On Tuesday February 18, 2020, Deputy Jeffery Gray and I were conducting flight training in preparation for my Commercial Rotorcraft Helicopter pilot checkride. We were flying in a 2014 Airbus AS350 B2, serial #7863, with an attached registration of N188FS and call sign SO4. Deputy J. Gray was sitting in the copilot (left) seat performing the role of flight instructor and I was sitting in the pilot (right) seat performing the role of trainee.

At approximately 1445 hours (Eastern Standard Time), we departed the Hillsborough County Sheriff's Office (HCSO) ramp located on the southern end of the Tampa Executive Airport, 5808 Wilkins Road, Tampa, Florida 33610. We flew to the Peter O. Knight airport and conducted approximately eight to ten autorotations, comprised of straight in and left 180 degree turn autorotations with a power recovery. We relocated to the Tampa Executive Airport to conduct right 180 degree turn autorotations with a power recovery. We joined a right downwind for runway 18 to conduct the maneuver. Deputy J. Gray advised to conduct the autorotation with a projected termination area above the number 36 at the departure end of runway 18. I made the appropriate radio call over the Tamp Executive's Unicom frequency. At approximately 1549 hours, we initiated the 180 degree right turn autorotation from approximately 1,000 feet mean sea level and abeam the departure end of runway 18. Deputy J. Gray reduced the throttle to idle and I lowered the collective to enter the autorotation. I immediately heard the audible low rotor speed warning horn and began the right turn to assist in speeding up the rotor and turning towards our targeted termination spot. During my 180 degree turn, I drifted past the runway and was directly above the alpha taxiway that parallels runway 18-36 to the east. Deputy J. Gray advised to conduct a goaround as the low rotor speed warning horn was still on. Deputy J. Gray reached down and increased the throttle. I increased the collective to conduct the go-around and notice the aircraft appeared to not have any power. I immediately lowered the collective and told Deputy J. Gray, "I don't have any power." Through my peripheral vison, I noticed Deputy J. Gray's right arm moved towards the throttle control to confirm its position. The audible low rotor speed warning horn was still on and we were still descending so I asked Deputy J. Gray to help me with the flight controls. With Deputy J. Gray and I both on the controls, we sidestepped to the left (east) as taxiway alpha was coming to an end and the adjacent asphalt aircraft parking ramp was extended beyond the taxiway. Due to the continued audible low rotor speed warning horn, a full autorotation deceleration was not conducted. After a small flare, we touched down on the aircraft parking ramp near taxiway intersection alpha one, at approximately 1550 hours. Due to the aircraft's forward momentum, we continued to skid on the aircraft parking ramp to the south. The aircraft skidded off the ramp to the south into a small marshy ditch. The aircraft rocked forward and then settled back down on the skids, coming to rest just south of the aircraft parking ramp on the north bank of the ditch.

Once the aircraft was stopped, I observed Deputy J. Gray reach down and close the throttle control lever. I then began shutting off all of the electronics in the aircraft. I did not hear the engine running once the aircraft came to rest and the rotor was slowing to a stop. During this maneuver, it appeared that one of the white arcs on the NR/N2 digital gauge that monitors engine RPM and rotor RPM was not visible. I believe the only white arc I observed on the gauge was the rotor RPM speed. I do not recall when during the sequence of events I noticed the white arc missing.

Deputy J. Gray and I were not injured during this event. Deputy J. Gray made all of the notifications of the event to the appropriate personnel. After conducting a walk around the aircraft, I observed damage to the camera mount located on the front left of the aircraft and damage to the rear tail rotor drive shaft cover.

Matthew Bonin
Sheriff's Pilot
Hillsborough County Sheriff's Office
Certificate