



FAR Part 139.303 Training

Required Annual 303 Training



Hillsborough County Aviation Authority
Tampa International, Peter O. Knight,
Plant City and Tampa Executive Airports





Hillsborough County Aviation Authority
Tampa International, Peter O. Knight,
Plant City and Tampa Executive Airports

139.303(c)(1) Airport Familiarization



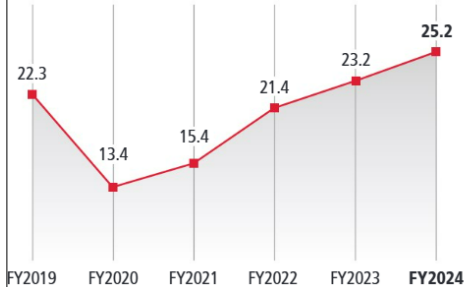
TPA By The Numbers

Primary Large Hub Commercial Service Airport

- Class I Airport (Large Hub)
- Serving Large Air Carriers

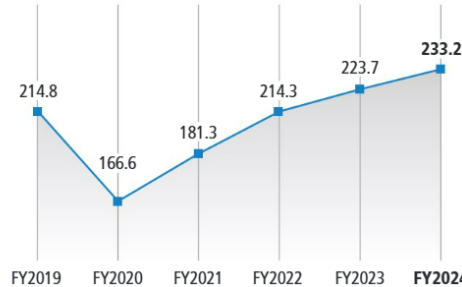


■ Passengers - Millions Enplaned and Deplaned



+8.8% increase in total passengers vs. FY23

■ Operations - Thousands of Landings and Takeoffs



+4.2% increase in operations vs. FY23

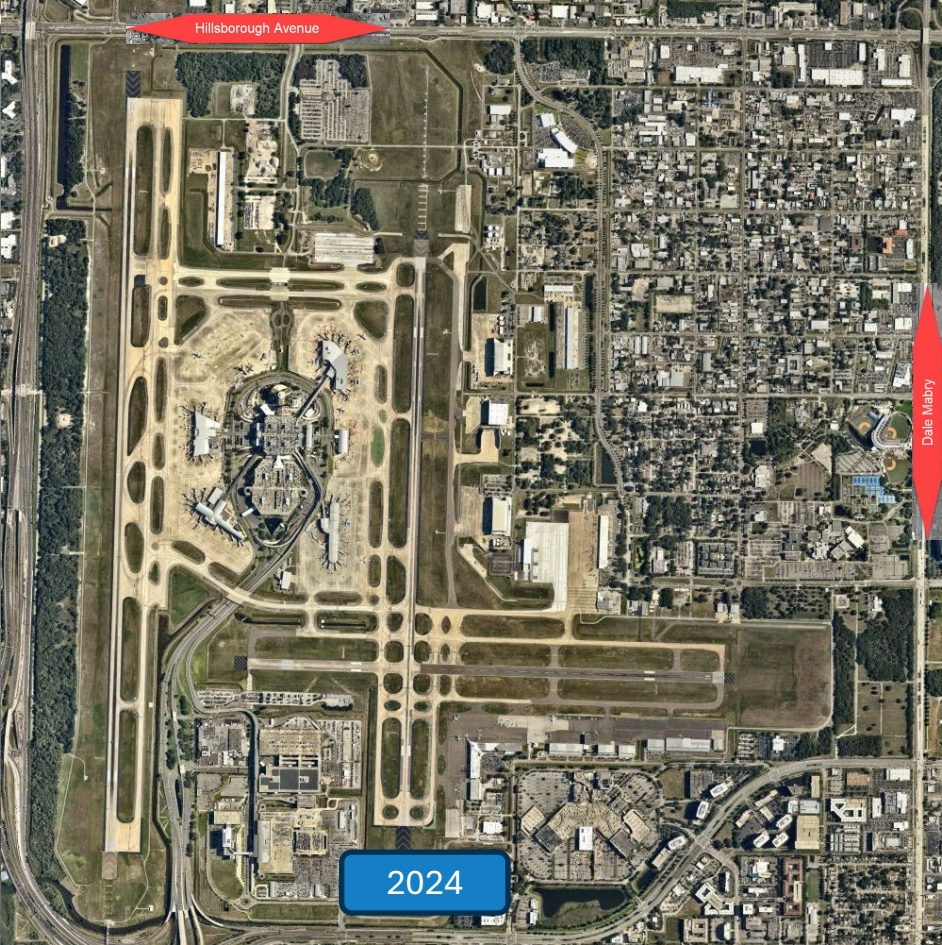
Revenue Performance

Gross Revenue (\$ Millions)



Hillsborough Avenue

Hillsborough Avenue



Dale Mabry

Dale Mabry

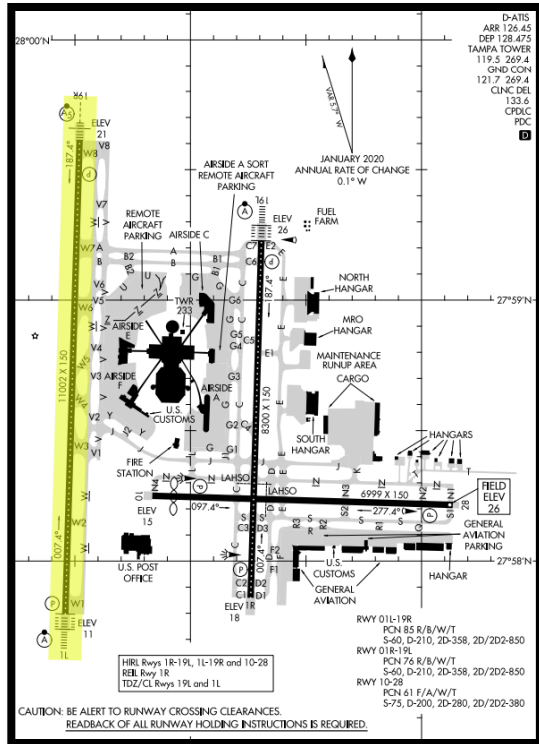
1948

2024

Annual Airfield Familiarization Training
Hillsborough County Aviation Authority



Runway 1L/19R



Runway Identification

Length

Width

Surface Type-Condition

Surface Treatment

Gross Weight (In Thousands)

Single Wheel (S)

Dual Wheel (D)

2 Dual Wheels in Tandem (2D)

2 Dual Wheels in Tandem/ 2 Dual Wheels in Double Tandem (2D/2D2)

Pavement Classification Number (PCN)

01L/19R

11,002

150

CONC-G

GRVD

G=Good!

60.0

210.0

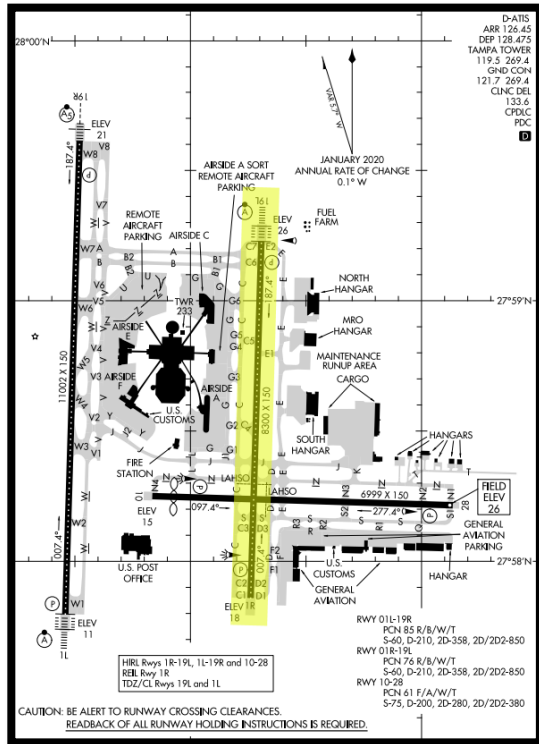
358.0

850.0

85 /R/B/W/T



Runway 1R/19L



Runway Identification

Length

Width

Surface Type-Condition

Surface Treatment

Gross Weight (In Thousands)

Single Wheel (S)

Dual Wheel (D)

2 Dual Wheels in Tandem (2D)

2 Dual Wheels in Tandem / 2 Dual Wheels in Double Tandem (2D/2D2)

Pavement Classification Number (PCN)

01R/19L

8,300

150

ASPH-CONC-G

GRVD

60.0

210.0

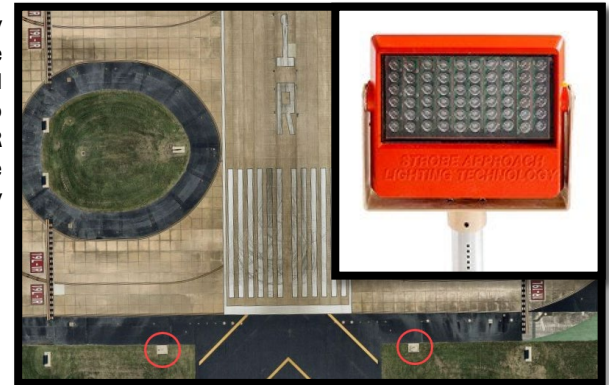
358.0

850.0

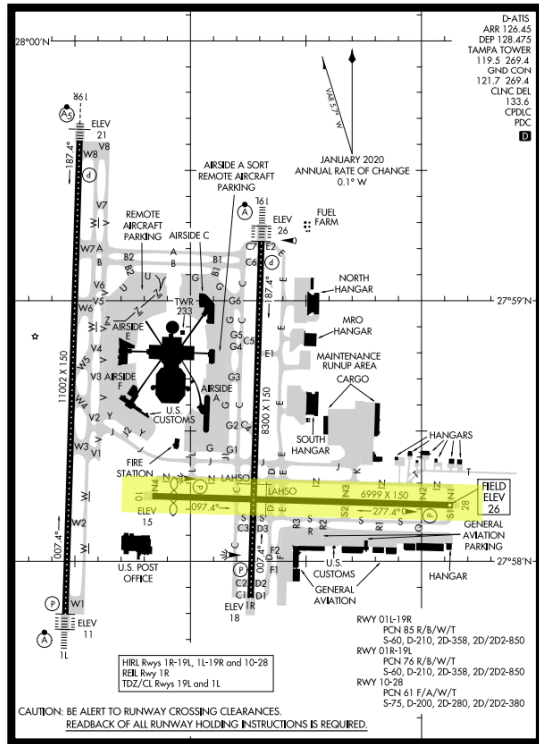
76 R/B/W/T

Note the mix

Runway End Identifier Light: high intensity flashing strobe lights sat at the end of the runway, they are supposed to be pointed out at a certain degree and are supposed to both flash simultaneously. Runways 01R only currently has REILs. The maintenance of this system falls under the responsibility of HCAA, not FAA Tech Ops.



Runway 10/28



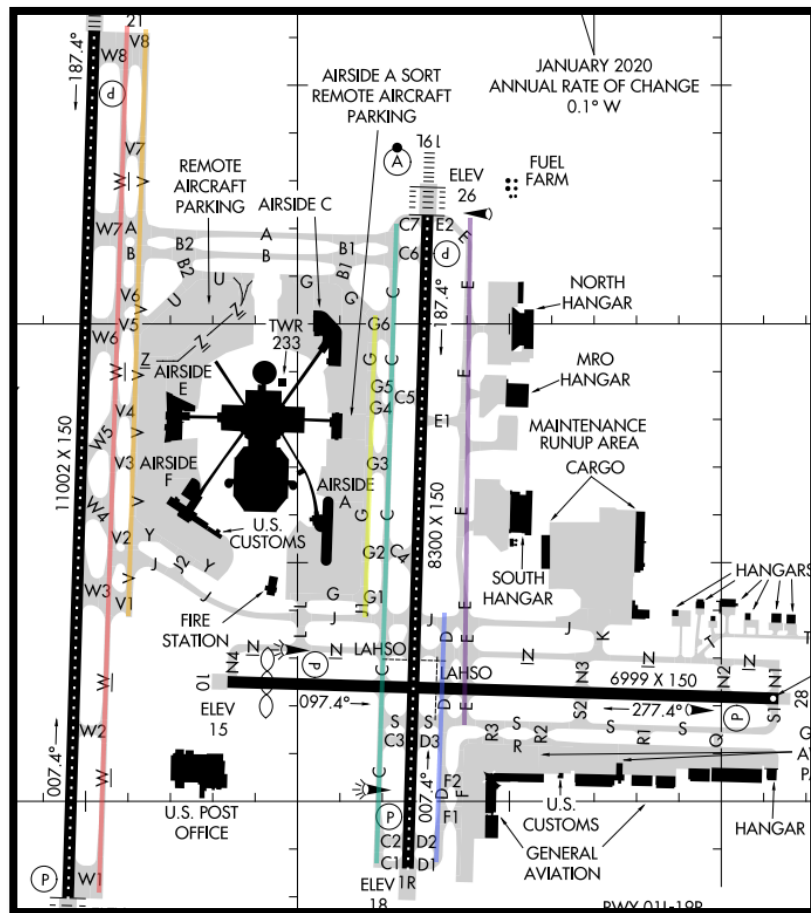
Runway Identification	10/28
Length	6,999
Width	150
Surface Type-Condition	ASPH-CONC-F
Surface Treatment	GRVD
Gross Weight (In Thousands)	
Single Wheel (S)	75.0
Dual Wheel (D)	200.0
2 Dual Wheels in Tandem (2D)	280.0
2 Dual Wheels in Tandem / 2 Dual Wheels in Double Tandem (2D/2D2)	380.0
Pavement Classification Number (PCN)	61 /F/A/W/T

F=Fair



General Taxiways

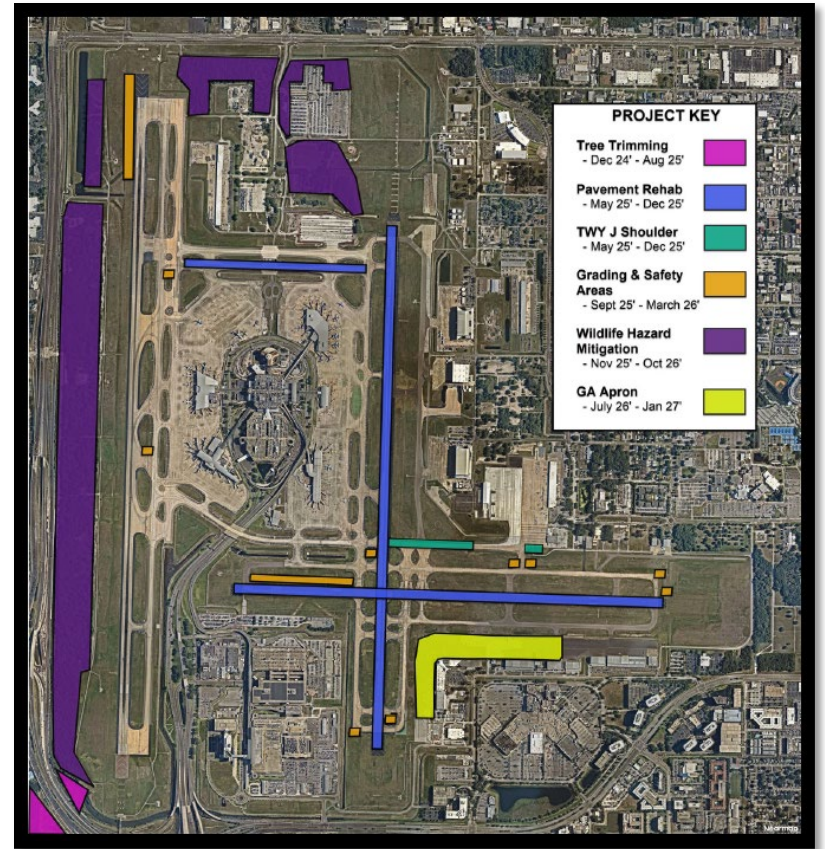
- Main North/South Taxiways
 - Taxiway W & Taxiway V
 - Taxilane G
 - Taxiway C & Taxiway D
 - Taxiway E
- Easy ways to remember your taxiways
 - TWY W = West – Western most
 - TWY E = East – Eastern most
 - TWY W & V – “West Virginia” parallel to each other
 - TWY C & D – “CD” parallel to each other



Active Projects

Current

- Tree Trimming
- Pavement Rehab
- TWY J Shoulder
- Grading & Safety Areas
- Wildlife Hazard Mitigation
- GA Apron Rehabilitation
- Airside D



AIRSIDE D CONSTRUCTION TIMELINE



Late 2023

HCAA Board Approves
Airside D design-build
contract



Late 2024

Groundbreaking and
site-enabling work
begins



Late 2025

Vertical construction
begins



Late 2027

75% of construction
completed



2028

Airside D opens



GROUND BREAKING 12.18.24
AirsideD.com



HENSEL PHELPS
Plus. Better. Happier.



Gensler



Tampa International Airport New Airside D Project Definition Document



PREPARED FOR:

Hillsborough County Aviation Authority

SEPTEMBER 2022

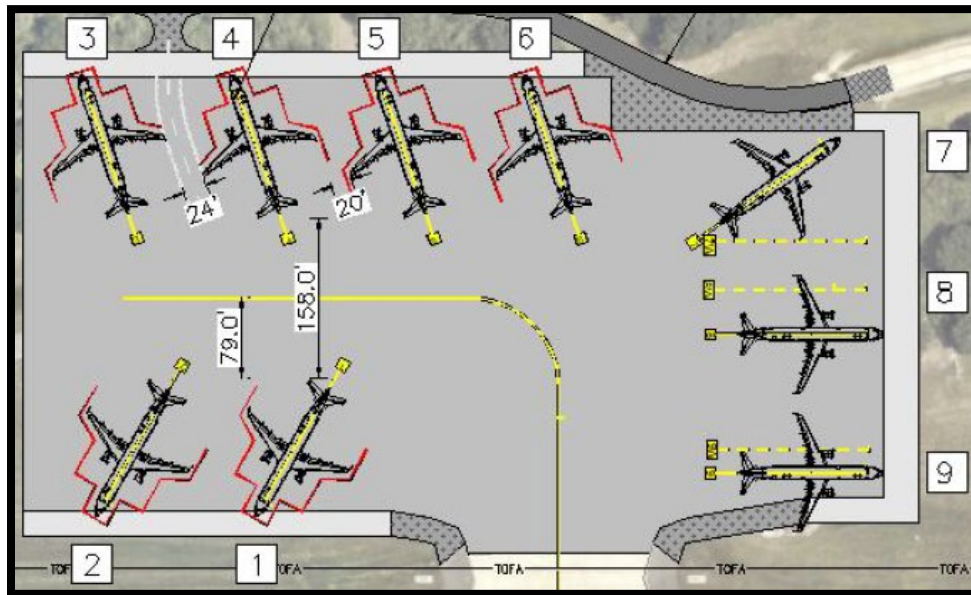


Annual Airfield Familiarization Training
Hillsborough County Aviation Authority



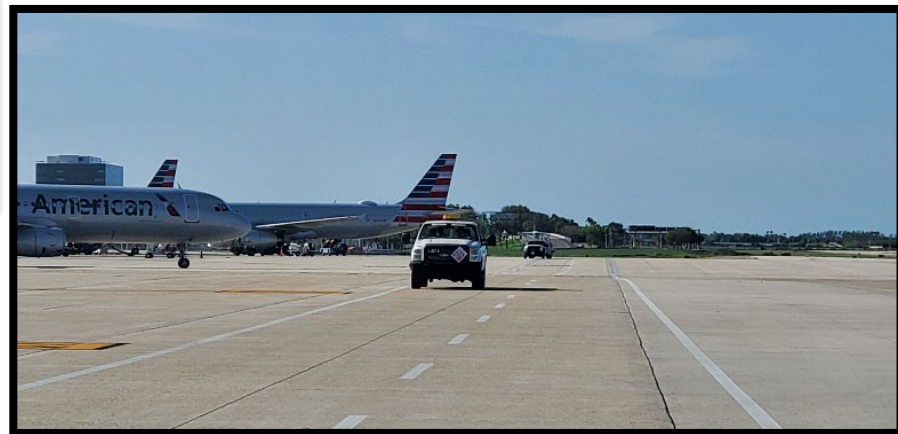
North RON | Air Cargo Parking

- Recently completed and opened.
- Spot 8W has the capability of parking some Group VI aircraft



Vehicle Roadway Markings

- Provide a clear route of travel for roadways located on paved areas used by aircraft
- ✓ **Aircraft always have the right of way**



Non-Movement Area Boundary Marking

Movement Area



Non-Movement Area

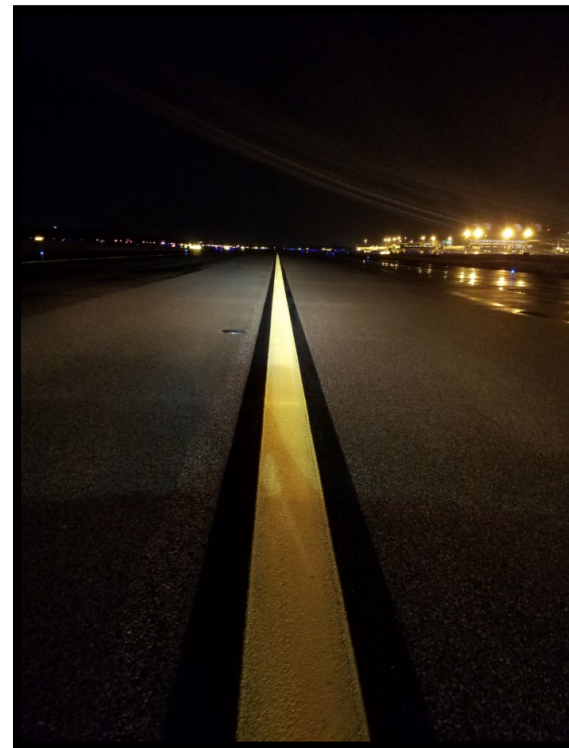
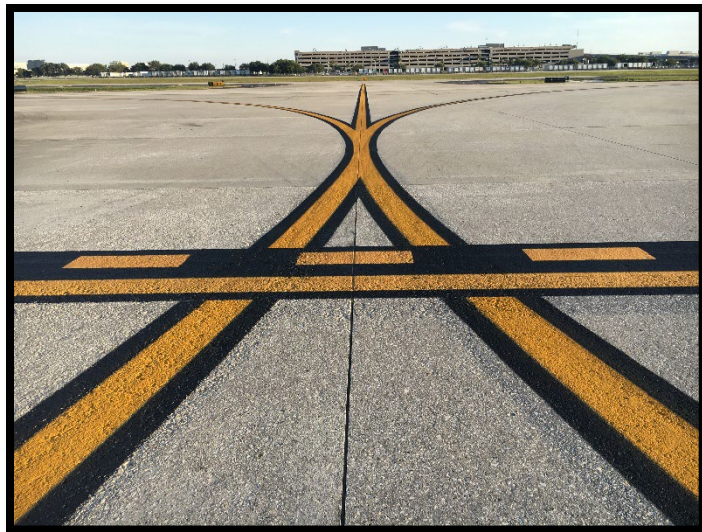
Non-Movement Area Boundary Marking:

- Defines the boundary between the Movement and Non-Movement Areas.
- The Movement Area is on the dashed-line side of the marking and the Non-Movement Area is on the solid-line side of the marking

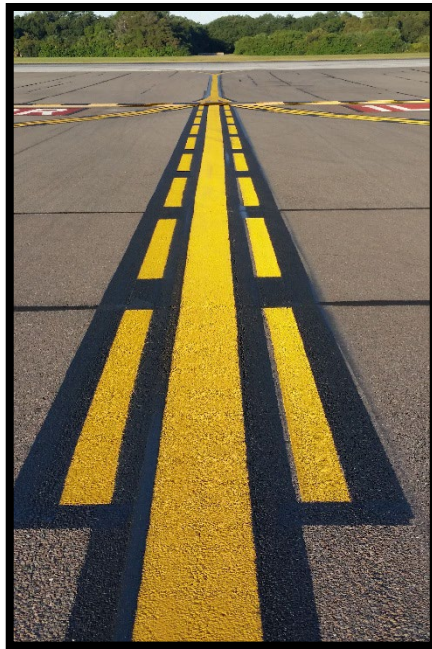


Taxiway Markings

- Visual cue for aircraft taxiing along a designated path
- Predominately yellow with black borders



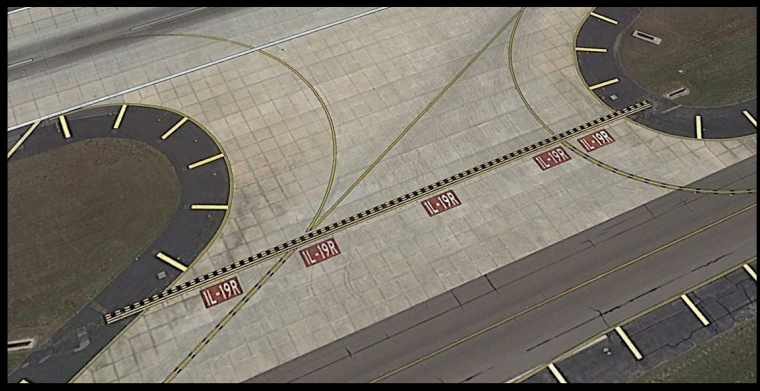
Enhanced Taxiway Centerline, Surface Painted Hold Short Marking



- Parallel line of yellow dashes on either side of taxiway centerline leading to a runway
- “Enhanced” for 150 feet prior to runway holding position marking

- Prior to every runway hold position marking which denotes the runway that you are about to enter.
- Number is based on width of the taxiway and the number of centerlines that intersect the same hold position marking.

- Provide pilots visual queues to avoid incursions





Runway Holding Position Marking



Runway Holding Position Marking:

- Defines the boundary between the Runway and Movement Areas.
- The Runway is located on the double dashed-line side of the marking and the Movement Area is located on the double solid-line side of the marking





Intermediate Hold Position Marking



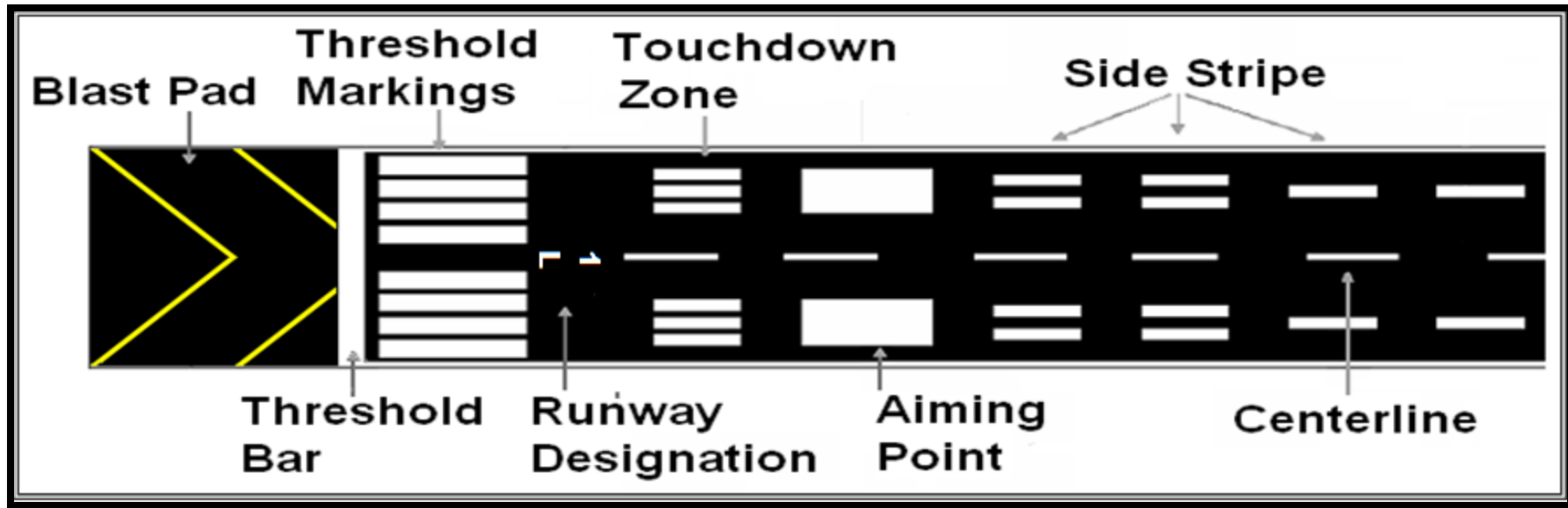
Intermediate Holding Position Marking:


- These markings are to denote where to hold position at the intersection of two taxiways.
- You may proceed thru these markings unless otherwise instructed by Air Traffic Control



Runway Markings

- Predominately White
- Blast Pad Chevrons Yellow





Airfield Signage

Purpose: A properly designed and standardized taxiway guidance sign system is essential for the safe and efficient operation of aircraft and ground vehicles within the airport movement area. It should:

- ✈ Provide the ability to easily determine the designation of any pavement on which the aircraft is located.
- ✈ Readily identify routes toward a desired destination.
- ✈ Indicate mandatory holding positions, including holding positions used to maintain aircraft separation during low-visibility weather operations.
- ✈ Identify boundaries for approach areas, Instrument Landing System (ILS) critical areas, the Precision OFZ, and RSA /OFZ.



Airfield Signage

5 Types of Airfield Signage:

1. Direction
2. Destination
3. Location
4. Mandatory
5. Special

These Signs Identify:

- ✈ Taxiway / Runway Location
- ✈ Taxing Routes
- ✈ Holding Positions
- ✈ Special Instructions

Airport Sign Systems			
Type of Sign	Action or Purpose	Type of Sign	Action or Purpose
	Taxiway/Runway Hold Position: Hold short of runway on taxiway		Runway Safety Area/Obstacle Free Zone Boundary: Exit boundary of runway protected areas
	Runway/Runway Hold Position: Hold short of intersecting runway		ILS Critical Area Boundary: Exit boundary of ILS critical area
	Runway Approach Hold Position: Hold short of aircraft on approach		Taxiway Direction: Defines direction & designation of intersecting taxiway(s)
	ILS Critical Area Hold Position: Hold short of ILS approach critical area		Runway Exit: Defines direction & designation of exit taxiway from runway
	No Entry: Identifies paved areas where aircraft entry is prohibited		Outbound Destination: Defines directions to takeoff runways
	Taxiway Location: Identifies taxiway on which aircraft is located		Inbound Destination: Defines directions for arriving aircraft
	Runway Location: Identifies runway on which aircraft is located		Taxiway Ending Marker: Indicates taxiway does not continue
	Runway Distance Remaining: Provides remaining runway length in 1,000 foot increments		Direction Sign Array: Identifies location in conjunction with multiple intersecting taxiways





Direction, Location, Destination Signs

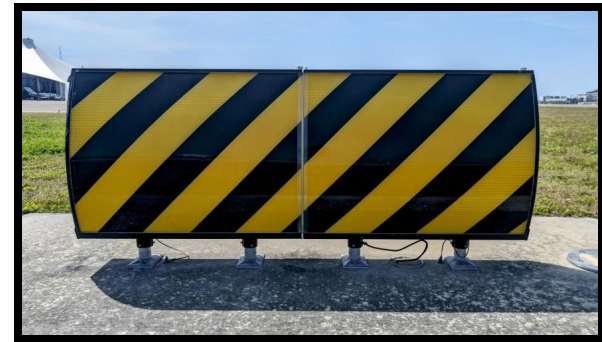
- ✈ Direction Signs
- ✈ Location Signs
- ✈ Destination Signs





Special Signs

- ✈ Runway Distance Remaining Signs
- ✈ Information Signs
- ✈ Taxiway Ending Marker



Mandatory Instruction Signs

- ✈ Runway Hold Position Signs
- ✈ ILS Critical Area Hold Position Signs





Airfield Lighting

Purpose: Numerous airport visual aids are available to provide information and guidance on airports and are essential for the safe and efficient operation of aircraft and ground vehicles within the airport movement area. These systems include:

- ✈ Taxiway Lighting Systems
- ✈ Runway Lighting Systems
- ✈ Airfield Miscellaneous Aids



Airfield Lighting

✈ Required to maintain lighting systems at the following periods of operation:

- Hours of darkness
- When weather conditions are below visual flight rule (VFR) minimums (i.e., Instrument Conditions)

✈ NAVAIDs and Approach Lighting Systems are maintained by the FAA





Taxiway Lighting

Taxiway edge lights are **blue**



Taxiway centerline lights are **green**





Runway Guard Lights

- ✈ In-Pavement Runway Guard Lights
- ✈ Elevated Runway Guard Lights



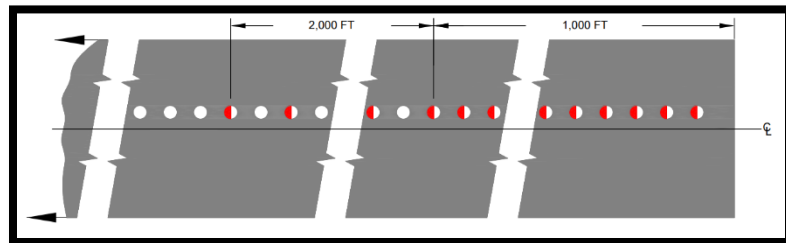
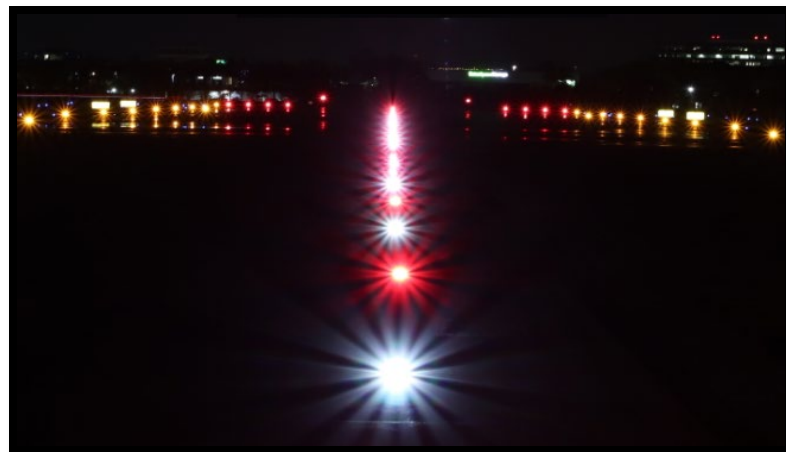
Runway Edge Lights

- ✈ Primarily White
- ✈ Dual Lens
- ✈ Yellow last 2,000 ft.
- ✈ Frangible Mounted or In-Pavement



Runway Centerline Lights

- ✈ Primarily White
- ✈ Located along the runway centerline at 50 ft. intervals
- ✈ Alternating Red/White starting at the last 3,000 ft.
- ✈ Red lights installed the last 1,000 ft.





What Type of Sign is This?





Hillsborough County Aviation Authority
Tampa International, Peter O. Knight,
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139.303 (c)(2) Pedestrian and Ground Vehicles





Definitions

- **Air Operations Area (AOA)**: Any area of an airport used or intended for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron. In other words, everything inside the perimeter fence.
- **Movement Area**: Runways, taxiways, and other areas of an airport which are used for taxiing, or hover taxiing, takeoff, landing of aircraft, exclusive of loading ramps and aircraft parking areas. These areas are controlled by the air traffic control tower
- **Non-Movement Area**: The portion of the AOA over which air traffic control exercises no control
- **Runway Safety Area (RSA)**: An RSA is a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway
- **Taxiway Safety Area (TSA)**: A TSA is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway
- **ILS Critical Area**: Areas that should be kept clear as not to interfere with the Instrument Landing System, which is used by aircraft in inclement weather





Air Operations Area (AOA)

Any area of the airport intended to be used for landing, takeoff, or surface maneuvering of aircraft.



The AOA includes **both**:

- Movement Area
- Non-Movement Area



Movement Area

- **Runway:** A defined rectangular surface on an airport prepared or suitable for the landing or takeoff of airplanes.
- **Taxiway:** A defined path established for the taxiing of aircraft from one part of an airport to another.
- **Safety Area:** Surface surrounding runways and taxiways that is prepared or suitable for reducing risk of damage to aircraft in case of undershoot, overshoot, or excursion from a runway or the unintentional departure from a taxiway.

Non-Movement Area

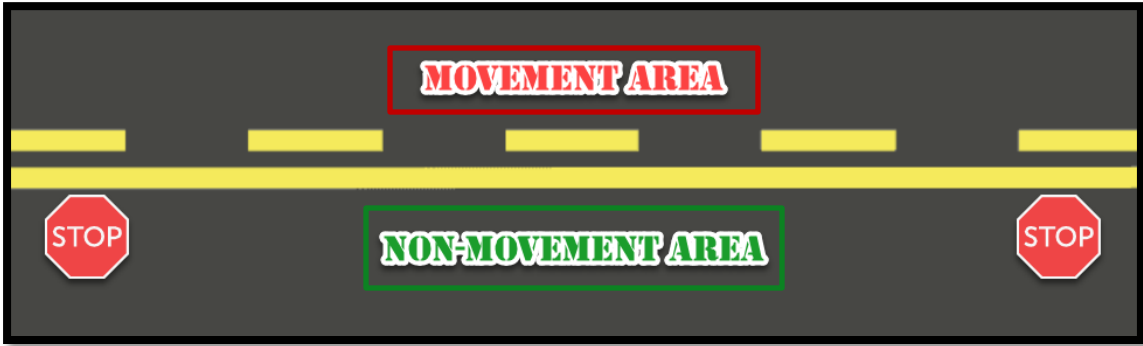
All areas not specifically designated as Movement Area, including:

- Taxilane: area that is used to provide access from a taxiway to aircraft parking positions.
- Airside, Cargo and FBO Ramps
- Parking areas
- Service roads
- MRO Ramps
- GRE

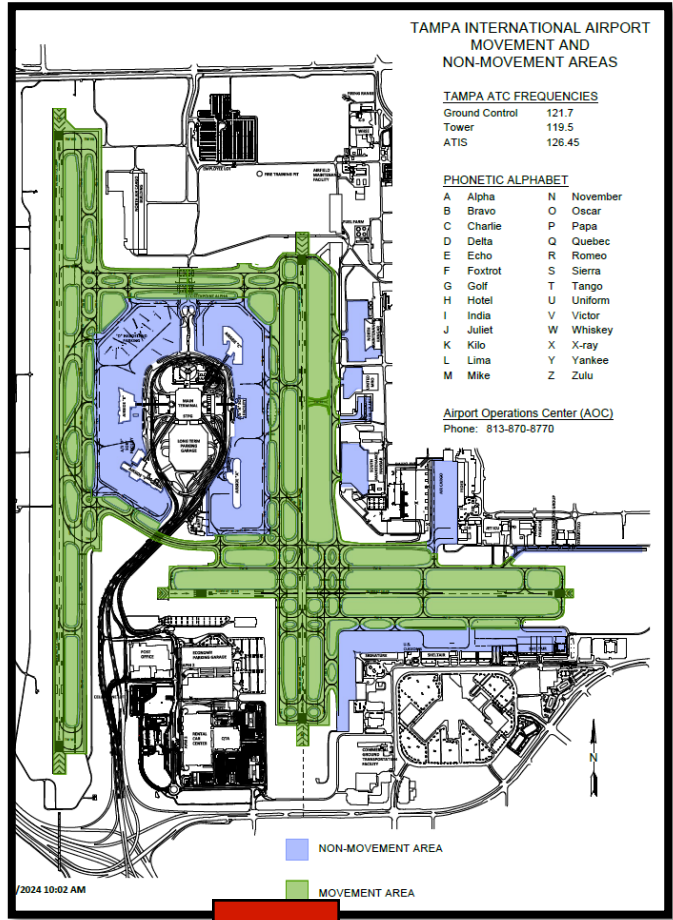




TPA Movement and Non-Movement Area Map



**DO NOT PROCEED
CONTACT ATC**



ILS – Critical Areas

- ILS Critical Areas are located within the movement areas
- When the ILS is in use, Air Traffic Control will issue clearance into the ILS Critical Areas.
- **Glide Slope Critical Area:** An area 200 feet in, centered on the antenna, which extends parallel to the runway and down 3100' towards the approach end of the runway and a slope of 3 degrees.

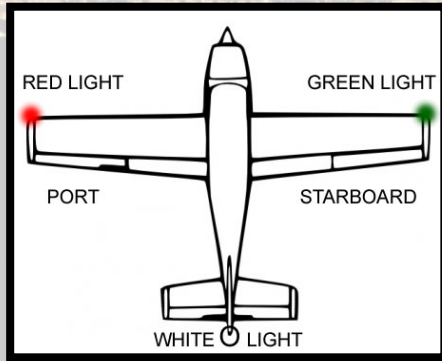
ILS hold short line



ILS



Nighttime Driving and Aircraft Lighting



- An anti-collision light (red strobe) signifies an aircraft has its engines running.
- Looking at the tail of an aircraft, a green light is on the edge of the right wing and a red light is on the edge of the left wing.
- If you see the green light on the left and the red on the right, that means the aircraft is heading towards you.



Movement Area Access Requirements

Limit access to Movement and Safety areas to personnel and vehicles necessary for airport operations.

- ✓ Each person authorized to access the movement area must possess a MAT badge or be escorted by someone who has a MAT badge
- ✓ A valid driver's license
- ✓ Training to retain a MAT Badge consists of initial training and recurrent training every 12 calendar months

Vehicles in the movement area must be equipped with:

- ✓ A two-way VHF radio capable of communication with Air Traffic Control
- ✓ A lighted rotating beacon on the vehicle
 - Escorted by someone who has the above two vehicle requirements





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Surface Movement Guidance and Control System (SMGCS)



Surface Movement Guidance and Control System (SMGCS)

- A system of markings, signage, lighting, and procedures to allow aircraft surface movements during low visibility operations
 - Enhances safe ground movement of aircraft and other vehicles on the airport surface
 - Protects high-speed, low-visibility operations on the runway
- A plan is required for airports where scheduled air carriers conduct takeoff or landing operations in visibility conditions of less than 1,200 feet runway visual range (RVR).
- The designated SMGCS runway is Runway 1L, and taxi routes to and from the runway are designated and displayed on a SMGCS low visibility taxi route chart.



What is Runway Visual Range (RVR)?

- The RVR system enables monitoring of visibility conditions on the runway, as seen from the runway level.
- The RVR equipment is located next to a runway that provide air traffic controllers with a measurement of the visibility at key points along a runway (e.g., touchdown, midpoint, and rollout).
- The data is used to report the estimated distance a pilot would be able to see down the runway and is a critical component in determining what the ILS minimums will be for each landing category.
- RVR values supersede the reported visibility and that in the case of precision approaches it is normally not permissible to start an approach if the applicable RVR value(s) is below the required minimum.



RWY	TD	MP	RO
01L	>6000	>6000	>6000
01R	FFF	>6000	>6000
19L	>6000	>6000	FFF
19R	>6000	>6000	>6000





SMGCS – By The Numbers

Less than **1,800ft** RVR (CAT II) - ATC notifies Operations via the AOC that visibility is dropping



Less than **1,200ft** RVR (CAT III) – ATC notifies the AOC and the SMGCS plan goes into effect

- Runway 1L is used for all arrivals & departures



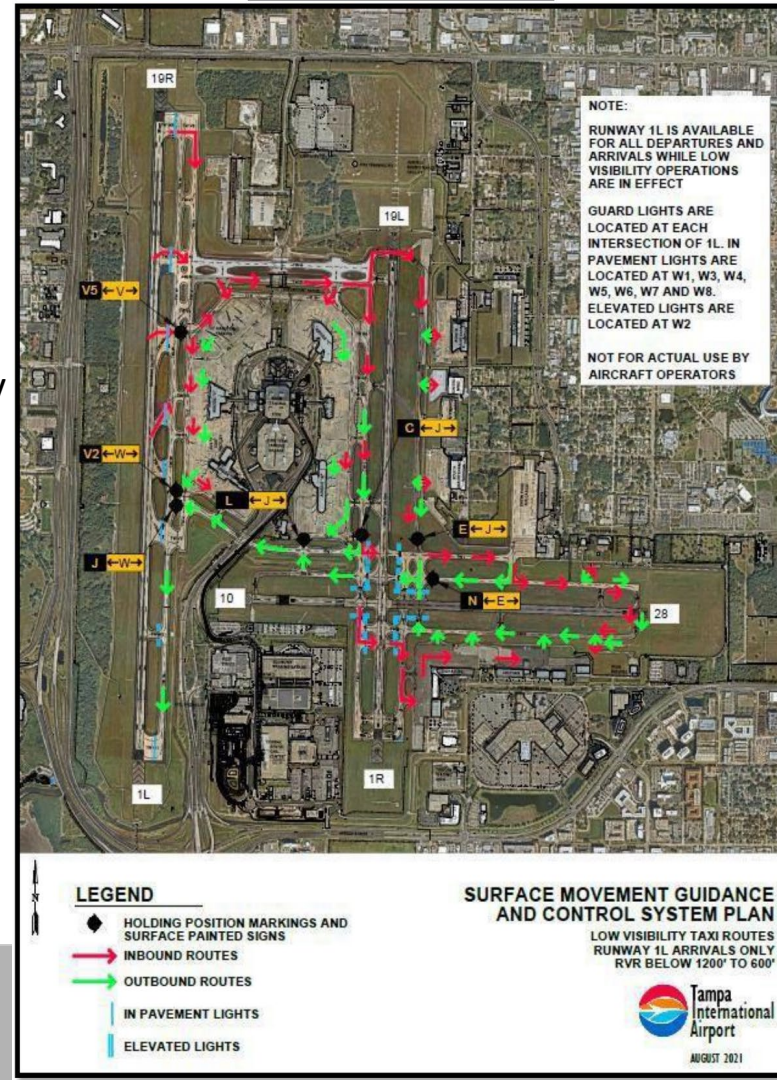
Less than **600ft** RVR – Other runway RVR conditions will be considered by ATC

- Example: Runway 1R - 19L has better visibility than Runway 1L-19R



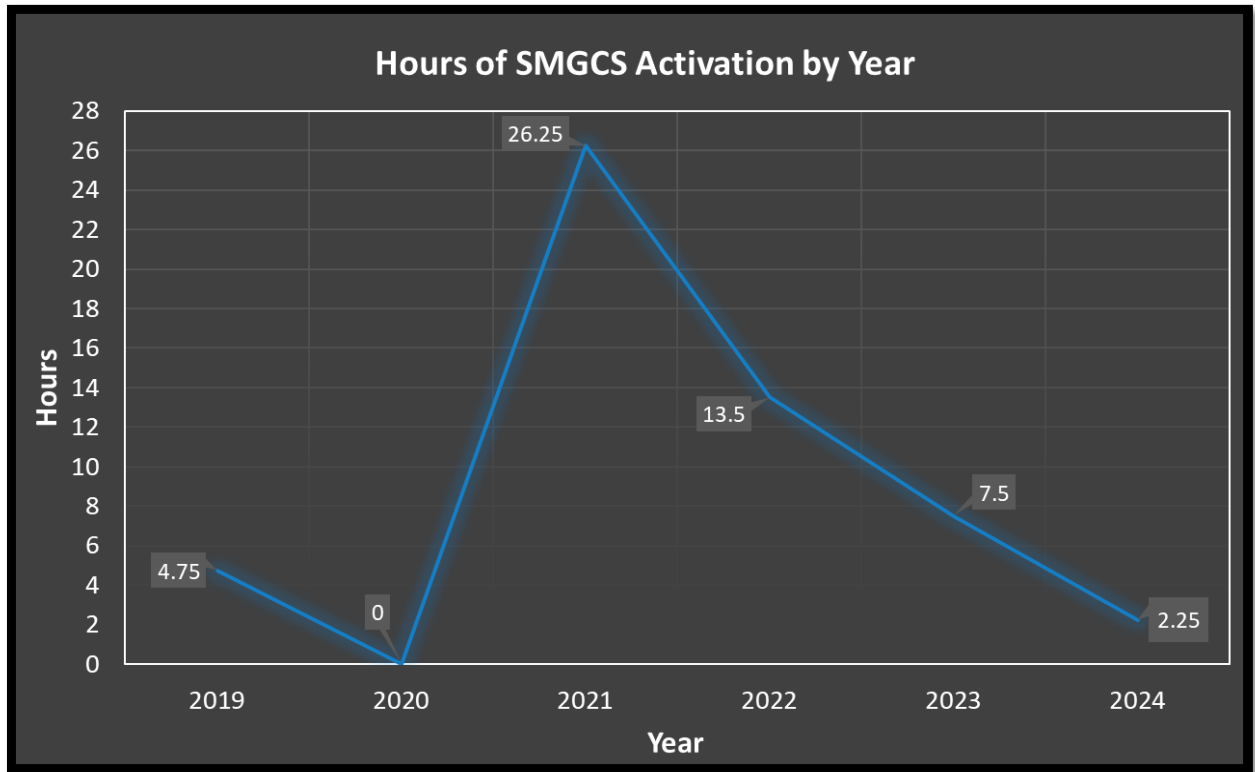
SMGCS Map

- All ARFF and Operations vehicles working within the movement area should have a copy of this map.
- If TPA is in SMGCS operations, minimize all movement in the non-movement and movement area .
- Aircraft/Vehicles may be repositioned during low visibility operations, with certain restrictions. Only authorized personnel (provide Pilot, Airfield Ops, etc.) in direct support of the SMGCS plan will be permitted access to the Non-Movement/Movement Area for the purpose of repositioning an aircraft or vehicle.
- Operations can provide a follow me escort upon request.





SMGCS Data – CAT III Activation





SMGCS Conclusion



TPA RVR Status





TPA Part 139.303

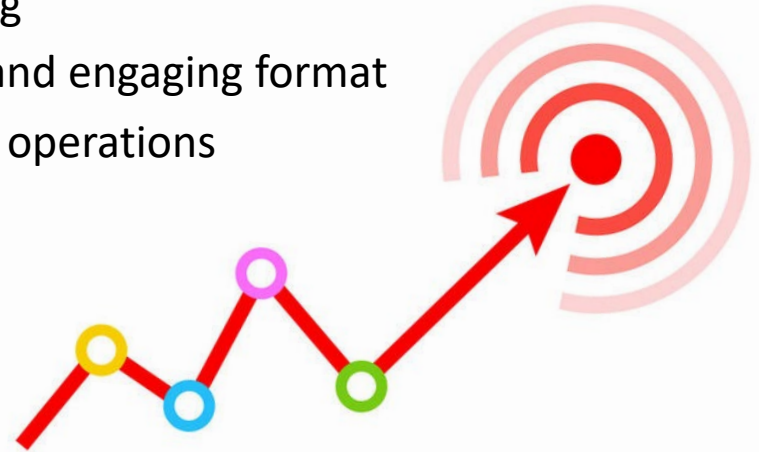
In-Person Training – 2025



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Objectives

- ✓ Reinforce key concepts from the digital training
- ✓ Deliver training topics through an interactive and engaging format
- ✓ Mitigate risks associated with movement area operations



Check on learning at the end of class

Agenda

- Airfield Marking & Sign Review
- 139.303(c)(3) Communications
- TPA Hot Topics
- Operating Safely During Runway & Taxiway Closures
- TPA Airfield Incidents
- The  Standard
- FAA National Example
- Next Steps
- Check on Learning

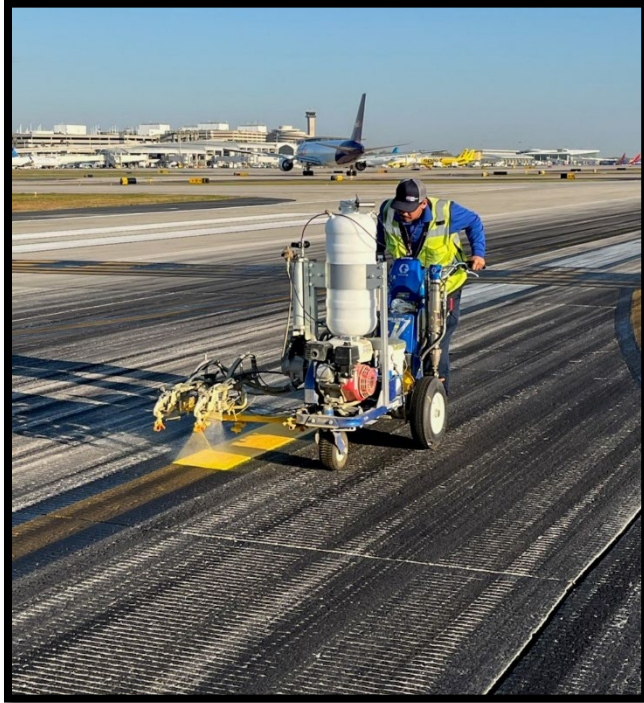




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Airfield Marking & Sign Review

Name That Marking



Intermediate Holding Position Marking





Name That Sign





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139.303(c)(3) Communications



Initial Contact



Clear radio communications with Air Traffic Control Tower require that you **follow a proper sequence**. Before you start talking, listen to the radio and make sure no one else is talking. Then key your microphone and speak clearly.

- (5) On initial contact, vehicle operators will advise TPA ATCT Ground Control (121.7 MHz) of the following:
- a. The entity being contacted (i.e., “Tampa Ground”)
 - b. Vehicle identification (i.e., "Maintenance 25")
 - c. Location of vehicle (i.e., TWY B1)
 - d. Vehicle operator’s intent (i.e., request to enter the movement area; will give way to all aircraft and hold short of all runways)

Vehicle Identifiers



(6) Vehicles **MUST NOT CROSS** an open runway unless the TPA ATCT controller specifically uses the phraseology:

*“**Correct Vehicle Identifier of the Requestor** + Cross Runway + Correct Runway Number”*

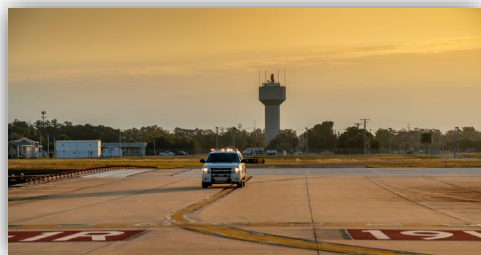
- Use extra vigilance for vehicle numbers that are close/match runway designators
 - OPS 9 (RWY 19L)
 - Tractor 28 (RWY 28)
 - ARFF 9 (RWY 19R)

Phraseology Example:

Vehicle Operator: Tampa Ground, OPS 3, at Taxiway Echo Two, request to cross Runway 1R

Tampa Ground Control: OPS 3, Tampa Ground, hold short of Runway 1R at Taxiway Echo Two

Vehicle Operator: Tampa Ground, OPS 3, holding short of Runway 1R at Taxiway Echo Two



Why are we crossing the runway at E2?



Communication with Air Traffic Control



- **Listen before speaking up** – don't interrupt a conversation, wait until there is a break in the communications
- **Look before you talk** – Look to the sky and runway surface before you request to cross
- **Know what you are going to say before keying the microphone**
- Keep communication **clear & concise**
- **Never assume** anything – if you are unsure of what Air Traffic Control said, ask for clarification
- Repeat all instructions back to the Air Traffic Controller, and **always read back hold short instructions**
- **Report** to the Air Traffic Controller when you are **exiting a runway**
- When escorting a vehicle on movement areas, use your call sign along with “and company” or “**plus escort**”; if escorting a **slow vehicle** indicate so to the Air Traffic Controller in your request

When driving on the Movement Areas, clear and proper communication is vital!



Maintain Radio Communications



Once you obtain clearance into the movement area, you are required to maintain radio communications or be with someone who does.





Communication with Air Traffic Control



Phraseology that is commonly misunderstood:

- **Go Ahead** – State your request (**CAUTION** -- Controllers use this phrase to mean “state your request”.) It NEVER means “to proceed” or “continue” or to “do anything”
- **Immediately or Without Delay** – Phrase used when such action compliance is required to avoid an imminent situation.
 - What if you can't?
- **Roger** – I have received your last transmission.
- **Wilco** – I have received your message, understand it, and will comply with it.



This Play is Under Review



A-Sort to Gate A-4



Runway Inspection



Who's Holding Short?



I'm Bigger





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TPA Hot Topics

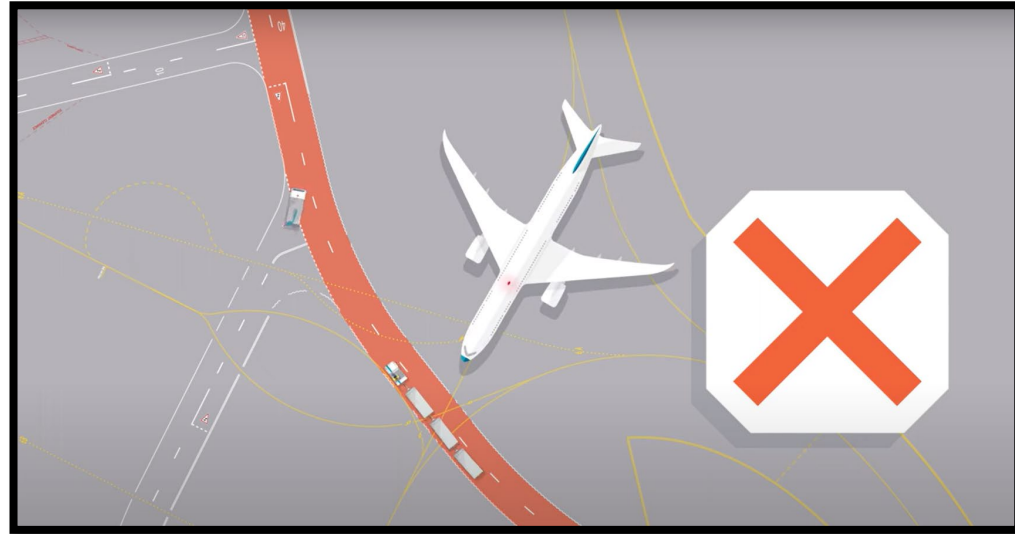
Giving Way To Aircraft

Aircraft always have the right of way

What to look for:

- Beacons
- Pushback Tug
- Engine Start
- Wing Walkers
- Jet Bridge Position
- Know Where Aircraft Belong

10+ Incidents over the last 12 months @ TPA



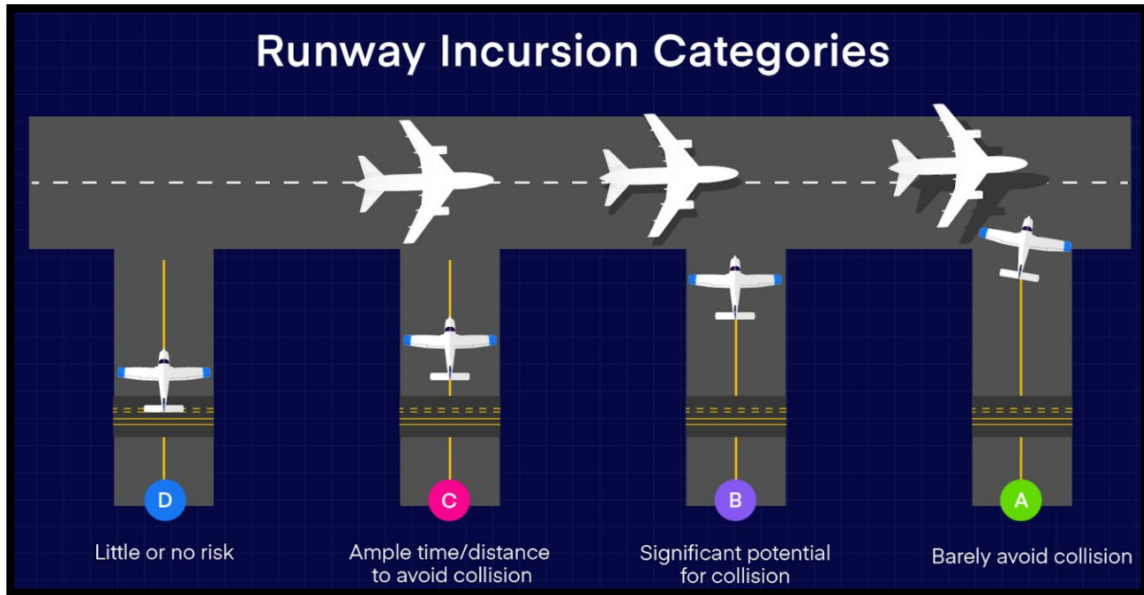


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TPA Airfield Incidents

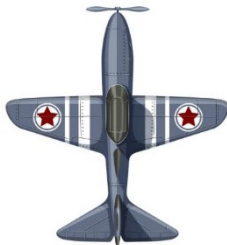
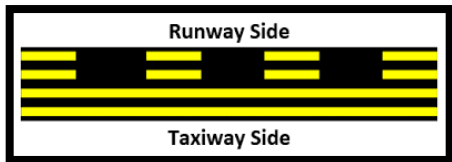
Incursions & Surface Incidents

What's the difference between an incursion & surface incident?

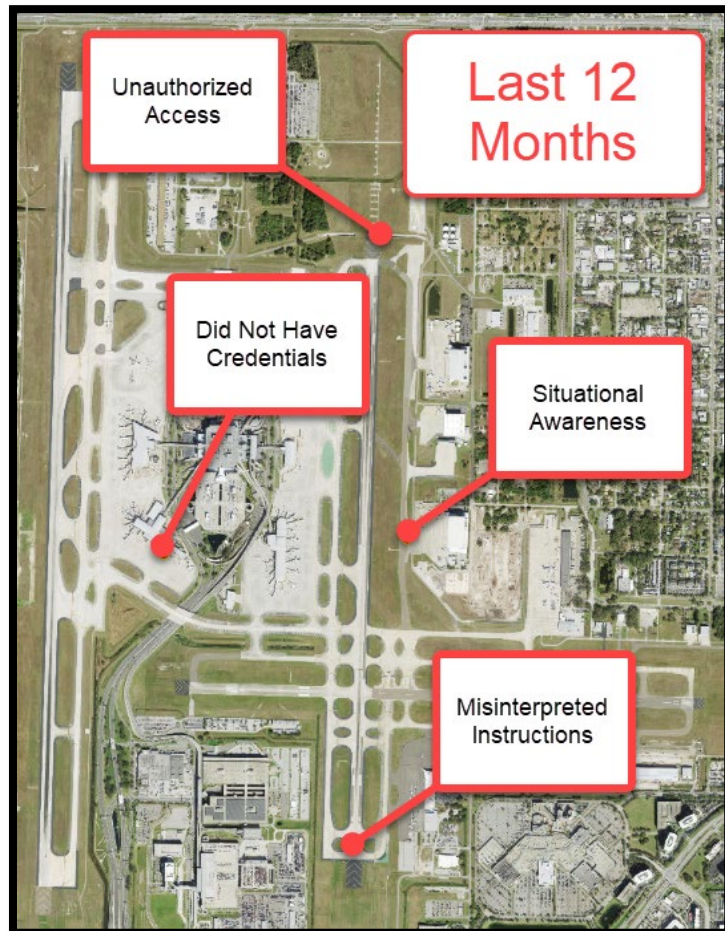


- “Any occurrence at an aerodrome or airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take-off of aircraft”.
- Surface incidents occur anywhere that is **not** a runway
- Essentially - Any time an aircraft, vehicle, or person enters a **runway/runway safety area** without an Air Traffic Control clearance.

TPA Incidents



Have we had any incidents in the last 12 months?





Hillsborough County Aviation Authority
Tampa International, Peter O. Knight,
Plant City and Tampa Executive Airports

The  Standard



The Tampa Standard - Movement Area Driving

- **Visually Verify: Stop** when approaching any runway and **verify you have permission from ATC to proceed onto or cross**, verify the **runway is clear**, **look right and left**, **check the sky**.
- **Give yourself space** – Request clearance across a runway with a good distance between your vehicle and the runway.
 - ***Do not drive and request clearance***
- Always maintain **situational awareness**
- Keep radio **volumes** at an adequate level circumstances
 - If working outside vehicle - Use an external speaker or portable/handheld
- **Eliminate unnecessary distractions**
- Roll down **windows**

What can happen if you don't follow the Tampa Standard?

Common Causes for Runway Incursions & Surface Incidents?



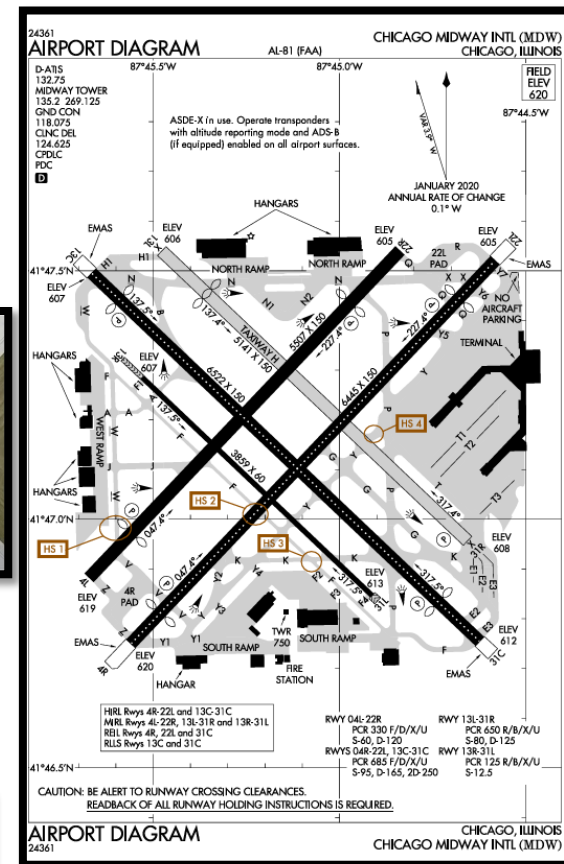
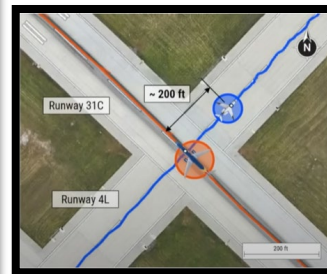
- ✓ Miscommunication
- ✓ Unfamiliarity with surroundings
- ✓ Poor weather conditions
- ✓ Distractions
- ✓ Complacency
- ✓ Expectation Bias



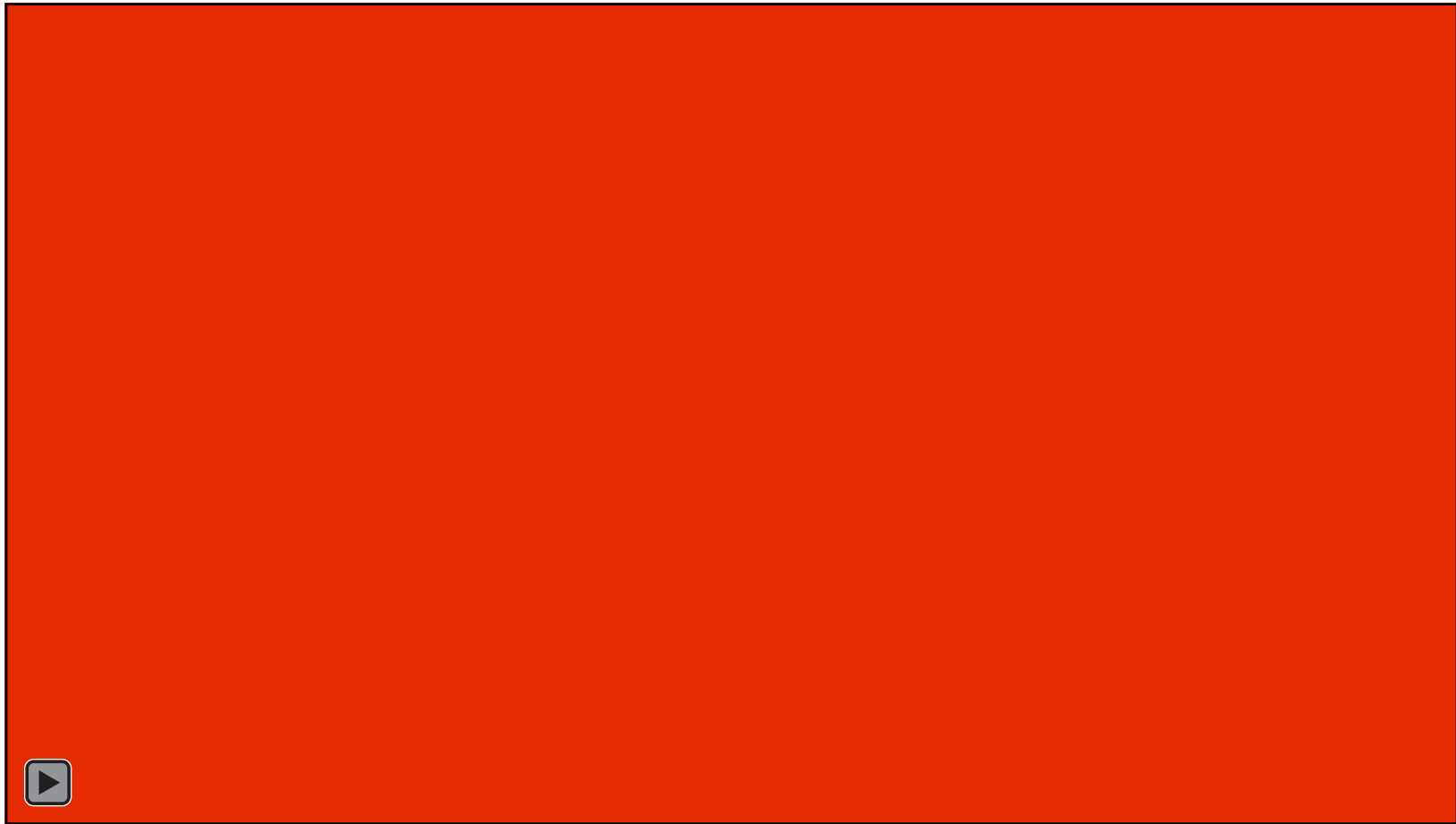
Hillsborough County Aviation Authority
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FAA National Example

Case Study – Chicago Midway Feb 25th, 2025



Watch the upcoming video with contributing factors in mind



Case Study – Contributing Factors

- ✓ Poor communication
- ✓ Lack of familiarity
- ✓ Lack of active scanning
- ✓ Busy airfield
- ✓ Cockpit crew management

