CHATHAM COUNTY
NORTH CAROLINA

WATERSHED PROTECTION DEPARTMENT

P.O. Box 548
Pittsboro, NC 27312
PHONE: (919) 545-8394

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February 10, 2023

Kimley-Horn
Ms. Emma Radford
421 Fayetteville Street, Suite 600
Raleigh, NC 27601

Project Name:	Eden (Parcel 2949)
Location:	6181 US 15 501 N, Chatham County
Subject Features:	One (1) ephemeral segment, one (1) intermittent segment, two (2) perennial segments, and five (5) potential wetlands
Chatham County WP#:	WP-23-41
Date of Determination:	February 7, 2023

Explanation:
The site was reviewed on January 10, 2023, by Emma Radford with Kimley-Horn on Parcel # 2949 that is located within the Jordan Lake watershed. Kimley-Horn personnel previously identified one (1) ephemeral segment, one (1) intermittent segment, one (1) perennial segment and five (5) potential wetlands on the property. Kimley-Horn submitted a request for Chatham County to complete a formal review to determine if the features would be subject to riparian buffers according to Section 304 of the Chatham County Watershed Protection Ordinance.

The confirmation site visit was completed on February 7, 2023 by Drew Blake and Phillip Cox of Chatham County and Emma Radford and Caroline Vinter of Kimley-Horn. All stream type transition points were reviewed in the field. One (1) perennial transition point was added along S1 just north of W4.

Required Riparian Buffers:
All ephemeral stream segments will require a 30-ft buffer riparian buffer from the top of bank landward. All intermittent stream segments will require a 50-ft buffer from the top of bank landward. All perennial stream segments will require a 100-ft buffer from the top of bank landward. All identified wetlands will require a 50-ft buffer proceeding landward from the flagged wetland boundary.

The potential wetlands identified by Kimley-Horn has not been confirmed by the US Army Corps of Engineers. Once the USACE confirmation is received the 50-ft riparian buffers will be required from the flagged confirmed wetland boundaries.

Impacts to Riparian Buffers:
Impacts to the riparian buffers may require a Riparian Buffer Authorization depending on the size and scope of the impacts. Please refer to Section 304 (J)(3) of the Chatham County Watershed Protection Ordinance to determine if your impacts will require a Riparian Buffer Authorization. If you determine that a Riparian Buffer Authorization is required, please contact Drew Blake to receive the required application and submittal instructions.

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This on-site determination shall expire five (5) years from the date of this letter. Landowners or affected parties that dispute a determination made by Chatham County, on parcels outside of the Jordan Lake watershed, may submit a request for appeal in writing to the Watershed Review Board. A request for a determination by the Watershed Review Board shall be made in accordance with Section 304 of the Chatham County Watershed Protection Ordinance. Landowners or affected parties that dispute a determination made by Chatham County, on parcels inside the Jordan Lake watershed, shall submit a request for appeal in writing to NC DWR, 401 & Buffer Permitting Unit, 1650 Mail Service Center, Raleigh, NC 27669-1650 attention of the Director of the NC Division of Water Quality.

Should this project result in any direct impacts to surface water features (i.e., crossing and/or filling streams or wetlands) additional reviews may be necessary. Additionally, a Section 404/401 Permit may be required. Any inquiries regarding Section 404/401 permitting should be directed to the Division of Water Resources (Central Office) at (919)-807-6364 and the US Army Corp of Engineers (Raleigh Regulatory Field Office) at (919)-554-4884.

Respectfully,

Drew Blake

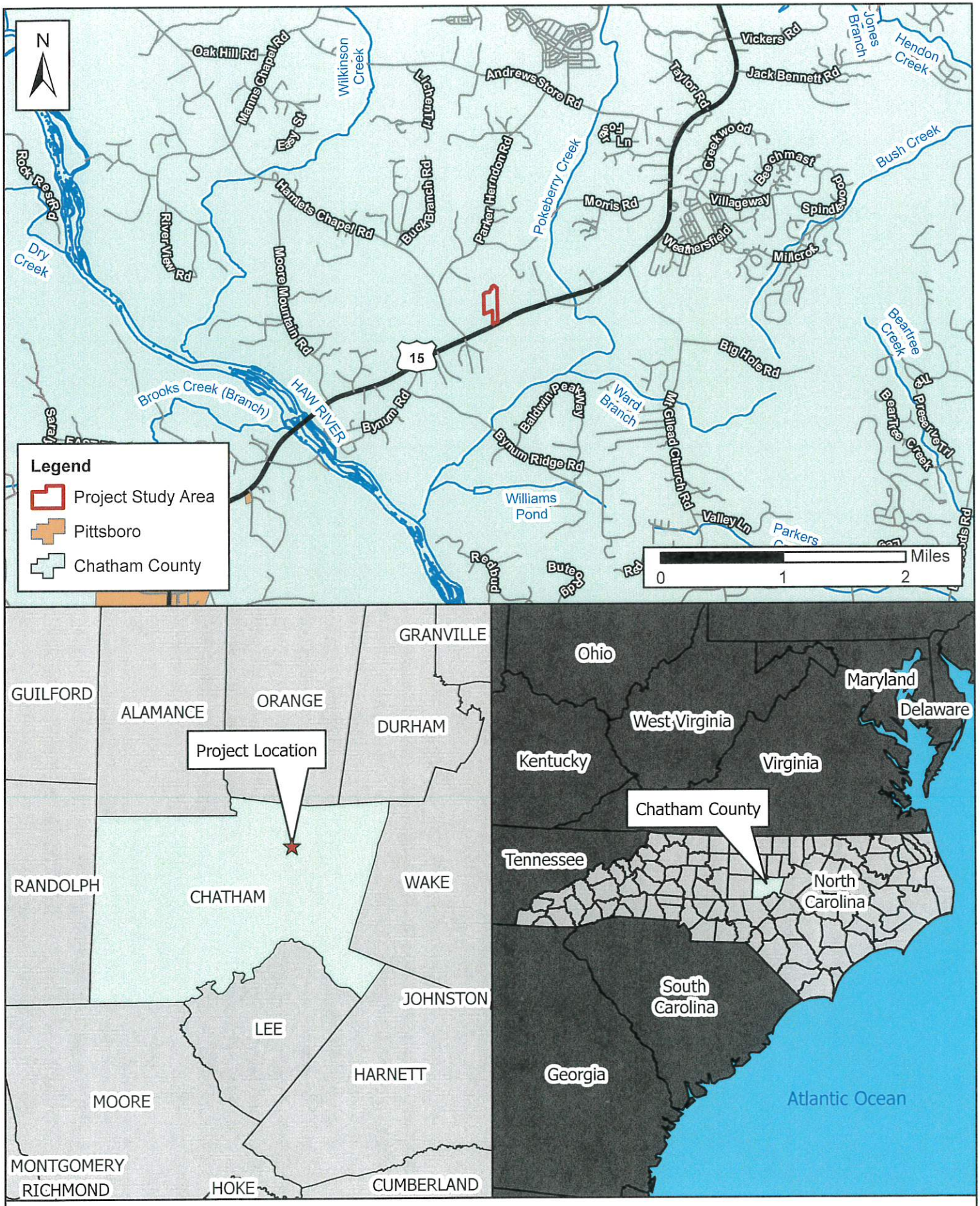
Drew Blake
Assistant Director, CESSWI

Enclosures:

- Figure 1: Site Vicinity Map – Completed by Kimley-Horn
- Figure 2: USGS Topographic Map – Completed by Kimley-Horn
- Figure 3: Delineated Features Map
- Surface Water & Riparian Buffer Spreadsheet
- Figure 4: NRCS Soil Survey– Completed by Kimley-Horn
- Kimley-Horn Stream ID Forms
- Kimley-Horn Wetland Data Form
- Major Subdivision Riparian Buffer Application
- Authorized Agent Form
- Authorization to Enter Property Form

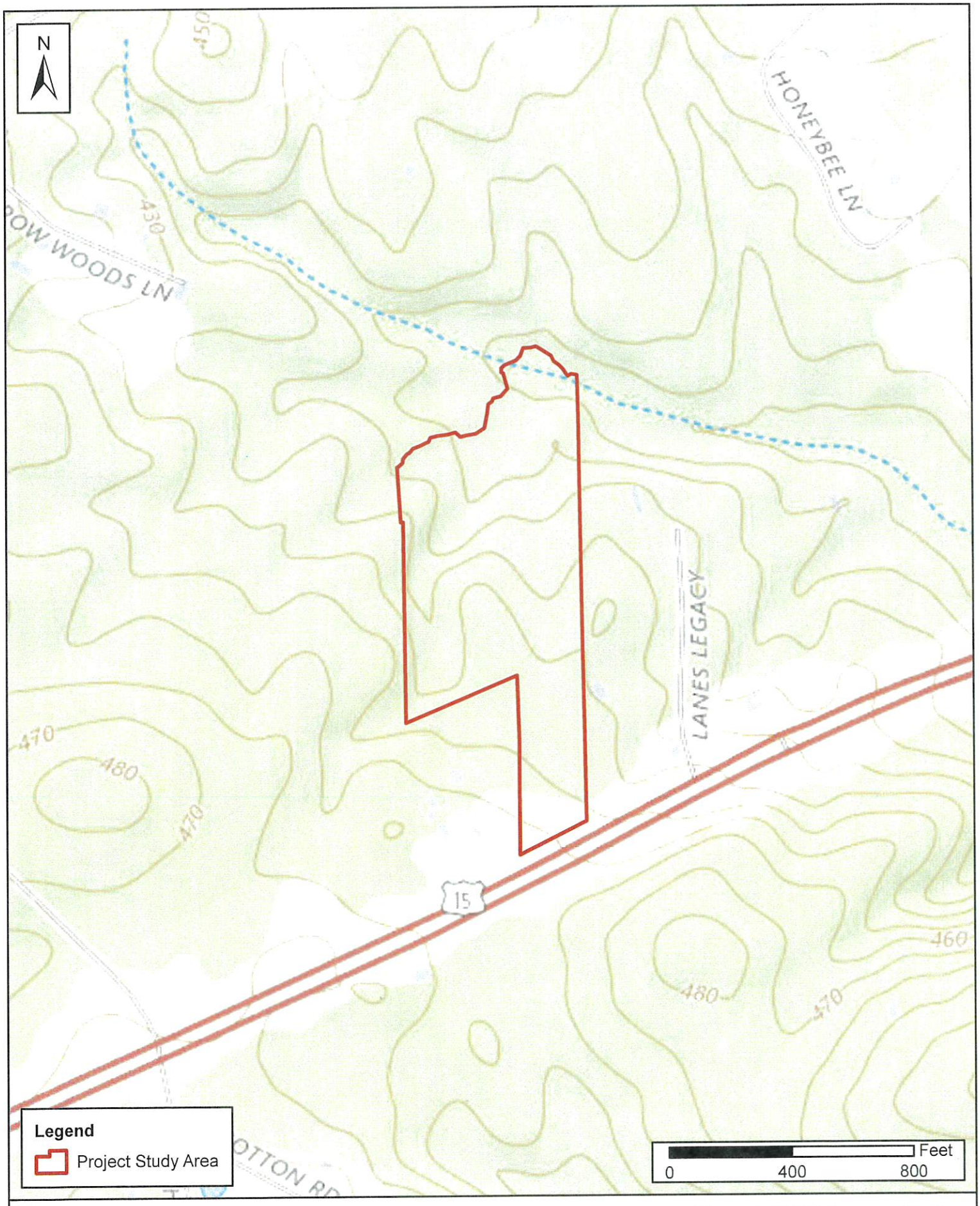
cc:

- Taylor Burton, Watershed Specialist, Chatham County Watershed Protection Department
- Phillip Cox, Watershed Specialist, Chatham County Watershed Protection Department
- Justin Hasenfus, Senior Watershed Specialist, Chatham County Watershed Protection Dept
- Rachael Thorn, Director, Chatham County Watershed Protection Department
- Kimberly Tyson, Planner II/Subdivision Administrator, Chatham County Planning Department
- Angela Plummer, Planner II/Zoning Administrator, Chatham County Planning Department
- Jason Sullivan, Director, Chatham County Planning Department



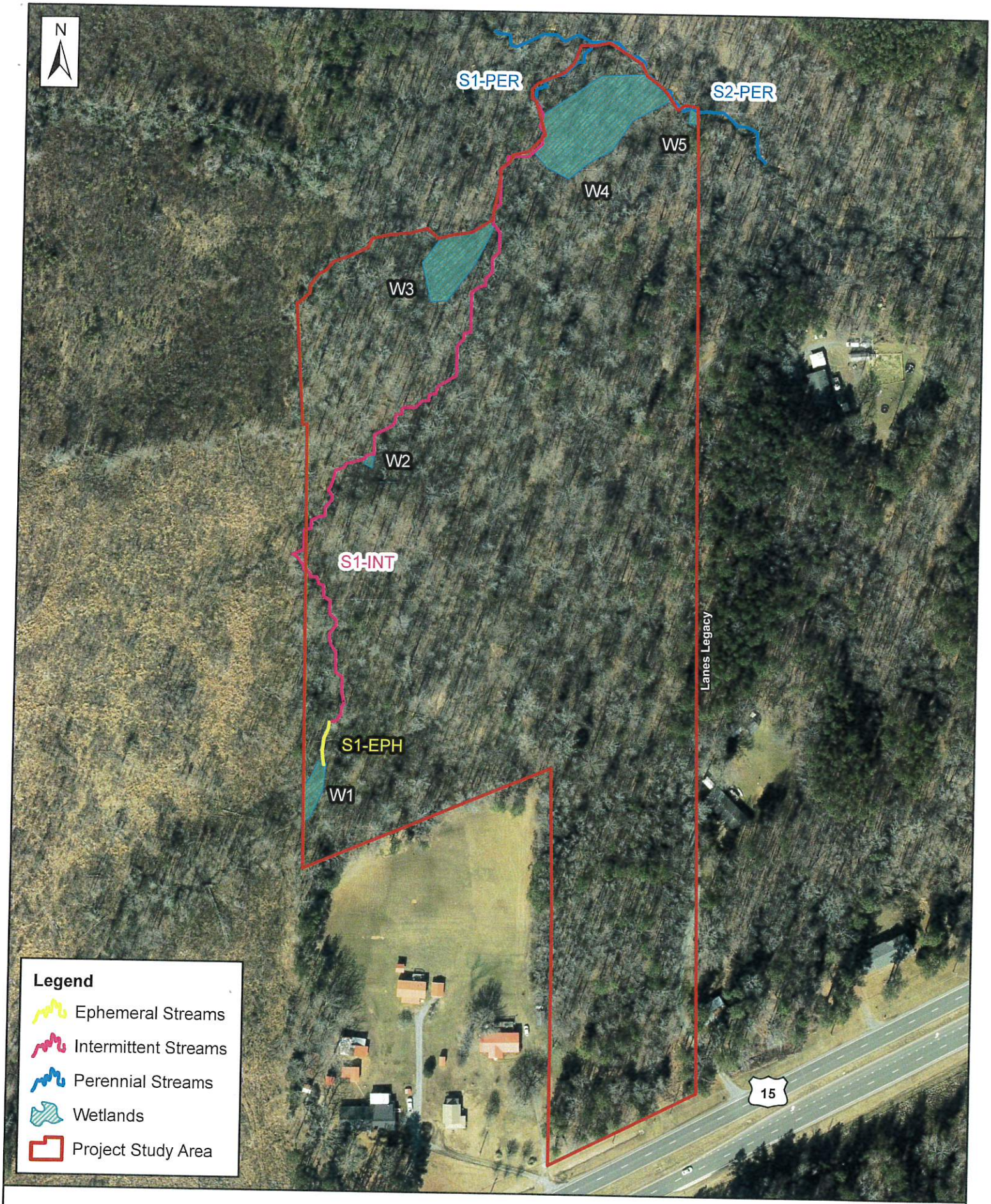
Kimley»Horn

Figure 1: Vicinity Map
6181 US Highway 15-501 Site
Chatham County, NC
January 2023



Kimley»Horn

Figure 2: USGS Topographic Map
6181 US Highway 15-501 Site
Chatham County, NC
January 2023



Kimley»Horn

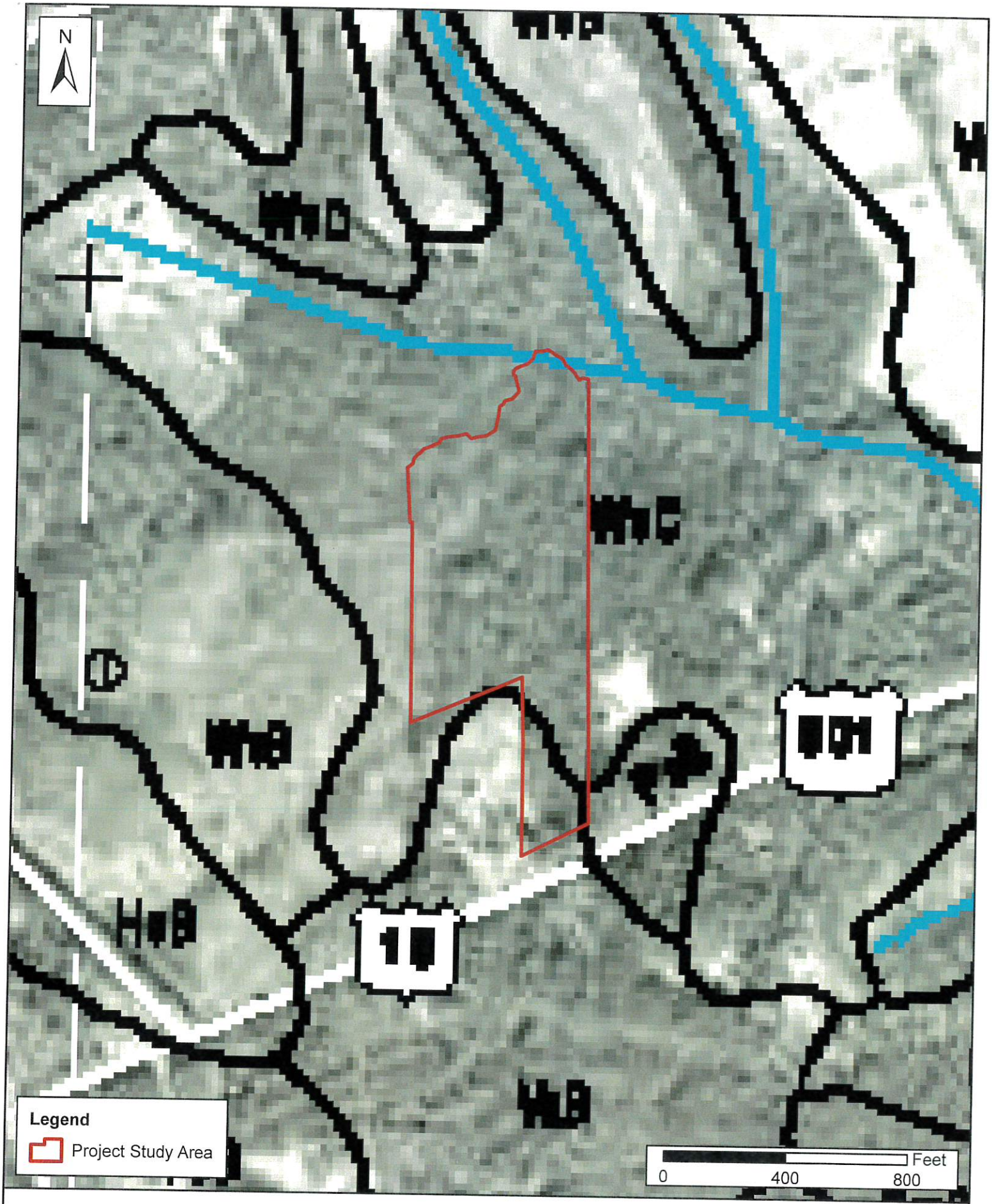
Figure 3: Delineated Features Map
6181 US Highway 15-501 Site
Chatham County, NC
February 2023

Eden Subdivision

Surface Water & Riparian Buffer Spreadsheet

Completed By: Emma Radfird, WPIT, CA - Kimley-Horn

	Stream/Wetland Data Form ID	Stream Length or Wetland Acres	Latitude	Longitude	Buffer Required	Buffer Jurisdiction (Jordan, County + Jordan)
and	W1/W2-WET	0.037 acres	35.788036	-79.121173	50' Jurisdictional Wetland	County
and	W1/W2-WET	0.004 acres	35.789368	-79.120934	50' Jurisdictional Wetland	County
and	W3/W4/W5-WET	0.144 acres	35.790174	-79.120523	50' Jurisdictional Wetland	County
and	W3/W4/W5-WET	0.372 acres	35.790739	-79.119822	50' Jurisdictional Wetland	County
and	W3/W4/W5-WET	0.006 acres	35.790775	-79.119348	50' Jurisdictional Wetland	County
	Stream S1-EPH	64 LF	35.788230	-79.121132	30' (Ephemeral)	County
	Stream S1-INT	1,085 LF	35.789707	-79.120525	50' (Intermittent)	County + Jordan
	Stream S1-PER	140 LF	35.791037	-79.119875	100' (Perennial)	County + Jordan
	Stream S2	55 LF	35.790799	-79.119402	100' (Perennial)	County + Jordan



Kimley»Horn

Figure 4: NRCS Soil Survey Map
6181 US Highway 15-501 Site
Chatham County, NC
January 2023

North Carolina Division of Water Quality - Stream Identification Form, Version 4.11

Date:	1/10/2023	Project/Site:	6181 US Highway 15-501 Site/Stream S1-EPH	Latitude:	35.788229
Evaluator:	E. Radford, WPIT & C. Vinter (Kimley-Horn)	County:	Chatham County	Longitude:	-79.121132
Total Points: 17.5 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30		Stream Determination (circle one) Ephemeral Intermittent Perennial		Other e.g. Quad Name:	Farrington

A. Geomorphology Subtotal = 7.5	Absent	Weak	Moderate	Strong	Score
1[a]. Continuity of channel bed and bank	0	1	2	3	**1**
2. Sinuosity of channel along thalweg	0	1	2	3	**1**
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	**0**
4. Particle size of stream substrate	0	1	2	3	**1**
5. Active/relic floodplain	0	1	2	3	**1**
6. Depositional bars or benches	0	1	2	3	**0**
7. Recent alluvial deposits	0	1	2	3	**2**
8. Headcuts	0	1	2	3	**1**
9. Grade control	0	0.5	1	1.5	**0**
10. Natural valley	0	0.5	1	1.5	**0.5**
11. Second or greater order channel[s]	No = 0		Yes = 3		**0**

B. Hydrology Subtotal = 6					
12. Presence of Baseflow	0	1	2	3	**2**
13. Iron oxidizing bacteria	0	1	2	3	**0**
14. Leaf litter	1.5	1	0.5	0	**0**
15. Sediment on plants or debris	0	0.5	1	1.5	**0.5**
16. Organic debris lines or piles	0	0.5	1	1.5	**0.5**
17. Soil-based evidence of high water table?	No = 0		Yes = 3		**3**

C. Biology Subtotal = 4					
18. Fibrous roots in streambed	3	2	1	0	**1**
19. Rooted upland plants in streambed	3	2	1	0	**3**
20. Macrobenthos (note diversity and abundance)	0	1	2	3	**0**
21. Aquatic Mollusks	0	1	2	3	**0**
22. Fish	0	0.5	1	1.5	**0**
23. Crayfish	0	0.5	1	1.5	**0**
24. Amphibians	0	0.5	1	1.5	**0**
25. Algae	0	0.5	1	1.5	**0**
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5; Other = 0				**0**

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Stream S1-EPH is an ephermal reach that originates at a headcut below wetland W1. Stream S1-EPH has very low banks and significant sedimentation within the stream channel. A moderate amount of fibrous roots and no biology were observed at the time of data collection.

North Carolina Division of Water Quality - Stream Identification Form, Version 4.11

Date: 1/10/2023	Project/Site: 6181 US Highway 15-501 Site/Stream S1-INT	Latitude: 35.789690
Evaluator: E. Radford, WPIT & C.Vinter (Kimley-Horn)	County: Chatham County	Longitude: -79.120558
Total Points: 28.5 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington

A. Geomorphology Subtotal = 14.5	Absent	Weak	Moderate	Strong	Score
1[a]. Continuity of channel bed and bank	0	1	2	3	**3**
2. Sinuosity of channel along thalweg	0	1	2	3	**2**
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	**3**
4. Particle size of stream substrate	0	1	2	3	**2**
5. Active/relic floodplain	0	1	2	3	**0**
6. Depositional bars or benches	0	1	2	3	**1**
7. Recent alluvial deposits	0	1	2	3	**1**
8. Headcuts	0	1	2	3	**2**
9. Grade control	0	0.5	1	1.5	**0**
10. Natural valley	0	0.5	1	1.5	**0.5**
11. Second or greater order channel	No = 0		Yes = 3		**0**

B. Hydrology Subtotal = 8.5					
12. Presence of Baseflow	0	1	2	3	**3**
13. Iron oxidizing bacteria	0	1	2	3	**0**
14. Leaf litter	1.5	1	0.5	0	**0.5**
15. Sediment on plants or debris	0	0.5	1	1.5	**0.5**
16. Organic debris lines or piles	0	0.5	1	1.5	**1.5**
17. Soil-based evidence of high water table?	No = 0		Yes = 3		**3**

C. Biology Subtotal = 5.5					
18. Fibrous roots in streambed	3	2	1	0	**2**
19. Rooted upland plants in streambed	3	2	1	0	**3**
20. Macrobenthos (note diversity and abundance)	0	1	2	3	**0**
21. Aquatic Mollusks	0	1	2	3	**0**
22. Fish	0	0.5	1	1.5	**0**
23. Crayfish	0	0.5	1	1.5	**0**
24. Amphibians	0	0.5	1	1.5	**0**
25. Algae	0	0.5	1	1.5	**0.5**
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5; Other = 0				**0**

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Stream S1-INT is an intermittent channel that originates at a large headcut below stream S1-EPH and flows along the southwestern boundary of the study area, eventually flowing into stream S2. Stream S1-INT has strong baseflow and continuous bed and back throughout the reach. Some algae was observed within the channel of stream S1-INT. Sand, Gravel, and Sandstone substrate were observed throughout S1-INT.

North Carolina Division of Water Quality - Stream Identification Form, Version 4.11

Date:	2/7/2023	Project/Site:	6181 US Highway 15-501 Site/Stream S1-PER	Latitude:	35.790931
Evaluator:	E. Radford, WPIT & C.Vinter (Kimley-Horn)	County:	Chatham County	Longitude:	-79.120003
Total Points: 34 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30		Stream Determination (circle one) Ephemeral Intermittent Perennial		Other e.g. Quad Name:	Farrington

A. Geomorphology Subtotal = 18	Absent	Weak	Moderate	Strong	Score
1[a]. Continuity of channel bed and bank	0	1	2	3	**3**
2. Sinuosity of channel along thalweg	0	1	2	3	**2**
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	**3**
4. Particle size of stream substrate	0	1	2	3	**2**
5. Active/relic floodplain	0	1	2	3	**2**
6. Depositional bars or benches	0	1	2	3	**1**
7. Recent alluvial deposits	0	1	2	3	**3**
8. Headcuts	0	1	2	3	**0**
9. Grade control	0	0.5	1	1.5	**1**
10. Natural valley	0	0.5	1	1.5	**1**
11. Second or greater order channel[s]	No = 0		Yes = 3		**0**

B. Hydrology Subtotal = 9.5					
12. Presence of Baseflow	0	1	2	3	**3**
13. Iron oxidizing bacteria	0	1	2	3	**1**
14. Leaf litter	1.5	1	0.5	0	**1.5**
15. Sediment on plants or debris	0	0.5	1	1.5	**0.5**
16. Organic debris lines or piles	0	0.5	1	1.5	**0.5**
17. Soil-based evidence of high water table?	No = 0		Yes = 3		**3**

C. Biology Subtotal = 6.5					
18. Fibrous roots in streambed	3	2	1	0	**3**
19. Rooted upland plants in streambed	3	2	1	0	**3**
20. Macrobenthos (note diversity and abundance)	0	1	2	3	**0**
21. Aquatic Mollusks	0	1	2	3	**0**
22. Fish	0	0.5	1	1.5	**0**
23. Crayfish	0	0.5	1	1.5	**0**
24. Amphibians	0	0.5	1	1.5	**0**
25. Algae	0	0.5	1	1.5	**0.5**
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5; Other = 0				**0**

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Stream S1-PER is a perennial stream that originates at a grade change below stream S1-INT and flows north, eventually flowing into stream S2-PER. Stream S1-PER has strong baseflow and high, incised banks, with evidence of increased sediment deposition and sloughing banks. Small amounts of algae were present throughout the observed reach, with no other biology observed at the time of data collection. Sand and gravel substrate were observed within the S1-PER reach, with bedrock observed at the origin.

North Carolina Division of Water Quality - Stream Identification Form, Version 4.11

Date:	1/10/2023	Project/Site:	6181 US Highway 15-501 Site/Stream S2-PER	Latitude:	35.790894
Evaluator:	E. Radford, WPIT & C.Vinter (Kimley-Horn)	County:	Chatham County	Longitude:	-79.119521
Total Points: 36 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30		Stream Determination (circle one) Ephemeral Intermittent Perennial		Other e.g. Quad Name:	Farrington

A. Geomorphology Subtotal = 20	Absent	Weak	Moderate	Strong	Score
1[a]. Continuity of channel bed and bank	0	1	2	3	**3**
2. Sinuosity of channel along thalweg	0	1	2	3	**2**
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	**3**
4. Particle size of stream substrate	0	1	2	3	**2**
5. Active/relic floodplain	0	1	2	3	**2**
6. Depositional bars or benches	0	1	2	3	**2**
7. Recent alluvial deposits	0	1	2	3	**1**
8. Headcuts	0	1	2	3	**0**
9. Grade control	0	0.5	1	1.5	**0.5**
10. Natural valley	0	0.5	1	1.5	**1.5**
11. Second or greater order channel	No = 0		Yes = 3		**3**

B. Hydrology Subtotal = 10					
12. Presence of Baseflow	0	1	2	3	**3**
13. Iron oxidizing bacteria	0	1	2	3	**1**
14. Leaf litter	1.5	1	0.5	0	**1**
15. Sediment on plants or debris	0	0.5	1	1.5	**1**
16. Organic debris lines or piles	0	0.5	1	1.5	**1**
17. Soil-based evidence of high water table?	No = 0		Yes = 3		**3**

C. Biology Subtotal = 6					
18. Fibrous roots in streambed	3	2	1	0	**2**
19. Rooted upland plants in streambed	3	2	1	0	**3**
20. Macrobenthos (note diversity and abundance)	0	1	2	3	**0**
21. Aquatic Mollusks	0	1	2	3	**0**
22. Fish	0	0.5	1	1.5	**0**
23. Crayfish	0	0.5	1	1.5	**0**
24. Amphibians	0	0.5	1	1.5	**0**
25. Algae	0	0.5	1	1.5	**1**
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5; Other = 0				**0**

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Stream S2-PER is a perennial stream that originates offsite and flows east along the northern boundary of the study area where it continues offsite. Stream S2-PER has strong baseflow and high, incised banks. Moderate amounts of algae were present throughout the observed reach, with no other biology observed at the time of data collection. Sand, Cobble, Gravel, and Sandstone substrate were observed throughout the S2-PER reach.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 6181 US Highway 15-501 Site City/County: Chatham County Sampling Date: 01/10/2023
Applicant/Owner: Prestige Construction & Land Development, LLC State: NC Sampling Point: W1/W2-UP
Investigator(s): E. Radford, WPIT & C.Vinter (Kimley-Horn) Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5-10%
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 35.7879349 Long: -79.1211474 Datum: NAD83
Soil Map Unit Name: WeC - Wedowee sandy loam NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
A representative upland data point for wetlands W1 and W2 was taken on a hillslope approximately 10 feet from and 5 feet higher than wetland W1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary or secondary wetland hydrology indicators were observed.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W1/W2-UP

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	20	Yes	FAC
2. *Acer rubrum*	20	Yes	FAC
3. *Liriodendron tulipifera*	15	Yes	FACU
4. *Quercus rubra*	5	No	FACU
5.			
6.			
7.			
	60	=Total Cover	
50% of total cover: 30	20% of total cover: 12		

Sapling/Shrub Stratum (Plot size: 30)			
1. *Acer rubrum*	20	Yes	FAC
2. *Clethra alnifolia*	15	Yes	FAC
3. *Liquidambar styraciflua*	15	Yes	FAC
4. *Prunus serotina*	10	No	FACU
5. *Ilex opaca*	5	No	FACU
6.			
7.			
8.			
9.			
	65	=Total Cover	
50% of total cover: 33	20% of total cover: 13		

Herb Stratum (Plot size: 30)			
1. *Asarum canadense*	5	Yes	FACU
2. *Chasmanthium latifolium*	5	Yes	FACU
3. *Polystichum acrostichoides*	5	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	15	=Total Cover	
50% of total cover: 8	20% of total cover: 3		

Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	5	Yes	FAC
2. *Gelsemium sempervirens*	5	Yes	FAC
3.			
4.			
5.			
	10	=Total Cover	
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	150 (A)		500 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1/W2-UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/3	100					Loamy/Clayey	
2-24	10YR 4/4	100					Loamy/Clayey	some gravel observed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

No surface water, saturation, or water table were observed within 24 inches of the soil surface.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 6181 US Highway 15-501 Site City/County: Chatham County Sampling Date: 01/10/2023
Applicant/Owner: Prestige Construction & Land Development, LLC State: NC Sampling Point: W1/W2-WET
Investigator(s): E. Radford, WPIT & C.Vinter (Kimley-Horn) Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Headwater Local relief (concave, convex, none): Concave Slope (%): 0-5%
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 35.7906146 Long: -79.1199713 Datum: NAD83
Soil Map Unit Name: WeC - Wedowee sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
Wetlands W1 and W2 are headwater wetlands. A representative wetland data point for wetlands W1 and W2 was taken within wetland W1. Wetland W1 originates offsite above stream S1 and channelizes into stream S1-EPH.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation was observed at the soil surface and water table was observed at 1 inch below the soil surface. Surface water was observed ponded throughout wetland W1, however was not located at the wetland data point. Multiple drainage patterns were observed throughout wetland W1.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W1/W2-WET

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	25	Yes	FAC
2. *Ulmus americana*	20	Yes	FACW
3. *Platanus occidentalis*	10	No	FACW
4. *Liquidambar styraciflua*	5	No	FAC
5.			
6.			
7.			
	60	=Total Cover	
50% of total cover: 30	20% of total cover: 12		

Sapling/Shrub Stratum (Plot size: 30)			
1. *Acer rubrum*	30	Yes	FAC
2. *Ligustrum sinense*	20	Yes	FACU
3. *Ilex opaca*	10	No	FACU
4. *Liquidambar styraciflua*	10	No	FAC
5.			
6.			
7.			
8.			
9.			
	70	=Total Cover	
50% of total cover: 35	20% of total cover: 14		

Herb Stratum (Plot size: 30)			
1. *Chasmanthium laxum*	20	Yes	FAC
2. *Juncus effusus*	20	Yes	FACW
3. *Microstegium vimineum*	20	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60	=Total Cover	
50% of total cover: 30	20% of total cover: 12		

Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	25	Yes	FAC
2. *Vitis rotundifolia*	10	Yes	FAC
3.			
4.			
5.			
	35	=Total Cover	
50% of total cover: 18	20% of total cover: 7		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	145	x 3 =	435
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	225 (A)		655 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1/W2-WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					Loamy/Clayey	
3-12	10YR 4/2	85	5YR 4/6	15	C	M	Loamy/Clayey	Prominent redox concentrations
12-24	2.5Y 5/2	85	5YR 4/6	15	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Saturation was observed at the soil surface and water table was observed at 1 inch below the soil surface. Surface water was observed ponded throughout wetland W1.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 6181 US Highway 15-501 Site City/County: Chatham County Sampling Date: 01/10/2023

Applicant/Owner: Prestige Construction & Land Development, LLC State: NC Sampling Point: W3/W4/W5-UP

Investigator(s): E. Radford, WPIT & C.Vinter (Kimley-Horn) Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10%

Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 35.7904373 Long: -79.1198900 Datum: NAD83

Soil Map Unit Name: WeC - Wedowee sandy loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
A representative upland data point for wetlands W3, W4, and W5 was taken on an adjacent hillslope approximately 30 feet from and 4 feet higher in elevation than wetland W4.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary or secondary wetland hydrology indicators were observed.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W3/W4/W5-UP

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	30	Yes	FACU
2. *Acer rubrum*	10	Yes	FAC
3. *Liriodendron tulipifera*	10	Yes	FACU
4. *Liquidambar styraciflua*	10	Yes	FAC
5. *Prunus serotina*	5	No	FACU
6.			
7.			
	65	=Total Cover	
50% of total cover: 33	20% of total cover: 13		

Sapling/Shrub Stratum (Plot size: 30)			
1. *Quercus rubra*	20	Yes	FACU
2. *Juniperus virginiana*	15	Yes	FACU
3. *Liquidambar styraciflua*	10	Yes	FAC
4. *Ilex opaca*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
	50	=Total Cover	
50% of total cover: 25	20% of total cover: 10		

Herb Stratum (Plot size: 30)			
1. *Polystichum acrostichoides*	15	Yes	FACU
2. *Chasmanthium latifolium*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	=Total Cover	
50% of total cover: 10	20% of total cover: 4		

Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	10	Yes	FAC
2. *Gelsemium sempervirens*	5	Yes	FAC
3.			
4.			
5.			
	15	=Total Cover	
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 45.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	105	x 4 =	420
UPL species	0	x 5 =	0
Column Totals:	150 (A)		555 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W3/W4/W5-UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/3	100					Loamy/Clayey	
4-10	10YR 3/3	100					Loamy/Clayey	
10-24	7.5YR 4/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

No surface water, saturation, or water table were observed within 24 inches of the soil surface.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 6181 US Highway 15-501 Site City/County: Chatham County Sampling Date: 01/10/2023
Applicant/Owner: Prestige Construction & Land Development, LLC State: NC Sampling Point: W3/W4/W5-WET
Investigator(s): E. Radford, WPIT & C.Vinter (Kimley-Horn) Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-5%
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 35.7906146 Long: -79.1199713 Datum: NAD83
Soil Map Unit Name: WeC - Wedowee sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
Wetlands W3, W4, and W5 are wetlands located within the floodplain of stream S1 and stream S2. A representative wetland data point for wetlands W3, W4, and W5 was taken within wetland W4.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 7
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 3

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation was observed at 3 inches below the soil surface and water table was observed at 7 inches below the soil surface. Surface water was not observed at the data point; however, ponding was observed elsewhere within wetland W4. Wetland W4 recieves hydrologic input from groundwater interface and overbank flooding of streams S1 and S2.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W3/W4/W5-WET

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	25	Yes	FACU
2. *Acer rubrum*	20	Yes	FAC
3. *Liquidambar styraciflua*	20	Yes	FAC
4.			
5.			
6.			
7.			
	65	=Total Cover	
50% of total cover: 33	20% of total cover: 13		
Sapling/Shrub Stratum (Plot size: 30)			
1. *Lindera benzoin*	60	Yes	FAC
2. *Acer rubrum*	15	No	FAC
3. *Ilex opaca*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	80	=Total Cover	
50% of total cover: 40	20% of total cover: 16		
Herb Stratum (Plot size: 30)			
1. *Microstegium vimineum*	50	Yes	FAC
2. *Polystichum acrostichoides*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80	=Total Cover	
50% of total cover: 40	20% of total cover: 16		
Woody Vine Stratum (Plot size: 30)			
1. *Gelsemium sempervirens*	15	Yes	FAC
2. *Smilax rotundifolia*	15	Yes	FAC
3.			
4.			
5.			
	30	=Total Cover	
50% of total cover: 15	20% of total cover: 6		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	195	x 3 =	585
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	255 (A)		825 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W3/W4/W5-WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	100					Loamy/Clayey	
6-16	10YR 6/2	60	5YR 4/4	40	C	M	Loamy/Clayey	Prominent redox concentrations
16-24	2.5Y 6/2	60	5YR 4/6	40	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

Saturation was observed at 3 inches below the soil surface and water table was observed at 7 inches below the soil surface. Surface water was not observed at the data point; however, ponding was observed elsewhere within wetland W4.

County of Chatham, NC

02/09/2023

WP-23-41

On-site Riparian Buffer Review

Status: Active

Date Created: Jan 23, 2023

Applicant

Emma Radford
emma.radford@kimley-horn.com
421 Fayetteville Street
Suite 600
Raleigh, NC 27601
9196772215

Primary Location

0 VACANT
North Carolina 00000

Owner:

PRESTIGE CONSTRUCTION & LAND DEVELOPMENT LLC
1804 STEADFAST RD HILLSBOROUGH , NC 27278

Project Information

Review Type

Major Subdivision

Before continuing please complete a phone or email conversation with Paula Phillips of the Planning Department. (919) 542-8276 paula.phillips@chathamcountync.gov

If your project will result in a review of greater than 10 acres please contact a private consulting firm to complete the surface water determination. For stream determinations the consultant must have successfully completed the NCDWQ/NC State University Surface Waters Classification. For wetland delineations the consultant must demonstrate at least 2 years of experience delineating jurisdictional wetlands in accordance with the Eastern Mountains and Piedmont Regional Supplement to the 1987 US Corps of Engineers Wetland Delineation Manual. Please visit the Watershed Protection Department website for a list of consultants that regularly complete work within Chatham County.

If your project is a Major Subdivision please contact a private consulting firm to complete the surface water determination. For stream determinations the consultant must have successfully completed the NCDWQ/NC State University Surface Waters Classification. For wetland delineations the consultant must demonstrate at least 2 years of experience delineating jurisdictional wetlands in accordance with the Eastern Mountains and Piedmont Regional Supplement to the 1987 US Corps of Engineers Wetland Delineation Manual. Please visit the Watershed Protection Department website for a list of consultants that regularly complete work within Chatham County.

Number of Features Found

7

Feature is defined as any surface water that is subject to Chatham County Riparian Buffers (streams, wetlands, ponds). Include each stream type transition, with corresponding forms, and individual wetland in your total. Total is total features found before USACE or County site visit.

Date Field Work Was Completed

01/10/2023

Has USACE on-site review been scheduled or completed

--

A Minor Subdivision is the creation of 5 or less new lots. If the original tract is over 10 acres and the subdivision results in the total of that tract becoming

less than 10 acres then two lots have been created by default.

Parcel Information

Parcel Number (s)
976400411735

Watershed District
WS-IV PA

Is the property within the Jordan Lake Watershed
Yes

Property Owner Name
PRESTIGE CONSTRUCTION & LAND DEVELOPMENT LLC

Location of Tract (address if applicable)
6181 US 15 501 N

Driving Directions from Pittsboro
From Raleigh, Take I-40 W and US-1 S/US-64 W to Mt Gilead Church Rd in Chatham County. Turn right onto Mt Gilead Church Rd, continue for 4.3 miles. Turn left onto US-15 S/US-501 S, continue for 1.2 miles. Turn right onto Lanes Legacy and destination will be on the left.

Subdivision Name (if applicable)
--

Please describe access issues (provide gate codes, or information for scheduling site visit)
N/A, dirt pull off of US-15-501 to park and access Site.

Applicants Information

Are you the Landowner or an Agent
Agent

Full Name
Emma Radford, WPIT, CA

Primary Phone Number
9196772215

Primary Email
emma.radford@kimley-horn.com

Mailing Address
421 Fayetteville Street, Suite 600

City/State
Raleigh, NC

Zip Code
27601

How would you like to receive the completed review letter?

I would like to pick up the completed Riparian Buffer Review at the County Office
☐

I would like the completed Riparian Buffer Review mailed to me
☐

I would like the completed Riparian Buffer Review e-mailed to me.
☑

Statement of Understanding

I have read and understand the regulations of the Watershed Protection Ordinance, Section 304, and I agree to adhere to these associated policies and guidelines.

Name
Emma Radford, WPIT, CA

New Field
01/23/2023

Attachments

pdf

03_OwnerForm_SIGNED_15505_Chatham_BufferDet_Form 4 (6).pdf
Uploaded by Emma Radford on Jan 23, 2023 at 9:51 am

pdf AGentForm_15505_Chatham_BufferDet_Form 3.pdf
Uploaded by Emma Radford on Jan 19, 2023 at 10:59 am

pdf Fig1_15501Site_Vicinity_MAP.pdf
Uploaded by Emma Radford on Jan 23, 2023 at 2:43 pm

pdf Fig3_15501Site_JDFeatures.pdf
Uploaded by Emma Radford on Jan 19, 2023 at 10:51 am

pdf 06_15501_DataForms.pdf
Uploaded by Emma Radford on Jan 19, 2023 at 10:51 am

pdf Fig4_15501Site_NRCS_MAP.pdf
Uploaded by Emma Radford on Jan 19, 2023 at 10:51 am

pdf Fig2_15501Site_USGS_MAP.pdf
Uploaded by Emma Radford on Jan 19, 2023 at 10:51 am

pdf 04_15501_SignedAgentAuth Form.pdf
Uploaded by Emma Radford on Jan 19, 2023 at 10:52 am

pdf SWITC_Certification_EAR.pdf
Uploaded by Emma Radford on Jan 23, 2023 at 9:55 am

History

Date	Activity
Jan 19, 2023 at 10:32 am	Emma Radford started a draft of Record WP-23-41
Jan 19, 2023 at 10:42 am	Emma Radford altered Record WP-23-41, changed ownerPhoneNo from "" to "9194275396"
Jan 19, 2023 at 10:51 am	Emma Radford added attachment Fig1_15501Site_Vicinity_MAP.pdf to Record WP-23-41
Jan 19, 2023 at 10:52 am	Emma Radford added attachment 04_15501_SignedAgentAuth Form.pdf to Record WP-23-41
Jan 23, 2023 at 9:55 am	Emma Radford added attachment SWITC_Certification_EAR.pdf to Record WP-23-41
Jan 23, 2023 at 2:43 pm	Emma Radford removed attachment Fig1_15501Site_Vicinity_MAP.pdf from Record WP-23-41
Jan 23, 2023 at 2:45 pm	Emma Radford submitted Record WP-23-41
Jan 23, 2023 at 2:45 pm	approval step Intake Approvalwas assigned to Drew Blake on Record WP-23-41
Jan 30, 2023 at 9:55 am	Drew Blake approved approval step Intake Approval on Record WP-23-41
Feb 1, 2023 at 12:32 pm	completed payment step Major Subdivision Riparian Buffer Review Fee on Record WP-23-41
Feb 1, 2023 at 12:32 pm	approval step Field Reviewwas assigned to Drew Blake on Record WP-23-41
Feb 1, 2023 at 12:32 pm	changed the deadline to Feb 15, 2023 on approval step Field Review on Record WP-23-41

Timeline

Label	Status	Activated	Completed	Assignee	Due Date
Intake Approval	Complete	Jan 23, 2023 at 2:45 pm	Jan 30, 2023 at 9:55 am	Drew Blake	-
Major Subdivision Riparian Buffer Review Fee	Paid	Jan 30, 2023 at 9:55 am	Feb 1, 2023 at 12:32 pm	-	-
Field Review	Active	Feb 1, 2023 at 12:32 pm	-	Drew Blake	02/15/2023
Major Subdivision Riparian Buffer Confirmation Report	Inactive	-	-	-	-

CHATHAM COUNTY

AUTHORIZED AGENT FOR FORM

PROPERTY LEGAL DESCRIPTION:

LOT NO. 0002949 PARCEL ID (PIN) 976400411735 PARCEL SIZE 15.03 acres

STREET ADDRESS: 6181 US Highway 15-501 N

Pittsboro, NC 27312

Please print:
Property Owner: Prestige Construction & Land Development, LLC; ATTN: Gilberto Lopez Ponce

Property Owner: _____

The undersigned owner(s) of the above described property, do hereby authorize

Emma Radford, WPIT, CA (Contractor / Agent), of Kimley-Horn (Name of consulting firm if applicable)

to act on my/our behalf and take all actions, I/we could have taken if present, necessary for the processing, issuance and acceptance of reviews, inspections, or permits and any and all standard and special conditions attached to these approvals. The activities authorized include the following (**Check all that apply**):

☑ **Check here for all of the below options.**

☐ Building Permit
☐ Zoning Compliance Permits
☐ Floodplain Determination
☐ Soil Erosion & Sedimentation Control Permit
☐ Permits to install, repair, evaluate, or expand onsite wastewater system(s)
☐ Evaluation/inspection/permitting of a private drinking water well(s).
☑ Riparian Buffer Review pursuant to §304 of the Chatham Co. Watershed Protection Ordinance.
☐ Other: _____

Property Owner's Address (if different than property above):
1804 Steadfast Rd, Hillsborough, NC 27278

Telephone: (919) 427-5396 E-mail: lopezponcegilberto@yahoo.com

We hereby certify the above information submitted in this application is true and accurate to the best of our knowledge.

_____
Owner Authorized Signature

Date: _____

Emma Radford
_____
Agent Authorized Signature

Date: 01/18/2023

CHATHAM COUNTY
NORTH CAROLINA

Watershed Protection Department

P.O. Box 548
Pittsboro, NC 27312

Website: www.chathamnc.org

Authorization to Enter Property Form

Date:_____

PARCEL No. (AKPAR) 0002949

I, (print name) Prestige Construction & Land Development, LLC, as owner of the property described above, or as a representative of the owner(s) do hereby convey permission to Chatham County staff to enter the property at their convenience to conduct a surface water identification (SWID) necessary to determine whether or not water features on my property are subject to the riparian buffer regulations described in Section 304 of the Chatham County Watershed Protection Ordinance. The SWID will be public record and on file at the Planning and Watershed Protection Departments, and may be requested in the future for review by interested parties.

I understand that stream delineations for the property listed above will be made by County staff only once and that if future subdivisions are proposed within this property boundary, it will require a surface water identification by a private consultant at the property owner's expense.

Gilberto Lopez Ponce
(Print Owner's Name)

DocuSigned by:
Gilberto Lopez Ponce
067894C3D5DD42A...
(Signature of Owner)

January 19, 2023
(Date)

Emma Radford, WPIT, CA
(Print Authorized Agent Name)

Emma Radford
(Signature of Authorized Agent)

01/19/2023
(Date)