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

PURDUE ROAD SCHOOL - 2017

Presented by:

Maria Muia, Ph.D., Senior Aviation Planner
Woolpert, Inc.

John Baer, P.E. Project Manager
Woolpert, Inc.

Richard F. Gerdeman III, P.E., MSEW Engineer
RH Batterman / Woolpert, Inc.
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?”
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!
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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 GoPRO THAT WENT DOWN THE HOLE?
Interpreted Top of Bedrock
from the Resistivity Data

Possible Water Flow Pathway

Moist, Clayey Soil (Shallow);
Moderately to Severely Weathered/
Fractured/Solutioned
Limestone with
Soil- or Water-Filled Voids,
or Weathered
Shale/Siltstone
(Deeper)

Slightly to Moderately Weathered,
Fractured, or Solutioned
Limestone; Air-Filled
Relative Void
Competent Shale/Siltstone
(Deeper)

Dense, Competent Limestone
Bedrock

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

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110 South Downey Avenue
Indianapolis, Indiana 46219
317-630-9060, fax 317-630-9065
www.MundellAssociates.com

FIGURE 7
ADDİTİONAL BORING B-203

Table 2: Downhole Photos
Borehole B-203

1. Bottom of Casing
2. Beginning of weathered zone (vuggy, highly fractured, heterogeneous sandstone/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 coarse 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
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