



NicNevol

Engineering Services



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1540 Baxley Road – Commercial Lot

Location: Middleburg, Clay County, FL

Owner: Dr. Rajesh K. Shetty (c/o Sodl & Ingram PLLC)

Markets: Commercial, Geotechnical Engineering

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

Project Description

NicNevol Engineering Services conducted a geotechnical exploration and evaluation for a commercially zoned lot located at 1540 Baxley Road in Middleburg, FL.

The scope of work included evaluating subsurface soil and groundwater conditions to support the design of proposed retail buildings, parking areas, and a stormwater retention pond. Field activities included five (5) hand auger borings to ~6 ft depth and three (3) Standard Penetration Test (SPT) borings to ~25 ft depth. Groundwater was encountered at ~3.0–3.5 ft below grade.

Subsurface conditions revealed surficial sands (SP) underlain by clayey sands (SC), clays (CH), silty sands (SM), and shallow limestone at ~18–25 ft. Laboratory testing provided soil classification, fines content, and moisture data.

Recommendations included undercutting unsuitable clays, replacing with select structural fill or No. 57 stone, compaction to 95% Modified Proctor, and groundwater/surface water control during construction. Pavement design parameters included an 8 in. limerock base with LBR 100 and 1.5–2 in. asphalt wearing surface.

NicNevol Responsibilities

- Conducting hand auger and SPT borings.
- Performing soil classification and laboratory testing.
- Evaluating subsurface soil and groundwater conditions.
- Providing foundation, slab, and pavement design parameters.
- Preparing recommendations for excavation, fill, and compaction.
- Delivering final geotechnical report with design guidance for retail site development.



Project Highlights

- Client: Dr. Rajesh K. Shetty (c/o Sodl & Ingram PLLC).
- Commercial lot development with retail buildings, parking, and stormwater pond.
- Field program: 5 hand auger borings (6 ft) + 3 SPT borings (25 ft).
- Subsurface profile: sands (SP), clayey sands (SC), clays (CH), silty sands (SM), shallow limestone at 18–25 ft.
- Groundwater: ~3.0–3.5 ft below surface.
- Pavement recommendation: 8 in. limerock base (LBR 100) + 1.5–2 in. asphalt.
- Recommendations: site clearing, undercut clays, replace with structural fill, compact to 95% Modified Proctor, groundwater/surface water control.



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