2023

Airport Master Record Seminar

Airport Inspection Overview

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Administrative Announcements

- Cell phones off or on vibrate.
- Restrooms are located…..

Welcome & Introductions

Introduce yourself to the group.

1. Name and Job Title
2. Years in aviation
3. Tell us about your states inspection program (Unique challenges, # of inspections, etc)
4. The one thing you want to learn here
5. One interesting fact about yourself

Federal Aviation Administration

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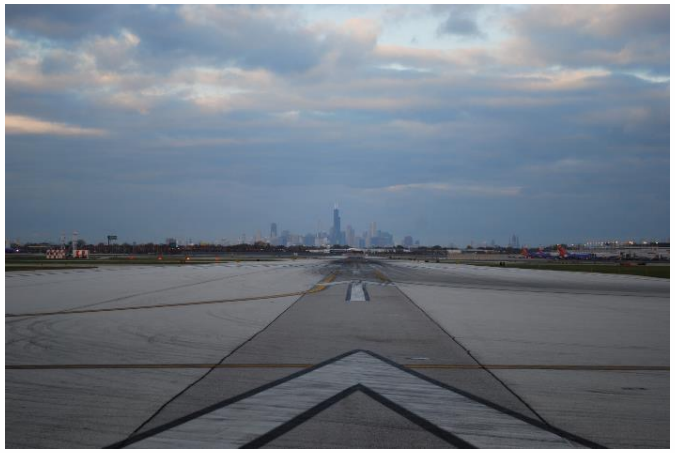

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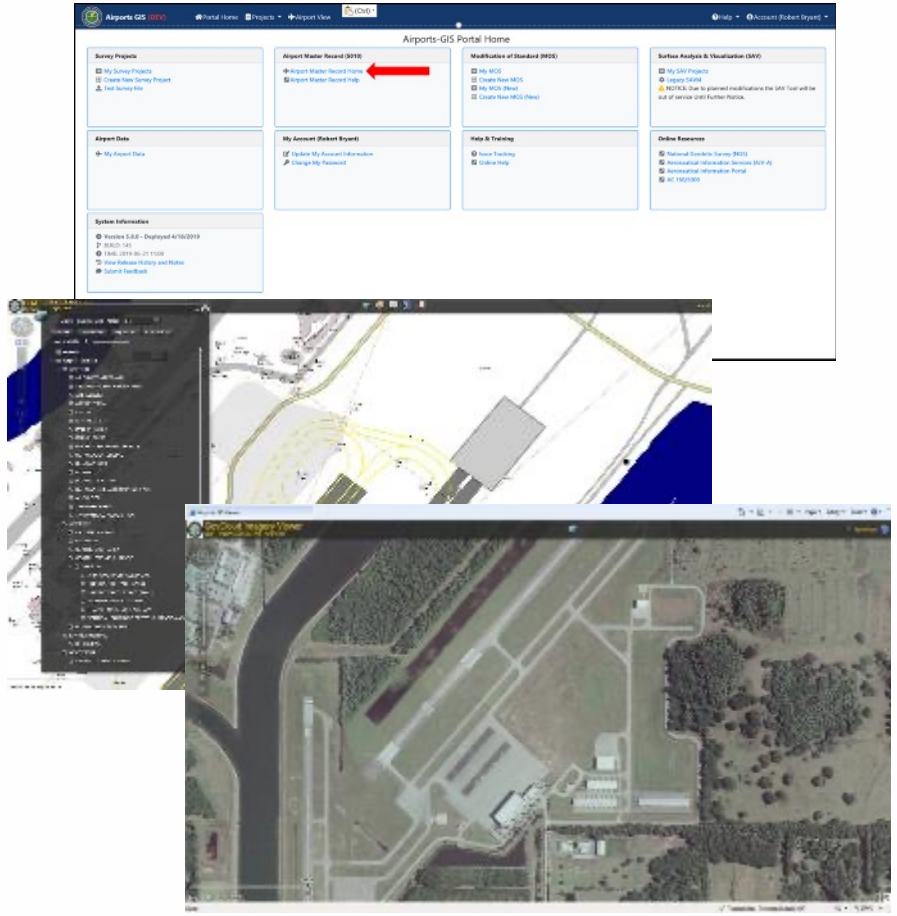
Airport Data and Information Portal (ADIP)

https://adip.faa.gov/agis/public/#/public

- Provides a single portal for the collection and management of airport data
- Allows the FAA and airports to collaborate more effectively and efficiently on airport planning, design, operations and maintenance decisions.
    - Airport Master Records (AMR) Module
    - Digital 7480-1 Module
    - Airports GIS Survey Module
    - Modification to Standards (MOS) Module
    - Runway Airspace Management (RAM) Module
    - Runway Incursion Mitigation (RIM) Program
    - Runway Safety Area (RSA) Module
    - Airport Documents and Plans



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National Airspace System Resources (NASR)

Aeronautical Data Team (ADT, formerly NFDC) maintains

- The National aeronautical information database
- The National Airspace System Resources (NASR)
- Provides aeronautical information to government, military, and private producers of aeronautical charts, publications, and flight management systems.

National Airspace System Resources (NASR)

Database element examples

- Airport Data
- Runway Data
- Remarks Data
- Navaids Data
- Airspace Fixes
- Holding Patterns
- Victor Airways
- Jet Airways
- Parachute Jump Areas
- US Location Identifiers (LOC IDs)
- Preferred Routes
- Restricted Areas
- Special Use Airspace
- Military Opns Areas

Upcoming Changes

- Official OMB 5010 Form Designation
- Advisory Circular 150/5300-19: *Airport Data and Information Program*
  - This AC provides standards, recommended practices, and automation capabilities for inspectors and airport owners/managers to manage their data within the Airport Data and Information Portal (ADIP) application to communicate changes to the FAA's authoritative source, which is the designated repository for authoritative data describing the physical infrastructure, characteristics, services, and operational environment of the nation's airports.

- The ADIP site is located at: https://adip.faa.gov/agis/public/#/

ADIP Program

- Enables state airport inspectors to edit data and submit inspections for their Public Use airports
- Enables airports and their sponsors/consultants to submit and manage airport data, transparently and in a single location
- Reduces the manual coordination necessary to make airport data revisions
- Provides private use facilities a way to keep their airports active and charted
- Must be OWNER/MANAGER (or Airport Staff) listed on current Airport Master Record (5010) form to gain access to system
    - Ability to designate responsible party

Airport Inspection Topics

- Paved areas
- Unpaved areas
- Safety areas
- Markings, signs, and lighting
- Traffic and wind direction indicators
- Handling and storing of hazardous substances and materials
- Obstructions
- Navaids
- Wildlife
- Public Protection
- Construction

Paved Areas

- Check for pavement lips greater than 3 inches
- Cracks which can cause lack of directional control
- Holes which can cause lack of directional control (less than 5” diameter, 3” deep, 45 degree side slope)
- Pavement condition
- Vegetation

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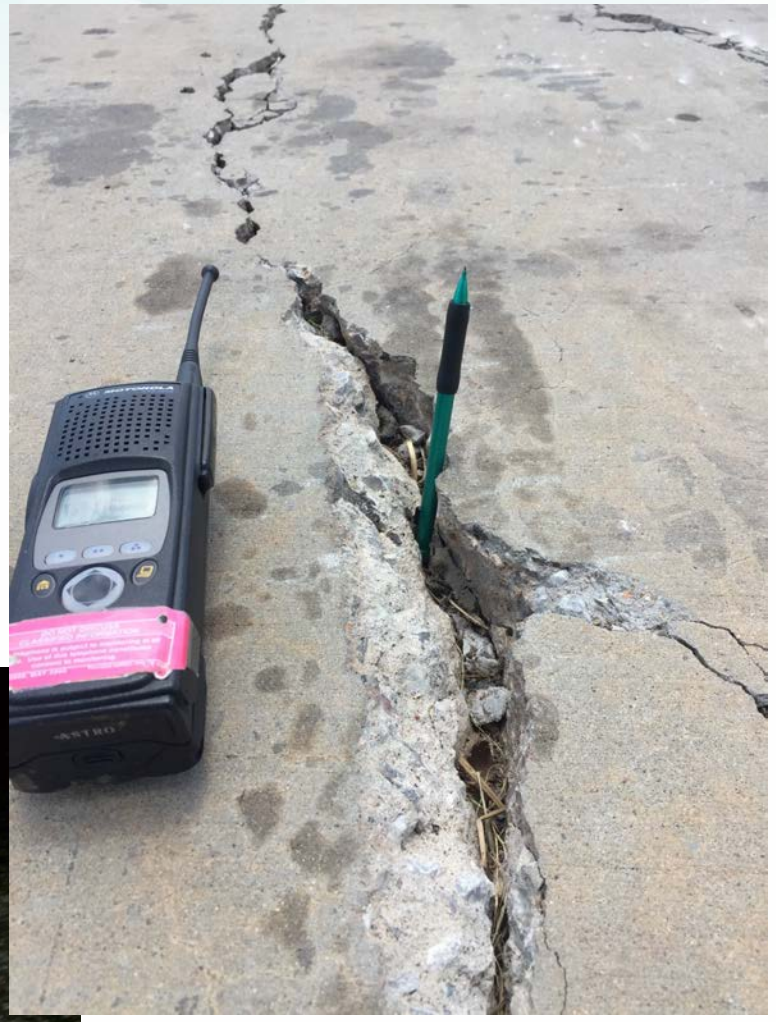

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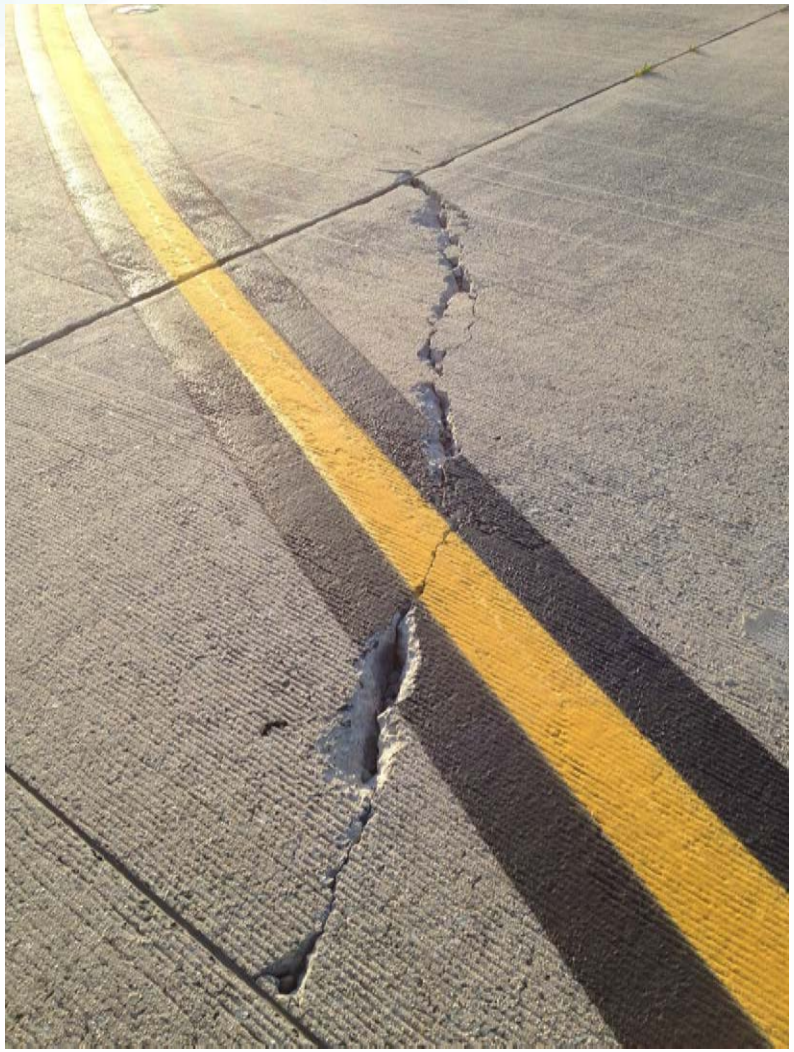

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Pavement condition Types

- E-EXCELLENT= Excellent Condition: New pavement or pavement with no cracks or a few hairline cracks.
- G-GOOD= Good Condition: Some cracking of the pavement. Cracks are generally spaced more than 50 feet apart. Less than 10% of the cracks and joints need sealing. There is minimal or slight raveling. There is no distortion, and the patches are in good condition.
- F-FAIR= Fair Condition: Some cracking and raveling. Cracks are generally spaced less than 50 feet apart. Joint and crack sealing is needed on 10% to 25% of the cracks and joints. There is isolated alligator cracking, the patches are in poor condition, and/or there are crack settlements up to 1 inch.
- P- POOR= Poor Condition: Widespread, open, unsealed cracks and joints. There are cracks over one half inch wide with raveling in 25% of the cracks. Cracks are generally spaced 5 to 50 feet apart with surface and slab spalling. Alligator cracking or patches are in poor condition and cover up to 20% of the surface or there is vegetation through the cracks and joints. If the condition is listed as poor, a referenced A033 remark is required.
- L- FAILED= Failed Condition: Widespread severe cracking and distortion over 2 inches. Alligator cracking over 20% or more and widespread vegetation growth in the pavement cracks. Slabs are extensively cracked and shattered with severe spalling and faulting over one half inch. If the condition is listed as failed, a referenced A033 remark is required.

Condition- Excellent

E = Excellent Condition:

New pavement or pavement with no cracks or a few hairline cracks.

Condition- Good

G = Good Condition:

Minimal or slight raveling
No distortion
Patches in good condition

Some cracks – less than
10% of cracks & joints
need sealing

Cracks - more than 50 feet apart

Condition- Fair

F = Fair Condition:

Some cracking and raveling
Cracks less than 50 ft apart
Joint and crack sealing needed
on 10% to 25% of cracks and joints.

Isolated alligator cracking
Patches in poor condition,
Crack settlements up to 1 inch.

Condition- Poor

P = Poor Condition:

Widespread, open, unsealed cracks / joints
Cracks < ½-inch wide
Raveling in 25% of the cracks.
Cracks 5 to 50 ft apart
Surface and slab spalling.

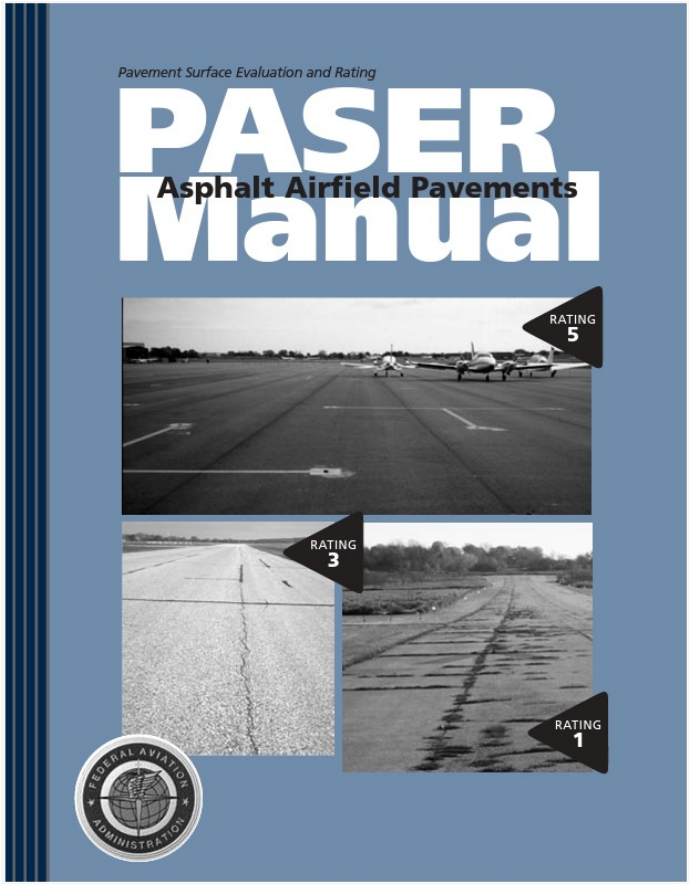
Condition- Fail

L = Failed Condition:

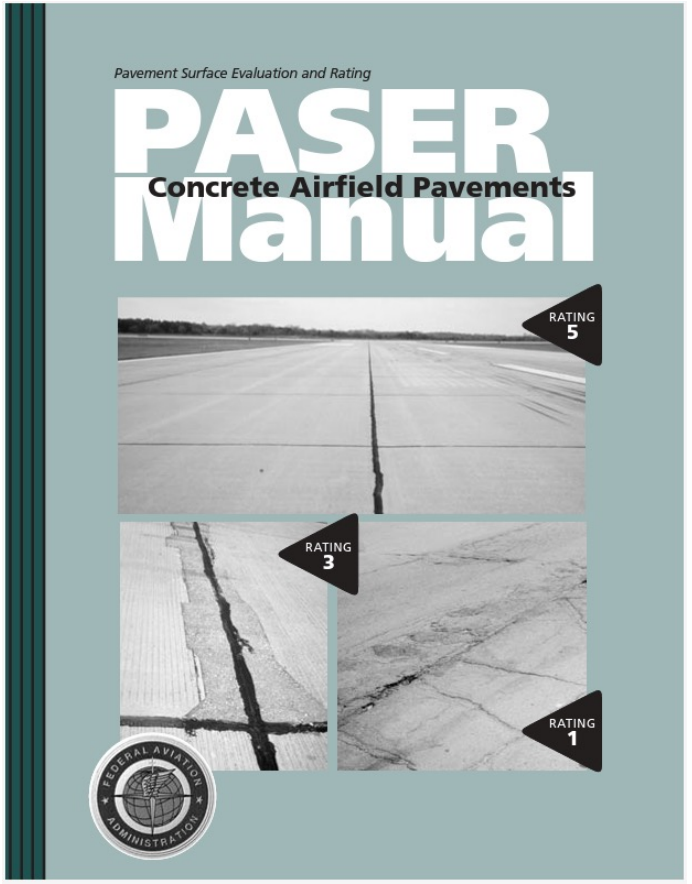
Widespread severe cracking & distortion > 2 “
Alligator cracking > 20%
Widespread vegetation
Slabs extensively cracked / shattered
Severe spalling and faulting

AC 150/5320-17A Airfield Pavement Surface Evaluation and Rating Manual

Appendix A



Appendix B



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Surface Treatment

Types of pavement surface treatment

- GRVD = Grooved-Saw-Cut or Plastic Grooved
- PFC = Porous Friction Course
- AFSC = Aggregate Friction Seal Coat
- RFSC = Rubberized Friction Seal Coat
- WC = Wire Comb or Wire Tine
- NONE = No Surface Treatment

Unpaved Areas

- Full strength surface must be adequately compacted and sufficiently stable to prevent rutting by aircraft.
- No slope from full strength surfaces greater than 2:1
- Check for holes or depressions that could cause loss of directional control

Safety Areas

- Dimensions vary based on runway approach category, design group, and visibility minimums
- Check to make sure area is graded properly and free of ruts, depressions, humps, or variations from the normal smooth surface
- Free of unnecessary objects
- Check manhole covers to ensure they are at grade and can support vehicles and aircraft
- No lips greater than 3in from based of objects


A 35

Markings

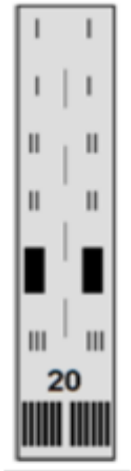
- Check markings for correct color-coding, peeling, blistering, chipping, fading, and obscurity due to rubber buildup.
- Check markings for glass bead reflectivity

Runway Marking Type

- BSC = Basic (number and centerline)
- PIR = Precision Instrument
- NPI = Non-Precision Instrument
- NRS = Numbers Only (no centerline)
- NSTD = Non-Standard
- BUOY = Buoys (for waterways and seaplane bases)

Refer to AC 150/5340-1, Standards for Airport Markings.

Runway Marking Type

	Threshold Approach Category		
RWY surface marking scheme	**Visual apch**	**Non-Precision apch**	**Precision Apch**
		Apch w/ vertical guidance not less than ¾ mile vis.	Apch w/ vertical guidance lower than ¾ mile vis.
Rwy diagram			
Landing Designator	Required	Required	Required
Centerline	Required	Required	Required
Threshold	Note 1	Required	Required
Aiming Point	Note 2	Note 3	Required
Touchdown Zone	(not applicable)	(not applicable)	Required
Edge Mkg	Note 4	Note 4	Required

Notes:
1 Req'd on rwys serving apch cat. C & D airplanes & for rwys used by int'l com'l air transport.
2 Req'd on 4,200 ft or longer rwys serving apch categories C & D airplanes
3 Req'd on 4,200 ft or longer instrument rwys
4 Used when full pavement width may not be available for use as rwy
Jan 2018

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Runway Markings

- Markings are white.
- Consist of a number with one or two digits. If a parallel runway, will also include a letter (L/C/R)
- Single-digit RY number never preceded by a zero.
- Glass beads can be used in all white markings to increase visibility
- Black outlining helps increase contrast with light colored pavement

Runway Markings

Paint a Black Border

Pavement Surface Type	Age of Pavement Surface		
	New	Up to 2 years old	Over 2 years old
Portland Cement Concrete	Yes	Yes	Yes
Asphalt Concrete	No	No	Yes
Asphalt Treated	No	No	Yes

Where Required	Where Recommended
• All holding position marking • Enhanced Twy centerlines • Non-movement area boundary markings • SMGCS Twy centerlines • Surface painted holding signs • Intermediate holding position • Geographic position marking (see AC150/5340-1L, 4.11(d)) • All runway markings *except* edge markings	• Taxiway centerlines • Taxiway edge markings • Chevrons • Shoulder markings

Runway Marking Condition

G = Good

F = Fair

P = Poor

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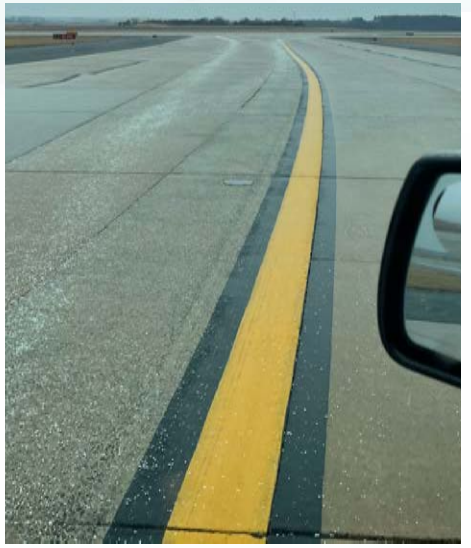
Taxiway Markings



- Markings are yellow
- Centerlines are single yellow line. Enhanced centerlines start 150ft prior to runway hold bar
- Edge lines are either solid or broken double lines
- Glass beads can be applied to the yellow paint

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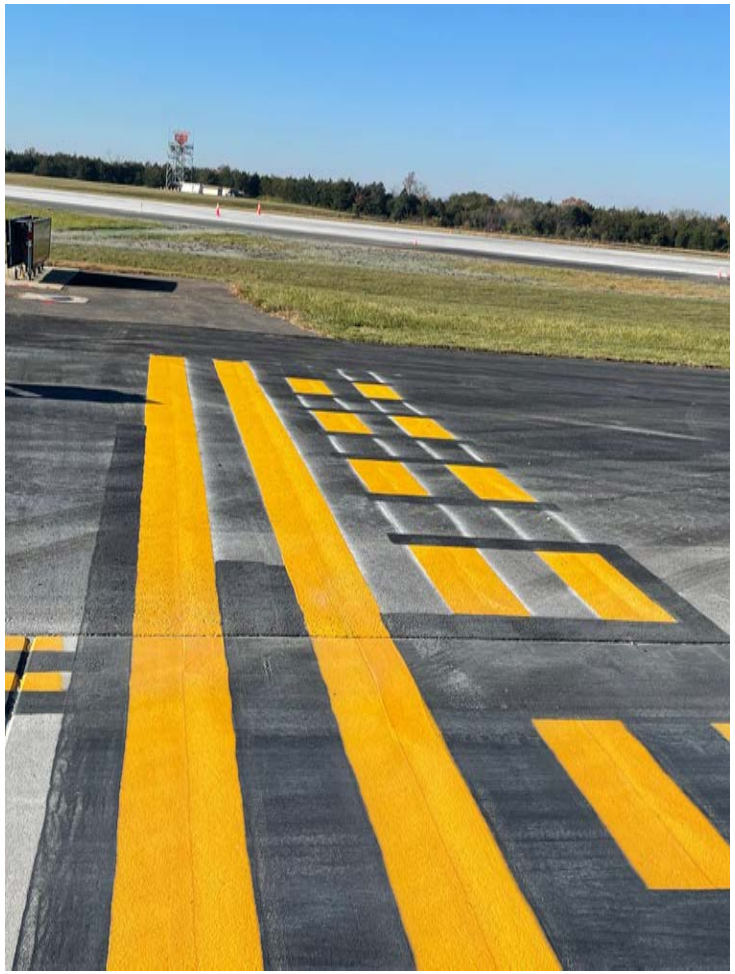
Runway Hold Bar

- Markings are yellow
- Consist of two solid lines on the taxiway side and two broken lines on the runway side
- Can be located with a surface painted holding position sign



Signage

- Check signs to ensure easy to read, retroreflective, meet standards
- Lights signs are working and not obscured by vegetation, dirt, snow, etc
- Check to see that sign panels are not missing or damaged, that they have the correct legend and arrow orientation and that they are not cracked or broken

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Airfield Sign Types

- Location signs are Black with a yellow inscription
- Directional signs are Yellow with a black inscription
- Distance remaining signs are Black with a white inscription
- Destination signs are Yellow with a black inscription
- Runway Mandatory hold signs are Red with a white inscription

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Lighting

- Check if operable, correct color, and not obscured by vegetation or foreign material.
- Check aim/alignment
- Check PCL, if equipped.
- Frangible bases less than 3” above grade

Airfield Lighting

- Runway lights are white. Edge lights turn to amber the last 2000ft
- Centerline lights can starting alternating red and white the last 3000ft and turn solid red the last 1000ft.
- Taxiway edge lights are blue. Taxiway centerline lights are green.
- If installed, runway guard lights are yellow.

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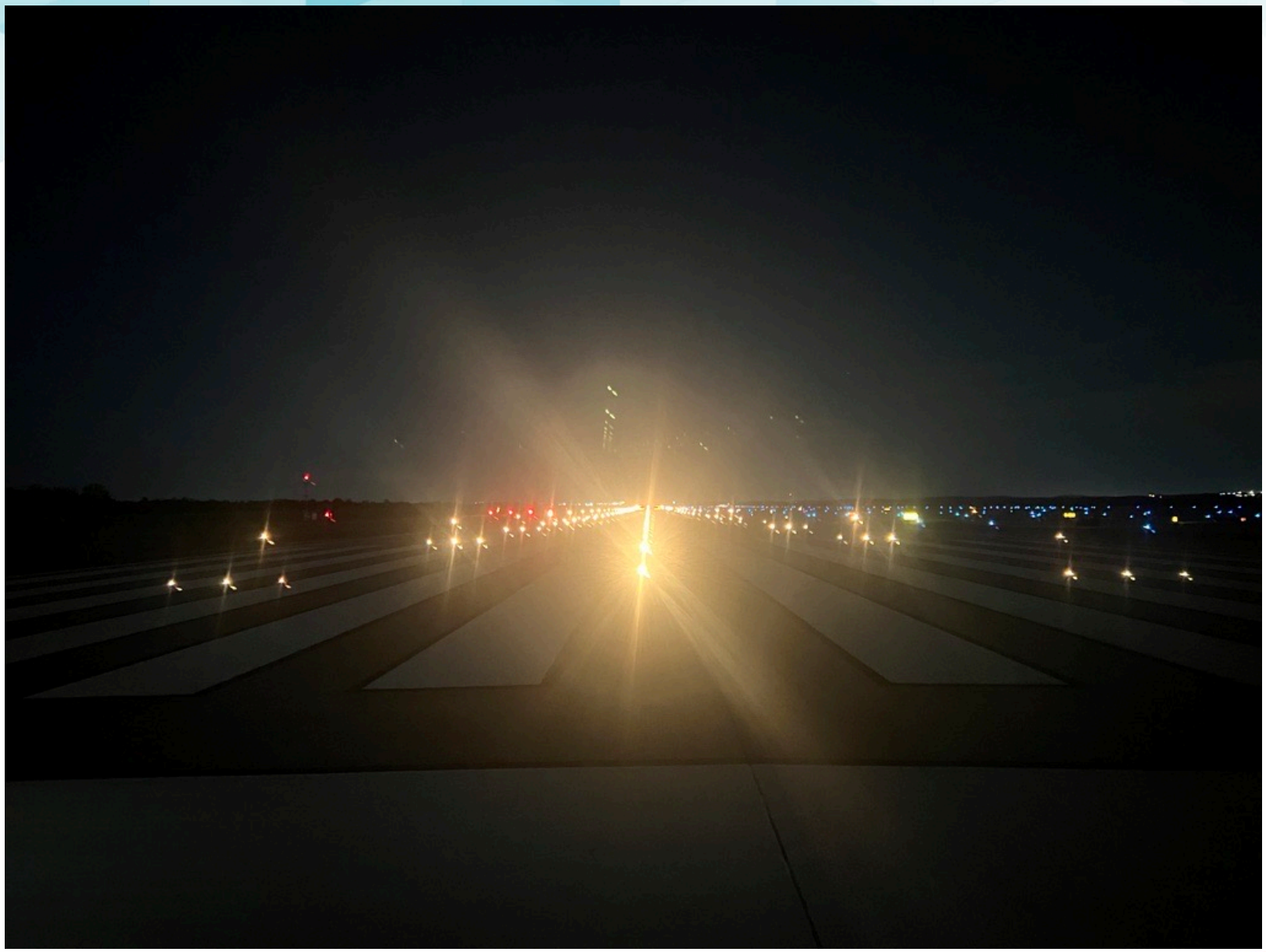
Lights off

Step 1

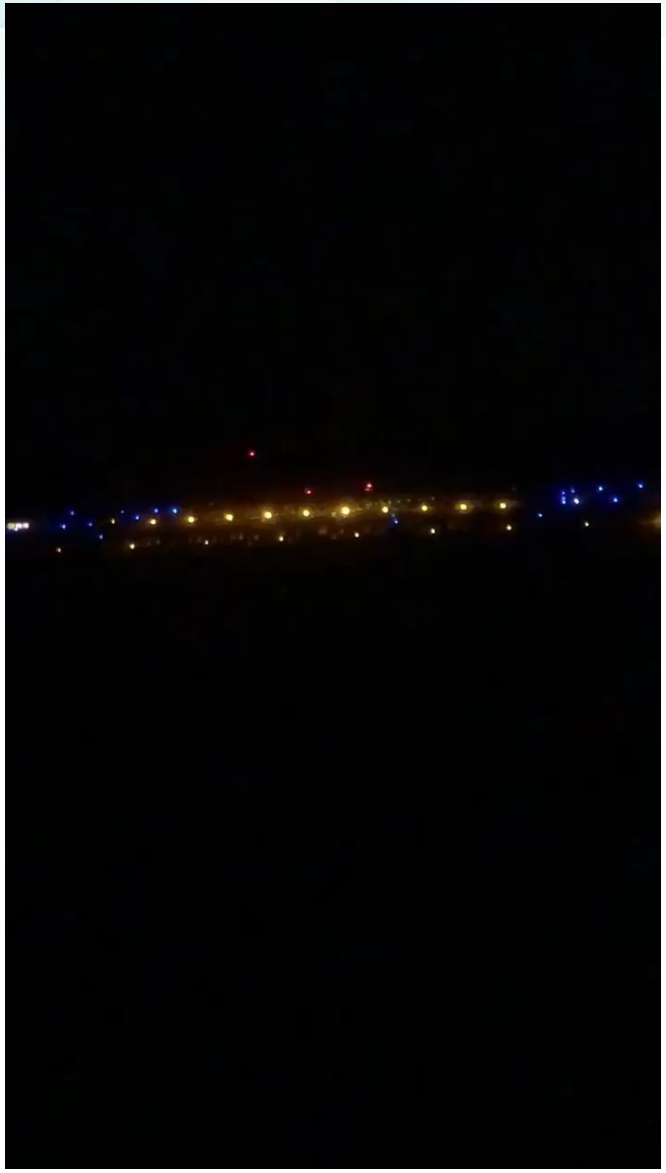
Step 2



Step 3

Step 4

Step 5



Traffic and Wind Indicators

- Check the wind cone(s) to ensure that it swings freely, the cone fabric is not faded or frayed, and, if lighted, that all lights are operating.
- If non-towered, check segmented circle

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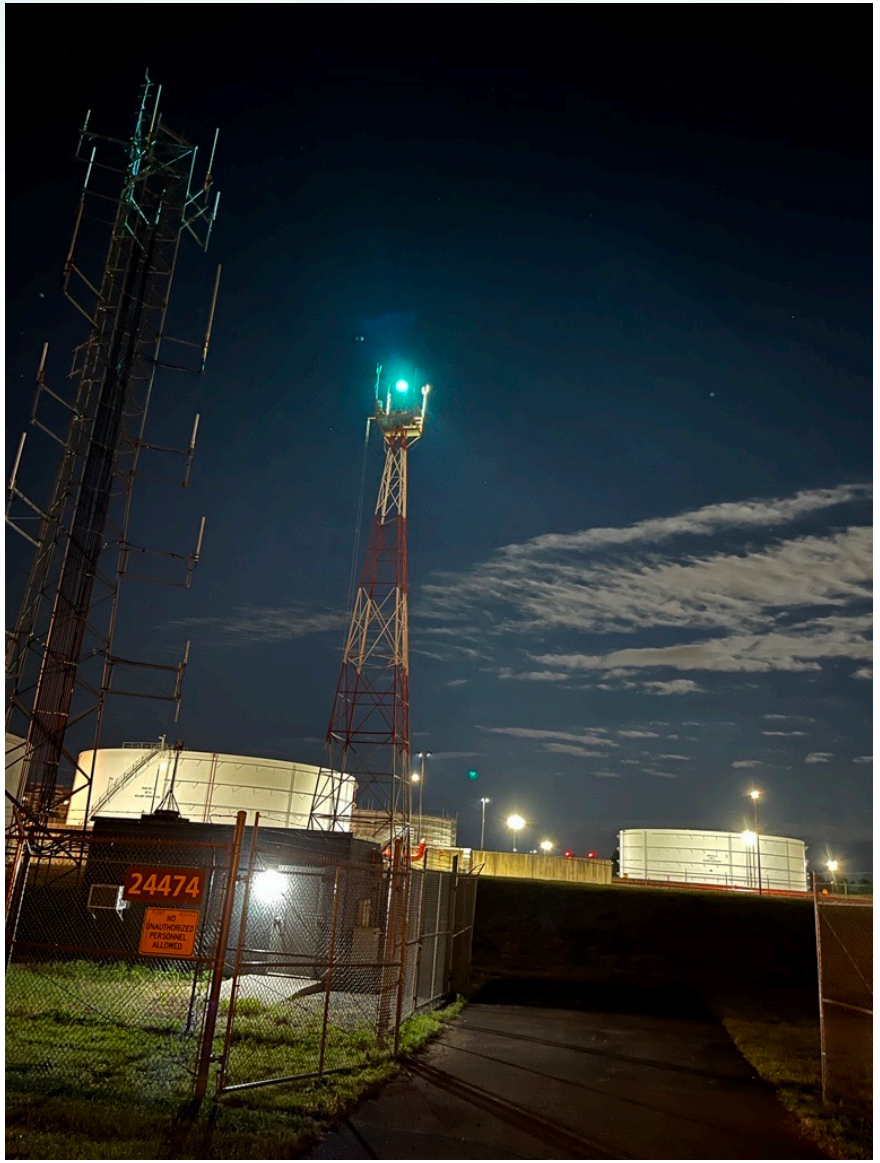
Navaids

- Check that the rotating beacon is visible and working properly
- Check that the REILS are flashing in proper sequence
- Check VGSIs and approach lighting, if applicable.

Airport Beacon

- Y = YELLOW
- W = WHITE
- WY = WHITE YELLOW (Seaplane Base)
- WGY = WHITE-GREEN-YELLOW (Heliport)
- WG = WHITE GREEN (Civil Airport)
- SWG = SPLIT-WHITE-GREEN (Military Airport)
- Blank = NONE (No beacon)



Approach Lights (APCH Lights)

ALSF = 3000’ long

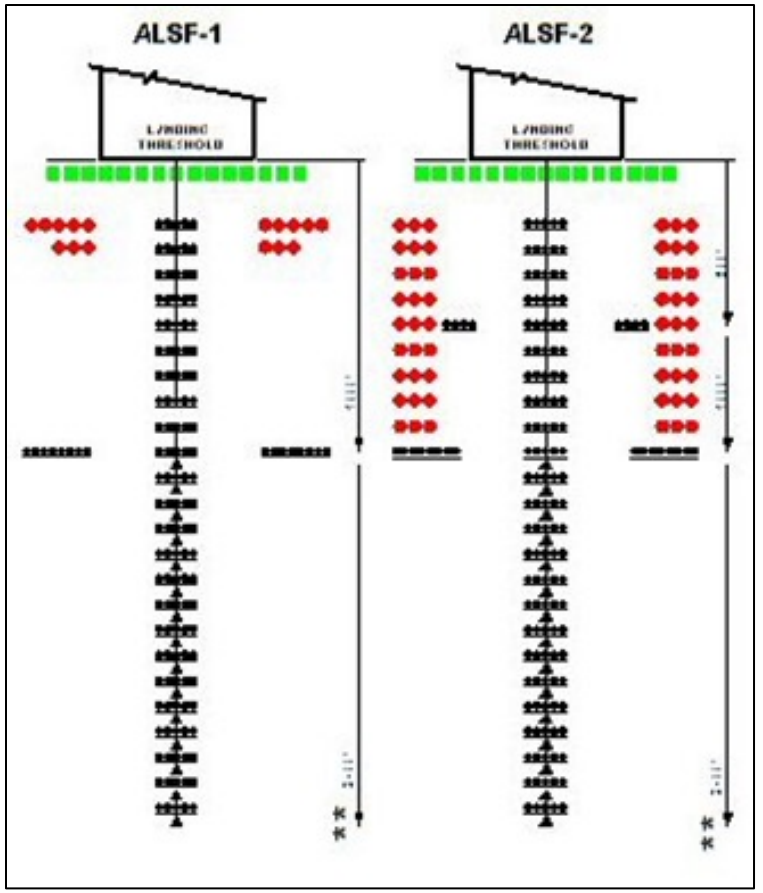
High Intensity Approach System With Centerline Sequence Flashers

ALSF1 = Standard 2,400’ long

High Intensity Approach System With Sequenced Flashers - Category I Configuration

ALSF2 = Standard 2,400’ long

High Intensity Approach System With Sequenced Flashers - Category II or III Configuration

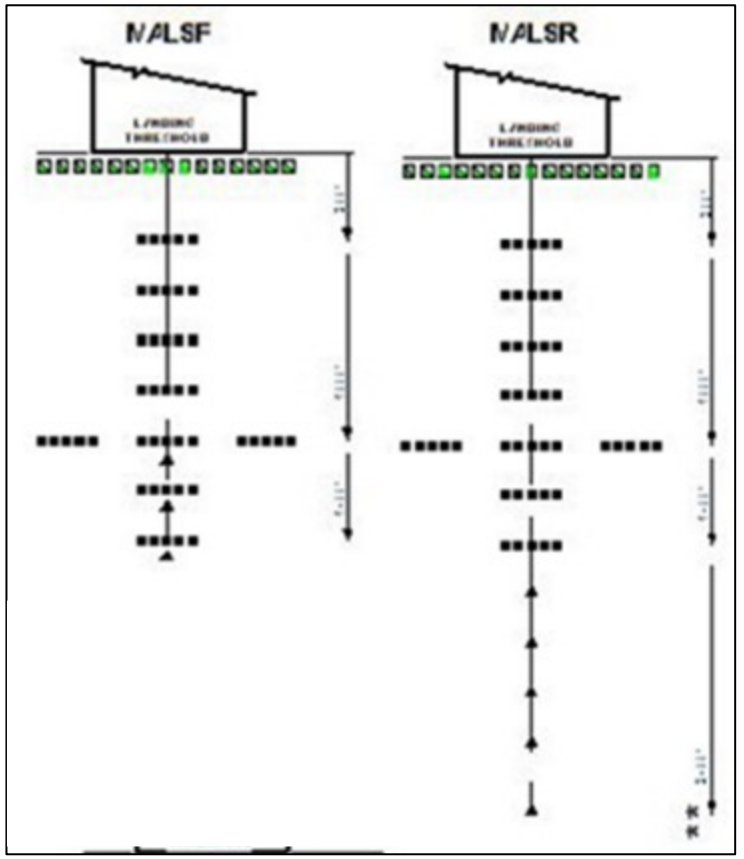


Approach Lights (APCH Lights)

MALS = 1,400’ long Medium Intensity Approach Light System

MALSF = 1,400’ long Medium Intensity Approach Light System With Sequenced Flasher Lights

MALSR = 2,400’ long Medium Intensity Approach Light System With Runway Alignment Indicator Lights

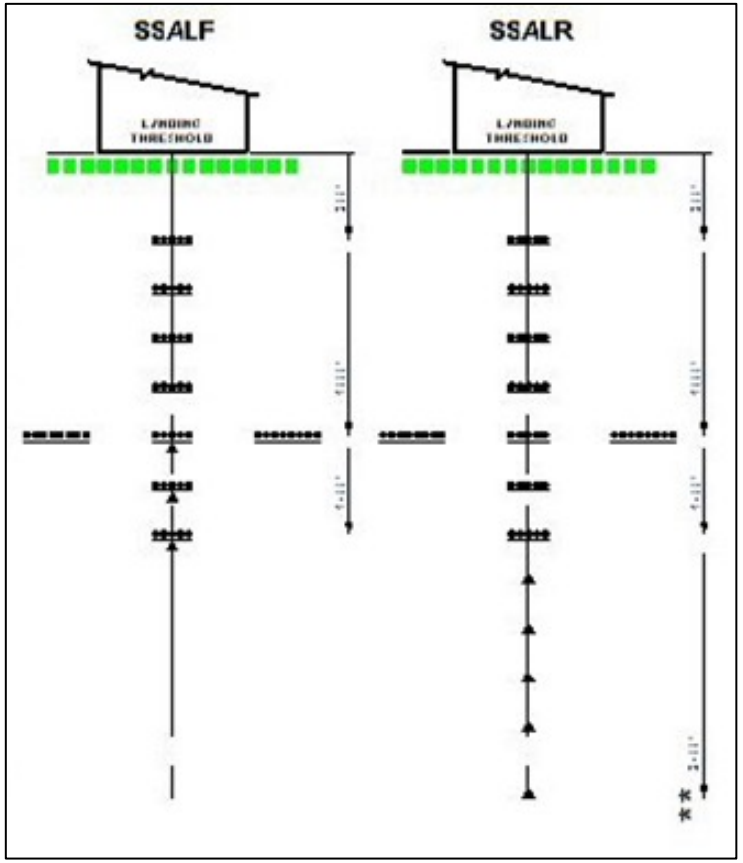


Approach Lights (APCH Lights)

SSALS = Simplified Short Approach Lighting System

SSALF = Simplified Short Approach Lighting System With Runway Sequenced Flasher Lights

SSALR = Simplified Short Approach Lighting System With Runway Alignment Indicator Lights



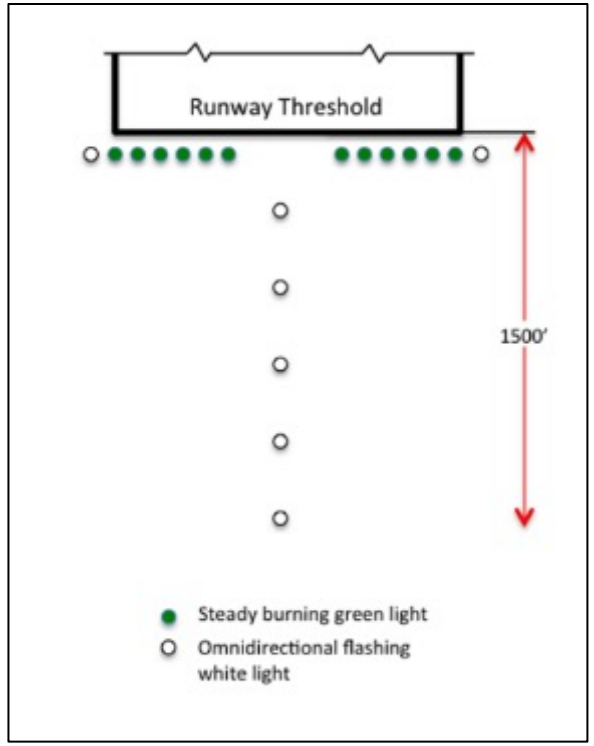
Approach Lights (APCH Lights)

ODALS = Omni-Directional Approach Lighting System. Do not show REIL in addition to ODALS because the REIL are part of this system.

LDIN = Lead-In Light System

NSTD = All Others are Non-Standard

NONE = No Approach Lighting System is Available



Fueling/Hazardous Materials

- Determine if the fueling operator is permitting any unsafe fueling practices or is in violation of local fire code, such as failure to bond aircraft with the mobile fuelers during fueling operations or fueling personnel smoking while fueling aircraft.
- Check any fueling islands (self-fueling) for hazards to users

Obstructions

- Inspection of obstructions should concentrate on a visual check of construction underway on or near the airport that could affect aircraft operations. This also includes checking for any vegetation, especially, trees, that may penetrate the Part 77 surfaces.
- Determine if obstructions are properly marked and lighted.

Wildlife

- Check for evidence of birds or animals on the runways, taxiways, aprons, and ramps or other signs that wildlife problems may have developed

Public Protection

- Check airport to ensure safeguards are in place to prevent inadvertent entry to the movement area by unauthorized persons or vehicles
- Check for reasonable protection of persons and property from jet blast/prop wash

Construction

- Check stockpiled material and construction materials are properly stored to keep them from being moved by wind, jet blast, or prop wash, and is not left in safety areas or movement area.
- Check all construction adjacent to movement areas to ensure areas are identified with conspicuous marking and lighting.

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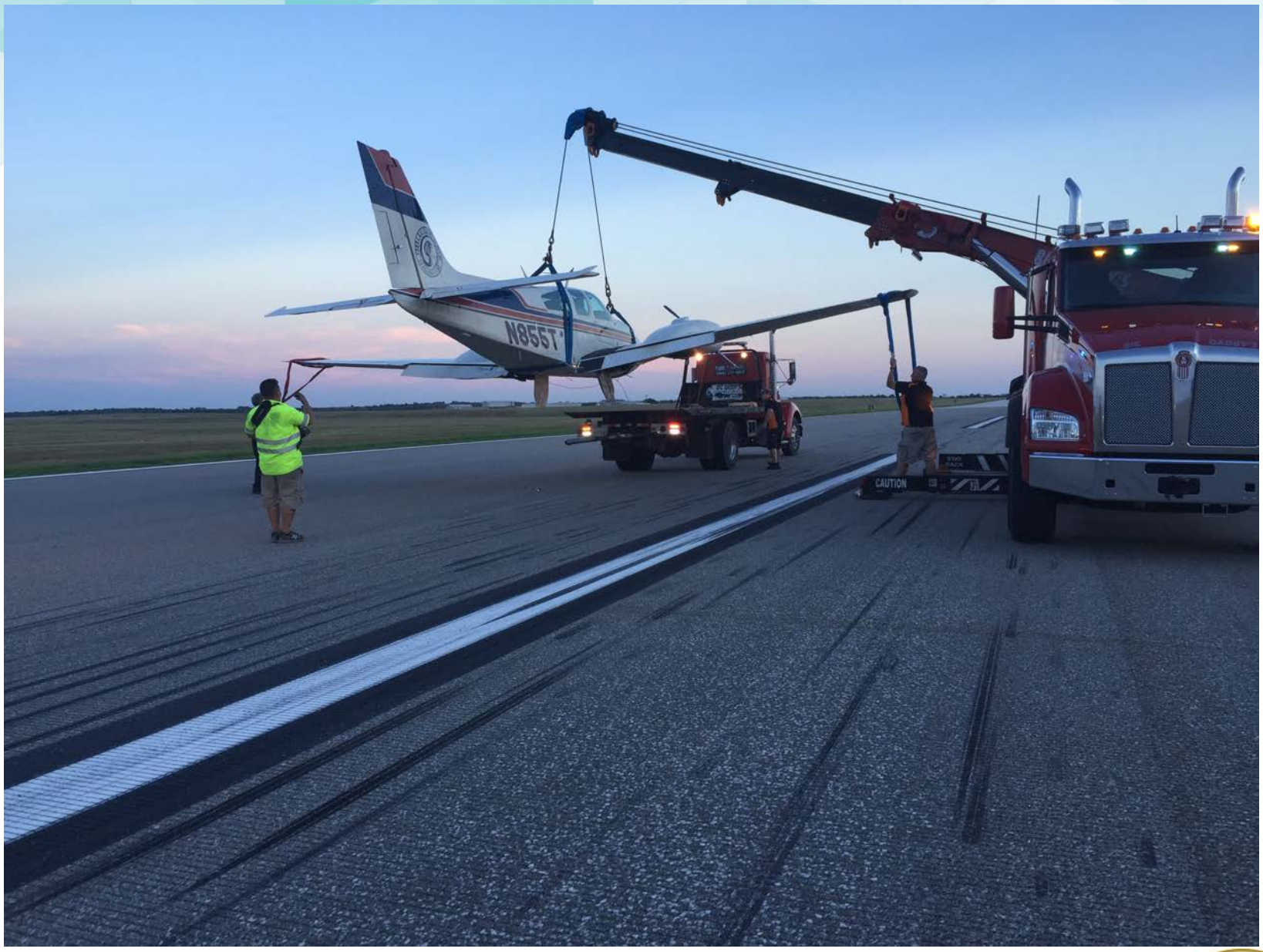
Emergency Response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