

Garage Top Helipad/Heliport Safety



Objectives

- Describe surrounding safety features of Dallas campus helipad
- Discusses personal safety around helipads
- Describe importance of helipad maintenance
- Discusses actions during an emergency (disaster) event
- Discusses roles and responsibilities of keeping landing zone safe

Helipad- Garage Top

The Access Center monitors the Plano & Parkland helipads



Notice
middle of
screen....
people on
pad

Helicopters You Might See



Careflight

4 blades,
side entry



UT Health

2 blades



Air Evac

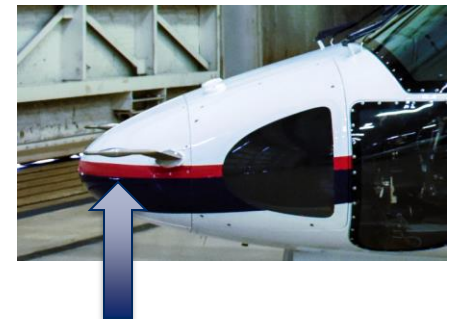
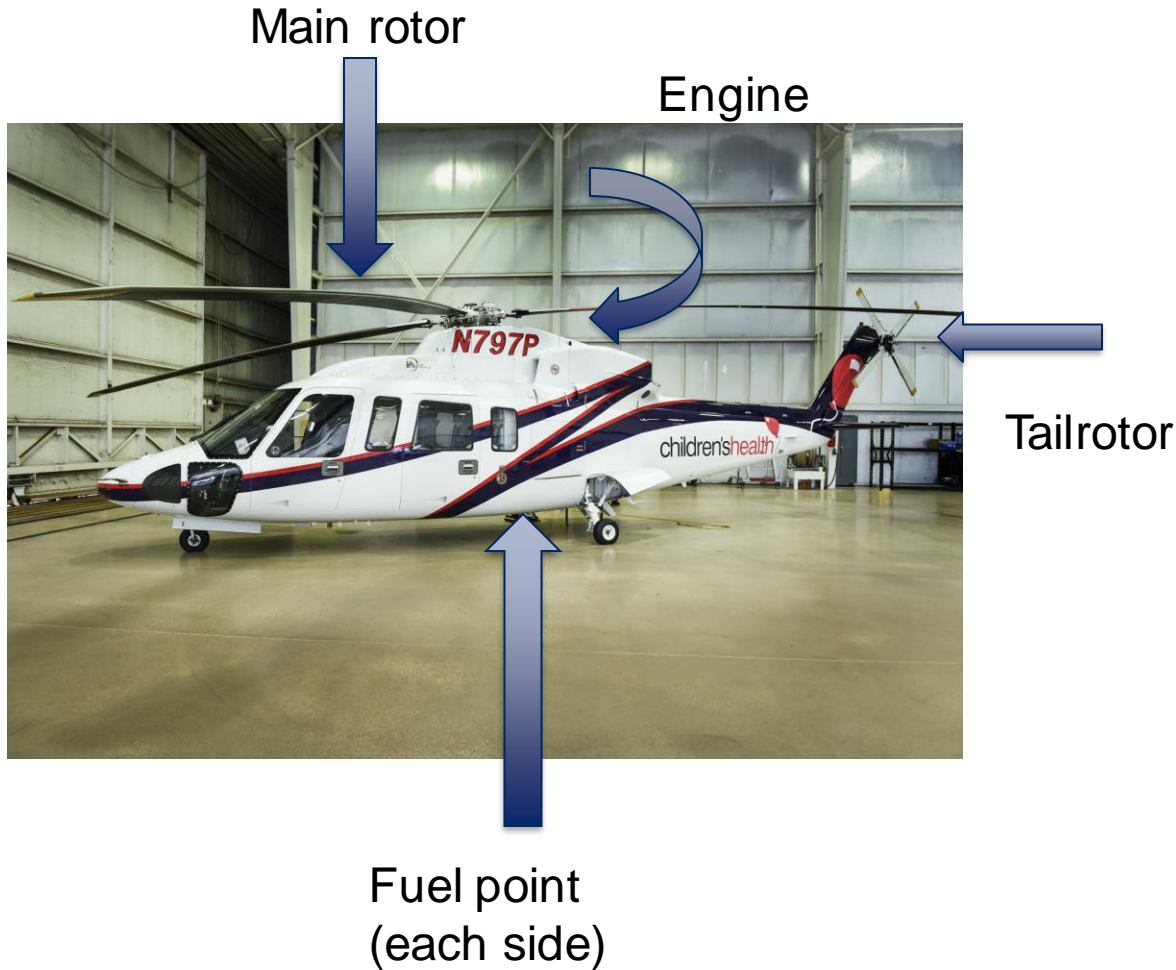
Children's Aircraft



- S76 C++ Sikorsky—It is a very large aircraft
 - Length: 52'6"
 - From tip of main rotor blade to tip of tail rotor blade
 - Width: 44' (blades)
- Weight 11,700 pounds maximum, therefore can not land on many rooftop pads
- Our aircraft can hold **286.4 gallons** of Jet A fuel--important to know if there is any kind of fire, hard landing etc. To let 911 know

Jet A fuel is the most common type of commercial aviation fuel

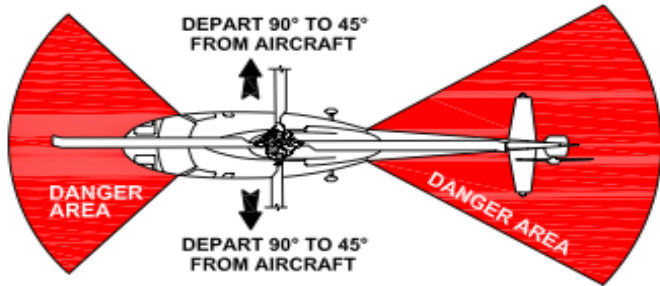
Let's review the main outer parts of our aircraft





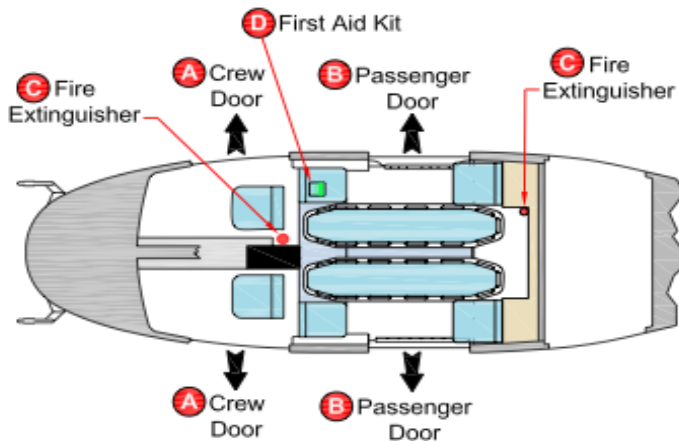
WHEN THE ROTOR IS TURNING ONLY ENTER AND EXIT THE AIRCRAFT FROM A 90 TO 45 DEGREE POSITION TO THE FUSELAGE (FROM THE SIDE)

NEVER APPROACH OR DEPART THE AIRCRAFT FROM THE REAR.



DANGER AREA(S)

2 CREW DOORS AND
2 PASSENGER DOORS
ARE USED AS EMERGENCY EXITS



CABIN LAYOUT

Danger Areas Specific to Child ONE

Approach and Departure Areas

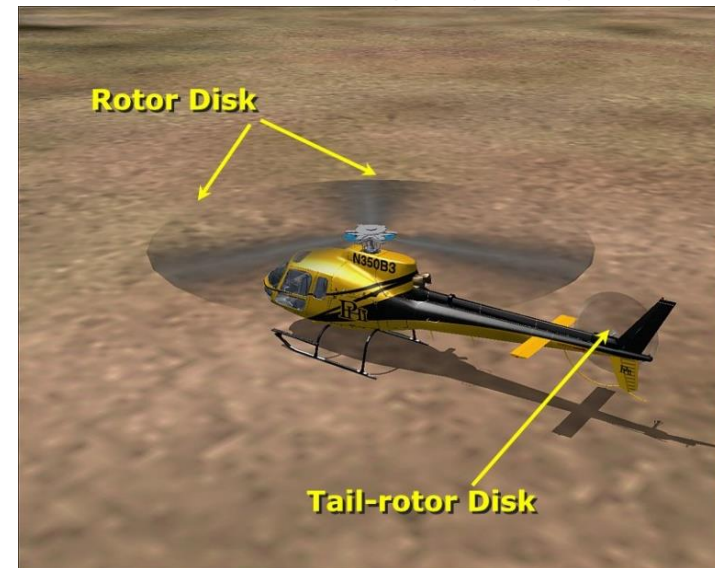
Emergency Equipment

Landing Zone Safety For Child One S76 C++

- Safety and security is of the utmost importance during landing and taking off for any aircraft.
- Child One operates with dual pilots for added safety
 - Majority of air medical crashes are due to pilot error, this redundancy decreases our risk
- This presentation is specifically for **Children's aircraft**
 - Other helicopters have different approach zones and regulations
 - Concepts may be applied to all aircraft

Things to Think About


- Height of the rotor disk can vary with winds, terrain and RPM (revolutions per minute)
- At operating RPM the tail rotor is **not noticeable** to the naked eye
- Remember
 - Contact with the tail rotor is ***fatal!***
- Never walk around the back of the aircraft



Basic safety

Rotor Wash

- All helicopters produce a significant downward flow of air during landing and takeoff.
 - The larger and heavier the helicopter the greater the velocity of wind produced.
 - A 75 to 100 mph downward flow of air is common.
 - Dumpsters in close proximity to a landing area should have a mechanical means of securing the lid.
 - Helicopter rotor wash has been known to pick up full sheets of ¾" plywood 30-40 feet into the air.



The diagram shows a blue helicopter with yellow rotor blades positioned above a green dumpster. Red arrows point downwards from the rotor area, indicating the downward flow of air. The dumpster lid is shown being lifted by the force of the air, with debris being blown upwards. The background is a dark, textured surface.

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- Remember: Debris can blow up, always wear eye protection, secure loose objects (badge, stethoscope etc), remove any ball caps, isolation gowns etc.
- Do not approach helicopter until motioned to do so by air medical crew member
- Always walk, never run around a helicopter
- DO NOT touch anything on the helicopter unless directed to do so by a crew member
- At night, Do not flash any bright lights at the aircraft

REMEMBER

**Never approach this aircraft from
the front or rear!**

It can be fatal.

Why do they fly around the helipad before landing?

- High Reconnaissance
 - To determine direction and speed of the wind
 - Touchdown point
 - Suitability of LZ
 - Approach and departure axes
 - Determine any obstacles on approach or departure

- Low reconnaissance
 - Checking for wires, support structures etc
 - Final decision point to land or go around



Approach/departure path at the discretion of the pilots

Safety Guidelines-what you need to know

- Is the Landing Zone (LZ) confined from the public?
 - If not:
 - Is there someone assigned to rope off or secure the site?
(at Dallas it is CMC security)
 - Is the staff trained for their own personal safety?

Types of loads/unloads

- Hot
 - Blades are spinning, engines running

- Cold
 - Helicopter completely shut down, no rotation of blades

Standard Crew on Children's Helicopter

Single patient configuration

- 2 pilots
- 1 RN
- 1 RRT
- 1 Medic
- 1 Patient
- 1 Parent

Dual patient

- 2 pilots
- 2 RN's
- 2 RRT's
- 2 patients
- No parent or paramedic



Safety Guidelines

- Secure all clothing, bedding and anything else that can become airborne—it can be sucked into the blades of the aircraft and endanger aircraft
 - Do not wear isolation gowns, hats, etc.
- **Never** point white light directly at the aircraft- it can blind the pilot & crew
 - Pilots may have (Night Vision Goggles)NVG's
 - This includes phones, media cameras, lasers or flash photography



Safety Guidelines

- All personnel should be at least 150 feet from helicopter during takeoff and landing (**stay inside whenever possible**)
 - Wear eye and ear protection if available
 - Turn your back to rotor wash
 - Stay inside when taking off or landing
- There should be no debris or trash on our around helipad
 - If you see debris on pad, and is safe to do so, pick up and dispose of properly
- All marking devices should be secured to the ground
- No smoking within 100 feet of aircraft
- All objects should be at least 150 feet from landing zone
 - Trees, vehicles, bystanders, etc.

Safety Guidelines cont'd

For
your
safety

- ***Do not approach the aircraft – it can be dangerous***
 - The pilot will motion when/if it is safe to approach the aircraft
- For patient's safety, keep the patient in the facility until the medical team arrives
- For safety reasons, the medical team will unload and reload ***without assistance*** from the referring facility
- If approaching aircraft after the blades have completely stopped, only approach from the sides
- The pilots will make eye contact and motion when it is safe to approach the aircraft on the helipad.

What are NOTAM's

- A communication to air medical community traffic shut down of pad, objects in flight path and any changes in the normal operations of the helipad.
- Type “NOTAM” in the Search menu

[Provider Resources](#) > [Refer a Patient](#) > [Neonatal and Pediatric Specialty Transport Services](#) > [Helipads and Hazard Reporting](#)

<https://www.childrens.com/for-healthcare-professionals/refer-a-patient/transfer-a-patient>

Children's HealthSM Transport Helipads and Hazard Reporting

A leader in neonatal and pediatric transport - with more than 30 years of experience.

EMS NOTAM

Date of Issue: 13 June 2022

Location: Children's Medical Center Plano, 7601 Preston Rd, TX 75024

- **Date & Time:** June 13 & 14, 2022 from 8:00 AM to 2:00 PM
- **Location:** Children's Medical Center Plano, 7601 Preston Rd, TX 75024
- **Expected Duration:** 6 hours
- **Altitude at which UAS will operate:** 100ft-400ft

Drone

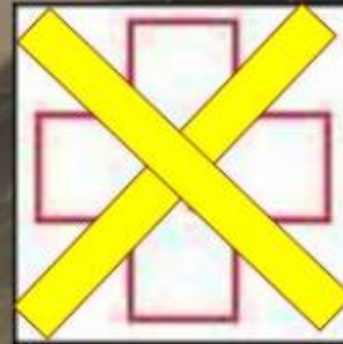
- **Owner of UAS:** Vaughn Construction
- **FAA Registration:** FA33P7ML4P
- **Remote Pilot in command:** Daniel Harris
 - [281-731-2454](tel:281-731-2454)
 - dharris@vaughnconstruction.com
- **UAS Operator:** Daniel Harris
- **Description of operations:** We will be capturing videos and pictures of the ongoing tower work for progress documentation

CLOSING A HELIPAD

- If for any reason you need to close a helipad landing area either temporarily or permanently. Place a large yellow X over the landing area to signal to all pilots not to land at this location.

– Reference:

- AC 150/5390-2B Section 409 e,
and figure 4-11



Pilots'
discretion in
emergency

What do the markings mean?



Hospital Helipad Marking

- Max Weight

- Is indicated by the upper number and is in thousands of pounds.

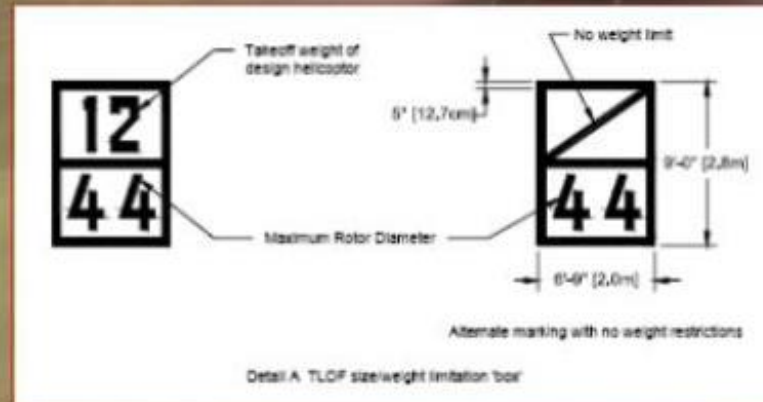
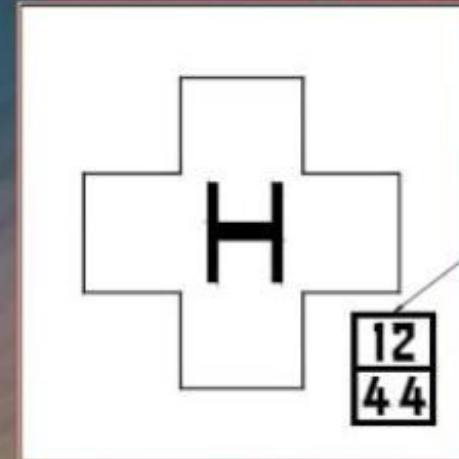
- Max Rotor Diameter

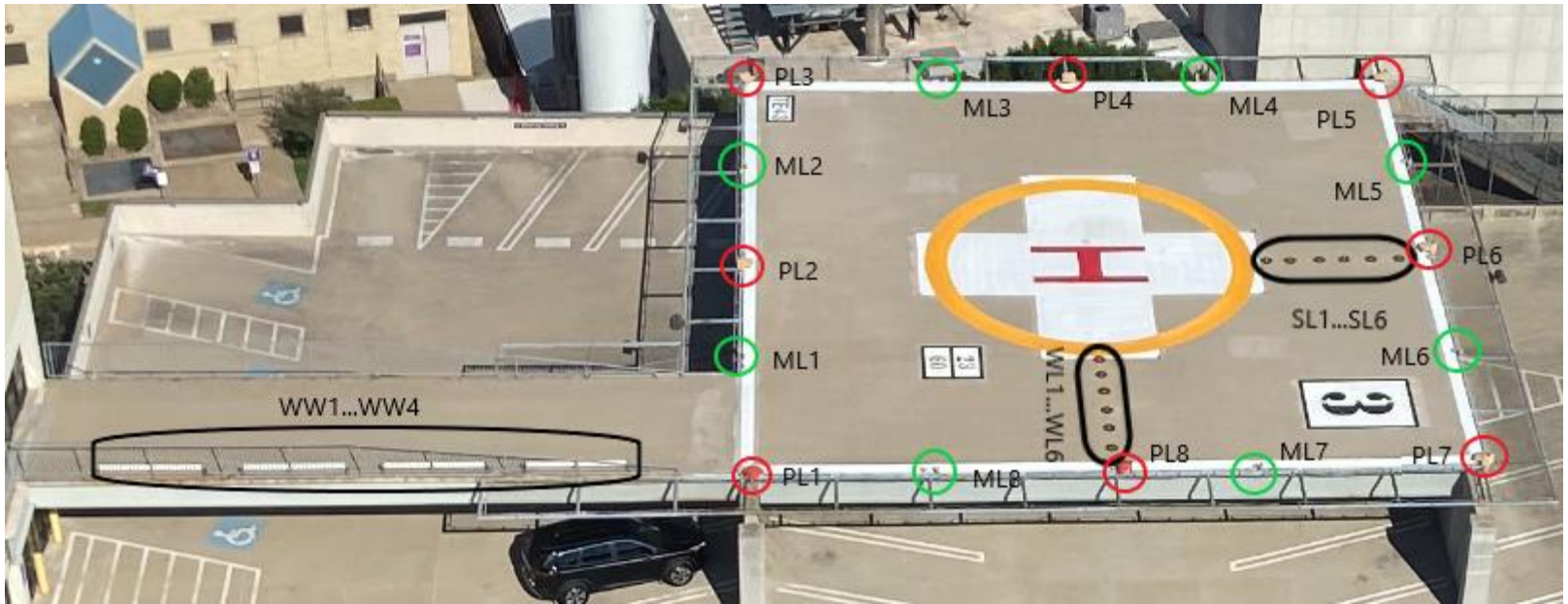
- Is indicated by the lower number and is in feet.

Reference: AC 150/5390-2b

Figure 4-12

Version 1.8 (9/25/2008)





Dallas Garage Top Helipad



Clear, concise signage in the area is a must

Response to the pad

Stepping off the Elevators

Available items:
2 stretchers
Ear protection
PPE
Cleaning supplies
Biohazard bin



Security responsibilities at Dallas for incoming & outgoing aircraft

- Access center will notify security of incoming aircraft via radio
- Security
 - will secure pad, stop traffic, monitor for public
 - Ensure the lighting on the pad is operational
 - Ensure of any needs are updated via the “Rounding at Children’s App”
 - Ensure access to air medical crew both off the pad to the respective unit and return escort to the helipad

Helipad Pathway

























Incoming Team requesting assistance on the Helipad

- **Max of 3 additional people to assist**
- **Admin sup will be contacted by Access Center to assign people to respond to assist**
- **Security to communicate with pilots for safety of entire team**
 - Security is the safety officer on the helipad and crowd control

Operations and Maintenance

- Daily Safety checks are maintained via the Rounding at Children's APP

- Location Specific for the APP

Items addressed:

Helipad reflective paint

Ground level lighting

Marker Lighting

Roof top light function

Roof top cameras

Windsock conditions

Equipment in place and Clean

Spill kit & fire extinguisher conditions

Notify engineering of any issues

Refer to EOC 1.10 Safe Use of the Children's Medical Center Dallas and Plano Campus Helistop/Helipads

ICE AND SNOW REMOVAL

- To ensure maximum safety for the helicopter, it's crew and the patient, snow and ice should always be removed from the landing area prior to the helicopter's arrival whenever possible.
- Monitor often during in climate weather



Do not use rock salt to remove snow or ice. Due to its size it can become a projectile and cause serious injury. It is also extremely corrosive and damaging to helicopters.



In the Event of a Disaster on or around the helipad...

CALL 911

- Consider these things:
 - Call **911 and 3-3333** to report
 - Rescue-patient, parent, crew members
 - Never approach until all moving parts have stopped on helicopter and pilots motion you forward
 - Break windows, if possible
 - Try to get doors open, if possible
 - HS 4.39 Helicopter Crash Emergency Response Plan
 - HS 4.17 Disaster Plan - Internal/External Emergency Response Plan

Disaster actions cont'd

- Consider these things:
 - Call for help
 - Get fire extinguishers/fire suppression equipment
 - Concentrate resources on getting patient and crew out rather than fire containment
 - Notify proper authorities
 - When the emergency is over, file a SafeLink

Garage Top fire extinguisher

- PASS



Any Questions



- Call MOC (214) 803-4346

Questions during the cornerstone module

- What type of fuel does the Children's helicopter use?
 - Jet fuel A
- Who is responsible for securing the helipad prior to aircraft landing or taking off?
 - Security
- When do you approach a helicopter
 - Only after eye contact and at the direction of the pilot
- Where can you find a fire extinguisher?
 - In the vestibule

What do you call if there is a 'hard landing'

 - Code yellow, 3-3333, 911
 - Refer to policy HS 4.39 Helicopter Crash Emergency Response Plan

And HS 4.17 Disaster Plan - Internal/External Emergency Response Plan

Team members next step

- Sign up for hands on training in Cornerstone for available dates/times after completing the modules