionics, and navigation equipment by explaining the reasons for the check and how to detect possible defects.

(a) Properly selects the instruments for the navigational facilities to be used for IFR flight.

(b) Properly tunes, identifies, and sets the course of the avionics and instruments to be used for IFR flight.

(3) Instrument Check During Taxi. To determine that the pilot establishes that the airplane is in condition for safe instrument flight by checking:

(a) Radio communications equipment.

(b) Radio navigation equipment VOR, GPS, and ILS.

(c) Magnetic compass.

(d) Heading indicator.

(e) Attitude indicator.

(f) Altimeter.

(g) Turn coordinator.

(h) Vertical speed indicator.

(i) Airspeed indicator.

(j) Clock.

(k) Vacuum system.

(l) Pitot heat.

(m) Emergency communication/navigation system.

(n) Autopilot.

c. Communications.

(1) Copy Clearance. To determine that the pilot exhibits adequate knowledge of the elements related to ATC clearances and pilot/controller responsibilities to include tower enroute and clearance void times.

(a) Copies correctly, in a timely manner, the ATC clearance as issued.

(b) Determines that it is possible to comply with ATC clearance.

(c) Interprets correctly the ATC clearance received and, when necessary, requests clarification, verification, or change.

(2) Proper Phraseology. To determine that the pilot exhibits adequate knowledge of the elements related to aviation phraseology and terminology.

(a) Uses standard phraseology when reading back clearance or communicating with ATC.

(b) Reads back correctly, in a timely manner, the ATC clearance in the sequence received.

(3) Air Traffic Control Instructions. To determine that the pilot exhibits adequate knowledge of the elements related to departure procedures, enroute low altitude charts, arrival procedures, and related pilot/controller responsibilities.

(a) Uses current and appropriate navigation publications.

(b) Selects and uses the appropriate navigation aids associated with the flight.

(c) Performs appropriate checklists relative to the phase of flight.

(d) Establishes two-way communication with the proper controlling agency, using proper phraseology.

(e) Complies in a timely manner with all ATC instructions and airspace restrictions.

(f) Sets the appropriate communication and navigation frequencies and transponder codes in compliance with the ATC clearance.

(g) Intercepts in a timely manner, all courses and radials appropriate to the route or procedure.

(h) Maintains assigned airspeed within 10 knots and headings within 10 degrees and altitude within 100 feet.

(4) Lost Communications. To determine that the pilot exhibits adequate knowledge of the elements related to loss of the communication.

(a) Recognizing loss of communication.

(b) Continuing to destination according to the flight plan.

(c) When to deviate from the flight plan.

(d) Timing for beginning an approach at destination.

d. Instrument Flight Rules Navigation.

(1) Time, speed, and distance. To determine that the pilot exhibits adequate knowledge of the elements related to attitude instrument flying during straight and level flight.

(a) Maintains straight and level flight in the aircraft configuration specified by the examining pilot.

(b) Maintains the heading within 10 degrees, altitude within 100 feet, and airspeed within 10 knots.

(c) Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, power, and trim corrections.

(2) Omnidirectional Range/Global Positioning System/Distance Measuring Equipment Navigation. To determine that the pilot exhibits adequate knowledge of the elements related to intercepting and tracking navigational systems and DME arcs.

(a) Intercept/Tracking.

1 Tunes and correctly identifies the navigational facility.

2 Sets and correctly orients the radial to be intercepted into the course selector or correctly identifies the radial.

3 Intercepts the specified radial at a predetermined angle, inbound or outbound from navigational facility.

4 Applies proper correction to maintain a radial, allowing no more than three-quarter scale deflection of the CDI.

(b) Position.

1 Determines the aircraft position relative to the navigational facility or from a waypoint in the case of a GPS.

2 Intercepts a DME arc and maintains that arc within one-nautical mile.

3 Maintains the airspeed within 10 knots, altitude within 100 feet and selected heading within 5 degrees.

4 Recognizes navigational receiver or facility failure, and when required, reports the failure to ATC.

e. Basic Maneuvers.

(1) Turns.

(a) Standard Rate. To determine that the pilot exhibits adequate knowledge of the elements relating to attitude instrument flying during standard rate turns.

1 Demonstrates standard rate turns as specified by the examining pilot.

2 Enters standard rate turns from the specified altitude, airspeed, and heading.

3 Establishes the appropriate bank angle and rate to establish a standard rate turn.

4 Maintains a standard rate turn throughout the maneuver.

5 Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, power, and trim corrections.

(b) Timed. To determine that the pilot exhibits adequate knowledge of elements and procedures relating to calibrating the miniature aircraft of the turn coordinator.

1 Establishes indicated standard rate turns, both right and left.

2 Applies the clock correctly to the calibration procedure.

3 Changes the miniature aircraft position, as necessary, to produce a standard rate turn.

4 Makes timed turns to specified compass headings.

5 Maintains the altitude within 100 feet, airspeed within 10 knots, bank angle 5 degrees of a standard or half-standard rate turn, and rolls-out on specified headings within 10 degrees.

(c) Compass. To determine that the pilot exhibits adequate knowledge of the operating characteristics and errors of the magnetic compass, and the performance of timed turns to specified compass headings.

1 Enters using a standard rate turn.

2 Maintains magnetic compass heading within +/-5 degrees of assigned heading.

3 Maintains altitude within 100 feet, airspeed within 10 knots, 5 degrees of specified bank angle, and rolls out within 10 degrees of the specified heading.

4 Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, power, and trim corrections.

(d) Steep. To determine that the pilot exhibits adequate knowledge of the factors relating to attitude instrument flying during steep turns.

1 Enters a turn using a bank angle of approximately 45 degrees.

2 Maintains the specified angle of bank either 180 degrees or 360 degrees of turn, both left and right.

3 Maintains altitude within 100 feet, airspeed within 10 knots, 5 degrees of specified bank angle, and rolls out within 10 degrees of the specified heading.

4 Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, power, and trim corrections.

(2) Climbs/Descents.

(a) Constant Airspeed. To determine that the pilot exhibits adequate knowledge of the elements relating to attitude instrument flying during constant airspeed climbs and descents.

1 Demonstrates climbs and descents at a constant airspeed between specific altitudes in straight or turning flight as specified by the examiner.

2 Enters constant airspeed climbs and descents from a specified altitude, airspeed, and heading.

3 Establishes the appropriate change of pitch and power to establish the desired climb and descent performance.

4 Maintains the airspeed within 10 knots, heading within 10 degrees or, if in a turning maneuver, within 5 degrees of the specific bank angle.

5 Performs the level-off within 100 feet of the specified altitude.

6 Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, power, and trim corrections.

(b) Constant Rate. To determine that the pilot exhibits adequate knowledge of the elements relating to attitude instrument flying during rate climbs and descents.

1 Demonstrates climbs and descents at a constant rate between specific altitudes in straight or turning flight as specified by the examiner.

2 Enters rate climbs and descents from the specified altitude, airspeed, and heading.

3 Establishes the appropriate change of pitch, bank, and power to establish the specified rate of climb or descent.

4 Maintains the specified rate of climb and descent within 100 feet per minute, airspeed within 10 knots, heading within 10 degrees, or if in a turning maneuver, within 5 degrees of the specified bank angle.

5 Performs the level-off within 100 feet of the specified altitude.

6 Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, power, and trim corrections.

(3) I.T.O. To determine that the pilot exhibits adequate knowledge of the elements relating to takeoff during instrument meteorological. Maintains runway centerline alignment using horizontal situational indicator and/or outside visual references for takeoff during actual or simulated reduced visibility.

(4) Instrument Meteorological Condition Transition. To determine that the pilot exhibits adequate knowledge of the elements relating to a smooth transition from visual flight procedures to instrument flight procedures.

(a) Begins a scanning of the flight instruments to ensure controlled flight is maintained during the transition from VFR to IFR.

(b) Completes ATC communications as required.

(c) Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, power, and trim corrections.

(5) Slow Flight Instrument Flight Rules. To determine that the pilot exhibits adequate knowledge of the elements related to flight characteristics and controllability associated with maneuvering during slow flight.

(a) Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL.

(b) Stabilizes and maintains the airspeed of 1.2 Vs, +/-5 knots.

(c) Establishes straight and level flight and level turns, with flaps selected as specified by the examining pilot.

(d) Maintains the specified altitude, +/-50 feet.

(e) Maintains the specified heading during straight flight +/-10 degrees.

(f) Maintains specified bank angle, +/-10 degrees, during turning flight.

(g) Rolls out on specified headings, +/-10 degrees.

(h) Divides attention between airplane control and orientation.

(6) Stalls/Recoveries.

(a) Power-Off Instrument Flight Rules. To determine that the pilot exhibits adequate knowledge of the elements related to aerodynamic factors associated with power-off stalls and how this relates to actual approach and landing situations.

1 Selects an entry altitude that allows the task to be competed no lower than 1,500 feet AGL.

2 Establishes a stabilized descent, in the approach or landing configuration, as specified by the examiner.

3 Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.

4 Maintains the specified heading +/-10 degrees, in straight flight, maintains a specified angle of bank, not to exceed 30 degrees, +0/10 degrees, in turning flight, while inducing a stall.

5 Recognizes and announces the onset of the stall by identifying the first aerodynamic buffeting or decay of control effectiveness.

6 Recovers promptly as the stall occurs by simultaneously decreasing the pitch attitude, increasing power, and leveling the wings, with a minimum loss of altitude.

7 Retracts flaps to the recommended setting, after a positive rate of climb is established.

8 Accelerates to Vx or Vy speed before final flap retraction.

9 Returns to the altitude, heading, and airspeed specified by the examiner.

(b) Power-On Instrument Flight Rules. To determine that the pilot exhibits adequate knowledge of the elements related to aerodynamic factors associated with power-on stalls and how this relates to actual takeoff and departure situations.

1 Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.

2 Establishes the takeoff configuration and slows the airplane to normal lift-off speed.

3 Sets power to approximately 55-60 percent of full power.

4 Maintains the specified heading +/-10 degrees, in straight flight, maintains a specified angle of bank, not to exceed a 20 degrees angle of bank, +/-10 degrees, in turning flight.

5 Recognizes and announces the onset of the stall by identifying the first aerodynamic buffeting or decay of control effectiveness.

6 Recovers promptly as the stall occurs, by simultaneously decreasing the pitch attitude, increasing power, and leveling the wings, with a minimum loss of altitude.

7 Retracts flaps after a positive rate of climb is established.

8 Returns to the altitude, heading, and airspeed specified by the examining pilot.

(7) NOTE: In some high performance airplanes, the power setting may have to be reduced below the PTS guideline power setting to prevent excessively high pitch attitudes (greater than 30 degrees nose up).

f. Holding Procedures.

(1) Entry. To determine that the pilot exhibits adequate knowledge of the elements related to holding procedures for entry into a pattern.

(a) Changes to the holding airspeed appropriate for the altitude or aircraft when three minutes or less from, but prior to arriving at, the holding fix.

(b) Explains and uses the entry procedure contained in the Aeronautical Information Manual that ensures the aircraft remains within the holding pattern airspace for a standard, nonstandard, published, or nonpublished holding pattern.

(c) Recognizes arrival at the holding fix and initiates prompt entry into the holding pattern.

(2) Pattern. To determine that the pilot exhibits adequate knowledge of the elements related to holding procedures within the pattern.

(a) Complies with ATC reporting requirements.

(b) Uses the proper timing criteria, where applicable, as required by altitude or ATC instructions.

(c) Complies with pattern leg lengths when a distance is specified.

(d) Uses proper wind correction procedures to maintain the desired pattern and to arrive over the fix as close as possible to a specified time.

(e) Maintains the airspeed within 10 knots; altitude within 100 feet; headings within 10 degrees, and tracks a selected course, radial, or bearing.

g. Approaches.

(1) Nonprecision. To determine that the pilot exhibits adequate knowledge of the elements related to an instrument approach procedure.

(a) Timing. Establishes a rate of descent and track that will ensure arrival at the MDA prior to reaching the MAP with the aircraft continuously in a position from which descent to a landing on the intended runway can be made at a normal rate using normal maneuvers.

(b) Airspeed.

1 Establishes the appropriate aircraft configuration and airspeed considering turbulence and wind shear, and completes the aircraft checklist items appropriate to the phase of the flight.

2 Allows, while on the final approach segment, no more than a three-quarter scale deflection of the CDI, and maintains airspeed within 10 knots.

(c) Altitude. Maintains the MDA, when reached, within +100 feet, -0 feet to the MAP.

(d) Track.

1 Maintains, prior to beginning the final approach segment, altitude within 100 feet, heading within 10 degrees, and allows less than a full-scale deflection of the CDI and maintains airspeed within 10 knots.

2 Allows, while on the final approach segment, no more than a three-quarter scale deflection of the CDI, and maintains airspeed within 10 knots.

(e) Procedures.

1 Selects and complies with the appropriate instrument approach procedure to be performed.

2 Establishes two-way communications with ATC, as appropriate, to the phase of flight or approach segment, and uses proper radio communication phraseology, and technique.

3 Selects, tunes, identifies, and confirms the operational status of navigation equipment to be used for the approach procedure.

4 Complies with all clearances issued by ATC or the examining pilot.

5 Executes the missed approach procedure when the required visual references for the intended runway are not distinctly visible and identifiable at the MAP.

6 Advises ATC or examiner anytime the aircraft is unable to comply with a clearance.

7 Recognizes if heading indicator and/or attitude is inaccurate or inoperative, advises controller, and proceeds with approach.

(2) Precision. To determine that the pilot exhibits adequate knowledge of the elements of an ILS instrument approach procedure.

(a) Timing. Establishes an initial rate of descent at the point where the electronic glide slope is intercepted, which approximates that required for the aircraft to follow the glide slope to DH.

(b) Airspeed.

1 Establishes the appropriate aircraft configuration and airspeed, considering turbulence and wind shear, and completes the aircraft checklist items appropriate to the phase of flight.

2 Allows, while on the final approach segment, no more than three-quarter scale deflection of either the localizer or glide slope indications, and maintains the specified airspeed within 10 knots.

(c) Altitude.

1 Maintains, prior to beginning the final approach segment, specified altitude within 100 feet, heading or course within 10 degrees, and airspeed within 10 knots.

2 Avoids descent below the DH before initiating a missed approach procedure or transitioning to a normal landing approach.

(d) Track.

1 Maintains, prior to beginning the final approach segment, specified altitude within 100 feet, heading or course within 10 degrees, and airspeed within 10 knots.

2 Allows, while on the final approach segment, no more than three-quarter scale deflection of either the localizer or glide slope indications, and maintains the specified airspeed within 10 knots.

(e) Procedures.

1 Selects and complies with the appropriate ILS instrument approach procedure to be performed.

2 Establishes two-way communications with ATC, as appropriate to the phase of flight or approach segment, and uses proper radio communications phraseology, and technique.

3 Selects, tunes, identifies, and confirms the operational status of ground and aircraft navigation equipment to be used for the approach procedure.

4 Complies with all clearances issued by ATC or the examiner.

5 Advises ATC or examiner anytime the aircraft is unable to comply with a clearance.

6 Initiates immediately the missed approach procedure when, at the DH, the required visual references for the intended runway are not distinctly visible and identifiable.

7 Transitions to a normal landing approach when the aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers.

(3) Circling Approach. To determine that the pilot exhibits adequate knowledge related to a circling approach procedure.

(a) Selects and complies with appropriate circling approach procedure considering turbulence and wind shear, and considering the maneuvering capabilities of the airplane.

(b) Confirms the direction of traffic and adheres to all restrictions and instructions issued by ATC and the examining pilot.

(c) Does not exceed visibility criteria or descend below the appropriate circling altitude until in a position from which a descent to a normal landing can be made.

(d) Maneuvers the airplane, after reaching the authorized MDA to remain within +100/-0 feet of the MDA and maintain a flight path that permits a normal landing on a runway at least 90 degrees from the final approach course.

(4) Missed Approach. To determine that the pilot exhibits adequate knowledge of the elements related to missed approach procedures associated with standard instrument approaches.

(a) Initiates the missed approach promptly by establishing a climb attitude, applying power, and reducing drag in accordance with the aircraft manufacturer's recommendations.

(b) Reports to ATC beginning the missed approach procedure.

(c) Complies with the published or alternate missed approach procedure.

(d) Advises ATC or examining pilot anytime the aircraft is unable to comply with a clearance, restriction, or climb gradient.

(e) Follows the recommended checklist items appropriate to the go-around procedure.

(f) Requests, if appropriate, ATC clearance to the alternate airport, clearance limit, or as directed by the examiner.

(g) Maintains the recommended airspeed within 10 knots, heading, course, or bearing within 10 degrees, and altitude(s) within 100 feet during the missed approach procedure.

h. Emergencies.

(1) Unusual Attitudes. To determine that the pilot exhibits adequate knowledge of the elements relating to attitude instrument flying during recovery from unusual flight attitudes (both nose-high and nose-low). Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, and power corrections in the correct sequence to return the aircraft to a stabilized level flight attitude.

(2) Partial Panel. To determine that the pilot exhibits adequate knowledge of the elements relating to recognizing the failure instruments and the ability to maintain control of the airplane and successfully complete the flight.

(a) Basic Maneuvers. Demonstrates basic maneuvers with partial instruments.

(b) Approaches.

1 Immediately advises ATC or the examining pilot of an actual or simulated failure of any instrument, avionics, or power plant.

2 Advises ATC or examining pilot anytime the aircraft is unable to comply with a clearance.

3 Demonstrates a precision or nonprecision instrument approach without gyro attitude and heading indicators, or other instruments as specified by the examining pilot.

(c) Unusual Attitudes. Demonstrates recovery from unusual attitudes with partial instruments.

i. Flight Level 180 Operations. To determine that the pilot exhibits adequate knowledge of the elements related to airplane operation at flight level 180 or above.

(1) Planning/Procedures.

(a) Conducts appropriate flight planning for the altitude to be flown, considering weather conditions, in particular, icing conditions that could be encountered during climb, enroute of descent.

(b) Conducts preflight and operational check of oxygen system.

(c) Knows supplemental oxygen requirements for flight crew and passengers.

(2) Avionics/Equipment.

(a) Knows/demonstrates use of navigation equipment/requirements for high altitude flight.

(b) Selects appropriate altimeter setting.

(c) Selects appropriate anticollision lighting.

(3) Emergencies. Knows/simulates emergency procedures, including emergency descent. (NOTE: Do not conduct an emergency descent during training, as this may cause damage to the engine, turbocharging system, and its components.)

j. Articulates awareness/causes of aeromedical factors for high altitude operations including but not limited to:

(1) Hypoxia.

(2) Hyperventilation.

(3) Middle ear and sinus problems.

(4) Carbon monoxide poisoning.

3. OVERALL EVALUATION. An overall evaluation will be based on the following criteria:

a. Safety Practices. Demonstrates the use of safe flying practices.

b. Collision Avoidance.

(1) Demonstrate outside scanning ability to see and avoid other aircraft in flight.

(2) Demonstrate adequate knowledge of runway incursion avoidance.

c. Judgment.

(1) Demonstrates appropriate decision-making abilities.

(2) Demonstrates ability to make appropriate go/no-go decisions.

d. Flight Skills/Smoothness. Demonstrates mastery of the aircraft with the successful outcome of each task performed never seriously in doubt.

e. Attitude. Demonstrates a positive attitude.

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ANNEX D

INITIAL FLIGHT OFFICER TRAINING

Flight officers shall not be permanently assigned until first satisfactorily completing Phase Training.

Initial departmental flight officer training will consist of three phases. Phase I is classroom and practical skills instruction coordinated or conducted by OAO for a duration allowing completion of this phase. Phase II is a minimum of 40 hours of field training that shall normally be conducted by an assigned unit training flight officer of the Division where the flight officer will be assigned. Phase III will consist of a flight officer evaluation conducted by the OAO flight officer coordinator or designee utilizing the

CHP 93K and CHP 93Q. Each phase has specific tasks and completion standards.

If, during any phase of training, a flight officer trainee is not demonstrating a level of performance consistent with satisfactory completion, the affected unit's aerial supervisor and OAO shall consult the Division SSC for a determination if training should be continued.

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

Phase I—(40 hours airplane/60 hours helicopter)

This training shall be coordinated or conducted by OAO for a duration allowing completion of this phase. Recommended classroom and practical skills instruction training is 40 hours for airplane and 60 hours for helicopter. The following is a list of subject areas to be included in the flight officer trainee's instruction. Although all areas must be covered, instruction may be individually tailored.

1. Introduction and initial briefing.
2. Historical review of AOP.
3. Organizational structure of air operations.
4. Review of HPM 100.7.
5. Airframe and powerplant - basic instruction.
6. Basic aerodynamics/theory of flight.
7. Human factors in decision making.
8. Risk assessment.
9. Flight safety/hazards to flight.
10. Emergency procedures.
11. Weather.
12. High DA operations/CHP 93N, Weight and Balance.
13. FAR/Flight Manual.
14. Airman's Information Manual.
15. Pre/Post flight inspections.
16. Radio communications, systems, and applications.

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

Phase II—(40 hours minimum)

Phase II of flight officer training is field training that shall normally be conducted by an assigned unit training flight officer of the Division where the flight officer will be assigned. Trainees will be paired with the flight training officer for each assigned shift. The flight officer shall be temporarily assigned where the training is to be accomplished for a duration allowing completion of the phase training.

The areas to be covered in Phase II training and the documentation of the trainee's performance are attached as a "training record" package. The record should be completed as the trainee progresses through Phase II and retained at the air operations unit.

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

Office of Air Operations
Flight Officer Training Record
Phase II Training

FLIGHT OFFICER: _____

TRAINING OFFICER: _____

DATE TRAINING BEGAN: _____

DATE TRAINING COMPLETED: _____

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

Instructions

The main objective of the training is to develop a flight officer who can safely, effectively, and productively control all aspects of airborne law enforcement operations.

Flight officer capabilities will vary from person-to-person. Due to the nature of the mission involved, there may be several characteristics or personality traits that may have been previously ingrained in the trainee or actively be developed during this training; self-motivation, assertiveness, and decisiveness.

The flight officer must be a self-starter and be able to motivate oneself to aggressively seek out activity. The pilot is primarily responsible for the safe operation of the aircraft.

The flight officer must make every effort to obtain the information critical to the response in an expeditious manner. There will be occasions where the flight officer will have to choose among several different calls occurring simultaneously. The ability to prioritize and make appropriate decisions is another quality necessary for a flight officer. A solid foundation in ground patrol is helpful in developing this ability.

This training record has been divided into tasks. These tasks are groups of actions that are closely related and can collectively be identified as fulfilling the particular task title.

Each task title has a brief description to provide an overview of the intent of the task involved. Under each task is a section relative to how the information was obtained (use checkmarks). Did the trainee **READ** the information in a manual, perhaps the training officer and trainee **DISCUSSED** the topic as needed. Lastly, there is a section for the flight officer trainee to show they have **DEMONSTRATED** a specific task.

The training officer and flight officer trainee should cover each task, utilizing the proper documentation on each page (read, discussed, and demonstrated). Both shall sign the bottom of each page when the task training has been completed.

If the flight officer trainee is performing a task at an unacceptable level, documentation shall be made on the bottom of that task page. Measures taken to accomplish an acceptable level of expertise should be included.

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

Task 1: UNIT SOP

Description: Become familiar with the assigned Division and air operation unit's SOP.

		READ	DISCUSSED	DEMONSTRATED
a.	Unit objective and procedures	( )	( )	( )
b.	Unit procedures	( )	( )	( )
c.	Occupational safety	( )	( )	( )
d.	Paramedic program	( )	( )	( )
e.	Pre-accident plan	( )	( )	( )
f.	Job description	( )	( )	( )
g.	Emergency Operation Plan (EOP)	( )	( )	( )
h.	Aircraft deployment priorities (SOP)	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 2: FACILITY ORIENTATION

Description: To know and understand the basic day-to-day operations of the office.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Area mission planning	( )	( )	( )
	• Mission cards	( )	( )	( )
	• Mission folder	( )	( )	( )
	• Mission board	( )	( )	( )
	• Hazard map	( )	( )	( )
b.	Safety procedures	( )	( )	( )
	• Ground handling of aircraft	( )	( )	( )
	• Safety around the aircraft	( )	( )	( )
	• Passenger briefings	( )	( )	( )
c.	Hangar operations	( )	( )	( )
d.	Supply	( )	( )	( )
e.	Air unit radio systems	( )	( )	( )
	• Wolfsburg/800mh/Erickson	( )	( )	( )
	• Scanners	( )	( )	( )
	• Frequency books	( )	( )	( )
	• TFM 500 & TFM 30	( )	( )	( )
f.	Management Information System	( )	( )	( )
g.	CHP 93 forms	( )	( )	( )
h.	Flight folder	( )	( )	( )
i.	Emergency Action Plan	( )	( )	( )
j.	Building alarm/Security systems	( )	( )	( )
	• Setting/resetting/notification	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

	READ	DISCUSSED	DEMONSTRATED N/A
k. Other related topics	( )	( )	( )
• Telephone	( )	( )	( )
• FAX machine	( )	( )	( )
• Printers	( )	( )	( )
• Copy machine	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 3: DIVISION ORIENTATION

Description: Be able to identify Division boundaries. Become familiar with the area's geographic environment, hazards, weather patterns, and allied agencies.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Division boundaries	( )	( )	( )
b.	Local hazards to flight	( )	( )	( )
c.	Local airport information	( )	( )	( )
d.	Local weather patterns	( )	( )	( )
e.	Allied agency resources	( )	( )	( )
	• Call signs	( )	( )	( )
	• Frequencies	( )	( )	( )
	• Boundaries	( )	( )	( )
	• Other topics	( )	( )	( )
f.	Orientation to Division communications center	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 4: REFUELING OPERATIONS

Description: There are two types of aviation fuel used by CHP aircraft. The first is Avgas, used for the Cessna 206, the second is Jet A, used by all helicopters.

	READ	DISCUSSED	DEMONSTRATED N/A
a. Fueling procedures	( )	( )	( )
• HPM 100.7	( )	( )	( )
• Local SOP	( )	( )	( )
b. Local fuel	( )	( )	( )
c. Remote fuel	( )	( )	( )
d. Hot refueling	( )	( )	( )
e. Fuel tracking	( )	( )	( )
f. Fire suppression systems	( )	( )	( )
g. Emergency fuel cut off switches	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 5: FLIGHT LOGS AND RECORDS

Description: Able to accurately complete the following CHP air operation's forms.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	CHP 93	( )	( )	( )
b.	CHP 93N	( )	( )	( )
c.	Patient care reports (PCR)	( )	( )	( )
d.	Unavailability log	( )	( )	( )
e.	Division/air unit specific forms	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 6: AIRCRAFT DESIGN AND PERFORMANCE

Description: Become familiar with the unit aircraft's performance, design characteristics, components, and specifications. Be able to complete load calculations using the CHP 93N, and have a working knowledge and use of the checklists.

		READ	DISCUSSED	DEMONSTRATED	N/A
a.	Powerplant	( )	( )	( )	
b.	Design characteristics		( )	( )	( )
	• Jettison door	( )	( )	( )	
c.	Instrumentation configuration	( )	( )	( )	
d.	Use of checklist	( )	( )	( )	
	• Starting the aircraft	( )	( )	( )	
	• In-flight (prelanding, instrument approach)	( )	( )	( )	
	• Shutdown	( )	( )	( )	
e.	Performance charts	( )	( )	( )	
f.	Weight and balance	( )	( )	( )	
	• Weight calculations	( )	( )	( )	
g.	Aircraft specifications	( )	( )	( )	
h.	Other topics	( )	( )	( )	
i.	EMS configuration	( )	( )	( )	
j.	Night sun	( )	( )	( )	
	• Installation	( )	( )	( )	
	• Removal	( )	( )	( )	
k.	FLIR system	( )	( )	( )	
	• Installation	( )	( )	( )	
	• Removal	( )	( )	( )	
	• Cleaning	( )	( )	( )	

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

	READ	DISCUSSED	DEMONSTRATED N/A
• Stowing	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 7: FLIGHT INSTRUMENTS/AVIONICS

Description: Able to identify and interpret the following aircraft instruments.

	READ	DISCUSSED	DEMONSTRATED N/A
a. Interior equipment	( )	( )	( )
• Radios	( )	( )	( )
• PA	( )	( )	( )
• Siren	( )	( )	( )
• Mixer panels	( )	( )	( )
• Yaesu	( )	( )	( )
• Scanner	( )	( )	( )
• Lights	( )	( )	( )
• Cargo placement	( )	( )	( )
b. Performance limitations (instrument readings)	( )	( )	( )
c. Caution systems	( )	( )	( )
d. Audible alarms	( )	( )	( )
e. Fuel	( )	( )	( )
f. Navigation	( )	( )	( )
• Moving map/Aviation charts	( )	( )	( )
• Position awareness	( )	( )	( )
• Radio navigation	( )	( )	( )
• Information resources	( )	( )	( )
g. GPS	( )	( )	( )
h. VHF VOR receiver	( )	( )	( )
• VOR receiver	( )	( )	( )
• HSI	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

	READ	DISCUSSED	DEMONSTRATED N/A
i. Local navigation	( )	( )	( )
• Use of landmarks	( )	( )	( )
• Identifying roadways	( )	( )	( )
j. Radios	( )	( )	( )
• Com 1	( )	( )	( )
• Com 2	( )	( )	( )
k. ICS	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 8: SAFETY EQUIPMENT/USAGE

Description: The flight officer trainee must be able to properly utilize the aircraft's seat belts, safety harnesses, and ALSE attire, and become familiar with all survival and rescue equipment issued.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Belts/Harnesses	( )	( )	( )
b.	ALSE	( )	( )	( )
c.	Floatation/Survival vest pouch	( )	( )	( )
	• HEED	( )	( )	( )
d.	Survival pack	( )	( )	( )
e.	Other topics	( )	( )	( )
f.	Nerve agent self-treatment	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 9: GROUND HANDLING

Description: Learn to safely move the aircraft utilizing the ground handling equipment and operate the auxiliary power unit (APU) to provide external power to the aircraft.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Tractor	( )	( )	( )
b.	Tow bar	( )	( )	( )
c.	Ground handling wheels	( )	( )	( )
d.	APU and cables	( )	( )	( )
e.	Platform	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 10: INDOCTRINATION

DESCRIPTION: One of the most important skills the flight officer will need to develop is the ability to recognize their location through correlation of external landmarks to his/her map. The flight officer should have their map/moving map consistent to the area the aircraft is flying over at all times. At any time the flight officer should be able to give a current location. This is more than an exercise for geographical expertise. In the event of an aircraft emergency, the only frequency that can be assured of being heard will be the frequency being used at the time. It will be up to the flight officer to immediately broadcast the aircraft emergency on the CHP radio and provide a location for ground (or air) units to respond and assist.

The flight officer may be called upon to advise dispatch of locations and jurisdictions. The pilot may need to assist with information from a sectional chart or locating a local hospital or trauma center.

	READ	DISCUSSED	DEMONSTRATED N/A
a. Area boundaries	( )	( )	( )
b. Local hospitals	( )	( )	( )
• Trauma centers	( )	( )	( )
• Burn units	( )	( )	( )
• Pediatric hospitals	( )	( )	( )
c. Off-site landing zones	( )	( )	( )
d. Directional chart/Airspace	( )	( )	( )
e. Use of moving map	( )	( )	( )
• AAA/Thomas Guides	( )	( )	( )
f. Infrastructures	( )	( )	( )
g. Fuel locations and procedures	( )	( )	( )
• Remote	( )	( )	( )
• Unit	( )	( )	( )
• Airports	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 11: AIRCRAFT INSPECTION

Description: After the crew checks the mission board and has taken care of briefing and preparing personal patrol items, the flight officer will assist with the aircraft readiness preparation. If everything is taken care of and the pilot still has the preflight to conduct, consider looking on and learning how it is done.

	READ	DISCUSSED	DEMONSTRATED N/A
a. Cleaning of aircraft	( )	( )	( )
• Degreaser	( )	( )	( )
• Polisher	( )	( )	( )
• Windscreen	( )	( )	( )
• Sanitizer	( )	( )	( )
b. Navigation map backup	( )	( )	( )
• AAA/Thomas Guides	( )	( )	( )
c. Paramedic equipment	( )	( )	( )
• Narcotics	( )	( )	( )
• Forms	( )	( )	( )
• Equipment check sheet	( )	( )	( )
d. Cell/Satellite phone/Pager	( )	( )	( )
• Charged	( )	( )	( )
e. Camera/VCR equipment	( )	( )	( )
• Extra film/Memory card	( )	( )	( )
• Blank tape in VCR	( )	( )	( )
• Battery charged	( )	( )	( )
f. Yaseu hand held radio	( )	( )	( )
• Battery charged	( )	( )	( )
g. Maintenance fluids and oils	( )	( )	( )
• Identification and location	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

COMMENTS:

Trainee Signature	Date
Training Officer Signature	Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 12: EMERGENCY PROCEDURES

Description: The flight officer should be able to differentiate between precautionary and forced landings and take appropriate action, as well as identify various systems failures and emergency procedures.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Fire	( )	( )	( )
b.	Forced landing/Precautionary landing	( )	( )	( )
c.	Electrical failure	( )	( )	( )
d.	Radio system failure	( )	( )	( )
e.	Unusual flight attitudes	( )	( )	( )
f.	Engine failure	( )	( )	( )
g.	POH	( )	( )	( )
h.	Egress	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 13: PATROL AND RADIO PROCEDURES

Description: The flight officer will be able to understand radio terminology such as simplex, duplex, direct, repeater, and all controls on the Technisonics (TFM) radio.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	TFM radio, switching of channels, and volume controls	( )	( )	( )
b.	Program in both simplex and duplex modes for any frequency	( )	( )	( )
c.	Locate, transmit, and receive frequencies in frequency book	( )	( )	( )
d.	Locate and expeditiously switch between primary channel, blue channel, and California Law Enforcement Mutual Aid Radio System	( )	( )	( )
e.	Recognize and inform area dispatchers when transitioning CHP areas	( )	( )	( )
f.	Monitor, identify, and manually program frequency numbers into the scanner while in flight	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 14: PROCEDURES WITH ALLIED AGENCIES

Description: Be able to monitor and communicate with allied agencies, to ensure exchange of time-critical, emergency information directly with the field units.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Identification of scanner frequencies	( )	( )	( )
b.	Locate any requested allied frequency on LAW 1, LAW 2, and LAW 3	( )	( )	( )
c.	Communication with the police agency's dispatch for information and confirmation to assist	( )	( )	( )
d.	VHF communications radio, COM 1, and COM 2	( )	( )	( )
e.	Procedure for contacting base hospital	( )	( )	( )
f.	Use of rear radio control panel, volume controls, and headsets	( )	( )	( )
g.	Use of guard switch	( )	( )	( )
h.	Private line procedures	( )	( )	( )
i.	Use of green phone via radio system	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 15: VEHICULAR PURSUITS

Description: Involvement in a vehicular pursuit is one of the most important responsibilities of the flight officer.

Upon becoming aware of a pursuit in progress, the first step is to establish communications with the area or agency involved on the proper frequency. Is the allied agency requesting assistance from the CHP air unit or is another aircraft involved?

Several conditions must be considered before CHP aircraft will assume "radio broadcast responsibility," familiarity with the geographic location by aircrew, location of airspace (heavy versus light air traffic), time of day, etc.

The standard positioning of the suspect vehicle relative to the aircraft is at the nine or ten o'clock position. In this manner, as you alternate between looking at the suspect vehicle and the map you will always know where to direct your attention when you look outside.

Many pursuits will terminate in a traffic collision. If the suspect(s) don't flee, your concern will be in directing units to the termination of the pursuit and positioning units for a felony stop procedure, if required.

	READ	DISCUSSED	DEMONSTRATED N/A
a. Procedure for involvement in vehicle pursuits	( )	( )	( )
• Obtain location and direction of pursuit	( )	( )	( )
• Obtain vehicle description	( )	( )	( )
• Obtain reason for the pursuit	( )	( )	( )
• Ascertain if pursuing agency requests assistance from other agencies ground units	( )	( )	( )
• Turn on night sun and position into the nine o'clock position as the aircraft slows to adequate speed	( )	( )	( )
• Advise when in visual contact with the suspect vehicle	( )	( )	( )
• Broadcast the location, direction of travel and if possible, the number of occupants, while keeping track of the suspect vehicle on the map	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

	READ	DISCUSSED	DEMONSTRATED N/A
• Inform ground supervisors of the number of units involved in pursuit	( )	( )	( )
• Delegate duty of location updates to ground units, if unfamiliar with geographic location, or unsafe conditions	( )	( )	( )
• Coordinate ground units to obtain perimeter control at the termination of pursuit	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 16: FOOT PURSUITS, CONTAINMENTS, K-9 SEARCHES

Description: A foot pursuit is commonly recognized as one of the most dangerous situations an officer can be involved in and demands placing them in the highest priority for response.

At night, consider having the officer shine their flashlight in the air to pinpoint their location. Once you have the officer's location in sight, request the last known location, direction, time lapse, and description of the suspect.

Once you have the information regarding the suspect's possible location, you can assist in coordinating the response of assisting units to set up containment. Be sure to communicate with the ground officer in charge and advise them if you see a gap or nonsecured location.

If you spot the suspect running, keep him/her in sight. Advise units where to position their vehicles to affect a perimeter. It is far better to contain an area for a running suspect than to involve officers in a foot chase.

When the suspect stops, goes into hiding, or takes cover you can adjust the containment accordingly and advise the handling unit. A decision can be made whether to move in at that time or wait for a K-9. If you are using the infrared, you will need to guide the K-9 unit to the location of the heat source.

During a K-9 search, the main purpose of the helicopter is to ensure the suspect does not have the opportunity to back track into an area that has been searched by the K-9. You must keep your attention focused on the area close to the search team. Advise the K-9 team of dogs, hazards, or possible points of suspect concealment that the team may have missed.

	READ	DISCUSSED	DEMONSTRATED N/A
a. Procedure for involvement in foot pursuits, containment, and K-9 searches	( )	( )	( )
• Ensure all officers are accounted for	( )	( )	( )
• At night, have officers on foot shine flashlight directly at the aircraft to ensure proper location	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

	READ	DISCUSSED	DEMONSTRATED N/A
• Request the last location, direction, time lapse, and description of the suspect	( )	( )	( )
• Coordinate the response of units to containment area, if requested to do so	( )	( )	( )
• Maintain communication with the K-9 search team to prevent suspect back tracking	( )	( )	( )
• Focus attention around the K-9 search team to prevent suspect back tracking	( )	( )	( )
• Advises K-9 team of nearby dogs, hazards, points of possible suspect concealment, etc.	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 17: TRAFFIC COLLISIONS

Description: In responding to traffic collision calls, there are two main aspects to consider: the medical and the criminal. When you monitor a reported traffic collision with possible injuries, you need to advise dispatch that you are responding and from where. In certain counties there is an automatic dispatch for an air ambulance when certain criteria are met. You must advise the county medical control that you are responding to ensure air traffic safety. You should consider advising the local trauma center of the nature and details of the call to alert them of a possible medevac.

When you are first on the scene, you will have to make an off-site landing and evaluate the need for medical aid, including dispatching or canceling of ambulances, extrication, or fire needs. If no injuries are observed (minor damage, parties walking around vehicles), you will stay overhead until ground units arrive. This communication platform can be very beneficial to dispatch, as well as ground units to advise of the exact location, need for tow trucks, lanes blocked, etc.

Be on the lookout when arriving at the scene of traffic accidents for individuals pointing at people that may be leaving the area on foot, or to vehicles that appear to be damaged, leaving the area.

If fire personnel or CHP units are on scene, communicate with them and ascertain the need for air support. Most ground CHP units are trained as emergency medical technician-Is (EMT-I), although some are trained only in advanced first-aid. Be sure to follow proper county protocol when contacting patients and or turning patients over to other advanced life support (ALS) or basic life support resources.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Advise dispatch of aircraft response	( )	( )	( )
b.	Inform medical control of response	( )	( )	( )
c.	Ascertain from units or fire personnel on scene if ALS medical assistance is needed	( )	( )	( )
d.	If no units or fire personnel on scene, determine the need to land and provide medical assistance	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

		READ	DISCUSSED	DEMONSTRATED N/A
e.	Maintain a communication platform with dispatch and inform of the need for tow trucks, additional units, fire, lanes blocked, number of vehicles involved, etc.	( )	( )	( )
f.	If a medevac is needed, follow proper county protocols	( )	( )	( )
g.	Advise CHP dispatch that aircraft is transporting and to what facility	( )	( )	( )
h.	Contact medical facility via radio/telephone and give a patient report	( )	( )	( )
i.	Complete proper logging of medevac and leave original patient care report (PCR) for office personnel	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 18: OTHER MISSIONS

Description: Often crewmembers are called upon to assist with non-emergency missions, such as transportation of persons, equipment, photo missions, and surveillance. The basic task in this situation will be to brief aircraft passengers on safety and that proper aircraft procedures are followed (as outlined in HPM 100.7).

If you are requested to assist with aerial photographs be sure to obtain the exact location and to what extent the agency is trying to capture via photos (overview, versus exact location, etc.). Be sure to reload the camera, check batteries, and cassette tapes for VCR. If the mission requires you to take a passenger, be sure to have all nondepartmental persons sign the waiver form.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Coordinate the pickup location of passengers. Decide whether or not this will be a hot load or if the pilot will shut down the aircraft	( )	( )	( )
b.	Ascertain the weight of your passenger and equipment and inform the pilot for weight calculations	( )	( )	( )
c.	Passenger briefing	( )	( )	( )
	• Waiver	( )	( )	( )
	• Pepper spray	( )	( )	( )
d.	Ensure the security of the aircraft's door and seat belts after the conclusion of the transportation mission	( )	( )	( )
e.	Obtain exact request for aerial photography (35mm, digital, or video)	( )	( )	( )
f.	Arrange for pick-up or mailing of the film at the conclusion of the photo mission. Be sure to reload/restock all items used.	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

	READ	DISCUSSED	DEMONSTRATED N/A
g. Evaluate the request for surveillance. It may be more effective for the airplane (due to expense, fuel capacity, and noise). Be able to coordinate turning over surveillance to another aircraft.	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 19: SPECIALIZED EQUIPMENT

Description: CHP aircraft are equipped with several pieces of equipment to assist with daily missions. The flight officer must be proficient in the use of all equipment. The equipment in CHP aircraft may include: FLIR, video camera, VCR, stabilizing binoculars, 35mm camera, and digital camera.

	READ	DISCUSSED	DEMONSTRATED N/A
a. FLIR	( )	( )	( )
• Proper position to obtain a search configuration	( )	( )	( )
• Adjust the system settings to optimize the display given existing conditions	( )	( )	( )
• Manipulate the switches to keep the target in view and in focus	( )	( )	( )
• Inform the pilot when you have a heat source/target and its position relative to the aircraft	( )	( )	( )
• Guide the pilot to position the aircraft so the target on the screen will be at the nine o'clock and 30 degree low position outside	( )	( )	( )
• Guide ground units to the target	( )	( )	( )
• Ability to "slave" the spotlight to the FLIR	( )	( )	( )
b. Video camera/VCR	( )	( )	( )
• Forward and rear controls	( )	( )	( )
• Storage of blank video tapes	( )	( )	( )
• Handheld video camera	( )	( )	( )
c. Stabilizing binoculars	( )	( )	( )
• Start up and adjustment procedure prior to flight	( )	( )	( )
• Use of binoculars on calls that require response to pinpoint location	( )	( )	( )
d. 35mm camera	( )	( )	( )
• Telephoto lens	( )	( )	( )
• Film supply	( )	( )	( )

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

	READ	DISCUSSED	DEMONSTRATED N/A
• Power source (on/off switch)	( )	( )	( )
e. Digital camera	( )	( )	( )
• Memory card	( )	( )	( )
• Battery charger	( )	( )	( )
• Downloading	( )	( )	( )
f. Handheld video camera	( )	( )	( )
• JVC camcorder	( )	( )	( )
• Power supply	( )	( )	( )
• Battery charger	( )	( )	( )
g. Siren	( )	( )	( )
• Use of switches	( )	( )	( )
• Effectiveness on calls	( )	( )	( )
h. PA system	( )	( )	( )
i. Cellular/satellite telephone	( )	( )	( )
• Unlock procedure	( )	( )	( )
• Checking power supply	( )	( )	( )
• Recharge procedures	( )	( )	( )
j. SX -16 Night Sun	( )	( )	( )
• Diversion tactic during suspects searches	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 20: LOCAL COUNTY ACCREDITATION

Description: Paramedic flight officers, assigned to regional helicopters shall maintain paramedic licensure with the State of California, as well as obtain local county accreditation.

	READ	DISCUSSED	DEMONSTRATED N/A
a. Complete the EMT-P accreditation authorization application	( )	( )	( )
b. Make appointment with your EMS coordinator at the local county EMS agency and have photo taken	( )	( )	( )
c. Complete the local county EMS agency option skills test	( )	( )	( )
d. Complete a five call challenge, if required	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 21: LOCAL COUNTY PROTOCOLS

Description: Flight officer paramedics will be working under local county protocols regardless of what county you provide medical services in. It is imperative that contact with your base hospital be maintained when patient contact is made, even if transporting to another facility. A copy of all PCRs will be forwarded to the local county EMS agency coordinator, for quality control follow-up.

		READ	DISCUSSED	DEMONSTRATED N/A
a.	Flight officer receives a copy of local county protocols	( )	( )	( )
b.	Familiar with local county PCR procedures	( )	( )	( )
c.	Familiar with local county trauma score	( )	( )	( )
d.	Processing of PCR after medevac completion	( )	( )	( )
e.	Completion of medevac log	( )	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

TASK 22: CONTINUING EDUCATION (CE)

Description: Flight officer paramedics licensed by the State of California are required to maintain their license by attending CE classes. A total of 48 hours of CE units must be completed during a two-year period of renewal. "Paramedic CEs" shall be recorded on a CHP 336, Paramedic Contacts/CE Log, and forwarded to OAO every quarter.

Continuing education classes offered are posted in the unit. Continuing education units may be obtained on duty, as long as it is scheduled in advance and posted on the schedule. You may obtain CE units from any county. Classes are generally offered at most hospitals. Be sure to keep good documentation and leave a copy of your CE certificates in your field folder.

		DISCUSSED	PROFICIENT
a.	Understands the procedure for obtaining CE units	( )	( )
b.	Maintains good documentation of paramedic CE's on a CHP 336.	( )	( )
c.	Able to locate CE classes available in the area.	( )	( )
d.	Review of HPM 100.7, Chapter 10 (Paramedic requirements)	( )	( )

COMMENTS:

Trainee Signature Date

Training Officer Signature Date

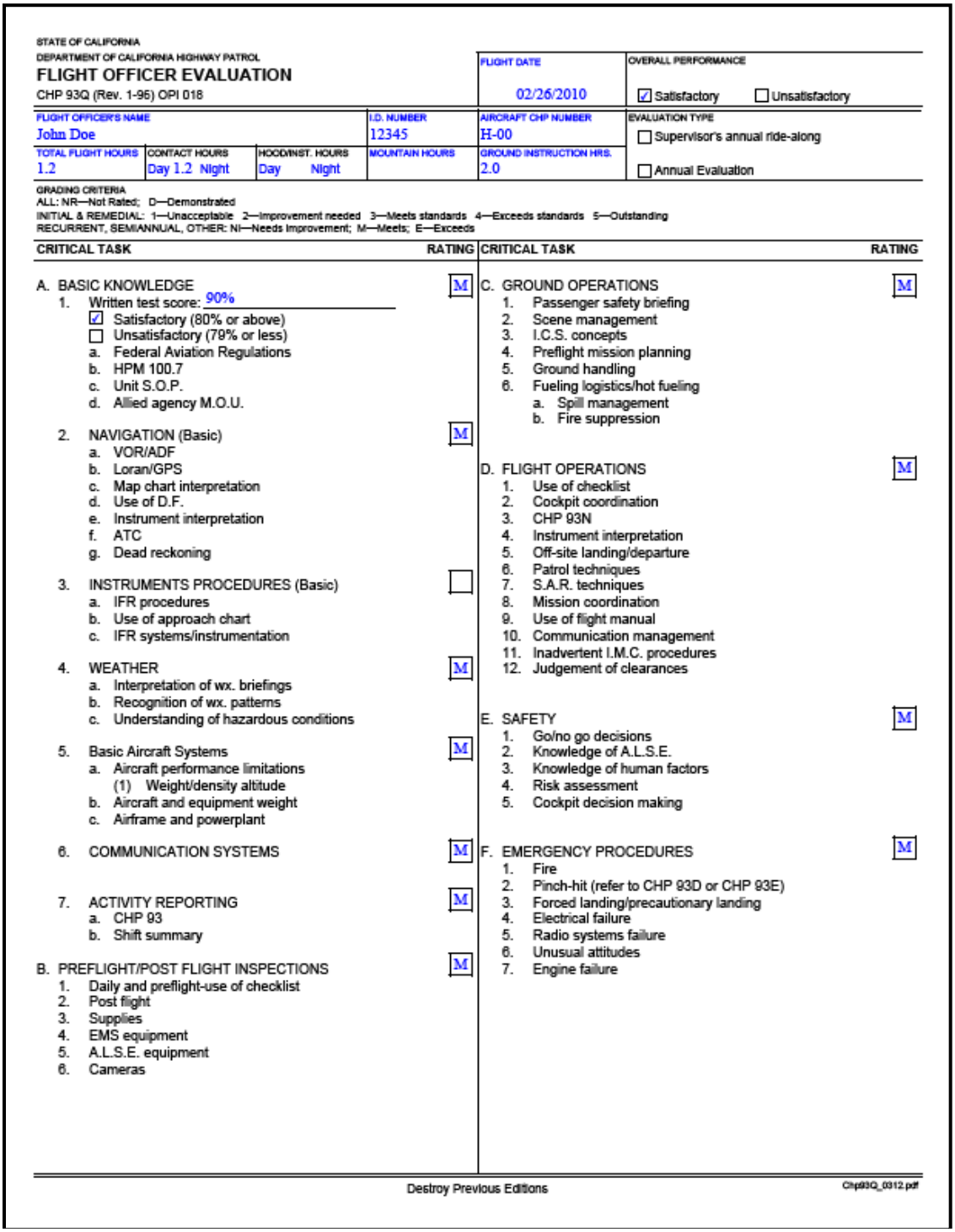
ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

Phase III will consist of a flight officer evaluation conducted by the OAO flight officer coordinator or designee utilizing the CHP 93K and CHP 93Q.

ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*



STATE OF CALIFORNIA
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

FLIGHT OFFICER EVALUATION

CHP 93Q (Rev. 1-96) OPI 018

FLIGHT DATE	OVERALL PERFORMANCE
02/26/2010	☑ Satisfactory ☐ Unsatisfactory

FLIGHT OFFICER'S NAME	I.D. NUMBER	AIRCRAFT CHP NUMBER	EVALUATION TYPE
John Doe	12345	H-00	☐ Supervisor's annual ride-along

TOTAL FLIGHT HOURS	CONTACT HOURS	HOOD/INST. HOURS	MOUNTAIN HOURS	GROUND INSTRUCTION HRS.	
1.2	Day 1.2 Night	Day Night		2.0	☐ Annual Evaluation

GRADING CRITERIA
ALL: NR—Not Rated; D—Demonstrated
INITIAL & REMEDIAL: 1—Unacceptable 2—Improvement needed 3—Meets standards 4—Exceeds standards 5—Outstanding
RECURRENT, SEMIANNUAL, OTHER: NI—Needs Improvement; M—Meets; E—Exceeds

CRITICAL TASK	RATING
A. BASIC KNOWLEDGE	M
1. Written test score: 90%	
☑ Satisfactory (80% or above)	
☐ Unsatisfactory (79% or less)	
a. Federal Aviation Regulations	
b. HPM 100.7	
c. Unit S.O.P.	
d. Allied agency M.O.U.	
2. NAVIGATION (Basic)	M
a. VOR/ADF	
b. Loran/GPS	
c. Map chart interpretation	
d. Use of D.F.	
e. Instrument interpretation	
f. ATC	
g. Dead reckoning	
3. INSTRUMENTS PROCEDURES (Basic)	
a. IFR procedures	
b. Use of approach chart	
c. IFR systems/instrumentation	
4. WEATHER	M
a. Interpretation of wx. briefings	
b. Recognition of wx. patterns	
c. Understanding of hazardous conditions	
5. Basic Aircraft Systems	M
a. Aircraft performance limitations	
(1) Weight/density altitude	
b. Aircraft and equipment weight	
c. Airframe and powerplant	
6. COMMUNICATION SYSTEMS	M
7. ACTIVITY REPORTING	M
a. CHP 93	
b. Shift summary	
B. PREFLIGHT/POST FLIGHT INSPECTIONS	M
1. Daily and preflight-use of checklist	
2. Post flight	
3. Supplies	
4. EMS equipment	
5. A.L.S.E. equipment	
6. Cameras	

CRITICAL TASK	RATING
C. GROUND OPERATIONS	M
1. Passenger safety briefing	
2. Scene management	
3. I.C.S. concepts	
4. Preflight mission planning	
5. Ground handling	
6. Fueling logistics/hot fueling	
a. Spill management	
b. Fire suppression	
D. FLIGHT OPERATIONS	M
1. Use of checklist	
2. Cockpit coordination	
3. CHP 93N	
4. Instrument interpretation	
5. Off-site landing/departure	
6. Patrol techniques	
7. S.A.R. techniques	
8. Mission coordination	
9. Use of flight manual	
10. Communication management	
11. Inadvertent I.M.C. procedures	
12. Judgement of clearances	
E. SAFETY	M
1. Go/no go decisions	
2. Knowledge of A.L.S.E.	
3. Knowledge of human factors	
4. Risk assessment	
5. Cockpit decision making	
F. EMERGENCY PROCEDURES	M
1. Fire	
2. Pinch-hit (refer to CHP 93D or CHP 93E)	
3. Forced landing/precautionary landing	
4. Electrical failure	
5. Radio systems failure	
6. Unusual attitudes	
7. Engine failure	

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ANNEX D

INITIAL FLIGHT OFFICER TRAINING *(continued)*

CRITICAL TASK	RATING	CRITICAL TASK	RATING
G. SPECIAL OPERATIONS (check as appropriate) ☑ Pursuit management ☐ Vehicle pacing ☐ Hover rescue ☐ External load ☐ Water rescue ☐ Night Sun ☐ Flir ☐ High altitude operations ☐ Officer back-up ☑ Other:	M	H. OVERALL EVALUATION 1. Safety practices 2. Collision avoidance 3. Judgement 4. Flight skills 5. Planning 6. Professional demeanor 7. Other:	M

COMMENTS

Prior to departing the airport, you completed written and oral examinations. You attained a score of 90% on the written test and demonstrated sufficient knowledge when responding to all oral questions,

As we prepared for flight, you performed a proper flight officer/paramedic preflight inspection of H-00 and provided me with a thorough passenger briefing. During the flight, you were tasked with a simulated suspect search, address and rural area navigation, multi-agency communications and coordinations, off-site operations, mission prioritization, and aircraft emergency procedures. Throughout the flight and during all of the scenarios, you were able to successfully demonstrate your ability to use proper CRM and multi-task while optimizing aerial services to those on the ground. Moreover, you effectively communicated with your pilot while always keeping flight safety as the overriding factor before making any decision. Nice job!

Officer John Doe, ID# 12345, has satisfactorily performed all required training and has successfully completed a flight officer Phase III flight evaluation. In accordance with HPM 100.7, Officer Doe is authorized to act as a departmental flight officer.

FLIGHT RESTRICTIONS

☐ None ☐ Reviewed ☐ Not Reviewed

FLIGHT OFFICER'S INITIALS	SUPERVISOR'S INITIALS	EVALUATOR'S SIGNATURE & I.D. NUMBER
JD	PS	

CHP 93Q (Rev. 1-96) OPI 018 (Back) Destroy Previous Editions Chp93Q_0312.pdf

ANNEX E

AIRCRAFT CREW TRAINING

The following subject areas should be covered during aircrew training:

1. Introduction/Air Operations update.
2. Air Operations Manual, HPM 100.7.
3. Pilots' Flight Manual.
4. FARs.
5. Maintenance procedures/Aircraft inspection/Log book.
6. ALSE/Medical/Physiological considerations.
7. Activity reporting.
8. Special operations (extended load, short field, etc.)
9. Mountain/High DA operations.
10. Instrument procedures.
11. Emergency procedures training.
12. Flight officer pinch-hit.
13. Tests/Quizzes.
14. Flight evaluation.

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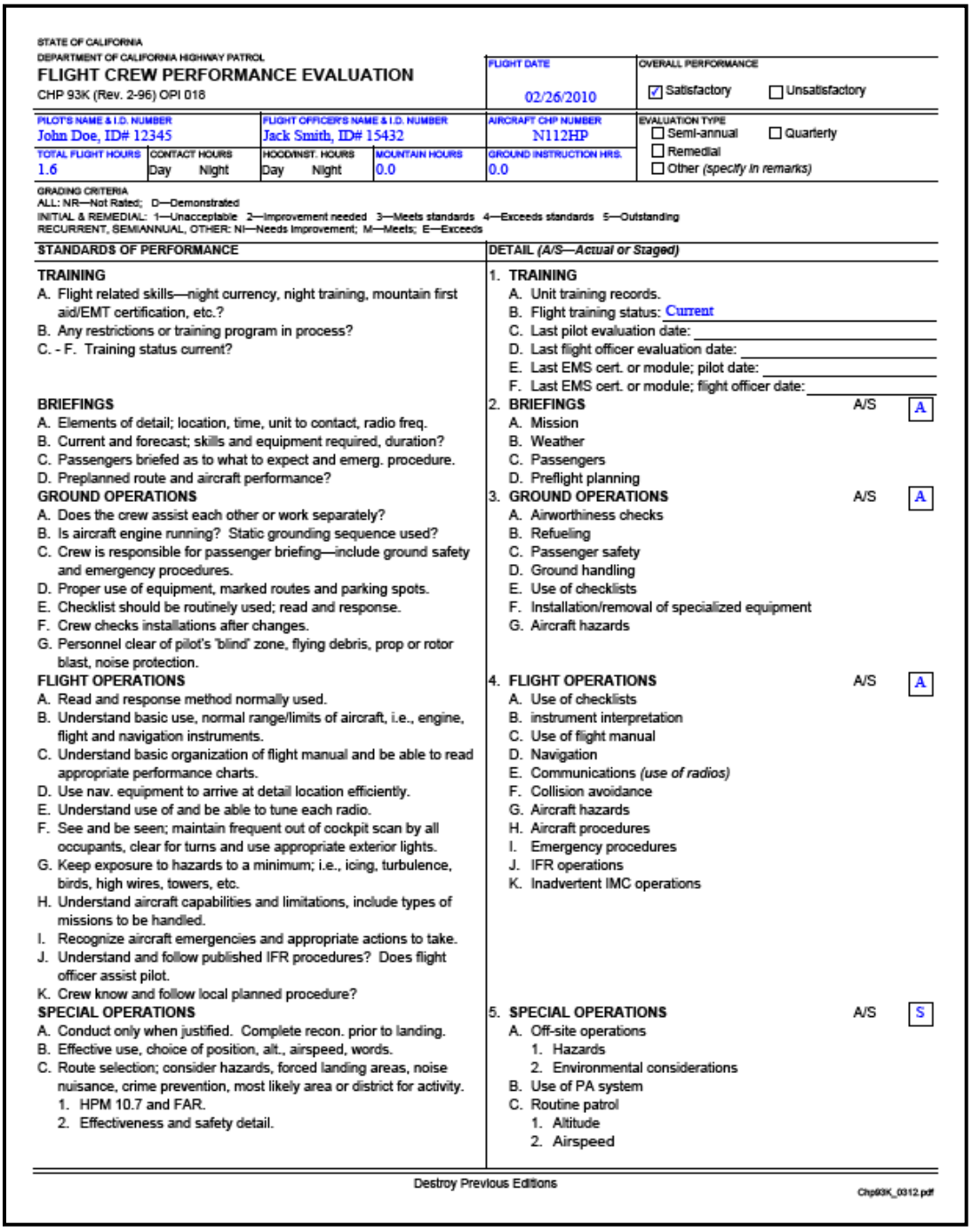
ANNEX F

CHP 93K, FLIGHT CREW PERFORMANCE EVALUATION



STATE OF CALIFORNIA
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

FLIGHT CREW PERFORMANCE EVALUATION

CHP 93K (Rev. 2-96) OPI 018

FLIGHT DATE	OVERALL PERFORMANCE
02/26/2010	☑ Satisfactory ☐ Unsatisfactory

PILOT'S NAME & I.D. NUMBER	FLIGHT OFFICER'S NAME & I.D. NUMBER	AIRCRAFT CHP NUMBER	EVALUATION TYPE
John Doe, ID# 12345	Jack Smith, ID# 15432	N112HP	☐ Semi-annual ☐ Quarterly ☐ Remedial ☐ Other *(specify in remarks)*

TOTAL FLIGHT HOURS	CONTACT HOURS		HOOD/INST. HOURS		MOUNTAIN HOURS	GROUND INSTRUCTION HRS.
1.6	Day	Night	Day	Night	0.0	0.0

GRADING CRITERIA
ALL: NR—Not Rated; D—Demonstrated
INITIAL & REMEDIAL: 1—Unacceptable 2—Improvement needed 3—Meets standards 4—Exceeds standards 5—Outstanding
RECURRENT, SEMIANNUAL, OTHER: NI—Needs Improvement; M—Meets; E—Exceeds

STANDARDS OF PERFORMANCE	DETAIL *(A/S—Actual or Staged)*	A/S	
TRAINING A. Flight related skills—night currency, night training, mountain first aid/EMT certification, etc.? B. Any restrictions or training program in process? C. - F. Training status current?	1. **TRAINING** A. Unit training records. B. Flight training status: Current C. Last pilot evaluation date: _____ D. Last flight officer evaluation date: _____ E. Last EMS cert. or module; pilot date: _____ F. Last EMS cert. or module; flight officer date: _____		
BRIEFINGS A. Elements of detail; location, time, unit to contact, radio freq. B. Current and forecast; skills and equipment required, duration? C. Passengers briefed as to what to expect and emerg. procedure. D. Preplanned route and aircraft performance?	2. **BRIEFINGS** A. Mission B. Weather C. Passengers D. Preflight planning	A/S	A
GROUND OPERATIONS A. Does the crew assist each other or work separately? B. Is aircraft engine running? Static grounding sequence used? C. Crew is responsible for passenger briefing—include ground safety and emergency procedures. D. Proper use of equipment, marked routes and parking spots. E. Checklist should be routinely used; read and response. F. Crew checks installations after changes. G. Personnel clear of pilot's 'blind' zone, flying debris, prop or rotor blast, noise protection.	3. **GROUND OPERATIONS** A. Airworthiness checks B. Refueling C. Passenger safety D. Ground handling E. Use of checklists F. Installation/removal of specialized equipment G. Aircraft hazards	A/S	A
FLIGHT OPERATIONS A. Read and response method normally used. B. Understand basic use, normal range/limits of aircraft, i.e., engine, flight and navigation instruments. C. Understand basic organization of flight manual and be able to read appropriate performance charts. D. Use nav. equipment to arrive at detail location efficiently. E. Understand use of and be able to tune each radio. F. See and be seen; maintain frequent out of cockpit scan by all occupants, clear for turns and use appropriate exterior lights. G. Keep exposure to hazards to a minimum; i.e., icing, turbulence, birds, high wires, towers, etc. H. Understand aircraft capabilities and limitations, include types of missions to be handled. I. Recognize aircraft emergencies and appropriate actions to take. J. Understand and follow published IFR procedures? Does flight officer assist pilot. K. Crew know and follow local planned procedure?	4. **FLIGHT OPERATIONS** A. Use of checklists B. instrument interpretation C. Use of flight manual D. Navigation E. Communications *(use of radios)* F. Collision avoidance G. Aircraft hazards H. Aircraft procedures I. Emergency procedures J. IFR operations K. Inadvertent IMC operations	A/S	A
SPECIAL OPERATIONS A. Conduct only when justified. Complete recon. prior to landing. B. Effective use, choice of position, alt., airspeed, words. C. Route selection; consider hazards, forced landing areas, noise nuisance, crime prevention, most likely area or district for activity. 1. HPM 10.7 and FAR. 2. Effectiveness and safety detail.	5. **SPECIAL OPERATIONS** A. Off-site operations 1. Hazards 2. Environmental considerations B. Use of PA system C. Routine patrol 1. Altitude 2. Airspeed	A/S	S

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ANNEX F

CHP 93K, FLIGHT CREW PERFORMANCE EVALUATION *(continued)*

STANDARDS OF PERFORMANCE	DETAIL *(A/S—Actual or Staged)*		GRADE
SPECIAL OPERATIONS ***(continued)***	5. **SPECIAL OPERATIONS** ***(continued)***		
D. Is crew alert and aggressive to provide backup? 1. Most effective use of altitude and airspeed for noise consideration and/or search effectiveness. 2. Use of radio, PA system and lights for officer safety. 3. Is the use of weapons allowed for in positioning of aircraft, especially when landing at scene? Was sidearm drawn?	D. Officer backup for felony or misdemeanor 1. Position of A/C 2. Use of radios 3. Use of weapons	A/S	S
E. Night Operations 1. Continuous, efficient sweeping pattern technique, from an effective altitude. 2. Aerial recon., coordinate with ground personnel, need of detail justify the risk? 3. Within HPM 100.7 and FAR's yet effective for detail at hand?	E. Night Operations 1. Use of search light 2. Landings 3. Altitudes and airspeed	A/S	S
F. Mountain Operations 1. Weather changes; temperature, den. altitude, wind currents affecting low and slow flying. 2. Organized, efficient pattern; quick overlook for subject and hazards then detail search, high terrain of sector first. 3. Recon. of landing sites, kept to a minimum, coordinate ground safety, use of smoke for marking and wind.	F. Mountain Operations 1. Terrain evaluation 2. Search patterns 3. Landings	A/S	S
G. Medevac Operations 1. Use medical equipment properly and compatible with aircraft at hand. 2. Set up litter and related equipment correctly and in a timely manner.	G. Medevac Operations 1. Use of medical equipment 2. Litter setup	A/S	S
H. External Operations 1. Choice of proper lifting device for detail. Use standards in HPM 100.7 and follow training guidelines. 2. No haste, mistakes, or tangled lines. 3. All communications must be clear to crew.	H. External Operations 1. Hoist 2. Cargo hook 3. Communications a. Intercom b. Radio c. Hand signals	A/S	S
I. Water Rescue 1. Unique hazards evaluated; i.e., rotorwash effects on victim, rescuers, (including pilot), wind currents and obstacles. 2. Was appropriate lifting equipment used?	I. Water Rescue 1. Hazards 2. Use of equipment	A/S	S
J. Aerial Photography 1. Photographer briefing—loose items, fit, controls, radio. 2. Needs of photographer; location, angle, lighting. 3. Altitude, airspeed, slipping.	J. Aerial Photography *(35 mm, video, etc.)* 1. Aircraft control 2. Camera positioning	A/S	S
CREW QUALITIES A. Positive, open-minded, constructive responsive. B. Safety orientated, reasonable, common sense. C. Crew members work together and with others. D. Flight officer manage the detail; pilot manage aircraft. E. Get basic mission information prior to commitment, and continually updating, planning ahead. F. Organized, professional, smooth and within limitations.	6. **CREW QUALITIES** A. Attitude B. Judgement C. Coordination D. Division of duties E. Planning F. Basic aircraft operation G. Examinations *(pass/fail)* 1. Written _____ or 2. Oral _____	A/S	A

REMARKS *(USE 8 1/2 X 11 SHEETS FOR ADDITIONAL REMARKS)*

During this fly along, we patrolled the Bay Area and assisted with a fly over detail. You had open communications during take-off and throughout the flight. You both used good crew resource management and safety!!! During the routine patrol you monitored the radios and assisted your pilot in looking for approaching aircraft and hazards. During the flight we discussed special operations and departmental policy, as well as, emergency procedures.

PILOT'S INITIALS	FLIGHT OFFICER'S INITIALS	SUPERVISOR'S INITIALS	EVALUATOR'S SIGNATURE & I.D. NUMBER
JD	JS	PS	

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ANNEX G

PILOT TRAINEE PROGRAM SYLLABUS

1. TRAINING.

   a. Training will be given as in Pilot Phase Training (Annexes B and C). Training hours in each phase will be increased by up to 10 hours.

   b. Night training for helicopter will be a minimum of 25 percent of the total.

2. MISCELLANEOUS.

   a. Failure to successfully complete any phase of training shall result in removal from the Pilot Trainee Program and may be cause for removal as a flight officer.

   b. All piloting will be with the training pilot or chief pilot.

   c. A maximum of one airplane and one helicopter pilot trainee will normally be assigned to a unit at one time.

   d. Pilot trainees will receive flight officer skill pay.

   e. When the pilot trainee has satisfactorily completed all phases and meets the minimum pilot qualifications required by the Department, his/her name shall be added to the Pilot Eligibility List.

3. PILOT TRAINEE PROGRAM. Applicants for the Pilot Trainee Program will be required to obtain all certificates or ratings at their own expense. Office of Air Operations may provide financial assistance if additional funds are available.

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ANNEX H

FORMATION FLIGHT TRAINING SYLLABUS

Formation flights are to be conducted as a show of support for fallen officers, not as an air show. Radical maneuvers such as steep turn breakups are prohibited.

1. TERMINOLOGY.

a. Formation. Two or more aircraft holding positions relative to each other and under the command of a designated pilot therein.

b. Lead Aircraft; "Lead". The aircraft at the head of the formation; the pilot who administers the pre-flight briefing, flies in the lead aircraft, and is responsible for the flight.

c. Trail Aircraft. The last aircraft in the formation.

d. Wing. A pilot who flies to the side and to the rear of, or directly behind a leader.

e. Trail Formation. A formation in which all aircraft are in single file, each directly behind the other.

f. Echelon Formation. A formation of aircraft in which each succeeding aircraft flies approximately 45° astern of the aircraft in front of it. All aircraft are echeloned on the same side.

g. V Formation. A formation consisting of a leader, wing aircraft in left echelon and wing aircraft in right echelon. The wing aircraft hold a position approximately 45° astern of the leader, both right and left and with an equal horizontal distance from the leader.

h. Horizontal Interval. The distance between aircraft in a formation. For helicopters, this distance is measured between tip-path planes (no closer than two rotor disks). For airplanes, this distance is measured from wing tip to wing tip (no closer than two wing lengths).

i. Vertical Separation (Also Called Step-up or Step-down). The vertical distance between the altitude of the lead aircraft to the altitude of the wing aircraft and each successive wing aircraft.

j. Join-Up. To form separate aircraft into a specific flight formation.

k. Flight. The term used to refer to the entire formation.

l. Chock. The number assigned to an aircraft in a formation based on its position in the formation.

2. NUMBERING OF AIRCRAFT IN A FORMATION. Aircraft formations are illustrated and described as seen from above. Aircraft are numbered, starting with the leader as number 1; then, progressively, laterally through each succeeding aircraft.

3. FORMATION FLIGHT BRIEFING (MUST BE GIVEN BY THE FLIGHT LEADER PRIOR TO THE FLIGHT).

a. Weather.

b. Route.

c. Horizontal interval and step-up or step-down distance (emphasis should be placed on our participation as a show of support not as an “air show.” The quality of a formation flight is determined by its symmetry and consistency, not by flying dangerously close).

d. Airspeed.

e. Altitude.

f. Power settings.

g. Radio frequencies and call signs.

(1) Air-to-air.

(2) Air-to-ground.

h. Formation and chock number assignments.

i. Route of flight.

j. Communications.

k. Emergency procedures.

(1) Overshoot.

(2) Inadvertant “out” and “out no-joy.”

(3) Inadvertent IMC.

(4) Mechanical failures.

(5) Lost communication.

(6) Breakup procedures.

4. COMMUNICATIONS.

a. The formation leader will make all calls to ATC or common traffic advisory frequency on the appropriate frequency. All aircraft in the flight should monitor this frequency.

b. A frequency shall be assigned as the primary frequency for communication between aircraft in the formation. All aircraft in the flight shall remain on this frequency throughout the flight. A communication check shall be established prior to any formation flight departure or any formation flight join-up.

c. Prior to initiating an enroute formation change, rendezvous, and join-up, or formation breakup, positive communications must be established between all aircraft in the flight. An acknowledgment of the transmission directing the maneuver is required to ensure complete understanding of the maneuver and to avoid misinterpretation of an aircraft’s movement. Maneuvers should not be attempted if communications are lost.

d. All changes in direction, speed, or altitude shall be communicated to the formation via radio.

e. All formation changes and frequency changes are directed by the formation leader using a preparatory command and a command of execution.

ANNEX H

FORMATION FLIGHT TRAINING SYLLABUS *(continued)*

5. FORMATION BREAKUP PROCEDURES.

a. Formation breakup procedures shall be established and communicated during the preflight formation briefing. These procedures are established in order to allow safe dispersal of a formation flight into a flight of individual aircraft.

b. The following procedure shall be used for formation breakup: The flight leader announces the breakup via radio communications. In the case where the formation flight leader is the first to break formation, subsequent wing aircraft will break formation pursuant to the method determined in the preflight briefing. If the formation flight leader is the last to break formation, each aircraft will be individually cleared to break formation by radio command from the formation flight leader. The formation flight leader shall ensure that each aircraft has departed the formation safely prior to clearing a subsequent aircraft to break formation.

6. FORMATION TAKEOFF.

a. A formation takeoff is two or more aircraft leaving the ground at the same time and then maintaining a predesignated relative position during the takeoff. Formation airplane takeoffs shall not be conducted.

b. The preferred formation for takeoff is the trail formation. Any formation change should be made after the formation is established at the predesignated altitude and airspeed.

c. If airplanes and helicopters are to be in the same formation:

(1) Airplanes depart independently and join-up in flight.

(2) Helicopters may takeoff in formation and then, after established as a flight, join-up with the airplanes.

7. FORMATION FLYING.

a. The flight leader should be aware that any (even slight) changes in airspeed or altitude effect the entire flight.

b. The flight leader must ensure that the airspeed and climb or descent rates fall within the performance capabilities of all formation aircraft.

c. All turns made by the leader should be constant rate and should not exceed standard rate.

d. Pilots must use constant vigilance to detect any change in altitude, airspeed, or heading of the aircraft they are following and control their aircraft to maintain proper separation.

8. FORMATION LANDING.

a. Formation landings are prohibited.

b. Prior to returning for landing a formation breakup shall take place and each aircraft shall make an individual landing.

9. POSTFLIGHT DEBRIEFING. A debriefing should be conducted whenever possible after each formation flight to assist in identifying areas where additional training may be required and to improve future formation flights.

10. FLIGHT TRAINING REQUIREMENTS.

a. All training shall be conducted by a unit training pilot or the chief pilot. Individual units shall maintain records, so that the formation authorization and currency is readily available.

b. Only specific pilots who have been trained and endorsed by the chief pilot shall function as formation lead pilots. If an endorsed formation lead pilot is not available, the formation flight shall not be conducted.

c. After initial formation flight training, training shall be given annually. Participation in an actual formation flight satisfies the annual training requirement.

d. CHP aircraft shall not participate in formation flights with other agency aircraft without first confirming that all involved pilots have received formation flight training and have conducted recurrency flights or training within the previous 12 months.

e. CHP aircraft shall not participate in formation flights with other agency aircraft unless an endorsed CHP pilot functions as the formation flight lead.

f. Training with allied agencies who request Division participation is encouraged.

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ANNEX I

FLIGHT OFFICER PINCH-HIT TRAINING

The pinch-hit training program is designed to enhance safety by increasing flight officer piloting skills so as to improve crew coordination during normal flight and enable the flight officer to safely land the aircraft in an emergency. The following is a list of subject areas to be included in the flight officer pinch-hit training. Although all areas must be covered, instruction may be individually tailored.

1. GROUND.

    a. Aircraft components and control function.

    b. Flight manual.

    c. Radio communication.

    d. Flight instruments and static system.

    e. Navigation.

2. FLIGHT. Up to a maximum of 12 hours to be conducted by the chief pilot/designee or unit training pilot.

    a. Flight control.

    b. Straight and level.

    c. Climbs and descent.

    d. Turn.

    e. Climbing/Descending turn.

    f. Scan pattern.

    g. Shutdown checklist.

    h. Normal approaches (including crosswind).

    i. Instrument approaches.

    j. Traffic pattern.

ANNEX I

FLIGHT OFFICER PINCH-HIT TRAINING *(continued)*

k. Communication.

l. Helicopter only operations.

(1) Hovering.

(2) Approaches to hover.

(3) Approaches to ground (includes running landing).

(4) Vertical landings from hover.

m. Airplane only operations.

(1) Slow flight.

(2) Minimum controllable airspeed.

(3) Stall recognition and recovery.

(4) Taxi.

n. Instructor demonstrates forced landings.

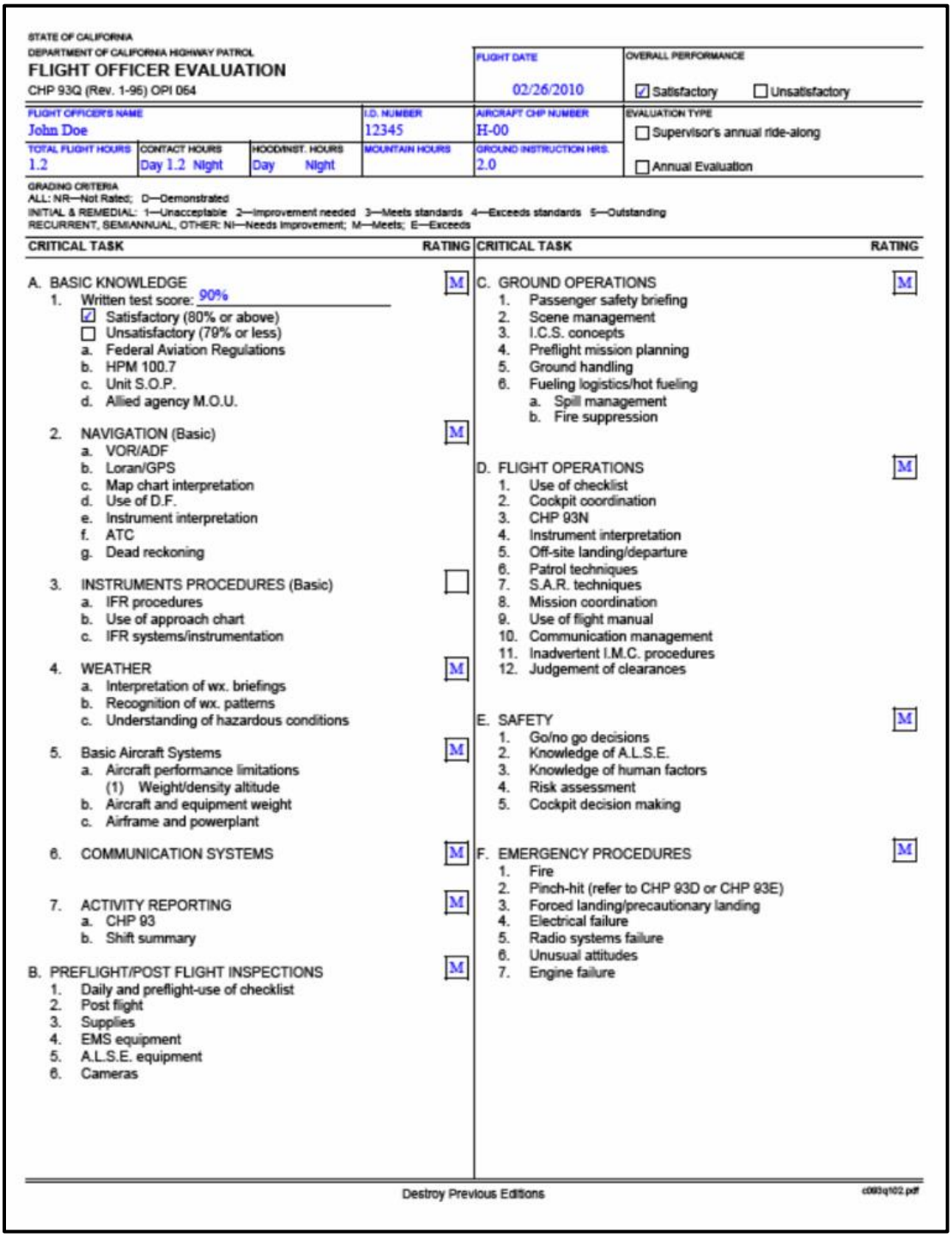
3. EVALUATION. Demonstrate to the unit training pilot or chief pilot the ability to safely navigate, land, and shutdown the aircraft using the checklist.

4. RECURRENT. Unit training pilots should semiannually evaluate flight officer's pilot proficiency and, if necessary, may utilize up to eight hours to correct deficiencies and maintain pinch-hit skills.

5. DOCUMENTATION. Training shall be documented on the appropriate CHP 93D or 93E. Ground instruction and pertinent comments shall be recorded in the "remarks" section. The original shall be maintained in the flight officer's local flight file, and a copy shall be forwarded to OAO.

ANNEX J

CHP 93Q, FLIGHT OFFICER EVALUATION



STATE OF CALIFORNIA
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

FLIGHT OFFICER EVALUATION

CHP 93Q (Rev. 1-96) OPI 064

FLIGHT DATE	OVERALL PERFORMANCE
02/26/2010	☑ Satisfactory ☐ Unsatisfactory

FLIGHT OFFICER'S NAME	I.D. NUMBER	AIRCRAFT CHP NUMBER	EVALUATION TYPE
John Doe	12345	H-00	☐ Supervisor's annual ride-along

TOTAL FLIGHT HOURS	CONTACT HOURS	HOOD/INST. HOURS	MOUNTAIN HOURS	GROUND INSTRUCTION HRS.	
1.2	Day 1.2 Night	Day Night		2.0	☐ Annual Evaluation

GRADING CRITERIA
ALL: NR—Not Rated; D—Demonstrated
INITIAL & REMEDIAL: 1—Unacceptable 2—Improvement needed 3—Meets standards 4—Exceeds standards 5—Outstanding
RECURRENT, SEMIANNUAL, OTHER: NI—Needs Improvement; M—Meets; E—Exceeds

CRITICAL TASK	RATING
A. BASIC KNOWLEDGE	M
1. Written test score: 90%	
☑ Satisfactory (80% or above)	
☐ Unsatisfactory (79% or less)	
a. Federal Aviation Regulations	
b. HPM 100.7	
c. Unit S.O.P.	
d. Allied agency M.O.U.	
2. NAVIGATION (Basic)	M
a. VOR/ADF	
b. Loran/GPS	
c. Map chart interpretation	
d. Use of D.F.	
e. Instrument interpretation	
f. ATC	
g. Dead reckoning	
3. INSTRUMENTS PROCEDURES (Basic)	
a. IFR procedures	
b. Use of approach chart	
c. IFR systems/instrumentation	
4. WEATHER	M
a. Interpretation of wx. briefings	
b. Recognition of wx. patterns	
c. Understanding of hazardous conditions	
5. Basic Aircraft Systems	M
a. Aircraft performance limitations	
(1) Weight/density altitude	
b. Aircraft and equipment weight	
c. Airframe and powerplant	
6. COMMUNICATION SYSTEMS	M
7. ACTIVITY REPORTING	M
a. CHP 93	
b. Shift summary	
B. PREFLIGHT/POST FLIGHT INSPECTIONS	M
1. Daily and preflight-use of checklist	
2. Post flight	
3. Supplies	
4. EMS equipment	
5. A.L.S.E. equipment	
6. Cameras	

CRITICAL TASK	RATING
C. GROUND OPERATIONS	M
1. Passenger safety briefing	
2. Scene management	
3. I.C.S. concepts	
4. Preflight mission planning	
5. Ground handling	
6. Fueling logistics/hot fueling	
a. Spill management	
b. Fire suppression	
D. FLIGHT OPERATIONS	M
1. Use of checklist	
2. Cockpit coordination	
3. CHP 93N	
4. Instrument interpretation	
5. Off-site landing/departure	
6. Patrol techniques	
7. S.A.R. techniques	
8. Mission coordination	
9. Use of flight manual	
10. Communication management	
11. Inadvertent I.M.C. procedures	
12. Judgement of clearances	
E. SAFETY	M
1. Go/no go decisions	
2. Knowledge of A.L.S.E.	
3. Knowledge of human factors	
4. Risk assessment	
5. Cockpit decision making	
F. EMERGENCY PROCEDURES	M
1. Fire	
2. Pinch-hit (refer to CHP 93D or CHP 93E)	
3. Forced landing/precautionary landing	
4. Electrical failure	
5. Radio systems failure	
6. Unusual attitudes	
7. Engine failure	

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ANNEX J

CHP 93Q, FLIGHT OFFICER EVALUATION, *(continued)*

CRITICAL TASK	RATING	CRITICAL TASK	RATING
G. SPECIAL OPERATIONS (check as appropriate) ☑ Pursuit management ☐ Vehicle pacing ☐ Hover rescue ☐ External load ☐ Water rescue ☐ Night Sun ☐ Flir ☐ High altitude operations ☐ Officer back-up ☑ Other:	M	H. OVERALL EVALUATION 1. Safety practices 2. Collision avoidance 3. Judgement 4. Flight skills 5. Planning 6. Professional demeanor 7. Other:	M

COMMENTS

Prior to departing the airport, you completed written and oral examinations. You attained a score of 90% on the written test and demonstrated sufficient knowledge when responding to all oral questions,

As we prepared for flight, you performed a proper flight officer/paramedic preflight inspection of H-00 and provided me with a thorough passenger briefing. During the flight, you were tasked with a simulated suspect search, address and rural area navigation, multi-agency communications and coordinations, off-site operations, mission prioritization, and aircraft emergency procedures. Throughout the flight and during all of the scenarios, you were able to successfully demonstrate your ability to use proper CRM and multi-task while optimizing aerial services to those on the ground. Moreover, you effectively communicated with your pilot while always keeping flight safety as the overriding factor before making any decision. Nice job!

Officer John Doe, ID# 12345, has satisfactorily performed all required training and has successfully completed a flight officer Phase III flight evaluation. In accordance with HPM 100.7, Officer Doe is authorized to act as a departmental flight officer.

FLIGHT RESTRICTIONS

☐ None ☐ Reviewed ☐ Not Reviewed

FLIGHT OFFICER'S INITIALS	SUPERVISOR'S INITIALS	EVALUATOR'S SIGNATURE & I.D. NUMBER

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ANNEX K

HELICOPTER/AIRPLANE EMERGENCY EGRESS DEVICE TRAINING

This training shall be coordinated or conducted by OAO for a duration allowing completion of this phase. Recommended classroom and practical skills instruction training is 8 hours.

1. Introduction and initial briefing.

2. Course introduction and overview.

3. Video presentation.

4. Safety program briefing and checklist.

5. Introduction to water crashes, land crashes, specific airframe hazards, emergency exits, and reference points.

6. Aircraft water ditching, obstacles to escape submerged airframes, and methods of pool training.

7. Introduction to emergency breathing device, snorkels, effects of pressure, pressure at depth, air consumption, and pressure equalization.

8. HEED usage, preflight, and refill for pool training.

9. HEED escape procedures.

10. Aircraft water escape utilizing aquatic survival simulator and HEED.

11. Introduction to HEED usage for smoke filled cabin escapes.

12. Safety debriefing and critique.

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