



U. S. Department  
of Transportation  
**Federal Aviation  
Administration**

Great Lakes Region  
Illinois, Indiana, Michigan  
Minnesota, North Dakota,  
Ohio, South Dakota,  
Wisconsin

2300 East Devon Avenue  
Des Plaines, Illinois 60018

POLICY AND PROCEDURES MEMORANDUM - AIRPORTS DIVISION

NUMBER: PPM 5370.5A

DATE: December 30, 1999

SUBJECT: Construction Safety Phasing Plan

CANCELLATION: PPM 5370.5; dated April 1, 1992

REFERENCES: FAR Part 107, Airport Security

FAR Part 139, Certification and Operations: Land Airports  
Serving Certain Air Carriers

Advisory Circular 150/5200-18, Airport Safety Self-  
Inspection

Advisory Circular 150/5200-28, Notice to Airmen (NOTAMS) for  
Airport Operators

Advisory Circular 150/5210-5, Painting, Marking, and  
Lighting of Vehicles Used on an Airport

Advisory Circular 150/5300-13, Airport Design

Advisory circular 150/5340-1, Standards for Airport Markings

Advisory Circular 150/5340-24, Runway and Taxiway Edge  
Lighting System

Advisory Circular 150/5370-2, Operational Safety on Airports  
with Emphasis on Safety During Construction

Advisory Circular 150/5370-10, Standards for Specifying  
Construction on Airports

Great Lakes Region Planning and Coordination Procedures,  
"Desk Guide"

PPM 5370.2, Temporary Lighting and Marking (for construction  
or maintenance)

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State Aviation Directors (for information only through ADOs)

- APPENDICES:
1. Changes from Prior PPM
  2. FAA Construction Safety/Phasing Plan Review Checklist

1. Background. This PPM is intended to assist airport owners/consultants in preparing safety/phasing plans for Airport Improvement Program (AIP) projects and all other projects at airports open to the public. The goal is to ensure that these projects have a minimum impact upon aircraft operations and do not compromise, during construction, the safety of the aircraft using the airport, airport personnel, or the contractor's work force. To accomplish this goal, adequate planning of construction and operation procedures must be accomplished by Sponsors early in the design process and coordinated with the airport users and the FAA. A proper and well-prepared "Construction Safety/Phasing Plan" is essential for accomplishing this goal.

2. Policy/Procedures

a. All airport owner/tenant or any other proponent's projects involving construction on airports should incorporate a requirement to develop a Construction Safety Phasing Plan. This plan shall receive airspace approval from FAA based on coordination conducted in accordance with the "Desk Guide". A safety/phasing plan is not required for the following projects:

(1) Construction projects on airports that are to be temporarily closed, that do not have an Airport Traffic Control Tower, do not have FAA-owned Airway Facilities navigational equipment, and where a Notice to Airman (NOTAM) is issued stating that the airport is closed for construction. In addition, all non-Federally owned navigational equipment shall be turned off and notice of the facility shutdown shall be given to FAA, Operations Branch Manager, AGL-470 (phone: 847-294-8470) twenty-four (24) hours prior to the start of construction.

(2) Maintenance projects that only require intermittent airport closures (less than 24 hours), such as pavement crack sealing, marking, repair to lighting circuits, and other routine maintenance type projects. Associated Navigational Aids should be turned off and an appropriate NOTAM, stating that the airport is temporarily closed, must be issued prior to commencing any maintenance work. If intermittent airport closures will occur on more than one day and Navigational Aids are to be turned off, notice of the facility shutdown shall be given to FAA, Operations Branch Manager, AGL-470 (phone: 847-294-8470) twenty-four hours prior to the start of construction.

**NOTE:** If the temporary or intermittent airport closure involves the shutdown of a Navigational Aid for terminal and enroute navigational procedures (example: an on airport VOR that serves other airports or has multiple users), it will require a construction safety/phasing plan and airspace approval from the FAA.

b. The ADO should require the airport sponsor to develop a "Construction Safety Phasing Plan" as part of its contract specification. This plan should include all safety requirements relating to the project. It should be a separate document, in a separate section, that is identified in

the index, and easily identifiable (perhaps a different color of paper). The plan should include, as a minimum, specific references to appropriate safety provisions incorporated in current editions of AC 150/5370-10, Standards for Specifying Construction of Airports; AC 150/5370-2, Operational Safety on Airports with Emphasis on Safety During Construction; AC 150/5370-18, Airport Safety Self-Inspection; FAR Parts 139 and 107, and other safety items discussed at the predesign conference or provided by FAA during design of the project. It must also consider the security requirements imposed by FAR Part 107, if applicable. When requested, the plan should be submitted with the "FAA Construction Safety/Phasing Plan Review Checklist" (See Appendix 2.).

c. The minimum clearances from operational areas are provided by Advisory Circular 150/5370-2. Some of the items that should be considered and included in the plan when appropriate are:

(1) Construction

(a) The sequence of construction phases with particular emphasis given to work and areas that will impact aircraft operations.

(b) A description of the aircraft operational constraints during construction within the operational areas and the means to be used, if feasible, to provide for continued operations on the airport.

(c) A description of any necessary special routing of aircraft and/or timing of construction activities, considering airline schedules and lead time for clearance of operational areas of construction equipment.

(d) A possibility may exist that the contractor will be required by the control tower, due to certain weather conditions, to release the work area for aircraft operations. Indicate the time period which the contractor has to clear the work area.

(e) Accelerated construction schedules (i.e., 12 hour, 16 hour, or 24-hour workday) for any phase of the project should be identified.

(2) Marking and Lighting (compliance with AC 150/5340-1 and AC 150/5340-24, to the extent feasible, is encouraged)

(a) Temporary threshold displacements (AC 150/5300-13, Appendix 2 and PPM 5370.2) or temporary runway ends, including their marking and lighting.

(b) Temporary or permanent runway or taxiway closing, including marking.

(c) Installation and maintenance of marking and/or lighting for threshold displacement, or closing of runways and taxiways.

(d) Identify useable runway lengths based on temporary runway end(s).

(e) Identify signage changes that are necessary for temporary displaced thresholds, temporary runway ends, and closed runways and taxiways.

(3) Traffic Control

(a) The requirement of signal persons or vehicular traffic control at point(s) of conflict between aircraft and surface vehicle(s) designated routes. The designated routes should include the contractor access routes to parking areas, material storage sites, and construction areas.

(b) The marking and/or lighting of construction equipment and vehicles for construction operations on the movement areas (compliance with AC 150/5310-5B, to the extent feasible, is encouraged).

(c) The parking areas for construction equipment and contractor vehicles when not engaged in construction during non-work time periods. Establish minimum distance restrictions, particularly in aircraft operational areas.

(d) Any required communications between construction or inspection forces and ATCT, FSS, or airport operator.

(e) Establish the maximum height above ground of contractor equipment, including cranes and batch plants. Areas should be identified where height restrictions exist. The maximum equipment heights for all haul routes should be identified.

(4) Construction Control

(a) Location of auto parking lot for use of contractor's employees and access from public roadways.

(b) Marking and lighting of construction areas shall be in accordance with PPM 5370.2. Utilize barricades, flashers, flags, markings, etc.:

1. To prevent aircraft from taxiing on to a closed runway, taxiway, or apron.

2. To outline construction/maintenance areas which are accessible to aircraft, persons, or vehicles.

3. To identify isolated hazard areas such as open manholes, ditches, potholes, small areas under repair, stockpiled material, waste areas, etc.

4. To identify FAA, airport, and National Weather Service facilities, cables, power lines, navigational aid critical areas, and other sensitive areas, in order to prevent damage, interference, and facility shutdowns.

(c) On-site location of construction areas.

- (d) On-site location of contractor's construction office.
- (e) On-site location of contractor's plant.
- (f) On-site designation of waste areas.
- (g) On-site location of haul roads.
- (h) On-site waste disposal.
- (i) Clearing of airfield pavements affected by construction activities.
- (j) Access from public roadways to construction area and construction office.
- (k) Notices to Airmen (NOTAM) (AC 150/5200-28B). Airport owners are expected to make known any condition that would prevent, restrict, or present a hazard to aircraft operations. This notification is normally accomplished by the NOTAM system. The same notice is required when the condition has been corrected or otherwise changed.

1. The safety/phasing plan shall include the specific procedures for issuing NOTAM's, the lead time requirements, and the contact person(s).

2. A request for a NOTAM for a temporary runway end shall advise the flight service station specialist that a portion of the runway is closed and that the runway is now \_\_\_\_ feet in length.

(5) NAVAIDS

(a) The effect of proposed construction on instrument approach procedures and takeoff or landing minimums.

(b) The identification of NAVAID critical areas (AC 150/5300-13, Chapter 6) and the time sequence of contractor activities related to the required shutdown of a NAVAID system to minimize the facility shutdown time.

(c) Requirements for protecting navigational aid service cables and facilities to include FAA and National Weather Service facilities.

(d) Requirement for providing line of sight from ATC.

(e) Issuing NOTAM's for federally owned NAVAIDS is usually the responsibility of the FAA, unless it is delegated to the airport owner.

(6) Construction Techniques.

(a) Tapering of pavement for temporary use. Scheduling construction which cause pavement "drop off" or "lips" at pavement tie-in areas or where undercutting is required.

(b) Use of accelerates in concrete to reduce construction time.

(c) Production of local concrete or asphalt plants.

(7) Security (FAR Part 107, where applicable)

(a) Impact on security procedures.

(b) Impact and relocation of security barriers.

(8) Part 139 Requirements

d. The sections of FAR Part 139 applicable to construction projects on certificated airports are as follows:

Section 139.305 Paved areas - runways, taxiways and ramps; no greater than 3" lips; no hole deeper than 3" nor larger than 5" in diameter; remove mud, dirt, sand, loose aggregate, debris, etc.

Section 139.307 Unpaved areas - runways, taxiways, and ramps shall be repaired.

Section 139.309 Safety areas - no hazardous surface variations; objects should be frangibly mounted.

Section 139.311 Marking and lighting - runway, threshold and taxiway markings clear and visible; lighting operation; temporary signage changes and temporary signage plan revisions.

Section 139.319 Aircraft rescue and fire fighting: operational requirements - access routes adequate to meet response time.

Section 139.323 Traffic and wind direction indicators - operational.

Section 139.327 Self-inspection program - correct unsafe conditions; dissemination of information to air carriers.

Section 139.329 Ground vehicles - vehicles are radio controlled, or escorted by a radio-equipped vehicle, or controlled by other procedures acceptable to FAA. Control pertains to vehicles on runways, taxiways, or safety areas.

Section 139.331 Obstructions - penetrations to FAR Part 77 surfaces.

Section 139.339 Airport condition reporting - NOTAMS

Section 139.341 Identifying, marking, and reporting construction and other unserviceable areas - adequately marked and lighted construction areas and equipment.

A handwritten signature in cursive script, appearing to read "Jeri Alles", with a horizontal line extending to the right.

Jeri Alles  
Manager, Airports Division

APPENDIX 1

CHANGES FROM PRIOR PPM

1. PPM 5370.5A incorporates the appropriate Policy Guidance contained in Guidance Memorandum GM 96-3, Safety During Construction (Hazard Marking), issued April 12, 1996 and GM 97-2, Safety Plans for closed Airports, issued July 22, 1997.
2. Background changed to clarify intended use of the PPM, as requested by the CHI-ADO.
3. References to relocated thresholds have been removed.
4. AC references included where it is appropriate to do so.
5. APPENDIX 2. "FAA Construction Safety/Phasing Plan review Checklist" has been added.



**APPENDIX 2  
FAA CONSTRUCTION SAFETY/PHASING PLAN  
REVIEW CHECKLIST**

PURPOSE: When requested by FAA ADO/block grant state or other authorized State Agency, this checklist is to be completed by the sponsor/consultant for all FAA funded projects. Submit the checklist along with safety/phasing plan not less than eight (8) weeks prior to the proposed bid advertisement date. This will allow inclusion of any airspace review comments in the bid documentation.

AIRPORT:		FAA/AIP PROJECT #
LOCATION: (City), (State)		
<u>DESCRIPTION OF WORK:</u>		
PROPOSED BID ADVER- TISEMENT DATE:	PROPOSED BID OPENING DATE:	PROPOSED CONSTRUC- TION START DATE:

**ACCEPTABLE**

ITEM	YES	NO	N/A
<b>A. SAFETY PLAN NARRATIVE</b>			
1. type of critical aircraft operations during construction			
2. basis for temporary displaced or temporary thresholds			
3. basis for deviating from standards			
4. type and height of construction equipment			
5. dates for start and completion of work or number of construction days			
6. specify daytime/nighttime closures			
<b>B. SAFETY PLAN</b>			
1. construction limits for each phase (refer to AC 150/5370-2C)			
2. applicable OFZ surfaces			
3. phase sequencing			
4. notification requirements			
5. haul routes for each phase			
6. equipment storage areas identified			
7. height restrictions shown			
8. all affected NAVAID critical areas depicted			
9. all affected airport structures depicted with elevations			
<b>C. TEMPORARY DISPLACED THRESHOLD OR TEMPORARY RUNWAY END PLANS</b>			
1. runway end and proposed threshold stationing			
2. proposed threshold approach surface			
3. marking and lighting depicted			
4. schedule for implementing threshold			

5. jet blast considered in location			
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<b>D. TEMPORARY MARKING AND LIGHTING PLANS</b>			
1. barricade locations shown			
2. barricade materials depicted			
3. responsibility for marking and lighting shown			
4. details for temporary marking materials shown			
5. temporary marking shown in accordance with AC 150/5340-1G			
6. temporary lighting shown in accordance with AC 150/5340-24 and PPM 5370.2B			
7. Temporary signage shown on plan			
8. Temporary signage plan approved by FAA			
<b>E. NUMBER OF PRINTS OF PLANS SUBMITTED</b>			
1. State	#		N/A
2. FAA ADO			
3. FAA Flight Standards			
4. FAA Air Traffic			
5. FAA Airway Facilities			
6. other:			
7. other:			
Total # of Prints:			
PREPARED BY:			
REPRESENTING:		DATE:	
TELEPHONE #:			

**REMINDERS**

DOs

1. Sponsor/consultant must send to the FAA ADO/block grant state or other authorized State Agency the appropriate number of plans and supporting documents for processing, i.e. one (1) for FAA ADO/block grant state or other authorized State Agency and one (1) for each office reviewing the plan.
2. Sponsor/consultant must complete checklist and submit with Safety Phasing Plan to the FAA ADO/block grant state or other authorized State Agency.
3. Safety Phasing Plan must reference AC 150/5370-2C, "Operation Safety on Airports During Construction."

DON'Ts

1. Do not begin construction activity until Safety Phasing Plan review comments have been received by the sponsor/consultant from the FAA ADO/block grant state or other authorized State Agency.