



PAT McCrory  
Governor

NICHOLAS J. TENNYSON  
Secretary

November 2, 2015

Newland Communities, LLC  
c/o Bill Mumford  
13777 Ballantyne Corporate Pl, Ste. 550  
Charlotte, North Carolina 28277

**SUBJECT: ENCROACHMENT AGREEMENT (19.4297)**  
**Roadway Modification (Superstreet)**  
**US 15-501**  
**Chatham County**

**Dear Mr. Mumford:**

Attached is a properly executed copy of a Right of Way Encroachment Agreement which covers the following:

Roadway modifications on US 15-501 in Chatham County, and any associated pre-construction work.

This agreement is approved subject to the Special Provisions and plans which are attached to and made a part of the Encroachment Agreement. Any work associated with the subject project permitted under an NCDOT approved Driveway Permit shall be completed in accordance with this Encroachment Agreement.

Sincerely,

Michael L Holder, P.E.

Chief Engineer

DocuSigned by:

A handwritten signature in black ink, appearing to read 'Marty C. Tillman'.

By: Marty C. Tillman  
District Engineer

Attachments

cc: Robert Memory, State Utility Agent, Utility Coordination Unit (cover letter only)  
Marty C. Tillman., District Supervisor (with original)  
Justin Bullock, P.E., County Maintenance Engineer  
File S:\S\_Drive\Dist1\Templates\ENCROACHMENTS\LETTERS\Encroachment  
APPROVAL LETTER.doc

The logo for 'Nothing Compares' featuring a stylized mountain range and the text 'Nothing Compares' with a trademark symbol.

ROUTE US 15-501, SR1528, PROJECT Briar Chapel Development COUNTY OF STATE OF NORTH CAROLINA  
SR1529 ENC# 19.4297 Chatham

DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY ENCROACHMENT AGREEMENT FOR  
CURB AND GUTTER, PAVEMENT WIDENING AND  
STORM DRAINAGE

-AND-

NNP - BRIAR CHAPEL, LLC  
16 WINDY KNOLL CIRCLE, CHAPEL HILL, NC  
27516

THIS AGREEMENT, made and entered into this the 2 day of NOV, 20 15, by and between the Department  
of Transportation, party of the first part; and NNP - BRIAR CHAPEL, LLC  
party of the second part,

WITNESSETH

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as  
Route(s) US 15-501, located at the intersections of US 15-501 with Andrews  
Store Road and Taylor Road  
with the construction and/or erection of: pavement widening, superstreet median features, drainage, signals and  
pavement marking improvements.

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of  
the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the  
right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right  
and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are  
made a part hereof upon the following conditions, to wit:

That the said party of the second part binds and obligates himself to install the encroaching facility in such safe  
and proper condition that it will not interfere with or endanger travel upon said highway.

That the party of the second part agrees to provide during construction proper signs, signal lights, flagmen and  
other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control  
Devices for Streets and Highways and Amendments or Supplements thereto. Information as to the above rules and  
regulations may be obtained from the Division Engineer of the party of the first part.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all  
damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

It is clearly understood by the party of the second part that the party of the first part will assume no responsibility  
for any damage that may be caused to such facilities, within the highway rights of way limits, in carrying out its  
construction.

That the party of the second part agrees to restore all areas disturbed during construction to the satisfaction of the  
Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable  
precaution during construction and maintenance to prevent eroding of soil; silting or pollution of rivers, streams, lakes,  
reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be  
compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North  
Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities  
and other official agencies relating to pollution prevention and control. When any construction operation disturbs the  
ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or  
otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be  
necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the encroaching site, at all times during construction,  
a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part  
reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the  
party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all  
work contained herein has been completed. Unless specifically requested by the party of the first part, written notice  
of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of  
the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the  
right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work  
contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless  
written waiver is secured by the party of the second part from the party of the first part.

R/W (161B) : Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (161B) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

DEPARTMENT OF TRANSPORTATION

BY:

*Mark C. Johnson*

Asst. Manager of Right of Way District Supervisor

ATTEST OR WITNESS:

Newland Communities

BY:

NNP - BRIAR CHAPEL, LLC

Laurie Ford, Vice President  
Second Party

### INSTRUCTIONS

When the applicant is a corporation or a municipality, this agreement must have the corporate seal and be attested by the corporation secretary or by the empowered city official, unless a waiver of corporate seal and attestation by the secretary or by the empowered City official is on file in the Raleigh office of the Manager of Right of Way. In the space provided in this agreement for execution, the name of the corporation or municipality shall be typed above the name, and title of all persons signing the agreement should be typed directly below their signature.

When the applicant is not a corporation, then his signature must be witnessed by one person. The address should be included in this agreement and the names of all persons signing the agreement should be typed directly below their signature.

This agreement must be accompanied, in the form of an attachment, by plans or drawings showing the following applicable information:

1. All roadways and ramps.
2. Right of way lines and where applicable, the control of access lines.
3. Location of the proposed encroachment.
4. Length and type of encroachment.
5. Location by highway survey station number. If station number cannot be obtained, location should be shown by distance from some identifiable point, such as a bridge, road, intersection, etc. (To assist in preparation of the encroachment plan, the Department's roadway plans may be seen at the various Highway Division Offices, or at the Raleigh office.)
6. Drainage structures or bridges if affected by encroachment.
7. Typical section indicating the pavement design and width, and the slopes, widths and details for either a curb and gutter or a shoulder and ditch section, whichever is applicable.
8. Horizontal alignment indicating general curve data, where applicable.
9. Vertical alignment indicated by percent grade, P.I. station and vertical curve length, where applicable.
10. Amount of material to be removed and/or placed on NCDOT right of way, if applicable.
11. Cross-sections of all grading operations, indicating slope ratio and reference by station where applicable.
12. All pertinent drainage structures proposed. Include all hydraulic data, pipe sizes, structure details and other related information.
13. Erosion and sediment control.
14. Any special provisions or specifications as to the performance of the work or the method of construction that may be required by the Department must be shown on a separate sheet attached to encroachment agreement provided that such information cannot be shown on plans or drawings.
15. The Department's Division Engineer should be given notice by the applicant prior to actual starting of installation included in this agreement.
16. Method of handling traffic during construction where applicable.
17. Scale of plans, north arrow, etc.

## ENCROACHMENT SPECIAL PROVISIONS

NNP- Briar Chapel, LLC.  
19-4297 (Chatham County)

*Approval of the encroachment agreement is made subject to the following Special Provisions:*

1. Changes noted in red on the plans shall be incorporated into and made a part of the encroachment agreement. An executed copy of the encroachment agreement shall be available at the construction site at all times. NCDOT reserves the right to stop all work unless evidence of approval can be shown.
2. Notify the following prior to beginning work:
  - **Justin Bullock, P.E., Maintenance Engineer**  
1404 E Raleigh St.  
Siler City, NC 27344  
(919)742-3431
3. The Encroaching Party shall comply with all applicable federal, state and local environmental regulations, and shall obtain all necessary federal, state and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species, and historical sites.
4. All materials and construction shall be in accordance with NCDOT standards and specifications, including but not limited to the latest versions of the NCDOT Standard Specifications for Roads and Structures, the NCDOT Roadway Standards Drawings, and NCDOT Policies and Procedures for Accommodating Utilities on Highway Rights of Way.
5. It shall be the responsibility of the Encroacher to determine the location of other utilities within the encroachment area in accordance with General Statute 87-102. The Encroacher shall be responsible for notifying other utility owners and providing protection and safeguards to prevent damage or interruption to existing facilities and to maintain accessibility to existing utilities. Costs to repair, restore, or relocate existing utilities due to this encroachment shall be the responsibility of the encroaching party.
6. NCDOT does not guarantee the Right of Way on this road, nor will it be responsible for any claim for damages brought by any property owner by reason of this encroachment. All Right of Way and easements necessary for construction and maintenance shall be dedicated to NCDOT with the proof of dedication furnished to the District Engineer prior to beginning work. Encroachment within the Right of Way does not imply approval for encroachment onto adjacent property. The Encroacher shall be responsible for securing any easement, permit, permission, or approval for encroachment or other use of property outside the state maintained right of way. Right of Way monuments disturbed during construction shall be referenced by a Professional Land Surveyor and reset immediately after construction.
7. The encroaching Party shall take whatever measures are necessary to minimize soil erosion and siltation, water pollution, and air pollution. It shall be the responsibility of the Encroaching Party to keep fully informed to comply with the applicable regulations of all legally constituted authorities relating to pollution prevention and control. In the event of conflict between regulations, specifications, or requirements, the more restrictive requirement shall apply. All erosion and pollution control devices and measures shall be constructed, installed, maintained and removed by the encroaching party in accordance with all applicable Federal, State and Local laws, regulations, ordinances, and policies. No construction shall begin until all erosion control devices have been installed to the satisfaction of the District Engineer. Failure to comply with this provision shall be grounds for immediate suspension of all activities within the Right of Way.
8. **NCDOT WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM:**  
Effective July 1, 2010, all flagging operations within NCDOT Right of Way require qualified and trained Work Zone Flaggers. Qualified and trained Work Zone Traffic Control Supervisors will be required on Significant Projects.  
Training for this certification is provided by NCDOT approved training sources and by private entities that have been pre-approved to train themselves. If you have questions, contact our web site at <http://www.ncdot.org/doh/preconstruct/wztc/WZTCTrainingProgram/default.html>, or contact Stuart Bourne, P.E. with NCDOT Work Zone Traffic Control Unit at (919) 662-4338 or [sbourne@ncdot.gov](mailto:sbourne@ncdot.gov).
9. A \$2,000,000.00 Performance and Indemnity Bond shall be executed and posted with the District Engineer prior to beginning any work on the Right of Way. The bond shall remain in effect for a period of 19.4297 years

following completion of the job. The encroaching party shall notify the District Engineer in writing when all work within the Right of Way has been completed. Upon receipt of written notification, the District Engineer will inspect the project and provide certification that the project has been completed. When the project has been satisfactorily completed for 1 year, the bonding company shall submit a written request along with a copy of the encroachment authorization to the District Engineer for release of the bond. The bond will be released upon satisfactory final inspection, review, and approval by the District Engineer.

10. A **\$2,000,000.00** Performance and Indemnity Bond shall be executed and posted with the District Engineer prior to beginning any work on the Right of Way. The required bond may be executed in any of the following methods.
  - Cash bond in the form of a certified check payable to the North Carolina Department of Transportation.
  - Performance and indemnity bond underwritten by a surety company legally authorized to do business in North Carolina.
  - Continuing bond for the performance of work within the NCDOT Right of Ways.
  - Cashiers check or bank letter of credit (2 copies with original signature) in the amount of the bond.
  - The Bond shall be submitted to the District Engineer, North Carolina Department of Transportation, **P.O. Box 1164 Asheboro NC 27204** Please identify the Encroachment Agreement by including File # **19.4297** on the Bond.
11. Bonds shall remain in effect for a period of **1 year** following completion of the job. The encroaching party shall notify the District Engineer in writing when all work within the Right of Way has been completed. Upon receipt of written notification, the District Engineer will inspect the project and provide certification that the project has been completed. When the project has been satisfactorily completed for **1 year**, the bonding company shall submit a written request along with a copy of the encroachment authorization to the District Engineer for release of the Bond. The Bond will be released upon satisfactory final inspection, review, and approval by the District Engineer.
12. In the event this encroachment is constructed under multiple contracts and the bond requirement is delegated to the contractor or contractors, separate bonds may be posted. The amount of the bond secured by each contractor shall be proportional to the length and size of the contract. The bond will be held for a period of one (1) year following completion of the contract.
13. No work shall commence until all Bond requirements have been satisfied.
14. The encroaching party shall provide an inspector acceptable to the District Engineer for the work to be performed under this agreement. All costs and expenses for inspection shall be the responsibility of the encroaching party. The inspector's name, telephone and qualifications shall be provided in writing to the District Engineer prior to beginning construction.
15. A pre-construction conference between NCDOT, the Encroaching Party or the Encroaching Party's designated representative, and the contractor(s) is required prior to commencing any work within the Right of Way.
16. Storage of materials or equipment within the Right of Way is prohibited. During non-working hours, equipment shall be parked as close to the right of way line as possible and shall be properly barricaded so that no equipment obstruction shall be within the Clear Recovery Area.
17. Construction equipment or vehicles shall not be parked on the pavement or roadway shoulder.
18. Construction is authorized to be performed on Monday through Friday during the hours between sunrise and sunset.
19. No lane(s) of traffic shall be closed or alteration of the traffic flow will be allowed on or during holidays, holiday weekends, special events, and/or any other time when traffic is unusually heavy. Holidays and holiday weekends shall include, but not be limited to Easter, Memorial Day, Independence Day, and Labor Day.
20. No lane(s) of traffic shall be closed or restricted between the hours of 7:00am-9:00am and 4:00pm- 6:00pm.

21. The encroaching party may delegate the performance of certain provisions of this agreement to contractors or other parties. However, this shall not in any way release the encroaching party from its obligations to the terms and provisions of the encroachment.
22. The Encroaching Party shall provide certification signed by a licensed Professional Engineer verifying that construction meets NCDOT design requirements. Certification shall include the following:
  - Subgrade density
  - Base and pavement thickness by type
  - Stone Base density
  - Core and test locations
23. The Encroaching Party shall provide the District Engineer with “as-built” plans upon completion of the installation.
24. Written notification shall be provided to the District Engineer upon completion of the work proposed under this agreement. Materials test frequencies and methods shall be in conformance with the NCDOT Materials and Tests guidelines, or as directed by NCDOT. A letter of approval, or recommendations for compliance, will be provided upon receipt and review of test reports.
25. The encroaching party or the contractor(s) for the encroaching party may request a written letter stating that the encroachment has been satisfactorily completed by making a request in writing to the appropriate County Maintenance Engineer. The letter of completion does not relieve the encroaching party from any obligations or responsibilities under the terms and provisions of the encroachment or from obligations or responsibilities for making repairs needed for a reasonable time period.
26. The traveling public shall be warned of construction with complete and proper signing and traffic control devices in accordance with the current Manual on Uniform Traffic Control Devices (MUTCD) and the latest NCDOT Roadway Standard Drawing and Standard Specifications for Roads and Structures. No work shall be performed in the Right of Way unless this requirement is satisfied. NCDOT reserves the right to require a written traffic control plan for encroachment operations. Traffic control devices and operations shall include, but are not limited to the following:
  - Adequate and appropriate advance warning signs for any and all work zones/closed or obstructed areas.
  - “End Construction” signage beyond the end of all work zones.
  - Adequate and appropriate delineation and control devices for all work zone areas including but not limited to lane closures, disturbed areas, and active work sites.
  - Properly trained and equipped flagmen/women.
  - Proper maintenance of all traffic control devices, including but not limited to proper signage and controls during periods of inactivity and removal of inappropriate traffic control signage and/or devices.
27. The Encroacher agrees to provide traffic control devices, lane closures, road closures, positive protection and/or any other warning or positive protection devices necessary for the safety of road users during construction and any subsequent maintenance. This shall be performed in conformance with the latest NCDOT Roadway Standard Drawing and Standard Specifications for Roads and Structures and Amendments or Supplements thereto. When there is no guidance provided in the Roadway Standard Drawings or Specifications, comply with the Manual on Uniform Traffic Control Devices for Streets and Highways and Amendments or Supplement thereto. Information as to the above rules and regulations may be obtained from the Division Engineer.
28. Traffic shall not be detoured or rerouted without the prior written approval of the Division Engineer. Two-way traffic shall be maintained at all times.
29. In the event work is completed in less time than permitted, the normal traffic pattern shall be restored as soon as the work has been completed.
30. The Traffic Services Supervisor shall be notified at (910) 947-3930 in Carthage, NC, prior to beginning work on the Right of Way if there are existing NCDOT signs, traffic signals, or signal equipment in or near the proposed work zone. Costs to relocate, replace, or repair NCDOT signs, signals, or associated equipment shall be the responsibility of the Encroacher.

31. Excavation within 500 feet of a signalized intersection will require notification by the party of the second part to the Division Traffic Engineer at telephone number (910) 947-3930. All traffic signal or detection cables must be located prior to excavation.
32. All temporary and final pavement markings, reflective pavement markers, traffic control devices, and signage are the responsibility of the encroaching party and shall be installed in accordance with current NCDOT standards. **Final pavement marking plans shall be submitted to and approved by the Division Traffic Engineer at (910)947-3930, at 150 DOT Drive, Carthage, NC 28327.** Plans should be submitted as soon as possible to allow adequate time for review. **Pavement markings shall be pre-marked and the Division Traffic Services Supervisor shall be notified at (910) 947-3930 for inspection of pre-marking before permanent pavement markings are placed.** The encroaching party shall provide at least two working days notification for the inspection. Pavement markings and reflective pavement markers which are damaged, obscured, or obliterated during construction shall be replaced in conformance with current NCDOT standards. Thermoplastic pavement markings shall be installed at locations where the adjacent pavement are thermoplastic or as directed by the Division Traffic Engineer.
33. All pavement markings shall be thermoplastic and shall conform to the requirements of the latest version of the **NCDOT Standard Specifications for Roads and Structures.**
34. Poles for aerial crossings should be located at or as near as practical to the right of way and outside the Clear Recovery Area.
35. Guy wires to ground anchors and stub poles should not be placed between a pole and the travel way, and should be located outside the Clear Recovery Area.
36. Parallel utility lines occupying highway right of way shall maintain a minimum vertical clearance of 15.5 feet as stated in the National Electric Safety Code. Minimum vertical clearance shall be 18' for aerial crossings over NCDOT roadways.
37. Splice boxes shall be a traffic bearing type designed for HS-20 loading and approved for use within NCDOT right of ways. All such appurtenances shall be installed flush to or below the surface of the ground in such a manner that they do not pose obstacles or obstructions to pedestrians, vehicles, equipment, or roadway maintenance operations.
38. All splice boxes installed during initial construction or any future splice boxes that may be required to repair damaged cables shall be installed adjacent to the right of way line. No splice boxes shall be allowed in the shoulder, ditch line, or slope of the ditch adjacent to the roadway.
39. All signal installation and construction shall be inspected and approved by NCDOT. The encroaching party shall notify Mr. Jerry Porter, Deputy Division Traffic Engineer, at 910-947-3930 at least two (2) working days prior to commencing installation of the signal system in order to arrange for inspection of the signal system.
40. Access to the site covered under this agreement shall remain closed (i.e. barricaded) to traffic until all requirements relating to traffic control and signalization have been satisfied.
41. Curb cuts and ramps for handicapped persons shall be constructed in accordance with the current NCDOT "Standard for Wheelchair Ramp Curb Cuts" and the Americans With Disabilities (ADA) Accessibility Guidelines for Buildings and Facilities.
42. Ingress and egress shall be maintained to businesses and dwellings. Driveways altered during construction shall be restored to a condition equal to that prior to beginning construction.
43. Excavated material shall not be placed on the paved roadway surface at any time unless specifically approved by the District Engineer. Drainage structures shall not be blocked with excavated material at any time.
44. Trenches/excavations/bore pits shall not remain open longer than a 24 hour period. No trench/excavation/bore pit shall be left open overnight except in the event of emergency, in which case the encroacher shall notify the District Engineer and inform him as to the nature and anticipated duration of the emergency. Any excavation left open overnight due to emergency shall be protected and delineated with complete, adequate and appropriate safety and traffic control devices.
45. All backfill shall meet the Statewide Borrow Criteria and shall be placed in accordance with section 300-6 of the latest version of the **NCDOT Standard Specifications for Roads and Structures.** Backfill material shall be free from rocks and debris placed in six inch loose layers and compacted to at least 95% of standard density

as determined by AASHTO Method T-99 as modified by NCDOT, except that backfill material placed within eight (8) inches of the pavement subgrade shall be compacted to 100% of standard density. (Copies of these testing procedures are available on request from the NCDOT Materials and Tests Unit.) Each layer must be fully compacted by an approved mechanical tamp before the next layer is placed.

46. Excavated areas adjacent to pavement having more than a 2 inch drop shall be backfilled and made safe with a 6:1 or flatter slope and shall be designated by appropriate delineation during periods of construction inactivity including, but not limited to, night and weekend hours.
47. When burying around the end of a pipe, culvert, or bridge, the utility shall be located a minimum of five (5) feet from the nearest part of the pipe, culvert, or bridge, and buried to a minimum depth of five (5) feet below the stream bed. At points where the utility is placed under existing storm drains by trenching, the trench shall be backfilled with Class M concrete up to the outside diameter of the existing pipe.
48. All excavations inside the theoretical 1:1 slope from the existing edge of pavement to the bottom of the nearest trench wall shall be made in accordance with the following conditions:
  - Traffic shall be moved to a travel lane outside the limits of a theoretical 1:1 slope from the bottom of the nearest trench wall to the pavement surface.
  - Active excavation shoring such as sheet piling shall be installed. The design of the shoring shall include the effects of traffic loads. The design shall be designed and sealed by an engineer registered in North Carolina. Shoring plans and design calculations shall be submitted to the Division Engineer for review prior to construction. **Trench boxes shall not be accepted as positive shoring.**
  - The trench backfill shall meet the Statewide Borrow Criteria. The trench shall be backfilled in accordance with Section 300-6 of the latest version of the **NCDOT Standard Specifications for Roads and Structures.**
  - At the first sign of trench failure, the trench shall be immediately backfilled with materials consisting of A-1, A-3, A-2-4 soils or A-4 soils having a maximum of 45% passing a No. 200 sieve and a maximum P.I. of 6. All work shall cease and the Division Engineer shall be contacted. The Encroaching party or contractor shall repair any damage to the pavement caused by the excavation.
  - All trench excavation inside the limits of the theoretical 1:1 slope from the bottom of the nearest trench wall to the pavement surface shall be completely backfilled and compacted at the end of each construction day. No portion of the trench shall be left open overnight.
  - The length of parallel excavation shall be limited to the length necessary to install and backfill on joint of pipe at a time, not to exceed twenty five (25) feet.
49. Drainage structures and systems shall be preserved and protected. Any structure which is disturbed or damaged during construction shall be immediately restored to its original condition at no expense to the Department of Transportation. All utility installations shall be designed and constructed so as not to hinder, disrupt or interfere with existing storm drainage. All facilities shall pass over or under highway drainage facilities.
50. All manholes and/or vaults shall be of an NCDOT pre-approved design. Manholes or vaults shall be designed for HS-20 live loads and conform to the latest versions of the **NCDOT Standard Specifications for Roads and Structures,** the **NCDOT Roadway Standards Drawings.** Any proposed structure which is not of a design pre-approved by NCDOT shall be submitted to NCDOT with details and design calculations sealed by a Professional Engineer for approval prior to construction. A list of approved structures may be obtained from NCDOT Design Services at 919-250-4128.
51. Manhole rings and covers and valve covers shall be a traffic bearing type designed for HS-20 loading and approved for use within NCDOT right of ways. All such appurtenances shall be installed flush to or below the surface of the ground in such a manner that they do not pose obstacles or obstructions to pedestrians, vehicles, equipment, or roadway maintenance operations.
52. All vaults, manholes and other appurtenances within the NCDOT right of way shall be located behind the ditch and at the right of way line. Manholes and/or vaults shall not be placed in the ditch line, side slopes of ditches or in the pavement.
53. Manholes/Valves should not be located in the pavement or shoulders of any State road. Exceptions may be made on roads at those locations where manholes/valves are essential parts of existing lines that are permitted to



remain in place under existing and proposed roadways. Every effort should be made to minimize such installations and to avoid their location in wheel paths or at street intersections, insofar as practicable. Manholes should be designed and located in such a manner that will cause the least interference with roadway users, other utilities, and future highway expansion.

54. Locating tape or detection wire shall be installed with non-ferrous pipelines.
55. The encroaching party shall contact Justin Bullock, P.E., County Maintenance Engineer at (919) 724-3431 for inspection of forms or grade line prior to placing concrete for curb and gutter. A minimum of 24 hours notice is required for inspections.
56. A  $\frac{1}{4}$  inch per foot pavement slope based on the existing centerline in tangent sections is required. In addition, a smooth transition must be maintained along areas of superelevation. The proposed widening may necessitate wedging or resurfacing one half of the existing roadway to accomplish this requirement. Widened areas less than 6 feet in width shall utilize a full depth asphalt pavement design. The minimum pavement design shall be:
  - 2 inches Asphalt Surface Course – S9.5B
  - 3 inches Asphalt Binder Course – I19.0B
  - 8 inches Aggregate Base Course- B25.0B
57. Where an installation is by open cut, the pavement shall be neatly sawed or cut perpendicular to the surface. The replacement base and surface shall extend a minimum of one foot beyond the excavated opening on each side and shall be equivalent to the original base and pavement or the design as stated in the encroachment agreement, whichever is greater. The minimum pavement design for pavements on secondary roads shall be:
  - 3 inches Asphalt Surface Course – S9.5B
  - Flowable fill to within 3" of asphalt grade
58. Pavement cuts shall be allowed for tapping purposes only and at the dimensions and locations shown on the approved plans.
59. All disturbed soil areas shall be promptly seeded and mulched. The encroaching party shall obtain the District Engineer's approval of ditch and shoulder grading prior to seeding and mulching.
60. All earth areas shall be regraded, seeded and mulched in accordance with Section 1660 of the latest version of the **NCDOT Standard Specifications for Roads and Structures**. Final determination of soil type shall be made by the Engineer. The following rates in pounds per acre apply:
  - *YEAR ROUND MIXTURE (Sandy Soils)*
    - KY 31 Tall Fescue or Alta Tall Fescue – 50 pounds
    - Pensacola Bahiagrass – 50 pounds
    - Centipede – 5 pounds
    - Fertilizer (10-20-20 analysis) – 500 pounds
    - Limestone – 4000 pounds
  - *YEAR ROUND MIXTURE (Clay Soils)*
    - KY 31 Tall Fescue or Alta Tall Fescue – 100 pounds
    - Kenblue Bluegrass – 15 pounds
    - Fertilizer (10-20-20 analysis) – 500 pounds
    - Limestone – 4000 pounds
  - Add 10 pounds of Kobe or Korean Lespedeza and 10 pounds of Millet to the above mixture from May 1 to August 31.
  - On cut and fill slopes 2:1 or steeper, add 30# Sericea Lespedeza from January 1 to December 31.
  - Fertilizer shall be 10-20-20 analysis. Upon written approval of the Engineer, a different analysis may be used provided the 1-2-2 ratio is maintained and the rate of application is adjusted to provide the same amount of plant food as a 10-20-20 analysis.
61. The encroaching party or any agent acting on behalf of the encroaching party shall exercise care and provide any and all necessary measures and precautions to preserve and protect existing landscaping and roadside plantings within the right of way. Existing landscaping and landscape plantings shall not be disturbed unless approved by the NCDOT Division 8 Roadside Environmental Engineer. All costs associated with restoration or

replacement of landscaping or landscape plantings damaged or destroyed by the encroaching party or its agents shall be the responsibility of the encroaching party.

62. In the event it is determined that there is a conflict between the existing landscaping or landscape plantings and the proposed utility installation, the encroaching party or any agent acting on behalf of the encroaching party shall not proceed until the Division 8 Roadside Environmental Engineer has been notified and the conflict has been resolved to his satisfaction.

63. The Division 8 Roadside Environmental Engineer can be contacted as follows:

Roadside Environmental Engineer  
902 N. Sandhills Boulevard  
P. O. Box 1067Aberdeen, NC 28315  
(910-944-2344)

64. The encroaching party shall assume all responsibility, obligation, and liability for maintenance of the structure permitted under this encroachment agreement. This condition shall be conveyed in any future buy, lease, sell or rental agreement. In the event that the encroaching party or any future responsible party should fail to satisfy this condition, NCDOT reserves the right close or remove the structure.
65. The District Engineer will make a field inspection during construction to evaluate the need for guardrail. If the District Engineer determines that the location meets the current NCDOT warrants and criteria for the installation of guardrail, the encroaching party shall furnish and install guardrail at locations and as directed by the District Engineer.
66. Notify **Justin Bullock, P.E., County Maintenance Engineer, 1404 E Raleigh St, Siler City, NC 27344 (919) 724-3431**, prior to beginning work. The encroaching party shall provide the District Engineer with the following information at least 3 working days prior to commencing operations:
- Proposed schedule of operations
  - The name(s) and phone number(s) of project contact person(s).
  - Tentative locations where directional bores will commence and terminate.
67. All activities or operations approved under this agreement which fall within the project limits or contract period of any active NCDOT project shall require a waiver from the prime Contractor for the NCDOT project, granting the encroaching party access within the project and releasing NCDOT from claims against NCDOT by the prime Contractor resulting from the encroaching party's operations or activities. The NCDOT project shall have precedence and priority over all others.
68. Ingress and egress through the controlled access right of way is prohibited. No staging or queuing of vehicles or equipment within the Controlled Access Right of Way, travel lanes, or shoulders shall be permitted.



## **Central Carolina Soil Consulting, PLLC**

1900 South Main Street, Suite 110

Wake Forest, NC 27587

919-569-6704

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August 17, 2016

Job # 2020

Withers & Ravenel

Attention: Andy Johnson

115 MacKenan Drive

Cary, NC 27511

RE: Preliminary soil/site evaluation 67 Andrews Store Road, Chatham County, NC

Dear Mr. Johnson:

Central Carolina Soil Consulting, PLLC conducted a preliminary soil evaluation on the parcel listed above to determine the areas of provisionally suitable soils that are suitable for subsurface wastewater disposal systems (conventional & LPP). The soil/site evaluation was performed with hand auger borings, under moist soil conditions, based on the criteria found in the State Subsurface Rules, 15ANCAC 18A .1900 "Laws and Rules for Sewage Treatment and Disposal Systems". From this evaluation, CCSC sketched the boundary between the provisionally suitable soils and unsuitable soils onto an aerial and topographic map of the property through ground truthing and GPS field location of soil borings to help increase mapping accuracy.

This area lies in the felsic crystalline geologic unit, where soils have formed from residual parent material such as gneiss or schist. The soils that have formed on this parcel are similar to the Wedowee soil series. The attached soils map indicates the areas of provisionally suitable vs. unsuitable soils. The Wedowee soil series is generally suitable for subsurface wastewater systems. That is, the morphology of the soils contain suitable characteristics that would support subsurface septic systems such

as clay textured subsoils that are not considered expansive, blocky structure and no indicators of restrictive characteristics within 24 inches of the soil surface.

The proposed repair area for the existing house was found on the western side of the property greater than 50' from the existing well. There is enough provisionally suitable soils in this area to support a 4-bedroom repair septic system with a soil LTAR of 0.275 gal/day/ft<sup>2</sup>. Central Carolina Soil Consulting believes the existing house is only a 3-bedroom but an existing house plan has not been supplied by the client. The existing gravity septic system does not seem to be impacted by the proposed construction easements on the lot. According to the attached Chatham County Septic Permit the existing septic tank and drainfields are south and/or just east of the current house location. Central Carolina Soil Consulting was not able to probe out the entire drainfield due to the dry soil conditions and dense rock in the soil profile

This report discusses the location of suitable soils for subsurface wastewater disposal systems and does not guarantee any permits or approval required by the local health department. Central Carolina Soil Consulting, PLLC is a professional consulting firm specializing in soil delineations and design for on-site wastewater disposal systems. The rules governing on-site wastewater disposal systems are complex and the interpretation of the rules are based upon the opinions of regulators (state and county level). Due to the subjective nature of the permitting process and the variability of naturally occurring soils, CCSC cannot guarantee that areas delineated as suitable for on-site wastewater disposal systems will be permitted by the governing agencies. Central Carolina Soil Consulting does not guarantee that the areas shown as potentially suitable for septic systems will be granted septic permits by the local health department. These permitting considerations should be taken into account before a financial commitment is made on a tract of land.

If you have any questions regarding the findings on the attached map or in this report, please feel free contact me at anytime. Thank you allowing Central Carolina Soil Consulting to perform this site evaluation for you.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason M. Hall". The signature is fluid and cursive, with the first name "Jason" and last name "Hall" clearly distinguishable.

Jason Hall

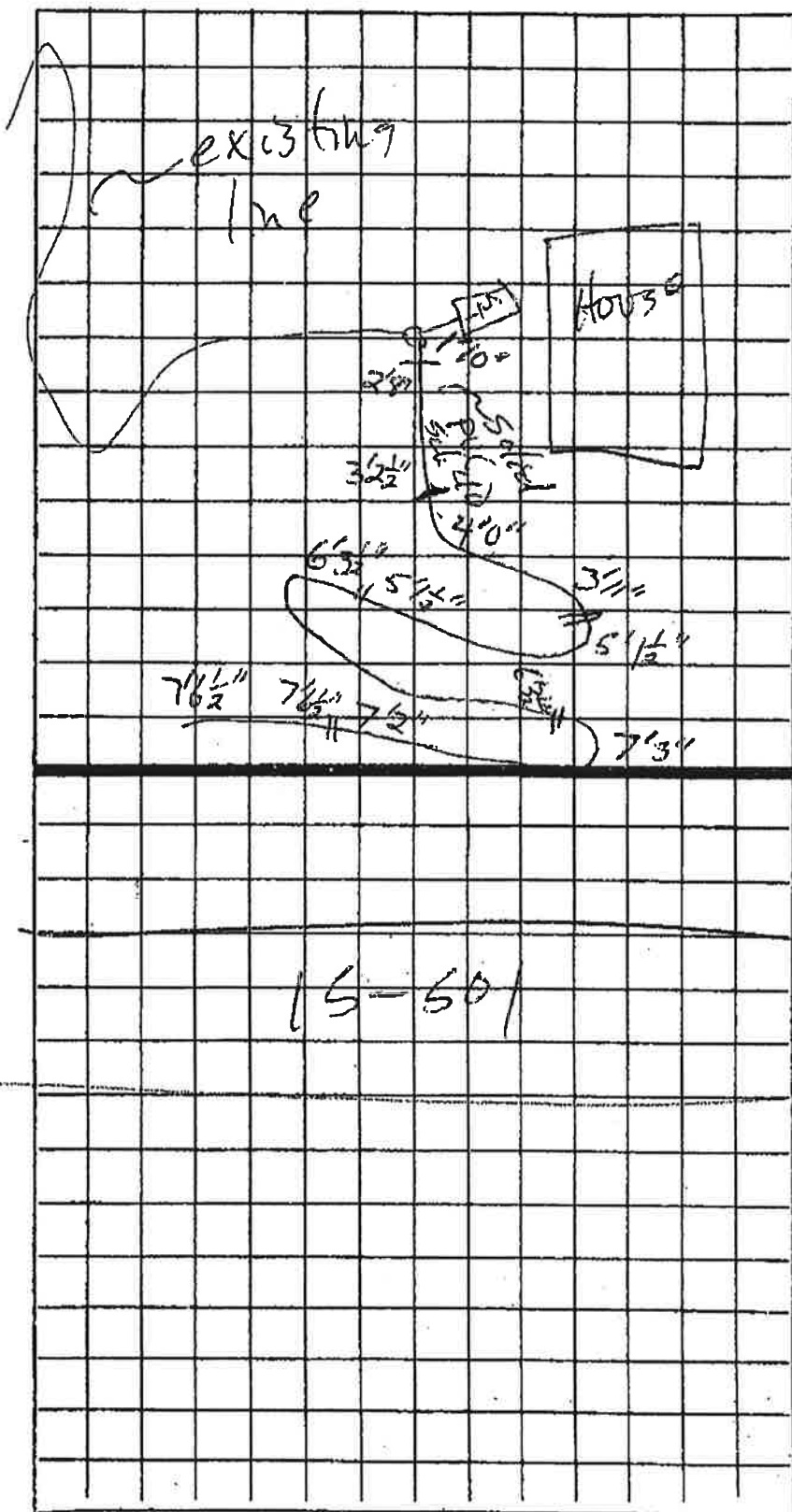
NC Licensed Soil Scientist #1248



Encl: Soil Map

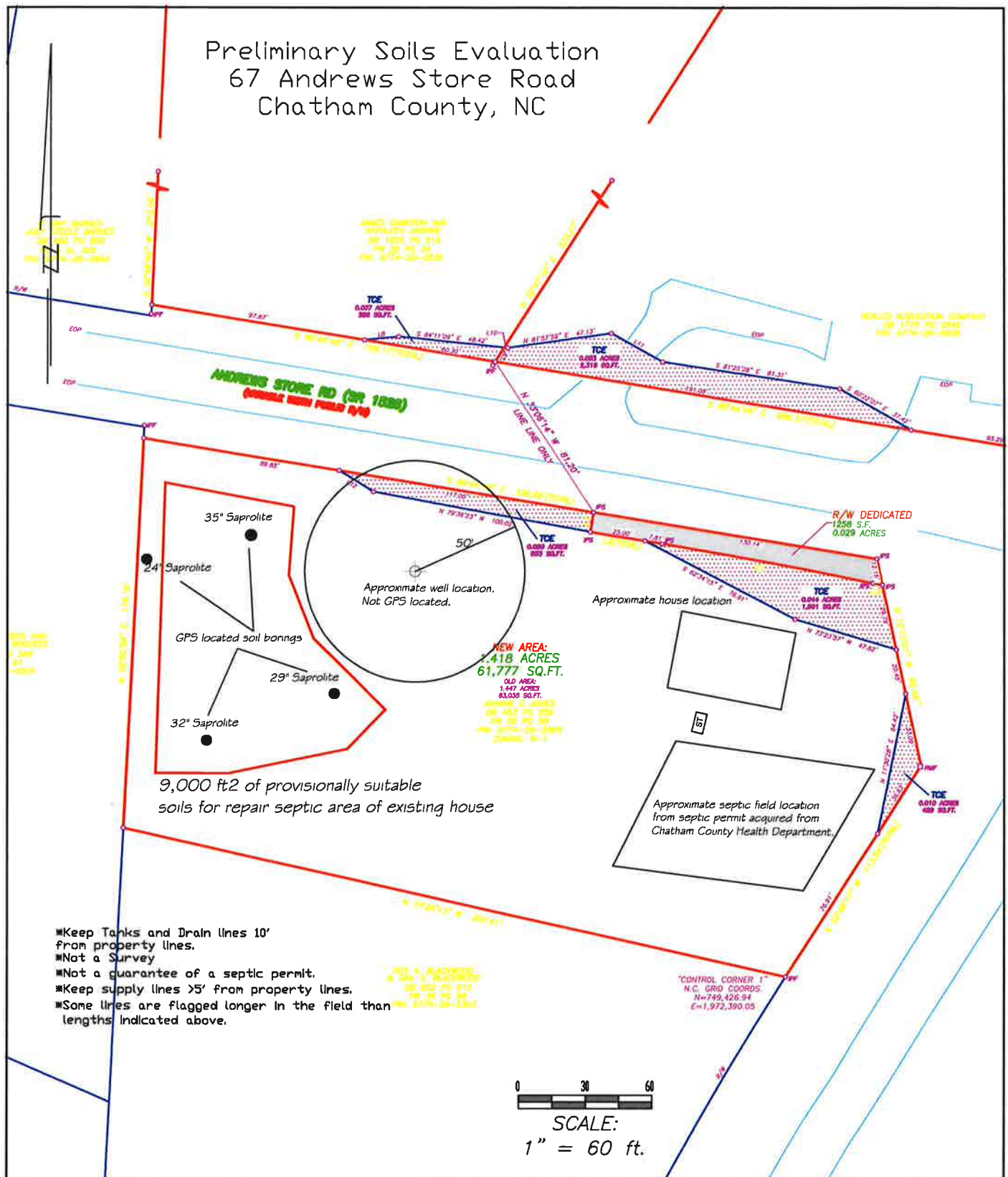
581524  
 NOTE: Make sketch of installation showing lot size and shape, location of house, septic tanks, privies, water supplies, etc. Note special problems existing on lot. Write in measurements in order that installations may be located at later date. Note location of water supplies on adjacent lots.

(1)



(2)

# Preliminary Soils Evaluation 67 Andrews Store Road Chatham County, NC



- Keep Tanks and Drain Lines 10' from property lines.
- Not a Survey
- Not a guarantee of a septic permit.
- Keep supply lines >5' from property lines.
- Some lines are flagged longer in the field than lengths indicated above.



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