K D Phillippie LCID – Driveway Bearing Capacity & Proof Roll Report

K D Phillippie LLC

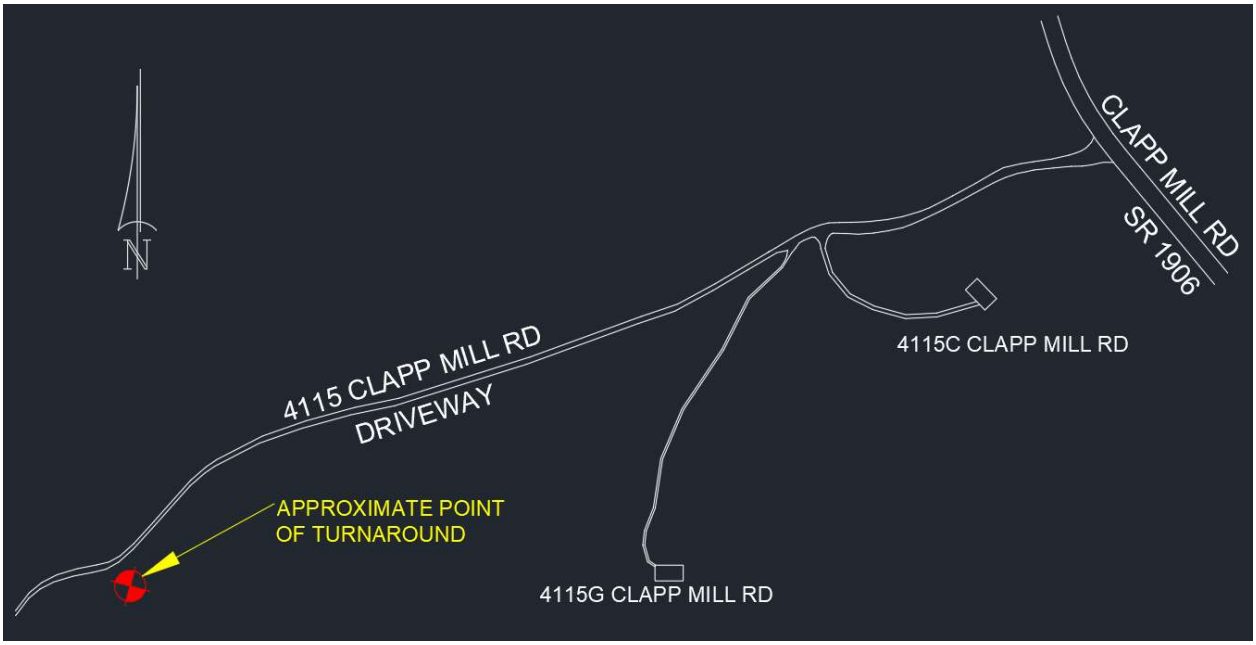
4115 Clapp Mill Rd – Burlington - Alamance County, North Carolina

Project No. 25-PHILLIPPIE-01

February 24, 2026

General Information and Site Vicinity Map

Address: 4115 Clapp Mill Road, Burlington, NC
Segment Tested: From the driveway apron at its intersection with Clapp Mill Road to the proposed operational area of the LCID landfill
Date of Proof Roll: February 24, 2026



1. Purpose

This report documents and draws conclusions from the proof roll conducted on the gravel access driveway serving the property located at 4115 Clapp Mill Road, Burlington, North Carolina. The purpose of the proof roll was to evaluate the structural stability and load-bearing capacity of the existing gravel drive under heavy vehicular loading conditions consistent with emergency and operational access requirements associated with the proposed LCID landfill.

2. Testing Vehicle and Load Conditions

The proof roll was conducted using a fully loaded fire tanker apparatus to simulate heavy axle loading conditions representative of emergency response vehicles and large operational equipment.

Vehicle Information:

- Manufacturer: Spartan Emergency Response (REV Group)
- Department: E.M. Holt Fire Department (jurisdictional responder to property)

- Department Designation: Tanker T-99
- Driver / Operator: Captain Joseph Byrd

Load Conditions:

The tanker apparatus was operated under full load conditions, carrying approximately 3,000 gallons of water at the time of testing, thereby representing a maximum operational loading scenario for the vehicle. When combined with the tare weight of the apparatus itself, the total gross vehicle weight during the proof roll was estimated by both Captain Byrd and E.M. Holt Fire Chief Luke Macon to be in the range of approximately 68,000 to 70,000 pounds. This loading condition provided a conservative and appropriate test of the driveway's structural integrity under high gross vehicle weight and axle loads.

3. Proof Roll Procedure

The tanker entered the property at the driveway apron where it connects to Clapp Mill Road / SR 1906. The vehicle navigated the full length of the gravel access drive to the proposed operational area of the LCID landfill. Upon reaching the designated turnaround area, the vehicle executed a turn and exited the property along the same route.

The traversal included:

- Straight-line travel along the full driveway length
- Turning maneuvers at the operational area
- Return travel under sustained load

This procedure subjected the driveway to both longitudinal and lateral loading stresses typical of heavy vehicle operations.

4. Documentation

The entire proof roll was video recorded by Caleb Hall, who was present onsite representing Wilson Engineering Group on behalf of Kenneth D. Phillippie / K D Phillippie, LLC. Photographs were also taken at the start and conclusion of the test, depicting the test vehicle, location, and pertinent details such as the tanker's water payload gauge. Video documentation and associated photographs are available for review by any regulatory body, permitting authority, or third-party reviewer upon request.

5. Observations and Findings

Throughout the duration of the proof roll:

- No visible rutting, pumping, displacement, or shear failure of the gravel surface was observed.
- No deflection or localized soft spots were noted.

- The turning maneuver in the operational area did not result in structural degradation of the driving surface.
- The driveway maintained stability under the applied loading conditions.

Following completion of the proof roll, Captain Joseph Byrd indicated that he had no issues or concerns with respect to the structural adequacy of the driveway, the overall site access conditions, or the performance of the graveled driving surface under the applied loading conditions imposed by the fully loaded tanker. His professional assessment and observations associated with this empirical testing procedure were leveraged to form final conclusions regarding the access driveway's capabilities with respect to the accommodation of heavy vehicular traffic.

6. Conclusion

Based on the observed performance of the gravel access driveway under a fully loaded test vehicle, the driveway demonstrated adequate structural stability and load-bearing capacity. No deficiencies were identified during the proof roll. The results of this field evaluation indicate that the driveway is more than capable of supporting heavy vehicular traffic consistent with emergency response vehicles and anticipated operational access demands associated with the proposed LCID landfill.