

Aero Logic, LLC

██████████ - Pleasant Lake, MI 49272-9634

February 12, 2013

Mr. Glen Hyde, Airport Manager  
Northwest Regional Airport

██████████  
Roanoke, TX 76262

Dear Hyde,

### Roanoke Texas, Northwest Regional Airport 52F - Airport Inspection

It was a pleasure meeting you yesterday during the airport inspection. Thanks for taking time to meet with me during the inspection and also the next day to review the airport data. It's nice to see an active airport and I appreciate the challenges you face maintaining such a large, privately owned airport with no federal assistance. The installation of the 4' fence across both runway ends mounted on a break-away post is an excellent idea. Also, the pavement mounted solar taxiway lights seem to be a great low cost solution for taxiway lights.

Because the airport is privately owned, you are under no obligation to maintain the airport to any federal standard. However, when making improvements, you should refer to FAA Advisory Circular 150/5340-13 Airport Design Guide, AC 150/5340-1K Standards For Airport Markings, and AC 150/5340-30G Design and Installation Details for Airport Visual Aids. All are available free online.

Following are recommendations to enhance the safety of the airport.

#### Runway length

The runway has a non-standard (NSTD) configuration with different day and night thresholds:

1. Runway 17 has a 5' wide painted threshold bar, 137' from the pavement end. This is the daytime threshold. The 137' area between the pavement end and threshold bar would be considered paved runway overrun. There are 3 green threshold lights on each side of the runway located 265' from the daytime threshold. This represents the night threshold.
2. Runway 35 has a 5' wide painted threshold bar approximately 70' from the pavement end. This represents the daytime threshold. The 70' area between the pavement end and threshold bar would be considered as a paved runway overrun. There are 3 green threshold lights on each side of the runway located approximately 250' from the daytime threshold. This represents the night threshold.

This configuration is in place to provide the maximum amount of runway during the day and to provide additional clearance over obstructions at each runway end during the night.

3. From pavement end to pavement end is approximately 3500'. Because the runway (daytime) thresholds have been moved in from the physical pavement end, the official runway length from threshold to threshold is actually 3300' [ $3500 - (137+70) = 3300'$ ].

Because this is a non-standard configuration, I recommend that the day and night thresholds should be located in the same place to provide the standard clear 20:1 approach slope over obstructions. This would require shortening the landing distance available. Again, you should reference AC 150/5340-1K.

4. For runway 17, currently there is a 12:1 approach over the 40' power pole located at the corner of Kelly Dr. and Co. Rd 338. The pole is 200' from the runway end, 185' right of the runway centerline. This would require moving the threshold approximately 600' from the current day threshold leaving 2700' of runway remaining beyond the displaced threshold. The approximate location of this is near the white

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and orange pipe west of the runway (gas line marker?). The best solution would be to remove the power pole that obstructs the approach.

5. For runway 36, there are 40' trees located 250' from the runway end, 125' right of centerline. You indicated that there was a fatal accident in September 2012 due to a plane impacting trees in the approach. Some clearing work was started, but the entire approach has not been cleared. The obstruction clearance slope is 6:1 at the current day threshold and 12:1 at the night threshold. To provide the standard 20:1 clear approach as per FAR Part 77, the threshold would have to be displaced at least 600' from the runway end. I flagged the general location at which the trees are cleared at 20:1 (orange wire flag next to the parallel taxiway). Obviously, it would be preferable to remove the trees. If the trees can't be removed, you would want to displace the threshold even farther to allow for tree growth. Shortening an already short runway by displacing the landing threshold is not a good solution.

Other recommendations:

1. Provide a lighted wind indicator.
2. Repair the rotating beacon.
3. Runway 17 VASIs have no aiming indicator on either unit. The indicators should be replaced so the VASI aiming can be adjusted and checked.
4. Runway 17 end, you should fill around the taxiway "A" sign posts and remove the old concrete base.
5. Runway markings are non-standard. See Advisory Circular AC 150-5340-1K.
6. The taxiway hold lines are non-standard marking located too close to the runway. Normal spacing for a VFR runway is 125 from runway centerline. No taxiway center lines. See Advisory Circular AC 150/5340-30G
7. Turf area off the runway 35 end is low and should be filled.
8. Drainage near rwy 35 end partially collapsed and should be repaired
9. Runway pavement is in poor to failed condition. Loose stones on the pavement should be swept clear. Large areas of cracking and alligator cracking. Runway should be resurfaced or reconstructed.
10. Runway lights mounted on angle iron should be flush to grade with frangible mounting.
11. While inspecting the airport, I noticed several cars traveling along Kelly Rd, across the runway end. Although there is paint marking indicating the vehicles should stop, the markings are faded and often ignored by the drivers. The road is located 165' from the runway end and is considered a "close-in" obstructed. In light of the vehicle/airplane collision on November 3, 2012, I offer the following recommendations:
  - A. Locate the road outside the runway safety area.
  - B. Until that can be accomplished, repaint the pavement marking "STOP" as the marking has faded and is not very visible, even during the day, but much more so at night.
  - C. Install vertical stop signs on both sides of the road that would be visible to drivers on the road.
  - D. Install a sign on each side of the runway indicating something like, "WARNING! Active runway. Low flying aircraft. Stop! Look both ways before crossing."

Feel free to call me [REDACTED] or via e-mail if you have any questions.

Sincerely,

[REDACTED]  
/Randy L. Collier