Runway Extension With a Vegetated Mechanically Stabilized Earth Wall (VMSEW)

PURDUE ROAD SCHOOL - 2017

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Paoli: story of a small airport with a big idea

County Seat for Orange County

Largest population center in the county but had the shortest runway
Paoli: story of a small airport with a big idea
Paoli: story of a small airport with a big idea

Pilot, “Can I land?”

Insurance company, “No”

Aircraft rental agreement, “No”

Airport, “FAA, can we have a longer runway please?”

FAA, “Umm, no.”

Airport, “Pretty please?”
Paoli: story of a small airport with a big idea

County Seat for Orange County
Largest population center

Town, “Engineer, can we have a longer runway please?”
Engineer, “Umm, [scratch head], umm, [scratch head some more], Yes!”
Airport, “Hoorah!”
Paoli: small airport on a big hill!
Paoli: small airport on a big hill!
Paoli: small airport and a little hole?
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**DO WE HAVE ANY PICTURES FROM THE GO PRO THAT WENT DOWN THE HOLE?**
ELECTRO RESISTIVITY TOMOGRAPHY - ORIGINAL

South
Easting: 3128816 ft.
Northing: 1213875 ft.

North
Easting: 3129107 ft.
Northing: 1214632 ft.

Distances:
- Easting: 3128816 ft.
- Northing: 1213875 ft.

Processing Statistics:
- Dipole-Dipole Array
- Number of Iterations: 6
- RMS Error: 6.98 %
- Total Data Points: 1166
- Maximum Misfit: 43.4 %
- Electrode Spacing: 10 ft. (3.05 m.)

Resistivity Profile Line PAM
Karst Imaging
Paoli Municipal Airport
Paoli, Orange County, Indiana
MUNDELL PROJECT NO. M15010

FIGURE 7

Interpreted Top of Bedrock from the Resistivity Data
Possible Water Flow Pathway

Resistivity (Ohm-meters)

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ADDITIONAL BORING B-203

NOTES:
1. Site map is provided for site reference only. No claim is made as to the accuracy or completeness of this information.
2. Coordinates are referenced according to Indiana State Plane West (feet), NAD83 datum.
3. Boring locations are approximate. Their locations were determined based on the Boring Plan Runway Extension Area provided by CARDNO.

Updated Site Map
Karst Imaging
Paoli Municipal Airport
Paoli, Orange County, Indiana
MUNDELL PROJECT NO. M15010

110 South Downey Avenue
Indianapolis, Indiana 46219
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FIGURE 1
Table 2: Downhole Photos
Borehole B-203

1. Bottom of Casing

2. Beginning of weathered zone (vuggy, highly fractured, heterogeneous sandstone/shale/siltstone, bluegray to tan/orange to white in color)

3. Bedrock weathering, darker in color, wet vuggy texture and fissile type texture

4. Continuation of weathered region, dark in color, vuggy, and moist

5. Competent coarsely grained limestone, oolitic texture

6. Fracture/flow pathway present

7. Relatively clean/competent limestone, coarse grained

8. Start of void

9. Water table, clay particles clouding the water

10. Water cloudy with sediment

11. End of boring, drilling sediment

12. Mundell preparing downhole video camera for data collection

13. Downhole Video camera being lowered into borehole B-203
Borehole B-203

Ground Surface

7.6' Bottom of casing

17.2' Beginning of highly weathered, heterogeneous bedrock zone.

18.9' Still highly weathered

22.3' Relatively competent limestone

24.0' Fracture/flow pathway

30.0' Competent, coarse-grained, limestone bedrock

31.8' Start of void

34.5' Top of Sediment

Water level 32.4' on 5/20/15

It should be noted that all depths are approximate.
Paoli: small airport and a big hole!
Start of Phase II Construction Activities
Four Phases of Construction
Piper PA-28R-201 Landing on Runway 2
Paoli: story of a small airport with a big idea