MEYERS
ENGINEERING, PLLC

March 2, 2026

Mr. Mark Locklear
Director Development Services
Harnett County
420 McKinney Parkway
Lillington, North Carolina 27546

Re: Alfreda Drive
Stormwater Review

Dear Mr. Locklear,

Meyers Engineering, PLLC was requested by Harnett County Development Services to review a storm drainage situation between properties on Alfreda Drive in southwest Harnett County. The following is a summary of the existing situation as I understand it, my research, findings, and my conclusions.

Site Visit

On February 13, 2026, Meyers Engineering met on site with Harnett County staff and the owner of the 2087 NC 24 and 174 Alfreda Drive parcels, Mr. Keith Graham. Mr. Graham purchased the properties in 2016. Mr. Graham voiced his concerns about the changes to the properties on the west side of Alfreda Drive and the resulting impact on his properties. The adjoining properties on the west side of Alfreda Drive were purchased by Anderson Creek Rentals and Properties LLC in 2021.

The following are Mr. Grahams concerns regarding storm water runoff:

1. He had told the new property owner that the area at the property line between 43 Alfreda Drive and 107 Alfreda Drive was a wet spot that retained water when it rained prior to them purchasing the land.
2. When the new property owner built the new storage units, they also filled into the low spot for parking and lowered Alfreda Drive.
3. The gravel parking lot filled to the edge of the road eliminating any type of ditch on the west side of Alfreda Drive and installed a rock berm to direct stormwater across Alfreda Drive and onto the 174 Alfreda property.
4. The fill and the re-direction of stormwater is washing sediment onto his property.

Meyers Engineering made the following observations while on-site.

1. The area of the property line between 2087 NC 24/174 Alfreda Drive and 43 Alfreda Drive/ 107 Alfreda Drive is a low spot with Alfreda Drive splitting the area, and no storm drain present to convey from one property to another.
2. The area is located in the sandhills of North Carolina, with corresponding sandy soils and relatively flat terrain and no discernible drainage path.
3. Mr. Graham confirmed that rainfall runoff prior to Anderson Creek Storage changes would pond on either side of Alfreda Drive at the low spots and drain off after a few days.

4. The berm constructed to divert water from reaching the low area of 43 Alfreda Drive/ 107 Alfreda Drive and onto Mr. Graham's property is washing sediment onto Mr. Graham's property as evident by the alluvial fan observed on the east side of Alfreda Drive.
5. While the western edge of the 43 Alfreda Drive/ 107 Alfreda Drive properties is higher than the low spot, the grade drops sharply to the long drive for the adjacent property to the west, 2045 NC 24.

Post Site Visit Information Review

After the site visit, Meyers Engineering reviewed the following documents with the accompanying observations:

1. 1983 USGS Southern Pines Map (Exhibit 1)
    a. Based on review of the 1983 USGS map, 2 hilltops to the east of Alfreda Drive form a saddle landform resulting in a drainage path flowing from east to west. This would mean that prior to the existence of Alfreda Drive, stormwater runoff would flow to the blue line stream west of Alfreda Drive.
2. USDA Soils Map (Exhibit 2)
    a. Area soils in the subject area predominantly Wakula sand (WfB), 0 to 8% slope.
    b. USDA description of Wakula sand states it's a sandy and loamy marine deposits and/or eolian sands that are somewhat excessively drained in a very low runoff class with high to very transmission of water. The description also states that frequency of flooding and ponding is "none". The soil hydrological group is A, which USDA defines as "Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil." (USDA National Engineering Handbook, Part 630 Hydrology, Chapter 7 Hydrological Soil Groups, 2009)
3. 2005 Aerial from Harnett County GIS (Exhibit 3)
    a. The GIS topographic data illustrates the saddle landform similar to the 1983 USGS map.
    b. The 2005 aerial illustrates Alfreda Drive and the storage unit building constructed on 107 Alfreda Drive.
    c. It appears the storage unit building with the corresponding grading was located in the natural drainage path.
    d. Based on the site visit in 2026, Alfreda was constructed without a storm drainage pipe.
4. 2021 Aerial from Harnett County GIS (Exhibit 4)
    a. Substantially the same conditions as the 2005 aerial.
    b. Mr. Graham would have owned his properties since 2016 at this point without issue.
    c. About this time Anderson Creek Rentals and Properties LLC purchased the 43 Alfreda Drive/107 Alfreda Drive properties.
5. 2024+/- Aerial from Harnett County GIS (Exhibit 5)
    a. Indicates the addition of gravel parking on the 107 Alfreda property
6. Easy Storage Site Plan by 4D Site Solutions dated August 2023.

a. Proposed addition of storage buildings with compacted ABC drive paths around buildings for a total land disturbance of 0.99 acres of the 1.74 acre property. An impact of 1+ acre would trigger requirement for a Soil and Erosion Control plan.
b. Sheet C-1.0 (Exhibit 6) illustrates existing conditions, including a drainage swale along the western side of Alfreda Drive.
c. Sheet C-3.0 (Exhibit 7) doesn't propose any grading to northern half of property nor any changes to Alfreda Drive.

7. NC Stormwater Manual (Exhibit 8)
    a. Defines pervious gravel cover as #57 stone over filter fabric. Compacted ABC stone is treated as a partially impervious area and must be accounted for in stormwater management calculations.

8. 2026 Google Maps Aerial Photo (Exhibit 9)
    a. Illustrates extensive installation of gravel parking area on 107 Alfreda Drive, construction of the storage units with gravel driveways as well as addition gravel parking area within the 50-foot access easement that also eliminated the drainage swale on the west side of Alfreda Drive.

9. Harnett County UDO
    a. Defines Built upon area as "Built-upon areas shall include that portion of a development project that is covered by impervious or partially impervious cover including buildings, pavement, gravel areas, recreation facilities, etc." Refer back to bullet 7.
    b. Nonresidential development that adds more than 22,000 square feet of disturbed area must meet requirements of Article X, Section 2.0 Stormwater management. It would appear that the addition of gravel to the 107 Alfreda Drive property exceeded 22,000 square feet without submission of plan for meeting USO requirements.

10. NCDEQ Water Surface Classifications
    a. The properties are outside water supply watershed.

11. NC Reasonable Use Doctrine
    a. North Carolina uses the "Reasonable Use Rule" to guide decisions on stormwater practices and disputes between property owners. Water has to flow somewhere — and everyone has the right to use their land but property owners must act reasonably.
        i. Lower properties must accept natural runoff from higher properties. If rain naturally flows downhill onto your lot, that's expected and allowed.
        ii. Upstream (higher) properties must manage water reasonably. You can't make changes that unreasonably increase runoff or cause serious harm to your neighbors.
        iii. Downstream (lower) properties also have limits on what can be done. You can't block culverts, raise the grade of your property, or build barriers that create drainage problems upstream.
        iv. Streams and natural drainageways cannot be blocked. State law (NCGS 77-13 and 77-14) makes it illegal to dam, fill in, or obstruct creeks and drainage channels.

CONCLUSIONS

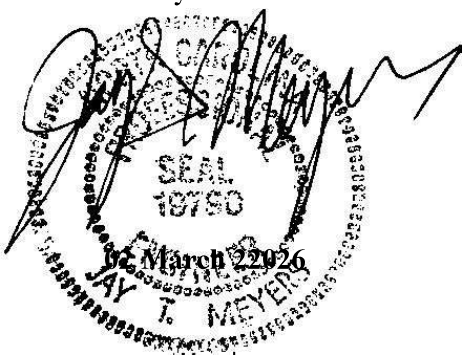
1. Prior to 2021, Alfreda Drive acted as a dam to the natural drainage path but given the low runoff potential of the natural soil, the ponding was reportedly limited to a short time.
2. The placement of gravel parking areas on 43 and 107 Alfreda properties increased runoff, but under existing conditions the runoff would have been contained on the western side of Alfreda Drive.
3. The placement of fill within the swale on the west side of Alfreda Drive and the construction of a berm along the northern side of the parking area diverted runoff onto Mr. Graham's property.
4. **Given the observations listed above, it is my opinion that the 43/107 Alfreda Drive property owner violated the following:**
    a. **Harnett County UDO by:**
        i. **exceeding the approved site plan for additional fill and placement of gravel on 43 Alfreda Drive,**
        ii. **lowering Alfreda Drive and constructing berm to divert water onto Mr. Graham's property**
        iii. **failure to prevent erosion resulting of siltation of adjacent property**
        iv. **placement of gravel on the 43 Alfreda Drive sans submittal to Harnett County**
        v. **failure to submit stormwater management plan for increased impervious area on 43 Alfreda Drive**
    b. **Reasonable Use Doctrine**
        i. **Directing stormwater flow across Alfreda Drive to Mr. Graham's property, which is upstream property.**

I am available to discuss these observations and conclusions at your convenience.

Sincerely,

Jay Meyers

Jay T. Meyers, PE
President



cc: Randy Baker – HC Manager of Central Permitting
Jay Sikes – HC Development Services Assistant Director

Attachments: Exhibits 1- 9 referenced in document

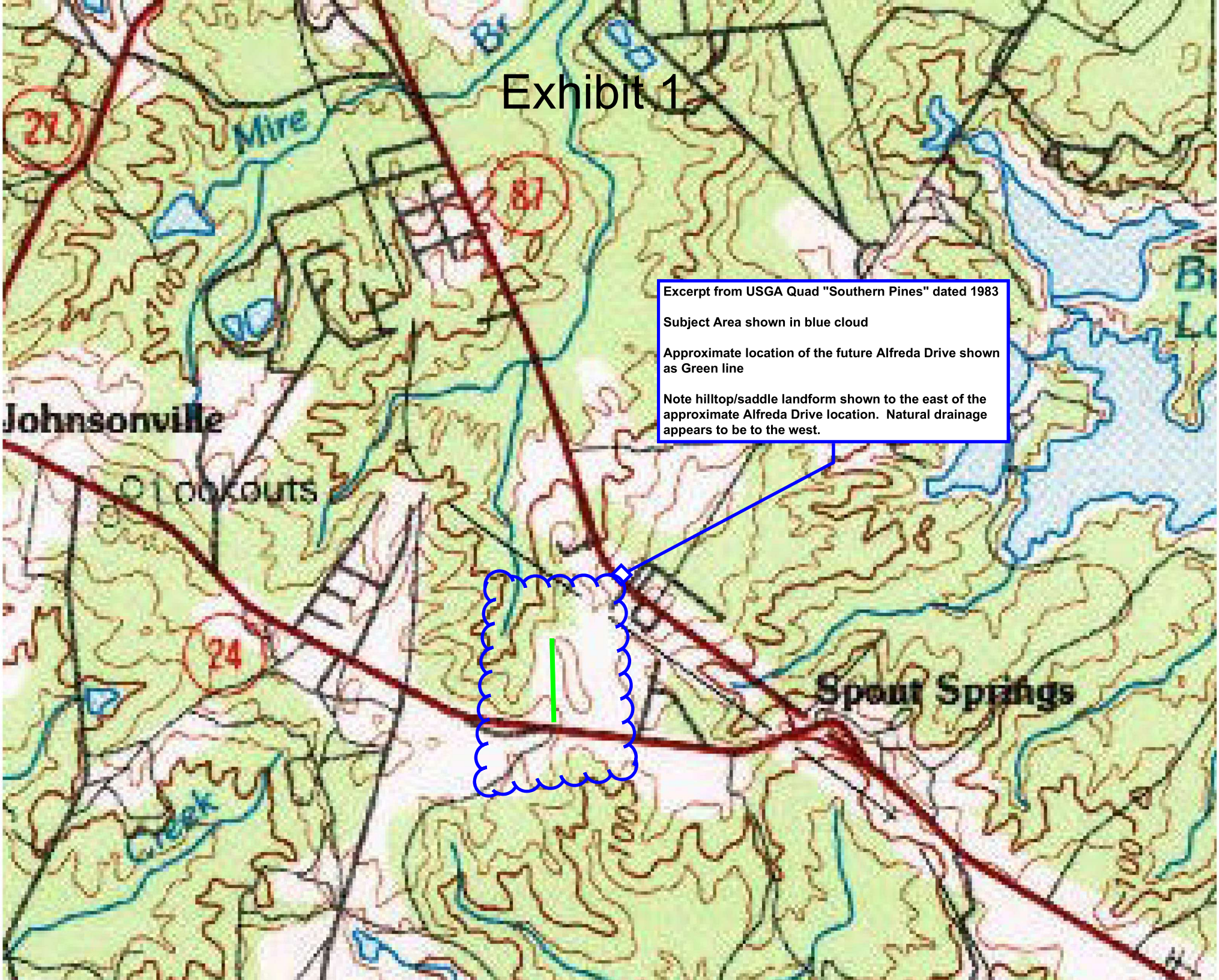
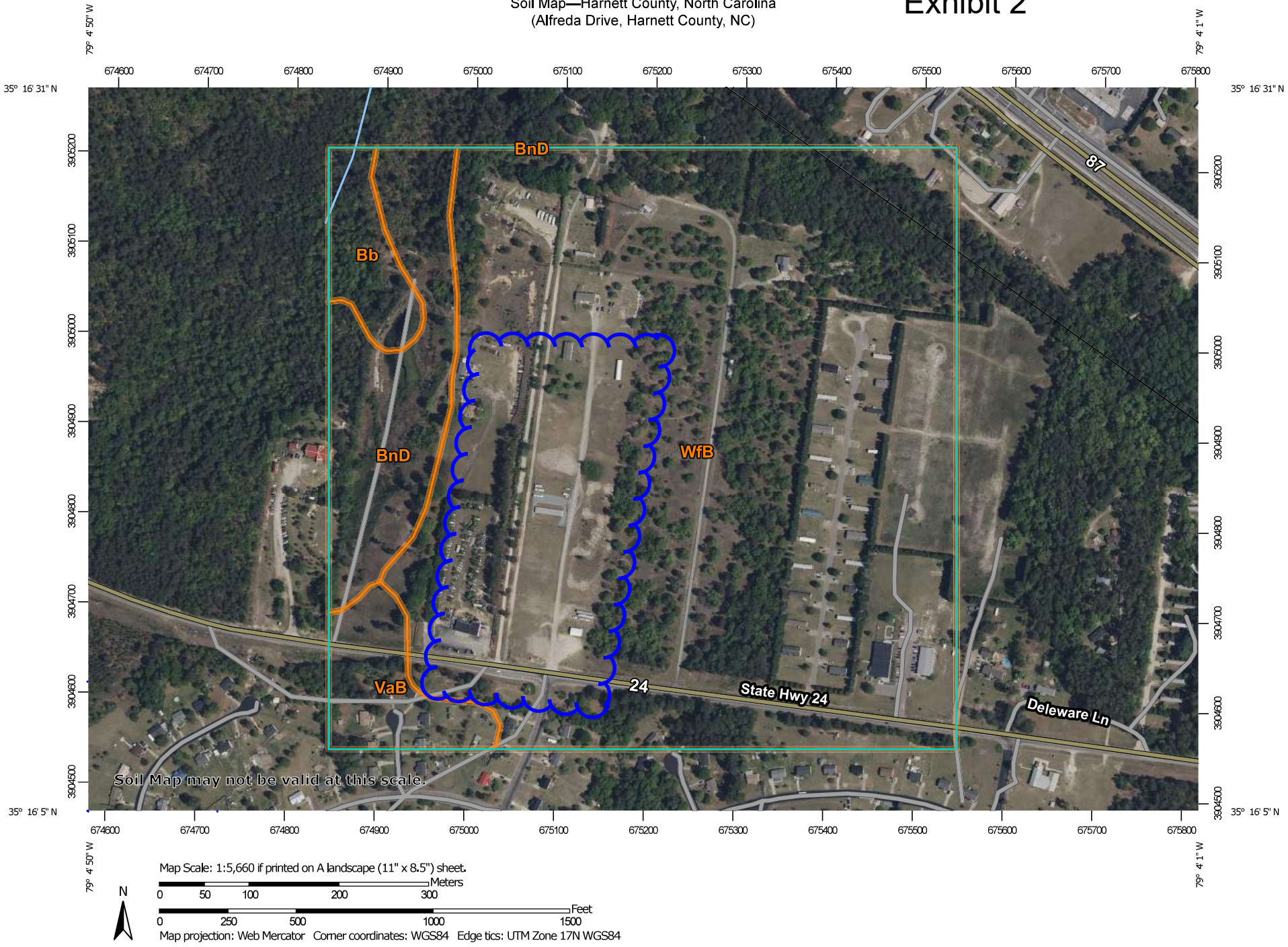


Exhibit 1
Excerpt from USGA Quad "Southern Pines" dated 1983
Subject Area shown in blue cloud
Approximate location of the future Alfreda Drive shown as Green line
Note hilltop/saddle landform shown to the east of the approximate Alfreda Drive location. Natural drainage appears to be to the west.
Johnsonville
Lookouts
Sprout Springs
Mire
Creek
21
87
24

Exhibit 2

Soil Map—Harnett County, North Carolina
(Alfreda Drive, Harnett County, NC)



Map Scale: 1:5,660 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Harnett County, North Carolina
Survey Area Data: Version 23, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 23, 2022—Apr 27, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bb	Bibb soils, frequently flooded	3.6	3.1%
BnD	Blaney loamy sand, 8 to 15 percent slopes	11.7	10.1%
VaB	Vaucluse loamy sand, 2 to 8 percent slopes	5.0	4.3%
WfB	Wakulla sand, 0 to 8 percent slopes	95.4	82.4%
Totals for Area of Interest		**115.8**	**100.0%**

Harnett County, North Carolina

WfB—Wakulla sand, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3sqt
Landscape: Sandhills
Elevation: 160 to 660 feet
Mean annual precipitation: 38 to 52 inches
Mean annual air temperature: 61 to 70 degrees F
Frost-free period: 210 to 245 days
Farmland classification: Not prime farmland

Map Unit Composition

Wakulla and similar soils: 90 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wakulla

Setting

Landscape: Sandhills
Landform: Low hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy marine deposits and/or eolian sands

Typical profile

A - 0 to 7 inches: sand
E - 7 to 24 inches: sand
Bt - 24 to 42 inches: loamy sand
C - 42 to 85 inches: sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A
Ecological site: F137XY070SC - Dry Sandy Upland Woodland
Hydric soil rating: No

Minor Components

Bibb, undrained
Percent of map unit: 3 percent
Landscape: Sandhills
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F137XY010SC - Flood Plains And Seepage Swamps
Hydric soil rating: Yes

Johnston, undrained
Percent of map unit: 2 percent
Landscape: Sandhills
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F137XY010SC - Flood Plains And Seepage Swamps
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Harnett County, North Carolina
Survey Area Data: Version 23, Sep 2, 2025

Harnett County GIS

Exhibit 3

NOT FOR LEGAL USE

Harnett COUNTY NORTH CAROLINA

Harnett.org/GIS

February 25, 2026

2005 Aerial Image from Harnett County GIS

Note that the natural drainage path may have been impacted by the construction of the original storage building at 107 Alfreda Drive.

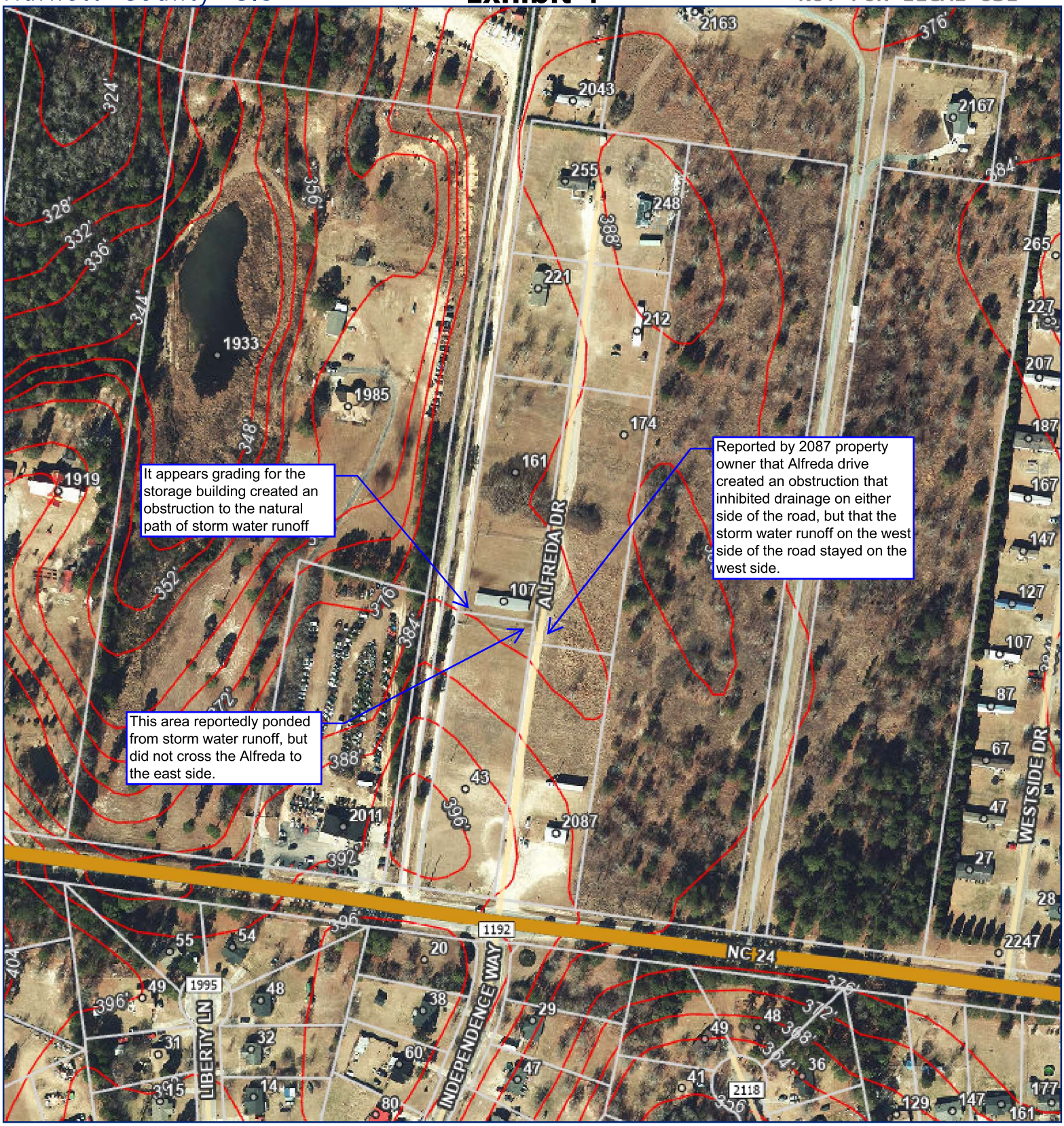
N
W E
S

Feet
0 120

Harnett County GIS

Exhibit 4

NOT FOR LEGAL USE



Harnett COUNTY NORTH CAROLINA

Harnett.org/GIS

February 25, 2026

2021 Aerial Image form Harnett County GIS

N
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Feet
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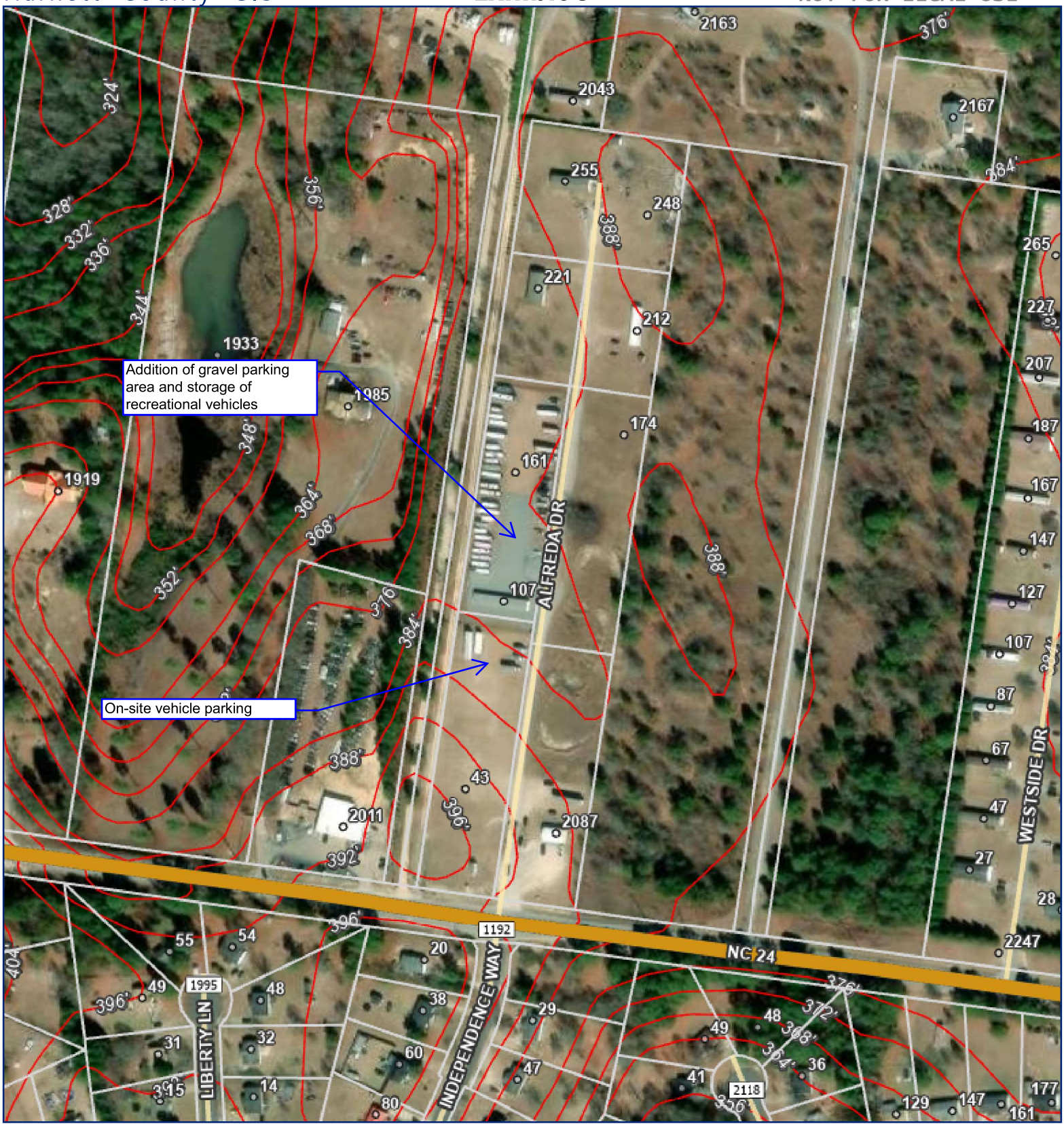
Harnett County GIS

Exhibit 5

NOT FOR LEGAL USE



Harnett COUNTY NORTH CAROLINA

Harnett.org/GIS

February 25, 2026

2024 +/- Aerial From Harnett County GIS

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Feet
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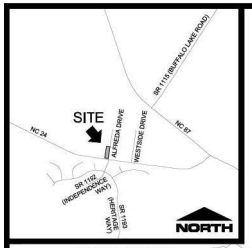
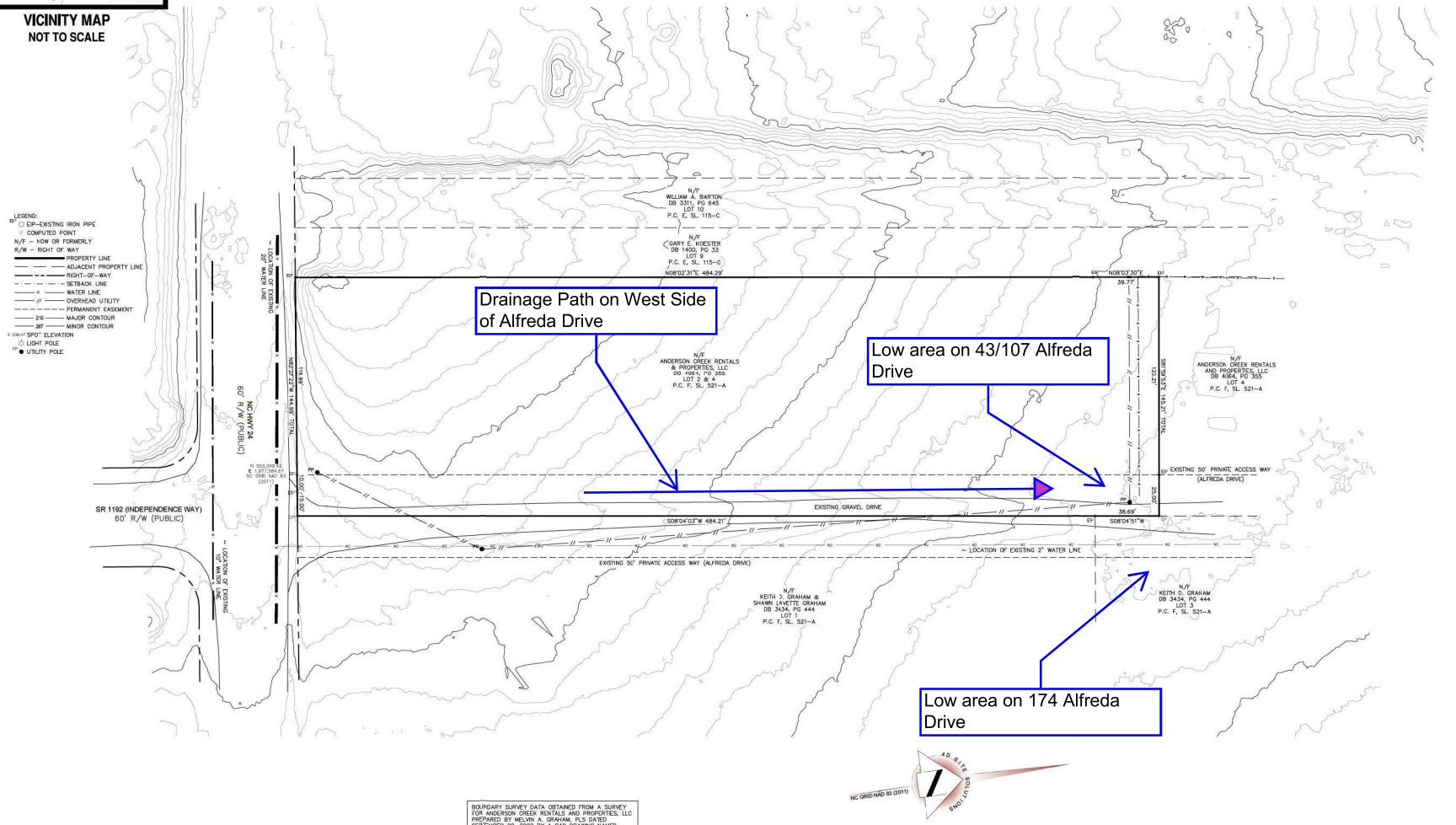
Exhibit 6



VICINITY MAP
NOT TO SCALE



BOUNDARY SURVEY DATA OBTAINED FROM A SURVEY FOR ANDERSON CREEK RENTALS AND PROPERTIES, LLC PREPARED BY MELVIN A. GRAHAM, PLS DATED SEPTEMBER 29, 2022 BY A CAD DRAWING NAMED 5622–SP PROVIDED BY THE AFOREMENTIONED.

THE CONTOURS SHOWN ARE FROM THE NORTH CAROLINA SPATIAL DATA DOWNLOAD WEBSITE, VIA THE NC FLOODPLAIN MAPPING PROGRAM. THE CONTOURS WERE ACHIEVED VIA LIDAR MAPPING SYSTEMS AND ARE PART OF THE PHASE 3, 2015 QL2–NC DATA SET. THESE CONTOURS ARE 1' CONTOURS AND ARE IN NC GRID NAD 83/2011 AND NAVD 88 DATUMS.

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www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 027482 ENGINEER SCOTT BRANCH
08-30-23

REVISIONS

PROJECT NAME
EASY STORAGE

EXISTING CONDITIONS

CLIENT
MIKE EVANS DESIGN/BUILD

912 Cedar Creek Road
Fayetteville, North Carolina 28312
Phone: (910) 486-5120

PROJECT INFORMATION

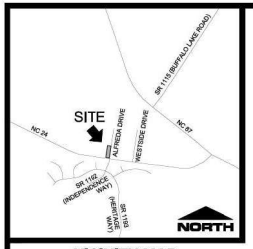
SURVEYED BY:	M.A.G
DRAWN BY:	M.A.G
CHECKED BY:	M.A.G
PROJECT NUMBER:	1980

DRAWING SCALE
HORIZONTAL: 1"=30'

DATE SURVEYED
FEBRUARY 14, 2023

SHEET NUMBER
C-1.0

Exhibit 7



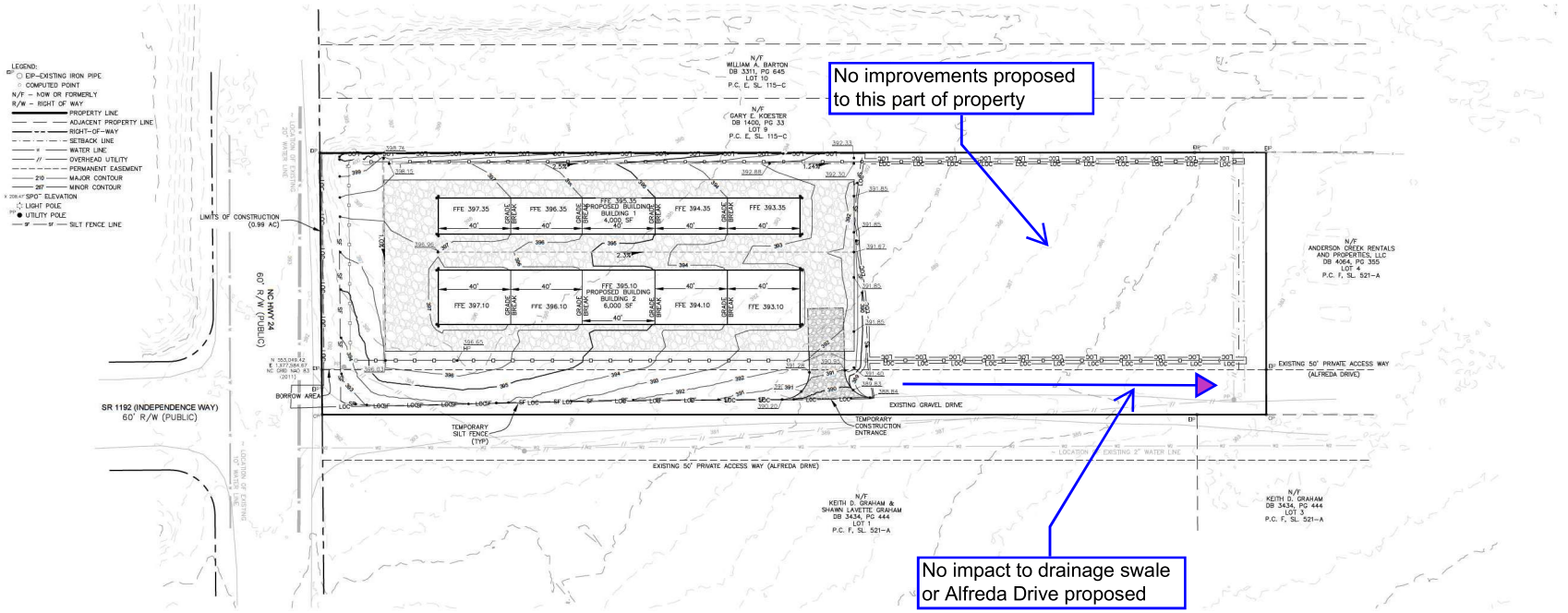
VICINITY MAP
NOT TO SCALE

EROSION CONTROL NOTES

1. TEMPORARY EROSION CONTROL FACILITIES AND/OR PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF AND EARTH DISTURBANCE OPERATION SHALL BE INSTALLED BEFORE ANY EARTH DISTURBANCE OPERATIONS TAKE PLACE OR AT THE EARLIEST POSSIBLE POINT DURING CONSTRUCTION.
2. TEMPORARY & PERMANENT EROSION CONTROL MEASURES SHALL BE CONSTRUCTED PER THE DETAILS HEREIN, OR SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS.
4. LOCATE SOIL STOCKPILES NO LESS THAN FIFTY (50) FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN FIVE FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
5. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
6. TEMPORARILY OR PERMANENTLY STABILIZE ALL DENUDED AREAS WHICH HAVE BEEN FINISH GRADED, AND ALL DENUDED AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER WITHIN 14 DAYS. USE SEEDING AND MULCHING, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS AND OTHERWISE APPROPRIATE MEASURES. USE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED.
7. DO NOT REMOVE ANY EROSION AND SEDIMENT CONTROL DEVICES AFTER THE PROTECTED AREA HAS UNDERGONE FINAL STABILIZATION AND PERMANENT VEGETATION HAS BEEN ESTABLISHED, IT IS RECOMMENDED THAT NCDEQ APPROVE THE ACTION PRIOR TO REMOVAL.
8. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED CONCURRENTLY WITH THE INITIATION OF CONSTRUCTION ACTIVITY.
9. THE INSTALLATION OF EROSION CONTROL MEASURES SHALL TAKE PRECEDENCE OVER ALL OTHER CONSTRUCTION ACTIVITIES.
10. THE PERMITTEE SHALL BE HELD RESPONSIBLE FOR THE ACTIONS AND PERFORMANCE OF ANY OTHER PARTIES PERFORMING WORK ON THIS PROJECT.
11. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
12. PURSUANT TO G.S. 113A–57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 7 OR 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PURSUANT TO G.S. 113A–57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 90 CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
13. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EROSION CONTROL MEASURES SHOWN AND ANY ADDITIONAL MEASURES REQUIRED TO CONTROL THE SEDIMENT DURING THE COURSE OF CONSTRUCTION.
14. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO THE DETAILS HEREIN.
15. THE CONTACT PERSON FOR EROSION CONTROL ISSUES THAT ARISE ON SITE IS MIKE EVANS. CONTACT 910-486-5120.
16. EXCESS TOPSOIL FROM THE SITE SHOULD BE HAULED OFF AND PROPERLY DISPOSED OF.

GRADING NOTES

1. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE LIDAR DATA AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR.
2. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ALL LAND DISTURBING ACTIVITIES AND ENSURE COMPLIANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES AND CLEAR ANY DEBRIS LEAVING THE SITE ON NEIGHBORING ROADS.
3. EXISTING GROUND UPON WHICH FILL OR BASE IS TO BE PLACED SHALL BE CLEARED OF WEEDS, DEBRIS, TOPSOIL, AND ALL OTHER DELETERIOUS MATERIALS. NO FILL SHALL BE PLACED UNTIL PREPARATION OF THE EXISTING GROUND HAS BEEN COMPLETED.
4. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR AND THE OWNER TO PROTECT ADJACENT PROPERTY, THE PUBLIC AND UTILITIES DURING GRADING OPERATIONS. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES, WHETHER SHOWN OR NOT ON THE PLAN.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES OR STRUCTURES ABOVE AND BELOW GROUND, SHOWN OR NOT SHOWN ON THESE PLANS. THEY WILL BE HELD RESPONSIBLE FOR ALL DAMAGE TO ANY UTILITIES OR STRUCTURES CAUSED BY HIS OPERATION.
6. ALL CUT AND FILL SLOPES SHOULD BE INVESTIGATED BOTH DURING AND AFTER GRDING BY THE CONTRACTOR TO DETERMINE IF ANY SLOPE STABILITY PROBLEMS EXIST. IF IT IS DETERMINED THAT THERE IS A SLOPE STABILITY PROBLEM THE ENGINEER OF RECORD SHOULD BE NOTIFIED.
7. STOCKPILE AREAS THAT WILL EXCEED 10' IN HEIGHT SHOULD BE GRADED WITH 3:1 SLOPES AND SURROUNDED BY SILT FENCE.
8. APPROVED COPIES OF THE GRADING AND EROSION CONTROL PLANS SHALL BE ON THE PERMITTED SITE WHILE WORK IS IN PROGRESS.
9. ALL EXISTING DRAINAGE COURSES THROUGH THIS SITE SHALL REMAIN IN A CONDITION SUCH THAT THEY CAN TRANSPORT THE NATURAL DRAINAGE UNTIL FACILITIES TO HANDLE THE STORM WATER ARE CONSTRUCTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.
10. ANY DEVIATION FROM THE APPROVED GRADING PLAN SHOULD BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO IMPLEMENTATION OF THE CHANGE.
11. ALL SLOPES 3:1 OR STEEPER THAT EXTEND TEN FEET OR MORE SHALL BE LINED WITH NORTH AMERICAN GREEN S75 TEMPORARY EROSION CONTROL BLANKET OR EQUAL SUBSTITUTE.

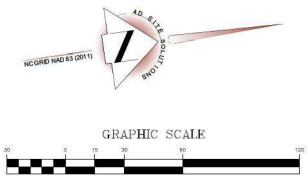


CONSTRUCTION SEQUENCE

1. OBTAIN ALL NECCSSARY PERMITS AND APPROVALS AND HOLD PRE-CONSTRUCTION CONFERENCE.
2. INSTALL STONE CONSTRUCTION ENTRANCE
3. CLEAR AND GRUB THE SITE AS NEEDED.
4. ROUGH GRADE THE SITE AND APPLY TEMPORARY SEEDING TO AREAS REMAIN GRASSED.
5. INSTALL UTILITIES.
6. PERFORM FINE GRADING.
7. INSTALL GRAVEL DRIVE AISLES.
8. FERTILIZE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.
9. UPON SITE STABLIZATION, SEEK NCDEQ APPROVAL TO REMOVE ALL TEMPORARY MEASURES.
10. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED AS OUTLINED IN THE DETAILS WITHIN THE PLANS AND ACCORDING TO THE NCDEQ EROSION CONTROL MANUAL. OBTAIN ALL NECCSSARY PERMITS AND APPROVALS AND HOLD PRE CONSTRUCTION CONFERENCE.

GROUND STABILIZATION CHART

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITHCES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)



811 Know what's below. Call before you dig.

THE CONTRACTOR MUST CONTACT NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 A MINIMUM OF 72 HOURS PRIOR TO DIGGING IN ORDER TO HAVE THE EXISTING UTILITIES LOCATED

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www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 027482 ENGINEER SCOTT BROWN
08-30-23

REVISIONS

PROJECT NAME

EASY STORAGE

GRADING AND EROSION CONTROL PLAN

CLIENT

MIKE EVANS DESIGN/BUILD

912 Cedar Creek Road
Fayetteville, North Carolina 28312
Phone: (910) 486-5120

PROJECT INFORMATION

DESIGNED BY:	BRETT
DRAWN BY:	BRETT
CHECKED BY:	SCOTT
PROJECT NUMBER:	1980

DRAWING SCALE

HORIZONTAL: 1"=30'

DATE RELEASED

AUGUST 30, 2023

SHEET NUMBER

C-3.0

A-4. Built-Upon Area

N.C.G.S.143-214.7(b2): For purposes of implementing stormwater programs, "**built-upon area**" means impervious surface and partially impervious surface to the extent that the partially impervious surface does not allow water to infiltrate through the surface and into the subsoil. "Built-upon area" does not include:

- a slatted deck;
- the water area of a swimming pool;
- a surface of number 57 stone, as designated by the American Society for Testing and Materials, laid at least four inches thick over a geotextile fabric;
- a trail as defined in G.S. 113A-85 that is either unpaved or paved as long as the pavement is porous with a hydraulic conductivity greater than 0.001 centimeters per second (1.41 inches per hour); or
- landscaping material, including, but not limited to, gravel, mulch, sand, and vegetation, placed on areas that receive pedestrian or bicycle traffic or on portions of driveways and parking areas that will not be compacted by the weight of a vehicle, such as the area between sections of pavement that support the weight of a vehicle.

The owner or developer of a property may opt out of any of the exemptions from "built-upon area" set out in this subsection. .

NOTE: The above definition of "built-upon area" applies only to state stormwater programs.

Some additional guidance on using #57 stone in accordance with the statute is as follows:

- The #57 stone may not be mixed with other aggregate material;
- "***Geotextile fabric***" *means a permeable geosynthetic comprised solely of non-biodegradable textiles.* [15A NCAC 2H .1002(19)]
- The #57 stone and geotextile fabric may not be placed on top of an impervious material, such as crusher run or asphalt;
- The #57 stone area may not use an underdrain system that discharges without treatment; and
- The soil on which the 57 stone will be placed (subgrade) should not be mechanically compacted prior to installation; however, the statute does not prohibit this.

Figure 1: Number 57 Stone

Although #57 stone laid on geotextile fabric and trails that meet the minimum hydraulic conductivity standard are not considered built-upon area to determine whether a project is high density or low density, these areas shall be accounted for in the design of SCMs required in high density projects. Per 15A NCAC 02H .1050, SCMs shall be sized to account for runoff from all surfaces draining to the system unless the applicant can demonstrate that those areas will not produce stormwater runoff. The requirement to account for runoff from all surfaces for purposes of SCM sizing is consistent with rule 15A NCAC 2H .1003(3).

Any size stone or aggregate used on portions of projects that receive infrequent vehicular traffic (approximately twice a month or less) may be counted as pervious regardless of the depth of the stone layer. This includes applications such as decorative landscaping, drainage swales, weed control, and the area within the fenced yard at electrical substations.

If an applicant plans to install a surface that does not meet one of the five exemptions to built-upon area called out in N.C.G.S.143-214.7(b2), he has the option of demonstrating to the permitting authority that the proposed surface allows an adequate level of stormwater infiltration to be considered either pervious or partially pervious. The information the applicant provides shall be based on engineering calculations and the results of research studies showing that the proposed surface provides equal or better infiltration rates as the surrounding pervious surfaces and that it shall function in perpetuity.

Google Maps

Exhibit 9

Imagery ©2026 Airbus, Maxar Technologies, Map data ©2026 Google 100 ft

2026 Aerial from Goggle Maps