

**AERONAUTICAL CHARTING MEETING**  
**Charting Group**  
**Meeting – October 28 - 29, 2020**

**RECOMMENDATION DOCUMENT**

**FAA Control #20-02-345**

**Subject: Wrong Surface Hot Spots and Surface Hot Spot Standardization**

**Background/Discussion:**

After numerous wrong surface events with some being potentially catastrophic, this is one of the FAA's Top 5 Safety Issues.

After numerous internal discussions within the FAA and external Aviation stakeholders, we have recognized the safety risk in the National Airspace System (NAS), associated with a wrong surface alignment and have collaborated on mitigations to address this risk.

This proposal standardizes both surface based and wrong surface hot spots on the Airport Diagrams. A Safety Risk Management Panel (SRMP), was conducted in January 2019. Subsequently a working group of internal and external stakeholders to include Runway Safety, Aeronautical Information Services, Flight Standards, Airports, Air Traffic, NATCA, NBAA, ALPA, RAA and NAFI.

The workgroup members shared the process with external stakeholders and this proposal is the result of their feedback. All members of the workgroup have expressed complete buy in on the proposal as written.

This working group has addressed the standardization of symbology on the airport diagrams to include both surface based and misalignment risk hot spots. In addition, the group addressed concerns brought up during the panel on adding information to the Approach Plates. As a result of the Approach plate addition a NEW Arrival Alert page was created to highlight those approaches to a particular airport that have been problematic.

**Recommendations:**

- Standardize both surface based and wrong surface hotspots.
- Implement three shapes as part of the standardization.
  - Cylinders to represent Wrong Surface Hot Spots
  - Circles or Ovals to represent Surface Based Hot Spots, depending on the size and shape of the area of the confusion.
- Implement the inverted MR on the Airport Diagram in the top left corner to indicate there is a misalignment risk potential.
- Implement the MR on the Approach Plate in the sketch view.
- Define the MR in the Charting Specifications to address a potential for a misalignment risk and points to more information.

- Implement a new Arrival Alert page which aids the pilot in a visual reference of a particular approach.
- Outreach and Education will take place prior to implementation to include the following:
  - Single Topic Video
  - Briefings to Industry stakeholders and Stakeholder Webinars.
  - Presentation to the National Association of Flight Instructors (NAFI)
  - Flight Standards FFAST blasts
  - Webinars
- Proposed implementation in December 2020.

**Comments:**

PowerPoint Presentation is available.

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**Date:** September 22, 2020

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# Hot Spots

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VERBIAGE AND SYMBOLS

# Why should we have this discussion?

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Seeking additional clarity to runway safety related challenges while reducing risk and mitigating pilot confusion.

- Ground Movement Risk
- Misalignment Risk

## Hot Spot and Wrong Surface Hot Spot Workgroup Members

Giovanni Dipierro, AJI, Runway Safety Group Manager

Raymond German, AJI, Runway Safety

Christine Madden, AJI, Runway Safety

Maria DeRosa, AJI, Runway Safety

Tom Frakes, AJI, Runway Safety

Chris Diggons, AJI, Runway Safety

Bridget Singratanakul, NATCA Runway Safety Representative

Brent Walker, AJV, Aeronautical Information Services

Jeff Lamphier, AJV, Aeronautical Information Services

Nicholas DeLotell, AFS, Flight Standards

Joseph Foresto, AFS, Flight Standards

Steven Debban, ARP, Office of Airports HQ

Susan Gardner, ARP, Office of Airports HQ

Michael Meyers, ARP, Office of Airports HQ

Lisa Caldwell, AJT, Air Traffic Terminal

Alex Gertsen, NBAA

Jeffrey Sedin, ALPA

Bill Whyte, RAA

Andrew Sousa, ALPA

Adam Williams, AOPA

Robert Meder, NAFI

Karen Kalishek, NAFI

# Overview:

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- Hot Spot definition
- Verbiage
- Symbol/Symbology
- Airport Diagrams

# Hot Spot definition

As shown in the:

Chart Supplement

Terminal Procedures Publication

458

## AIRPORT DIAGRAMS

### HOT SPOTS

An "Airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or polygons designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

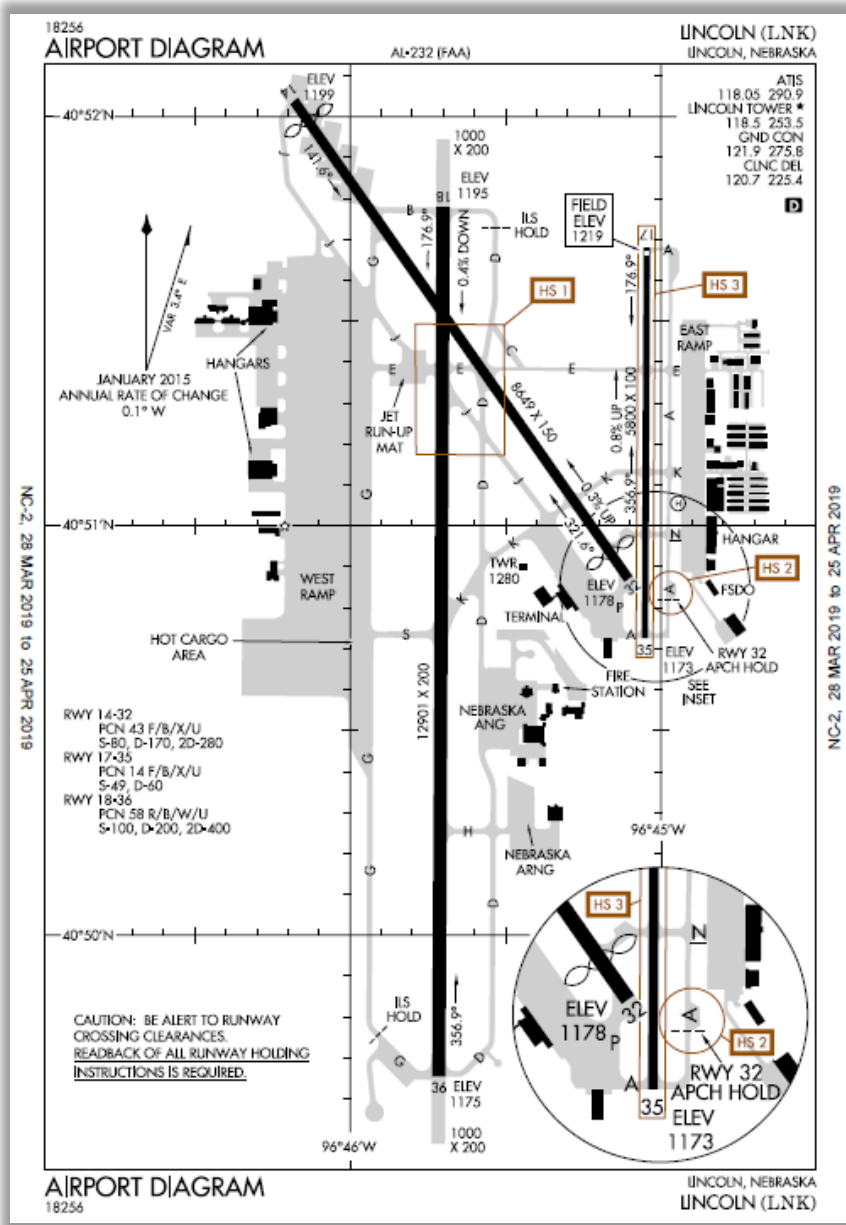
Increased RISK due to:

- Airport layout
- Traffic flow
- Airport markings
- Signage and lighting
- Situational awareness
- Training

# Airport Diagram

Linear shapes everywhere...

- Runways
- Taxiways
- Movement areas
- Building outlines
- Projection lines
- Leader lines from text
- Lines under text

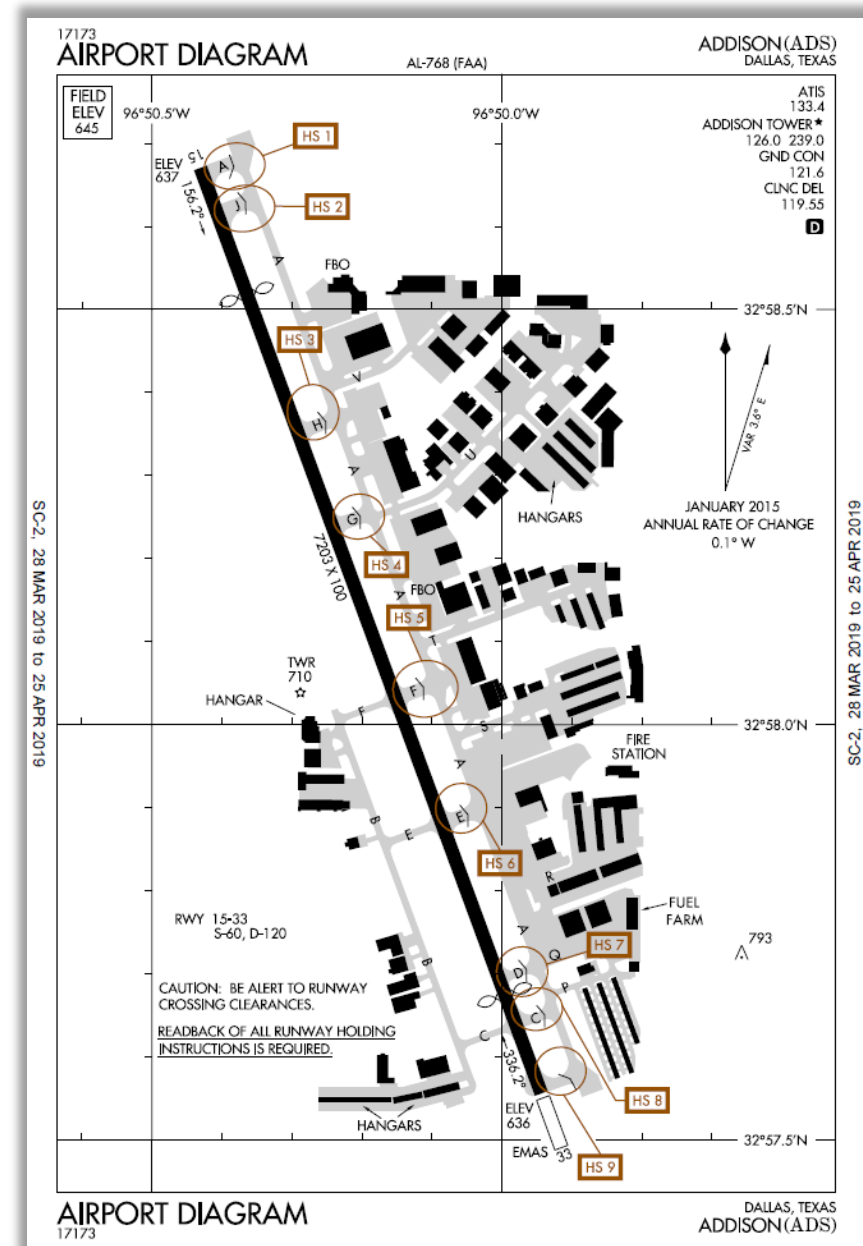




# Airport Diagram

## Hot Spot identification:

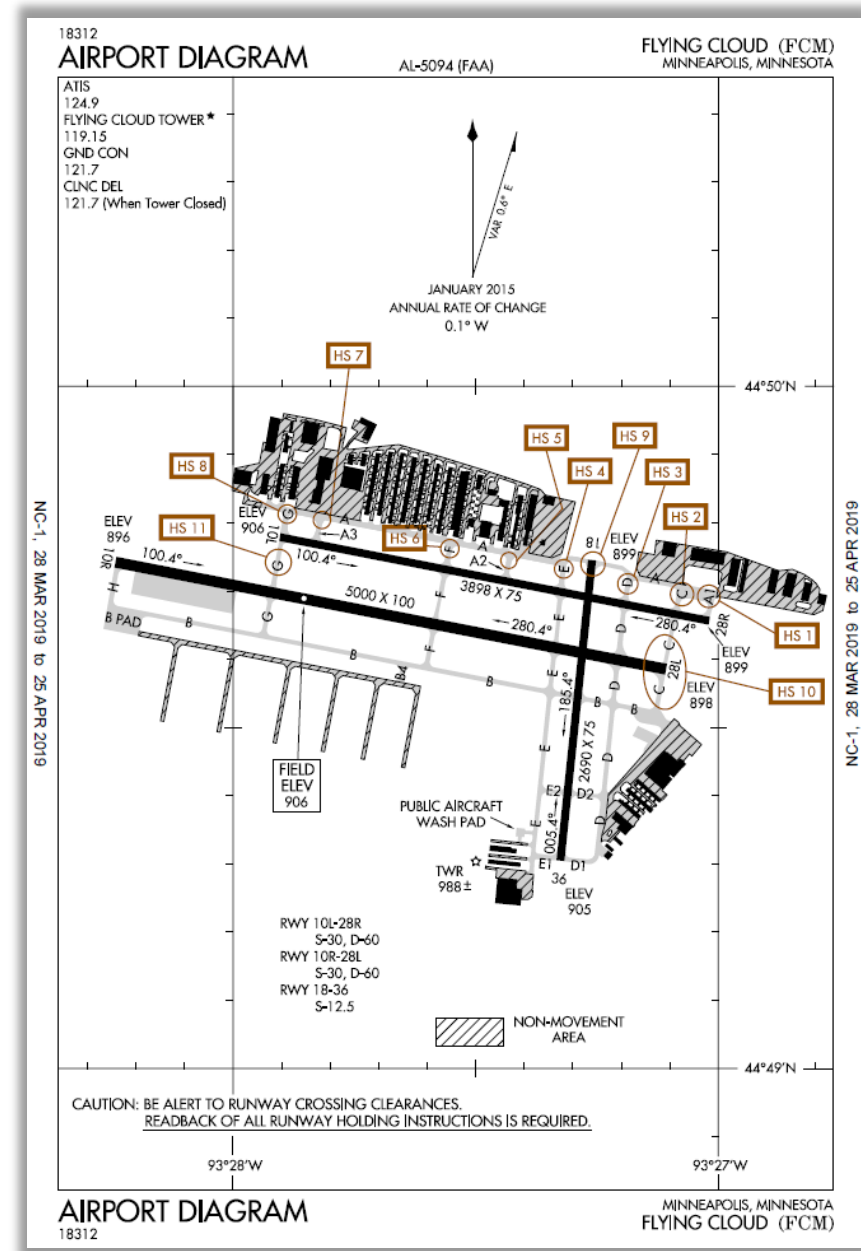
- Curves
  - Circle
  - Ellipse
- **Brown** color
- Unique shape & color captures the pilot's attention.



# Airport Diagram

## Hot Spot identification:

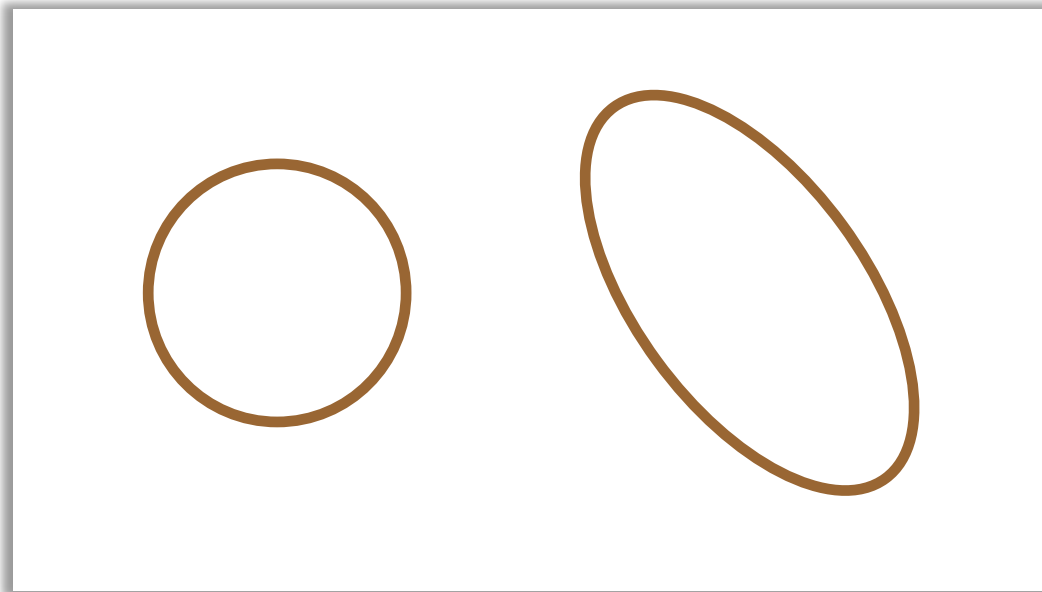
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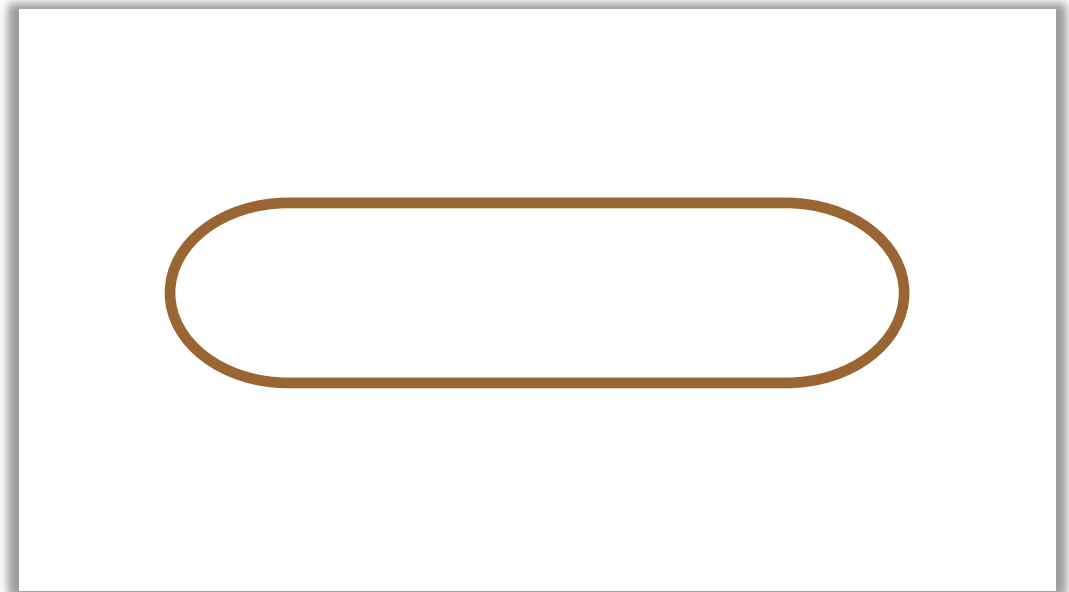
# Hot Spot shapes

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GROUND MOVEMENT RISK



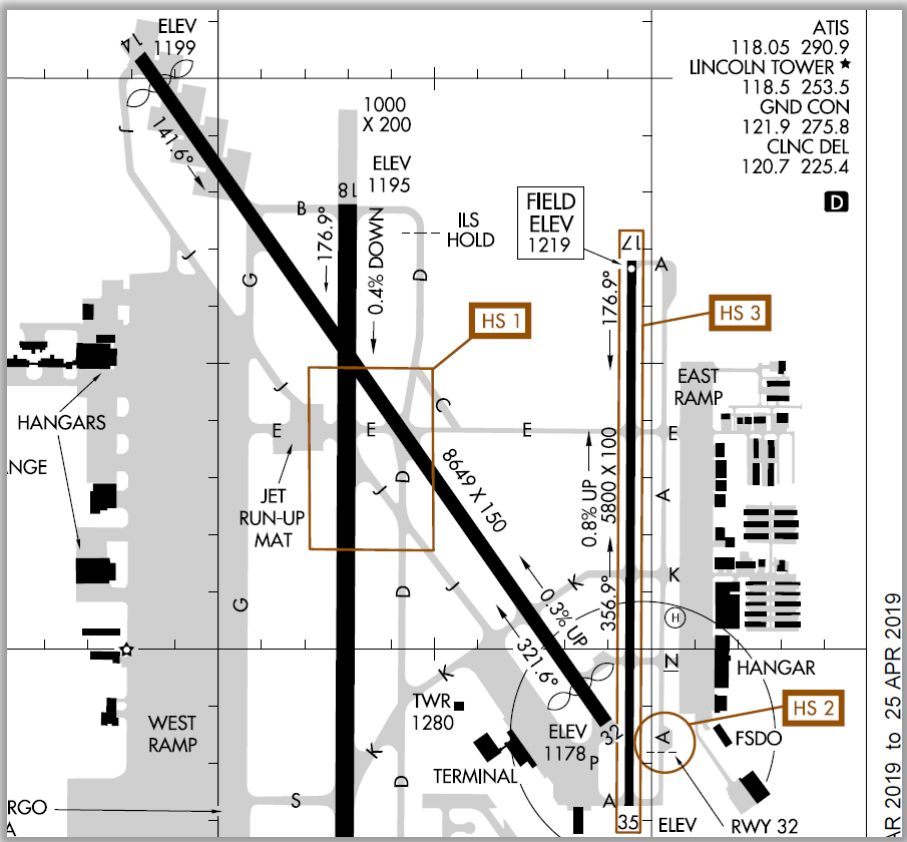
MISALIGNMENT RISK



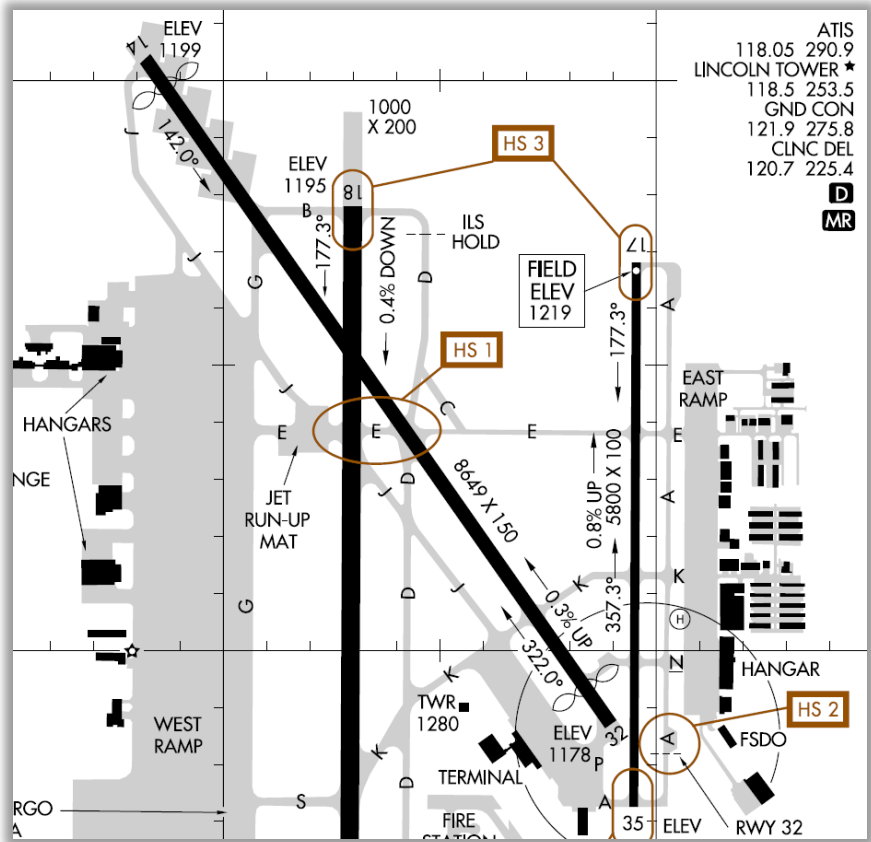
# LINCOLN (LNK)

## LINCOLN, NEBRASKA

CURRENT

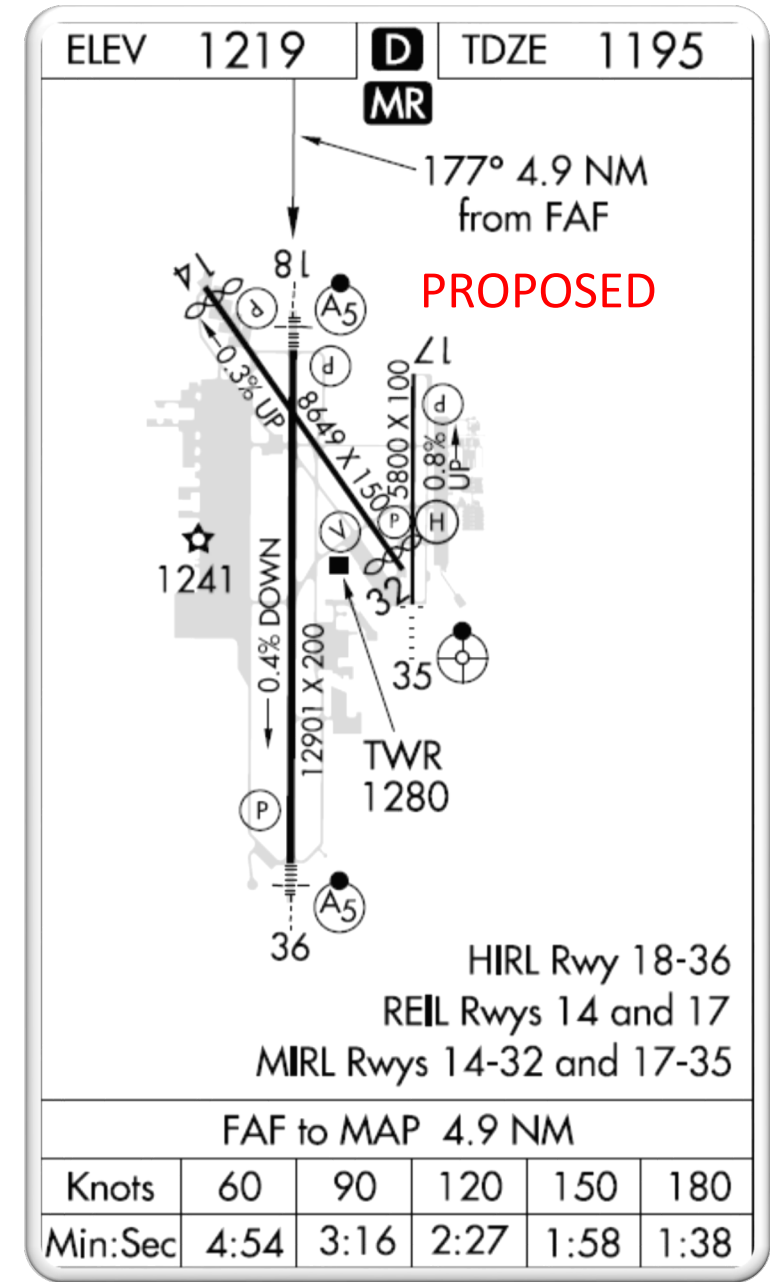
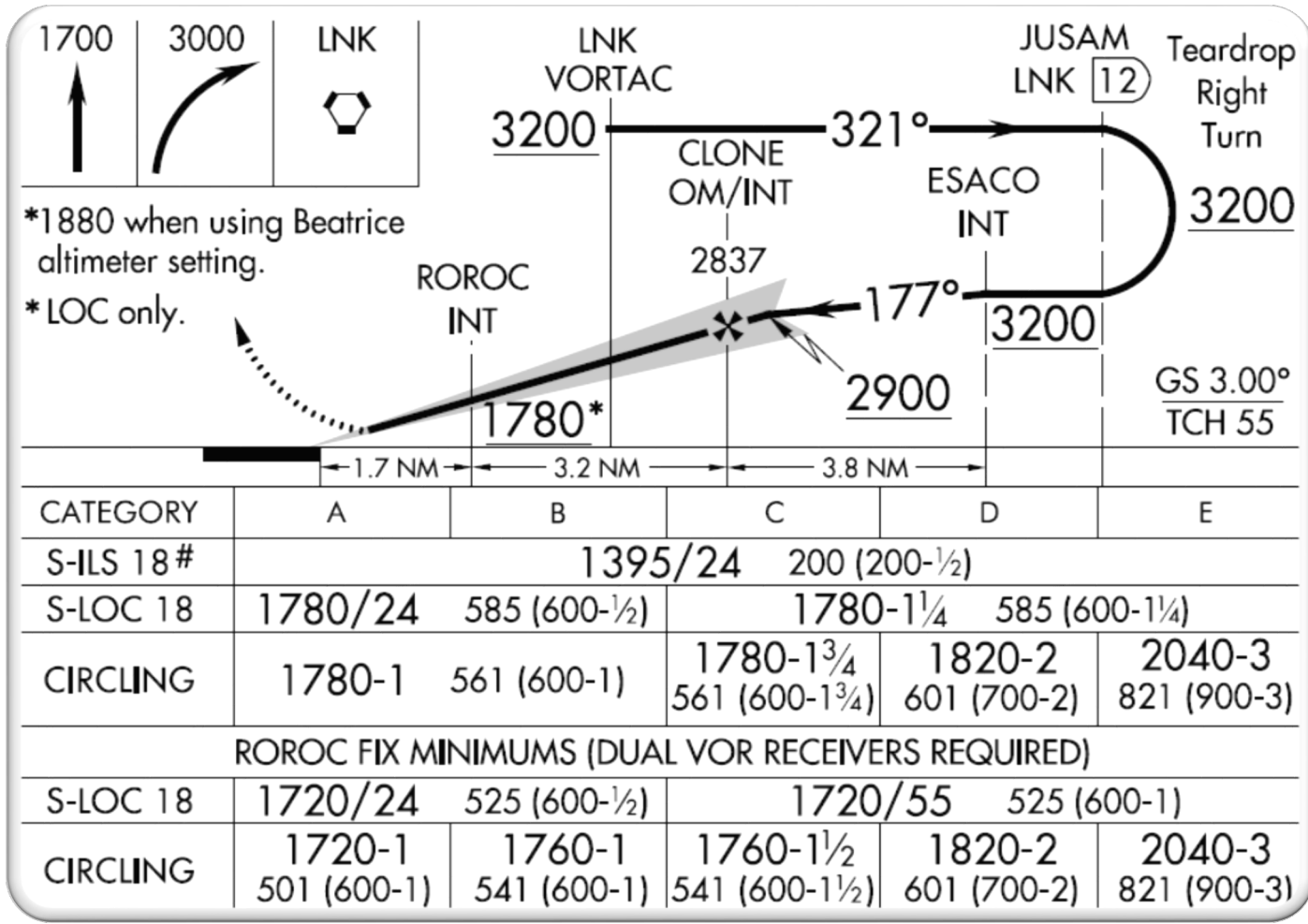


PROPOSED



# LINCOLN (LNK)

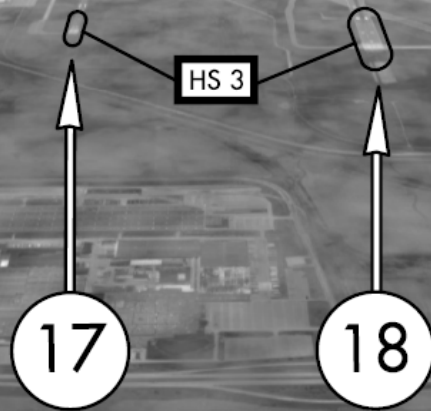
## LINCOLN, NEBRASKA



# LINCOLN (LNK) ARRIVAL ALERT

Landing South Misalignment Risk  
Rwy 17 and Rwy 18

PROPOSED



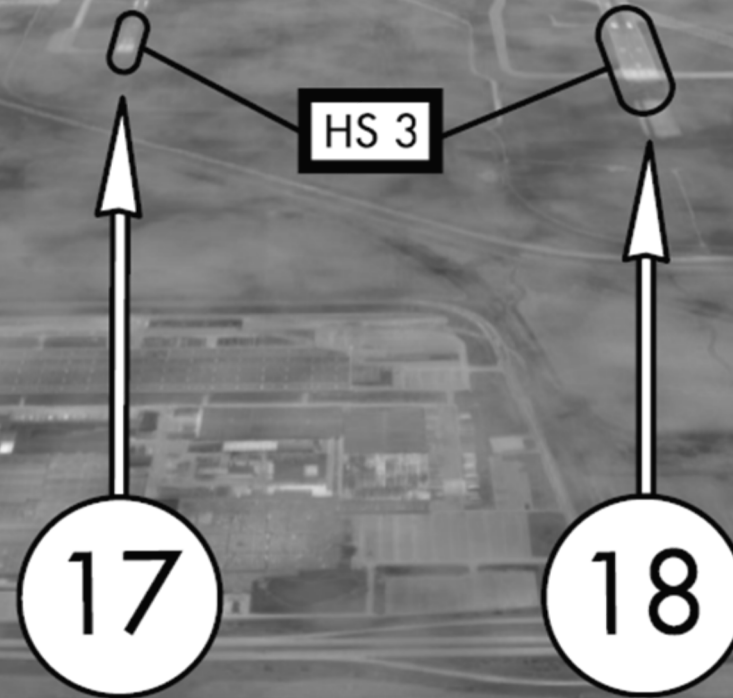
Pilots arriving on Rwy 17 need to be aware that Rwy 17 is 550 feet farther down the approach than Rwy 18.

**Not for Navigation**

LNK Airport manager, (555) 555-5555

Effective 10 SEP 2020 to 8 SEP 2022

PROPOSED



## Outreach and Education

Currently, we are working with the Office of Communications on several outreach efforts as outlined as a result of the SRMP, which will all be completed prior to publication.

- Develop a one pager as well as a PowerPoint presentation that will be sent out via FFAST blast, Industry stakeholders, FAA LOBs and will also be linked to the Runway Safety website.
- Develop a single topic video on all the changes as part of the From the Flight Deck series.
- Participating in the National Association of Flight Instructors (NAFI) Mentor LIVE event to again outline all the changes taking place with regard to new symbology, approach plates and Arrival Alert pages.
- Continue to work with AJV on enduring that the Chart Supplement and Approach Plates and Arrival Alert pages are all defined and outlined in those publication.

## Airports currently scheduled to be updated with this new standardization

Tucson, AZ  
Palm Springs, CA  
Reid-Hillview, San Jose, CA  
Honolulu, HI  
Idaho Falls, ID  
Reno, NV  
Phoenix, AZ  
Santa Rosa, CA  
Victorville, CA  
Colorado Springs, CO  
Las Vegas, NV  
Seattle Boeing Field, WA  
Groton, CT  
Rochester, NY  
Richmond, VA  
Fort Myers, FL  
Fort Lauderdale, FL  
Orlando, FL  
Peach Tree DeKalb, GA  
Lincoln, NE  
Kansas City, KS  
Mason City, IA  
Dallas McKinney National, TX  
Flying Cloud, MN  
Littlerock, AR  
Valley International, TX  
Houston Hobby, TX  
San Marcos Regional, TX  
Willow Run, MI

Veterans Airport, IL  
Ohio State, OH  
Central Wisconsin, WI  
Salt lake City, UT  
Grand Junction Regional, CO



# Questions?

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ANSWERS

