



NicNevol

Engineering Services



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Bulk Hangar – Williston Municipal Airport (X60)

Location: Williston, FL (Levy County)

Owner: Passero Associates, LLC

Markets: Aviation, Geotechnical Engineering

Services: Geotechnical Exploration, Subsurface Investigation, Laboratory Testing, Foundation Recommendations

Project Description

NicNevol (through Bensatec Geosciences, Inc.) performed a geotechnical exploration and evaluation to support the design and construction of a new bulk hangar at Williston Municipal Airport (X60).

The project involved assessing subsurface conditions to develop foundation design parameters, evaluate infiltration characteristics of the on-site pond, and provide recommendations for pavement and site preparation. Field exploration included Standard Penetration Test (SPT) borings, infiltration testing, and bulk sampling for CBR evaluation.

Subsurface conditions revealed asphalt and limerock underlain by soft clayey soils in the upper 2–5 feet, followed by limestone layers at approximately 5 feet depth. Laboratory testing indicated highly plastic clays unsuitable for direct foundation support, requiring over-excavation and replacement with compacted structural fill or No. 57 stone. Recommendations also addressed slab design, stormwater pond infiltration parameters, and pavement design with stabilized subgrades.

NicNevol Responsibilities

- Conducting subsurface investigation with SPT borings and infiltration testing.
- Collecting and analyzing bulk soil samples for CBR and classification testing.
- Evaluating site geology, subsurface stratification, and groundwater conditions.
- Preparing laboratory testing program (Atterberg limits, moisture, permeability).
- Providing foundation design parameters and recommendations.
- Developing pavement and site preparation guidelines.
- Supporting client and design team with geotechnical expertise throughout planning.



Project Highlights

- Field program included 2 SPT borings, infiltration test, and bulk CBR sampling.
- Proposed hangar size: approx. 100' x 109' x 33' (≈11,990 SF) with 100' x 28' swing door.
- Subsurface profile: asphalt (5 in.) + limerock base (9–10 in.) over soft clays and limestone.
- Groundwater not encountered at 20 ft; seasonal high water table estimated 35–55 ft depth.
- Laboratory testing: Atterberg limits, moisture content, fines content, CBR.
- Foundation recommendations: undercutting clays to limestone, replacement with structural fill/stone, footing capacity ≈2000 psf.
- Pavement recommendations: stabilized subgrade (12 in. compacted), 8 in. limerock base, 1.5–2 in. asphalt surface.

“ Delivering engineering expertise that supports safer, stronger infrastructure. ”