ASHBROOK ESTATES
CRAWFORD TOWNSHIP, CURRITUCK COUNTY, NORTH CAROLINA

DRAINAGE NARRATIVE

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PREPARED BY:

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Drainage Narrative – Ashbrook Estates

Ashbrook Estates is a proposed residential subdivision containing 52 lots around an acre each. The site is currently vacant agricultural land and wooded wetlands. The overall tract is 130.73 acres and contains 22.8 acres of wooded wetlands.

The site is bounded by Maple Road on the east, some residential property to the north and woods to the west and south. The site will be served by public water and sanitary sewer will be provided by individual on-site septic systems. Construction activities for development of the subdivision will include roadway construction with sidewalks, a watermain extension, and construction of an on-site drainage network.

The existing site topography falls from elevation 12 along the eastern border near the road to elevation 2 along the wetlands on the western border. Runoff is collected in field ditches that run from south to north and discharge into the wetlands at multiple points.

Impervious coverage for the project will include 89,979 sf of roadway, 39,240 sf of concrete sidewalk, 5,000 sf of future coverage and 8,000 sf of allowable coverage per lot. The resulting impervious area is 550,219 sf or 9.66% of the 130.73 acres being subdivided.

Drainage within the subdivision has been designed to comply with Currituck County and NCDEQ development standards. Swales along lot lines will be constructed with 4:1 side slopes, collector ditches along the back of lots will have 5:1 side slopes and the roadside ditches will have 3:1 side slopes. The use of stormwater pipes has been limited to locations where it is necessary to convey runoff under the road or sidewalk.

The Currituck County Drainage Manual requires residential development to limit its post-development runoff during the 10-year storm to the pre-development wooded site during the 2-year storm; however, as this project drains directly into a large wetland area, additional discharge is being permitted but managed to not cause erosive discharge into the wetlands.

The runoff from the development will be routed to the collector ditch and discharge into one of the existing field ditches that connects to the wetlands. The portion of the existing ditch conveying the runoff from the subdivision has a maximum flow of 3.80 cfs and a maximum velocity of 2.22 fps during the 10-year storm so we don’t believe it will negatively impact the wetlands at the discharge point. A subcatchment of the on-site wetlands was added to the PCSWMM models to better represent the overland flow through the wetlands before leaving the site. Overall, the peak runoff leaving the on-site wetlands is 0.82 cfs during the 2-year storm under wooded conditions and 16.76 cfs during the 10-year storm under post-development conditions. This provides a 0.01 ft rise in water surface elevation at the discharge point. The rise in water surface elevation was analyzed at junction SU-WTL which represents the storage for onsite wetland area. Storage curves in the models were calculated using stage storage based on topographic survey and LIDAR.

The disturbed area for the entire project will not exceed 64.9 acres. The disturbed area will drain into a sediment basin. Other erosion control measures include silt fence, a gravel construction entrance, and stone check dams. While the velocity discharging from the main collector ditch at the culvert is only 3.8 cfs at 2.22 fps, a rip rap apron has been provided for protection of the downstream channel. The size of the apron is based on the pipe diameter and not the flow due to the low flow value.

Appendix A

Stormwater & Erosion Control Calculations

- Curve Number Tables
  - Pre-Development
  - Post-Development
  - Post-Development Bare Earth
- Stage Storage Tables
  - Pre-Development
  - Post-Development
- PCSWMM Results
  - Pre-Development Layout
  - Pre-Development Results (2 yr Storm as wooded)
  - Post-Development Layout
  - Post-Development Results (10 yr Storm)
  - Post-Development Results (10 yr Storm – Bare Earth)
- Sediment Basin Calculations
- Rip-rap apron sizing

Area CN Computations

Stormwater Drainage Analysis
Pre-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S1

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	13,793	0.32	**13,793**	**0.32**	31.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	1,053,354	24.18			725.5
	B	55			**1,249,163**	**28.68**	
	C	70	195,809	4.50			314.7
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product / Total Area (AC) = 1040.11 / 28.68 = **36**

Area (SF)	Area (AC)
1,262,956	28.99

Initial Abstraction (Dstore Perv) =	3.51

Percent Impervious	1.09

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Pre-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	1,917,249	44.01			1320.4
	B	55	667,027	15.31	**2,584,276**	**59.33**	842.2
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{2162.63}{59.33} =$ **36**

Area (SF)	Area (AC)
2,584,276	59.33

Initial Abstraction (Dstore Perv) =	3.49

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Pre-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S3

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	425,869	9.78	1,046,916	24.03	293.3
	B	55	499,695	11.47			630.9
	C	70					
	D	77	121,352	2.79			214.5
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{1138.74}{24.03} =$ **47**

Area (SF)	Area (AC)
1,046,916	24.03

Initial Abstraction (Dstore Perv) =	2.22

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Pre-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S4

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	152,950	3.51	**152,950**	**3.51**	344.1
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	611,801	14.05	**611,801**	**14.05**	547.8
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product 547.76 / Total Area (AC) 14.05 = **39**

Area (SF)	Area (AC)
764,751	17.56

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	20.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S1

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	19,293	0.44	**19,293**	**0.44**	43.4
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67	434,248	9.97	**447,965**	**10.28**	667.9
	B	78	13,717	0.31			24.6
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{692.48}{10.28} =$ **67**

Area (SF)	Area (AC)
467,258	10.73

Initial Abstraction (Dstore Perv) =	0.97

Percent Impervious	4.13

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2A

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	9,456	0.22	**9,456**	**0.22**	21.3
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	21,603	0.50	**21,743**	**0.50**	19.3
	B	61					
	C	74	140	0.00			0.2
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{19.58}{0.50} =$ **39**

Area (SF)	Area (AC)
31,199	0.72

Initial Abstraction (Dstore Perv) =	3.10

Percent Impervious	30.31

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2B

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	10,132	0.23	**10,132**	**0.23**	22.8
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	14,554	0.33	**14,554**	**0.33**	13.0
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{13.03}{0.33} =$ **39**

Area (SF)	Area (AC)
24,686	0.57

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	41.04

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2C

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	10,603	0.24	**10,603**	**0.24**	23.9
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	15,518	0.36	**15,518**	**0.36**	13.9
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{13.89}{0.36} =$ **39**

Area (SF)	Area (AC)
26,121	0.60

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	40.59

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2D

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	16,000	0.37	**16,000**	**0.37**	36.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	46,013	1.06	**89,131**	**2.05**	41.2
	B	61					
	C	74	43,118	0.99			73.2
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{114.45}{2.05} =$ **56**

Area (SF)	Area (AC)
105,131	2.41

Initial Abstraction (Dstore Perv) =	1.58

Percent Impervious	15.22

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2E

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	40,000	0.92	**40,000**	**0.92**	90.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	7,952	0.18	**31,342**	**0.72**	5.5
	B	55					
	C	70	23,390	0.54			37.6
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	160,706	3.69	**268,099**	**6.15**	143.9
	B	61					
	C	74	107,393	2.47			182.4
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{369.39}{6.87} =$ **54**

Area (SF)	Area (AC)
339,441	7.79

Initial Abstraction (Dstore Perv) =	1.72

Percent Impervious	11.78

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2F

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	40,000	0.92	**40,000**	**0.92**	90.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	14,553	0.33	**14,553**	**0.33**	10.0
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	182,810	4.20	**182,810**	**4.20**	163.7
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product 173.70 / Total Area (AC) 4.53 = **38**

Area (SF)	Area (AC)
237,363	5.45

Initial Abstraction (Dstore Perv) = 3.22

Percent Impervious	16.85

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2G

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	9,557	0.22	**9,557**	**0.22**	21.5
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	13,702	0.31	**13,702**	**0.31**	12.3
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product / Total Area (AC) = 12.27 / 0.31 = **39**

Area (SF)	Area (AC)
23,259	0.53

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	41.09

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2H

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	9,825	0.23	**9,825**	**0.23**	22.1
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	14,028	0.32	**14,028**	**0.32**	12.6
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{12.56}{0.32} =$ **39**

Area (SF)	Area (AC)
23,853	0.55

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	41.19

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2I

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	28,000	0.64	**28,000**	**0.64**	63.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	14,541	0.33	**43,033**	**0.99**	10.0
	B	55	28,492	0.65			36.0
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	82,066	1.88	**182,121**	**4.18**	73.5
	B	61	100,055	2.30			140.1
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{259.58}{5.17} =$ **50**

Area (SF)	Area (AC)
253,154	5.81

Initial Abstraction (Dstore Perv) =	1.98

Percent Impervious	11.06

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2J

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	20,983	0.48	**20,983**	**0.48**	47.2
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	4,327	0.10	**22,666**	**0.52**	3.9
	B	61	18,339	0.42			25.7
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{29.56}{0.52} =$ **57**

Area (SF)	Area (AC)
43,649	1.00

Initial Abstraction (Dstore Perv) =	1.52

Percent Impervious	48.07

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2K

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	36,000	0.83	**36,000**	**0.83**	81.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	18,336	0.42	**141,566**	**3.25**	16.4
	B	61	123,230	2.83			172.6
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product 188.98 / Total Area (AC) 3.25 = **58**

Area (SF)	Area (AC)
177,566	4.08

Initial Abstraction (Dstore Perv) =	1.44

Percent Impervious	20.27

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2L

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	40,000	0.92	**40,000**	**0.92**	90.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	137,722	3.16	**177,832**	**4.08**	123.3
	B	61	40,110	0.92			56.2
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{179.47}{4.08} =$ **44**

Area (SF)	Area (AC)
217,832	5.00

Initial Abstraction (Dstore Perv) =	2.55

Percent Impervious	18.36

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2M

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	56,000	1.29	**56,000**	**1.29**	126.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	208,500	4.79	**208,500**	**4.79**	186.7
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product / Total Area (AC) = 186.67 / 4.79 = **39**

Area (SF)	Area (AC)
264,500	6.07

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	21.17

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2N

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	24,000	0.55	**24,000**	**0.55**	54.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	93,042	2.14	**93,042**	**2.14**	83.3
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{83.30}{2.14} =$ **39**

Area (SF)	Area (AC)
117,042	2.69

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	20.51

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2O

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	24,000	0.55	**24,000**	**0.55**	54.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	94,034	2.16	**94,034**	**2.16**	84.2
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{84.19}{2.16} =$ **39**

Area (SF)	Area (AC)
118,034	2.71

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	20.33

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2P

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	25,392	0.58	**25,392**	**0.58**	57.1
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	36,044	0.83	**36,044**	**0.83**	32.3
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{32.27}{0.83} =$ **39**

Area (SF)	Area (AC)
61,436	1.41

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	41.33

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2Q

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	32,716	0.75	**32,716**	**0.75**	73.6
Streets & Roads	A	83					
Paved; open ditches (w/	B	89					
right-of-way)	C	92					
	D	93					
Residential District	A	51					
1-acre average lot size	B	68					
	C	79					
	D	84					
Woods	A	30					
(Assume Good Condition)	B	55					
	C	70					
	D	77					
Row Crop	A	67					
Straight Row - good	B	78					
condition[2]	C	85					
	D	89					
Open Space	A	39	47,182	1.08			42.2
(Assume Good Condition)	B	61			**47,182**	**1.08**	
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{42.24}{1.08} =$ **39**

Area (SF)	Area (AC)
79,898	1.83

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	40.95

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2R

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	36,000	0.83	**36,000**	**0.83**	81.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	132,734	3.05	**132,734**	**3.05**	118.8
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{118.84}{3.05} =$ **39**

Area (SF)	Area (AC)
168,734	3.87

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	21.34

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2S

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	40,000	0.92	**40,000**	**0.92**	90.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	136,290	3.13	**136,290**	**3.13**	122.0
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{122.02}{3.13} =$ **39**

Area (SF)	Area (AC)
176,290	4.05

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	22.69

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2T

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	32,000	0.73	**32,000**	**0.73**	72.0
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	192,782	4.43			172.6
	B	61			**192,782**	**4.43**	
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{172.60}{4.43} =$ **39**

Area (SF)	Area (AC)
224,782	5.16

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	14.24

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2U

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67	277,990	6.38	**277,990**	**6.38**	427.6
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product 427.58 / Total Area (AC) 6.38 = **67**

Area (SF)	Area (AC)
277,990	6.38

Initial Abstraction (Dstore Perv) =	0.99

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S3

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55	27,306	0.63	**54,886**	**1.26**	34.5
	C	70					
	D	77	27,580	0.63			48.8
Row Crop Straight Row - good condition[2]	A	67	530,735	12.18			816.3
	B	78	755,520	17.34	**1,380,026**	**31.68**	1352.9
	C	85					
	D	89	93,771	2.15			191.6
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{2444.01}{32.94} =$ **74**

Area (SF)	Area (AC)
1,434,912	32.94

Initial Abstraction (Dstore Perv) =	0.70

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S4

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	152,950	3.51	**152,950**	**3.51**	344.1
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	611,801	14.05	**611,801**	**14.05**	547.8
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product 547.76 / Total Area (AC) 14.05 = **39**

Area (SF)	Area (AC)
764,751	17.56

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	20.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # WTL

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	207,706	4.77	992,921	22.79	143.0
	B	55	114,566	2.63			144.7
	C	70					
	D	77	670,649	15.40			1185.5
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{1473.19}{22.79} =$ **65**

Area (SF)	Area (AC)
992,921	22.79

Initial Abstraction (Dstore Perv) =	1.09

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S1

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	19,293	0.44	**19,293**	**0.44**	43.4
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67	434,248	9.97	**447,965**	**10.28**	667.9
	B	78	13,717	0.31			24.6
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77					
	B	86					
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{692.48}{10.28} =$ **67**

Area (SF)	Area (AC)
467,258	10.73

Initial Abstraction (Dstore Perv) =	0.97

Percent Impervious	4.13

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2A

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	31,068	0.71	31,208	0.72	54.9
	B	86					
	C	91	140	0.00			0.3
	D	94					

Weighted Pervious CN = Total Product 55.21 / Total Area (AC) 0.72 = **77**

Area (SF)	Area (AC)
31,208	0.72

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2B

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	24,686	0.57			43.6
	B	86			24,686	0.57	
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{43.64}{0.57} =$ **77**

Area (SF)	Area (AC)
24,686	0.57

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2C

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	26,121	0.60			46.2
	B	86			26,121	0.60	
	C	91					
	D	94					

Weighted Pervious CN = Total Product 46.17 / Total Area (AC) 0.60 = **77**

Area (SF)	Area (AC)
26,121	0.60

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2D

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	54,013	1.24	**105,131**	**2.41**	95.5
	B	86					
	C	91	51,118	1.17			106.8
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{202.27}{2.41} =$ **84**

Area (SF)	Area (AC)
105,131	2.41

Initial Abstraction (Dstore Perv) =	0.39

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2E

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	7,952	0.18			5.5
	B	55			**31,342**	**0.72**	
	C	70	23,390	0.54			37.6
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	180,706	4.15			319.4
	B	86			**308,099**	**7.07**	
	C	91	127,393	2.92			266.1
	D	94					

Weighted Pervious CN = Total Product 628.63 / Total Area (AC) 7.79 = **81**

Area (SF)	Area (AC)
339,441	7.79

Initial Abstraction (Dstore Perv) =	0.48

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2F

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	14,553	0.33	**14,553**	**0.33**	10.0
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	222,810	5.12	**222,810**	**5.12**	393.9
	B	86					
	C	91					
	D	94					

Weighted Pervious CN = Total Product 403.88 / Total Area (AC) 5.45 = **74**

Area (SF)	Area (AC)
237,363	5.45

Initial Abstraction (Dstore Perv) =	0.70

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2G

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	23,259	0.53			41.1
	B	86			23,259	0.53	
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{41.11}{0.53} =$ **77**

Area (SF)	Area (AC)
23,259	0.53

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2H

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	23,853	0.55			42.2
	B	86			23,853	0.55	
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{42.16}{0.55} =$ **77**

Area (SF)	Area (AC)
23,853	0.55

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2I

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	14,541	0.33	**43,033**	**0.99**	10.0
	B	55	28,492	0.65			36.0
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	96,066	2.21	**210,121**	**4.82**	169.8
	B	86	114,055	2.62			225.2
	C	91					
	D	94					

Weighted Pervious CN = Total Product / Total Area (AC) = 440.98 / 5.81 = **76**

Area (SF)	Area (AC)
253,154	5.81

Initial Abstraction (Dstore Perv) =	0.64

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2J

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	4,327	0.10			7.6
	B	86	39,322	0.90	**43,649**	**1.00**	77.6
	C	91					
	D	94					

Weighted Pervious CN = Total Product / Total Area (AC) = 85.28 / 1.00 = **85**

Area (SF)	Area (AC)
43,649	1.00

Initial Abstraction (Dstore Perv) =	0.35

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2K

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	18,336	0.42	177,566	4.08	32.4
	B	86	159,230	3.66			314.4
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{346.78}{4.08} =$ **85**

Area (SF)	Area (AC)
177,566	4.08

Initial Abstraction (Dstore Perv) =	0.35

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2L

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	177,722	4.08	217,832	5.00	314.2
	B	86	40,110	0.92			79.2
	C	91					
	D	94					

Weighted Pervious CN = Total Product / Total Area (AC) = 393.34 / 5.00 = **79**

Area (SF)	Area (AC)
217,832	5.00

Initial Abstraction (Dstore Perv) =	0.54

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2M

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	264,500	6.07			467.6
	B	86			**264,500**	**6.07**	
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{467.55}{6.07} =$ **77**

Area (SF)	Area (AC)
264,500	6.07

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2N

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	117,042	2.69			206.9
	B	86			117,042	2.69	
	C	91					
	D	94					

Weighted Pervious CN = Total Product 206.89 / Total Area (AC) 2.69 = **77**

Area (SF)	Area (AC)
117,042	2.69

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2O

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	118,034	2.71			208.6
	B	86			118,034	2.71	
	C	91					
	D	94					

Weighted Pervious CN = Total Product 208.65 / Total Area (AC) 2.71 = **77**

Area (SF)	Area (AC)
118,034	2.71

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2P

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	61,436	1.41			108.6
	B	86			61,436	1.41	
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{108.60}{1.41} =$ **77**

Area (SF)	Area (AC)
61,436	1.41

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2Q

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	79,898	1.83	79,898	1.83	141.2
	B	86					
	C	91					
	D	94					

Weighted Pervious CN = Total Product / Total Area (AC) = 141.23 / 1.83 = **77**

Area (SF)	Area (AC)
79,898	1.83

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2R

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	168,734	3.87			298.3
	B	86			168,734	3.87	
	C	91					
	D	94					

Weighted Pervious CN = Total Product 298.27 / Total Area (AC) 3.87 = **77**

Area (SF)	Area (AC)
168,734	3.87

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2S

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	176,290	4.05			311.6
	B	86			176,290	4.05	
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{311.62}{4.05} =$ **77**

Area (SF)	Area (AC)
176,290	4.05

Initial Abstraction (Dstore Perv) =	0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2T

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77	224,782	5.16			397.3
	B	86			224,782	5.16	
	C	91					
	D	94					

Weighted Pervious CN = Total Product 397.34 / Total Area (AC) 5.16 = **77**

Area (SF)	Area (AC)
224,782	5.16

Initial Abstraction (Dstore Perv) = 0.60

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S2U

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67	277,990	6.38			427.6
	B	78			277,990	6.38	
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77					
	B	86					
	C	91					
	D	94					

Weighted Pervious CN = Total Product 427.58 / Total Area (AC) 6.38 = **67**

Area (SF)	Area (AC)
277,990	6.38

Initial Abstraction (Dstore Perv) =	0.99

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S3

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55	27,306	0.63	**54,886**	**1.26**	34.5
	C	70					
	D	77	27,580	0.63			48.8
Row Crop Straight Row - good condition[2]	A	67	530,735	12.18			816.3
	B	78	755,520	17.34	**1,380,026**	**31.68**	1352.9
	C	85					
	D	89	93,771	2.15			191.6
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Newly graded areas	A	77					
	B	86					
	C	91					
	D	94					

Weighted Pervious CN = $\frac{\text{Total Product}}{\text{Total Area (AC)}} = \frac{2444.01}{32.94} =$ **74**

Area (SF)	Area (AC)
1,434,912	32.94

Initial Abstraction (Dstore Perv) =	0.70

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # S4

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98	152,950	3.51	**152,950**	**3.51**	344.1
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30					
	B	55					
	C	70					
	D	77					
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39	611,801	14.05	**611,801**	**14.05**	547.8
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product 547.76 / Total Area (AC) 14.05 = **39**

Area (SF)	Area (AC)
764,751	17.56

Initial Abstraction (Dstore Perv) =	3.13

Percent Impervious	20.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Area CN Computations

Stormwater Drainage Analysis
Post-Development (Bare Earth)

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

Project Name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew
Checked by: Kim Hamby

Drainage Area # WTL

Cover Description	HSG	Curve Number, CN[1]	Area (SF)	Area (AC)	Total Area (SF)	Total Area (AC)	Area (AC) * CN
Asphalt, Concrete, Roofs	*All*	98					
Streets & Roads Paved; open ditches (w/ right-of-way)	A	83					
	B	89					
	C	92					
	D	93					
Residential District 1-acre average lot size	A	51					
	B	68					
	C	79					
	D	84					
Woods (Assume Good Condition)	A	30	207,706	4.77	992,921	22.79	143.0
	B	55	114,566	2.63			144.7
	C	70					
	D	77	670,649	15.40			1185.5
Row Crop Straight Row - good condition[2]	A	67					
	B	78					
	C	85					
	D	89					
Open Space (Assume Good Condition)	A	39					
	B	61					
	C	74					
	D	80					
Meadow - cont. grass	A	30					
	B	58					
	C	71					
	D	78					

Weighted Pervious CN = Total Product 1473.19 / Total Area (AC) 22.79 = **65**

Area (SF)	Area (AC)
992,921	22.79

Initial Abstraction (Dstore Perv) =	1.09

Percent Impervious	0.00

[1] CN values obtained from Tables 2-2a and 2-2c of the NRCS TR-55 Manual, rev. June 1986

Stage-storage Calculations for Storage Nodes

Stormwater Quantity Analysis
Pre-Development

Project name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew

Subcatchment # WTL

Rim (Top) Elevation:
Invert Elevation: **-0.52**

Depth measured from: **Top** (Top or Invert)

Elevation	Depth	Area (SF)	Area (AC)
-0.52	0.00	0	0.00
0	0.52	0	0.00
1	1.52	1730	0.04
2	2.52	507892	11.66
3	3.52	809685	18.59
4	4.52	939053	21.56
	0.52		0.00
	0.52		0.00
	0.52		0.00
	0.52		0.00

Stage-storage Calculations for Storage Nodes

Stormwater Quantity Analysis
Post-Development

Project name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew

Subcatchment # S3

Rim (Top) Elevation:
Invert Elevation: **-0.20**

Depth measured from: **Top** (Top or Invert)

Elevation	Depth	Area (SF)	Area (AC)
-0.2	0.00	0	0.00
0	0.20	378	0.01
1	1.20	8756	0.20
2	2.20	42040	0.97
3	3.20	334456	7.68
4	4.20	626600	14.38
5	5.20	1055990	24.24
6	6.20	1291275	29.64
	0.20		0.00
	0.20		0.00

Stage-storage Calculations for Storage Nodes

Stormwater Quantity Analysis
Post-Development

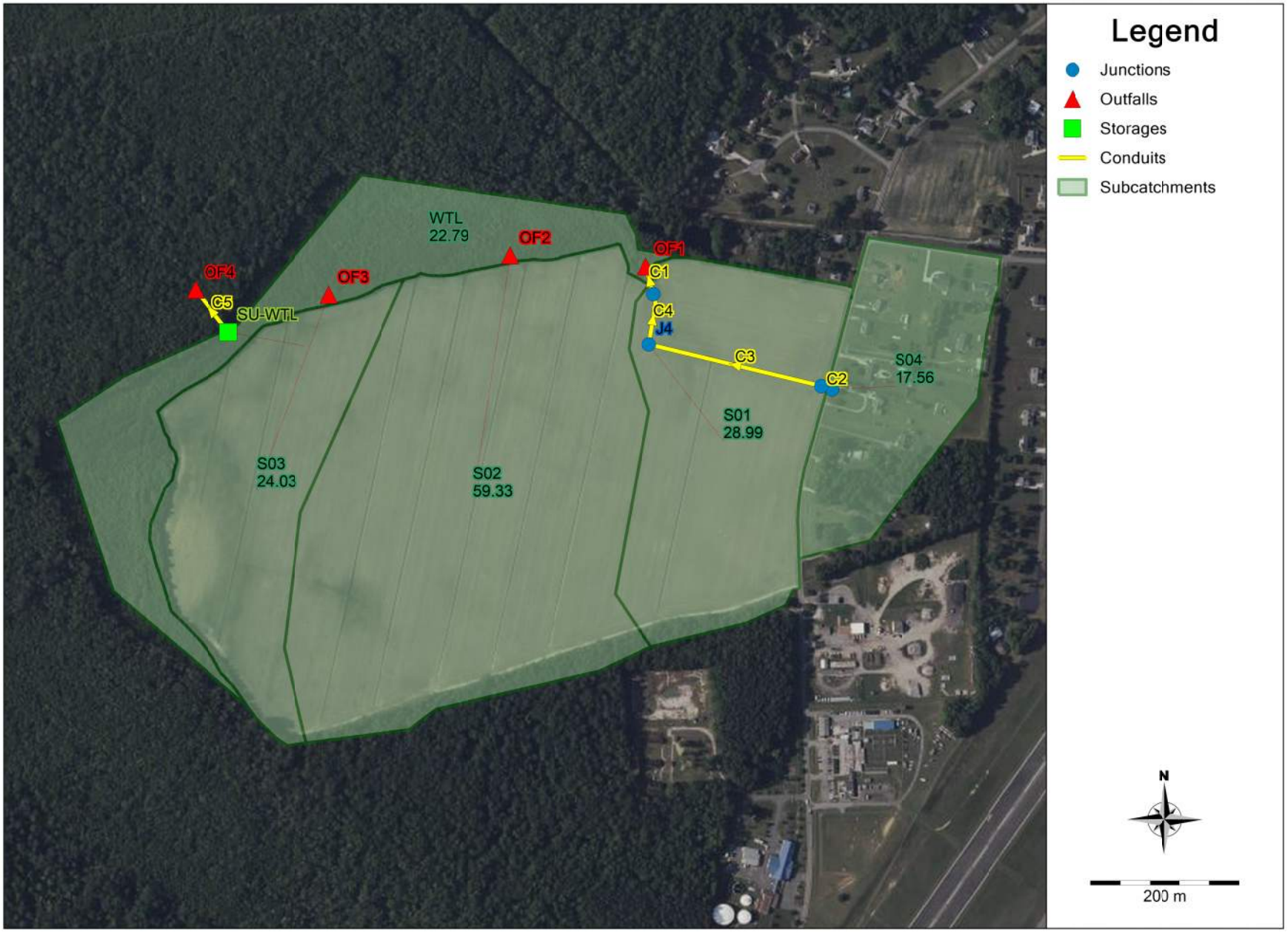
Project name: Ashbrook Estates
Timmons Group Project No. 48235
Date: 12/18/25
Calculated by: Ben Drew

Subcatchment # WTL

Rim (Top) Elevation:
Invert Elevation: **-0.52**

Depth measured from: **Top** (Top or Invert)

Elevation	Depth	Area (SF)	Area (AC)
-0.52	0.00	0	0.00
0	0.52	0	0.00
1	1.52	1730	0.04
2	2.52	507892	11.66
3	3.52	809685	18.59
4	4.52	939053	21.56
	0.52		0.00
	0.52		0.00
	0.52		0.00
	0.52		0.00


Legend
Junctions
Outfalls
Storages
Conduits
Subcatchments
WTL
22.79
OF1
OF2
OF3
OF4
C1
C2
C3
C4
C5
J4
SU-WTL
S01
28.99
S02
59.33
S03
24.03
S04
17.56
N
200 m

PCSWMM Report

Ashbrook Estates - Pre-Development 2-year Storm

Model 48235-Pre-2yr.inp

Timmons Group

September 9, 2025

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Table 1A: Conduits

Name	Inlet Node	Outlet Node	Length (ft)	Roughness	Inlet Elev. (ft)	Outlet Elev. (ft)	Entry Loss Coeff.	Exit Loss Coeff.	Cross-Section	Geom1 (ft)	Geom2 (ft)	Geom3
C1	J1	OF1	30	0.01	3.1	2.88	0	0	CIRCULAR	1.5	0	0
C2	J2	J3	34	0.022	7.15	6.43	0	0	CIRCULAR	2	0	0
C3	J3	J4	795	0.035	6.19	3.52	0	0	TRAPEZOIDAL	2.59	0	3
C4	J4	J1	230	0.035	3.52	3.1	0	0	TRAPEZOIDAL	2.3	0	3
C5	SU-WTL	OF4	500	0.04	1.5	1.25	0	0	RECT_OPEN	1	250	2

Table 1B: Conduits

Name	Geom4	Barrels	Slope (ft/ft)	Max. |Flow| (cfs)	Max. |Velocity| (ft/s)
C1	0	1	0.00733	10.08	7.44
C2	0	1	0.02118	11.11	6.33
C3	3	1	0.00336	10.71	1.64
C4	3	1	0.00183	10.18	1.92
C5	0	1	0.0005	0.82	0.01

Table 2: Junctions

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Contributing Area (ac)
J1	3.1	5.4	2.3	0	0.08	1.07	4.17	46.55
J2	6.19	10.05	3.86	0	1.04	2.06	8.25	17.56
J3	6.19	9.92	3.73	0	0.17	1.39	7.58	17.56
J4	3.52	6.11	2.59	0	0.25	1.6	5.12	46.55

Table 3A: Subcatchments

Name	Rain Gage	Outlet	Area (ac)	Flow Length (ft)	Slope (%)	Imperv. (%)	N Imperv	N Perv	Dstore Imperv (in)	Dstore Perv (in)	Zero Imperv (%)
S01	SCS_Type_III_3.75in	J4	28.99	1629.999	0.52	1.09	0.01	0.4	0.05	3.51	25
S02	SCS_Type_III_3.75in	OF2	59.33	1854.999	0.44	0	0.01	0.4	0.05	3.49	25
S03	SCS_Type_III_3.75in	OF3	24.03	1675.001	0.4	0	0.01	0.4	0.05	2.22	25
S04	SCS_Type_III_3.75in	J2	17.56	1125	0.9	20	0.01	0.24	0.05	3.13	25
WTL	SCS_Type_III_3.75in	SU-WTL	22.79	430	0.05	0	0.01	0.8	0.05	1.09	0

Table 3B: Subcatchments

Name	Subarea Routing	Percent Routed (%)	Curve Number	Infiltration (in)	Runoff Depth (in)	Runoff Volume (MG)	Peak Runoff (cfs)
S01	PERVIOUS	100	36	3.7	0	0	0
S02	OUTLET	100	36	3.7	0	0	0
S03	OUTLET	100	47	3.68	0	0	0
S04	OUTLET	100	39	2.96	0.74	0.35	11.11
WTL	OUTLET	100	65	2.75	0.64	0.4	0.82

Table 4: Outfalls

Name	Invert Elev. (ft)	Rim Elev. (ft)	Fixed Stage (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Max. Flow (cfs)	Total Flow (MG)	Contributing Area (ac)
OF1	2.15	4.65	0	0	0	2.15	10.08	0.354	46.55
OF2	0.2	2.12	0	0	0	0.2	0	0	59.33
OF3	-0.15	10	0	0	0	-0.15	0	0	24.03
OF4	1.25	4	2	0.75	0.75	2	0.82	0.398	152.7

Table 5: Storages

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Curve Name	Max. Depth (ft)	Max. HGL (ft)	Max. Volume (1000 ft³)	Contributing Area (ac)
SU-WTL	-0.52	4	4.52	2.52	WTL	2.52	2	255.685	152.7

PCSWMM Report

Ashbrook Estates - Pre-Development 10-year Storm

Model 48235-Pre-10yr.inp

Timmons Group

September 9, 2025

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Table 1A: Conduits

Name	Inlet Node	Outlet Node	Length (ft)	Roughness	Inlet Elev. (ft)	Outlet Elev. (ft)	Entry Loss Coeff.	Exit Loss Coeff.	Cross-Section	Geom1 (ft)	Geom2 (ft)	Geom3
C1	J1	OF1	30	0.01	3.1	2.88	0	0	CIRCULAR	1.5	0	0
C2	J2	J3	34	0.022	7.15	6.43	0	0	CIRCULAR	2	0	0
C3	J3	J4	795	0.035	6.19	3.52	0	0	TRAPEZOIDAL	2.59	0	3
C4	J4	J1	230	0.035	3.52	3.1	0	0	TRAPEZOIDAL	2.3	0	3
C5	SU-WTL	OF4	500	0.04	1.5	1.25	0	0	RECT_OPEN	1	250	2

Table 1B: Conduits

Name	Geom4	Barrels	Slope (ft/ft)	Max. |Flow| (cfs)	Max. |Velocity| (ft/s)
C1	0	1	0.00733	15.99	9.12
C2	0	1	0.02118	17.11	6.99
C3	3	1	0.00336	16.73	1.9
C4	3	1	0.00183	16.14	2.02
C5	0	1	0.0005	3.54	0.02

Table 2: Junctions

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Contributing Area (ac)
J1	3.1	5.4	2.3	0	0.12	1.61	4.71	46.55
J2	6.19	10.05	3.86	0	1.07	2.42	8.61	17.56
J3	6.19	9.92	3.73	0	0.21	1.64	7.83	17.56
J4	3.52	6.11	2.59	0	0.31	1.8	5.32	46.55

Table 3A: Subcatchments

Name	Rain Gage	Outlet	Area (ac)	Flow Length (ft)	Slope (%)	Imperv. (%)	N Imperv	N Perv	Dstore Imperv (in)	Dstore Perv (in)	Zero Imperv (%)
S01	SCS_Type_III_5.76in	J4	28.99	1629.999	0.52	1.09	0.01	0.4	0.05	3.51	25
S02	SCS_Type_III_5.76in	OF2	59.33	1854.999	0.44	0	0.01	0.4	0.05	3.49	25
S03	SCS_Type_III_5.76in	OF3	24.03	1675.001	0.4	0	0.01	0.4	0.05	2.22	25
S04	SCS_Type_III_5.76in	J2	17.56	1125	0.9	20	0.01	0.24	0.05	3.13	25
WTL	SCS_Type_III_5.76in	SU-WTL	22.79	430	0.05	0	0.01	0.8	0.05	1.09	0

Table 3B: Subcatchments

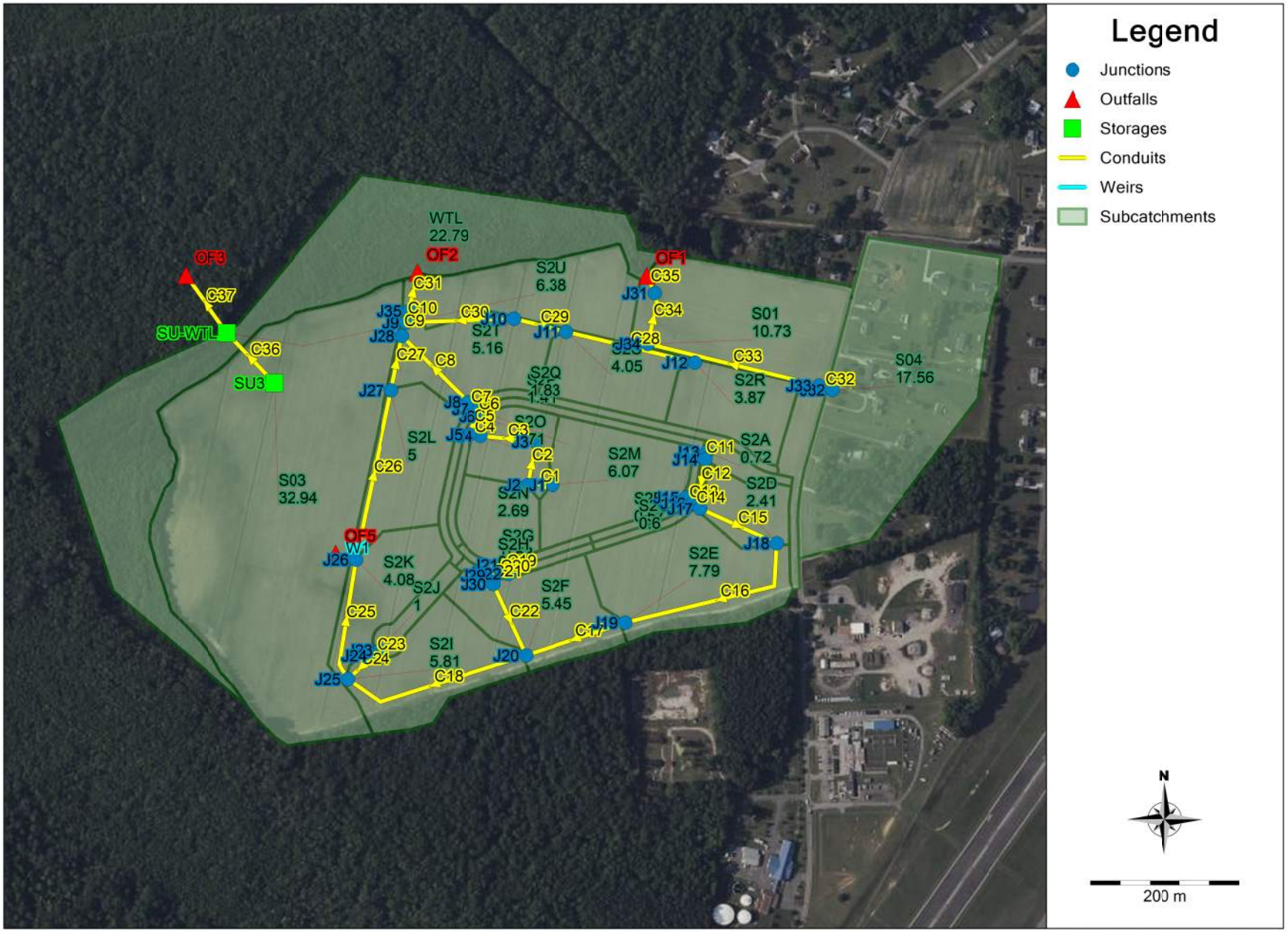
Name	Subarea Routing	Percent Routed (%)	Curve Number	Infiltration (in)	Runoff Depth (in)	Runoff Volume (MG)	Peak Runoff (cfs)
S01	PERVIOUS	100	36	5.64	0	0	0
S02	OUTLET	100	36	5.71	0	0	0
S03	OUTLET	100	47	4.85	0	0	0
S04	OUTLET	100	39	4.38	1.15	0.55	17.11
WTL	OUTLET	100	65	3.34	2.29	1.42	3.54

Table 4: Outfalls

Name	Invert Elev. (ft)	Rim Elev. (ft)	Fixed Stage (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Max. Flow (cfs)	Total Flow (MG)	Contributing Area (ac)
OF1	2.15	4.65	0	0	0	2.15	15.99	0.546	46.55
OF2	0.2	2.12	0	0	0	0.2	0	0	59.33
OF3	-0.15	10	0	0	0	-0.15	0	0	24.03
OF4	1.25	4	2	0.75	0.75	2	3.54	1.418	152.7

Table 5: Storages

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Curve Name	Max. Depth (ft)	Max. HGL (ft)	Max. Volume (1000 ft³)	Contributing Area (ac)
SU-WTL	-0.52	4	4.52	2.52	WTL	2.52	2	255.849	152.7


Legend
Junctions
Outfalls
Storages
Conduits
Weirs
Subcatchments
N
200 m
WTL
22.79
OF1
OF2
OF3
OF5
SU-WTL
SU3
W1
S01
10.73
S03
32.94
S04
17.56
S2A
0.72
S2D
2.41
S2E
7.79
S2F
5.45
S2I
5.81
S2J
1
S2K
4.08
S2L
5
S2M
6.07
S2N
2.69
S2O
S2R
3.87
S2U
6.38
S21
5.16
S23
4.05
J10
J11
J12
J13
J14
J17
J18
J19
J20
J25
J26
J27
J28
J30
J31
J33
J54
C1
C2
C3
C4
C5
C6
C7
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C9
C10
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PCSWMM Report

Ashbrook Estates - Post-development 10-year Storm

Model 48235-Post-10yr.inp

Timmons Group

December 19, 2025

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Table 1A: Conduits

Name	Inlet Node	Outlet Node	Length (ft)	Roughness	Inlet Elev. (ft)	Outlet Elev. (ft)	Entry Loss Coeff.	Exit Loss Coeff.	Cross-Section	Geom1 (ft)	Geom2 (ft)	Geom3
C1	J1	J2	105	0.035	5.43	5.12	0	0	TRAPEZOIDAL	2	0	5
C10	J9	J35	50	0.035	2	1.9	0	0	CIRCULAR	2	0	0
C11	J13	J14	24	0.011	7.8	7.67	0	0	CIRCULAR	1.25	0	0
C12	J14	J16	189	0.035	7.67	7.1	0	0	TRAPEZOIDAL	2.03	0	3
C13	J15	J16	45	0.011	7.3	7.1	0	0	CIRCULAR	1.5	0	0
C14	J16	J17	32	0.011	7.1	7	0	0	CIRCULAR	1.5	0	0
C15	J17	J18	370	0.035	7	6	0	0	TRAPEZOIDAL	2	0	4
C16	J18	J19	830	0.035	6	4.91	0	0	TRAPEZOIDAL	3	10	5
C17	J19	J20	450	0.035	4.91	4.32	0	0	TRAPEZOIDAL	3	10	5
C18	J20	J25	845	0.035	4.32	3.71	0	0	TRAPEZOIDAL	3	10	5
C19	J21	J22	45	0.011	5.8	5.55	0	0	CIRCULAR	1.5	0	0
C2	J2	J3	186	0.035	5.12	4.65	0	0	TRAPEZOIDAL	2	0	5
C20	J22	J29	68	0.035	5.55	5.4	0	0	TRAPEZOIDAL	2.35	0	3
C21	J29	J30	32	0.011	5.4	5.3	0	0	CIRCULAR	1.5	0	0
C22	J30	J20	328	0.035	5.3	4.32	0	0	TRAPEZOIDAL	2	0	4
C23	J23	J24	30	0.011	4.25	4.15	0	0	CIRCULAR	1.25	0	0
C24	J24	J25	148	0.035	4.15	3.71	0	0	TRAPEZOIDAL	2.55	0	4
C25	J25	J26	554	0.035	3.71	3.13	0	0	TRAPEZOIDAL	3	10	5
C26	J26	J27	760	0.035	3.13	2.34	0	0	TRAPEZOIDAL	3	10	5
C27	J27	J28	228	0.035	2.34	2.1	0	0	TRAPEZOIDAL	3	10	5
C28	J12	J11	580	0.035	5.41	3.95	0	0	TRAPEZOIDAL	2.5	0	5
C29	J11	J10	235	0.035	3.95	3.5	0	0	TRAPEZOIDAL	2.5	0	5
C3	J3	J4	265	0.035	4.65	4	0	0	TRAPEZOIDAL	2	0	5
C30	J10	J9	270	0.035	3.5	0.35	0	0	TRAPEZOIDAL	2.5	0	5
C31	J35	OF2	163	0.035	1.9	0.2	0	0	TRAPEZOIDAL	1.92	4	2
C32	J32	J33	34	0.022	7.15	6.43	0	0	CIRCULAR	2	0	0
C33	J33	J34	795	0.035	6.19	3.52	0	0	TRAPEZOIDAL	2.59	0	3
C34	J34	J31	230	0.035	3.52	3.1	0	0	TRAPEZOIDAL	2.3	0	3
C35	J31	OF1	30	0.01	3.1	2.88	0	0	CIRCULAR	1.5	0	0
C36	SU3	SU-WTL	50	0.04	-0.2	-0.52	0	0	RECT_OPEN	1	20	0
C37	SU-WTL	OF3	500	0.04	1.5	1.25	0	0	RECT_OPEN	1	250	2
C4	J4	J5	32	0.011	4	3.8	0	0	CIRCULAR	1.25	0	0
C5	J5	J6	68	0.035	3.8	3.5	0	0	TRAPEZOIDAL	2.15	0	3
C6	J6	J7	46	0.011	3.5	3.2	0	0	CIRCULAR	1.5	0	0
C7	J7	J8	30	0.011	3.2	3.1	0	0	CIRCULAR	1.5	0	0
C8	J8	J28	409	0.035	3.1	2.1	0	0	TRAPEZOIDAL	2	0	5
C9	J28	J9	56	0.035	2.1	2	0	0	TRAPEZOIDAL	3	10	5

Table 1B: Conduits

Name	Geom4	Barrels	Slope (ft/ft)	Max. |Flow| (cfs)	Max. |Velocity| (ft/s)
C1	5	1	0.00295	0	0
C10	0	1	0.002	3.8	3.43
C11	0	1	0.00542	0.06	0.83
C12	3	1	0.00302	0.06	0.29
C13	0	1	0.00444	0.14	1.1
C14	0	1	0.00313	0.27	1.17
C15	4	1	0.0027	0.26	0.69
C16	5	1	0.00131	1.16	0.51
C17	5	1	0.00131	1.72	0.57
C18	5	1	0.00072	1.95	0.5
C19	0	1	0.00556	0.17	0.95
C2	5	1	0.00253	0	0
C20	3	1	0.00221	0.17	0.61
C21	0	1	0.00313	0.34	1.21
C22	4	1	0.00299	0.39	0.82
C23	0	1	0.00333	1.81	1.96
C24	4	1	0.00297	1.85	1.48
C25	5	1	0.00105	2.32	0.54
C26	5	1	0.00104	4.18	0.74
C27	5	1	0.00105	3.24	0.62
C28	5	1	0.00252	0	0
C29	5	1	0.00191	0.04	0.34
C3	5	1	0.00245	0	0
C30	5	1	0.01167	0.03	0.03
C31	2	1	0.01043	3.8	2.22
C32	0	1	0.02118	17.11	6.99
C33	3	1	0.00336	16.73	1.88
C34	3	1	0.00183	17.4	2.03
C35	0	1	0.00733	17.04	9.69
C36	0	1	0.0064	12.51	0.63
C37	0	1	0.0005	16.76	0.11
C4	0	1	0.00625	0	0
C5	3	1	0.00441	0	0
C6	0	1	0.00652	0.28	1.52
C7	0	1	0.00333	0.58	1.76
C8	5	1	0.00244	0.58	0.59
C9	5	1	0.00179	3.8	0.31

Table 2: Junctions

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Contributing Area (ac)
J1	5.43	7.43	2	0	0	0	5.43	6.07
J10	3.5	6	2.5	0	0	0.11	3.61	13.08
J11	3.95	6.45	2.5	0	0.01	0.18	4.13	7.92
J12	5.41	7.91	2.5	0	0	0	5.41	3.87
J13	7.8	9.74	1.94	0	0.03	0.09	7.89	0.72
J14	7.67	9.7	2.03	0	0.08	0.2	7.87	0.72
J15	7.3	9.6	2.3	0	0.06	0.14	7.44	0.57
J16	7.1	9.6	2.5	0	0.17	0.35	7.45	1.89
J17	7	9	2	0	0.22	0.45	7.45	1.89
J18	6	9	3	0	0.07	0.22	6.22	4.3
J19	4.91	7.91	3	0	0.11	0.26	5.17	12.09
J2	5.12	7.12	2	0	0	0	5.12	8.76
J20	4.32	7.32	3	0	0.14	0.34	4.66	18.62
J21	5.8	7.9	2.1	0	0.05	0.14	5.94	0.53
J22	5.55	7.9	2.35	0	0.14	0.36	5.91	0.53
J23	4.25	6	1.75	0	0.17	0.86	5.11	1
J24	4.15	6.7	2.55	0	0.22	0.95	5.1	1
J25	3.71	6.71	3	0	0.16	0.33	4.04	25.43
J26	3.13	6.13	3	0	0.2	0.49	3.62	29.51
J27	2.34	5.34	3	0	0.36	0.77	3.11	34.51
J28	2.1	5.1	3	0	0.48	1	3.1	49.22
J29	5.4	7.75	2.35	0	0.1	0.47	5.87	1.08
J3	4.65	6.65	2	0	0	0	4.65	8.76
J30	5.3	7.3	2	0	0.15	0.57	5.87	1.08
J31	3.1	5.4	2.3	0	0.42	1.71	4.81	28.29
J32	6.19	10.05	3.86	0	1.24	2.42	8.61	17.56
J33	6.19	9.92	3.73	0	0.5	1.64	7.83	17.56
J34	3.52	6.11	2.59	0	0.92	1.84	5.36	28.29
J35	1.9	5	3.1	0	0.2	0.44	2.34	62.3
J4	4	6.65	2.65	0	0	0	4	11.47
J5	3.8	5.95	2.15	0	0	0	3.8	11.47
J6	3.5	5.82	2.32	0	0.07	0.17	3.67	12.88
J7	3.2	5.82	2.62	0	0.14	0.32	3.52	14.71
J8	3.1	5.1	2	0	0.19	0.4	3.5	14.71
J9	2	5	3	0	0.53	1.09	3.09	62.3

Table 3A: Subcatchments

Name	Rain Gage	Outlet	Area (ac)	Flow Length (ft)	Slope (%)	Imperv. (%)	N Imperv	N Perv	Dstore Imperv (in)	Dstore Perv (in)	Zero Imperv (%)
S01	SCS_Type_III_5.76in	J34	10.73	825	0.69	4.13	0.01	0.24	0.05	0.97	25
S03	SCS_Type_III_5.76in	SU3	32.94	1674.999	0.4	0	0.01	0.17	0.05	0.7	25
S04	SCS_Type_III_5.76in	J32	17.56	1125	0.9	20	0.01	0.24	0.05	3.13	25
S2A	SCS_Type_III_5.76in	J13	0.72	424.999	0.94	30.31	0.01	0.24	0.05	3.1	25
S2B	SCS_Type_III_5.76in	J15	0.57	489.998	0.45	41.04	0.01	0.24	0.05	3.13	25
S2C	SCS_Type_III_5.76in	J16	0.6	519.995	0.46	40.59	0.01	0.24	0.05	3.13	25
S2D	SCS_Type_III_5.76in	J18	2.41	410	1.1	15.22	0.01	0.24	0.05	1.58	25
S2E	SCS_Type_III_5.76in	J19	7.79	859.999	0.65	11.78	0.01	0.24	0.05	1.72	25
S2F	SCS_Type_III_5.76in	J20	5.45	550	1.08	16.85	0.01	0.24	0.05	3.22	25
S2G	SCS_Type_III_5.76in	J21	0.53	369.999	1	41.09	0.01	0.24	0.05	3.13	25
S2H	SCS_Type_III_5.76in	J29	0.55	440	0.93	41.19	0.01	0.24	0.05	3.13	25
S2I	SCS_Type_III_5.76in	J25	5.81	990	0.48	11.06	0.01	0.24	0.05	1.98	25
S2J	SCS_Type_III_5.76in	J23	1	539.998	0.67	48.07	0.01	0.24	0.05	1.52	25
S2K	SCS_Type_III_5.76in	J26	4.08	405	0.96	20.27	0.01	0.24	0.05	1.44	25
S2L	SCS_Type_III_5.76in	J27	5	760	0.68	18.36	0.01	0.24	0.05	2.55	25
S2M	SCS_Type_III_5.76in	J1	6.07	530	0.86	21.17	0.01	0.24	0.05	3.13	25
S2N	SCS_Type_III_5.76in	J2	2.69	300	1.29	20.51	0.01	0.24	0.05	3.13	25
S2O	SCS_Type_III_5.76in	J4	2.71	420	0.95	20.33	0.01	0.24	0.05	3.13	25
S2P	SCS_Type_III_5.76in	J6	1.41	1029.994	0.68	41.33	0.01	0.24	0.05	3.13	25
S2Q	SCS_Type_III_5.76in	J7	1.83	1435.01	0.59	40.95	0.01	0.24	0.05	3.13	25
S2R	SCS_Type_III_5.76in	J12	3.87	580.001	0.79	21.34	0.01	0.24	0.05	3.13	25
S2S	SCS_Type_III_5.76in	J11	4.05	665.001	0.76	22.69	0.01	0.24	0.05	3.13	25
S2T	SCS_Type_III_5.76in	J10	5.16	829.999	0.65	14.24	0.01	0.24	0.05	3.13	25
S2U	SCS_Type_III_5.76in	WTL	6.38	415	1.11	0	0.01	0.24	0.05	0.99	25
WTL	SCS_Type_III_5.76in	SU-WTL	22.79	430	0.05	0	0.01	0.8	0.05	1.09	25

Table 3B: Subcatchments

Name	Subarea Routing	Percent Routed (%)	Curve Number	Infiltration (in)	Runoff Depth (in)	Runoff Volume (MG)	Peak Runoff (cfs)
S01	PERVIOUS	100	67	2.55	2	0.58	4.05
S03	OUTLET	100	74	2.18	2.36	2.11	12.55
S04	OUTLET	100	39	3.37	1.14	0.54	17.11
S2A	PERVIOUS	100	39	2.93	0.55	0.01	0.06
S2B	PERVIOUS	100	39	2.48	1.29	0.02	0.14
S2C	PERVIOUS	100	39	2.5	1.25	0.02	0.13
S2D	PERVIOUS	100	56	2.82	1.48	0.1	0.76

Table 3B: Subcatchments (continued...)

Name	Subarea Routing	Percent Routed (%)	Curve Number	Infiltration (in)	Runoff Depth (in)	Runoff Volume (MG)	Peak Runoff (cfs)
S2E	PERVIOUS	100	54	3.03	0.96	0.2	0.98
S2F	PERVIOUS	100	38	3.54	0	0	0
S2G	PERVIOUS	100	39	2.48	1.34	0.02	0.17
S2H	PERVIOUS	100	39	2.48	1.34	0.02	0.16
S2I	PERVIOUS	100	50	3.25	0.46	0.07	0.33
S2J	PERVIOUS	100	57	1.7	3.14	0.09	1.81
S2K	PERVIOUS	100	58	2.56	1.93	0.21	2.61
S2L	PERVIOUS	100	44	3.24	0.26	0.03	0.2
S2M	PERVIOUS	100	39	3.32	0	0	0
S2N	PERVIOUS	100	39	3.35	0	0	0
S2O	PERVIOUS	100	39	3.35	0	0	0
S2P	PERVIOUS	100	39	2.47	1.26	0.05	0.28
S2Q	PERVIOUS	100	39	2.49	1.17	0.06	0.3
S2R	PERVIOUS	100	39	3.31	0	0	0
S2S	PERVIOUS	100	39	3.25	0.01	0	0.04
S2T	PERVIOUS	100	39	3.61	0	0	0
S2U	PERVIOUS	100	67	2.66	1.96	0.34	3.44
WTL	OUTLET	100	65	2.78	3.36	2.08	8

Table 4: Outfalls

Name	Invert Elev. (ft)	Rim Elev. (ft)	Fixed Stage (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Max. Flow (cfs)	Total Flow (MG)	Contributing Area (ac)
OF1	2.15	4.65	0	0	0	2.15	17.04	1.119	28.29
OF2	0.2	2.12	0	0.13	0.29	0.49	3.8	0.816	62.3
OF3	1.25	4	2	0.75	0.75	2	16.76	4.178	152.7
OF5	4	6	0	0	0	4	0	0	29.51

Table 5: Storages

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Curve Name	Max. Depth (ft)	Max. HGL (ft)	Max. Volume (1000 ft³)	Contributing Area (ac)
SU3	-0.2	6	6.2	2.2	S3	2.22	2.02	31.03	62.45
SU-WTL	-0.52	4	4.52	2.52	WTL	2.53	2.01	259.499	152.7

Table 6: Weirs

Name	Inlet Node	Outlet Node	Type	Height (ft)	Length (ft)	Side Slope (ft/ft)	Inlet Elev. (ft)	Discharge Coeff. (CFS)	Max. |Flow| (cfs)
W1	J26	OF5	TRANSVERSE	2	40	0	4	3.33	0

PCSWMM Report

Ashbrook Estates - Post-development 10-year Storm (Bare Earth Conditions)

Model 48235-Post-10yr-Bare Earth.inp

Timmons Group

December 11, 2025

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Table 1A: Conduits

Name	Inlet Node	Outlet Node	Length (ft)	Roughness	Inlet Elev. (ft)	Outlet Elev. (ft)	Entry Loss Coeff.	Exit Loss Coeff.	Cross-Section	Geom1 (ft)	Geom2 (ft)	Geom3
C1	J1	J2	105	0.02	5.43	5.12	0	0	TRAPEZOIDAL	2	0	5
C10	J9	J35	50	0.035	2	1.9	0	0	CIRCULAR	2	0	0
C11	J13	J14	24	0.011	7.8	7.67	0	0	CIRCULAR	1.25	0	0
C12	J14	J16	189	0.02	7.67	7.1	0	0	TRAPEZOIDAL	2.03	0	3
C13	J15	J16	45	0.011	7.3	7.1	0	0	CIRCULAR	1.5	0	0
C14	J16	J17	32	0.011	7.1	7	0	0	CIRCULAR	1.5	0	0
C15	J17	J18	370	0.02	7	6	0	0	TRAPEZOIDAL	2	0	4
C16	J18	J19	830	0.02	6	4.91	0	0	TRAPEZOIDAL	3	10	5
C17	J19	J20	450	0.02	4.91	4.32	0	0	TRAPEZOIDAL	3	10	5
C18	J20	J25	845	0.02	4.32	3.71	0	0	TRAPEZOIDAL	3	10	5
C19	J21	J22	45	0.011	5.8	5.55	0	0	CIRCULAR	1.5	0	0
C2	J2	J3	186	0.02	5.12	4.65	0	0	TRAPEZOIDAL	2	0	5
C20	J22	J29	68	0.02	5.55	5.4	0	0	TRAPEZOIDAL	2.35	0	3
C21	J29	J30	32	0.011	5.4	5.3	0	0	CIRCULAR	1.5	0	0
C22	J30	J20	328	0.02	5.3	4.32	0	0	TRAPEZOIDAL	2	0	4
C23	J23	J24	30	0.011	4.25	4.15	0	0	CIRCULAR	1.25	0	0
C24	J24	J25	148	0.02	4.15	3.71	0	0	TRAPEZOIDAL	2.55	0	4
C25	J25	J26	554	0.02	3.71	3.13	0	0	TRAPEZOIDAL	3	10	5
C26	J26	J27	760	0.02	3.13	2.34	0	0	TRAPEZOIDAL	3	10	5
C27	J27	J28	228	0.02	2.34	2.1	0	0	TRAPEZOIDAL	3	10	5
C28	J12	J11	580	0.02	5.41	3.95	0	0	TRAPEZOIDAL	2.5	0	5
C29	J11	J10	235	0.02	3.95	3.5	0	0	TRAPEZOIDAL	2.5	0	5
C3	J3	J4	265	0.02	4.65	4	0	0	TRAPEZOIDAL	2	0	5
C30	J10	J9	270	0.02	3.5	0.35	0	0	TRAPEZOIDAL	2.5	0	5
C31	J35	OF2	163	0.035	1.9	0.2	0	0	TRAPEZOIDAL	1.92	4	2
C32	J32	J33	34	0.022	7.15	6.43	0	0	CIRCULAR	2	0	0
C33	J33	J34	795	0.035	6.19	3.52	0	0	TRAPEZOIDAL	2.59	0	3
C34	J34	J31	230	0.035	3.52	3.1	0	0	TRAPEZOIDAL	2.3	0	3
C35	J31	OF1	30	0.01	3.1	2.88	0	0	CIRCULAR	1.5	0	0
C36	SU3	SU-WTL	50	0.04	-0.2	-0.52	0	0	RECT_OPEN	1	20	0
C37	SU-WTL	OF3	500	0.04	1.5	1.25	0	0	RECT_OPEN	1	250	2
C4	J4	J5	32	0.011	4	3.8	0	0	CIRCULAR	1.25	0	0
C5	J5	J6	68	0.02	3.8	3.5	0	0	TRAPEZOIDAL	2.15	0	3
C6	J6	J7	46	0.011	3.5	3.2	0	0	CIRCULAR	1.5	0	0
C7	J7	J8	30	0.011	3.2	3.1	0	0	CIRCULAR	1.5	0	0
C8	J8	J28	409	0.02	3.1	2.1	0	0	TRAPEZOIDAL	2	0	5
C9	J28	J9	56	0.02	2.1	2	0	0	TRAPEZOIDAL	3	10	5

Table 1B: Conduits

Name	Geom4	Barrels	Slope (ft/ft)	Max. |Flow| (cfs)	Max. |Velocity| (ft/s)
C1	5	1	0.00295	9.92	1.84
C10	0	1	0.002	14	5.83
C11	0	1	0.00542	1.38	3.06
C12	3	1	0.00302	1.38	1.22
C13	0	1	0.00444	0.86	1.26
C14	0	1	0.00313	3.08	3.65
C15	4	1	0.0027	3.07	2.1
C16	5	1	0.00131	8.74	1.12
C17	5	1	0.00131	20	1.49
C18	5	1	0.00072	29.06	1.74
C19	0	1	0.00556	1.11	2.57
C2	5	1	0.00253	16.19	2.43
C20	3	1	0.00221	1.1	1.27
C21	0	1	0.00313	2.12	3.61
C22	4	1	0.00299	2.11	1.24
C23	0	1	0.00333	2.21	3.98
C24	4	1	0.00297	2.17	2.35
C25	5	1	0.00105	35	1.58
C26	5	1	0.00104	27.97	0.83
C27	5	1	0.00105	22.59	0.48
C28	5	1	0.00252	6.1	1.42
C29	5	1	0.00191	12.23	2.18
C3	5	1	0.00245	14.73	1.45
C30	5	1	0.01167	18.21	1.39
C31	2	1	0.01043	13.99	3.38
C32	0	1	0.02118	0	0
C33	3	1	0.00336	0	0
C34	3	1	0.00183	3.3	1.49
C35	0	1	0.00733	3.3	5.69
C36	0	1	0.0064	36.81	1.84
C37	0	1	0.0005	42.18	0.26
C4	0	1	0.00625	19.39	15.8
C5	3	1	0.00441	19.39	2.44
C6	0	1	0.00652	20.96	11.86
C7	0	1	0.00333	22.53	12.75
C8	5	1	0.00244	22.06	1.58
C9	5	1	0.00179	8.42	0.25

Table 2: Junctions

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Contributing Area (ac)
J1	5.43	7.43	2	0	0.35	3.75	9.18	6.07
J10	3.5	6	2.5	0	0.39	1.23	4.73	13.08
J11	3.95	6.45	2.5	0	0.35	1.07	5.02	7.92
J12	5.41	7.91	2.5	0	0.25	0.79	6.2	3.87
J13	7.8	9.74	1.94	0	0.11	0.47	8.27	0.72
J14	7.67	9.7	2.03	0	0.16	0.53	8.2	0.72
J15	7.3	9.6	2.3	0	0.11	0.51	7.81	0.57
J16	7.1	9.6	2.5	0	0.21	0.72	7.82	1.89
J17	7	9	2	0	0.27	0.73	7.73	1.89
J18	6	9	3	0	0.1	0.48	6.48	4.3
J19	4.91	7.91	3	0	0.19	0.76	5.67	12.09
J2	5.12	7.12	2	0	0.41	4.05	9.17	8.76
J20	4.32	7.32	3	0	0.28	1.09	5.41	18.62
J21	5.8	7.9	2.1	0	0.08	0.36	6.16	0.53
J22	5.55	7.9	2.35	0	0.16	0.52	6.07	0.53
J23	4.25	6	1.75	0	0.16	0.65	4.9	1
J24	4.15	6.7	2.55	0	0.2	0.74	4.89	1
J25	3.71	6.71	3	0	0.31	1.17	4.88	25.43
J26	3.13	6.13	3	0	0.51	1.52	4.65	29.51
J27	2.34	5.34	3	0	0.99	2.37	4.71	34.51
J28	2.1	5.1	3	0	1.15	2.61	4.71	49.22
J29	5.4	7.75	2.35	0	0.14	0.56	5.96	1.08
J3	4.65	6.65	2	0	0.46	4.5	9.15	8.76
J30	5.3	7.3	2	0	0.17	0.56	5.86	1.08
J31	3.1	5.4	2.3	0	0.25	0.55	3.65	28.29
J32	6.19	10.05	3.86	0	0	0	6.19	17.56
J33	6.19	9.92	3.73	0	0	0	6.19	17.56
J34	3.52	6.11	2.59	0	0.6	1.17	4.69	28.29
J35	1.9	5	3.1	0	0.45	0.86	2.76	62.3
J4	4	6.65	2.65	0	0.56	5.12	9.12	11.47
J5	3.8	5.95	2.15	0	0.51	3.25	7.05	11.47
J6	3.5	5.82	2.32	0	0.53	3.53	7.03	12.88
J7	3.2	5.82	2.62	0	0.6	2.53	5.73	14.71
J8	3.1	5.1	2	0	0.57	1.7	4.8	14.71
J9	2	5	3	0	1.22	2.71	4.71	62.3

Table 3A: Subcatchments

Name	Rain Gage	Outlet	Area (ac)	Flow Length (ft)	Slope (%)	Imperv. (%)	N Imperv	N Perv	Dstore Imperv (in)	Dstore Perv (in)	Zero Imperv (%)
S01	SCS_Type_III_5.76in	J34	10.73	825	0.69	0	0.01	0.24	0.05	0.97	25
S03	SCS_Type_III_5.76in	SU3	32.94	1674.999	0.4	0	0.01	0.17	0.05	0.7	25
S04	SCS_Type_III_5.76in	J32	17.56	1125	0.9	0	0.01	0.24	0.05	3.13	25
S2A	SCS_Type_III_5.76in	J13	0.72	424.999	0.94	0	0.01	0.1	0.05	0.6	25
S2B	SCS_Type_III_5.76in	J15	0.57	489.998	0.45	0	0.01	0.1	0.05	0.6	25
S2C	SCS_Type_III_5.76in	J16	0.6	519.995	0.46	0	0.01	0.1	0.05	0.6	25
S2D	SCS_Type_III_5.76in	J18	2.41	410	1.1	0	0.01	0.1	0.05	0.39	25
S2E	SCS_Type_III_5.76in	J19	7.79	859.999	0.65	0	0.01	0.1	0.05	0.48	25
S2F	SCS_Type_III_5.76in	J20	5.45	550	1.08	0	0.01	0.1	0.05	0.7	25
S2G	SCS_Type_III_5.76in	J21	0.53	369.999	1	0	0.01	0.1	0.05	0.6	25
S2H	SCS_Type_III_5.76in	J29	0.55	440	0.93	0	0.01	0.1	0.05	0.6	25
S2I	SCS_Type_III_5.76in	J25	5.81	990	0.48	0	0.01	0.1	0.05	0.64	25
S2J	SCS_Type_III_5.76in	J23	1	539.998	0.67	0	0.01	0.1	0.05	0.35	25
S2K	SCS_Type_III_5.76in	J26	4.08	405	0.96	0	0.01	0.1	0.05	0.35	25
S2L	SCS_Type_III_5.76in	J27	5	760	0.68	0	0.01	0.1	0.05	0.54	25
S2M	SCS_Type_III_5.76in	J1	6.07	530	0.86	0	0.01	0.1	0.05	0.6	25
S2N	SCS_Type_III_5.76in	J2	2.69	300	1.29	0	0.01	0.1	0.05	0.6	25
S2O	SCS_Type_III_5.76in	J4	2.71	420	0.95	0	0.01	0.1	0.05	0.6	25
S2P	SCS_Type_III_5.76in	J6	1.41	1029.994	0.68	0	0.01	0.1	0.05	0.6	25
S2Q	SCS_Type_III_5.76in	J7	1.83	1435.01	0.59	0	0.01	0.1	0.05	0.6	25
S2R	SCS_Type_III_5.76in	J12	3.87	580.001	0.79	0	0.01	0.1	0.05	0.6	25
S2S	SCS_Type_III_5.76in	J11	4.05	665.001	0.76	0	0.01	0.1	0.05	0.6	25
S2T	SCS_Type_III_5.76in	J10	5.16	829.999	0.65	0	0.01	0.1	0.05	0.6	25
S2U	SCS_Type_III_5.76in	WTL	6.38	415	1.11	0	0.01	0.1	0.05	0.99	25
WTL	SCS_Type_III_5.76in	SU-WTL	22.79	430	0.05	0	0.01	0.8	0.05	1.09	25

Table 3B: Subcatchments

Name	Subarea Routing	Percent Routed (%)	Curve Number	Infiltration (in)	Runoff Depth (in)	Runoff Volume (MG)	Peak Runoff (cfs)
S01	PERVIOUS	100	67	2.66	1.84	0.54	3.31
S03	OUTLET	100	74	2.18	5.07	4.54	37.78
S04	OUTLET	100	39	4.21	0	0	0
S2A	PERVIOUS	100	77	1.97	3.1	0.06	1.38
S2B	PERVIOUS	100	77	1.97	3.06	0.05	0.86
S2C	PERVIOUS	100	77	1.97	3.05	0.05	0.88
S2D	PERVIOUS	100	84	1.43	3.85	0.25	6.42

Table 3B: Subcatchments (continued...)

Name	Subarea Routing	Percent Routed (%)	Curve Number	Infiltration (in)	Runoff Depth (in)	Runoff Volume (MG)	Peak Runoff (cfs)
S2E	PERVIOUS	100	81	1.67	3.43	0.73	11.77
S2F	PERVIOUS	100	74	2.18	2.77	0.41	7.95
S2G	PERVIOUS	100	77	1.97	3.11	0.04	1.11
S2H	PERVIOUS	100	77	1.97	3.09	0.05	1.03
S2I	PERVIOUS	100	76	2.04	2.86	0.45	5.66
S2J	PERVIOUS	100	85	1.35	3.93	0.11	2.17
S2K	PERVIOUS	100	85	1.35	3.96	0.44	10.91
S2L	PERVIOUS	100	79	1.82	3.24	0.44	7.42
S2M	PERVIOUS	100	77	1.97	3.08	0.51	10.27
S2N	PERVIOUS	100	77	1.97	3.13	0.23	6.62
S2O	PERVIOUS	100	77	1.97	3.1	0.23	5.22
S2P	PERVIOUS	100	77	1.97	3	0.11	1.59
S2Q	PERVIOUS	100	77	1.97	2.93	0.15	1.61
S2R	PERVIOUS	100	77	1.97	3.07	0.32	6.11
S2S	PERVIOUS	100	77	1.97	3.05	0.34	5.96
S2T	PERVIOUS	100	77	1.97	3.02	0.42	6.48
S2U	PERVIOUS	100	67	2.66	2.03	0.35	5.68
WTL	OUTLET	100	65	2.78	4.99	3.09	12.55

Table 4: Outfalls

Name	Invert Elev. (ft)	Rim Elev. (ft)	Fixed Stage (ft)	Avg. Depth (ft)	Max. Depth (ft)	Max. HGL (ft)	Max. Flow (cfs)	Total Flow (MG)	Contributing Area (ac)
OF1	2.15	4.65	0	0	0	2.15	3.3	0.53	28.29
OF2	0.2	2.12	0	0.32	0.65	0.85	13.99	2.792	62.3
OF3	1.25	4	2	0.75	0.75	2	42.18	7.596	152.7
OF5	4	6	0	0	0	4	69.19	2.476	29.51

Table 5: Storages

Name	Invert Elev. (ft)	Rim Elev. (ft)	Depth (ft)	Initial Depth (ft)	Curve Name	Max. Depth (ft)	Max. HGL (ft)	Max. Volume (1000 ft³)	Contributing Area (ac)
SU3	-0.2	6	6.2	2.2	S3	2.38	2.18	42.298	62.45
SU-WTL	-0.52	4	4.52	2.52	WTL	2.56	2.04	278.008	152.7

Table 6: Weirs

Name	Inlet Node	Outlet Node	Type	Height (ft)	Length (ft)	Side Slope (ft/ft)	Inlet Elev. (ft)	Discharge Coeff. (CFS)	Max. |Flow| (cfs)
W1	J26	OF5	TRANSVERSE	2	40	0	4	3.33	69.19

Temporary Sediment Basin *Simplified design*

Okay

64.2	Disturbed Area (Acres)
3.8	Peak Flow from 10-year Storm (cfs)

115560	Required Volume ft^3
1655	Required Surface Area ft^2
28.8	Suggested Width ft
57.5	Suggested Length ft

141	Trial Top Width at Emergency Spillway Invert ft	
306	Trial Top Length at Emergency Spillway Invert ft	
3	Trial Side Slope Ratio Z:1	(2.5:1 or flatter)
3	Trial Depth ft	(2 to 13.5 feet above grade)
123	Bottom Width ft	
288	Bottom Length ft	
35424	Bottom Area ft^2	
117693	Actual Volume ft^3	**Okay**
43146	Actual Surface Area ft^2	**Okay**

Use Spillway Capacity Sheet to Size Primary and Emergency Spillways

6	Skimmer Size (inches)
0.417	Head on Skimmer (feet)
4	Orifice Size (1/4 inch increments)
4.84	Dewatering Time (days)
	Suggest about 3 days

Skimmer Size (Inches)
1.5
2
2.5
3
4
5
6
8

Check L:W ratio

Okay 2:1 to 6:1

Check dam height (max. 15 ft)

Okay

Cleanout elevation (ft)

2.00	Elevation of bottom of basin near riser structure
3.5	Depth at one-half of sediment storage volume. Elevation to be staked in the field.

DESIGN OF RIPRAP OUTLET PROTECTION

User Input Data
Calculated Value
Reference Data

Designed By:	BCD	**Date:**	10/28/2025
Checked By:	KDH	**Date:**	
Company:	TIMMONS GROUP		
Project Name:	ASHBROOK ESTATES		
Project No.:	48235		

Site Location (City/Town)	Maple
Culvert Id.	
Total Drainage Area (acres)	

Step 1. Determine the tailwater depth from channel characteristics below the pipe outlet for the design capacity of the pipe. If the tailwater depth is less than half the outlet pipe diameter, it is classified minimum tailwater condition. If it is greater than half the pipe diameter, it is classified maximum condition. Pipes that outlet onto wide flat areas with no defined channel are assumed to have a minimum tailwater condition unless reliable flood stage elevations show otherwise.

Outlet pipe diameter, D_o (in.)	24
Tailwater depth (in.)	0
Minimum/Maximum tailwater?	Min TW (Fig. 8.06a)
Discharge (cfs)	3.8
Velocity (ft./s)	3.43

Step 2. Based on the tailwater conditions determined in step 1, enter Figure 8.06a or Figure 8.06b, and determine d_{50} riprap size and minimum apron length (L_a). The d_{50} size is the median stone size in a well-graded riprap apron.

Step 3. Determine apron width at the pipe outlet, the apron shape, and the apron width at the outlet end from the same figure used in Step 2.

	Minimum TW	**Maximum TW**
	Figure 8.06a	Figure 8.06b
Riprap d_{50}, (ft.)	0.4	
Minimum apron length, L_a (ft.)	12	
Apron width at pipe outlet (ft.)	6	6
Apron shape		

Apron width at outlet end (ft.)	14	2

Step 4. Determine the maximum stone diameter:

$$d_{max} = 1.5 \times d_{50}$$

	Minimum TW	Maximum TW
Max Stone Diameter, dmax (ft.)	0.6	0

Step 5. Determine the apron thickness:

$$\text{Apron thickness} = 1.5 \times d_{max}$$

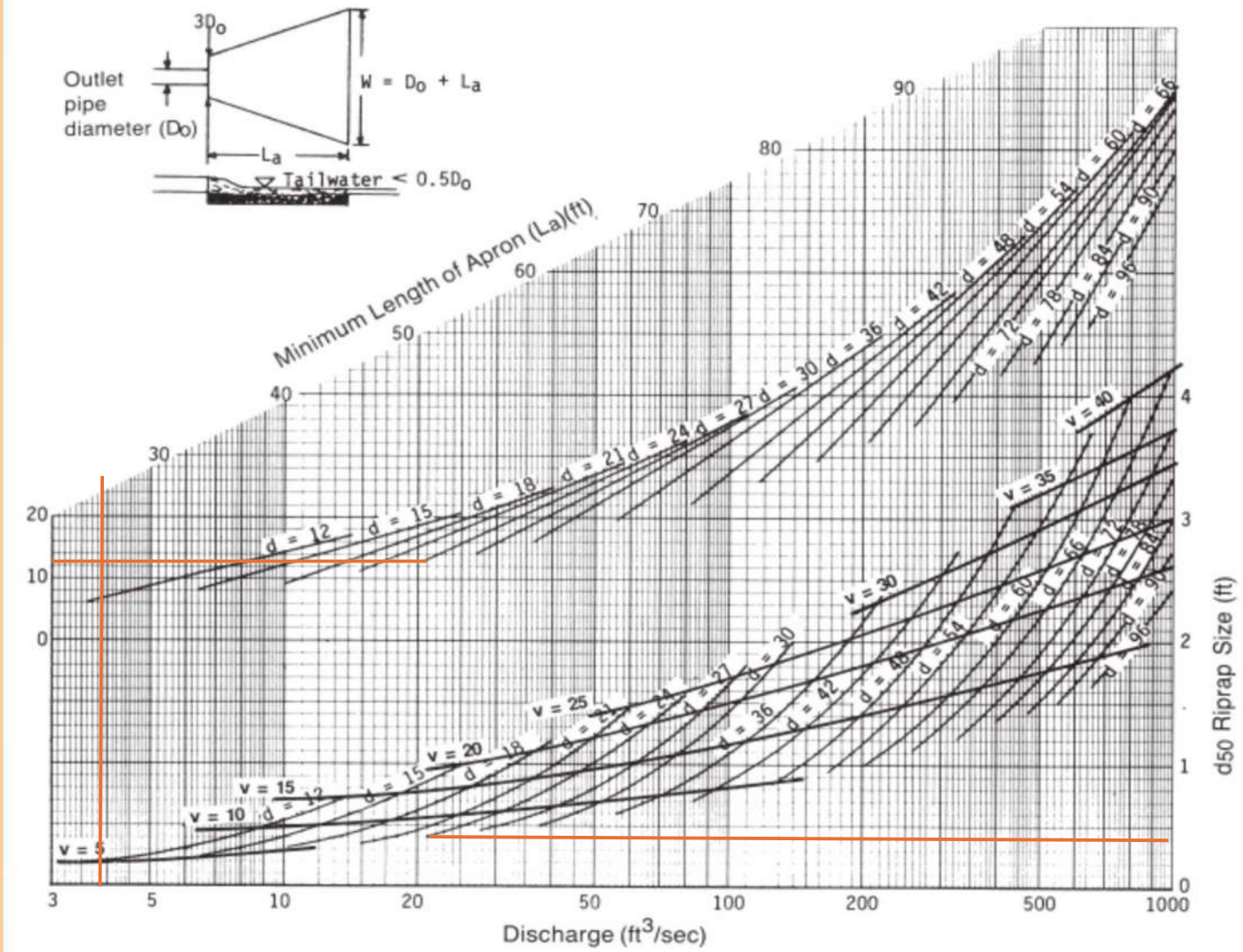
	Minimum TW	Maximum TW
Apron Thickness(ft.)	0.9	0

Step 6. Fit the riprap apron to the site by making it level for the minimum length, L_s, from Figure 8.06a or Figure 8.06b. Extend the apron farther downstream and along channel banks until stability is assured. Keep the apron as straight as possible and align it with the flow of the receiving stream. Make any necessary alignment bends near the pipe outlet so that the entrance into the receiving stream is straight.

Some locations may require lining of the entire channel cross section to assure stability.

It may be necessary to increase the size of riprap where protection of the channel side slopes is necessary (*Appendix 8.05*). Where overfalls exist at pipe outlets or flows are excessive, a plunge pool should be considered, see page 8.06.8.

Figure 8.06a: Design of outlet protection from a round pipe flowing full, minimum tailwater condition (Tw<0.5 diameter)

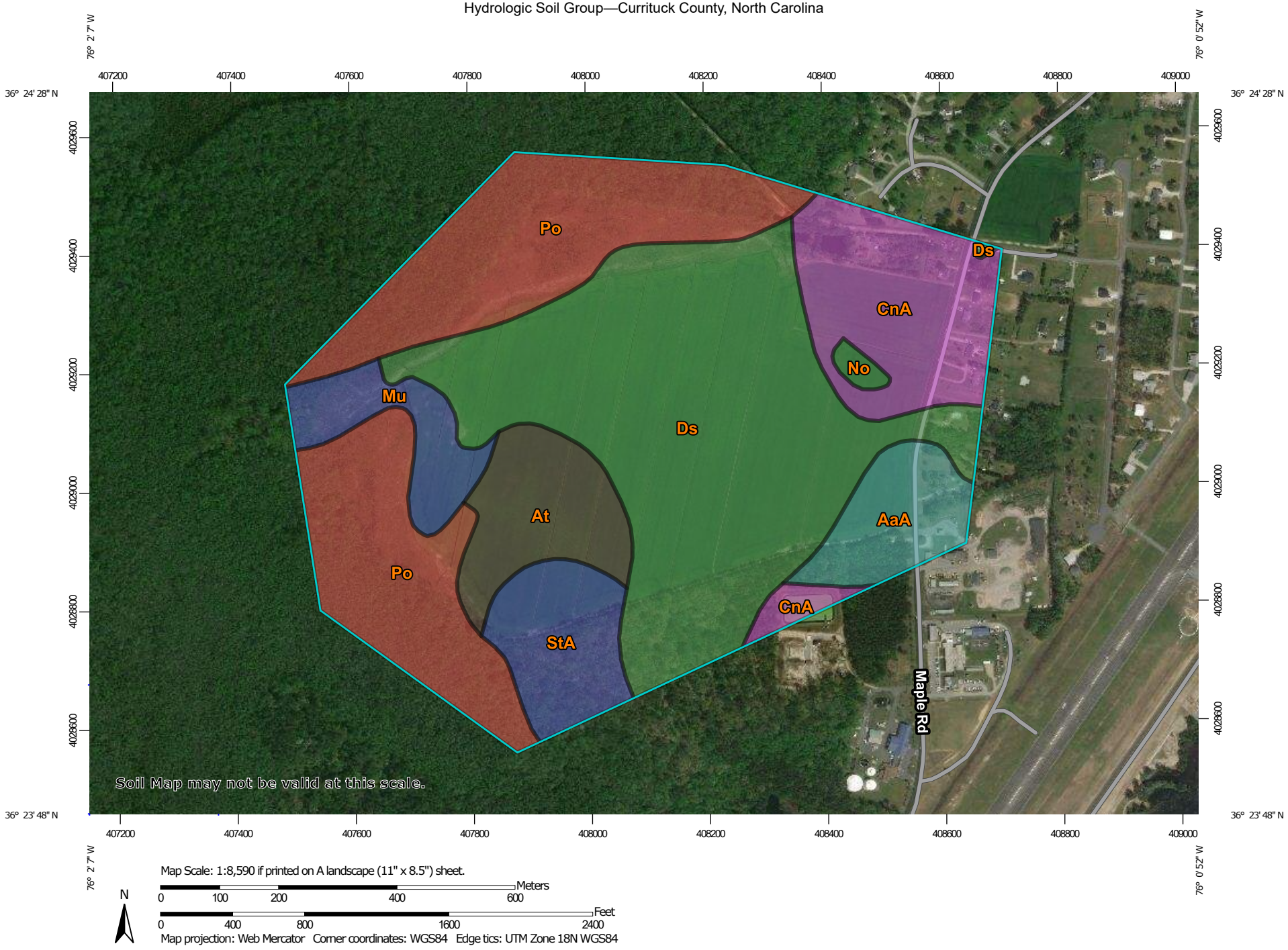


Curves may not be extrapolated.

Figure 8.06a Design of outlet protection protection from a round pipe flowing full, minimum tailwater condition (T_w < 0.5 diameter).

Appendix B

WEB Soil Survey



Map Scale: 1:8,590 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 400 800 1600 2400

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

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 1:20,000.

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: Currituck County, North Carolina
Survey Area Data: Version 19, Jun 2, 2020

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

Date(s) aerial images were photographed: Dec 31, 2009—Oct 4, 2017

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	C	11.3	5.2%
At	Augusta fine sandy loam	B/D	14.8	6.9%
CnA	Conetoe loamy sand, 0 to 3 percent slopes	A	26.0	12.0%
Ds	Dragston loamy fine sand	A/D	80.5	37.3%
Mu	Munden loamy sand	B	10.0	4.7%
No	Nimmo loamy sand	A/D	1.1	0.5%
Po	Ponzer muck, 0 to 2 percent slopes, rarely flooded	D	58.8	27.2%
StA	State fine sandy loam, 0 to 2 percent slopes	B	13.3	6.2%
Totals for Area of Interest			**215.8**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix C

Precipitation Data

NOAA Atlas 14, Volume 2, Version 3
Location name: Maple, North Carolina, USA*
Latitude: 36.404°, Longitude: -76.0197°
Elevation: 8 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.435** (0.395-0.480)	**0.507** (0.459-0.561)	**0.571** (0.517-0.632)	**0.657** (0.593-0.727)	**0.741** (0.665-0.818)	**0.817** (0.731-0.901)	**0.885** (0.789-0.977)	**0.952** (0.844-1.05)	**1.03** (0.907-1.14)	**1.11** (0.969-1.23)
10-min	**0.695** (0.630-0.767)	**0.811** (0.734-0.897)	**0.915** (0.829-1.01)	**1.05** (0.949-1.16)	**1.18** (1.06-1.30)	**1.30** (1.16-1.44)	**1.41** (1.25-1.55)	**1.51** (1.34-1.66)	**1.63** (1.44-1.80)	**1.75** (1.53-1.94)
15-min	**0.869** (0.788-0.958)	**1.02** (0.923-1.13)	**1.16** (1.05-1.28)	**1.33** (1.20-1.47)	**1.50** (1.34-1.65)	**1.65** (1.48-1.82)	**1.78** (1.58-1.96)	**1.90** (1.69-2.10)	**2.05** (1.81-2.27)	**2.20** (1.92-2.43)
30-min	**1.19** (1.08-1.31)	**1.41** (1.28-1.56)	**1.64** (1.49-1.82)	**1.93** (1.74-2.13)	**2.22** (1.99-2.45)	**2.48** (2.22-2.74)	**2.72** (2.43-3.00)	**2.96** (2.63-3.27)	**3.27** (2.87-3.61)	**3.55** (3.10-3.94)
60-min	**1.48** (1.35-1.64)	**1.77** (1.60-1.95)	**2.11** (1.91-2.33)	**2.51** (2.26-2.78)	**2.95** (2.65-3.26)	**3.36** (3.01-3.71)	**3.75** (3.34-4.14)	**4.16** (3.69-4.59)	**4.69** (4.12-5.18)	**5.19** (4.53-5.75)
2-hr	**1.74** (1.57-1.94)	**2.08** (1.87-2.31)	**2.53** (2.27-2.81)	**3.06** (2.75-3.40)	**3.68** (3.28-4.08)	**4.27** (3.79-4.72)	**4.84** (4.28-5.36)	**5.45** (4.79-6.04)	**6.27** (5.46-6.96)	**7.06** (6.10-7.82)
3-hr	**1.86** (1.68-2.08)	**2.22** (1.99-2.48)	**2.71** (2.43-3.03)	**3.30** (2.96-3.69)	**4.01** (3.57-4.47)	**4.70** (4.16-5.22)	**5.39** (4.74-5.98)	**6.14** (5.36-6.80)	**7.17** (6.20-7.95)	**8.16** (6.99-9.06)
6-hr	**2.21** (1.99-2.46)	**2.63** (2.36-2.94)	**3.22** (2.88-3.60)	**3.92** (3.51-4.38)	**4.78** (4.25-5.32)	**5.62** (4.97-6.24)	**6.47** (5.68-7.17)	**7.40** (6.44-8.18)	**8.67** (7.47-9.60)	**9.92** (8.44-11.0)
12-hr	**2.60** (2.34-2.91)	**3.09** (2.77-3.48)	**3.79** (3.39-4.25)	**4.66** (4.15-5.22)	**5.71** (5.06-6.37)	**6.77** (5.95-7.54)	**7.84** (6.84-8.72)	**9.04** (7.80-10.0)	**10.7** (9.09-11.9)	**12.3** (10.4-13.7)
24-hr	**3.08** (2.83-3.38)	**3.75** (3.44-4.11)	**4.84** (4.44-5.30)	**5.76** (5.27-6.29)	**7.12** (6.46-7.76)	**8.28** (7.45-9.02)	**9.55** (8.52-10.4)	**11.0** (9.67-11.9)	**13.1** (11.3-14.3)	**14.8** (12.7-16.3)
2-day	**3.56** (3.27-3.90)	**4.31** (3.97-4.73)	**5.54** (5.08-6.06)	**6.58** (6.02-7.19)	**8.16** (7.40-8.89)	**9.52** (8.56-10.4)	**11.0** (9.82-12.0)	**12.7** (11.2-13.9)	**15.3** (13.2-16.8)	**17.5** (14.8-19.3)
3-day	**3.79** (3.50-4.13)	**4.59** (4.24-5.01)	**5.86** (5.40-6.38)	**6.94** (6.37-7.54)	**8.52** (7.76-9.25)	**9.87** (8.93-10.7)	**11.4** (10.2-12.3)	**13.0** (11.5-14.1)	**15.4** (13.4-16.9)	**17.6** (15.1-19.4)
4-day	**4.02** (3.72-4.36)	**4.86** (4.51-5.29)	**6.19** (5.72-6.71)	**7.29** (6.71-7.90)	**8.88** (8.13-9.62)	**10.2** (9.30-11.1)	**11.7** (10.5-12.6)	**13.2** (11.8-14.4)	**15.6** (13.7-17.0)	**17.8** (15.4-19.6)
7-day	**4.69** (4.36-5.07)	**5.65** (5.26-6.12)	**7.10** (6.59-7.67)	**8.29** (7.67-8.95)	**10.0** (9.21-10.8)	**11.4** (10.4-12.3)	**13.0** (11.7-14.0)	**14.6** (13.1-15.8)	**17.0** (15.0-18.5)	**19.0** (16.5-20.8)
10-day	**5.28** (4.95-5.67)	**6.34** (5.93-6.80)	**7.85** (7.33-8.41)	**9.09** (8.48-9.74)	**10.9** (10.1-11.7)	**12.4** (11.4-13.3)	**14.0** (12.7-15.0)	**15.6** (14.1-16.8)	**18.1** (16.1-19.6)	**20.0** (17.6-21.8)
20-day	**7.18** (6.75-7.65)	**8.55** (8.05-9.12)	**10.4** (9.77-11.1)	**11.9** (11.2-12.7)	**14.1** (13.1-15.0)	**15.8** (14.6-16.9)	**17.7** (16.2-18.9)	**19.6** (17.9-21.0)	**22.3** (20.1-24.1)	**24.6** (21.8-26.6)
30-day	**8.85** (8.36-9.40)	**10.5** (9.93-11.2)	**12.6** (11.9-13.4)	**14.4** (13.5-15.2)	**16.7** (15.6-17.7)	**18.6** (17.3-19.8)	**20.5** (19.0-21.8)	**22.5** (20.7-24.0)	**25.2** (22.9-27.1)	**27.3** (24.6-29.5)
45-day	**11.0** (10.4-11.7)	**13.0** (12.3-13.8)	**15.5** (14.6-16.5)	**17.6** (16.6-18.7)	**20.6** (19.2-21.8)	**23.0** (21.4-24.4)	**25.4** (23.5-27.1)	**28.0** (25.7-29.9)	**31.7** (28.7-33.9)	**34.6** (31.0-37.2)
60-day	**13.2** (12.4-13.9)	**15.5** (14.7-16.4)	**18.4** (17.4-19.4)	**20.6** (19.5-21.8)	**23.7** (22.3-25.1)	**26.2** (24.5-27.7)	**28.6** (26.7-30.4)	**31.1** (28.8-33.1)	**34.5** (31.7-37.0)	**37.2** (33.8-40.0)

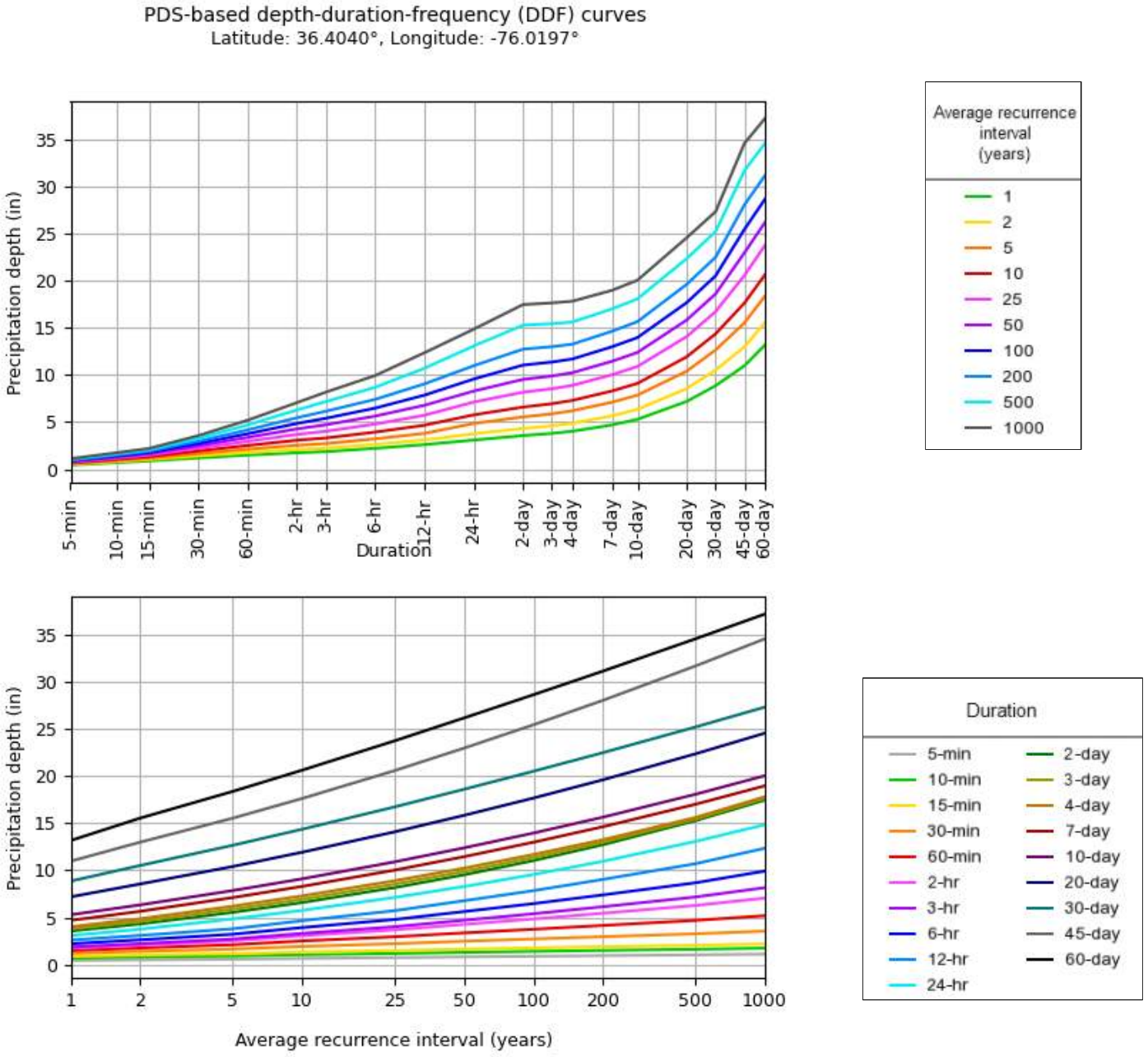
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



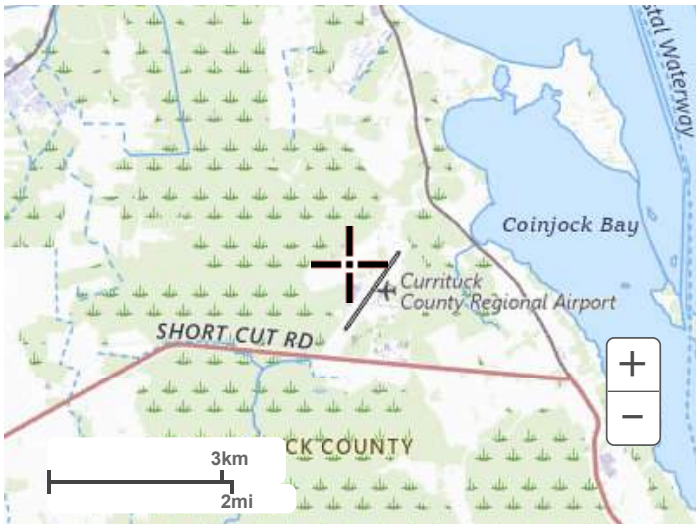
NOAA Atlas 14, Volume 2, Version 3

Created (GMT): Tue Jun 10 16:06:49 2025

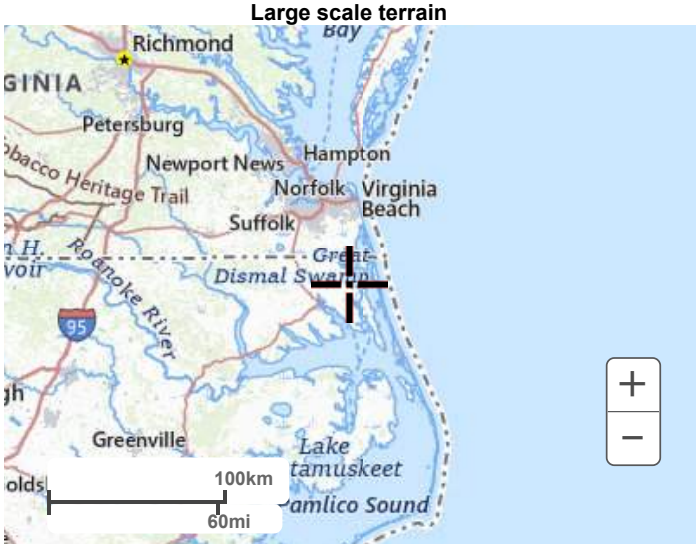
Back to Top

Maps & aerials

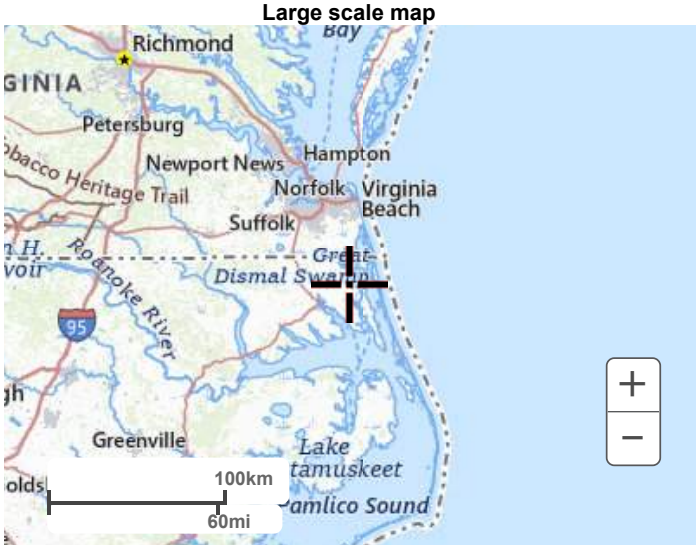
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

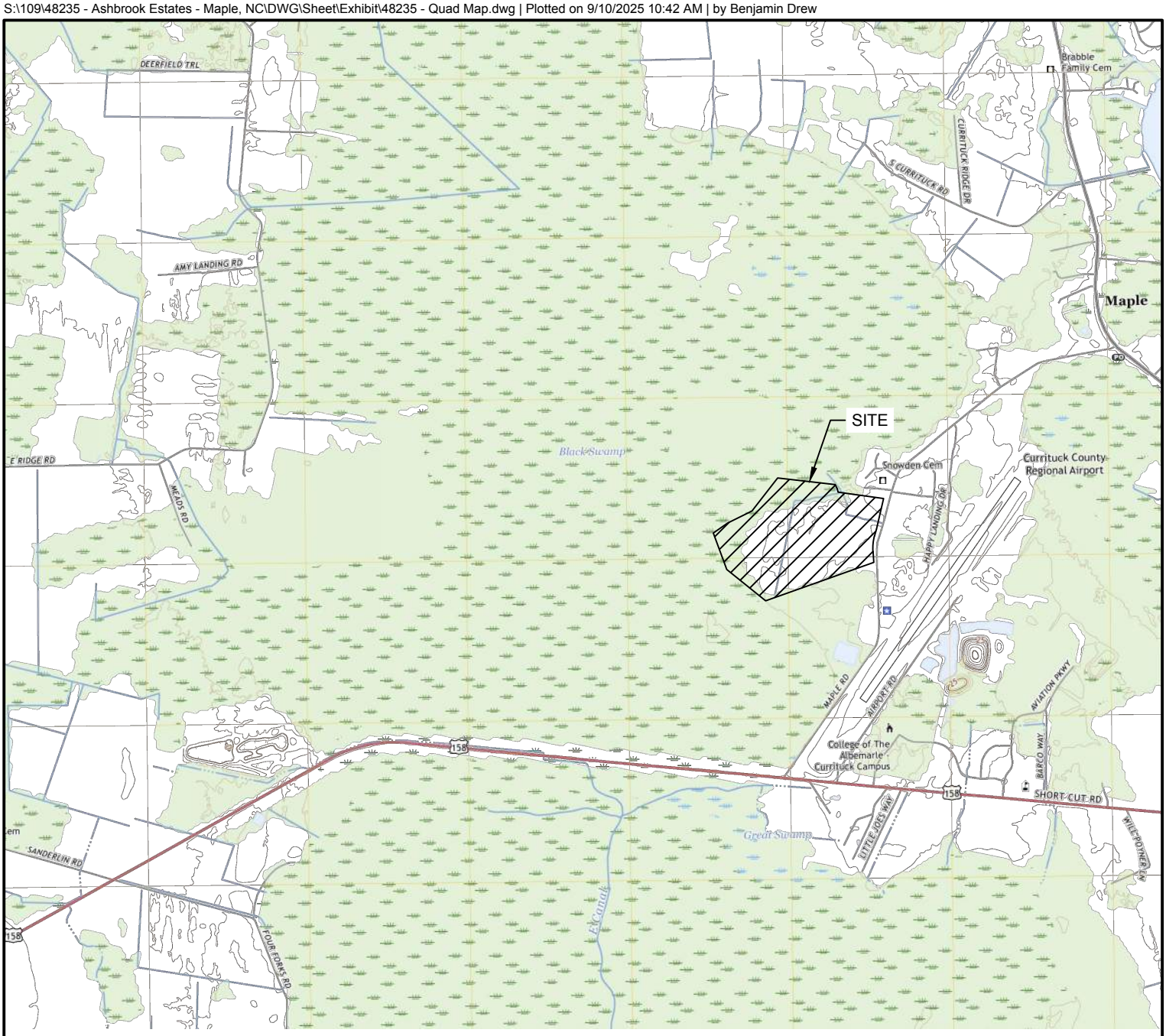
Disclaimer

Appendix D

Quad Map

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

S:\109\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\Exhibit\48235 - Quad Map.dwg | Plotted on 9/10/2025 10:42 AM | by Benjamin Drew



USGS QUAD MAP EXHIBIT

CURRITUCK, NC

2022

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

FEET

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

CRAWFORD TOWNSHIP	*CURRITUCK COUNTY*
Date:9/10/2025	*Scale:1" = 3000'*
Sheet 1 of 1	*J.N.:48235*
Drawn by:BCD	*Checked by:KDH*

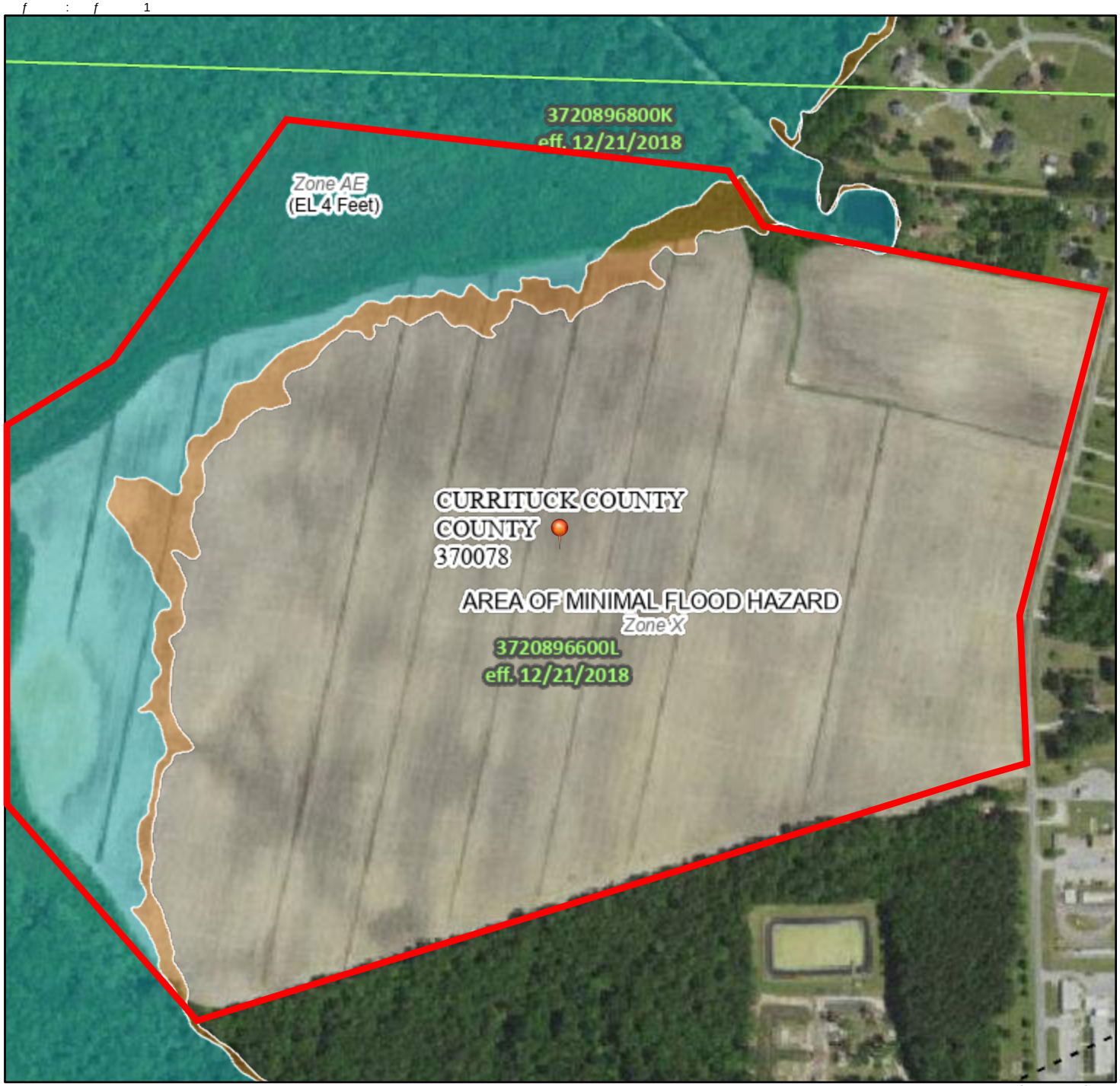
TIMMONS GROUP

Appendix E

Flood Map

1DWLRQDO)ORRG +D]DUG / FEMA) F6HWWH

f : f 1



)HHW

f : f 1

/HJHQG

6(( ),6 5(3257)25 '(7$,/(' /(*(1' $1' ,1'(; 0$3)25),50

63(&,$/)/2 +$=$5' $5(:LWKRXW %DVH)ORRG (O =RQH $ 9 $:LWK %)(RU +HLJKW 5HGXFHG)ORRG =RQH 9 5HJXODWRU\ )ORRGZD\

$QQXDO &KDQFH)ORR RI DQQXDO FKDQFH IO GHSWK OHVV WKDQ RQH DUHDV RI OHVV WKDQ RQ

27+(5 $5($6)/22' +$=$5')XWXUH &RQGLWLRQV &KDQFH)ORRG +D]DUG $UHD ZLWK 5HGXFHG)OR /HYHH 6HH 1RWHV $UHD ZLWK)ORRG 5LVN

12 6&5((1 $UHD RI 0LQLPDO)ORRG (IIHFWLYH /205V 27+(5 $5($6 $UHD RI 8QGHWHUPLQHG *(1(5$/ &KDQQHO &URVV 6HFWLRQV /HYHH 'LNH RU)ORRGZD

&URVV 6HFWLRQV ZLWK :DWHU 6XUIDFH (OHYDWL &RDVWDO 7UDQVHFW %DVH)ORRG (OHYDWLRQ /LPLW RI 6WXG\ -XULVGLFWLRQ %RXQGDU &RDVWDO 7UDQVHFW %DV 27+(5)($785(6 3URILOH %DVHOLQH +\GURJUDSKLF)HDWXUH

'LJLWDO 'DWD $YDLODEO 1R 'LJLWDO 'DWD $YDLOD 0$3 3$1(/6 8QPDSSHG

7KH SLQ GLVSOD\HG RQ WKH SRLQW VHOHFWHG E\ WKH XV DQ DXWKRULWDWLYH SURSHU

7KLV PDS FRPSOLHV ZLWK)(0$ V VWDQ GLJLWDO IORRG PDSV LI LW LV QRW YR 7KH EDVHPDS VKRZQ FRPSOLHV ZLWK) DFFXUDF\ VWDQGDUGV

7KH IORRG KD]DUG LQIRUPDWLRQ LV GH DXWKRULWDWLYH 1)+/ ZHE VHUYLFHV S ZDV H[SRUWHG RQ DW DQG GHV QRW UHIOHFW FKDQJHV RU DPHQGPHQWV VX WLPH 7KH 1)+/ DQG HIIHFWLYH LQIRUP EHFRPH VXSHUVHGHG E\ QHZ GDWD RYH

7KLV PDS LPDJH LV YRLG LI WKH RQH R HOHPHQWV GR QRW DSSHDU EDVHPDS OHJHQG VFDOH EDU PDS FUHDWLRQ G),50 SDQHO QXPEHU DQG),50 HIIHFWLY XQPDSSHG DQG XQPRGHUQL]HG DUHDV UHJXODWRU\ SXUSRVHV

%DVHPDS ,PDJHU\ 6RXUFH 86*6 1DWLRQDO 0DS

TIMMONS GROUP

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www.timmons.com

February 4, 2026

Kathleen Balaze
McAdams

Subject: **Response to Construction Drawings Comments**
Site Plan: Ashbrook Estates
Timmons Group Job #48235

Dear Ms. Balaze:

Please see below our responses to the Construction Drawings comments from McAdams.

1. For the alternative downstream analysis – please describe what nodes were analyzed in the pre/post conditions when determining the rise in the adjoing wetlands. Please also provide the geometry and depths in the conveyances that were analyzed in both conditions.

   Node SU-WTL was used to analyze the water level rise in the adjoining wetlands. Stage storage calculations have been provided. The stage storage for SU-WTL is identical in pre/post conditions.

2. Please describe how the storages in the pre/post condition were determined. It appears that more storage was accounted for in the post-condtion to OF3 than in the existing condition to OF4. Please clarify if this was used in determining the 0.01 ft rise in the post conditions and revise if necessary.

   Storage curves were calculated using stage storage utilizing topographic survey and LIDAR. The additional storage at node SU3 was included in post conditions to represent the lower area adjoining the wetlands that is being used as open space. This storage wasn't included in the pre conditions because subcatchment S03 shows no runoff under those conditions. The max storage shown in the model results is the maximum storage that is used not the overall capactiy of the storage itself so the increase in the post condition is due to the additional runoff. Stage storage tables used for storage development have been added to the narrative appendix.

3. Curve numbers were used for infiltration in the SWMM Model. Please provide curve number calculations for the subcatchments.

   Curve number calculations for pre/post scenarios have been added to the narrative appendix.

4. Sheet C3.0 – Please label this feature or remove.

   The line has been removed from the plans. It was a soil type boundary used for early plans and curve number determination.

5. Sheet C6.1 – Narrative indicates lot line swales are 4:1, but the detail shows 3:1 swales. Please revise.

   The detail is a generic detail for all ditches/swales and applies to the lot line swales as well as the roadside ditches and collector ditches. Side slopes are labeled accordingly on the plans. We have updated the detail to specify the slope for lot line swales.

Please let me know if you need any additional information or have any questions.

Sincerely,

Kimberly D. Hamby

Kimberly D. Hamby, PE
Sr. Project Manager
Timmons Group

Water Resources
ENVIRONMENTAL QUALITY

Project Detail

12/19/2025

Serial No: **25-01143** **Received:** 11/5/2025 **Project Type:** DISTRIBUTION EXTENSION

Water System No.: **NC0427010** **County:** CURRITUCK

Water System Name: CURRITUCK COUNTY WATER SYSTEM

Description: ASHBROOK ESTATES

Contacts

Applicant Name: Rebecca Gay **Engineer Name:** Kimberly D. Hamby

Reviewer Name: Corbett, Jonathan

Events

Event	Event Date	Comments
Approval mailed	12/12/2025	TB
Response to comments received	12/11/2025	TT
Authorization to construct	12/11/2025	WSMP: 00-02618
Project approval	12/11/2025	AP - JCC
Comment Sent	12/09/2025	Comments
Assigned to Reviewer	11/13/2025	Autogenerated by Team Leader - sfguyer
Application complete	11/07/2025	Admin Review - AE
Response to Application Incomplete Notification	11/07/2025	HB
Application Incomplete Notification Sent	11/05/2025	Admin Review - AE

JOSH STEIN
Governor
D. REID WILSON
Secretary
RICHARD E. ROGERS, JR.
Director

NORTH CAROLINA
Environmental Quality

December 11, 2025

Currituck County
Attention: Rebecca Gay, County Manager
153 Courthouse Rd., Suite 204
Currituck, NC 27929

Re: Engineering Plans Approval
Distribution Extension
Ashbrook Estates
CURRITUCK COUNTY WATER SYSTEM
Water System No.: NC0427010
CURRITUCK County
Serial No.: 25-01143

Dear Applicant:

Enclosed please find one copy of the "Application for Approval..." together with one copy of the referenced engineering plans bearing the Division of Water Resources stamp of approval for the referenced project. These engineering plans are approved under Division of Water Resources Serial Number, 25-01143 dated December 11, 2025.

Engineering plans prepared by Kimberly D. Hamby, P.E. call for the installation of approximately 3680 linear feet of 8-inch water main, 680 linear feet of 4-inch water main, fire hydrants, valves, and associated appurtenances along Tunstall Loop and Bowbray Court in Crawford Township, Currituck County. The proposed 8-inch watermain along Tunstall Loop Road will connect to the existing 12-inch water main along Maple Road. Construction of this project must be in accordance with Currituck County Water System's standard specifications.

Please note that in accordance with 15A NCAC 18C .0309(a), no construction, alteration, or expansion of a water system shall be placed into service or made available for human consumption until the Public Water Supply Section has issued Final Approval. Final Approval will be issued and mailed to the applicant upon receipt of both an Engineer's Certification and an Applicant's Certification submitted in accordance with 15A NCAC 18C .0303 (a) and (c).

These plans in the foregoing application are approved insofar as the protection of public health is concerned as provided in the rules, standards and criteria adopted under the authority of Chapter 130A-317 of the General Statutes. This approval does not constitute a warranty of the design, construction or future operation of the water system.

One copy of the "Application for Approval..." and a copy of the plans with a seal of approval from the department are enclosed. One copy of the approved documents in a digital format is being forwarded to our Washington Regional Office. Another copy is being retained in our records.

If the Public Water Supply Section can be of further service, please call (919) 707-9100.

Sincerely,

RB Sadosky

Rebecca Sadosky, Ph.D., Chief
Public Water Supply Section
Division of Water Resources

RS/JCC

Enclosures: Approval Documents

cc: Jamie Midgette, P.E., Washington Regional Office
Currituck County Health Department
Timmons Group

JOSH STEIN
Governor
D. REID WILSON
Secretary
RICHARD E. ROGERS, JR.
Director

NORTH CAROLINA
Environmental Quality

December 11, 2025

CURRITUCK COUNTY
ATTN: REBECCA GAY
153 COURTHOUSE RD, SUITE 204
CURRITUCK COUNTY, NC 27929

Re: **Authorization to Construct (This is not a Final Approval)**
Issue Date: December 11, 2025
ASHBROOK ESTATES
Serial No.: 25-01143 Water System No.: NC0427010
Currituck County

Dear Applicant:

This letter is to confirm that a complete Engineer's Report and a Water System Management Plan have been received, and that engineering plans and specifications have been approved by the Department for **ASHBROOK ESTATES, Serial No.: 25-01143.**

The "Authorization to Construct" is valid for 36 months from the issue date. Authorization to construct may be extended if the Rules Governing Public Water Systems [15A NCAC 18C] and site conditions have not changed (see Rule .0305). The "Authorization to Construct" and the engineering plans and specifications approval letter shall be posted at the primary entrance of the job site before and during construction.

Upon completion of the construction or modification, **and prior to placing the new construction or modification into service**, the applicant must submit an Engineer's Certification and Applicant's Certification to the Public Water Supply Section.

- **Engineer's Certification:** in accordance with Rule .0303(a), the applicant shall submit a certification statement signed and sealed by a registered professional engineer stating that construction was completed in accordance with approved engineering plans and specifications, including any provisions stipulated in the Department's engineering plan and specification approval letter.
- **Applicant's Certification:** in accordance with Rule .0303(c), the applicant shall submit a signed certification statement indicating that the requirements for an Operation and Maintenance Plan and Emergency Management Plan have been satisfied in accordance with Rule .0307(d) and (e) and that the system has a certified operator in accordance with Rule .1300. The "Applicant's Certification" form is available at http://www.ncwater.org/ (click on Public Water Supply Section, Plan Review, Plan Review Forms).

Certifications can be sent by mail or attachment to an e-mail message to **PWSSection.PlanReview@deq.nc.gov.**

If this "Authorization to Construct" is for a new public water system, the owner must submit a completed **application for an Operating Permit** and the appropriate fee. For a copy of the application for an Operating Permit please call (919) 707-9076.

Once the certifications and permit application and fee (if applicable) are received and determined adequate, the Department will issue a Final Approval letter to the applicant. In accordance with Rule .0309(a), **no portion of this project shall be placed into service until the Department has issued Final Approval.**

Please contact us at (919) 707-9100 if you have any questions or need additional information.

Sincerely,

RBSadosky

Rebecca Sadosky, Ph.D., Chief
Public Water Supply Section
Division of Water Resources, NCDEQ

cc: JAMIE MIDGETTE, P.E., Regional Engineer
TIMMONS GROUP

North Carolina Department of Environmental Quality
Division of Water Resources

Authorization to Construct

Project Applicant:	**CURRITUCK COUNTY**
Public Water System Name:	**CURRITUCK COUNTY WATER SYSTEM**
Water System No.:	**NC0427010**
Project Name:	**ASHBROOK ESTATES**
Serial No.:	**25-01143**
Issue Date:	**December 11, 2025**
Expiration Date:	36 Months after Issue Date

In accordance with 15A NCAC 18C .0305, this Authorization to Construct must be posted at the primary entrance to the job site during construction.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

December 22, 2025

Driveway Permit ID:
D011-027-25-00074

Subject: Driveway Permit – Ashbrook Estates
County: Currituck

Ashbrook Estates, LLC, Stuart Innes
PO Box 85
Moyock NC, 27958

Dear Applicant,

Attached for your files is a copy of a Residential Driveway Permit, which has been properly executed. Please note any comments, which may appear on the permit form.

Please feel free to contact the District Office at (252) 621-6400 if you have any questions.

Sincerely,

DocuSigned by:
Caitlin A Spear
930880FAC40F45A...

Caitlin A. Spear, PE
District Engineer

Attachments

Cc: Division Engineer
County Maintenance Engineer

Street and Driveway Access Permit
General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

Pre-Construction Notices

PCN 1 Approval may be rescinded upon failure to follow any of the provisions in this permit and may be considered a violation of the Street and Driveway Access Permit.

PCN 2 Prior to beginning work, the Applicant shall contact the Road Maintenance Supervisor for the corresponding county, to provide or verify the proposed pipe diameter. Please see the last page of the General Provisions for Contact Information

PCN 3 Prior to beginning work, it is the requirement of the Applicant to contact the appropriate Utility Companies involved and make arrangements to adjust or relocate any utilities that conflict with the proposed work.

PCN 4 It shall be the responsibility of the Applicant to determine the location of utilities within the permitted area. NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act requires underground utilities to be located by calling 811 prior to construction. The Applicant shall be responsible for notifying other utility owners and providing protection and safeguards to prevent damage or interruption to existing facilities and maintain access to them.

PCN 7 Trenching, bore pits and/or other excavations shall not be left open or unsafe overnight.

Legal & Right-of-Way

RW 1 This approval and associated plans and supporting documents shall not be interpreted to allow any design change or change in the intent of the design by the Owner, Design Engineer, or any of their representatives. Any revisions or changes to these approved plans or intent for construction must be obtained in writing from the District Engineer's office or their representative prior to construction or during construction, if an issue arises during construction to warrant changes.

RW 2 NCDOT does not guarantee the right of way on this road, nor will it be responsible for any claim for damages brought about by any property owner by reason of this installation. It is the responsibility of the Applicant to verify the right of way.

RW 3 Prior to the approval of any privately maintained facility within NCDOT right of way which the State of North Carolina is not the fee simple owner, written permission that each and every property owner affected by the installation shall be provided to NCDOT by the Applicant. (See corresponding attachment.)

RW 4 Applicant shall be responsible for obtaining all necessary permanent and/or temporary construction, drainage, utility and/or sight distance easements.

RW 6 No commercial advertising shall be allowed within NCDOT Right of Way.

Street and Driveway Access Permit
General Provisions

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Work Zone Traffic Control

TC 2 WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM

All personnel performing any activity inside the highway right of way are required to be familiar with the NCDOT Maintenance / Utility Traffic Control Guidelines (MUTCG). No specific training course or test is required for qualification in the Maintenance /Utility Traffic Control Guidelines (MUTCG).

All flagging, spotting, or operating Automated Flagger Assist Devices (AFAD) inside the highway right of way requires qualified and trained Work Zone Flaggers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel involved with the installation of Work Zone Traffic Control devices inside the highway right of way are required to be qualified and trained Work Zone Installers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel in charge of overseeing work zone Temporary Traffic Control operations and installations inside the highway right of way are required to be qualified and trained Work Zone Supervisors. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

For questions and/or additional information regarding this training program please refer to https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx or call the NCDOT Work Zone Traffic Control Section (919) 814-5000.

TC 3 The party of the second part shall employ traffic control measures that are in accordance with the prevailing federal, state, local, and NCDOT policies, standards, and procedures. These policies, standards, and procedures include, but are not limited to the following:

A) Manual on Uniform Traffic Control Devices (MUTCD) – North Carolina has adopted the MUTCD to provide basic principles and guidelines for traffic control device design, application, installation, and maintenance. North Carolina uses the MUTCD as a minimum requirement where higher supplemental standards specific to North Carolina are not established. Use fundamental principles and best practices of MUTCD (Part 6, Temporary Traffic Control).

B) NCDOT Maintenance / Utility Traffic Control Guidelines – This document enhances the fundamental principles and best practices established in MUTCD Part 6, Temporary Traffic Control, incorporating NCDOT-specific standards and details. It also covers important safety knowledge for a wide range of work zone job responsibilities.

TC 4 If the Traffic Control Supervisor determines that portable concrete barrier (PCB) is required to shield a hazard within the clear zone, then PCB shall be designed and sealed by a licensed North Carolina Professional Engineer. PCB plans and design calculations shall be submitted to the District Engineer for review and approval prior to installation.

TC 5 Ingress and egress shall be maintained to all businesses and dwellings affected by the project. Special attention shall be paid to police, EMS and fire stations, fire hydrants, secondary schools, and hospitals.

TC 6 Traffic shall be maintained at all times. All lanes of traffic are to be open during the hours of 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. Monday through Friday, during any time of inclement weather, or as directed by the District Engineer. Any violation of these hours will result in ceasing any further construction by the Encroaching Party or their contractor.

TC A) The Contractor shall not perform any work on US158 and/or NC12 that would require a lane closure or alter the traffic flow during the following day and time restrictions: May14th from thirty (30) minutes before sunset to thirty (30) minutes after sunrise October 4th or any other time when traffic is unusually heavy.

Street and Driveway Access Permit
General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

TC 9 Work requiring lane or shoulder closures shall not be performed on both sides of the road simultaneously within the same area.

TC 10 Any work requiring equipment or personnel within 5 feet of the edge of any travel lane of an undivided facility and within 10 feet of the edge of any travel lane of a divided facility shall require a lane closure with appropriate tapers per current NCDOT Roadway Standard Drawings or MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

TC 13 Any pavement markings that are damaged or obliterated shall be restored by the Applicant at no expense to NCDOT.

TC 14 Sidewalk closures shall be installed as necessary. Pedestrian traffic shall be detoured around these closures and shall be signed appropriately and in accordance with The American with Disabilities Act Accessibility Guidelines. The Applicant must adhere to the guidelines for accommodating pedestrians in encroachment work zones as described in the NCDOT Pedestrian Work Zone Accommodations Training found at https://www.youtube.com/watch?v=AOuYa5lW3dg&feature=youtu.be

TC 15 Parking and material storage shall not be allowed along the shoulders of any NCDOT roadways, any NCDOT roadways along the route and adjacent to the route.

TC 16 During periods of construction inactivity, place approved traffic control drums 3' minimum from the existing travel way.

TC 17 Any violation of the Traffic Control provisions will result in the termination of the permit application and liquidated damages in the amount of $2,000 per hour or any portion thereof and will be assessed by the District Engineer's office.

Environmental Regulations

EC 1 The Applicant 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. Additional information can be obtained by contacting the NCDOT Roadside Environmental Engineer regarding the North Carolina Natural Heritage Program or the United States Fish and Wildlife Services. Contact the Division Roadside Environmental Engineer's Office at (252) 621-6310

EC 2 When surface area in excess of one acre will be disturbed, the Applicant shall submit a Sediment and Erosion Control Plan which has been approved by the appropriate regulatory agency or authority prior to beginning any work on the Right of Way. Failure to provide this information shall be grounds for suspension of operations. Proper temporary and permanent measures shall be used to control erosion and sedimentation in accordance with the approved sediment and erosion control plan.

EC 3 The Verification of Compliance with Environmental Regulations (VCER-1) form is required for all non-utility permits or any utility permits when land disturbance within NCDOT right of way exceeds 1 acre. The VCER-1 form must be PE sealed by a NC registered professional engineer who has verified that all appropriate environmental permits (if applicable) have been obtained and all applicable environmental regulations have been followed.

EC 4 All erosion control devices and measures shall be constructed, installed, maintained, and removed by the Applicant in accordance with all applicable Federal, State, and Local laws, regulations, ordinances, and policies. Permanent vegetation shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer. All areas disturbed (shoulders, ditches, removed accesses, etc.) shall be graded and seeded in accordance with the latest NCDOT Standards Specifications for Roads and Structures and within 15 calendar days with an approved NCDOT seed mixture (all lawn type areas shall be maintained and reseeded as such). Seeding rates per acre shall be applied according to the Division Roadside Environmental Engineer. Any plant or vegetation in the NCDOT planted sites that is destroyed or damaged as a result of this permit shall be replaced with plants of like kind or similar shape.

EC 5 No trees within NCDOT shall be cut without authorization from the Division Roadside Environmental Engineer. An inventory of trees measuring greater than 4 caliper inches (measured 6" above the ground) is required when trees within C/A right of way will be impacted by the encroachment installation. Mitigation is required and will be determined by the Division Roadside Environmental Engineer's Office.

Street and Driveway Access Permit
General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

EC 6 Prior to installation, the Applicant shall contact the District Engineer to discuss any environmental issues associated with the installation to address concerns related to the root system of trees impacted by boring or non-utility construction of sidewalk, roadway widening, etc.

EC 7 The applicant is responsible for identifying project impacts to waters of the United States (wetlands, intermittent streams, perennial streams and ponds) located within the NCDOT right-of-way. The discharge of dredged or fill material into waters of the United States requires authorization from the United States Army Corps of Engineers (USACE) and certification from the North Carolina Division of Water Quality (NCDWQ). The applicant is required to obtain pertinent permits or certification from these regulatory agencies if construction of the project impacts waters of the United States within the NCDOT right-of-way. The applicant is responsible for complying with any river or stream Riparian Buffer Rule as regulated by the NCDWQ. The Rule regulates activity within a 50-foot buffer along perennial streams, intermittent streams and ponds. Additional information can be obtained by contacting the NCDWQ or the USACE.

EC 8 The contractor shall not begin the construction until after the traffic control and erosion control devices have been installed to the satisfaction of the District Engineer or their agent.

EC 9 The contractor shall perform all monitoring and record keeping and any required maintenance of erosion and sediment control measures to maintain compliance with stormwater regulations.

EC 10 Vegetative cover shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer.

General

G 1 An executed copy of the Street and Driveway Access Permit, provisions and approved plans shall be present at the construction site at all times. If safety or traffic conditions warrant such an action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.

G 2 The Applicant and/or their Contractor shall comply with all OSHA requirements. If OSHA visits the work area associated with this permit, the District Office shall be notified by the encroaching party immediately if any violations are cited.

G 3 Any REVISIONS marked in RED on the attached non-PE sealed plans shall be incorporated into and made part of the approved permit.

G 4 All disturbed areas are to be fully restored to current NCDOT minimum roadway standards or as directed by the District Engineer or their representative. Disturbed areas within NCDOT Right-of-Way include, but not limited to, any excavation areas, pavement removal, drainage or other features.

G 5 The Applicant shall notify the District Engineer or their representative immediately in the event any drainage structure is blocked, disturbed or damaged. All drainage structures disturbed, damaged or blocked shall be restored to its original condition as directed by the District Engineer or their representative.

G 8 Unless specified otherwise, during non-working hours, equipment shall be located away from the job site or parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Recovery Area. Also, during non-working hours, no parking or material storage shall be allowed along the shoulders of any state-maintained roadway.

G 9 No access to the job site, parking or material storage shall be allowed along or from the Control of Access Roadway.

G 10 Guardrail removed or damaged during construction shall be replaced or repaired to its original condition, meeting current NCDOT standards or as directed by the District Engineer or their representative.

G 12 Right of Way monuments disturbed during construction shall be referenced by a registered Land Surveyor and reset after construction.

G 13 All Traffic signs moved during construction shall be reinstalled as soon as possible to the satisfaction of the District Engineer or their representative.

Street and Driveway Access Permit
General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

G 16 All driveways disturbed during construction shall be returned to a state comparable with the condition of the driveways prior to construction.

G 17 Conformance with driveway permit review should be required in conjunction with this encroachment agreement. In the event there is a conflict between the driveway permit and the encroachment agreement, the District Engineer should resolve the conflict and notify the parties involved.

G 18 If the approved method of construction is unsuccessful and other means are required, prior approval must be obtained through the District Engineer before construction may continue.

G 22 Strict compliance with the Policy on Street and Driveway Access to North Carolina Highways manual shall be required.

G 23 The Applicant may delegate the performance of certain provisions of this agreement to contractors or other parties. However, this shall not in any way release the Applicant from its obligations to the terms and provisions of the permit.

Engineering

E 1 All traffic control, asphalt mixes, structures, construction, workmanship and construction methods, and materials shall be in compliance with the most-recent versions of the following resources: ASTM Standards, Manual on Uniform Traffic Control Devices, NCDOT Utilities Accommodations Manual, NCDOT Standard Specifications for Roads and Structures, NCDOT Roadway Standard Drawings, NCDOT Asphalt Quality Management System manual, and the approved plans.

Excavation

EX 1 Excavation material shall not be placed on pavement.

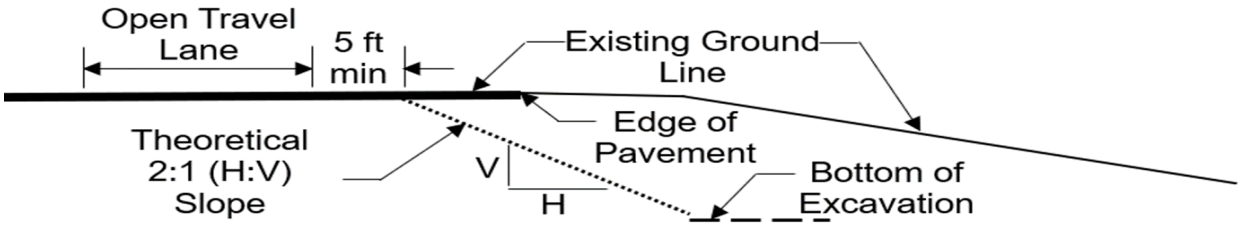
EX 2 It is the responsibility of the applicant and their contractor to prevent any mud/dirt from tracking onto the roadway. Any dirt which may collect on the roadway pavement from equipment and/or truck traffic on site shall be immediately removed to avoid any unsafe traffic conditions.

EX 3 The utility shall be installed within 5 feet of the right of way line and outside the 5-foot minimum from travel lane plus theoretical 2:1 slope from the edge of pavement to the bottom of the nearest excavation wall for temporary shoring. If the 2:1 slope plus 5 feet requirement above is met for traffic, then temporary shoring is typically only necessary to protect roadways from damage when a theoretical 1:1 slope from the edge of pavement intersects the nearest excavation wall. This rule of thumb should be used with caution and does not apply to all subsurface conditions, surcharge loadings and excavation geometries. Situations where this 1:1 slope is not recommended include groundwater depth is above bottom of excavation or excavation is deeper than 10 feet or in Type B or C soils as defined by OSHA Technical Manual. Temporary shoring may be avoided by locating trenches, bore pits, and other excavations far enough away from the open travel lane, edge of pavement and any existing structure, support, utility, property, etc. to be protected. Temporary shoring is required when a theoretical 2:1 slope from the bottom of excavation will intersect the existing ground line less than 5 feet from the outside edge of an open travel lane as shown in the figure below or when a theoretical 2:1 slope from the bottom of excavation will intersect any existing structure, support, utility, property, etc. to be protected.

Street and Driveway Access Permit
General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

EX 3



EX 4 Temporary shoring shall be designed and constructed in accordance with current NCDOT Standard Temporary Shoring provisions (refer to https://connect.ncdot.gov/resources/Specifications/Pages/2018-Specifications-and-Special-Provisions.aspx and see SP11 R002).

A) Temporary excavation shoring, such as sheet piling, shall be installed. The design of the shoring shall include the effects of traffic loads. The shoring system shall be designed and sealed by a licensed North Carolina Professional Engineer. Shoring plans and design calculations shall be submitted to the Division Engineer for review and approval prior to construction. (See NCDOT Utilities Accommodations Manual for more information on requirements for shoring plans and design calculations.) Trench boxes shall not be accepted as temporary shoring and will not be approved for use in instances where shoring is required to protect the highway, drainage structure, and/or supporting pavement or structure foundation.

B) All trench excavation inside the limits of the theoretical one-to-one slope, as defined by the policy, shall be completely backfilled and compacted at the end of each construction day. No portion of the trench shall be left open overnight. Any excavation that is not backfilled by the end of the workday must address any safety and traveling public concerns including accommodations for bicycles, pedestrians and persons with disabilities.

C) At the discretion of the District Engineer, a qualified NCDOT inspector shall be on the site at all times during construction. The applicant shall reimburse NCDOT for the cost of providing the inspector. If NCDOT cannot supply an inspector, the applicant (not the utility contractor) should make arrangements to have a qualified inspector, under the supervision of a licensed North Carolina Professional Engineer, on the site at all times. The Professional Registered Engineer shall certify that the utility was installed in accordance with the permit and that the backfill material meets the Statewide Borrow Criteria.

Street and Driveway Access Permit
General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

D) The length of parallel excavation shall be limited to the length necessary to install and backfill one joint of pipe at a time, not to exceed twenty-five (25) feet.

EX 5 The trench backfill material shall meet the Statewide Borrow Criteria. The trench shall be backfilled in accordance with Section 300-7 of the latest NCDOT Standard Specifications for Roads and Structures, which basically requires the backfill material to be placed in layers not to exceed 6 inches loose and compacted to at least 95% of the density obtained by compacting a sample in accordance with AASHTO T99 as modified by DOT.

EX 6 All material to a depth of 8 inches below the finished surface of the subgrade shall be compacted to a density equal to at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. The subgrade shall be compacted at a moisture content which is approximately that required to produce the maximum density indicated by the above test method. The contractor shall dry or add moisture to the subgrade when required to provide a uniformly compacted and acceptable subgrade. The option to backfill any trenches with dirt or either #57 stone or #78 stone with consolidation with a plate tamp and without a conventional density test may be pursued with the written consent of the District Engineer. If this option is exercised, then roadway ABC stone and asphalt repair as required will also be specified by the District Engineer.

EX 7 All roadway sections, ditch lines and slopes, and shoulders affected by the operations under this encroachment shall be restored to the satisfaction of the District Engineer.

Pavement Repair

PR 7 Any pavement damaged because of settlement of the pavement or damaged by equipment used to perform the permitted work, shall be re-surfaced to the satisfaction of the District Engineer. This may include the removal of pavement and a 50' mechanical overlay. All pavement work and pavement markings (temporary and final) are the responsibility of the Applicant.

Post-Construction

I 1 The Applicant shall notify the Roadway Maintenance Supervisor's office within 2 business days after construction is complete. The Roadway Maintenance Supervisor may perform a construction inspection. Any deficiencies may be noted and reported to the Applicant to make immediate repairs or resolve any issues to restore the right-of-way to a similar condition prior to construction, including pavement, signage, traffic signals, pavement markings, drainage, structures/pipes, or other highway design features.

Roadway Maintenance Contact Information by County:

Camden
(252) 621-6420

Currituck
(252) 421-7200

Currituck OBX / Dare
(252) 473-2990

Gates
(252) 401-6050

Pasquotank
(252) 621-6420

Perquimans
(252) 426-4170

APPLICATION IDENTIFICATION		N.C. DEPARTMENT OF TRANSPORTATION STREET AND DRIVEWAY ACCESS PERMIT APPLICATION
Driveway Permit No. **D011-027-25-00074**	Date of Application December 22, 2025	
County: Currituck		
Development Name: Ashbrook Estates		

LOCATION OF PROPERTY:

Route/Road: Maple Road

Exact Distance 1.0 ☒ Miles ☐ Feet N ☒ S ☐ E ☒ W ☐

From the Intersection of Route No. US Hwy 158 and Route No. SR 1246 Toward **NC Hwy 168**

Property Will Be Used For: ☒ Residential /Subdivision ☐ Commercial ☐ Educational Facilities ☐ TND ☐ Emergency Services ☐ Other

Property: ☒ is ☐ is not within Currituck County ~~City~~ Zoning Area.

AGREEMENT

- I, the undersigned property owner, request access and permission to construct driveway(s) or street(s) on public right-of-way at the above location.
- I agree to construct and maintain driveway(s) or street entrance(s) in absolute conformance with the current "Policy on Street and Driveway Access to North Carolina Highways" as adopted by the North Carolina Department of Transportation.
- I agree that no signs or objects will be placed on or over the public right-of-way other than those approved by NCDOT.
- I agree that the driveway(s) or street(s) will be constructed as shown on the attached plans.
- I agree that that driveway(s) or street(s) as used in this agreement include any approach tapers, storage lanes or speed change lanes as deemed necessary.
- I agree that if any future improvements to the roadway become necessary, the portion of driveway(s) or street(s) located on public right-of-way will be considered the property of the North Carolina Department of Transportation, and I will not be entitled to reimbursement or have any claim for present expenditures for driveway or street construction.
- I agree that this permit becomes void if construction of driveway(s) or street(s) is not completed within the time specified by the "Policy on Street and Driveway Access to North Carolina Highways".
- I agree to pay a $50 construction inspection fee. Make checks payable to NCDOT. This fee will be reimbursed if application is denied.
- I agree to construct and maintain the driveway(s) or street(s) in a safe manner so as not to interfere with or endanger the public travel.
- I agree to provide during and following construction proper signs, signal lights, flaggers and other warning devices for the protection of traffic in conformance with the current "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 District Engineer.
- I agree to indemnify and save harmless the North Carolina Department of Transportation from all damages and claims for damage that may arise by reason of this construction.
- I agree that the North Carolina Department of Transportation will assume no responsibility for any damages that may be caused to such facilities, within the highway right-of-way limits, in carrying out its construction.
- I agree to provide a Performance and Indemnity Bond in the amount specified by the Division of Highways for any construction proposed on the State Highway system.
- The granting of this permit is subject to the regulatory powers of the NC Department of Transportation as provided by law and as set forth in the N.C. Policy on Driveways and shall not be construed as a contract access point.
- I agree that the entire cost of constructing and maintaining an approved private street or driveway access connection and conditions of this permit will be borne by the property owner, the applicant, and their grantees, successors, and assignees.
- **I AGREE TO NOTIFY THE DISTRICT ENGINEER WHEN THE PROPOSED WORK BEGINS AND WHEN IT IS COMPLETED.**

SIGNATURES OF APPLICANT

PROPERTY OWNER (APPLICANT)		WITNESS	
COMPANY	Ashbrook Estates, LLC, Stuart Innes	NAME	Megan E. Morningstar
SIGNATURE		SIGNATURE	Megan C. Morningstar
ADDRESS	PO Box 85	ADDRESS	1805 W City Dr., Unit E
	Moyock, NC 27958 Phone No. 252.619.6919		Elizabeth City, NC 27909

AUTHORIZED AGENT		WITNESS	
COMPANY		NAME	
SIGNATURE		SIGNATURE	
ADDRESS		ADDRESS	
	Phone No.		

APPROVALS

APPLICATION RECEIVED BY DISTRICT ENGINEER

SIGNATURE DATE

APPLICATION APPROVED BY LOCAL GOVERNMENTAL AUTHORITY (when required)

SIGNATURE TITLE DATE

APPLICATION APPROVED BY NCDOT

DocuSigned by: Caitlin A Spear 40F45A...
SIGNATURE DISTRICT ENGINEER TITLE 01/22/2026 DATE

INSPECTION BY NCDOT

SIGNATURE TITLE DATE

COMMENTS:

ASHBROOK ESTATES

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

SITE DATA:

1. OWNER:
   ASHBROOK ESTATES, LLC
   PO BOX 85
   MOYOCK, NC 27958
   (252) 619-6919
   stuartinnes1@gmail.com

2. SITE INFORMATION:
   PIN: 005200000120000
   GPIN: 8977-58-4666
   D.B. 1640, PG. 711
   P.C. R, SLD. 147
   ZONING: AG (AGRICULTURAL)
   AIRPORT OVERLAY DISTRICT
   EXISTING USE: AGRICULTURAL
   PROPOSED USE: RESIDENTIAL
   PARCEL AREA: 130.73 AC
   PROPOSED LOTS: 52
   MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC (100.0%)

   CONSERVATION AREA REQUIRED:
   60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
   0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

   PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
   SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
   TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

   OVERALL DENSITY CALCULATION:
   AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

   PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
   LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
   ASPHALT = 89,979 SF
   CONCRETE = 39,240 SF
   FUTURE = 5,000 SF
   TOTAL = 550,219 SF (9.66%)

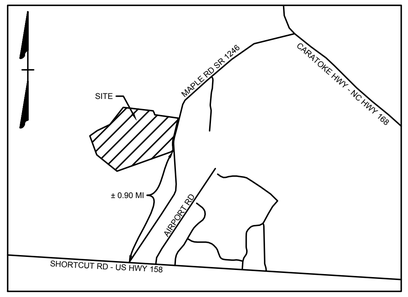
6. REQUIRED MINIMUM BUILDING SETBACKS:
   FRONT: 50'
   SIDE: 15'
   CORNER: 50'
   REAR: 25'

7. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

8. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
   NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
   A N 979464.76 sFT
     E 2,877,209.80 sFT
     ELEV 12.09'
   B N 978,636.77 sFT
     E 2,877,010.91 sFT
     ELEV 11.89'
   C N 978,173.61 sFT
     E 2,877,007.22 sFT
     ELEV 13.00'

9. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

10. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.



VICINITY MAP
NO SCALE

SHEET LIST

SHEET NUMBER	SHEET TITLE
C0.0	COVER SHEET
C1.0	EXISTING CONDITIONS OVERVIEW
C1.1	EXISTING CONDITIONS
C1.2	EXISTING CONDITIONS
C1.3	EXISTING CONDITIONS
C2.0	SUBDIVISION PLAN OVERVIEW
C2.1	SUBDIVISION PLAN
C2.2	SUBDIVISION PLAN
C2.3	SUBDIVISION PLAN
C2.4	SUBDIVISION PLAN
C2.5	SITE PLAN OVERVIEW
C2.6	SITE PLAN
C2.7	SITE PLAN
C2.8	SITE PLAN
C2.9	SITE PLAN
C3.0	GRADING & DRAINAGE OVERVIEW
C3.1	GRADING & DRAINAGE PLAN
C3.2	GRADING & DRAINAGE PLAN
C3.3	GRADING & DRAINAGE PLAN
C3.4	GRADING & DRAINAGE PLAN
C4.0	EROSION CONTROL PLAN
C5.0	UTILITY PLAN
C6.0	SITE DETAILS
C6.1	EROSION CONTROL DETAILS
C6.2	EROSION CONTROL DETAILS
C6.3	WATER LINE DETAILS

OWNER/DEVELOPER

ASHBROOK ESTATES, LLC
301 EAST MAIN STREET
ELIZABETH CITY, NC 27909
CONTACT: STUART INNES
PHONE: (252) 619-6919
EMAIL: stuartinnes1@gmail.com

CIVIL ENGINEER

TIMMONS GROUP
1805 WEST CITY DRIVE, UNIT E
ELIZABETH CITY, NC 27909
CONTACT: KIMBERLY HAMBY, PE
PHONE: (252) 621-5029
EMAIL: kim.hamby@timmons.com

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY 10-27-25

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: -
CHECKED BY: KDH
SCALE: NO SCALE

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
COVER SHEET

JOB NO. 48235
SHEET NO. C0.0

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(252) 619-6919
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D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

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RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC (100.0%)

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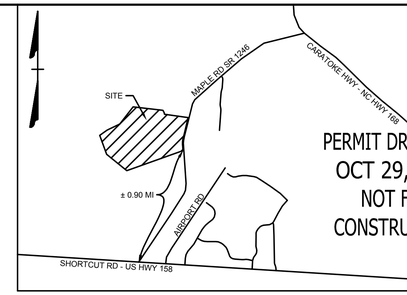
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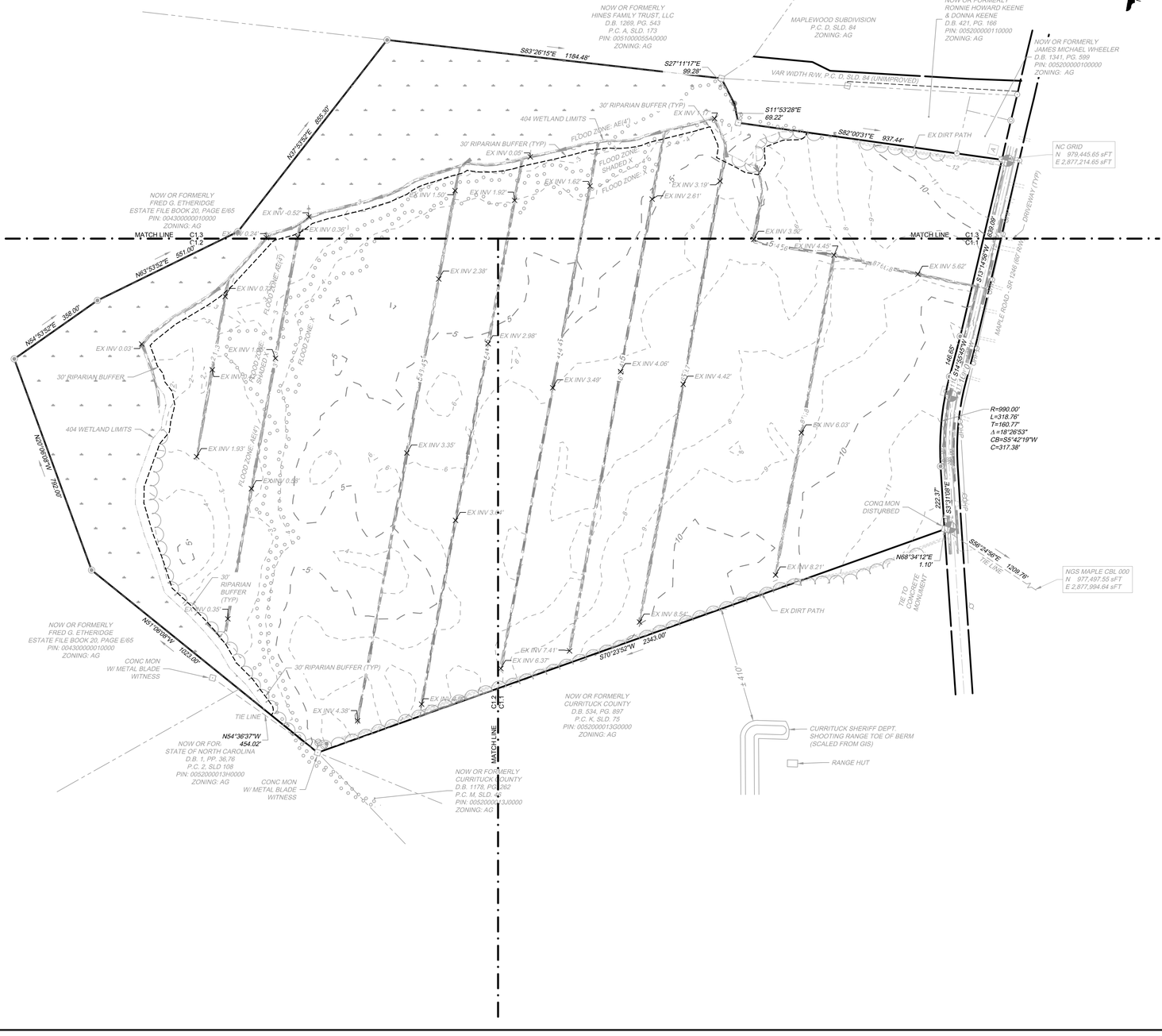
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VICINITY MAP
NO SCALE

NC GRID NAD 83(2011)



LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
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- EX BOLLARD
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- W — PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

SCALE 1"=200'
0 200' 400'

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
10-29-25

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX. 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY N/A
CHECKED BY KDH
SCALE 1" = 200'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

EXISTING CONDITIONS OVERVIEW

JOB NO. 48235
SHEET NO. C1.0

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PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
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GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
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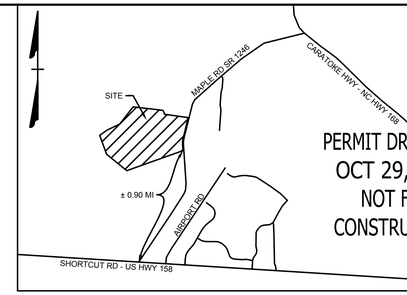
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VICINITY MAP
NO SCALE

LEGEND

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- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
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SCALE 1"=100'
0 100' 200'

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 KIMBERLY D. HAMBY 10-29-25

THIS DRAWING PREPARED AT THE
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TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

EXISTING CONDITIONS

JOB NO. 48235
SHEET NO. C1.1

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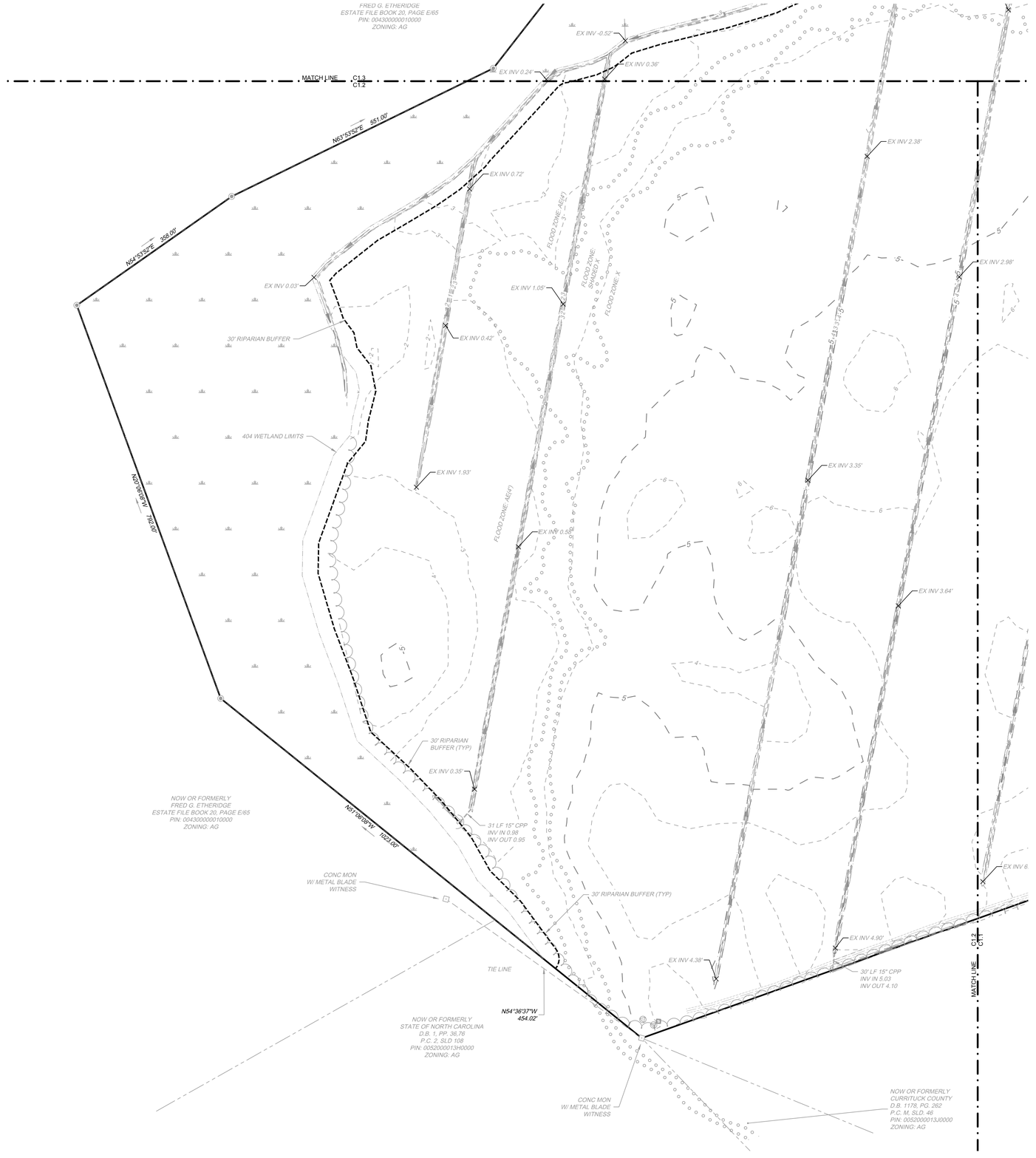
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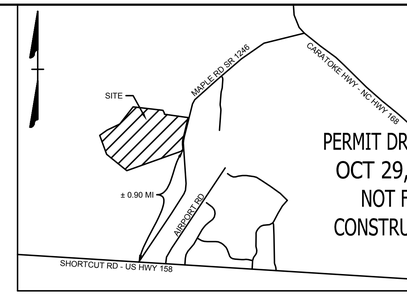
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ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
EXISTING CONDITIONS

JOB NO. 48235
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   SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
   TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

   OVERALL DENSITY CALCULATION:
   AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

   PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
   LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
   ASPHALT = 89,979 SF
   CONCRETE = 39,240 SF
   FUTURE = 5,000 SF
   TOTAL = 550,219 SF (9.66%)

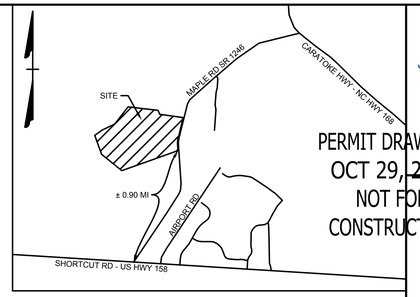
6. REQUIRED MINIMUM BUILDING SETBACKS:
   FRONT: 50'
   SIDE: 15'
   CORNER: 50'
   REAR: 25'

7. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

8. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
   NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
   A N 979464.76 sFT
     E 2,877,209.80 sFT
     ELEV 12.09'
   B N 978,636.77 sFT
     E 2,877,010.91 sFT
     ELEV 11.89'
   C N 978,173.61 sFT
     E 2,877,007.22 sFT
     ELEV 13.00'

9. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

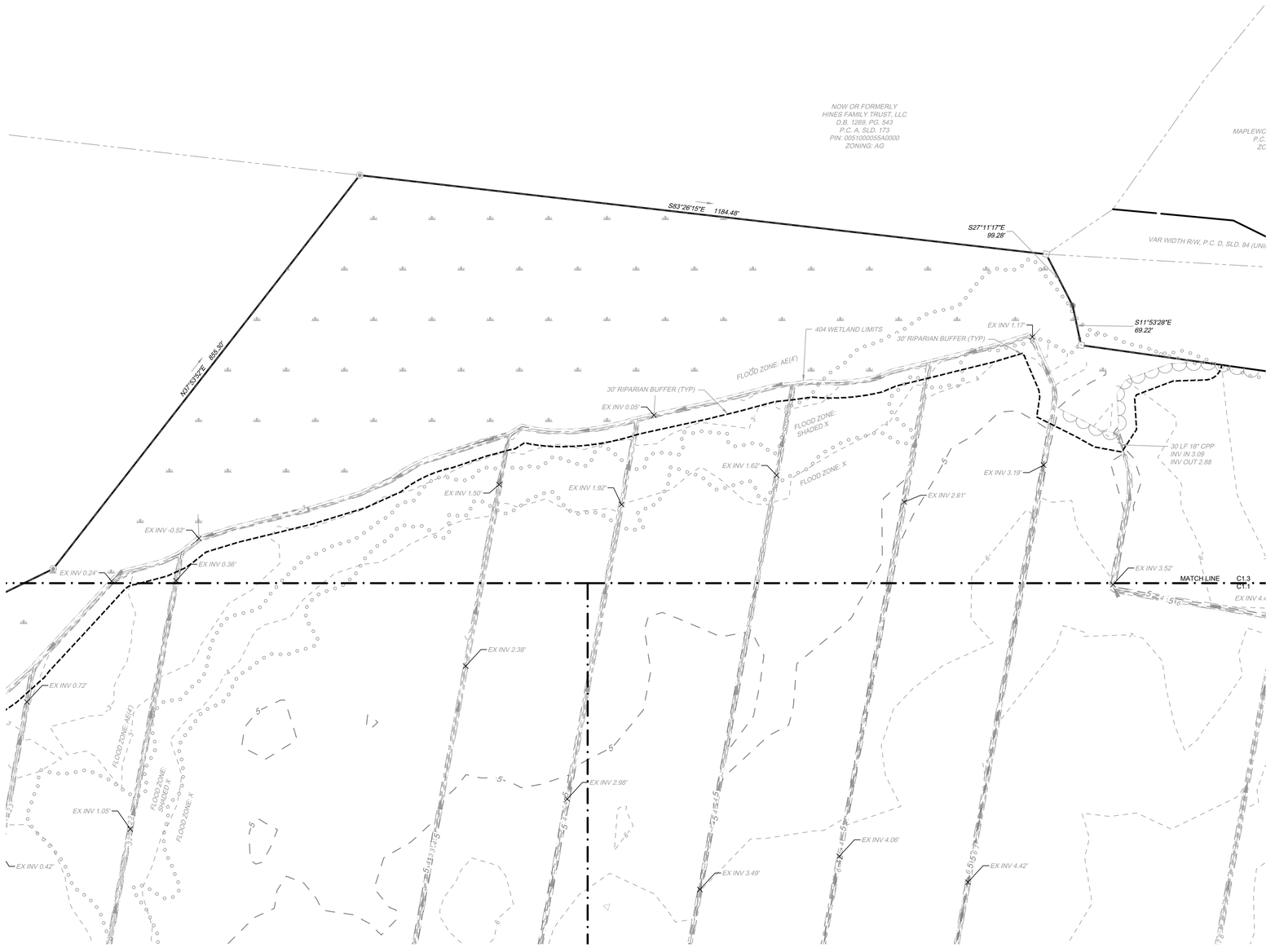
10. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.



VICINITY MAP
NO SCALE

NC GRID NAD 83(2011)

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION



LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER (OHP)
- EX WATER LINE (W)
- EX CENTER OF DITCH
- EX TOP OF BANK
- EX MAJOR CONTOUR (5)
- EX MINOR CONTOUR (4)
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- EX SPOT GRADE (X.XX')
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- PROP MAJOR CONTOUR (5)
- PROP MINOR CONTOUR (4)
- PROP STORM PIPE
- PROP WATER LINE (W)
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE (X.XX')

SCALE 1"=100'
0 100' 200'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 (0-21-25) KIMBERLY D. HAMBY

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX. 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY N/A
CHECKED BY KDH
SCALE 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
EXISTING CONDITIONS

JOB NO. 48235
SHEET NO. C1.3

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S:\10948235 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C1.0-EXIST .dwg | Plotted on 10/29/2025 10:50 AM | by Kim Hamby

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

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA: 2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA: 207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA: 3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA: 5,694,834 SF = 130.73 AC (100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

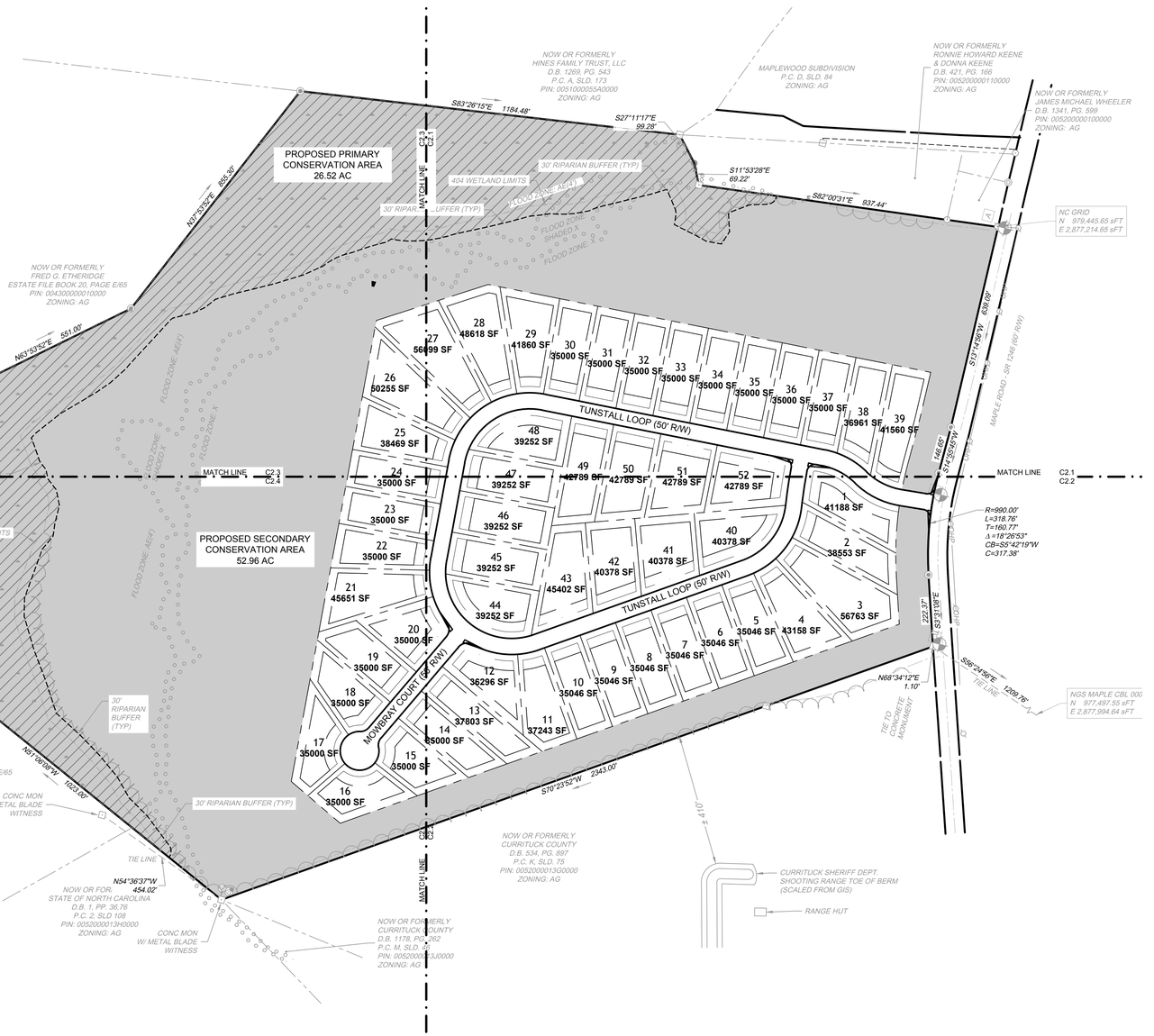
30' EDGE OF PAVEMENT RADIUS REQUIRED FOR ALL STREET CONNECTIONS

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
C39	205.00	8.80	4.40	2°27'31"	N71°37'37"E	8.80
C40	205.00	378.60	271.14	105°48'57"	S54°14'09"E	327.04
C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14



LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
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- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
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- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
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- PROP MAJOR CONTOUR
- PROP MINOR CONTOUR
- PROP STORM PIPE
- PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

NC GRID (NAD 83 (2011))

SCALE 1"=200'
0 200' 400'

PRELIMINARY PLAT
NOV 26, 2025
NOT FOR RECORDATION OR CONVEYANCE

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = 200'

TIMMONS GROUP

ASHBROOK ESTATES
NORTH CAROLINA LICENSE NO. C-1652
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

JOB NO. 48235
SHEET NO. C2.0

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

S:\105\48235 - Ashbrook Estates - Maps_NCDWGSheetCD\48235C-C2.0-PRELIM PLAT.dwg | Plotted on 11/26/2025 3:03 PM | by Kim Hamby

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

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SIDE: 15'
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REAR: 25'

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25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

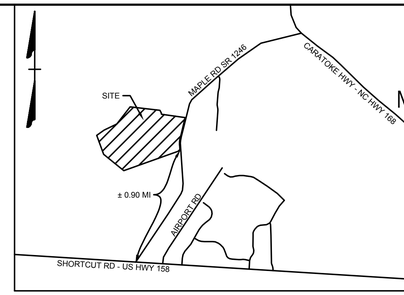
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10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

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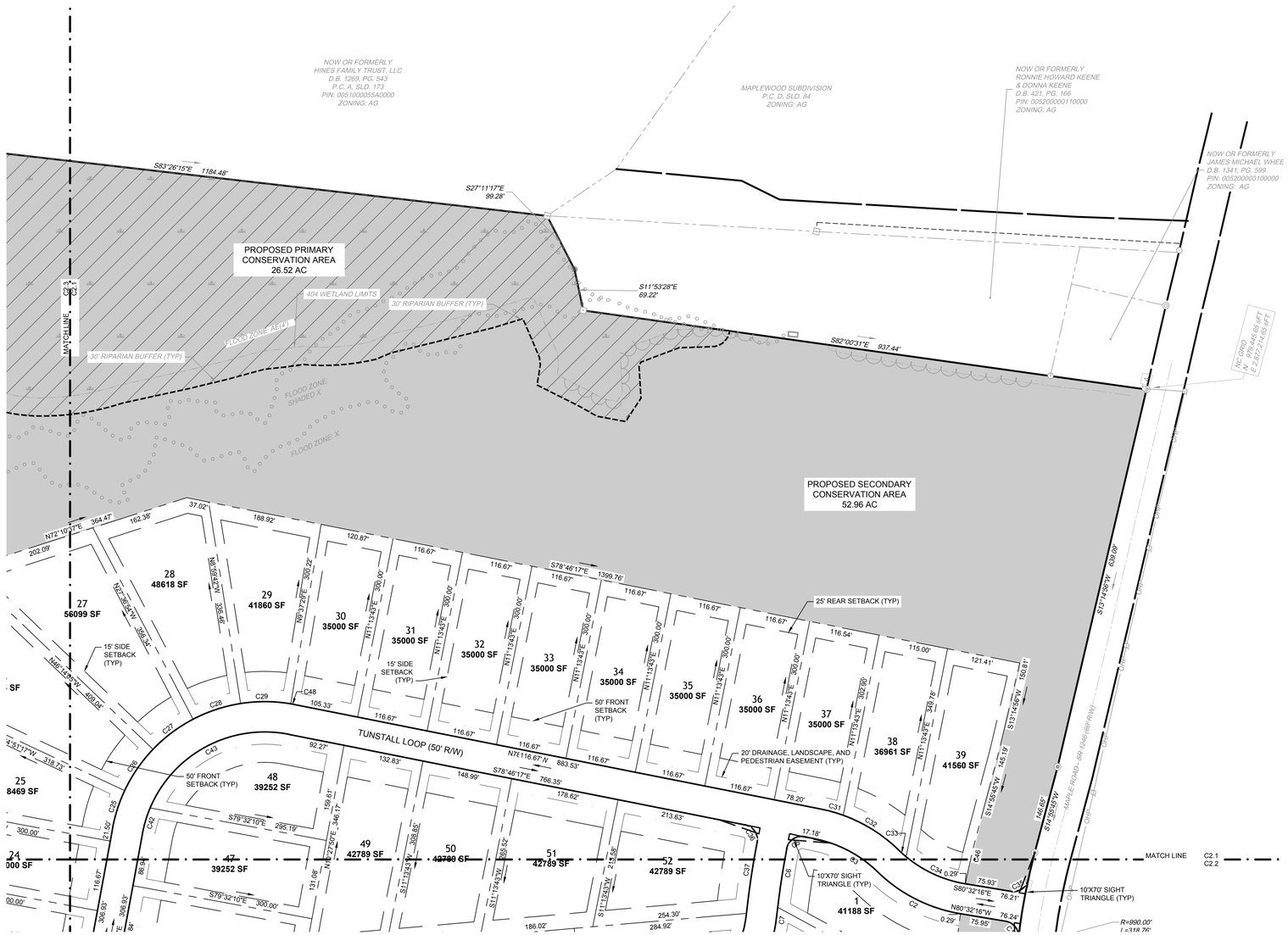
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CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
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C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE						
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C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
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C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14



VICINITY MAP
NO SCALE

NC GRID NAD 83(2011)



SCALE 1"=100'
0 100' 200'

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER
- EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- PROP MAJOR CONTOUR
- PROP MINOR CONTOUR
- PROP STORM PIPE
- PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

PRELIMINARY PLAT
NOV 26, 2025
NOT FOR RECORDATION OR CONVEYANCE

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
	10/29/2025

DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

JOB NO. 48235
SHEET NO. C2.1

These plans and associated documents are the exclusive property of TIMMONS GROUP and may not be reproduced in whole or in part and shall not be used for any purpose whatsoever, inclusive, but not limited to construction, bidding, and/or construction staking without the express written consent of TIMMONS GROUP.

S:\1\48\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C2.0-PREL IM PLAT.dwg | Plotted on 11/26/2025 3:03 PM | by Kim Hamby

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

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC	(35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC	(3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC	(60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC	(100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

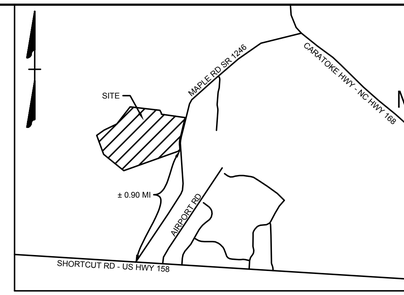
10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

CURVE TABLE					
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE					
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
C39	205.00	8.80	4.40	2°27'31"	N71°37'37"E	8.80
C40	205.00	378.60	271.14	105°48'57"	S54°14'09"E	327.04
C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14





VICINITY MAP

NO SCALE

NC GRID NAD 83(2011)

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- OHP — EX OVERHEAD POWER
- W — EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- 5 — EX MAJOR CONTOUR
- 4 — EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- X.XX' — EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- 5 — PROP MAJOR CONTOUR
- 4 — PROP MINOR CONTOUR
- PROP STORM PIPE
- W — PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' — PROP SPOT GRADE

SCALE 1"=100'
0 100' 200'

PRELIMINARY PLAT
NOV 26, 2025
NOT FOR RECORDATION OR CONVEYANCE

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = 100'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

JOB NO. 48235
SHEET NO. C2.2

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S:\108\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\C2\48235C-C2.0-PRELIM PLAT.dwg | Plotted on 11/26/2025 3:04 PM | by Kim Hamby

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

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA: 2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA: 207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA: 3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA: 5,694,834 SF = 130.73 AC (100.0%)

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60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
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AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

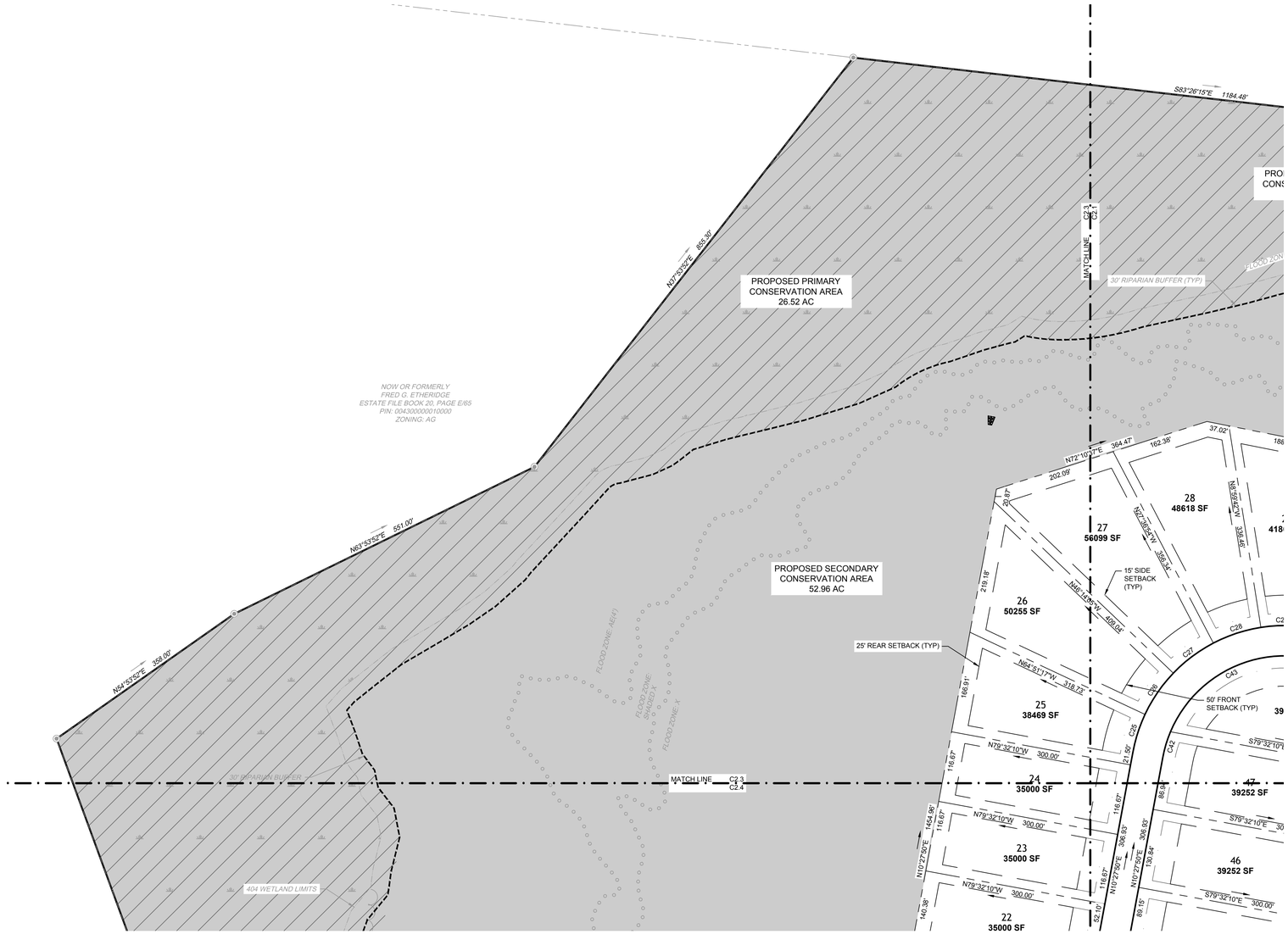
9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

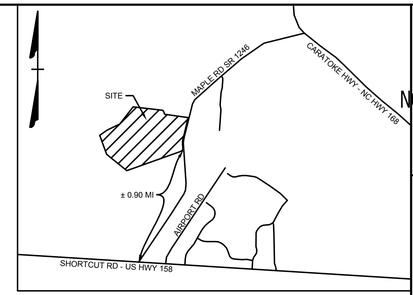
10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
C39	205.00	8.80	4.40	2°27'31"	N71°37'37"E	8.80
C40	205.00	378.60	271.14	105°48'57"	S54°14'09"E	327.04
C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14





VICINITY MAP
NO SCALE

NC GRID NAD 83(2011)

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
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- PROP WATER LINE
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- PROP SWALE
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SCALE 1"=100'
0 100' 200'

PRELIMINARY PLAT
NOV 26, 2025
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ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

JOB NO. 48235
SHEET NO. C2.3

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

S:\110\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C2.0-PRELIM PLAT.dwg | Plotted on 11/26/2025 3:04 PM | by Kim Hamby

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA: 2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA: 207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA: 3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA: 5,694,834 SF = 130.73 AC (100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT
ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

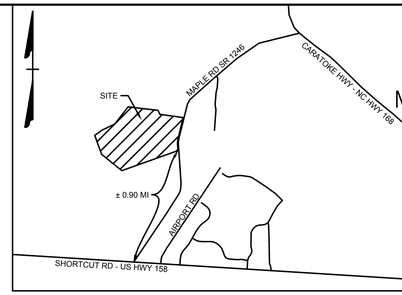
9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

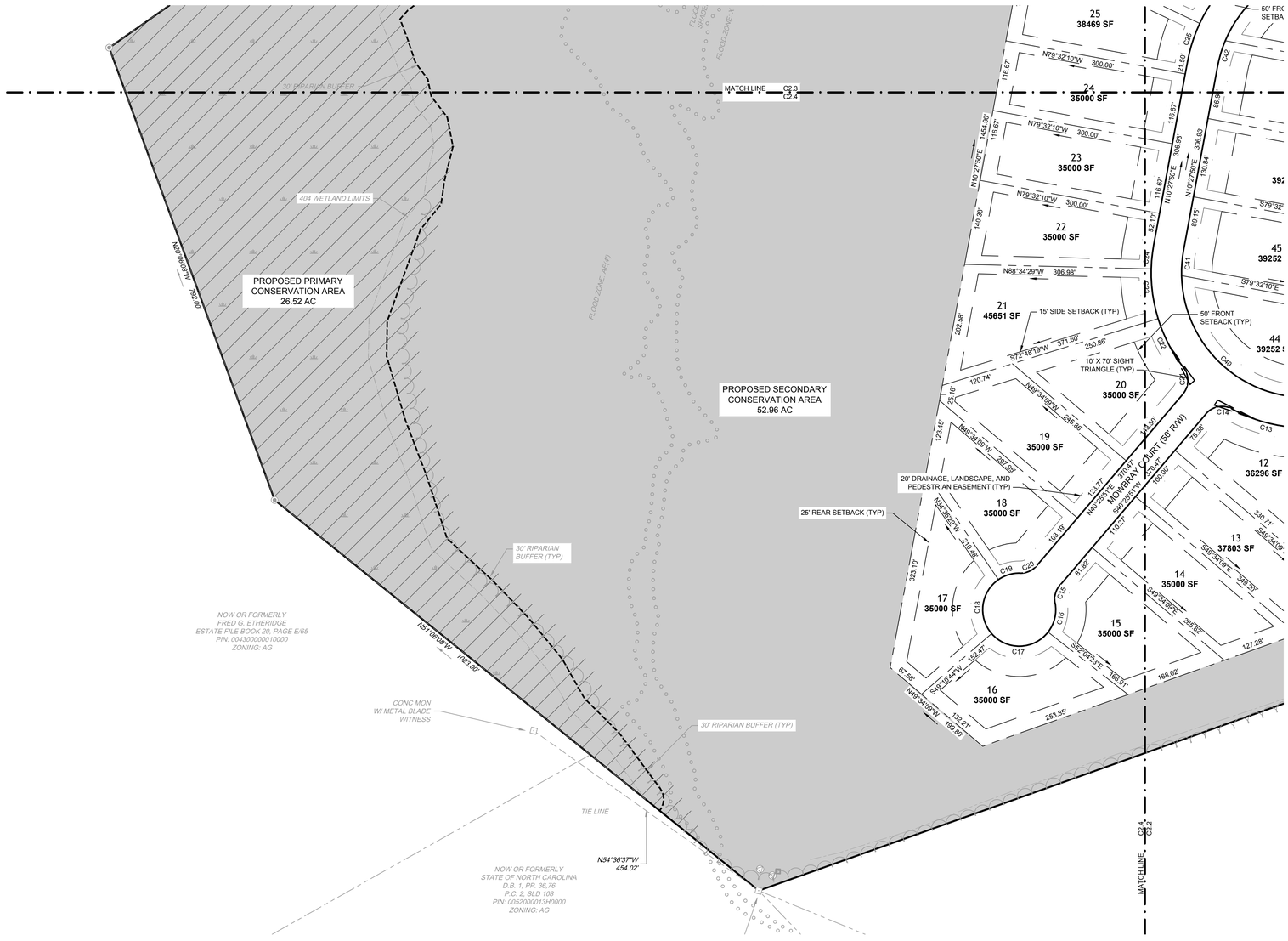
CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
C39	205.00	8.80	4.40	2°27'31"	N71°37'37"E	8.80
C40	205.00	378.60	271.14	105°48'57"	S54°14'09"E	327.04
C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14



VICINITY MAP
NO SCALE

NC GRID NAD 83 (2011)



SCALE 1"=100'
0 100' 200'

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- OHP — EX OVERHEAD POWER
- W — EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- 5 — EX MAJOR CONTOUR
- 4 — EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- X.XX' EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
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- PROP STORM PIPE
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- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

PRELIMINARY PLAT
NOV 26, 2025
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NORTH CAROLINA LICENSE NO. C-1652

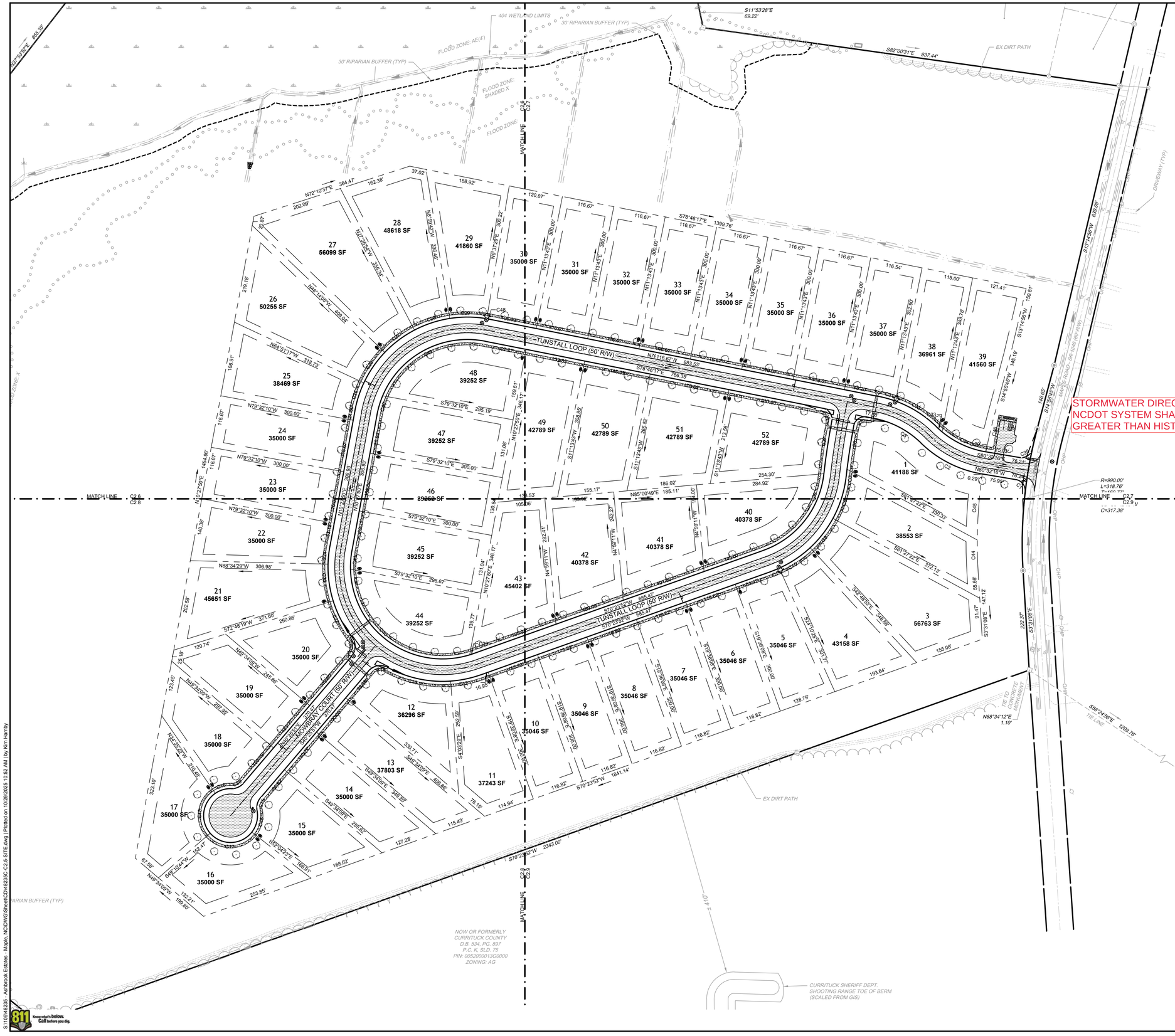
ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

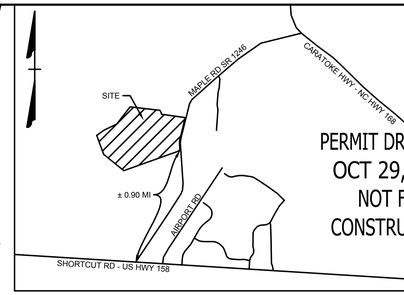
JOB NO. 48235
SHEET NO. C2.4

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NC GRID NAD 83 (2011)

LEGEND

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PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

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SCALE: 1" = 100'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN OVERVIEW

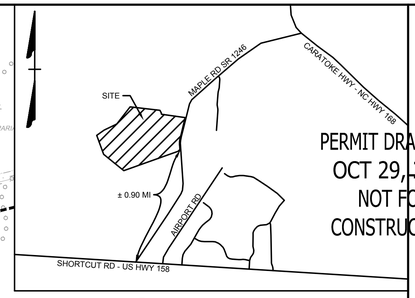
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VICINITY MAP

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NC GRID NAD 83 (2011)

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SCALE 1"=50'
0 50' 100'

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OCT 29, 2025
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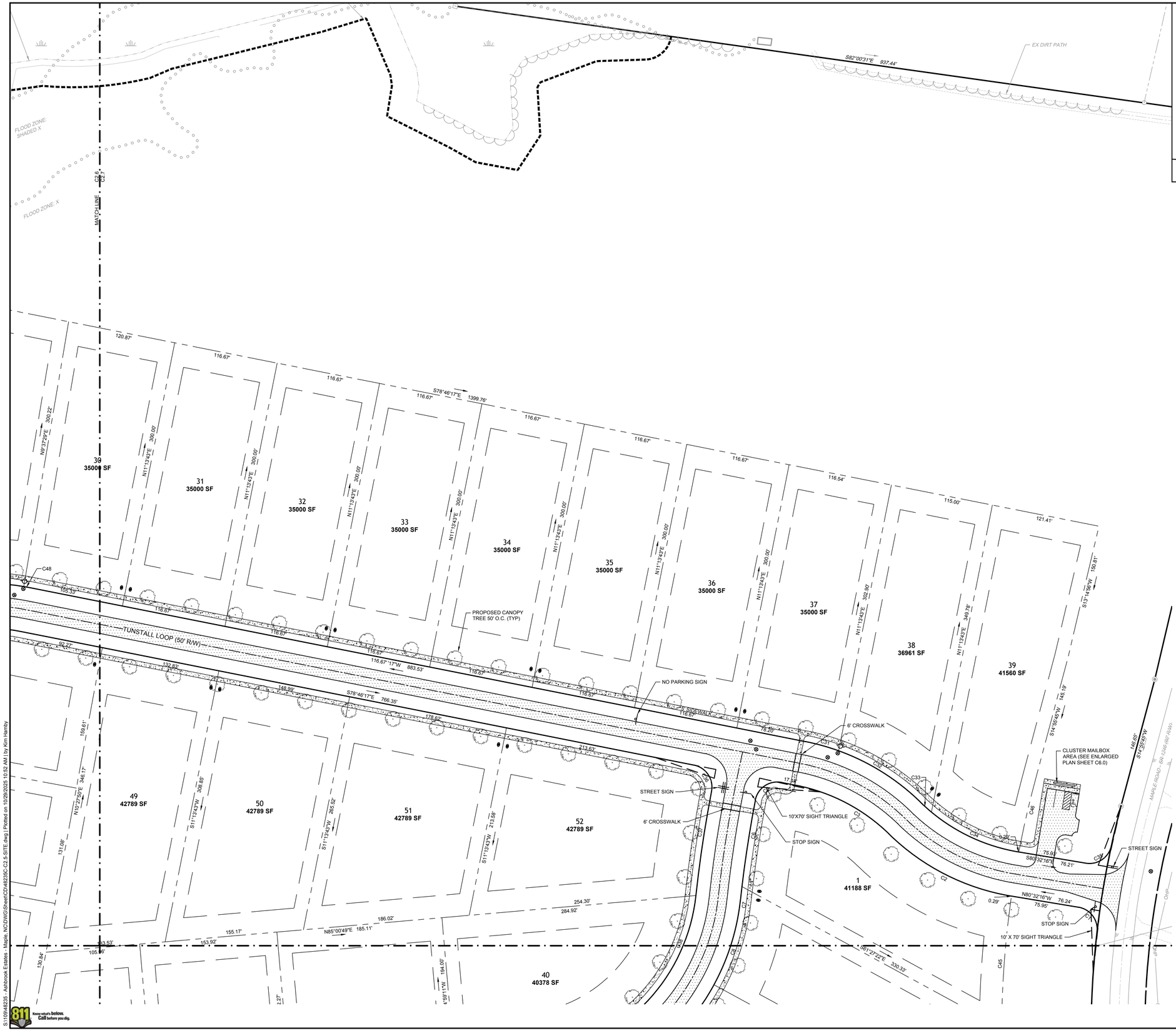
ASHBROOK ESTATES

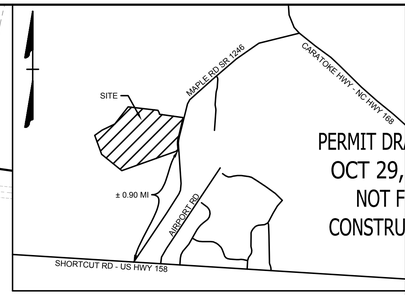
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO. 48235
SHEET NO. C2.6

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VICINITY MAP

NO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

NC GRID NAD 83 (2011)

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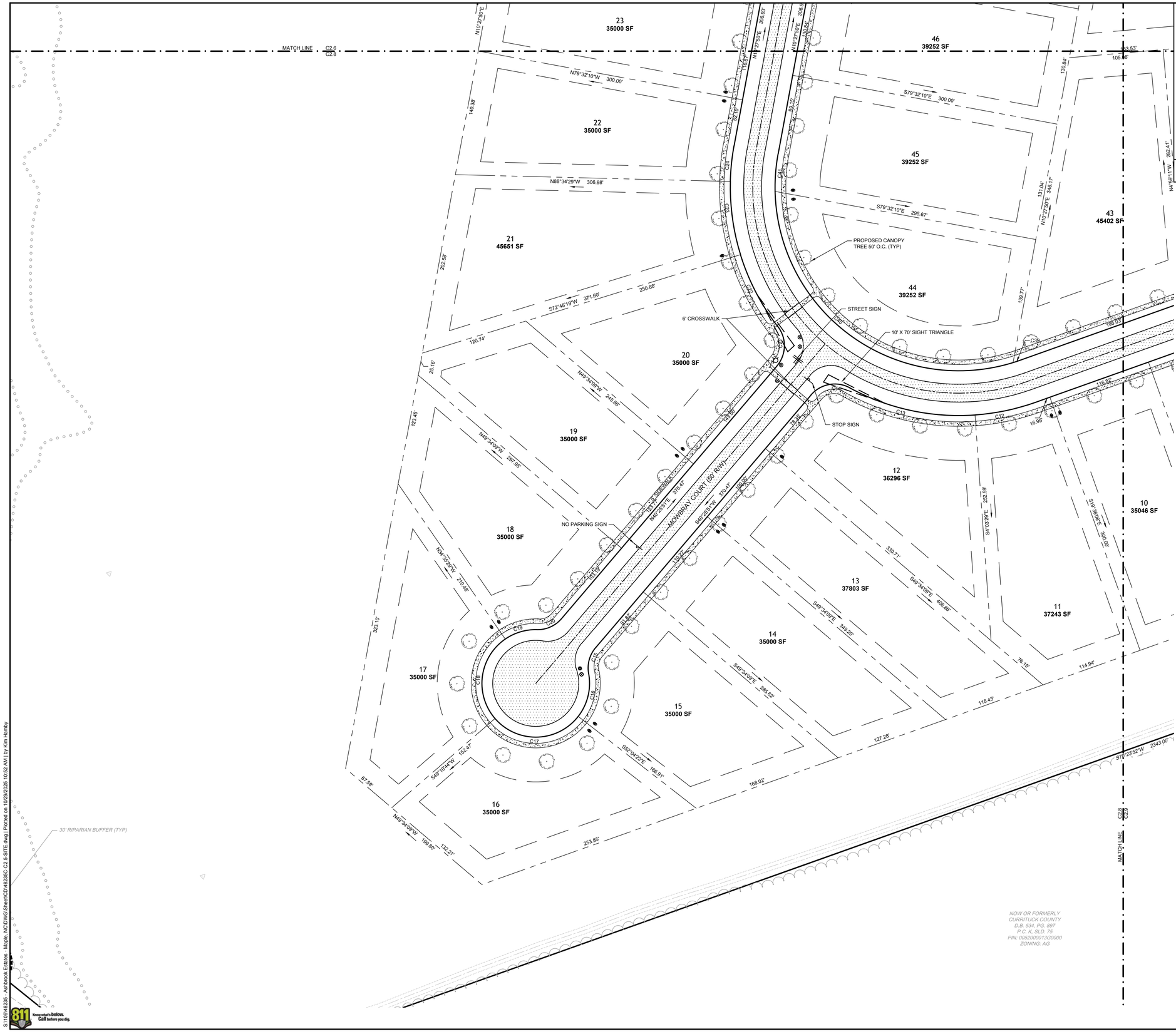
SITE PLAN

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VICINITY MAP

NO SCALE

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SCALE 1"=50'
0 50' 100'

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NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

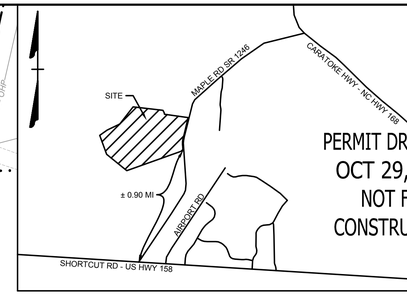
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO. 48235
SHEET NO. C2.8

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VICINITY MAP

NO SCALE

NC GRID (NAD 83 (2011))

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER
- EX WATER LINE
- EX CENTER OF DITCH
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- PROP SWALE
- PROP SPOT GRADE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

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OCT 29, 2025
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YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO. 48235
SHEET NO. C2.9

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S:\105\48235 - Ashbrook Estates - Maps_NC\DWG\Sheet\CD\48235C-C2.5-SITE.dwg | Plotted on 10/29/2025 10:53 AM | by Kim Hamby

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC	(35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC	(3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC	(60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC	(100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

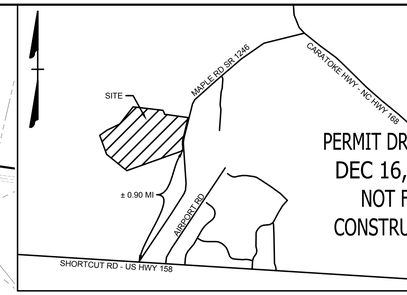
8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.





VICINITY MAP
NO SCALE

LEGEND

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- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
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- EX WATER VALVE
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- OHP — EX OVERHEAD POWER
- W — EX WATER LINE
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- EX TOP OF BANK
- 5 — EX MAJOR CONTOUR
- 4 — EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
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- EX CONCRETE
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- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

STORMWATER DIRECTED TO THE NCDOT SYSTEM SHALL NOT BE GREATER THAN HISTORIC CAPACITY

SCALE 1"=100'
0 100' 200'

PERMIT DRAWINGS
DEC 16, 2025
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NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
12/16/2025

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DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

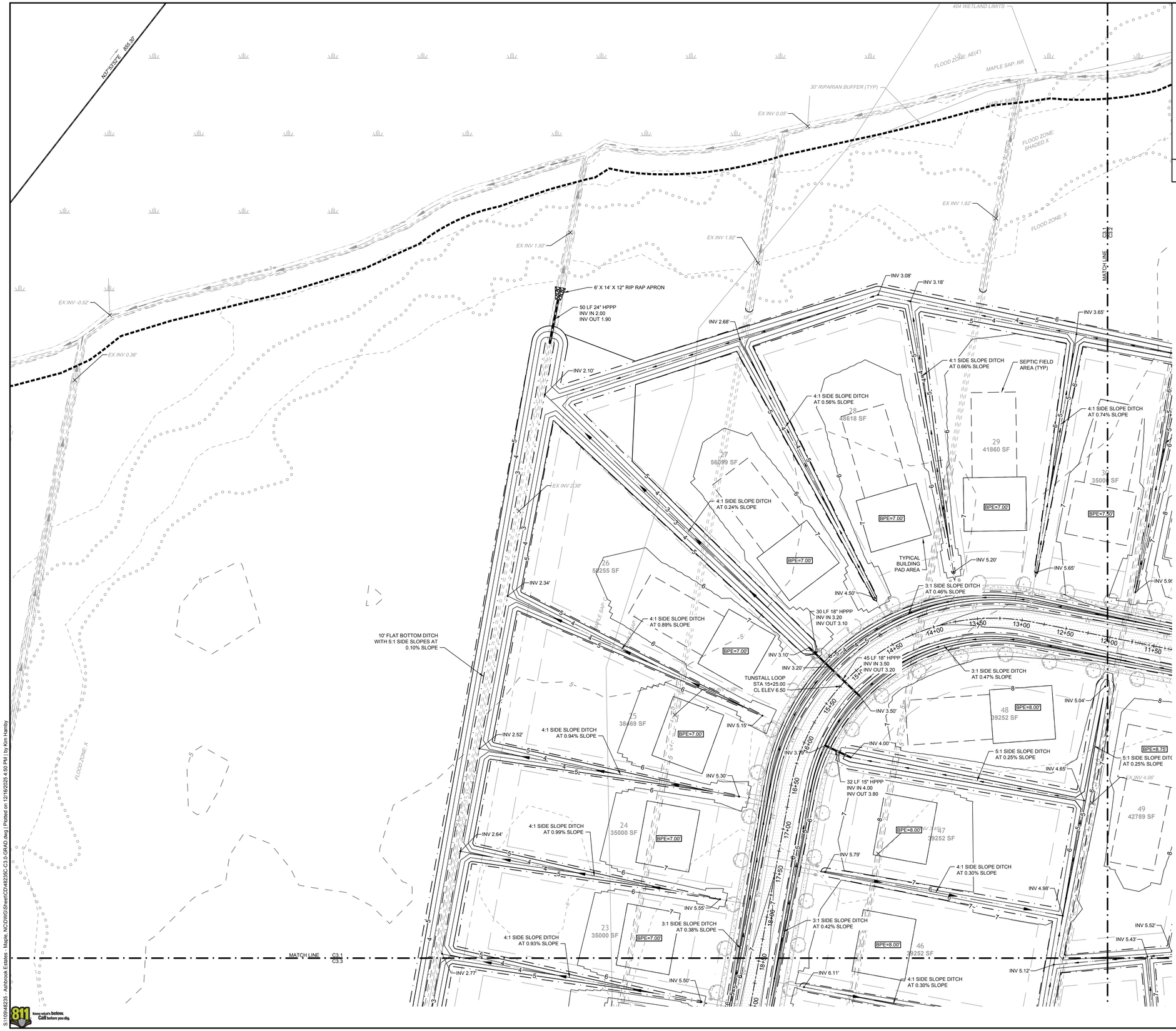
ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
GRADING & DRAINAGE OVERVIEW

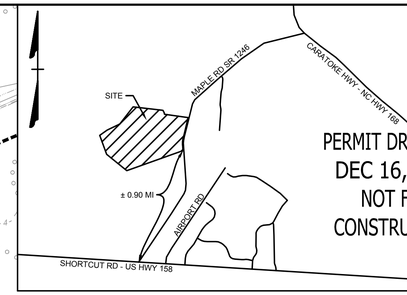
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SHEET NO. C3.0

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SCALE: 1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
GRADING & DRAINAGE PLAN

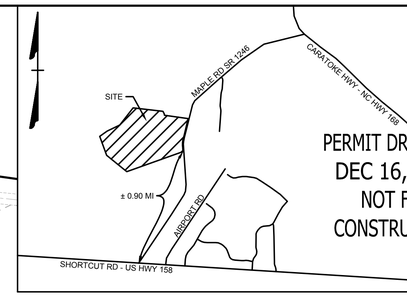
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12/16/2025

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NC GRID NAD 83(2011)

WHEN BURYING AROUND THE END OF A CULVERT, THE UTILITY SHOULD BE LOCATED A MINIMUM OF 5 FEET FROM THE NEAREST PART OF THE CULVERT INCLUDING THE WINGWALLS AND SCOUR APRON, AND BURIED AT A MINIMUM DEPTH OF 2 FEET BELOW THE STREAM BED.

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DESIGNED BY KDH
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SCALE 1" = XX'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

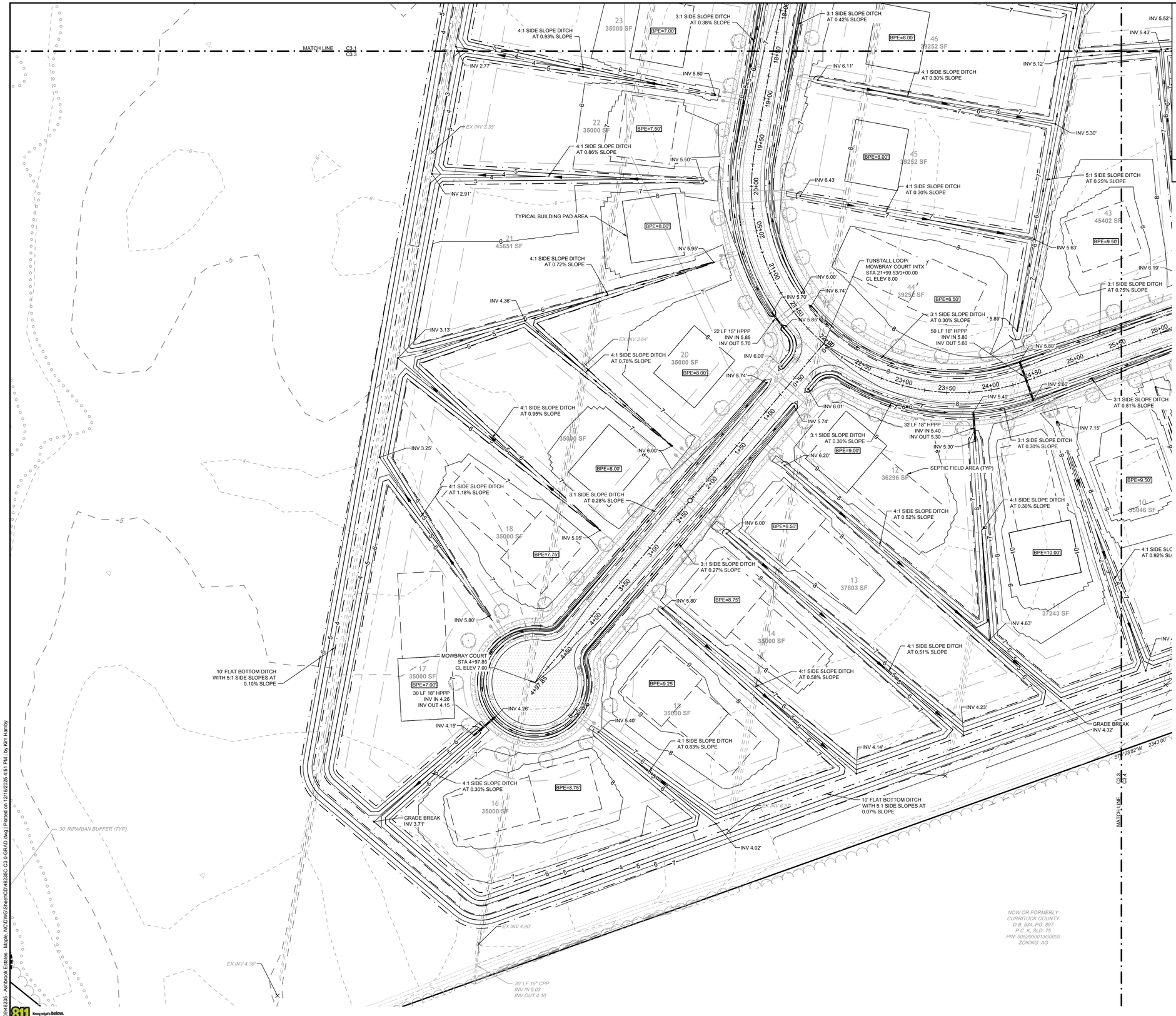
ASHBROOK ESTATES

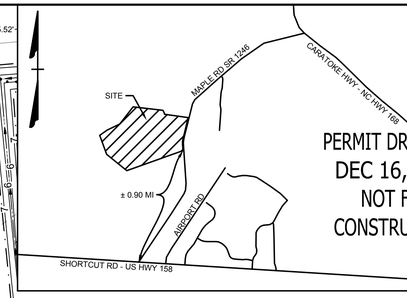
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

GRADING & DRAINAGE PLAN

JOB NO. 48235
SHEET NO. C3.2

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12/16/25

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TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

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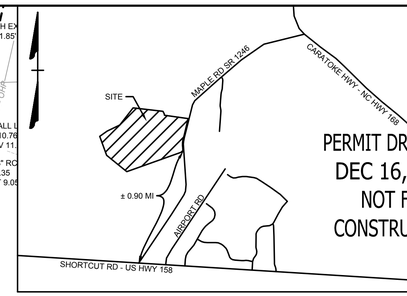
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TIMMONS GROUP

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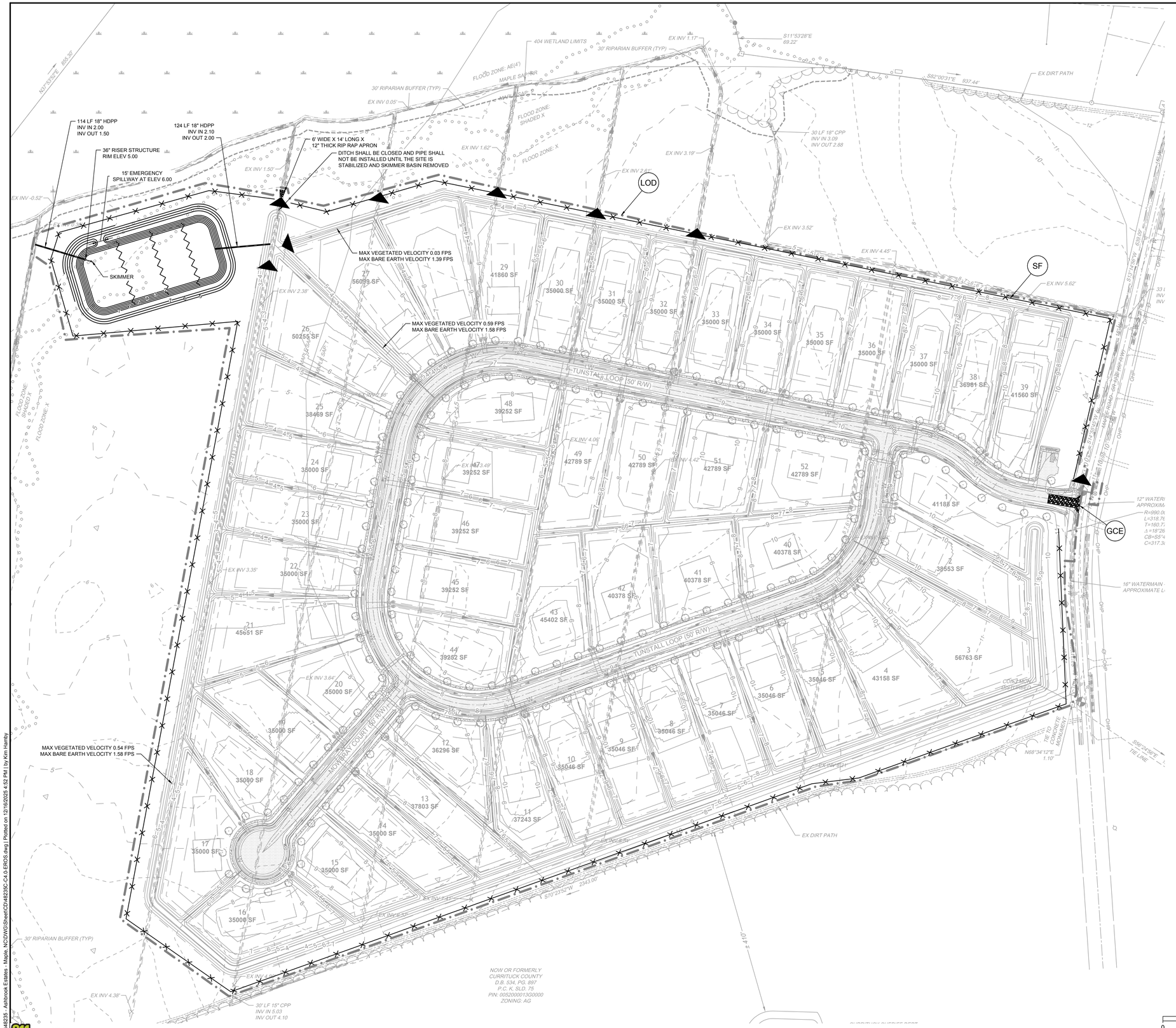
GRADING & DRAINAGE PLAN

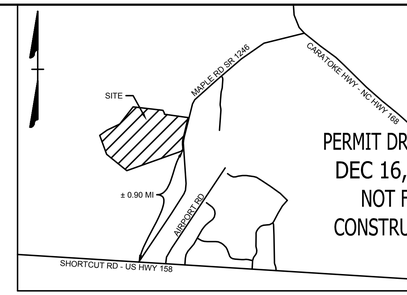
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VICINITY MAP

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NC GRID NAD 83(2011)

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   ASHBROOK ESTATES, LLC
   PO BOX 85
   MOYOCK, NC 27958
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   stuartinnes1@gmail.com

2. SITE INFORMATION:
   PIN: 0052000001200000
   GPIN: 8977-58-4666
   D.B. 1640, PG. 711
   P.C. R, SLD. 147
   ZONING: AG (AGRICULTURAL)
   AIRPORT OVERLAY DISTRICT
   EXISTING USE: AGRICULTURAL
   PROPOSED USE: RESIDENTIAL
   PARCEL AREA: 130.73 AC
   PROPOSED LOTS: 52
   MINIMUM LOT SIZE: 35,000 SF

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4. SITE AREA:

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   PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
   LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
   ASPHALT = 89,979 SF
   CONCRETE = 39,240 SF
   FUTURE = 5,000 SF
   TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
   FRONT: 50'
   SIDE: 15'
   CORNER: 50'
   REAR: 25'

7. EASEMENTS:
   15' ALONG SIDE PROPERTY LINES
   25' ALONG REAR PROPERTY LINES
   20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT
   ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
   NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
   A N 979464.76 sFT
   E 2,877,209.80 sFT
   ELEV 12.09'
   B N 978,636.77 sFT
   E 2,877,010.91 sFT
   ELEV 11.89'
   C N 978,173.61 sFT
   E 2,877,007.22 sFT
   ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- GCE — TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
- SF — SILT FENCE
- CHECK DAM
- COIR BAFFLES

SCALE 1"=100'

0 100' 200'

PERMIT DRAWINGS
DEC 16, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
12/16/25

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
(UPDATED VELOCITIES PER PIPE SIZE CHANGES	12/16/2025

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 100'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

EROSION & SEDIMENT CONTROL PLAN

JOB NO. 48235
SHEET NO. C4.0

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

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC	(35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC	(3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC	(60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC	(100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

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FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

8. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
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E 2,877,209.80 sFT
ELEV 12.09'
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E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

9. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

10. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

WATERMAIN NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN BASED ON INFORMATION AVAILABLE TO THE ENGINEER AND SHOULD NOT BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST IN THE AREA OF CONSTRUCTION PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY UTILITIES DAMAGED DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT NC ONE CALL AT 811 FOR UTILITY LOCATION.

2. CURRITUCK COUNTY WILL PROVIDE WATER SERVICE FOR THIS PROJECT.

3. ALL INSPECTIONS SHALL BE COORDINATED WITH CURRITUCK COUNTY WATER SYSTEM AND THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE.

4. ALL WATERMAINS SHALL BE EITHER SDR 21 PVC OR DUCTILE IRON AS SHOWN ON PLANS. ALL PIPE SHALL COMPLY WITH THE REQUIREMENTS OF AWWA STANDARDS AND THE NATIONAL SANITATION FOUNDATION. ALL PIPE MUST BEAR THE NSF LOGO FOR P0TABLE WATER.

5. WATERMAINS MAY BE INSTALLED UNDER STORM DRAINS WITHOUT FITTINGS, WHERE THE CHANGE IN VERTICAL ELEVATION IS TWO FEET OR LESS.

6. WATERMAINS INSTALLED UNDER STORM DRAINS SHALL HAVE A MINIMUM SEPARATION OF 18" BETWEEN WATERMAIN AND STORM DRAIN AND WATERMAIN SHALL BE DUCTILE IRON. WHERE PRACTICAL, INSTALL A FULL JOINT OF 20 LF DUCTILE IRON PIPE CENTERED UNDER THE STORM DRAIN. WHERE THE WATERLINE BENDS INTO A VERTICAL LEG WITHIN 10 HORIZONTAL FEET OF THE STORM DRAIN, THE VERTICAL LEG SHALL BE DUCTILE IRON.

7. THRUST BLOCKING SHALL BE INSTALLED ON ALL BENDS OF 22 1/2° OR GREATER. (SEE THE SPECIFICATIONS AND DETAILS ON THRUST BLOCKINGS.)

8. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE AND MATERIAL OF EXISTING MAINS PRIOR TO ORDERING MATERIALS.

9. DURING CONSTRUCTION, NO PIPE SHALL BE COVERED UNTIL INSPECTED BY CURRITUCK COUNTY WATER SYSTEM. THE CONTRACTOR SHALL NOTIFY THE WATER DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE INSPECTION OF WATERLINE.

10. THE CONTRACTOR SHALL SATISFY ALL BOND REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

11. ALL WATERMAINS SHALL HAVE A MINIMUM OF 36" COVER.

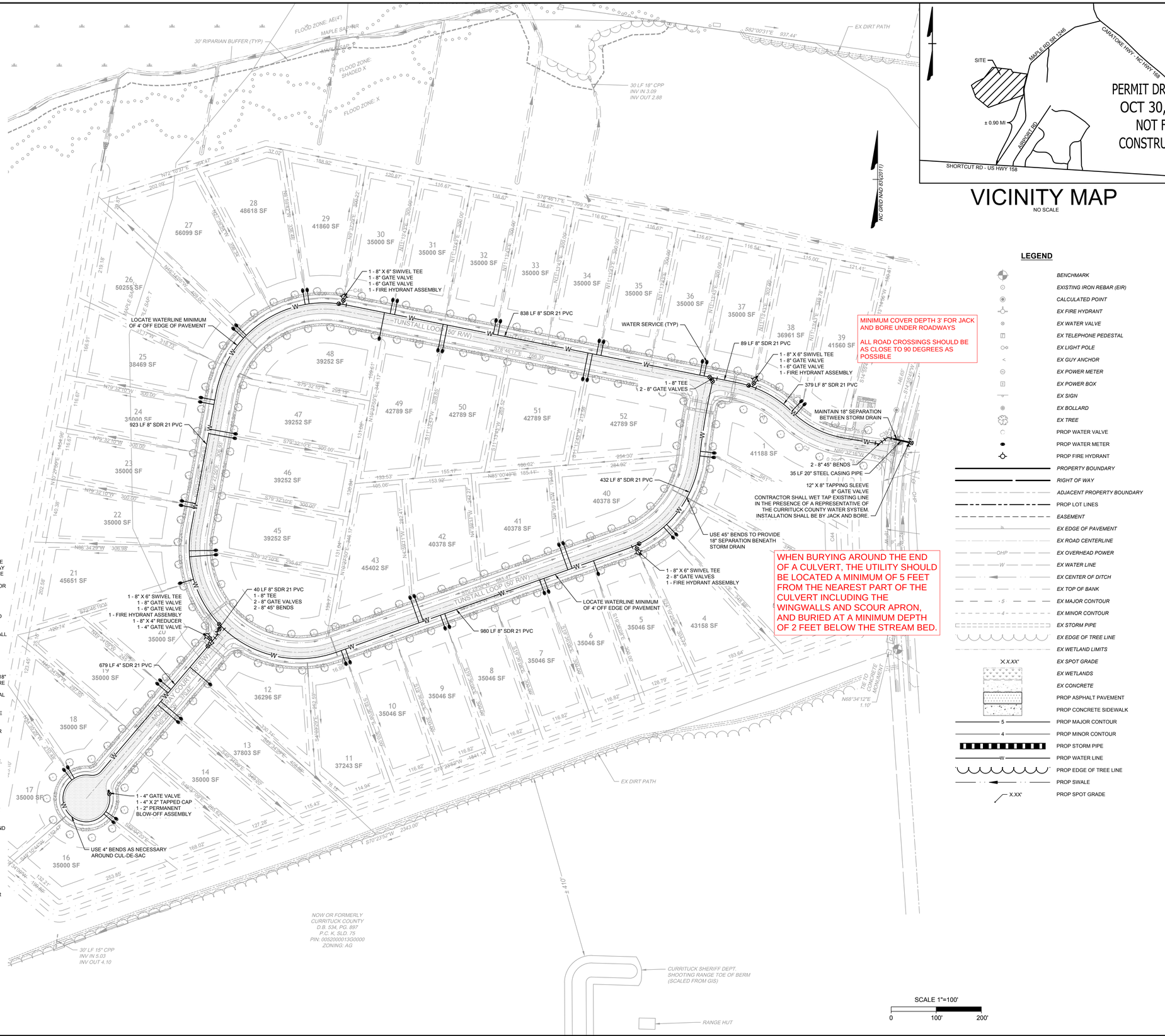
12. ALL PIPES AND SERVICES TO HAVE RUNNING ALONG AND WITH THE PIPE A CONTINUOUS LENGTH OF #12 SOLID COPPER WIRE AND A 3" WIDE TRACER TAPE AT ONE (1) FOOT BELOW THE FINISHED GRADE OF THE EXCAVATION FOR THE PIPE.

13. WATERLINES SHALL BE PRESSURE TESTED AND CHLORINATED AS REQUIRED BY NCDEQ AND AS DETAILED IN THE COUNTY'S SPECIFICATIONS. TESTING SHALL BE INSPECTED BY A REPRESENTATIVE OF CURRITUCK COUNTY WATER SYSTEM AND/OR THE ENGINEER.

14. CONTRACTOR SHALL REPAIR ALL GRAVEL AND SOIL DRIVES AND ROAD WITH 6" MIN. ABC STONE

15. LENGTHS OF WATERLINE ARE APPROXIMATE AND HAVE BEEN INCLUDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY LENGTHS TO HIS SATISFACTION.

16. CONTRACTOR SHALL PROVIDE ADDITIONAL FITTINGS AS NECESSARY TO MAINTAIN PROPER ALIGNMENT AND COVER.



VICINITY MAP
NO SCALE

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER
- EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- PROP MAJOR CONTOUR
- PROP MINOR CONTOUR
- PROP STORM PIPE
- PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

PERMIT DRAWINGS
OCT 30, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
10-30-25

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TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

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REVISION DESCRIPTION	DATE

DATE: 10/30/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

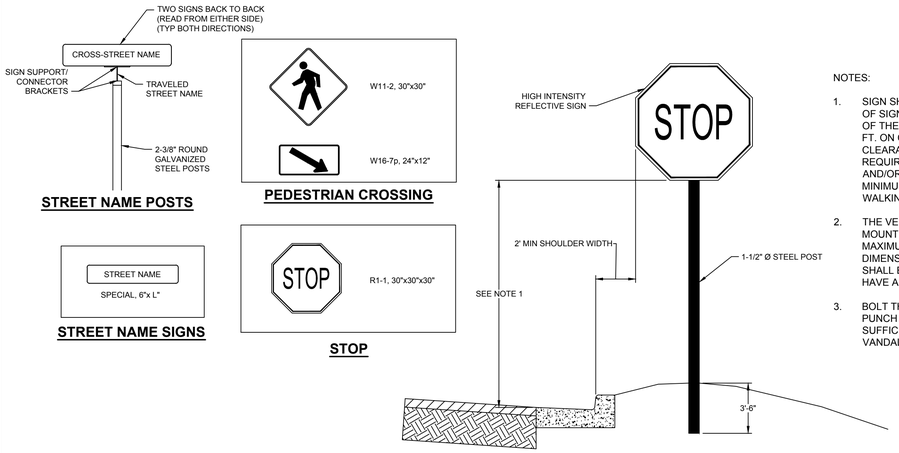
UTILITY PLAN

JOB NO. 48235
SHEET NO. C5.0

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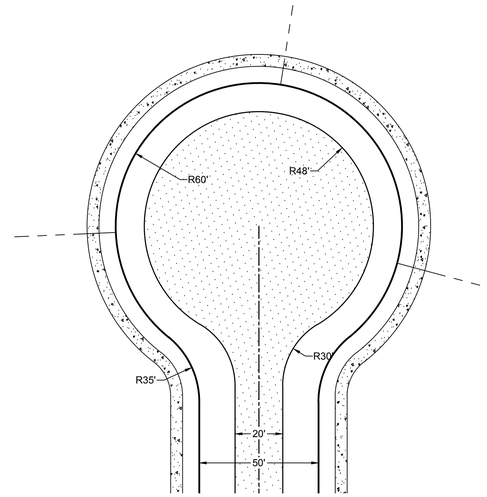
811 Know what's below. Call before you dig.



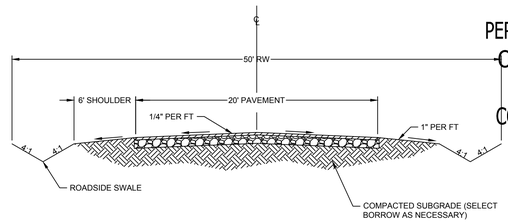
NOTES:

1. SIGN SHALL BE ERECTED WITH THE BOTTOM OF SIGN ASSEMBLY 6 FT. ABOVE THE EDGE OF THE TRAVEL LANE ON FREEWAYS AND 5 FT. ON OTHER ROUTES. THE VERTICAL CLEARANCE SHALL BE 7 FT. WHERE REQUIRED FOR PEDESTRIAN TRAFFIC AND/OR PARKED VEHICLES, OR A 6 FT. +, MINIMUM CLEARANCE TO THE SIDEWALK OR WALKING SURFACE.
2. THE VERTICAL DIMENSIONS BETWEEN MOUNTING HOLE CENTERS SHALL BE 30" MAXIMUM. THE VERTICAL AND HORIZONTAL DIMENSIONS BETWEEN MOUNTING HOLES SHALL BE TO THE WHOLE INCH. SIGN SHALL HAVE A MINIMUM OF 2 BOLTS PER SUPPORT.
3. BOLT THREADS SHALL BE DEFORMED WITH PUNCH AND CHISEL AFTER INSTALLATION SUFFICIENTLY TO REDUCE REMOVAL BY VANDALS.

TYPICAL SIGN DETAIL
NO SCALE



CUL-DE-SAC DETAIL
SCALE: 1"=30'



SURFACE: 2" TYPE SF9.5A ASPHALT
BASE: 6" ABC STONE

STREET SECTION
NO SCALE

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

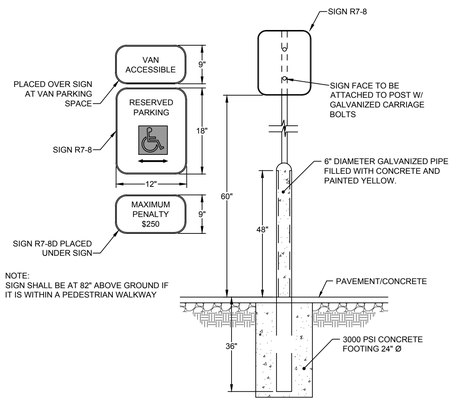
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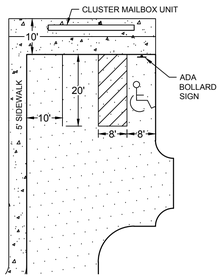
REVISION DESCRIPTION

DATE

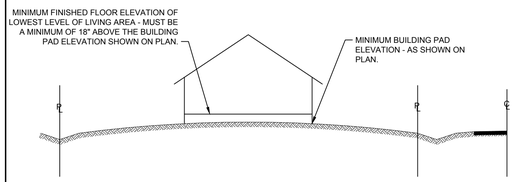
DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE NO SCALE



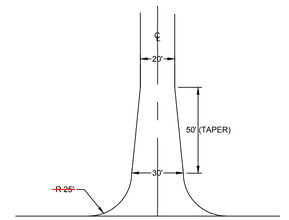
HANDICAP PARKING SIGN IN BOLLARD
NO SCALE



CLUSTER MAILBOX DETAIL
SCALE: 1"=20'

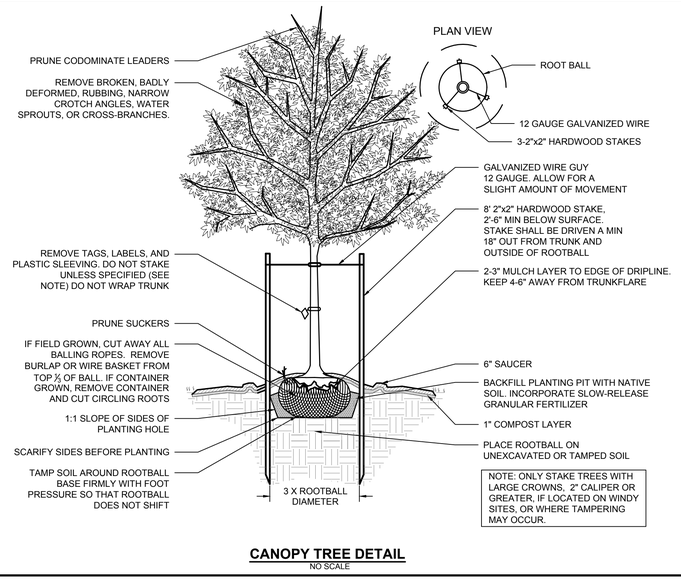


LOT CROSS-SECTION
NO SCALE



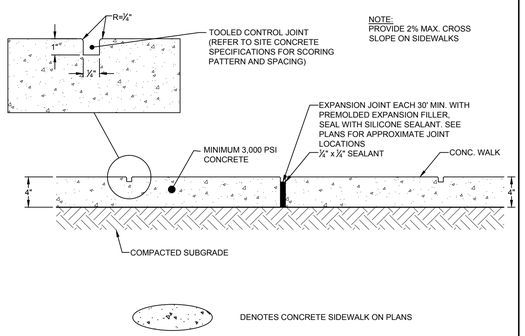
30' EDGE OF PAVEMENT RADIUS REQUIRED
FOR ALL STREET CONNECTIONS

ENTRANCE ROAD DETAIL
NO SCALE



NOTE: ONLY STAKE TREES WITH LARGE CROWNS, 2" CALIPER OR GREATER, IF LOCATED ON WINDY SITES, OR WHERE TAMPERING MAY OCCUR.

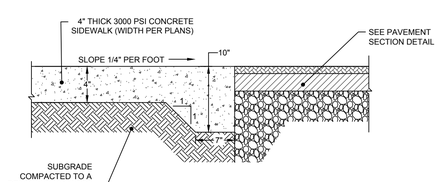
CANOPY TREE DETAIL
NO SCALE



CONCRETE SIDEWALKS
NO SCALE

PLACE A TOOLED CONTROL JOINT 1" DEEP WITH 1/8" RADII IN THE SIDEWALK AT ±5' INTERVALS. INTERVALS SHALL BE ADJUSTED AS NECESSARY SUCH THAT NO SECTION IS MORE THAN 6' OR LESS THAN 4'.

A 1/2" EXPANSION JOINT WILL BE REQUIRED AT 30' INTERVALS AND WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE, INCLUDING BUILDINGS. SIDEWALKS, STEPS, ETC.



FLUSH SIDEWALK
NO SCALE

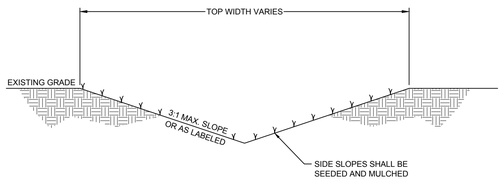
TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
CONSTRUCTION DETAILS

JOB NO. 48235
SHEET NO. C6.0

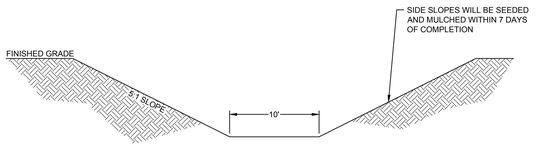
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TYPICAL DITCH/SWALE

NO SCALE



FLAT BOTTOM DITCH

NO SCALE

CONSTRUCTION SEQUENCING

1. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE PADS. (SEE DETAIL)
2. INSTALL SILT FENCE, SKIMMER BASIN AND CHECK DAMS WHERE SHOWN IN EXISTING DITCHES TO PREVENT OFF-SITE SEDIMENTATION.
3. PERFORM GRADING, INCLUDING FILLING OF EXISTING DITCHES, AND INSTALL STORM DRAINAGE.
4. INSTALL THE REMAINING SEDIMENT AND EROSION CONTROL PROTECTION.
5. INSTALL THE STONE BASE AND ASPHALT FOR THE PROPOSED ROAD.
6. PROVIDE GROUNDCOVER IN ACCORDANCE WITH DETAIL MARKED 'EROSION CONTROL MEASURES', THIS SHEET.
7. MONITOR AND MAINTAIN THE INSTALLED EROSION CONTROL MEASURES AND REPAIR AS NECESSARY.
8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. ONCE SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES, AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUNDCOVER IS NOT ADEQUATE. SKIMMER BASINS MAY NOT BE REMOVED UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED, NCDEQ SHOULD BE NOTIFIED 10 DAYS PRIOR TO REMOVAL OF A BASIN.
9. UPON NCDEQ APPROVAL, SKIMMER, DISCHARGE PIPE, SPILLWAY, AND BAFFLES SHALL BE REMOVED AND CONNECTION TO DOWNSTREAM DRAINAGE SHALL BE MADE. GRADE BASIN AREA ACCORDING TO FINISHED GRADES AND IMMEDIATELY SEED AND MULCH.
10. ONCE THE SKIMMER BASIN AREA IS VEGETATED AND THE REMAINDER OF THE SITE IS FULLY STABILIZED, REMOVE ANY REMAINING EROSION CONTROL DEVICES.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS OF THE DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PROVIDED ON ALL AREAS OF THE SITE WHICH ALL DISTURBED OR GRADED.

PROVIDE A GROUNDCOVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY FOR SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH, FOR SLOPES 4:1 OR FLATTER OF ANY LENGTH (EXCEPT FOR PERIMETERS AND HQW ZONES), AND SLOPES NO STEEPER THAN 2:1 AND LESS THAN 10' IN LENGTH.

PROVIDE GROUNDCOVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN 7 CALENDAR DAYS FOR SLOPES STEEPER THAN 3:1 OR SLOPES 3:1 OR FLATTER GREATER THAN 50' IN LENGTH, FOR HIGH QUALITY WATER (HWQ) ZONES, AND PERIMETER DIKES, SWALES, DITCHES AND SLOPES.

PROVIDE GROUNDCOVER (TEMPORARY OR PERMANENT) ON ALL EXPOSED SLOPES WITH IN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING; AND, A PERMANENT GROUNDCOVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

THE CONTROL MEASURES SHALL BEGIN PRIOR TO ANY LAND DISTURBING ACTIVITY INCLUDING CLEARING; SHALL CONTINUE DURING CONSTRUCTION AND SHALL CONTINUE WITH THE NECESSARY MAINTENANCE UNTIL THE DISTURBED LAND IS STABILIZED. COMPLIANCE WITH LOCAL AND/OR STATE SOIL EROSION AND SEDIMENTATION CONTROL LAWS SHALL BE THE ENTIRE RESPONSIBILITY OF THE CONTRACTOR. THIS PARAGRAPH IS INTENDED TO SERVE ONLY AS A GUIDE TO THE CONTRACTOR FOR COMPLIANCE WITH SUCH LAWS. ORDERS, RULES AND REGULATIONS CONCERNING EROSION AND SEDIMENTATION CONTROL PROTECTION OF EXISTING STRUCTURES AND FACILITIES FROM SEDIMENTATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ITEMS TO BE PROTECTED SHALL INCLUDE, BUT ARE NOT LIMITED TO, CATCH BASINS, NATURAL WATERWAYS, DRAINAGE DITCHES, WALKS, DRIVES, ROADS, LAWNS, AND STREAMS.

EROSION CONTROL MEASURES

NO SCALE

SEEDBED PREPARATION

CONSTRUCTION SPECIFICATIONS

1. PREPARE SOIL AS NECESSARY TO ESTABLISH AN ADEQUATE SEEDBED FOR RECEIVING SEED USING TILLAGE AND/OR REMOVAL OF DEBRIS (ROCKS, ROOTS, OBSTRUCTIONS). CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. SOIL SHALL RECEIVE LIME, FERTILIZER,AND/OR SUPERPHOSPHATE UNIFORMLY AS NEEDED PER RECOMMENDATIONS FROM NORTH CAROLINA DEPARTMENT OF AGRICULTURE OR OTHER COMMERCIAL LABORATORY.
3. SEED ON A FRESHLY PREPARED SEEDBED AND ENSURE SEED IS LIGHTLY COVERED FOLLOWING INSTALLATION.
4. MULCH IMMEDIATELY AFTER SEEDING.
5. CONTRACTOR SHALL SEED ALL AREAS THAT ARE DISTURBED WITHIN TWO DAYS. INSPECT ALL SEEDED AREAS AND MAKE SURE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETE, AN INSPECTION WILL BE COMPLETED TO DETERMINE IF ADDITIONAL SEEDING WILL BE REQUIRED.

*APPLY:
FERTILIZER, LIME, AND MULCH SHALL BE APPLIED AT RATES RECOMMENDED BY NCDA (OR OTHERS). OTHERWISE, APPLY AS DESCRIBED BELOW.

AGRICULTURAL LIMESTONE - 1-1.5 TONS/ACRE ON COURSE TEXTURED SOILS AND 2-3 TONS/ACRE IN FINE-TEXTURED SOILS.
SOILS WITH PH OF 6 OR HIGHER NEED NOT BE LIMED.
FERTILIZER - 700/1000 LBS/ACRE (10-10-10)
MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)
ANCHOR - ASPHALT EMULSION AT 450 GAL/ACRE

PERMANENT SEEDING SCHEDULE FOR COASTAL PLAIN

DATE	TYPE	BROADCAST SEEDING RATES
SEP 1 - MAR 31	COMMON BERMUDA 'SAHARA' (UNHULLED) REBEL II FESCUE	130 LBS/ACRE 175 LBS/ACRE
APR 1 - AUG 31	COMMON BERMUDA 'SAHARA' (HULLED) REBEL II FESCUE	90 LBS/ACRE 175 LBS/ACRE
AUG 15 - APR 30	PERENNIAL RYE (AS A NURSE PLANT)	40 LBS/ACRE IN ADDITION TO OTHER SEED TYPES

TEMPORARY SEEDING SCHEDULE

DATE	TYPE	PLANTING RATES
APR 15 - AUG 15	GERMAN MILLET	40 LBS/ACRE
AUG 15 - APR 15	RYE GRAIN	120 LBS/ACRE

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

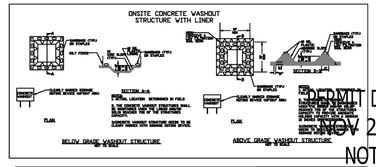
EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA Environmental Quality

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part II, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
11-06-25

PERMIT DRAWINGS
NOV 26, 2025
NOT FOR CONSTRUCTION

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
REVISED CONSTRUCTION SEQUENCING	11/26/2025

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE NO SCALE

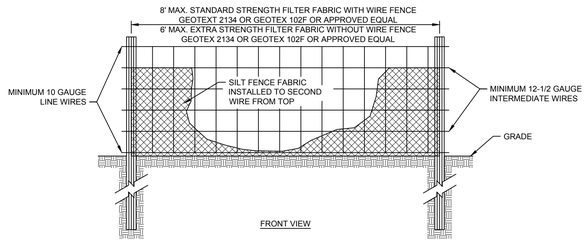
TIMMONS GROUP

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
EROSION & SEDIMENT CONTROL PLAN
NORTH CAROLINA LICENSE NO. C-1652

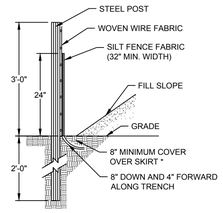
JOB NO. 48235
SHEET NO. C6.1

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FRONT VIEW



SIDE VIEW

CONSTRUCTION SPECIFICATIONS

1. USE SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461.
2. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0-120 DEGREES F.
3. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.33 LB/LF STEEL WITH A MINIMUM LENGTH OF 5'. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
4. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.

MAINTENANCE

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE

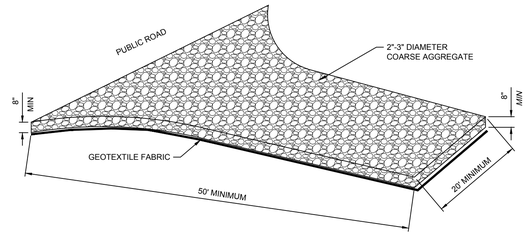
NO SCALE

CONSTRUCTION SPECIFICATIONS:

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL, AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLAN.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

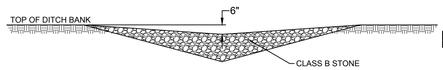
MAINTENANCE

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH TWO-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

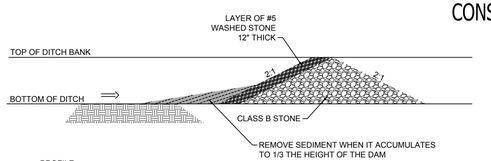


TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

NO SCALE



SECTION

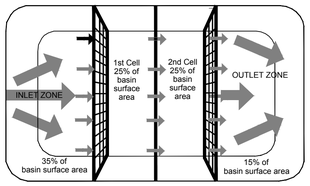


PROFILE

FILTER DAM IS TO BE IN PLACE UNTIL GRASS IS ESTABLISHED IN BOTTOM OF DITCH SUFFICIENT TO PREVENT EROSION

CHECK DAM

NO SCALE

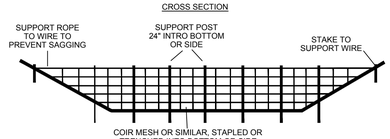


PLAN VIEW

NOTES:

1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL

CROSS SECTION



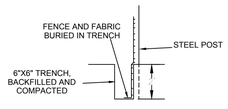
MAINTENANCE

INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

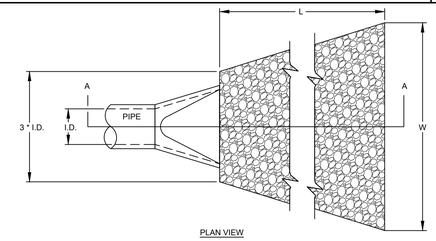
REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



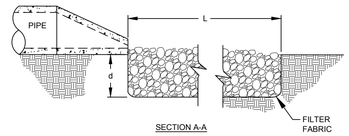
SECTION VIEW AT OPENING

COIR BAFFLES

NO SCALE



PLAN VIEW



SECTION A-A

NOTES:

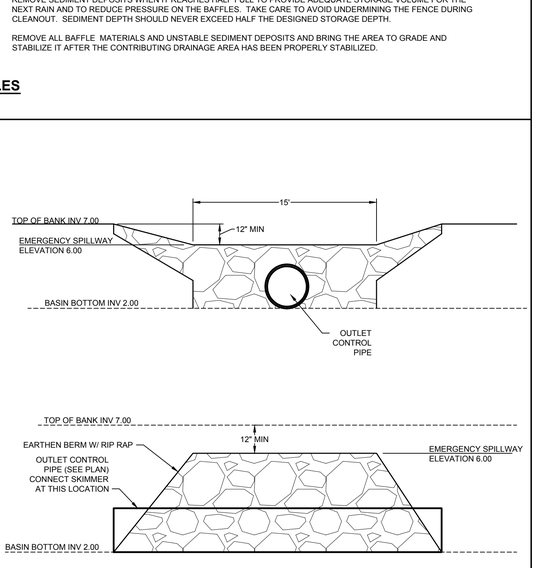
1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

MAINTENANCE

INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

OUTLET PROTECTION

NO SCALE



PERSPECTIVE VIEW

NOTES:

PROVIDE A SMALL PILE OF RIP RAP OR CONCRETE MASONRY BLOCK DIRECTLY BELOW SKIMMER TO PREVENT SKIMMER FROM RESTING ON SOIL.

ALL SCHEDULE 40 PVC PIPE & FITTINGS SHALL BE 6" MIN. DIA.

SKIMMER TO BE TETHERED

SEE N.C. DENR EROSION and SEDIMENT CONTROL PLANNING and DESIGN MANUAL FOR CONDITIONS WHERE PRACTICE APPLIES; PLANNING CONSIDERATION & DESIGN CRITERIA.

6" SKIMMER

NO SCALE

SEDIMENT BASIN EMERGENCY SPILLWAY

NO SCALE

DATE:

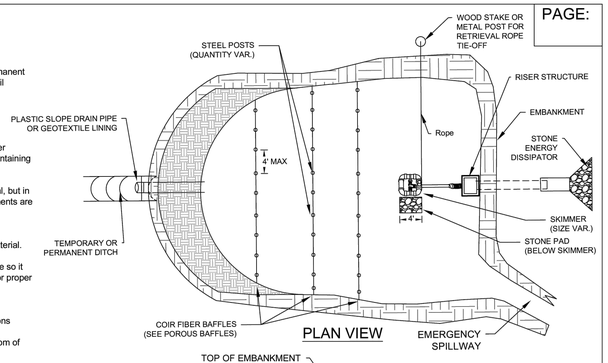
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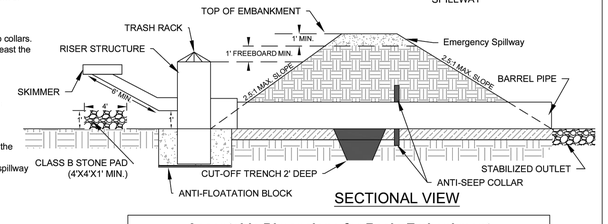
NOTES:

1. Install temporary sediment basins to the approved design. If the basin will eventually be converted to a permanent SCM device, the basin must function as a temporary sediment basin and meet the following parameters until completion of the project:
   - Maximum Drainage Area: 100 acres
   - Minimum Sediment Storage Volume: 1800 cubic feet per acre of disturbed area
   - Minimum Surface Area: 435 square feet per cfs of Q_{10} peak inflow
   - Minimum dewatering time: 48 hours
2. Clear, grub, and strip topsoil from areas under the embankment to remove trees, vegetation, roots, and other objectionable material. Delay clearing the pool area until the dam is complete. Stockpile all topsoil or soil containing organic matter for use on the outer shell of the embankment to facilitate vegetative establishment.
3. Place temporary sediment control measures below the basin and stockpile as needed.
4. Excavate a cut-off trench along the center line of the earth fill embankment. Cut trench to stable soil material, but in no case make it less than 2 feet deep with maximum side slopes no steeper than 1:1. Compaction requirements are the same as those for the embankment.
5. Extend the cut-off trench into both abutments to at least the elevation of the riser crest.
6. Keep the trench dry during backfilling and compaction operations.
7. Fill material should be clean mineral soil, free of roots, woody vegetation, rocks, and other objectionable material. Areas of approved fill should be shown on the plans.
8. Scarify areas on which fill is to be placed prior to placing. Ensure that fill material contains sufficient moisture so it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction.
9. Place fill material in 6 to 8 inch continuous layers over the entire length of fill area and compact.
10. Construct the embankment to an elevation 10% higher than the design height to allow for settling.
11. Securely attach the riser to the barrel or barrel stub to make a watertight structural connection. All connections should be made using approved watertight assemblies.
12. If no riser structure is to be used, couple the skimmer arm directly into the embankment 1 foot from the bottom of the basin.
13. The arm pipe connecting the skimmer to the riser shall have a minimum length of 6 feet.
14. Place barrel and riser on a firm, smooth foundation of impervious soil.
15. Do not use pervious material such as sand, gravel, or crushed stone as backfill around the pipe or anti-seep collars.
16. Place fill material around the pipe spillway in 4-inch layers, and compact it under and around the pipe to at least the same density as the adjacent embankment.
17. Place a minimum depth of 2 feet of compacted backfill over the pipe spillway before crossing it with any construction equipment.
18. Anchor riser in place by concrete or other satisfactory means to prevent floatation.
19. In no case should the pipe conduit be installed by cutting a trench through the dam after the embankment is complete.
20. Install the emergency spillway in undisturbed soil.
21. Discharge water into the basin in a manner to prevent erosion.
22. Construct basin so that the disturbed area is minimized, divert surface water from bare areas and complete the embankment before the area is cleared.
23. Stabilize the emergency spillway embankment and all other disturbed area above the crest of the principal spillway immediately after construction.
24. Seed and place matting for erosion control on interior and exterior side slopes.
25. Install Porous Baffles as specified on following sheets.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any repairs immediately.
2. Remove sediment and restore basin to its original dimensions when it accumulates to one-half the design depth.
3. Place removed sediment in an area with sediment control measures to ensure no loss of sediment off-site.
4. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement.
5. Remove all trash and other debris form the riser and pool area.





SECTIONAL VIEW

Acceptable Dimensions for Basin Embankment

Fill Height	Minimum Top Width
Less than 10.0 ft	8.0 ft
10.0 ft to 15.0 ft	10.0 ft

SEDIMENT BASIN

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 KIMBERLY D. HANBY 10-31-25

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: NO SCALE

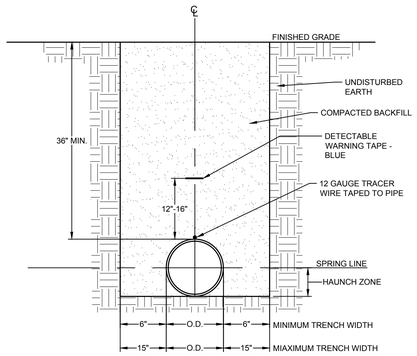
TIMMONS GROUP

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
NORTH CAROLINA LICENSE NO. C-1652
EROSION & SEDIMENT CONTROL PLAN

JOB NO. 48235
SHEET NO. C6.2

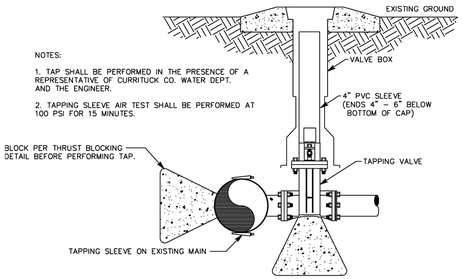
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S:\10948235 - Ashbrook Estates - Maple, NC\DWG\Sheet\C0748235C-C6.1 DTEROS.dwg | Plotted on 10/29/2025 10:56 AM | by Kim Hanby



1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND THE BRACING.
2. BACKFILL IN AREAS TO REMAIN GRASSED MAY BE NATIVE MATERIAL. BACKFILL IN AREAS TO RECEIVE PAVEMENT OR BUILDING FOUNDATIONS SHALL BE SUITABLE NATIVE MATERIAL OR SELECT OFF-SITE MATERIAL.
3. BACKFILL SHALL BE TAMPED IN 6" LAYERS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
4. BEDDING MATERIAL BENEATH TYPICAL TRENCH SHALL BE INSTALLED ONLY AS NECESSARY WHEN NATIVE SOILS ARE UNSTABLE.

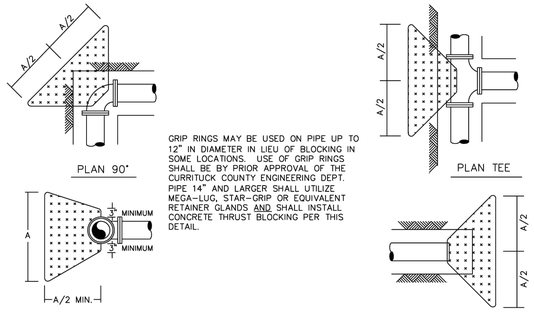
TYPICAL WATERLINE TRENCH DETAIL
NO SCALE



NOTES:

1. TAP SHALL BE PERFORMED IN THE PRESENCE OF A REPRESENTATIVE OF CURRITUCK CO. WATER DEPT. AND THE ENGINEER.
2. TAPPING SLEEVE AIR TEST SHALL BE PERFORMED AT 100 PSI FOR 15 MINUTES.

TAPPING DETAIL
NTS



GRIP RINGS MAY BE USED ON PIPE UP TO 12" IN DIAMETER IN LIEU OF BLOCKING IN SOME LOCATIONS. USE OF GRIP RINGS SHALL BE BY PRIOR APPROVAL OF THE CURRITUCK COUNTY ENGINEERING DEPT. PIPE 14" AND LARGER SHALL UTILIZE MEGA-LUG, STAR-GRIP OR EQUIVALENT RETAINER GLANDS AND SHALL INSTALL CONCRETE THRUST BLOCKING PER THIS DETAIL.

CONCRETE THRUST BLOCK SCHEDULE

FITTING	PIPE SIZE (NOM. DIA. IN INCHES)									
	2"	4"	6"	8"	10"	12"	16"	18"	20"	24"
TEE	1.6	1.9	2.8	3.8	4.7	5.9	7.5	8.5	9.4	11.3
90° BEND	1.5	1.9	2.8	3.8	4.7	5.9	7.5	8.5	9.4	11.3
45° BEND	1.0	1.4	2.1	2.8	3.5	4.3	5.5	6.2	6.9	7.7
22 1/2° BEND	.8	1.0	1.5	2.0	2.5	3.1	4.0	4.5	4.9	5.5

TABLE "A" DIMENSIONS (IN FEET)

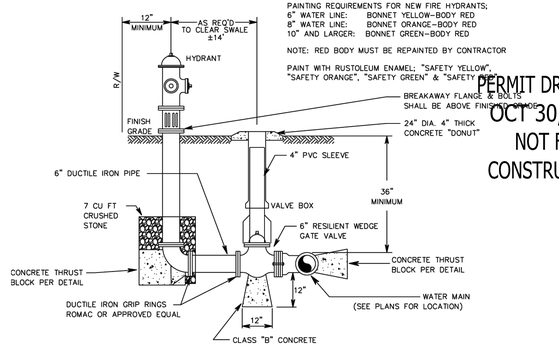
THRUST BLOCK DETAIL
NTS

HYDRANT TO BE M+H 129 TRAFFIC MODEL FOR 3.5' BURY WITH 5 1/4" VALVE OPENING

PAINTING REQUIREMENTS FOR NEW FIRE HYDRANTS;
6" WATER LINE: BONNET YELLOW-BODY RED
8" WATER LINE: BONNET ORANGE-BODY RED
10" AND LARGER: BONNET GREEN-BODY RED

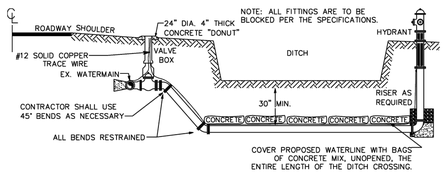
NOTE: RED BODY MUST BE REPAINTED BY CONTRACTOR

PAINT WITH RUSTOLEUM ENAMEL; "SAFETY YELLOW", "SAFETY ORANGE", "SAFETY GREEN" & "SAFETY RED".

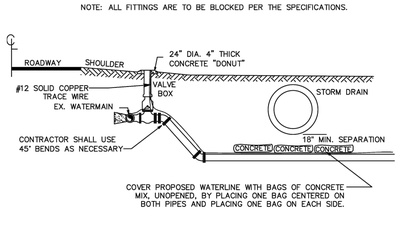


NOTES:
1. DO NOT BLOCK HYDRANT DRAIN WITH THRUST BLOCKING
2. COAT TIE RODS & NUTS WITH EPOXY
3. DO NOT SUPPORT VALVE BOX DIRECTLY ON VALVE
4. ALL JOINTS SHALL BE MECHANICAL JOINTS
5. INSTALL REFLECTIVE HYDRANT MARKER, STIMPSONITE, MODEL 88AB, TWO-WAY BLUE REFLECTOR IN CENTERLINE OF PAVEMENT PERPENDICULAR TO HYDRANT LOCATION USING E-BOND EPOXY ADHESIVE 1240/1241 PER MANUFACTURERS SPECIFICATIONS.

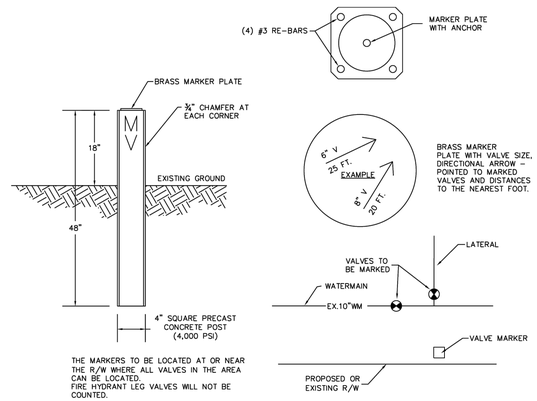
FIRE HYDRANT DETAIL
NTS



DITCH CROSSING DETAIL
NTS

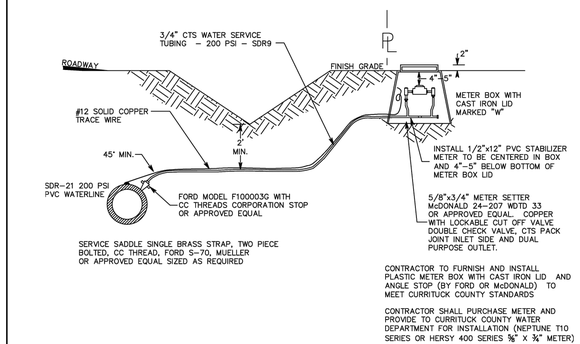


CULVERT CROSSING DETAIL
NTS



THE MARKERS TO BE LOCATED AT OR NEAR THE R/W WHERE ALL VALVES IN THE AREA CAN BE LOCATED.
FIRE HYDRANT LEG VALVES WILL NOT BE COUNTED.

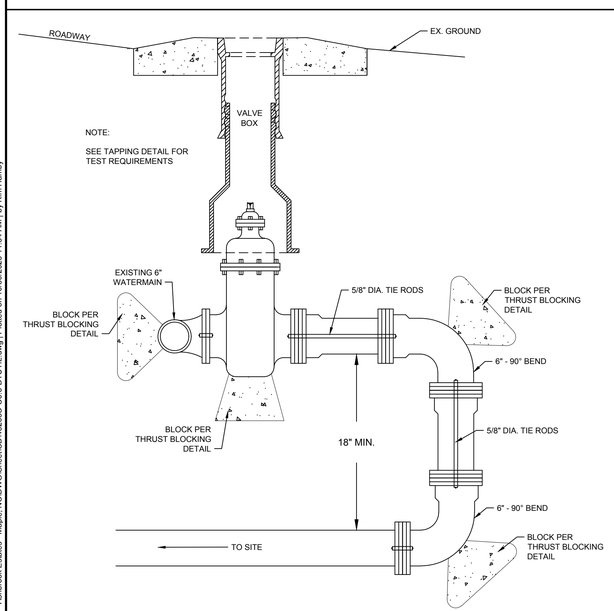
VALVE MARKER DETAIL
NTS



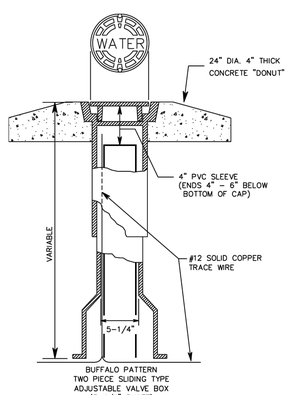
CONTRACTOR TO FURNISH AND INSTALL PLASTIC METER BOX WITH CAST IRON LID AND ANGLE STOP (BY FORD OR McDONALD) TO MEET CURRITUCK COUNTY STANDARDS

CONTRACTOR SHALL PURCHASE METER AND PROVIDE TO CURRITUCK COUNTY WATER DEPARTMENT FOR INSTALLATION (NEPTUNE T10 SERIES OR HERSY 400 SERIES ⅝" X ¾" METER)

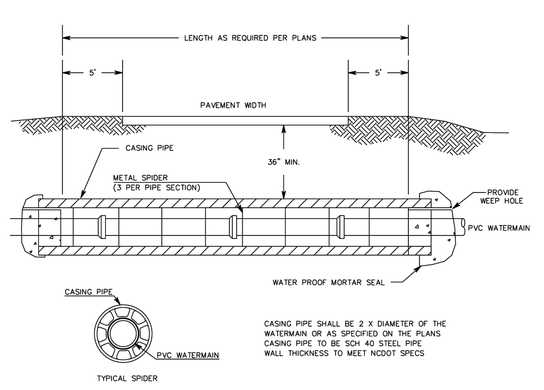
3/4" WATER SERVICE LATERAL DETAIL
NTS



CONNECTION USING 90° BENDS
NO SCALE

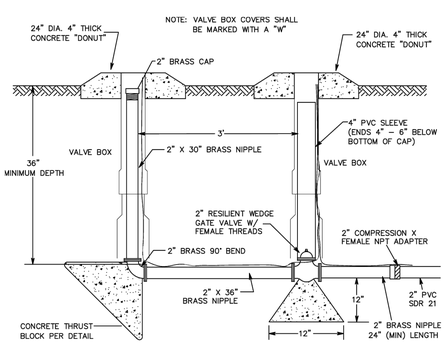


VALVE BOX
NTS



CASING PIPE SHALL BE 2 X DIAMETER OF THE WATERMAIN OR AS SPECIFIED ON THE PLANS
CASING PIPE TO BE SCH 40 STEEL PIPE
WALL THICKNESS TO MEET NCDOT SPECS

ROAD BORE DETAIL
NTS



2" BLOW-OFF DETAIL
NTS

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
UTILITY DETAILS

JOB NO. 48235
SHEET NO. C6.3

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 EXP. 10-30-25 KIMBERLY D. HAMBY

PERMIT DRAWINGS
OCT 30, 2025
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THIS DRAWING PREPARED AT THE ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE 10/30/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE NO SCALE

S:\105\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C6.3-DTUTIL.dwg | Plotted on 10/30/2025 11:34 AM | by Kim Hamby

TIMMONS GROUP

1805 West City Drive
Unit E
Elizabeth City, NC 27909

P 252.621.5030
F 252.562.6974
www.timmons.com

October 29, 2025

Ms. Caitlin A Spear, District Engineer
N. C. Department of Transportation
1929 North Road St.
Elizabeth City, NC 27909

RE: Driveway Permit
Ashbrook Estates
Timmons Project No. 48235

Dear Ms. Spear:

Please accept this request for a driveway permit for one driveway access for Ashbrook Estates.

Submitted for your review and approval are the executed driveway permit and a complete set of plans. The $50.00 fee check will be mailed to your office.

Thank you for your attention to this project. If you have any questions concerning this submission, please do not hesitate to contact me at (252) 621-5029.

Sincerely,
Timmons Group

Kimberly D. Hamby

Kimberly D. Hamby, PE
Sr. Project Manager

cc: file
Dare Co Public Works

JOSH STEIN
Governor
D. REID WILSON
Secretary
WILLIAM E. TOBY VINSON, JR
Director

NORTH CAROLINA
Environmental Quality

December 1, 2025

LETTER OF APPROVAL WITH MODIFICATIONS

Ashbrook Estates, LLC
301 E Main St.
Elizabeth City, North Carolina 27909

RE: Project Name: Ashbrook Estates
Permit Number: CURRI-2026-0148
Acres Approved: 64.9
County: Currituck
City: Maple
Address: Maple Rd
River Basin: Pasquotank
Stream Classification: C: Aquatic Life, Secondary Contact Recreation, Fresh water; SW: Swamp Waters
Plan Type: New Plan – Residential Subdivision (Roadway/Ditch Construction with Sidewalks, Watermain Extension, On-Site Drainage Network and Lot Grading)

Dear Ashbrook Estates, LLC,

This office has received and reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan shall expire three (3) years following the date of approval, if no land disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (eNOI) form requesting a COC under the NCG010000 Construction Stormwater General Permit. You must apply for coverage by submitting a "Construction Stormwater – NCG01 (Subject to the SPCA) in the AccessDEQ Portal. Once your application is complete, you will receive an invoice for the $127 annual permit fee and can submit payment through the AccessDEQ Portal. Once the fee is processed and the application approved, you will receive the COC via email. As the Financially Responsible Party shown on the FRO form submitted for this project, you MUST obtain the COC prior to commencement of any land disturbing activity. Please direct questions about the eNOI form to the Stormwater Program staff in the Raleigh central office. If the owner/operator of this project changes in the future, the new responsible party must obtain a new COC.

North Carolina Department of Environmental Quality
Division of Energy, Mineral and Land Resources | Washington Regional Office
943 Washington Square Mall | Washington, North Carolina 27889
252.948.3800

Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:

1. The approved E&SC plan as well as any approved deviation.
2. The NCG01 permit and the COC, once it is received.
3. Records of inspections made during the previous 12 months.

Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to ensure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form and on the plan which you provided. You are requested to file an amended form if there is any change in the information included on the form.

Your cooperation is appreciated.

Sincerely,

Ginger Turner

Ginger Y. Turner, PE for
Samir Dumpor, PE
Regional Engineer
Land Quality Section

Modifications

1. The perimeter ditches shall be constructed along with measures found in Item 2 of the Construction Sequencing and prior to mass grading the site, directing construction stormwater to the proposed skimmer basin.

General Comments

1. This permit allows for a land disturbance, as called for on the application plan, not to exceed **64.9** acres. Exceeding that acreage will be a violation of this permit and would require a revised plan and additional application fee. Land disturbance should be conducted in a manner to minimize land exposure, preferably limited exposure to approximately 20 acres at a time. Any addition in impervious surface, over that already noted on the approved plan, would also require a revised plan to verify the appropriateness of the erosion control measures and stormwater retention measures (NCGS 113A-54.1(b)).

2. Additional measures may be required - the applicant is responsible for the control of sediment on-site. If the approved erosion and sedimentation control measures prove insufficient, the applicant must take those additional steps necessary to stop sediment from leaving this site (NCGS 113A-57(3); 15A NCAC 4B .0115). Each sediment storage device must be inspected after each storm event (NCGS 113A54.1(e)). Maintenance and/or clean out is necessary anytime the device is at 50% capacity. All sediment storage measures will remain on site and functional until all grading and final landscaping of the project is complete (15A NCAC 04B .0113).

3. The applicant is responsible for obtaining any and all permits and approvals necessary for the development of this project prior to the commencement of this land disturbing activity. This could include our agency's Stormwater regulations and the Division of Water Resources' enforcement requirements within Section 401 of the Clean Water Act, the U.S. Army Corps of Engineers' jurisdiction of Section 404 of the Clean Water Act, the Division of Coastal Management's CAMA requirements, the Division of Solid Waste Management's landfill regulations, the Environmental Protection Agency and/or The U.S. Army Corps of Engineers jurisdiction of the Clean Water Act, local County or Municipalities' ordinances, or others that may be required. This approval cannot supersede any other permit or approval; however, in the case of a Cease-and-Desist Order from the Corps of Engineers, that Order would only apply to wetland areas. All highlands would still have to be in compliance with the N.C. Sedimentation Pollution Control Act.

4. If any area on site falls within the jurisdiction of Section 401 or 404 of the Clean Water Act, the applicant is responsible for compliance with the requirements of the Division of Water Resources (DWR), the Corps of Engineers and the Environmental Protection Agency (EPA) respectively. Any erosion control measures that fall within jurisdictional wetland areas must be approved by the aforementioned agencies prior to installation. The Land Quality Section must be notified of a relocation of the measures in question to the transition point between the wetlands and the uplands to assure that the migration of sediment will not occur. If that relocation presents a problem or contradicts any requirements of either DWR, the Corps, or the EPA, it is the responsibility of the applicant to inform the Land Quality Section regional office so that an adequate contingency plan can be made to ensure sufficient erosion control remains on site. Failure to do so will be considered a violation of this approval (NCGS 113A-54.1(b)).

5. Any off-site borrow and waste required for this project must come from a site with an approved erosion control plan, a site regulated under the Mining Act of 1971, or a landfill regulated by the Division of Solid

Waste Management. Trash/debris from demolition activities or generated by any activities on site must be disposed of at a facility regulated by the Division of Solid Waste Management or per Division of Solid Waste Management or Division of Water Resources rules and regulations. [15A NCAC 4B .0110]

6. A graveled construction entrance must be located at each point of access and egress available to construction vehicles during the grading and construction phases of this project. Access and egress from the project site at a point without a graveled entrance will be considered a violation of this approval. Routine maintenance of the entrances is critical (113A-54.1(b)).

7. If sediment traps and basins are shown on the plan as the primary sedimentation and erosion control devices on this project, it is necessary that the traps and basins and their collection systems be installed before any other grading takes place on site, and that every structure that receives more than one acre of drainage is built so that each dewaters only from the surface (NCG010000). If that proves to be impractical, a revised plan must be submitted and approved that addresses erosion and sediment control needs during the interim period until the traps and basins are fully functioning (113A-54.1(b)).

8. Any and all existing ditches on this project site are assumed to be left undisturbed by the proposed development unless otherwise noted. The removal of vegetation within any existing ditch or channel is prohibited unless the ditch or channel is to be regraded with side slopes of 2 horizontal to 1 vertical or less steep (15A NCAC 04B .0124 (d)). Bank slopes may be mowed but stripping of vegetation is considered new earth work and is subject to the same erosion control requirements as new ditches (NCGS 113A52(6)).

9. As a condition of the NPDES General Stormwater Permit (NCG010000), the financially responsible party shall comply with the NCG01 Ground Stabilization and Materials Handling requirements that became effective April 1, 2019. The NCG01 Ground Stabilization and Materials Handling standard detail can be printed from the deq.nc.gov/NCG01 website.

10. As a condition of the NPDES General Stormwater Permit (NCG010000), the financially responsible party shall comply with the NCG01 Self-Inspection, Recordkeeping and Reporting requirements that became effective April 1, 2019. The NCG01 Self-Inspection, Recordkeeping and Reporting standard details can be printed from the deq.nc.gov/NCG01 website.

11. As a part of routine monitoring of the approved land-disturbing activity, the financially responsible party shall ensure inspections of the area covered by the approved plan after each phase of the plan has been completed and after establishment of temporary ground cover in accordance with North Carolina General Statute 113A-54.1(e).

12. The NCG01 has a yearly fee and our office often receives closure inspection requests days prior to yearly NCG01 fee payment due dates. Be advised the project requires a closure inspection report by DEMLR prior to filing the Notice of Termination (NOT) to terminate NCG01 coverage. The closure inspection should not be requested until after the site has achieved full vegetative stabilization and measures have been removed. The removal of temporary ESC measures, including basins, requires prior approval. Often, a full growing season is necessary between initial seeding/mulching and removal of measures. Please plan your construction accordingly to avoid contacting our office prematurely for a closure inspection. Also be advised you may be asked for representative site pictures prior to a closure inspection.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

February 4, 2026

Ashbrook Estates, LLC
PO Box 85
Moyock, NC 27958

-AND-

Currituck County
153 Courthouse Rd, Suite 204
Currituck, NC 27929

County: Currituck

Subject: Encroachment to allow the installation of a fire hydrant, waterline, and appurtenances along SR-1246

Dear Applicant,

Attached for your records is a copy of the approved encroachment package to allow the installation a waterline, and appurtenances along and under SR-1246, to serve Ashbrook Estates. **Any and all damages done to State Routes must be properly repaired.** This approval will expire on February 4, 2027, unless construction has started or been completed prior to that date.

Please feel free to contact the District Office at (252) 621-6400 if you have any questions.

Sincerely yours,

DocuSigned by:
Caitlin A Spear
930880FAC40F45A...

Caitlin A. Spear, PE
District Engineer

Attachments
Cc: Division Engineer (W/Attachments)
County Maintenance Engineer (W/Attachments)

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION ONE – DISTRICT ONE
1929 NORTH ROAD STREET
ELIZABETH CITY, NC 27909

Telephone: (252) 621-6400
Fax: (252) 621-6410
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1929 NORTH ROAD STREET
ELIZABETH CITY, NC 27909

Pre-Construction

Contact Offices & Outside Agency issues / Contacts / Info.

1. Approval may be rescinded upon failure to follow any of the provisions in this permit and may be considered a violation of the encroachment agreement.

2. The Encroaching party or their contractor shall provide the following notices prior to construction activity within the NCDOT Right of Way:
    a. Three (3) business days advance phone call at telephone (252) 621-6400 or email to caspear@ncdot.gov to the District Engineer's office
    b. If the construction falls within the limits of an NCDOT managed construction project, five (5) business days advance phone call to the Resident Engineer, Mr. Brandon Tatum at (252) 621-6400 or email to bjtatum@ncdot.gov.

    Failure to provide these notifications prior to beginning construction is subject to the Division Engineer's discretion to cease construction activity for this encroachment. NCDOT reserves the right to cease any construction or maintenance work associated with this installation by the encroaching party until the construction or maintenance meets the satisfaction of the Division Engineer or their representative.

3. Prior to beginning work, it is the requirement of the Encroaching Party to contact the appropriate Utility Companies involved and make arrangements to adjust or relocate any utilities that conflict with the proposed work.

4. It shall be the responsibility of the encroaching party to determine the location of utilities within the encroachment area. NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act requires underground utilities to be located by calling 811 prior to construction. The encroaching party shall be responsible for notifying other utility owners and providing protection and safeguards to prevent damage or interruption to existing facilities and maintain access to them.

5. The encroaching party shall notify the appropriate municipal office prior to beginning any work within the municipality's limits of jurisdiction.

6. Excavation within 1000 feet of a signalized intersection will require notification by the encroaching party to the Division Traffic Engineer at telephone number (252) 482-1857 no less than one week prior to beginning work. All traffic signal or detection cables must be located prior to excavation. Cost to replace or repair NCDOT signs, signals, pavement markings or associated equipment and facilities shall be the responsibility of the encroaching party.

7. At the option of the District Engineer, a preconstruction meeting including representatives of NCDOT, the encroaching party, contractors and municipality, if applicable, shall be required. A pre-construction conference held between a municipality (or other facility owner) and a contractor without the presence of NCDOT personnel with subsequent construction commencing may be subject to NCDOT personnel ceasing any work on NCDOT right-of-way related to this encroachment until such meeting is held. Contact the District office to schedule.

8. At the discretion of the District Engineer, a NOTIFICATION FOR UTILITY / NON-UTILITY ENCROACHMENT WITHIN NCDOT R/W form (See corresponding attachment) with the scheduled pre-construction meeting and associated construction schedule details must be completed and submitted to the District Engineer's office a minimum of one week prior to construction.

9. At the discretion of the District Engineer, the encroaching party (not the utility contractor) shall make arrangements to have a qualified inspector, under the supervision of a Professional Engineer registered in North Carolina, on site at all times during construction. The registered Professional Engineer shall be required to submit a signed and PE sealed certification that the utility was installed in accordance with the encroachment agreement.

Legal & Right-of-Way Issues

10. This approval and associated plans and supporting documents shall not be interpreted to allow any design change or change in the intent of the design by the Owner, Design Engineer, or any of their representatives. Any revisions or changes to these approved plans or intent for construction must be obtained in writing from the Division Engineer's office or their representative prior to construction or during construction if an issue arises during construction to warrant changes.

11. NCDOT does not guarantee the right of way on this road, nor will it be responsible for any claim for damages brought about by any property owner by reason of this installation. It is the responsibility of the encroaching party to verify the right of way.

12. Encroaching party shall be responsible for obtaining all necessary permanent and/or temporary construction, drainage, utility and/or sight distance easements.

13. All Right of Way and easements necessary for construction and maintenance shall be dedicated to NCDOT with proof of dedication furnished to the District Engineer prior to beginning work.

14. No commercial advertising shall be allowed within NCDOT Right of Way.

15. The encroaching party shall obtain proper approval from all affected pole owners prior to attachment to any pole.

16. This agreement does not authorize installations within nor encroachment onto railroad rights of way. Permits for installations within railroad right of way must be obtained from the railroad and are the responsibility of the encroaching party.

Work Zone Traffic

17. Traffic control shall be coordinated with the District Engineer and the Division Traffic Engineer at telephone (252) 621-6400, prior to construction.

18. <u>WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM</u>

    All personnel performing any activity inside the highway right of way are required to be familiar with the NCDOT Maintenance / Utility Traffic Control Guidelines (MUTCG). No specific training course or test is required for qualification in the Maintenance /Utility Traffic Control Guidelines (MUTCG).

    All flagging, spotting, or operating Automated Flagger Assist Devices (AFAD) inside the highway right of way requires qualified and trained Work Zone Flaggers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

    All personnel involved with the installation of Work Zone Traffic Control devices inside the highway right of way are required to be qualified and trained Work Zone Installers. Training for this

certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel in charge of overseeing work zone Temporary Traffic Control operations and installations inside the highway right of way are required to be qualified and trained Work Zone Supervisors. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

For questions and/or additional information regarding this training program please refer to https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx or call the NCDOT Work Zone Traffic Control Section (919) 814-5000.

19. The party of the second part shall employ traffic control measures that are in accordance with the prevailing federal, state, local, and NCDOT policies, standards, and procedures. These policies, standards, and procedures include, but are not limited to the following:
    a. Manual on Uniform Traffic Control Devices (MUTCD) – North Carolina has adopted the MUTCD to provide basic principles and guidelines for traffic control device design, application, installation, and maintenance. North Carolina uses the MUTCD as a minimum requirement where higher supplemental standards specific to North Carolina are not established. Use fundamental principles and best practices of MUTCD (Part 6, Temporary Traffic Control).
    b. NCDOT Maintenance / Utility Traffic Control Guidelines – This document enhances the fundamental principles and best practices established in MUTCD Part 6, Temporary Traffic Control, incorporating NCDOT-specific standards and details. It also covers important safety knowledge for a wide range of work zone job responsibilities.

20. If the Traffic Control Supervisor determines that portable concrete barrier (PCB) is required to shield a hazard within the clear zone, then PCB shall be designed and sealed by a licensed North Carolina Professional Engineer. PCB plans and design calculations shall be submitted to the District Engineer for review and approval prior to installation.

21. Ingress and egress shall be maintained to all businesses and dwellings affected by the project. Special attention shall be paid to police, EMS and fire stations, fire hydrants, secondary schools, and hospitals.

22. Traffic shall be maintained at all times. All lanes of traffic are to be open during the hours of 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. Monday through Friday, during any time of inclement weather, **or as directed by the District Engineer**. If the location of work calls for a rolling roadblock on a divided highway for US routes, the restriction is to work only on Sunday from 1:00 A.M. to 10:00 A.M, **or as Directed by the District Engineer**. Any violation of these hours will result in ceasing any further construction by the Encroaching Party or their contractor.

23. Nighttime and weekend operations will NOT be allowed unless written approval is received from the District Engineer. If nighttime or weekend work is allowed or required, all signs must be retro-reflective, and a work zone lighting plan must be submitted for approval prior to construction.

24. Two-way traffic shall be maintained at all times unless designated by the District Engineer. Traffic shall not be rerouted or detoured without the prior written approval from the District Engineer. No utility work will be allowed on state holidays from 7:00 PM the night before through 9:00 AM the day prior to, following or during local events without prior approval from the District Engineer. If the construction is within 1000 feet of a school location or on a designated bus route, the construction shall be coordinated with the school start and end times to avoid traffic delays.

25. Work requiring lane or shoulder closures shall not be performed on both sides of the road simultaneously within the same area.

26. Any work requiring equipment or personnel within 5 feet of the edge of any travel lane of an undivided facility and within 10 feet of the edge of any travel lane of a divided facility shall require a lane closure with appropriate tapers per current *NCDOT Roadway Standard Drawings or MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES*.

27. At the discretion of the District Engineer, a traffic control plan shall be developed and submitted under the seal and signature of a Licensed North Carolina Professional Engineer prior to construction. The plan shall be specific to the site and adequately detailed. Issues such as the close proximity to intersections shall be addressed.

28. Temporary and final pavement markings are the responsibility of the encroaching party. Final pavement markings and sign plans shall be submitted with the encroachment request to the Division Traffic Engineer prior to construction. Final pavement markings shall be thermoplastic unless otherwise directed by the Division Traffic Engineer or District Engineer.

29. Any pavement markings that are damaged or obliterated shall be restored by the encroaching party at no expense to NCDOT.

30. Sidewalk closures shall be installed as necessary. Pedestrian traffic shall be detoured around these closures and shall be signed appropriately and in accordance with The American with Disabilities Act Accessibility Guidelines. The encroaching party must adhere to the guidelines for accommodating pedestrians in encroachment work zones as described in the NCDOT Pedestrian Work Zone Accommodations Training found at https://www.youtube.com/watch?v=AOuYa5IW3dg&feature=youtu.be

Roadside Environmental

31. 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. Additional information can be obtained by contacting the NCDOT Roadside Environmental Engineer regarding the North Carolina Natural Heritage Program or the United States Fish and Wildlife Services. Contact the Division Roadside Environmental Engineer's Office at (252) 621-6310.

32. When surface area in excess of one acre will be disturbed, the Encroacher shall submit a Sediment and Erosion Control Plan which has been approved by the appropriate regulatory agency or authority prior to beginning any work on the Right of Way. Failure to provide this information shall be grounds for suspension of operations. Proper temporary and permanent measures shall be used to control erosion and sedimentation in accordance with the approved sediment and erosion control plan.

33. The Verification of Compliance with Environmental Regulations (VCER-1) form is required for all non-utility encroachment agreements or any utility encroachments when land disturbance within NCDOT right of way exceeds 1 acre. When required, the VCER-1 form must be PE sealed by a NC registered professional engineer who has verified that all appropriate environmental permits (if applicable) have been obtained and all applicable environmental regulations have been followed.

34. All erosion control devices and measures shall be constructed, installed, maintained, and removed by the Encroacher in accordance with all applicable Federal, State, and Local laws, regulations, ordinances, and policies. Permanent vegetation shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer. All areas disturbed (shoulders, ditches, removed accesses, etc.) shall be graded and seeded in accordance with the latest *NCDOT Standards Specifications for Roads and Structures* and within 15 calendar days with an approved NCDOT seed mixture (all lawn type areas shall be maintained and reseeded as such). Seeding rates per acre shall be applied according to the Division Roadside Environmental Engineer. Any plant or vegetation in the NCDOT planted sites that is destroyed or damaged as a result of this encroachment shall be replaced with plants of like kind or similar shape.

35. No trees within NCDOT right of way shall be cut without authorization from the Division Roadside Environmental Engineer. An inventory of trees measuring greater than 4 caliper inches (measured 6" above the ground) is required when trees within C/A right of way will be impacted by the encroachment installation. Mitigation is required and will be determined by the Division Roadside Environmental Engineer's Office.

36. Prior to installation, the Encroaching Party shall contact the District Engineer to discuss any environmental issues associated with the installation to address concerns related to the root system of trees impacted by boring or non-utility construction of sidewalk, roadway widening, etc.

37. The applicant is responsible for identifying project impacts to waters of the United States (wetlands, intermittent streams, perennial streams and ponds) located within the NCDOT right-of-way. The discharge of dredged or fill material into waters of the United States requires authorization from the United States Army Corps of Engineers (USACE) and certification from the North Carolina Division of Water Quality (NCDWQ). The applicant is required to obtain pertinent permits or certification from these regulatory agencies if construction of the project impacts waters of the United States within the NCDOT right-of-way. The applicant is responsible for complying with any river or stream Riparian Buffer Rule as regulated by the NCDWQ. The Rule regulates activity within a 50-foot buffer along perennial streams, intermittent streams and ponds. Additional information can be obtained by contacting the NCDWQ or the USACE.

38. The contractor shall not begin the construction until after the traffic control and erosion control devices have been installed to the satisfaction of the Division Engineer or their agent.

39. The contractor shall perform all monitoring and record keeping and any required maintenance of erosion and sediment control measures to maintain compliance with stormwater regulations.

Bonds

40. A Performance and Indemnity Bond in the amount of $0 shall be posted with the District Engineer's Office by the Party of the Second Part prior to beginning any work within the NCDOT Right of Way. The bond shall be held for a minimum of one year after a satisfactory final inspection of the installation by NCDOT. The bond may be held for a period longer than one year after completion if, in the opinion of NCDOT, the size or complexity of the installation warrants a longer period.

41. The release of the bond is subject to a final inspection by NCDOT. Contact the District office to schedule a Final Inspection and to request release of the bond.

42. When a Continuing Indemnity bond is on file with the central Raleigh office, the cashing of that bond may be used to fund any necessary repairs by NCDOT forces for unaddressed defects in workmanship by the encroaching party and/or by their contractor.

Control of Access

43. No access to the job site, parking or material storage shall be allowed along or from the **Control of Access Roadway.**

44. The installation within the Control of Access fence shall not adversely affect the design, construction, maintenance, stability, traffic safety or operation of the controlled access highway, and the utility must be serviced without access from the through-traffic roadways or ramps.

45. The resetting of the Control of Access fence shall be in accordance with the applicable NCDOT standard and as directed by the Division Engineer or their representative.

STIP (or Division Managed) Projects

46. State Transportation Improvement Project (STIP) X-XXXX is scheduled for future construction. Any encroachment determined to be in conflict with the construction of this NCDOT project shall be removed and/or relocated at the encroaching party's expense.

Construction

General

47. An executed copy of the encroachment agreement, provisions and approved plans shall be present at the construction site at all times. If safety or traffic conditions warrant such an action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.

48. If the approved method of construction is unsuccessful and other means are required, prior approval must be obtained through the District Engineer before construction may continue.

49. Any REVISIONS marked in RED on the attached non-PE sealed plans shall be incorporated into and made part of the approved encroachment agreement.

50. All disturbed areas are to be fully restored to current NCDOT minimum roadway standards or as directed by the Division Engineer or their representative. Disturbed areas within NCDOT Right-of-Way include, but not limited to, any excavation areas, pavement removal, drainage or other features.

51. The encroaching party shall notify the Division Engineer or their representative immediately in the event any drainage structure is blocked, disturbed or damaged. All drainage structures disturbed, damaged or blocked shall be restored to its original condition as directed by the Division Engineer or their representative.

52. A minimum of five-foot clearance is required for utility installations beneath or near drainage pipes, headwalls, and a minimum of two-foot clearance below the flowline of streams. If directional drilling, a minimum of ten-foot clearance distance is required from drainage structures and a minimum of five feet below flowline of streams.

53. At points where the utility is placed under existing storm drainage, the trench will be backfilled with excavatable flowable fill up to the outside diameter of the existing pipe.

54. Unless specified otherwise, during non-working hours, equipment shall be located away from the job site or parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Zone. Also, during non-working hours, no parking or material storage shall be allowed along the shoulders of any state-maintained roadway.

55. The Encroaching Party and/or their Contractor shall comply with all OSHA requirements. If OSHA visits the work area associated with this encroachment, the District Office shall be notified by the encroaching party immediately if any violations are cited.

56. Any guardrail removed or damaged during construction shall be replaced or repaired to its original condition, meeting current NCDOT standards or as directed by the Division Engineer or their representative.

57. Right of Way monuments disturbed during construction shall be referenced by a registered Land Surveyor and reset after construction.

58. All Traffic signs moved during construction shall be reinstalled as soon as possible to the satisfaction of the Division Engineer or their representative.

59. Detection tape, where required by NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act, shall be buried in the trench approximately 1 foot above the installed facility. Where conduit is installed in the right of way and is not of ferrous material, locating tape or detection wire shall be installed with the conduit.

60. All driveways disturbed during construction shall be returned to a state comparable with the condition of the driveways prior to construction.

61. Conformance with driveway permit review should be required in conjunction with this encroachment agreement. In the event there is a conflict between the driveway permit and the encroachment agreement, the District Engineer should resolve the conflict and notify the parties involved.

Engineering

62. All traffic control, asphalt mixes, structures, construction, workmanship and construction methods, and materials shall be in compliance with the most-recent versions of the following resources: *ASTM Standards*, *Manual on Uniform Traffic Control Devices, NCDOT Utilities Accommodations Manual, NCDOT Standard Specifications for Roads and Structures, NCDOT Roadway Standard Drawings,* NCDOT *Asphalt Quality Management System* manual, **and the approved plans.**

63. Regulator stations, metering stations, cathodic test stations, and anode beds are not permitted within NCDOT right of way. Header wires are permitted.

64. Non-Utility Communication and Data Transmission installations (ground mounted type or Small Cell pole-mounted type) must adhere to guidelines in the Utilities Accommodations Manual and, when located within municipal jurisdictions, are subject to review and approval by municipal ordinances and any additional municipal approval for proximity to historic districts and landmarks. All wiring and related telecommunications work shall conform to the latest regulations by the Federal Communications Commission.

65. All wiring and related electrical work shall conform to the latest edition of the National Electrical Safety Code.

66. Prior approval for any blasting must be obtained from the Division Engineer or their representative.

Location within R/W

67. All utility access points, such as manholes, vaults, handholes, splice boxes and junction boxes shall be located as close to the right of way line as possible and shall not be placed in the ditch line, side slopes of the ditches or in the pavement. All manholes, handholes, splice boxes, junction boxes and vaults and covers shall be flush with the ground when located within the vehicle clear zone. Slack loops for telecommunications in industry standard housing units shall be buried a minimum of 18 inches when buried or meet minimum NCDOT vertical and horizontal clearances when installed aerially.

68. Any utility markers, cabinets, pedestals, meter bases and services for meter reading required shall be as close to the Right of Way line as possible. If it is not feasible to install at or near Right of Way line, then written approval shall be obtained from NCDOT prior to installation.

69. Fire Hydrants shall be of the breakaway type. Hydrants shall be placed near the right of way line. In curb and gutter sections with written approval from the District, the hydrants may be placed at 6' behind the back of the curb or minimum 2' back of sidewalk.

70. Hot box (aka ASSE 1060) or Safe-T-Cover type enclosures covering utility main pipe joints, backflow preventers, valves, vent pipes, cross connections, pumps, grinders, irrigation assemblies, transformers, generators, and other similar large appurtenances shall be located outside sight distance triangles and off of the NCDOT Right-of-Way.

71. Sprinkler heads shall be located a minimum of 10 feet from the edge of pavement, edge of shoulder, or back of curb whichever is greater and shall be directed so that water does not spray or drain on the roadway surface, sidewalk, or passing vehicles at any time. Upon completion of the installation and prior to activation of the system, the Encroacher shall contact the District Engineer to schedule a test of the system to verify the spray pattern. Sprinkler systems shall not be operated during periods of high wind or freezing weather, or to the extent that the subgrade adjacent to the pavement structure becomes saturated. NCDOT reserves the right to require immediate termination and removal of any sprinkler system which in its judgement and opinion adversely affects safety, maintenance, or operation of the roadway.

72. Luminaire and/or utility poles and guy wires shall be set as close to the Right of Way line as practical and outside the Clear Zone in accordance with the latest version of the AASHTO Roadside Design Guide (See corresponding attachment) or made breakaway in accordance with the requirements of NCHRP Report 350. Any relocation of the utility poles from the original design due to Clear Zone requirements shall require a re-submittal for the utility design.

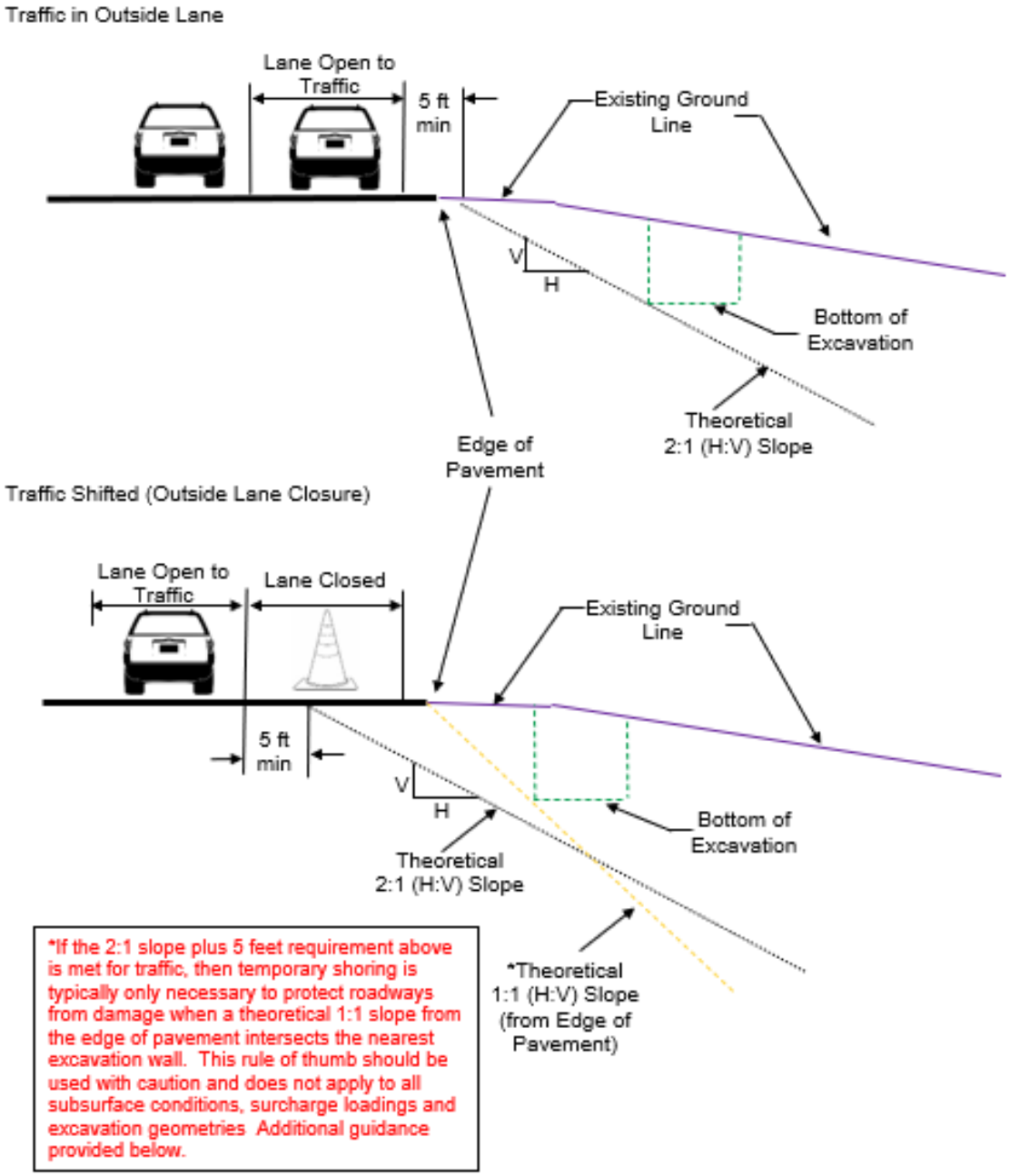
73. Luminaire and/or utility poles shall be set a minimum of 5'-6" behind face of any guardrail or otherwise sufficiently protected. However, standard placement may be reduced to 3'-6" behind face of guardrail when posts are spaced 3'-1 ½", or where speed limit is less than 55 MPH.

Excavation

74. Excavation material shall not be placed on pavement.

75. It is the responsibility of the encroaching party or their contractor to prevent any mud/dirt from tracking onto the roadway. Any dirt which may collect on the roadway pavement from equipment and/or truck traffic on site shall be immediately removed to avoid any unsafe traffic conditions.

76. The utility shall be installed within 5 feet of the right of way line and outside the 5-foot minimum from travel lane plus theoretical 2:1 slope from the edge of pavement to the bottom of the nearest excavation wall for temporary shoring. Temporary shoring is required when a theoretical 2:1 slope from the bottom of excavation will intersect the existing ground line less than 5 feet from the outside edge of an open travel lane as shown in the figure below or when a theoretical 2:1 slope from the bottom of excavation will intersect any existing structure, support, utility, property, etc. to be protected.



If the 2:1 slope plus 5 feet requirement above is met for traffic, then temporary shoring is typically only necessary to protect roadways from damage when a theoretical 1:1 slope from the edge of pavement intersects the nearest excavation wall. This rule of thumb should be used with caution and does not apply to all subsurface conditions, surcharge loadings and excavation geometries.

Situations where this 1:1 slope is not recommended include groundwater depth is above bottom of excavation or excavation is deeper than 10 feet or in Type B or C soils as defined by OSHA Technical Manual. Temporary shoring may be avoided by locating trenches, bore pits, and other excavations far enough away from the open travel lane, edge of pavement and any existing structure, support, utility, property, etc. to be protected.

Temporary shoring shall be designed and constructed in accordance with current NCDOT Standard Temporary Shoring provisions (refer to https://connect.ncdot.gov/resources/Specifications/Pages/2018-Specifications-and-Special-Provisions.aspx and see SP11 R002

a. Temporary excavation shoring, such as sheet piling, shall be installed. The design of the shoring shall include the effects of traffic loads. The shoring system shall be designed and sealed by a licensed North Carolina Professional Engineer. Shoring plans and design calculations shall be submitted to the Division Engineer for review and approval prior to construction. (See NCDOT *Utilities Accommodations Manual* for more information on requirements for shoring plans, design calculations, and subsurface investigation report.) **Trench boxes shall not be accepted as temporary shoring and will not be approved for use in instances where shoring is required to protect the highway, drainage structure, and/or supporting pavement or structure foundation**.
b. All trench excavation inside the limits of the theoretical two-to-one slope plus 5 feet requirement, as defined by the policy, shall be completely backfilled and compacted at the end of each construction day. No portion of the trench shall be left open overnight. Any excavation that is not backfilled by the end of the workday must address any safety and traveling public concerns including accommodations for bicycles, pedestrians and persons with disabilities.
c. The trench backfill material shall meet the Statewide Borrow Criteria. The trench shall be backfilled in accordance with Section 300-7 of the latest *NCDOT Standard Specifications for Roads and Structures,* which basically requires the backfill material to be placed in layers not to exceed 6 inches loose and compacted to at least 95% of the density obtained by compacting a sample in accordance with AASHTO T99 as modified by DOT.
d. At the discretion of the Division Engineer, a qualified NCDOT inspector shall be on the site at all times during construction. The encroaching party shall reimburse NCDOT for the cost of providing the inspector. If NCDOT cannot supply an inspector, the encroaching party (not the utility contractor) should make arrangements to have a qualified inspector, under the supervision of a licensed North Carolina Professional Engineer, on the site at all times. The Professional Registered Engineer shall certify that the utility was installed in accordance with the encroachment agreement and that the backfill material meets the Statewide Borrow Criteria.
e. The length of parallel excavation shall be limited to the length necessary to install and backfill one joint of pipe at a time, not to exceed twenty-five (25) feet.

77. All material to a depth of 8 inches below the finished surface of the subgrade shall be compacted to a density equal to at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. The subgrade shall be compacted at a moisture content which is approximately that required to produce the maximum density indicated by the above test method. The contractor shall dry or add moisture to the subgrade when required to provide a uniformly compacted and acceptable subgrade. The option to backfill any trenches with dirt or either #57 stone or #78 stone with consolidation with a plate tamp and without a conventional density test may be pursued with the written consent of the District Engineer. If this option is exercised, then roadway ABC stone and asphalt repair as required will also be specified by the District Engineer.

Boring

78. Boring equipment will be provided of a type and size to facilitate boring in the local geologic conditions and shall be able to facilitate the encroachment work.

79. When Horizontal Directional Drilling (HDD) is used, the following stipulations apply:
    a. Use drilling fluids as appropriate for the type soils but use of water alone is prohibited. Pump drilling fluids only while drilling or reaming. Directional boring using jetting with a Bentonite (or equivalent material) slurry is recommended. Monitor flow rates to match the amount leaving the bore hole and do not increase pressure or flow to free stuck drill heads, reamers or piping. Open cutting to retrieve stuck drill heads is not allowed without prior permission from the District Engineer.
    b. The minimum depth shall adhere to the table below for transverse (under non-controlled access, partial controlled access, or limited controlled access roadway) installations and refers to maximum diameter of hole drilled and not the dimension of the carrier or encasement pipe.

Diameter of Drilled Hole (Backream)	Minimum Depth of Cover
2" to 6”	5 feet
>6” to 15”	12 times hole diameter (e.g. 6-inch hole means 6 feet minimum depth)
>15” to 36”	15 feet or greater

    c. Under fully controlled access roadway installations, the minimum depth for transverse crossings shall be 15 feet under any pavement (ramps or thru lanes)
    d. An overbore (backream diameter) shall not be more than 1.5 times the outside diameter of the pipe or encasement under any highway for pipes 12 inches in diameter or less. For pipes with outer diameter larger than 12 inches, the overbore may be no larger than outer diameter of pipe plus 6 inches. An overbore exceeding 1.5 times greater than the outside diameter of the pipe or encasement may be considered if the encroachment agreement includes a statement signed and sealed by a licensed North Carolina Professional Engineer indicating that an overbore in excess of 1.5 times the outside diameter of the pipe or encasement will appropriately arch and no damage will be done to the pavement or sub-grade.
    e. Directional boring is allowed beneath embankment material in naturally occurring soil.
    f. Any parallel installation utilizing the directional boring method shall be made at a minimum depth of three (3’) feet (cover) below the ground surface and outside the theoretical 1:1 slope from the existing edge of pavement except where the parallel installation crosses a paved roadway.
    g. All directional bores shall maintain ten (10) feet minimum (clear) distance from the nearest part of any structure, including but not limited to bridges, footings, pipe culverts or box culverts. Directional bores are not allowed beneath bridge footings, culvert wingwall footings, slope protection or retaining walls.
    h. The tip of the drill string shall have a cutter head.
    i. Detection wire shall be installed with non-ferrous material.
    j. HDPE pipe installed by directional boring shall not be connected to existing pipe or fittings for one (1) week from the time of installation to allow tensional stresses to relax.

Aerial clearances

80. Vertical clearance of overhead power and communication lines shall meet the National Electrical Safety Code requirements except the minimum vertical clearance shall be 18' for crossings over NCDOT roadways (24' over Fully Controlled Access roadways) and 16' for parallel installations.

81. When applicable for aerial installations, in relation to the bridge, the utility line shall be located with minimum clearances as indicated in Figure 3-3 in the Utilities Accommodations Manual for NCDOT **Required Clearances for Aerial Installations by Encroachment Near Bridge Structures**.

Pavement Detail and Repair

82. The paving of this roadway shall be in accordance with the latest version of NCDOT Standard Specifications, Sections 610, 1012 and 1020. The Contractor shall follow all procedures of the latest Quality Management System (QMS) Asphalt Manual for asphalt pavement - Maintenance Version (see https://connect.ncdot.gov/resources/Materials/MaterialsResources/Forms/Default.aspx) to find the most recent version. The Contractor must adhere to all testing requirements and quality control requirements specified. The Contractor shall contact the NCDOT Division QA Supervisor prior to producing plant mix and make the Supervisor aware that the mix is being produced for a future NCDOT road. Contact the District Engineer to determine the NCDOT Division QA Supervisor. Only NCDOT approved mix designs will be acceptable. A Quality Control Plan shall be submitted (as Directed by the District Engineer) to the District Engineer's Office prior to asphalt production utilizing form QMS-MV1. Failing mixes and/or densities are subject to penalties including monetary payments or removal and replacement. To minimize traffic queuing in construction areas, the possibility of traffic detours may be considered when working on high traffic routes even if traffic control is used. The District Engineer may require traffic detours.

83. When paving beyond utility installation is involved, a Roadway certification report sealed by a Professional Engineer shall be submitted to the District Engineer's office indicating the following:
    - Pavement thickness by type
    - Pavement density, core and/or test locations
    - Base thickness
    - Base density
    - Subgrade density

    Test frequency and method shall be in conformance with the NCDOT *Materials and Tests Manual*. Test must be performed by a Certified Technician including name and Certification number on report.

84. "Potholing" (or "daylighting") pavement cores to expose existing utilities shall be made with a circular minimum 6" to maximum 18" diameter "test" hole to a maximum depth of 12 inches. Pavement core locations shall not be placed in the wheel path whenever possible. Vacuum excavation shall be utilized to expose underground utilities below pavement subgrade. Displaced dirt and rock debris must be suctioned away from the excavation area through a large hose to a vacuum truck and disposed by the encroaching party. Avoid using mechanized equipment in the proximity of all exposed underground utility lines. Pavement cores shall be repaired within the same working day. The pavement core shall be retained and evaluated for reuse to fill the core hole.

    The excavation shall be backfilled and compacted with select material to the bottom of the existing pavement structure or as indicated by the District Engineer. If in good condition, the retained core shall be placed in the hole and secured with a waterproof, mechanical joint. If the pavement core is damaged and cannot be re-used, the core may be replaced with the surface mix, S9.5B. The asphalt patch shall match the thickness of the existing asphalt or four inches, whichever is greater and the use

of NCDOT approved sealant applied to the cracks to fill the voids. All materials must be listed on the NCDOT Approved Products List (APL) found at: https://apps.ncdot.gov/vendor/approvedproducts/.

85. The minimum pavement design for pavement repair shall be according to the most recent version of NCDOT Standard Drawing 654.01 (https://connect.ncdot.gov/resources/Specifications/Pages/default.aspx). The version valid in 2024 through 2030 is located at https://connect.ncdot.gov/resources/Specifications/2024StandardRdwyDrawings/Div%206%20Combined.pdf. The pavement design shall include a mechanical overlay extent to be a minimum of 25 feet each side of the pavement repair area OR as directed by the District Engineer.
86. Pavement cuts shall be repaired the same day the cuts are made unless an asphalt patch cannot be accomplished the same day due to material availability or time restrictions. When the asphalt patch is not feasible, the following apply:
    a. The pavement cut shall be filled to the surface with ABC stone or Flowable Fill per NCDOT's Standards and Specifications.
    b. Once the cut is filled, a minimum ¾-inch steel plate shall be placed and pinned to prevent moving. Plates shall be designed large enough to span a minimum of 1-foot on all sides on the pavement cut.
    c. When flowable fill is used, it shall cure for 24 hours prior to any asphalt material placement. Flowable fill bleed water shall not be present during paving operations. Paving shall not cause damage (shoving, distortion, pumping, etc.) to the flowable fill.
    d. Install and leave "BUMP" signs according to MUTCD until the steel plate has been removed. Once the flowable fill has cured, remove the steel plate, and mill/fill according to the directions of the District Engineer.
    e. All pavement cuts must be sealed with NCDOT approved sealant to prevent future pavement separation or cracking.
87. Any pavement damaged because of settlement of the pavement or damaged by equipment used to perform encroachment work, shall be re-surfaced to the satisfaction of the District Engineer. This may include the removal of pavement and a 50' mechanical overlay. All pavement work and pavement markings (temporary and final) are the responsibility of the Encroaching Party.

Post Construction

Close out/ Inspection

88. The Encroaching party shall notify the District Engineer's office within 2 business days after construction is complete. The District Engineer may perform a construction inspection. Any deficiencies may be noted and reported to the encroaching party to make immediate repairs or resolve any issues to restore the right-of-way to a similar condition prior to construction, including pavement, signage, traffic signals, pavement markings, drainage, structures/pipes, or other highway design features.
89. At the discretion of the District Engineer, a final inspection report may be provided to the encroaching party upon satisfactory completion of the work.
90. When a performance bond is required, a written acknowledgement of the completed work by the District Engineer's office begins the one-year warranty period associated with the performance bond.

91. If the actual construction differs from the approved plans associated with this encroachment, a copy of "as-built" plans shall be submitted to the District Engineer's office in a PDF format and in a current ESRI GIS format within 4 weeks of construction.

92. The encroaching party shall provide the North Carolina Turnpike Authority **(**NCTA) with an electronic copy of coordinate correct as-built plans within two weeks of installation completion. Failure to provide the as-built plans may jeopardize future approvals within NCTA right of way.

93. A copy (in PDF format) of the completed ground water analysis shall be given to the District Engineer, including detailed drawings of the "as-built" wells showing location, depth and water level in well.

ATTACHMENT FORM

NOTIFICATION FOR UTILITY / NON-UTILITY ENCROACHMENT WITHIN NCDOT R/W

Instructions for use:
This form must be completed in its entirety and submitted directly to the designated personnel in the District Engineer's office via email, fax or hand delivery a minimum of one week prior to construction for the encroachment. If the designated NCDOT personnel names are unknown by the person completing this form, please contact the District Engineer's office to determine that contact info.

Date: _____ Submitted by Name: _____

To: District Personnel Name: _Caitlin Spear_____
District Personnel Email: ___caspear@ncdot.gov_____
District Fax No.: __(252) 621-6410_____

This notification is to inform you that we (encroaching party or their contractor) will begin construction work on the following project in a minimum of one week.

Encroachment number
(assigned by NCDOT) for the project: _____

Construction start date: _____

Approximate ending date: _____

Contact NCDOT inspector a minimum of 72 hrs. in advance to set-up Preconstruction meeting in the District Engineer's office or other location as directed by the District Engineer

Preconstruction meeting date & time: _____

Preconstruction meeting address: _____
_____

Type of project:_____
[Examples: power, telecommunication, water, sewer, gas, petroleum, other (describe)]

Contact Info for this project:

Contractor Company Name:
_____
Contractor Contact Name:
_____
Contractor Phone Number:
_____
Contractor Email:
_____

NCDOT Utility Inspector Name:
_____
NCDOT Utility Inspector Phone:
_____
NCDOT Utility Inspector Email:
_____
NCDOT Utility Project Manager Name:
_____
NCDOT Utility Project Manager Phone:
_____
NCDOT Utility Project Manager Email:
_____

Private Facility Encroachment
Hold Harmless Declaration

Encroachment Agreement Second Party: _____

_____

_____

Encroachment Number: _____

County: _____

The party of the second part of the above-referenced encroachment agreement agrees to indemnify and save harmless the North Carolina Department of Transportation from all claims of liability for the overburdening of right of way easements caused by the installation of private facilities owned by the party of the second part and installed under the approval of the above-referenced encroachment agreement.

Second Party: _____

_____

_____

Attest or Witness: _____

_____

_____

Date: _____

Published by NCDOT Utilities Unit 7/17/2017
Separate Form to be signed by each property owner affected by the installation.

Attachment for Clear Zone Guidelines from AASHTO

Clear - Zone Table

TABLE 3.1 (Cont'd)

[U.S. Customary Units]

DESIGN SPEED	DESIGN ADT	FORESLOPES			BACKSLOPES		
		1V:6H or flatter	1V:5H TO 1V:4H	1V:3H	1V:3H	1V:5H TO 1V:4H	1V:6H or flatter
40 mph or less	UNDER 750	7 – 10	7 – 10	**	7 – 10	7 – 10	7 – 10
	750 – 1500	10 – 12	12 – 14	**	10 – 12	10 – 12	10 – 12
	1500 – 6000	12 – 14	14 – 16	**	12 – 14	12 – 14	12 – 14
	OVER 6000	14 – 16	16 – 18	**	14 – 16	14 – 16	14 – 16
45–50 mph	UNDER 750	10 – 12	12 – 14	**	8 – 10	8 – 10	10 – 12
	750 – 1500	14 – 16	16 – 20	**	10 – 12	12 – 14	14 – 16
	1500 – 6000	16 – 18	20 – 26	**	12 – 14	14 – 16	16 – 18
	OVER 6000	20 – 22	24 – 28	**	14 – 16	18 – 20	20 – 22
55 mph	UNDER 750	12 – 14	14 – 18	**	8 – 10	10 – 12	10 – 12
	750 – 1500	16 – 18	20 – 24	**	10 – 12	14 – 16	16 – 18
	1500 – 6000	20 – 22	24 – 30	**	14 – 16	16 – 18	20 – 22
	OVER 6000	22 – 24	26 – 32 *	**	16 – 18	20 – 22	22 – 24
60 mph	UNDER 750	16 – 18	20 – 24	**	10 – 12	12 – 14	14 – 16
	750 – 1500	20 – 24	26 – 32 *	**	12 – 14	16 – 18	20 – 22
	1500 – 6000	26 – 30	32 – 40 *	**	14 – 18	18 – 22	24 – 26
	OVER 6000	30 – 32 *	36 – 44 *	**	20 – 22	24 – 26	26 – 28
65–70 mph	UNDER 750	18 – 20	20 – 26	**	10 – 12	14 – 16	14 – 16
	750 – 1500	24 – 26	28 – 36 *	**	12 – 16	18 – 20	20 – 22
	1500 – 6000	28 – 32 *	34 – 42 *	**	16 – 20	22 – 24	26 – 28
	OVER 6000	30 – 34 *	38 – 46 *	**	22 – 24	26 – 30	28 – 30

* Where a site specific investigation indicates a high probability of continuing crashes, or such occurrences are indicated by crash history, the designer may provide clear-zone distances greater than the clear-zone shown in Table 3.1. Clear zones may be limited to 30 ft for practicality and to provide a consistent roadway template if previous experience with similar projects or designs indicates satisfactory performance.

** Since recovery is less likely on the unshielded, traversable 1V:3H slopes, fixed objects should not be present in the vicinity of the toe of these slopes. Recovery of high-speed vehicles that encroach beyond the edge of the shoulder may be expected to occur beyond the toe of slope. Determination of the width of the recovery area at the toe of slope should take into consideration right-of-way availability, environmental concerns, economic factors, safety needs, and crash histories. Also, the distance between the edge of the through traveled lane and the beginning of the 1V:3H slope should influence the recovery area provided at the toe of slope. While the application may be limited by several factors, the foreslope parameters which may enter into determining a maximum desirable recovery area are illustrated in Figure 3.2.

NCDOT Required Clearances for Aerial Installations Near Bridge Structures

NOT TO SCALE

Any variation to this detail must be approved by the Division Engineer and/or State Utilities Manager.

Published by NCDOT Utilities Unit
June 2020

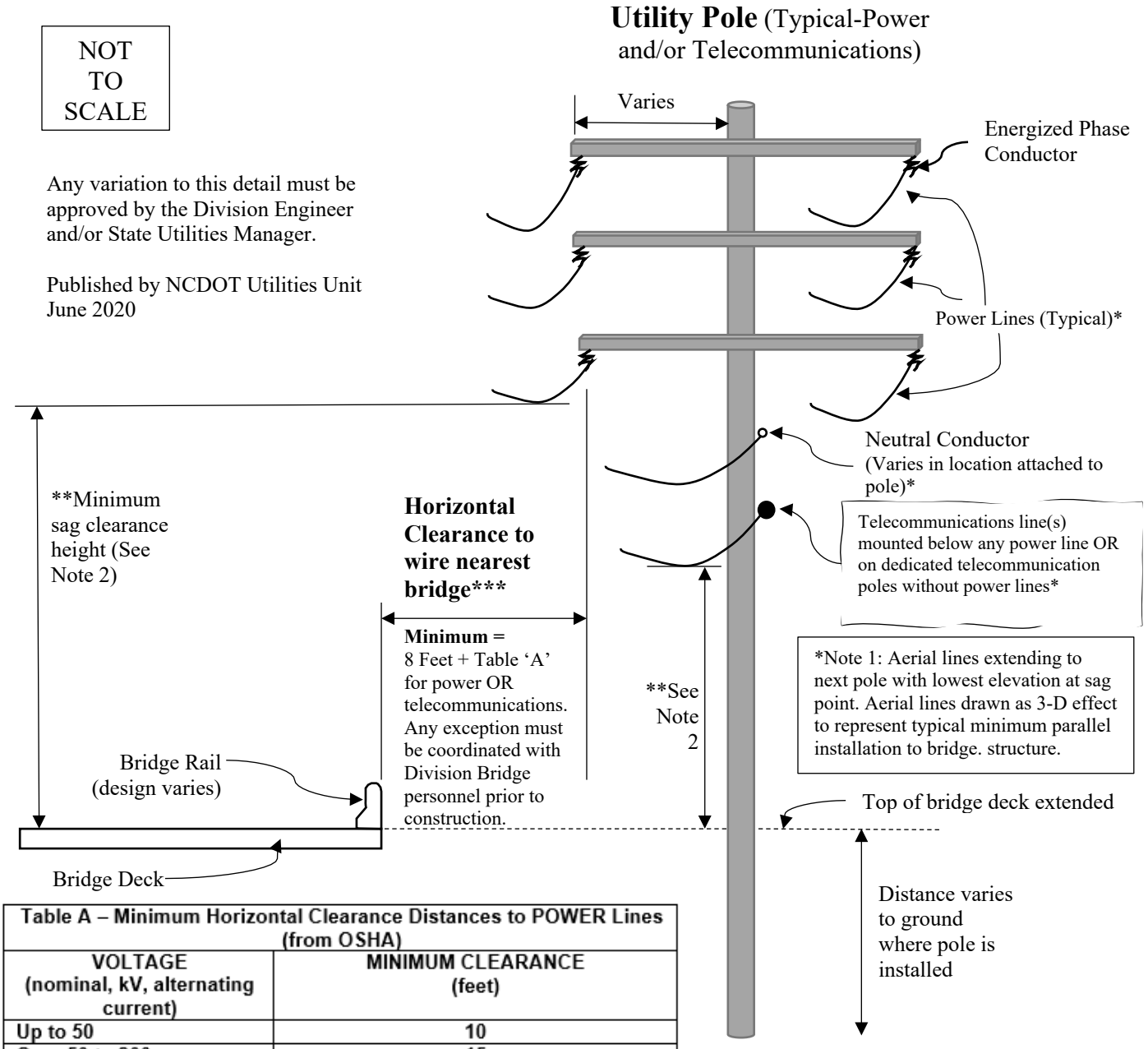


Table A – Minimum Horizontal Clearance Distances to POWER Lines (from OSHA)	
VOLTAGE (nominal, kV, alternating current)	MINIMUM CLEARANCE (feet)
Up to 50	10
Over 50 to 200	15
Over 200 to 350	20
Over 350 to 500	25
Over 500 to 750	35
Over 750 to 1000	45
Over 1000	As established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution

***Note 3: HORIZONTAL CLEARANCE EXCEPTION. If vertical sag clearance height for power above bridge deck is ≥ 45 feet AND voltage is ≤ 350kV, then Minimum Horizontal Clearance may be reduced to 3 feet. Any telecommunications attachment to power pole allowed in this exception must have a minimum 25 feet sag clearance height above bridge deck.

ROUTE SR 1246 (Maple Road) PROJECT Ashbrook Estates COUNTY OF Currituck

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

-AND-

Asbrook Estates, LLC

PO Box 85, Moyock, NC 27958

-AND-

Currituck County

153 Courthouse Road, Suite 204, Currituck, NC 27929

THREE PARTY RIGHT OF WAY ENCROACHMENT AGREEMENT ON PRIMARY AND SECONDARY SYSTEM

E011-027-25-00475

THIS AGREEMENT, made and entered into this the 4th day of Feb., 20 26, by and between the Department of Transportation, party of the first part; and Ashbrook Estates LLC party of the second part; and Currituck County party of the third 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) SR 1246 (Maple Road), located one mile north of US Hwy 158

with the construction and/or erection of: connection to an existing watermainon the east side of the road by means of jack and bore.

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 installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest UTILITIES ACCOMMODATIONS MANUAL, and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utilities Manager of the party of the first part.

That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.

That the party of the second part agrees to provide during construction and any subsequent maintenance 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.

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.

That the party of the second part agrees to restore all areas disturbed during installation and maintenance 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 installation or maintenance 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 construction 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.

During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

a. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

b. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

d. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,

(1) withholding of payments to the contractor under the contract until the contractor complies, and/or
(2) cancellation, termination or suspension of the contract, in whole or in part.

f. Incorporation of Provisions: The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

That when title to the subject that constitutes the aforesaid encroachment passes from the party of the second part and vests in the party of the third part, the party of the third part agrees to assume all responsibilities and rights and to perform all obligations as agreed to herein by the party of the second part.

R/W (166) : Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (166) 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: Docusigned by: Caitlin A Spear
DISTRICT ENGINEER

WITNESS:

Megan E. Morningstar

Megan E. Morningstar

Stuart Innes, Manager

Managing Member, Ashbrook Estates, LLC

Second Party

WITNESS:

Currituck County

Jessica Timmons, Clerk to the Board

Currituck County

Rebecca L Gay

Rebecca Gay, County Manager

Third Party

CURRITUCK COUNTY 1668

ASHBROOK ESTATES

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

SITE DATA:

1. OWNER:
   ASHBROOK ESTATES, LLC
   PO BOX 85
   MOYOCK, NC 27958
   (252) 619-6919
   stuartinnes1@gmail.com

2. SITE INFORMATION:
   PIN: 005200000120000
   GPIN: 8977-58-4666
   D.B. 1640, PG. 711
   P.C. R, SLD. 147
   ZONING: AG (AGRICULTURAL)
   AIRPORT OVERLAY DISTRICT
   EXISTING USE: AGRICULTURAL
   PROPOSED USE: RESIDENTIAL
   PARCEL AREA: 130.73 AC
   PROPOSED LOTS: 52
   MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC (100.0%)

   CONSERVATION AREA REQUIRED:
   60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
   0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

   PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
   SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
   TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

   OVERALL DENSITY CALCULATION:
   AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

   PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
   LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
   ASPHALT = 89,979 SF
   CONCRETE = 39,240 SF
   FUTURE = 5,000 SF
   TOTAL = 550,219 SF (9.66%)

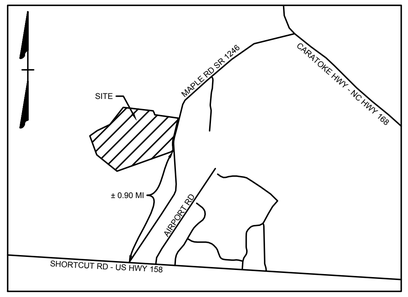
6. REQUIRED MINIMUM BUILDING SETBACKS:
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7. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

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   NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
   A N 979464.76 sFT
     E 2,877,209.80 sFT
     ELEV 12.09'
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     E 2,877,010.91 sFT
     ELEV 11.89'
   C N 978,173.61 sFT
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9. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

10. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.



VICINITY MAP
NO SCALE

SHEET LIST

SHEET NUMBER	SHEET TITLE
C0.0	COVER SHEET
C1.0	EXISTING CONDITIONS OVERVIEW
C1.1	EXISTING CONDITIONS
C1.2	EXISTING CONDITIONS
C1.3	EXISTING CONDITIONS
C2.0	SUBDIVISION PLAN OVERVIEW
C2.1	SUBDIVISION PLAN
C2.2	SUBDIVISION PLAN
C2.3	SUBDIVISION PLAN
C2.4	SUBDIVISION PLAN
C2.5	SITE PLAN OVERVIEW
C2.6	SITE PLAN
C2.7	SITE PLAN
C2.8	SITE PLAN
C2.9	SITE PLAN
C3.0	GRADING & DRAINAGE OVERVIEW
C3.1	GRADING & DRAINAGE PLAN
C3.2	GRADING & DRAINAGE PLAN
C3.3	GRADING & DRAINAGE PLAN
C3.4	GRADING & DRAINAGE PLAN
C4.0	EROSION CONTROL PLAN
C5.0	UTILITY PLAN
C6.0	SITE DETAILS
C6.1	EROSION CONTROL DETAILS
C6.2	EROSION CONTROL DETAILS
C6.3	WATER LINE DETAILS

OWNER/DEVELOPER

ASHBROOK ESTATES, LLC
301 EAST MAIN STREET
ELIZABETH CITY, NC 27909
CONTACT: STUART INNES
PHONE: (252) 619-6919
EMAIL: stuartinnes1@gmail.com

CIVIL ENGINEER

TIMMONS GROUP
1805 WEST CITY DRIVE, UNIT E
ELIZABETH CITY, NC 27909
CONTACT: KIMBERLY HAMBY, PE
PHONE: (252) 621-5029
EMAIL: kim.hamby@timmons.com

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY 10-27-25

THIS DRAWING PREPARED AT THE
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1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: -
CHECKED BY: KDH
SCALE: NO SCALE

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
COVER SHEET

JOB NO. 48235
SHEET NO. C0.0

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(252) 619-6919
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GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

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LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
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CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

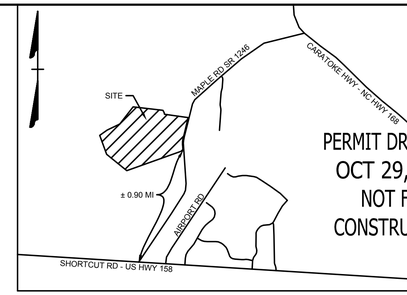
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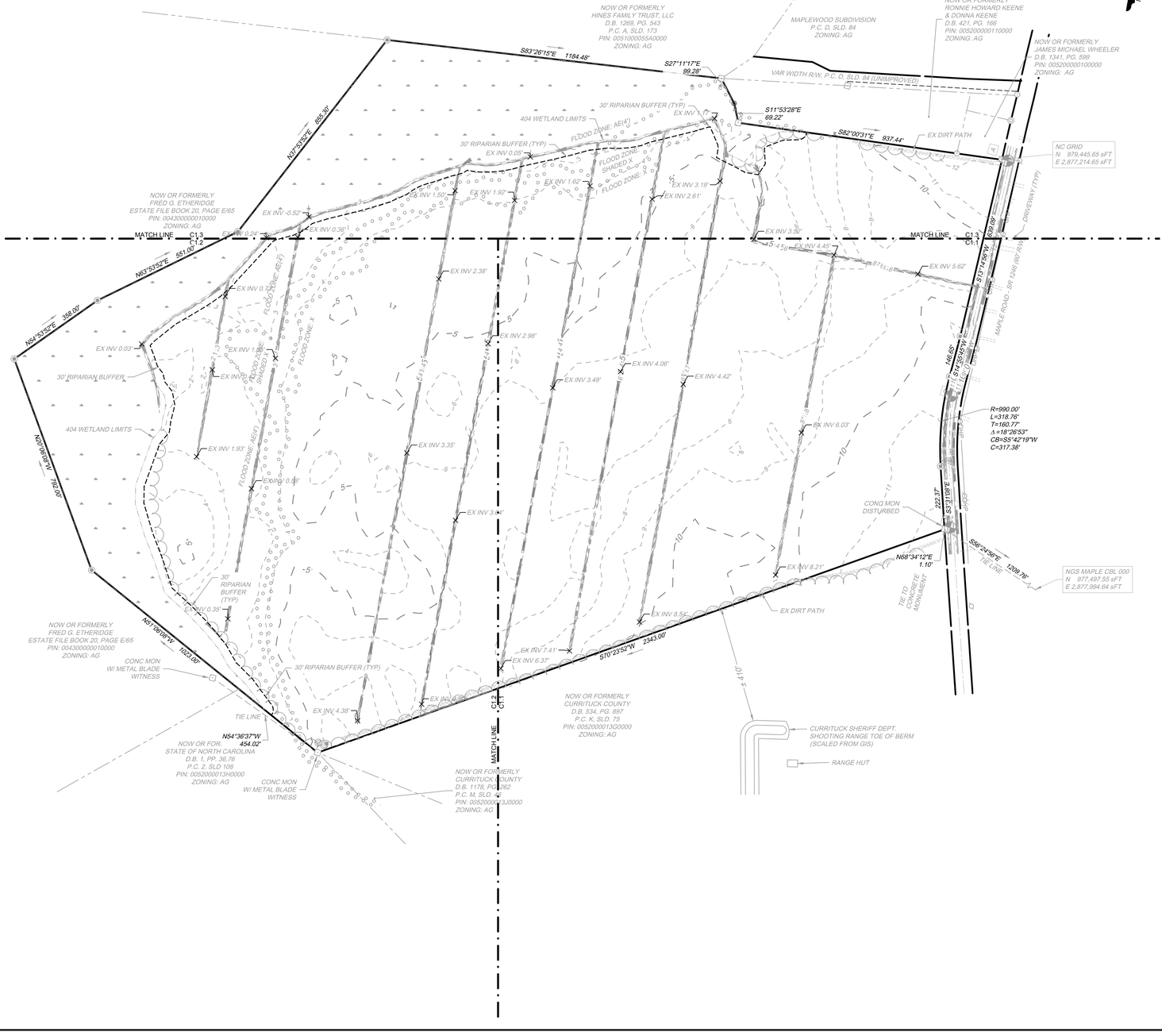
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VICINITY MAP
NO SCALE

NC GRID NAD 83(2011)



LEGEND

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- EX WATER VALVE
- EX TELEPHONE PEDESTAL
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- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

SCALE 1"=200'
0 200' 400'

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
10-29-25

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

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REVISION DESCRIPTION

DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY N/A
CHECKED BY KDH
SCALE 1" = 200'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

EXISTING CONDITIONS OVERVIEW

JOB NO. 48235
SHEET NO. C1.0

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PO BOX 85
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(252) 619-6919
stuartinnes1@gmail.com

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P.C. R, SLD. 147
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AIRPORT OVERLAY DISTRICT
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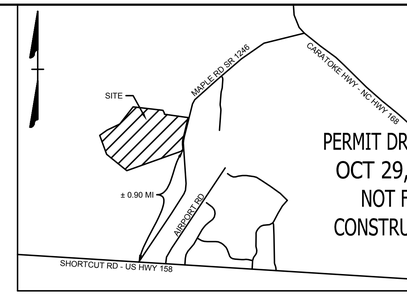
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VICINITY MAP
NO SCALE

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- EX WATER VALVE
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SCALE 1"=100'
0 100' 200'

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 KIMBERLY D. HAMBY 10-29-25

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX. 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

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DRAWN BY BCD
DESIGNED BY N/A
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TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

EXISTING CONDITIONS

JOB NO. 48235
SHEET NO. C1.1

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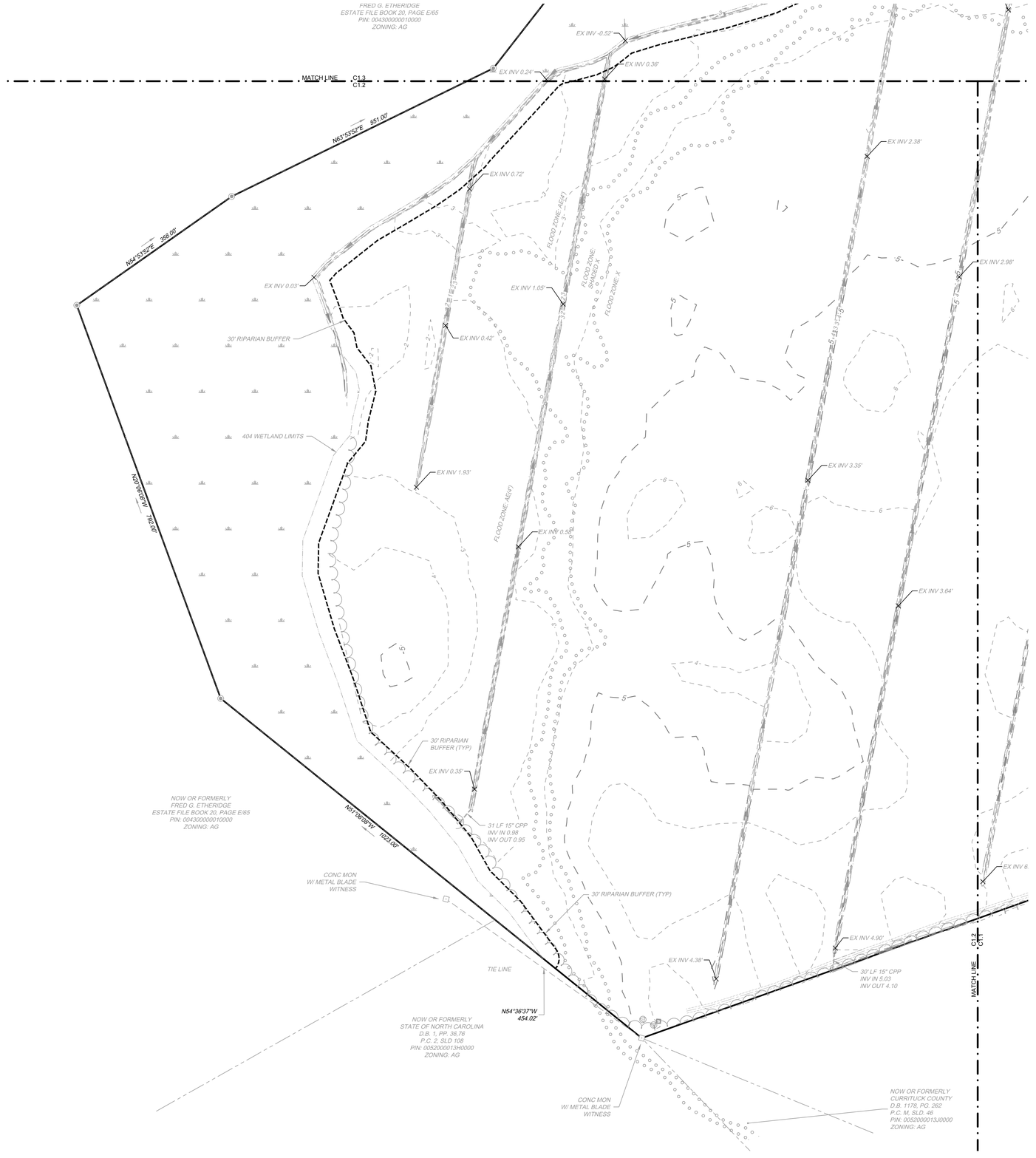
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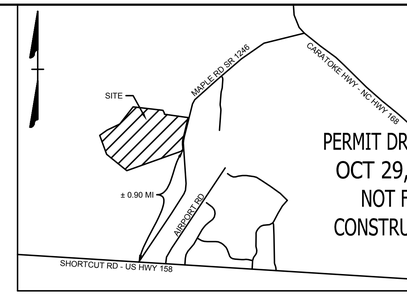
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TIMMONS GROUP
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ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
EXISTING CONDITIONS

JOB NO. 48235
SHEET NO. C1.2

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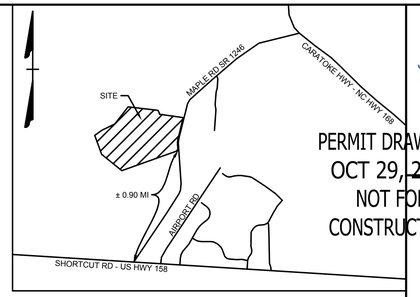
6. REQUIRED MINIMUM BUILDING SETBACKS:
   FRONT: 50'
   SIDE: 15'
   CORNER: 50'
   REAR: 25'

7. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

8. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
   NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
   A N 979464.76 sFT
     E 2,877,209.80 sFT
     ELEV 12.09'
   B N 978,636.77 sFT
     E 2,877,010.91 sFT
     ELEV 11.89'
   C N 978,173.61 sFT
     E 2,877,007.22 sFT
     ELEV 13.00'

9. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

10. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.



VICINITY MAP
NO SCALE

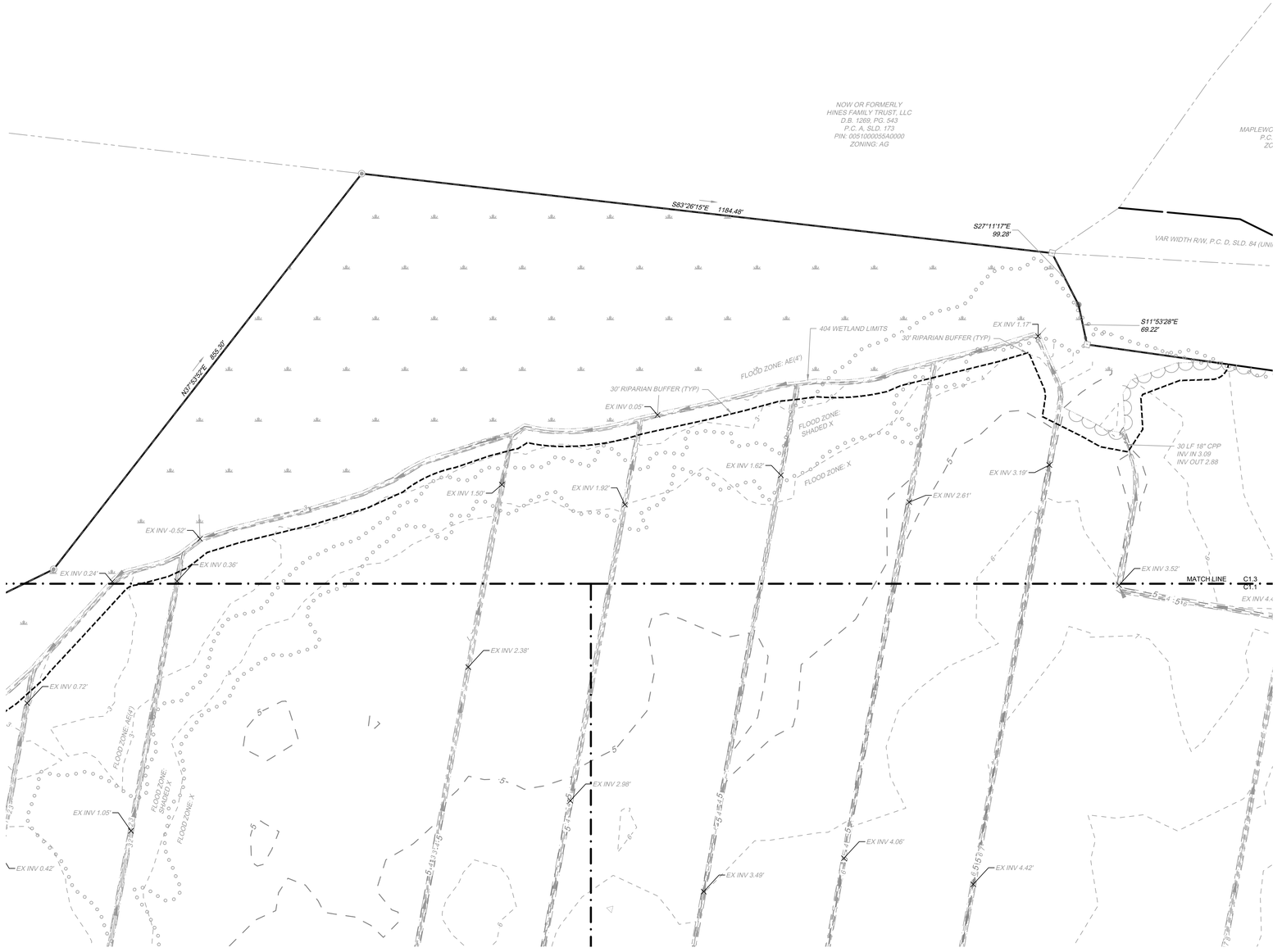
NC GRID NAD 83(2011)

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 (0-31-25) KIMBERLY D. HAMBY

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX. 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.



LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER (OHP)
- EX WATER LINE (W)
- EX CENTER OF DITCH
- EX TOP OF BANK
- EX MAJOR CONTOUR (5)
- EX MINOR CONTOUR (4)
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- EX SPOT GRADE (X.XX')
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- PROP MAJOR CONTOUR (5)
- PROP MINOR CONTOUR (4)
- PROP STORM PIPE
- PROP WATER LINE (W)
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE (X.XX')

SCALE 1"=100'
0 100' 200'

REVISION DESCRIPTION	DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY N/A
CHECKED BY KDH
SCALE 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
EXISTING CONDITIONS

JOB NO. 48235
SHEET NO. C1.3

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

S:\1109\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C1.0-EXIST .dwg | Plotted on 10/29/2025 10:50 AM | by Kim Hamby

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA: 2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA: 207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA: 3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA: 5,694,834 SF = 130.73 AC (100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

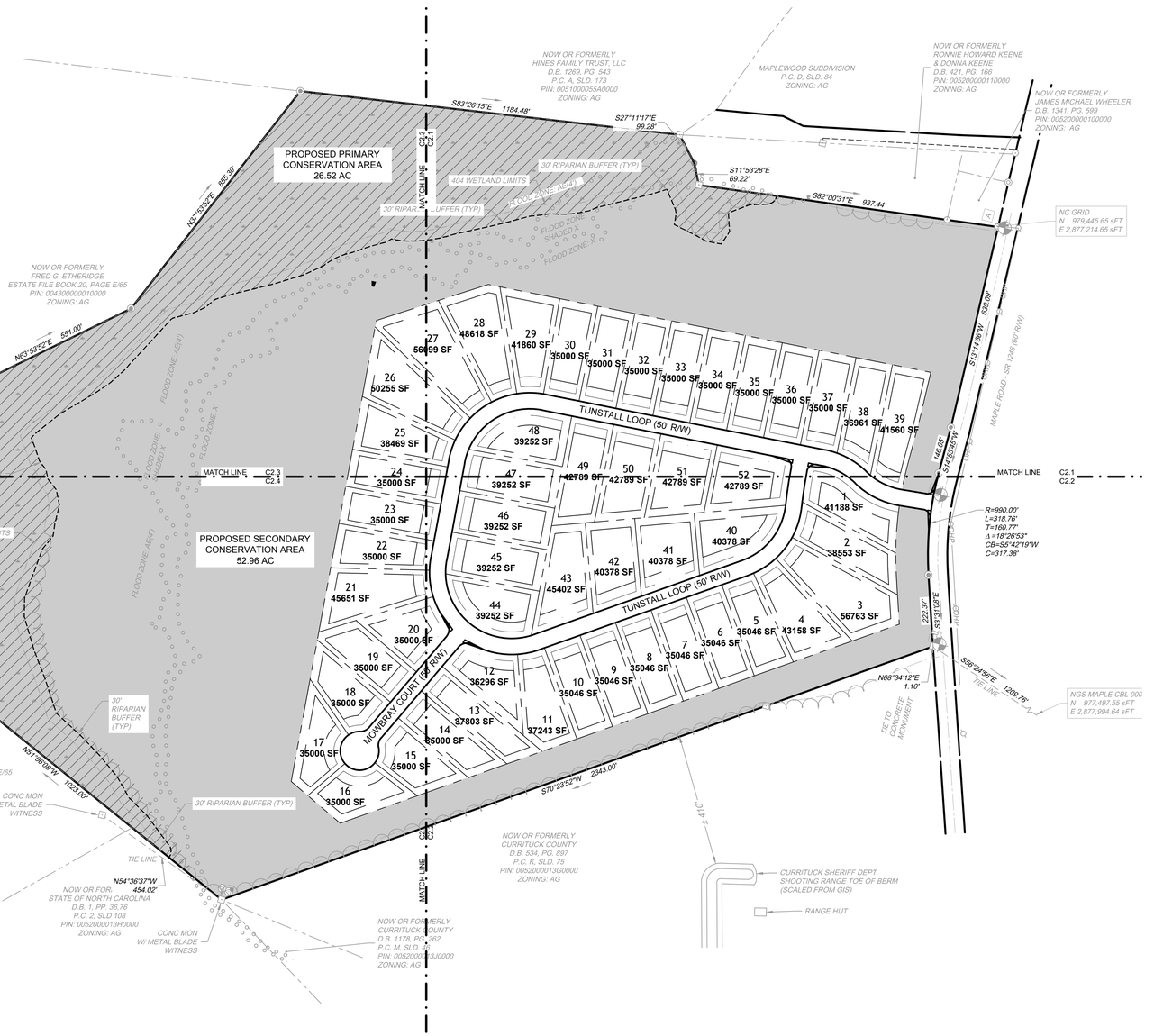
30' EDGE OF PAVEMENT RADIUS REQUIRED FOR ALL STREET CONNECTIONS

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
C39	205.00	8.80	4.40	2°27'31"	N71°37'37"E	8.80
C40	205.00	378.60	271.14	105°48'57"	S54°14'09"E	327.04
C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14



LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
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- PROP CONCRETE SIDEWALK
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- PROP MINOR CONTOUR
- PROP STORM PIPE
- PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

NC GRID NAD 83 (2011)

PRELIMINARY PLAT
NOV 26, 2025
NOT FOR RECORDATION OR CONVEYANCE

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

DATE
10/29/2025
DRAWN BY
BCD
DESIGNED BY
KDH
CHECKED BY
KDH
SCALE
1" = 200'

TIMMONS GROUP

ASHBROOK ESTATES
NORTH CAROLINA LICENSE NO. C-1652
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

JOB NO.
48235
SHEET NO.
C2.0

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S:\105\48235 - Ashbrook Estates - Maps_NC\DWG\Sheet\C2\48235C-C2.0-PRELIM PLAT.dwg | Plotted on 11/26/2025 3:03 PM | by Kim Hamby

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

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

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CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

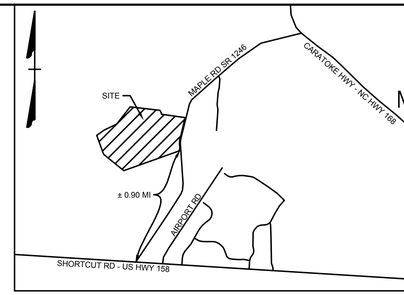
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10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

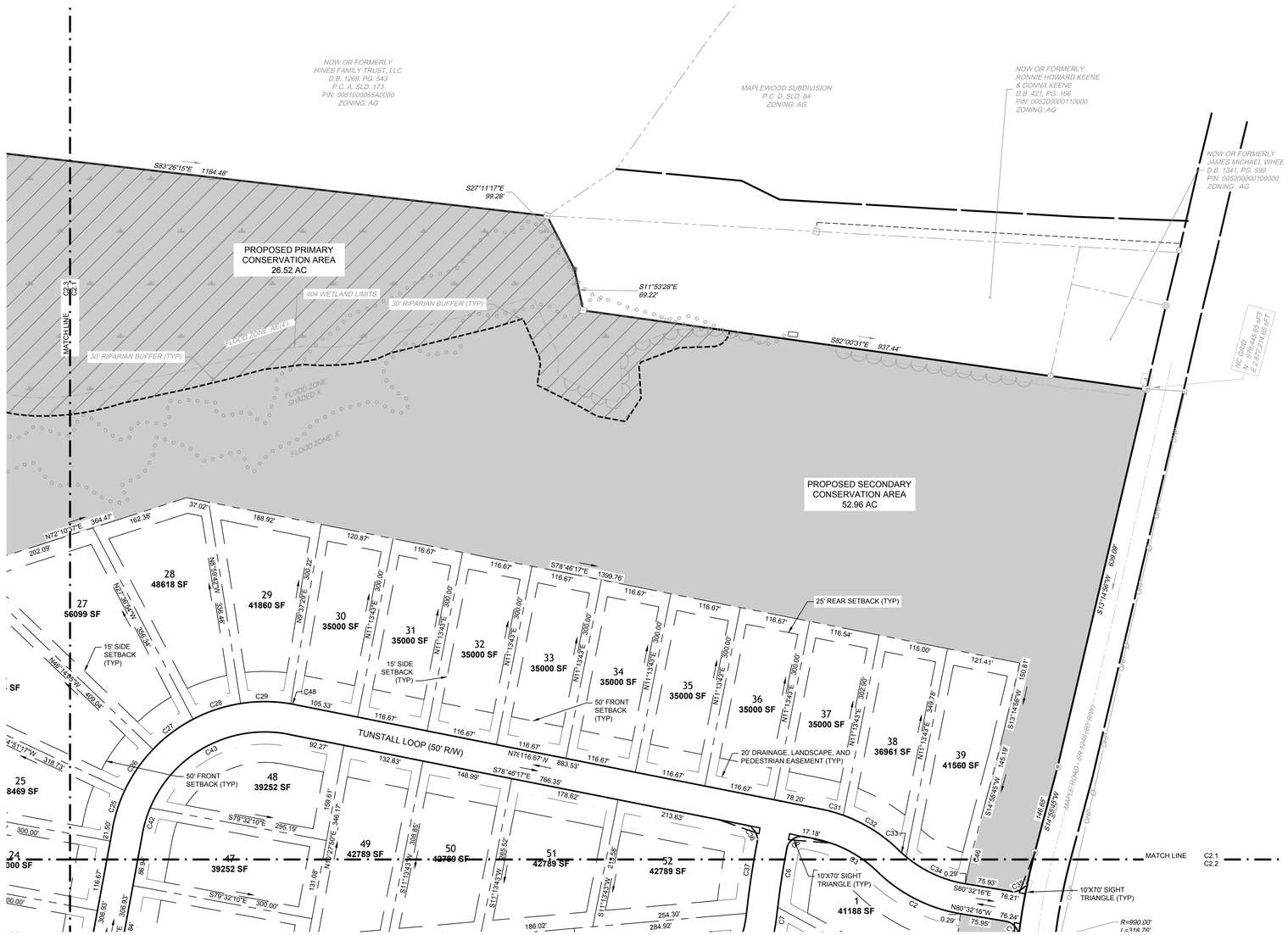
CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
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C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE						
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C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
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C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14



VICINITY MAP
NO SCALE

NC GRID NAD 83(2011)



SCALE 1"=100'
0 100' 200'

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER
- EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- PROP MAJOR CONTOUR
- PROP MINOR CONTOUR
- PROP STORM PIPE
- PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

PRELIMINARY PLAT
NOV 26, 2025
NOT FOR RECORDATION OR CONVEYANCE

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
	10/29/2025

DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

JOB NO. 48235
SHEET NO. C2.1

These plans and associated documents are the exclusive property of TIMMONS GROUP and may not be reproduced in whole or in part and shall not be used for any purpose whatsoever, inclusive, but not limited to construction, bidding, and/or construction staking without the express written consent of TIMMONS GROUP.

S:\1\48\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C2.0-PREL IM PLAT.dwg | Plotted on 11/26/2025 3:03 PM | by Kim Hamby

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

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC	(35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC	(3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC	(60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC	(100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

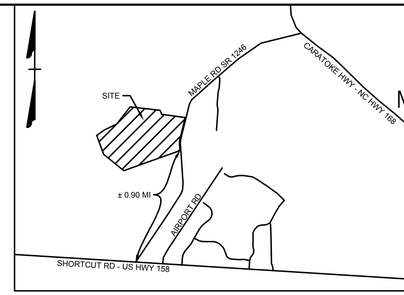
10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

CURVE TABLE					
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE					
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
C39	205.00	8.80	4.40	2°27'31"	N71°37'37"E	8.80
C40	205.00	378.60	271.14	105°48'57"	S54°14'09"E	327.04
C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14





VICINITY MAP

NO SCALE

NC GRID NAD 83(2011)

LEGEND

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- EXISTING IRON REBAR (EIR)
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- OHP — EX OVERHEAD POWER
- W — EX WATER LINE
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- 5 — EX MAJOR CONTOUR
- 4 — EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- X.XX' — EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
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0 100' 200'

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NOV 26, 2025
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REVISION DESCRIPTION	DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = 100'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

JOB NO. 48235
SHEET NO. C2.2

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S:\108\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\C2\48235C-C2.0-PRELIM PLAT.dwg | Plotted on 11/26/2025 3:04 PM | by Kim Hamby

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stuartinnes1@gmail.com

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PROPOSED USE: RESIDENTIAL
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SIDE: 15'
CORNER: 50'
REAR: 25'

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25' ALONG REAR PROPERTY LINES
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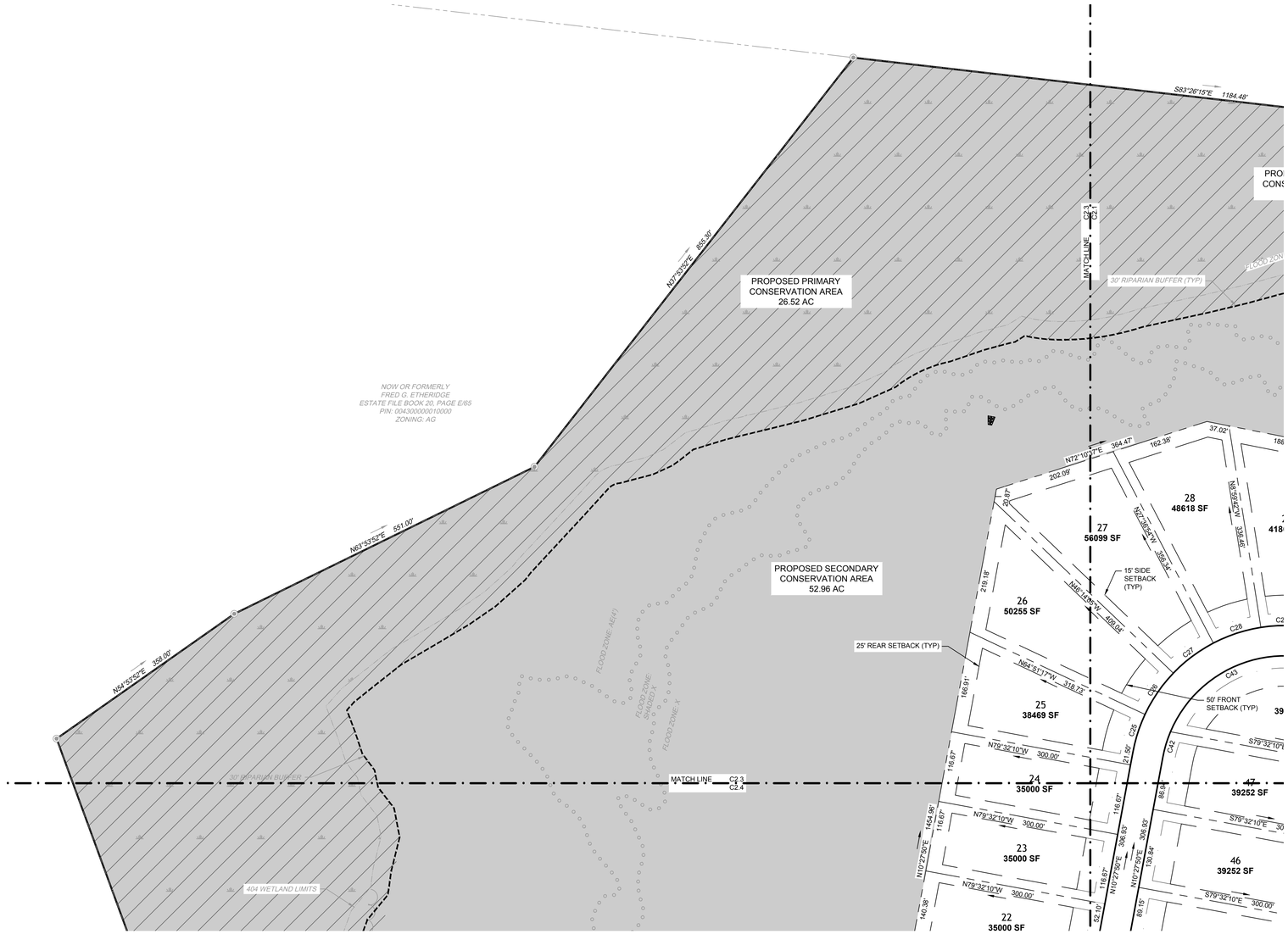
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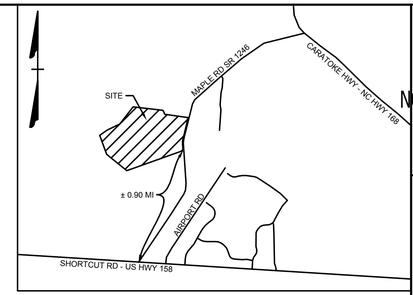
10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
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C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
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CURVE TABLE						
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C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
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C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14





VICINITY MAP
NO SCALE

NC GRID NAD 83(2011)

LEGEND

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S:\110\48235 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C2.0-PRELIM PLAT.dwg | Plotted on 11/26/2025 3:04 PM | by Kim Hamby

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA: 2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA: 207,695 SF = 4.77 AC (3.65%)
OPEN SPACE AREA: 3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA: 5,694,834 SF = 130.73 AC (100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT
ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

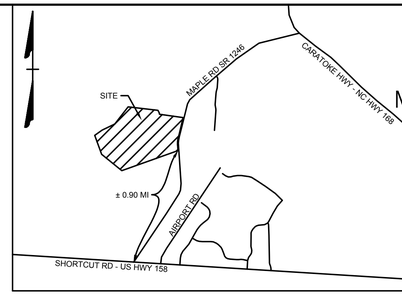
9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

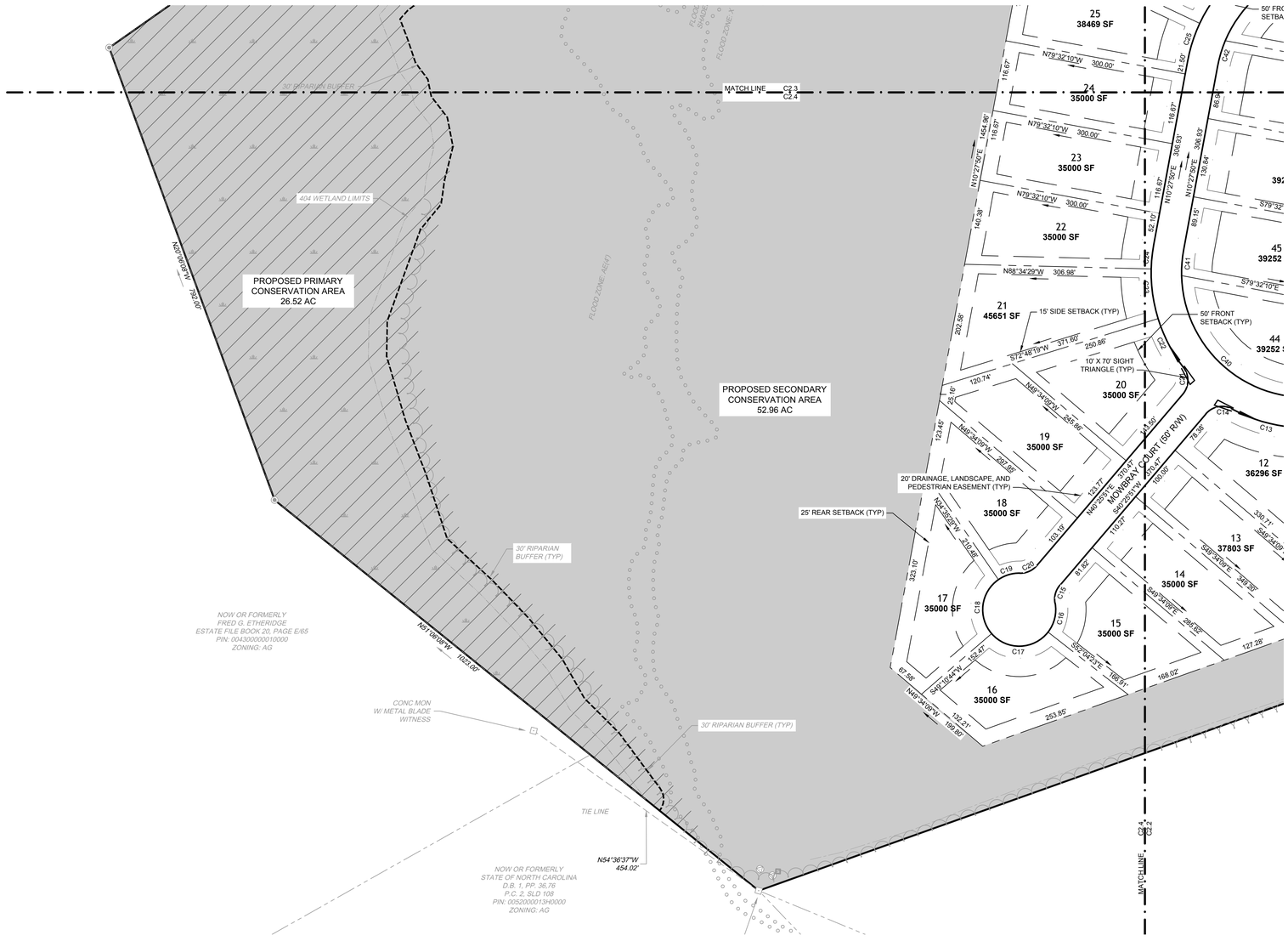
CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00	38.04	23.80	87°10'21"	N36°57'05"W	34.47
C2	255.00	155.19	80.08	34°52'06"	N63°06'13"W	152.80
C3	205.00	118.44	60.92	33°06'08"	N62°13'13"W	116.80
C5	25.00	39.44	25.17	90°22'47"	S56°02'19"W	35.47
C6	1390.00	97.66	48.85	4°01'32"	S8°50'10"W	97.64
C7	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C8	255.00	99.51	50.40	22°21'35"	S17°21'51"W	98.88
C9	255.00	82.96	41.85	18°38'28"	S37°51'52"W	82.60
C10	255.00	82.96	41.85	18°38'29"	S56°30'21"W	82.60
C11	255.00	20.34	10.18	4°34'16"	S68°06'43"W	20.34
C12	255.00	69.18	34.80	15°32'39"	S78°10'11"W	68.97
C13	255.00	144.86	74.44	32°32'54"	N77°47'02"W	142.92
C14	35.00	47.68	28.37	78°03'34"	S79°27'38"W	44.08
C15	35.00	31.05	16.63	50°50'00"	S15°00'51"W	30.04
C16	60.00	50.61	26.92	48°19'46"	S13°45'44"W	49.12
C17	60.00	106.03	73.11	101°15'07"	S88°33'11"W	92.76
C18	60.00	100.77	66.91	96°13'47"	N7°17'38"E	89.34
C19	60.00	37.55	19.41	35°51'20"	N73°20'11"E	36.94
C20	35.00	31.05	16.63	50°50'00"	N65°50'51"E	30.04
C21	35.00	47.68	28.37	78°03'34"	N1°24'04"E	44.08
C22	255.00	90.94	45.96	20°26'03"	N27°24'42"W	90.46
C23	255.00	82.87	41.80	18°37'12"	N7°53'05"W	82.51
C24	255.00	40.23	20.16	9°02'19"	N5°56'40"E	40.19

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C25	255.00	65.34	32.85	14°40'53"	N17°48'17"E	65.16
C26	255.00	82.87	41.80	18°37'12"	N34°27'19"E	82.51
C27	255.00	82.87	41.80	18°37'12"	N53°04'30"E	82.51
C28	255.00	82.87	41.80	18°37'12"	N71°41'42"E	82.51
C29	255.00	82.87	41.80	18°37'12"	S89°41'06"E	82.51
C31	255.00	38.48	19.28	8°38'49"	S74°26'52"E	38.45
C32	255.00	108.84	55.26	24°27'18"	S57°53'49"E	108.02
C33	205.00	16.39	8.20	4°34'53"	S47°57'36"E	16.39
C34	205.00	108.65	55.63	30°22'02"	S65°26'04"E	107.38
C35	25.00	38.05	23.81	87°12'19"	N55°51'35"E	34.48
C36	25.00	39.12	24.85	89°38'46"	N33°56'54"W	35.25
C37	1440.00	117.89	58.98	4°41'26"	N8°31'46"E	117.85
C38	205.00	229.75	128.63	64°12'49"	N38°17'27"E	217.91
C39	205.00	8.80	4.40	2°27'31"	N71°37'37"E	8.80
C40	205.00	378.60	271.14	105°48'57"	S54°14'09"E	327.04
C41	205.00	42.19	21.17	11°47'30"	S4°34'05"W	42.12
C42	205.00	44.48	22.33	12°25'59"	S16°40'50"W	44.40
C43	205.00	280.26	166.99	78°19'54"	S62°03'46"W	258.94
C44	1090.00	74.24	37.13	3°54'08"	N1°34'04"W	74.22
C45	1090.00	147.71	73.97	7°45'52"	N4°15'57"E	147.60
C46	1090.00	79.00	39.52	4°09'10"	N12°51'10"E	78.98
C48	255.00	7.14	3.57	1°36'14"	S79°34'24"E	7.14



VICINITY MAP
NO SCALE

NC GRID NAD 83 (2011)



SCALE 1"=100'
0 100' 200'

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- OHP — EX OVERHEAD POWER
- W — EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- 5 — EX MAJOR CONTOUR
- 4 — EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- X.XX' EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- 5 — PROP MAJOR CONTOUR
- 4 — PROP MINOR CONTOUR
- PROP STORM PIPE
- W — PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

PRELIMINARY PLAT
NOV 26, 2025
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REVISION DESCRIPTION	DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

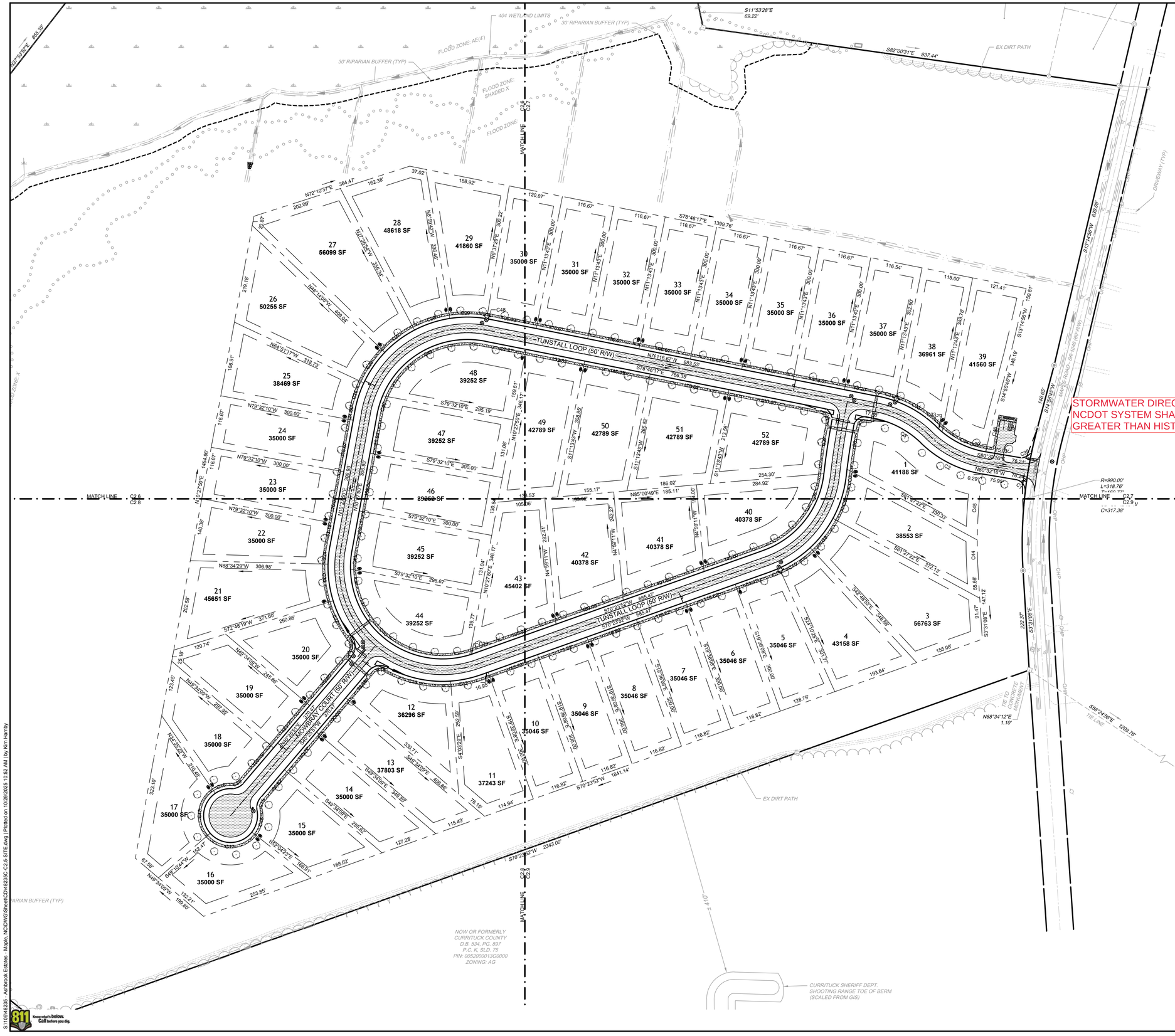
ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
SUBDIVISION PLAN

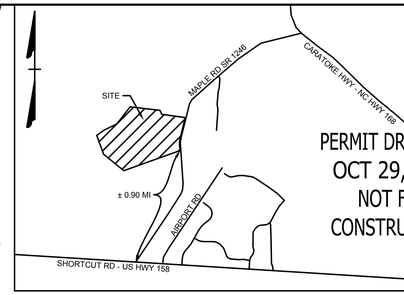
JOB NO. 48235
SHEET NO. C2.4

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VICINITY MAP

NO SCALE

NC GRID NAD 83 (2011)

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
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- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

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CHECKED BY: KDH
SCALE: 1" = 100'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN OVERVIEW

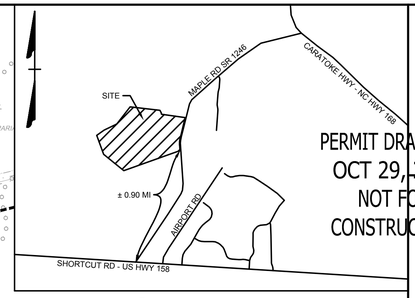
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VICINITY MAP

NO SCALE

NC GRID NAD 83 (2011)

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
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- PROP CONCRETE SIDEWALK
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- W PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

SCALE 1"=50'
0 50' 100'

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SCALE 1" = 50'

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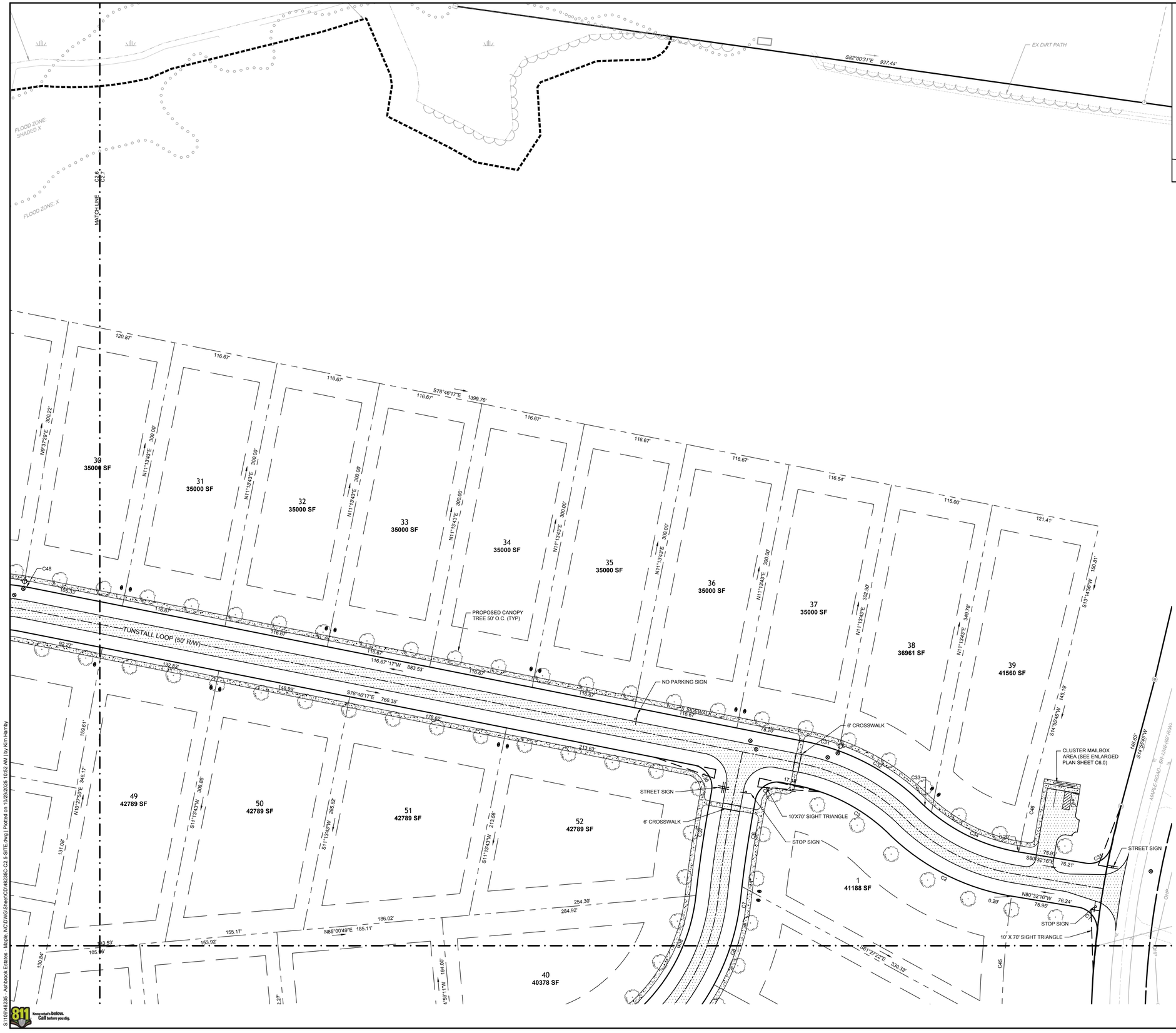
ASHBROOK ESTATES

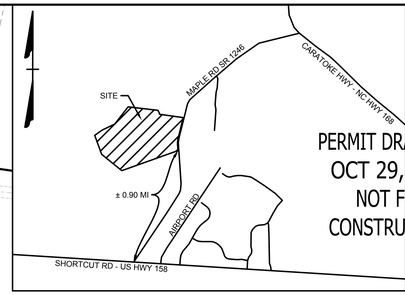
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO. 48235
SHEET NO. C2.6

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VICINITY MAP

NO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

NC GRID NAD 83 (2011)

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
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- PROP SPOT GRADE

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DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

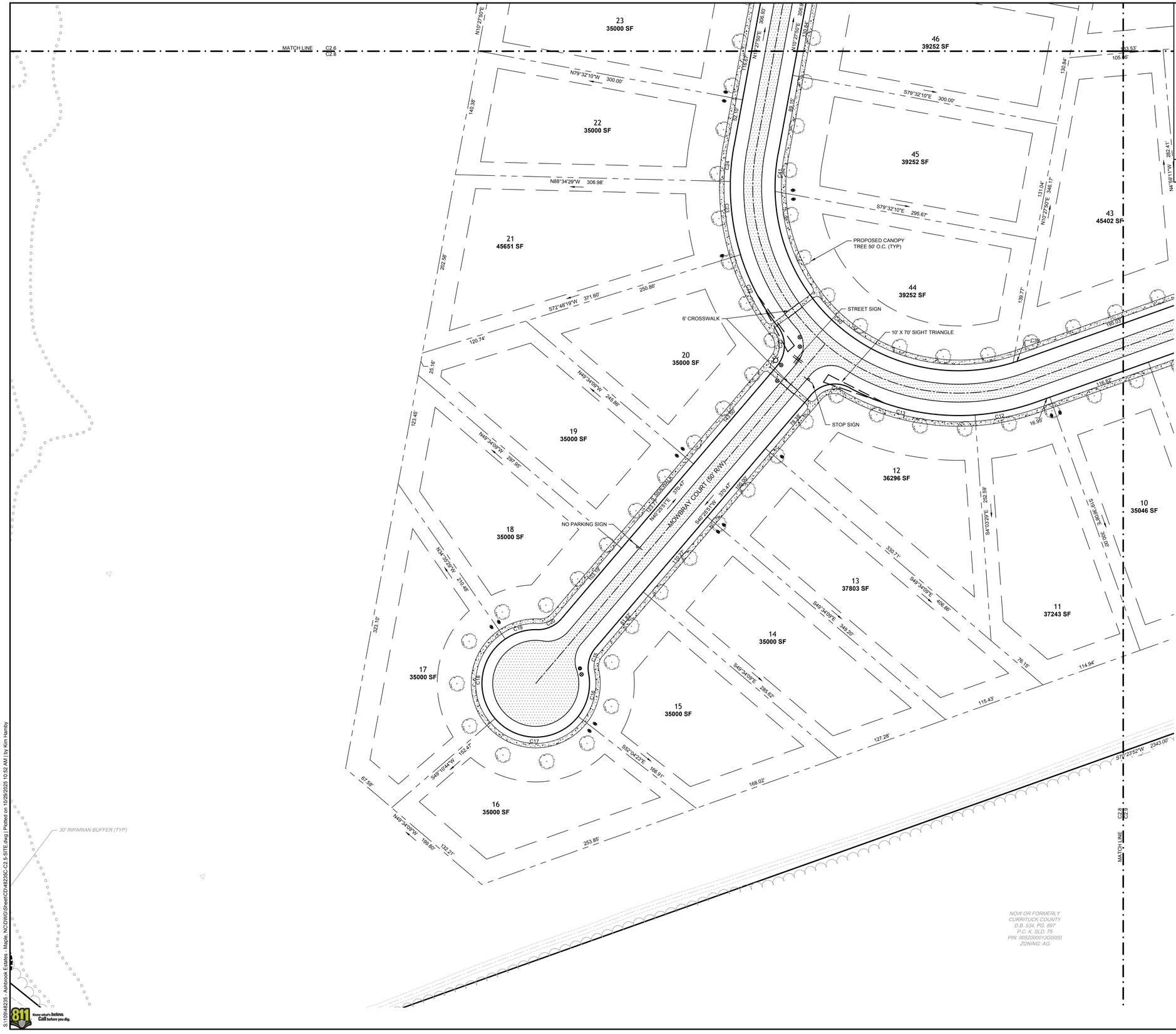
SITE PLAN

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VICINITY MAP

NO SCALE

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
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- W PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

SCALE 1"=50'
0 50' 100'

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

S:\10948228 - Ashbrook Estates - Maple, NC\DWG\Sheet\CD\48235C-C2.8 SITE.dwg | Plotted on 10/29/2025 10:52 AM | by Kim Hamby

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

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OCT 29, 2025
NOT FOR CONSTRUCTION

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REVISION DESCRIPTION	DATE

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

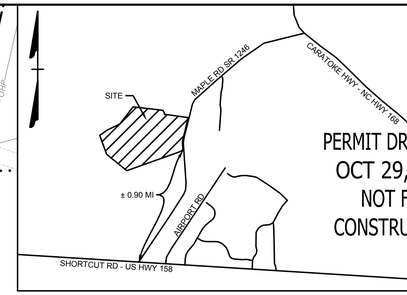
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO. 48235
SHEET NO. C2.8

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VICINITY MAP

NO SCALE

NC GRID (NAD 83 (2011))

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER
- EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- PROP MAJOR CONTOUR
- PROP MINOR CONTOUR
- PROP STORM PIPE
- PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

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OCT 29, 2025
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REVISION DESCRIPTION	DATE

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO. 48235
SHEET NO. C2.9

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S:\105\48235 - Ashbrook Estates - Maps_NC\DWG\Sheet\CD\48235C-C2.5-SITE.dwg | Plotted on 10/29/2025 10:53 AM | by Kim Hamby

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC	(35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC	(3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC	(60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC	(100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. EASEMENTS:
15' ALONG SIDE PROPERTY LINES
25' ALONG REAR PROPERTY LINES
20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT ALONG RIGHT OF WAY

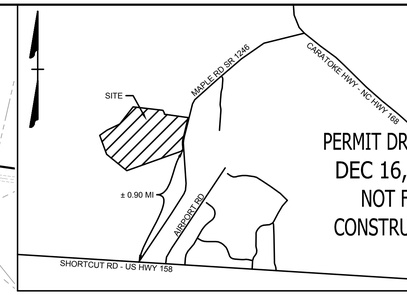
8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
A N 979464.76 sFT
E 2,877,209.80 sFT
ELEV 12.09'
B N 978,636.77 sFT
E 2,877,010.91 sFT
ELEV 11.89'
C N 978,173.61 sFT
E 2,877,007.22 sFT
ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.





VICINITY MAP
NO SCALE

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
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- PROPERTY BOUNDARY
- RIGHT OF WAY
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- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- OHP — EX OVERHEAD POWER
- W — EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- 5 — EX MAJOR CONTOUR
- 4 — EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- X.XX' EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- 5 — PROP MAJOR CONTOUR
- 4 — PROP MINOR CONTOUR
- PROP STORM PIPE
- W — PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- X.XX' PROP SPOT GRADE

STORMWATER DIRECTED TO THE NCDOT SYSTEM SHALL NOT BE GREATER THAN HISTORIC CAPACITY

SCALE 1"=100'
0 100' 200'

PERMIT DRAWINGS
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NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
12/16/2025

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SCALE 1" = 100'

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NORTH CAROLINA LICENSE NO. C-1652

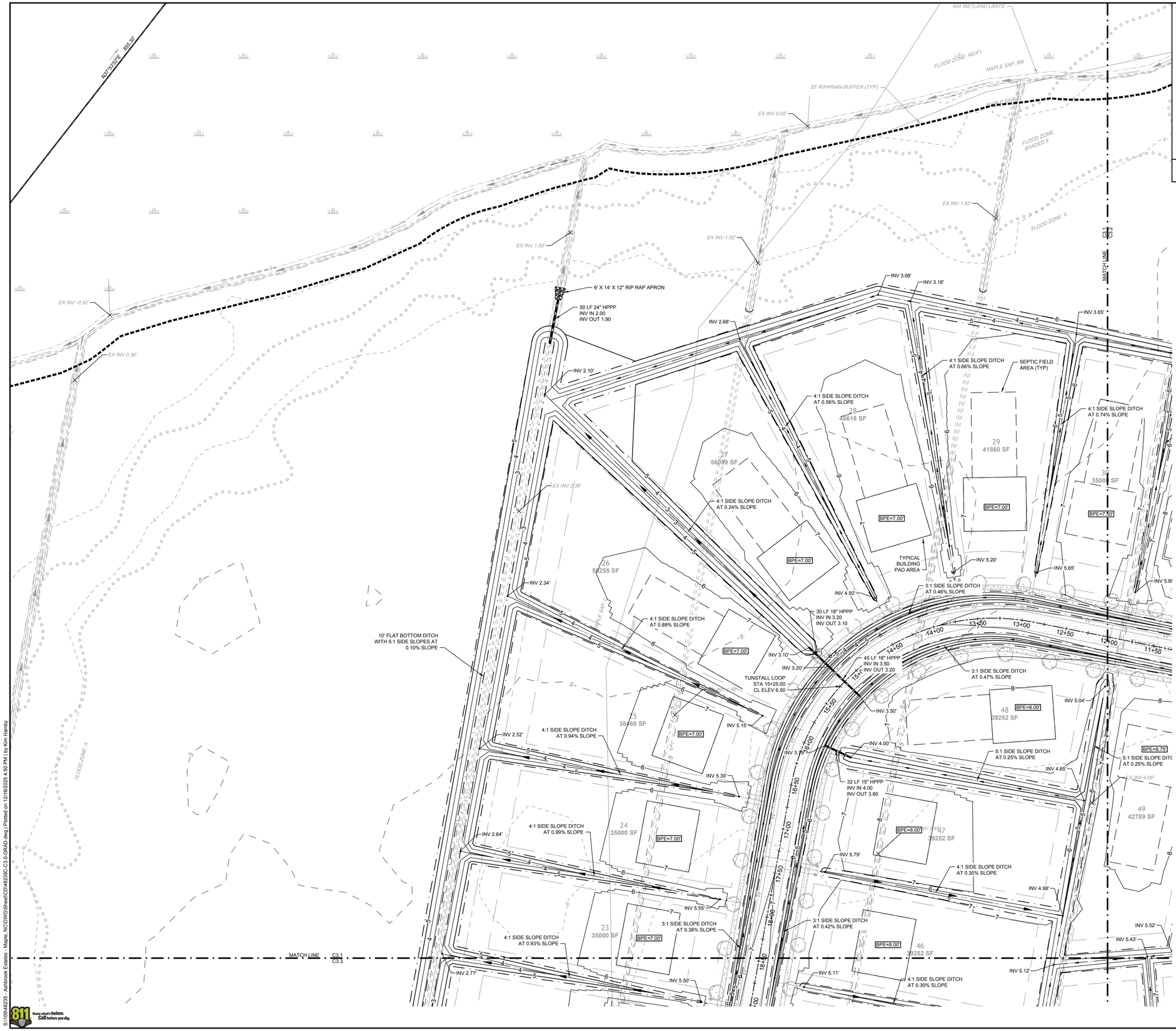
ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
GRADING & DRAINAGE OVERVIEW

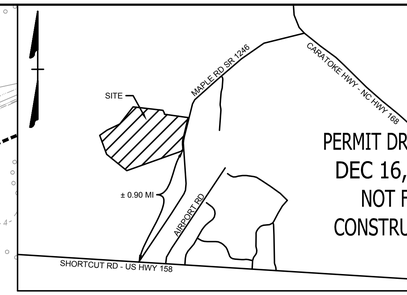
JOB NO. 48235
SHEET NO. C3.0

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DATE: 10/29/2025
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SCALE: 1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
GRADING & DRAINAGE PLAN

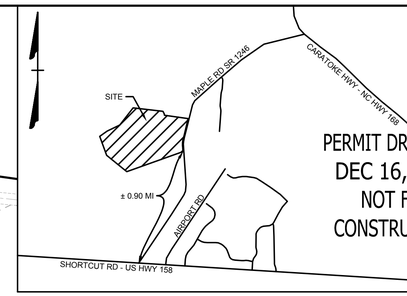
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12/16/2025

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- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

NC GRID NAD 83(2011)

WHEN BURYING AROUND THE END OF A CULVERT, THE UTILITY SHOULD BE LOCATED A MINIMUM OF 5 FEET FROM THE NEAREST PART OF THE CULVERT INCLUDING THE WINGWALLS AND SCOUR APRON, AND BURIED AT A MINIMUM DEPTH OF 2 FEET BELOW THE STREAM BED.

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REVISION DESCRIPTION	DATE
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DATE 10/29/2025
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DESIGNED BY KDH
CHECKED BY KDH
SCALE 1" = XX'

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NORTH CAROLINA LICENSE NO. C-1652

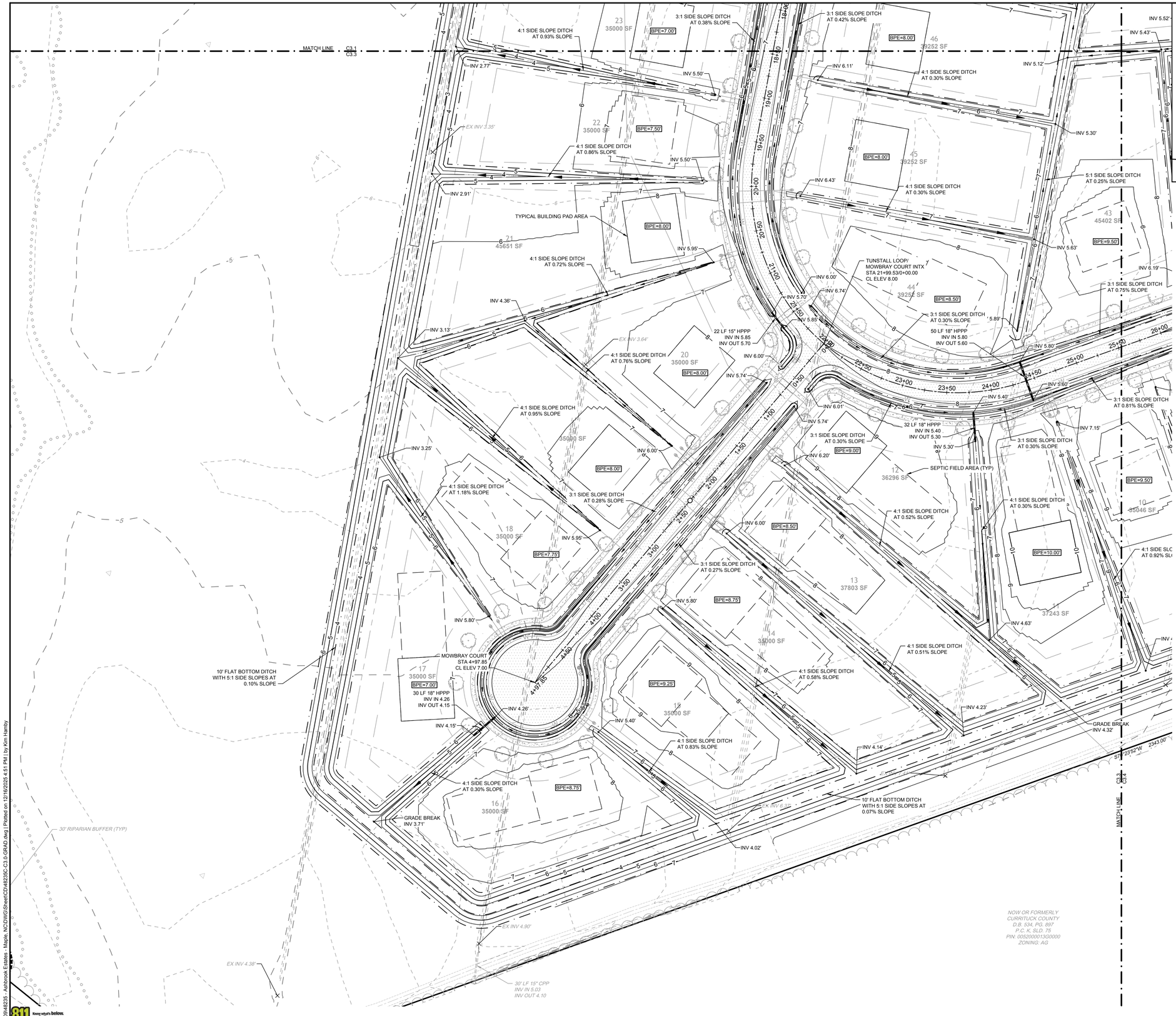
ASHBROOK ESTATES

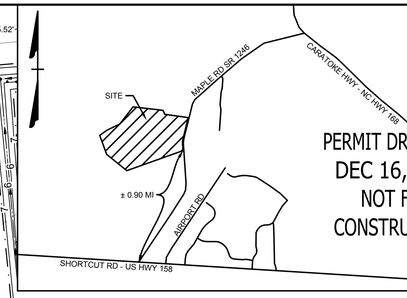
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

GRADING & DRAINAGE PLAN

JOB NO. 48235
SHEET NO. C3.2

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VICINITY MAP

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12/16/25

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SCALE 1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

GRADING & DRAINAGE PLAN

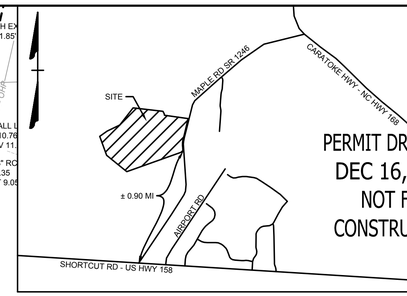
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VICINITY MAP

NO SCALE

NC GRID (NAD 83/2011)

LEGEND

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TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

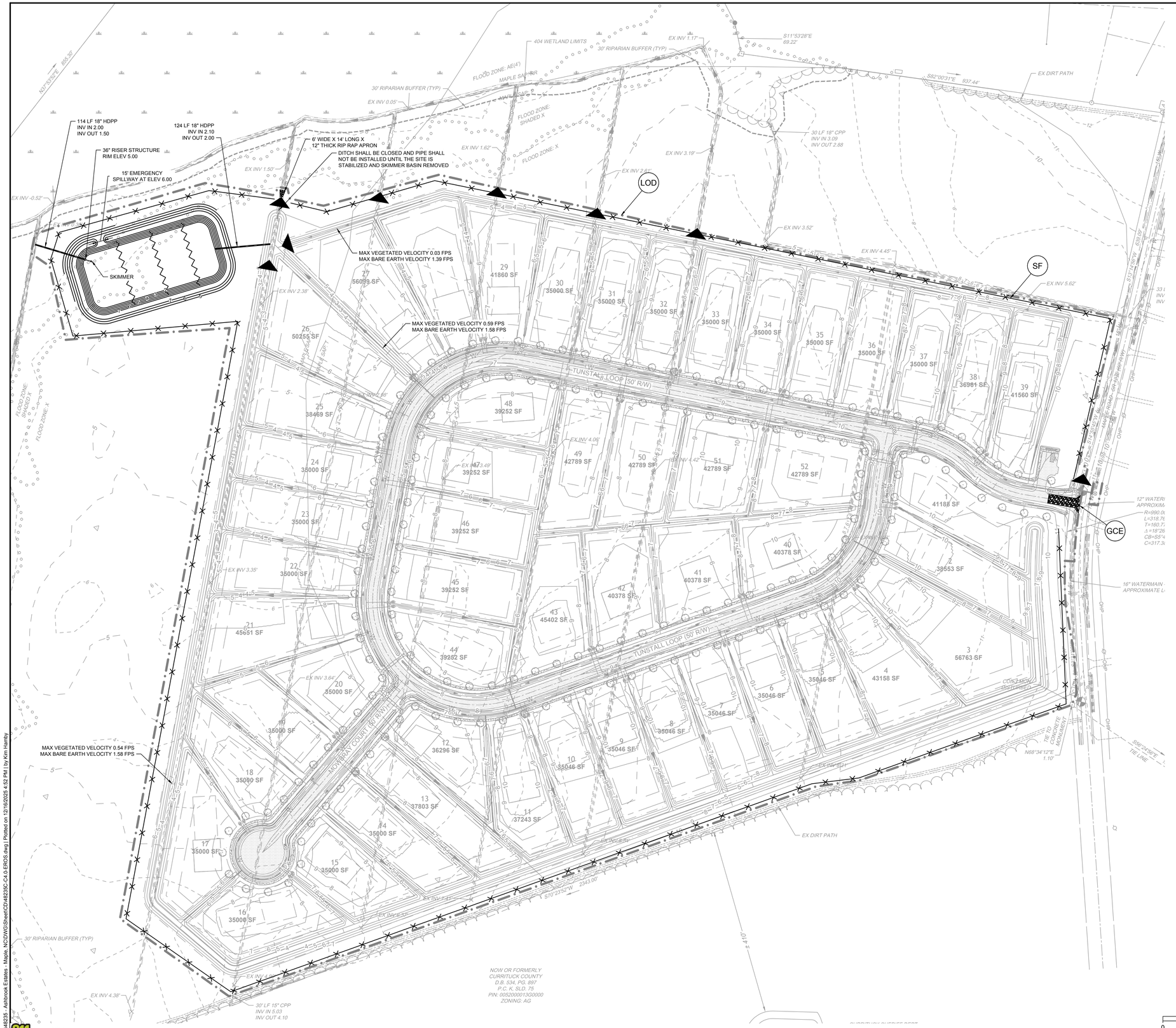
GRADING & DRAINAGE PLAN

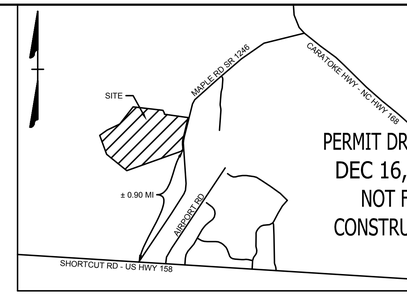
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VICINITY MAP

NO SCALE

NC GRID NAD 83(2011)

SITE DATA:

1. OWNER:
   ASHBROOK ESTATES, LLC
   PO BOX 85
   MOYOCK, NC 27958
   (252) 619-6919
   stuartinnes1@gmail.com

2. SITE INFORMATION:
   PIN: 0052000001200000
   GPIN: 8977-58-4666
   D.B. 1640, PG. 711
   P.C. R, SLD. 147
   ZONING: AG (AGRICULTURAL)
   AIRPORT OVERLAY DISTRICT
   EXISTING USE: AGRICULTURAL
   PROPOSED USE: RESIDENTIAL
   PARCEL AREA: 130.73 AC
   PROPOSED LOTS: 52
   MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC (35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC (3.85%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC (60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC (100.0%)

   CONSERVATION AREA REQUIRED:
   60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
   0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

   PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
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   PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
   LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
   ASPHALT = 89,979 SF
   CONCRETE = 39,240 SF
   FUTURE = 5,000 SF
   TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
   FRONT: 50'
   SIDE: 15'
   CORNER: 50'
   REAR: 25'

7. EASEMENTS:
   15' ALONG SIDE PROPERTY LINES
   25' ALONG REAR PROPERTY LINES
   20' DRAINAGE, LANDSCAPE, & PEDESTRIAN EASEMENT
   ALONG RIGHT OF WAY

8. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

9. BENCHMARKS - MAGNETIC NAILS AT EDGE OF PAVEMENT MAPLE ROAD
   NC GRID COORDINATES HORIZONTAL DATUM REFERENCE: NAD 83(2011) PER LEICA RTK NETWORK VERTICAL DATUM REFERENCE: NAVD 88
   A N 979464.76 sFT
   E 2,877,209.80 sFT
   ELEV 12.09'
   B N 978,636.77 sFT
   E 2,877,010.91 sFT
   ELEV 11.89'
   C N 978,173.61 sFT
   E 2,877,007.22 sFT
   ELEV 13.00'

10. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

11. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- GCE — TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
- SF — SILT FENCE
- CHECK DAM
- COIR BAFFLES

SCALE 1"=100'

0 100' 200'

PERMIT DRAWINGS
DEC 16, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
12/16/25

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
(UPDATED VELOCITIES PER PIPE SIZE CHANGES	12/16/2025

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 100'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES

CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

EROSION & SEDIMENT CONTROL PLAN

JOB NO. 48235
SHEET NO. C4.0

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

SITE DATA:

1. OWNER:
ASHBROOK ESTATES, LLC
PO BOX 85
MOYOCK, NC 27958
(252) 619-6919
stuartinnes1@gmail.com

2. SITE INFORMATION:
PIN: 005200000120000
GPIN: 8977-58-4666
D.B. 1640, PG. 711
P.C. R, SLD. 147
ZONING: AG (AGRICULTURAL)
AIRPORT OVERLAY DISTRICT
EXISTING USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
PARCEL AREA: 130.73 AC
PROPOSED LOTS: 52
MINIMUM LOT SIZE: 35,000 SF

3. THIS SITE IS LOCATED IN FLOOD ZONES X, SHADED X AND AE(4') AS SHOWN ON FIRM PANEL 3720896600L, DATED DECEMBER 21, 2018.

4. SITE AREA:

LOT AREA:	2,024,708 SF = 46.48 AC	(35.55%)
RIGHT-OF-WAY AREA:	207,695 SF = 4.77 AC	(3.65%)
OPEN SPACE AREA:	3,462,431 SF = 79.48 AC	(60.80%)
TOTAL AREA:	5,694,834 SF = 130.73 AC	(100.0%)

CONSERVATION AREA REQUIRED:
60% OF TOTAL ACREAGE TO BE OPEN SPACE SET-ASIDE
0.60 x 130.73 = 78.44 AC OPEN SPACE REQUIRED

PRIMARY CONSERVATION AREA PROVIDED = 26.52 AC
SECONDARY CONSERVATION AREA PROVIDED = 52.96 AC
TOTAL CONSERVATION AREA PROVIDED = 79.48 AC (60.80%)

OVERALL DENSITY CALCULATION:
AG 60% OPEN SPACE SET-ASIDE: 130.73 AC @ 0.4 UNITS/AC = 52 UNITS

PROPOSED NUMBER OF CONSERVATION SUBDIVISION LOTS = 52 UNITS

5. COVERAGE BREAKDOWN:
LOT BUA = 416,000 SF (8,000 SF X 52 LOTS)
ASPHALT = 89,979 SF
CONCRETE = 39,240 SF
FUTURE = 5,000 SF
TOTAL = 550,219 SF (9.66%)

6. REQUIRED MINIMUM BUILDING SETBACKS:
FRONT: 50'
SIDE: 15'
CORNER: 50'
REAR: 25'

7. ALL OR A PORTION OF THIS PROPERTY LIES WITHIN THE AIRPORT OVERLAY DISTRICT. PERSONS ON THE PREMISES MAY BE EXPOSED TO NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN AIRPORT OPERATIONS. CURRITUCK COUNTY HAS PLACED CERTAIN RESTRICTIONS ON DEVELOPMENT AND USE OF PROPERTY WITHIN THIS OVERLAY.

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ELEV 13.00'

9. BOUNDARY INFORMATION TAKEN FROM PLAT TITLED "MINOR SUBDIVISION FOR ASHBROOK ESTATES, LLC," DATED MAY 24, 2021 BY TIMMONS GROUP.

10. DISTURBED AREA SHALL NOT EXCEED 64.9 ACRES.

WATERMAIN NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN BASED ON INFORMATION AVAILABLE TO THE ENGINEER AND SHOULD NOT BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST IN THE AREA OF CONSTRUCTION PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY UTILITIES DAMAGED DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT NC ONE CALL AT 811 FOR UTILITY LOCATION.

2. CURRITUCK COUNTY WILL PROVIDE WATER SERVICE FOR THIS PROJECT.

3. ALL INSPECTIONS SHALL BE COORDINATED WITH CURRITUCK COUNTY WATER SYSTEM AND THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE.

4. ALL WATERMAINS SHALL BE EITHER SDR 21 PVC OR DUCTILE IRON AS SHOWN ON PLANS. ALL PIPE SHALL COMPLY WITH THE REQUIREMENTS OF AWWA STANDARDS AND THE NATIONAL SANITATION FOUNDATION. ALL PIPE MUST BEAR THE NSF LOGO FOR P0TABLE WATER.

5. WATERMAINS MAY BE INSTALLED UNDER STORM DRAINS WITHOUT FITTINGS, WHERE THE CHANGE IN VERTICAL ELEVATION IS TWO FEET OR LESS.

6. WATERMAINS INSTALLED UNDER STORM DRAINS SHALL HAVE A MINIMUM SEPARATION OF 18" BETWEEN WATERMAIN AND STORM DRAIN AND WATERMAIN SHALL BE DUCTILE IRON. WHERE PRACTICAL, INSTALL A FULL JOINT OF 20 LF DUCTILE IRON PIPE CENTERED UNDER THE STORM DRAIN. WHERE THE WATERLINE BENDS INTO A VERTICAL LEG WITHIN 10 HORIZONTAL FEET OF THE STORM DRAIN, THE VERTICAL LEG SHALL BE DUCTILE IRON.

7. THRUST BLOCKING SHALL BE INSTALLED ON ALL BENDS OF 22 1/2° OR GREATER. (SEE THE SPECIFICATIONS AND DETAILS ON THRUST BLOCKINGS.)

8. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE AND MATERIAL OF EXISTING MAINS PRIOR TO ORDERING MATERIALS.

9. DURING CONSTRUCTION, NO PIPE SHALL BE COVERED UNTIL INSPECTED BY CURRITUCK COUNTY WATER SYSTEM. THE CONTRACTOR SHALL NOTIFY THE WATER DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE INSPECTION OF WATERLINE.

10. THE CONTRACTOR SHALL SATISFY ALL BOND REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

11. ALL WATERMAINS SHALL HAVE A MINIMUM OF 36" COVER.

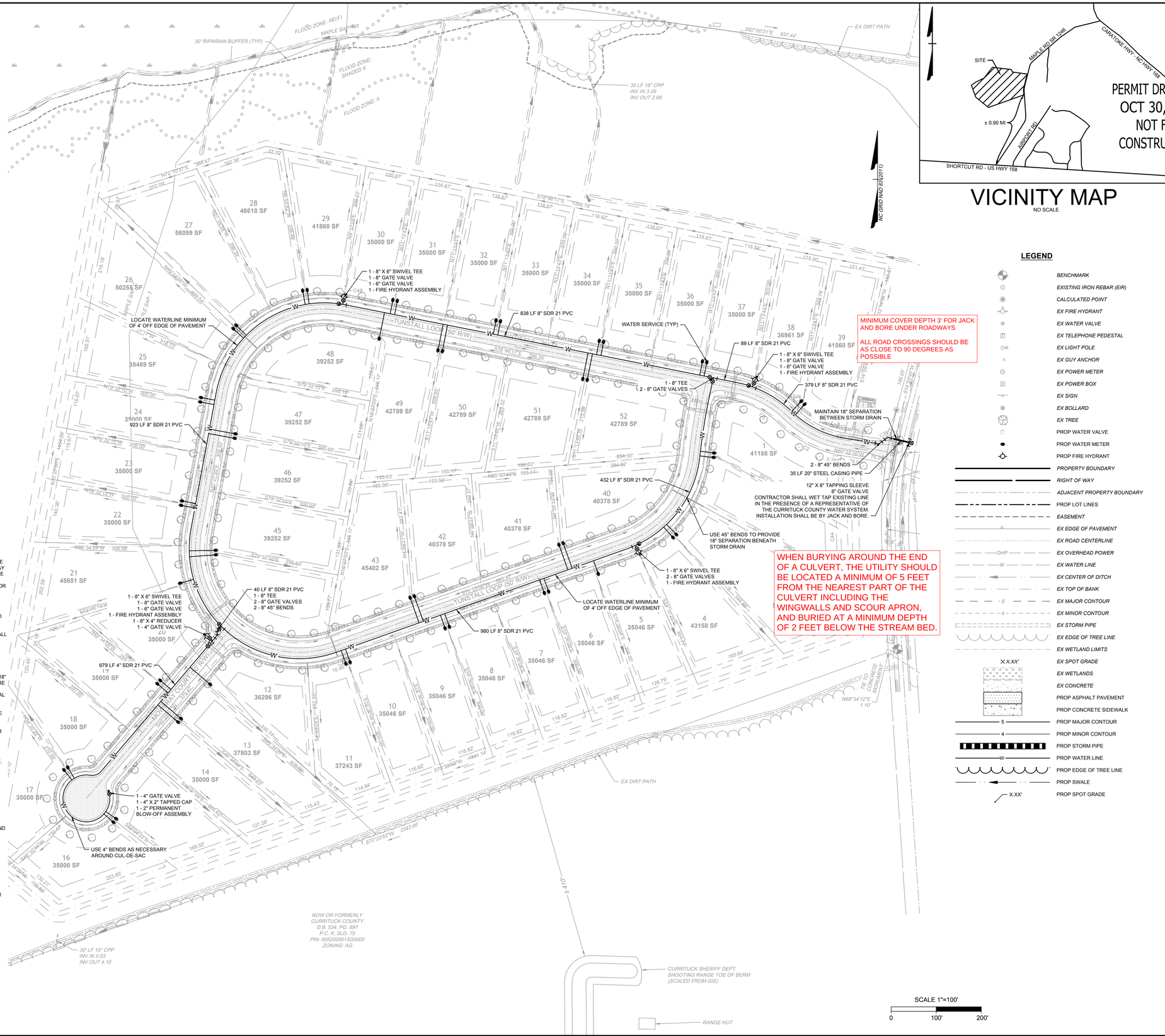
12. ALL PIPES AND SERVICES TO HAVE RUNNING ALONG AND WITH THE PIPE A CONTINUOUS LENGTH OF #12 SOLID COPPER WIRE AND A 3" WIDE TRACER TAPE AT ONE (1) FOOT BELOW THE FINISHED GRADE OF THE EXCAVATION FOR THE PIPE.

13. WATERLINES SHALL BE PRESSURE TESTED AND CHLORINATED AS REQUIRED BY NCDEQ AND AS DETAILED IN THE COUNTY'S SPECIFICATIONS. TESTING SHALL BE INSPECTED BY A REPRESENTATIVE OF CURRITUCK COUNTY WATER SYSTEM AND/OR THE ENGINEER.

14. CONTRACTOR SHALL REPAIR ALL GRAVEL AND SOIL DRIVES AND ROAD WITH 6" MIN. ABC STONE

15. LENGTHS OF WATERLINE ARE APPROXIMATE AND HAVE BEEN INCLUDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY LENGTHS TO HIS SATISFACTION.

16. CONTRACTOR SHALL PROVIDE ADDITIONAL FITTINGS AS NECESSARY TO MAINTAIN PROPER ALIGNMENT AND COVER.



VICINITY MAP
NO SCALE

LEGEND

- BENCHMARK
- EXISTING IRON REBAR (EIR)
- CALCULATED POINT
- EX FIRE HYDRANT
- EX WATER VALVE
- EX TELEPHONE PEDESTAL
- EX LIGHT POLE
- EX GUY ANCHOR
- EX POWER METER
- EX POWER BOX
- EX SIGN
- EX BOLLARD
- EX TREE
- PROP WATER VALVE
- PROP WATER METER
- PROP FIRE HYDRANT
- PROPERTY BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- PROP LOT LINES
- EASEMENT
- EX EDGE OF PAVEMENT
- EX ROAD CENTERLINE
- EX OVERHEAD POWER
- EX WATER LINE
- EX CENTER OF DITCH
- EX TOP OF BANK
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- EX STORM PIPE
- EX EDGE OF TREE LINE
- EX WETLAND LIMITS
- EX SPOT GRADE
- EX WETLANDS
- EX CONCRETE
- PROP ASPHALT PAVEMENT
- PROP CONCRETE SIDEWALK
- PROP MAJOR CONTOUR
- PROP MINOR CONTOUR
- PROP STORM PIPE
- PROP WATER LINE
- PROP EDGE OF TREE LINE
- PROP SWALE
- PROP SPOT GRADE

PERMIT DRAWINGS
OCT 30, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
10-30-25

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REVISION DESCRIPTION	DATE

DATE: 10/30/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: 1" = 100'

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

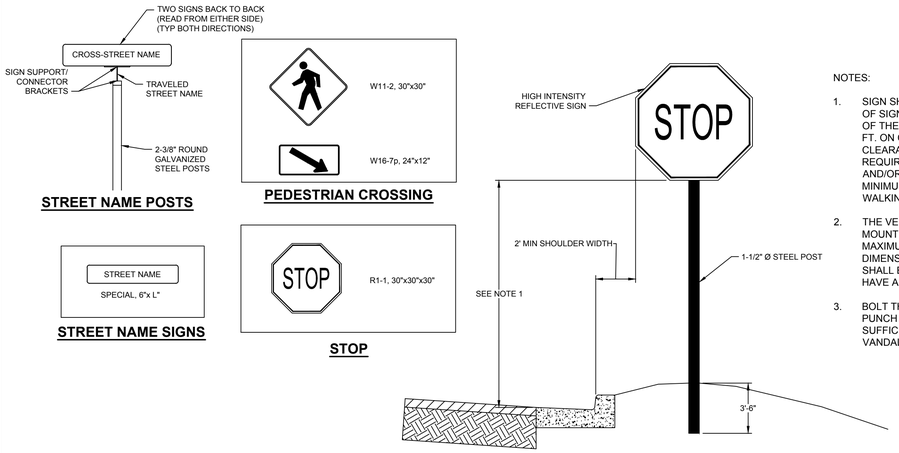
UTILITY PLAN

JOB NO. 48235
SHEET NO. C5.0

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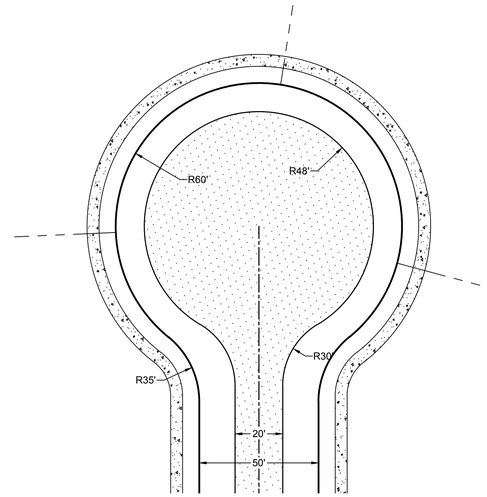
811 Know what's below. Call before you dig.



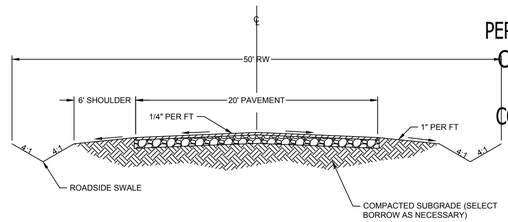
NOTES:

1. SIGN SHALL BE ERECTED WITH THE BOTTOM OF SIGN ASSEMBLY 6 FT. ABOVE THE EDGE OF THE TRAVEL LANE ON FREEWAYS AND 5 FT. ON OTHER ROUTES. THE VERTICAL CLEARANCE SHALL BE 7 FT. WHERE REQUIRED FOR PEDESTRIAN TRAFFIC AND/OR PARKED VEHICLES, OR A 6 FT. +, MINIMUM CLEARANCE TO THE SIDEWALK OR WALKING SURFACE.
2. THE VERTICAL DIMENSIONS BETWEEN MOUNTING HOLE CENTERS SHALL BE 30" MAXIMUM. THE VERTICAL AND HORIZONTAL DIMENSIONS BETWEEN MOUNTING HOLES SHALL BE TO THE WHOLE INCH. SIGN SHALL HAVE A MINIMUM OF 2 BOLTS PER SUPPORT.
3. BOLT THREADS SHALL BE DEFORMED WITH PUNCH AND CHISEL AFTER INSTALLATION SUFFICIENTLY TO REDUCE REMOVAL BY VANDALS.

TYPICAL SIGN DETAIL
NO SCALE



CUL-DE-SAC DETAIL
SCALE: 1"=30'



SURFACE: 2" TYPE SF9.5A ASPHALT
BASE: 6" ABC STONE

STREET SECTION
NO SCALE

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 10-31-25 KIMBERLY D. HAMBY

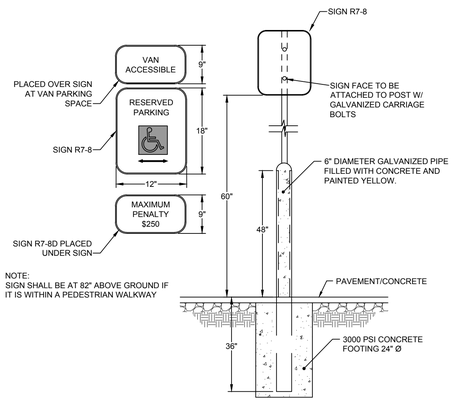
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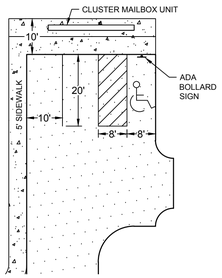
REVISION DESCRIPTION

DATE

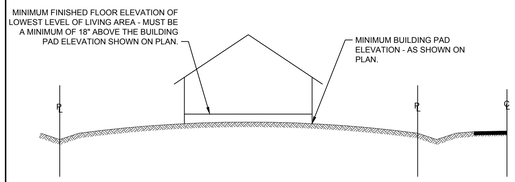
DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE NO SCALE



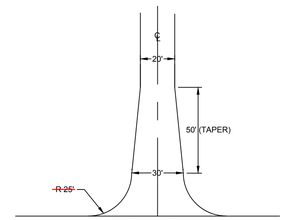
HANDICAP PARKING SIGN IN BOLLARD
NO SCALE



CLUSTER MAILBOX DETAIL
SCALE: 1"=20'

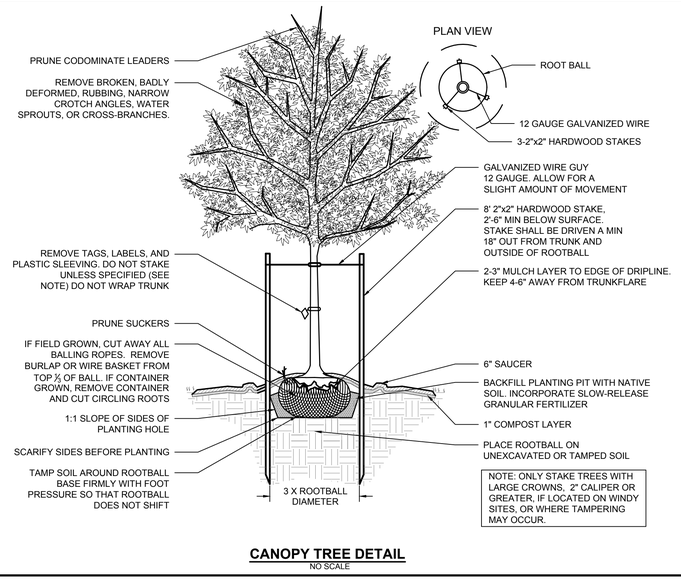


LOT CROSS-SECTION
NO SCALE



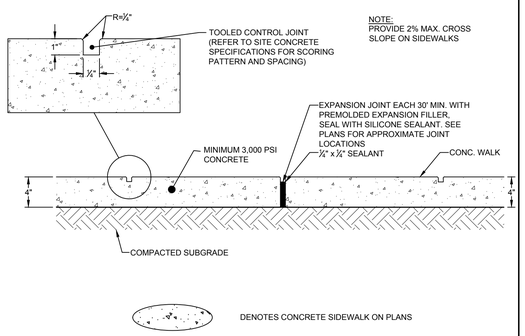
30' EDGE OF PAVEMENT RADIUS REQUIRED
FOR ALL STREET CONNECTIONS

ENTRANCE ROAD DETAIL
NO SCALE



NOTE: ONLY STAKE TREES WITH LARGE CROWNS, 2" CALIPER OR GREATER, IF LOCATED ON WINDY SITES, OR WHERE TAMPERING MAY OCCUR.

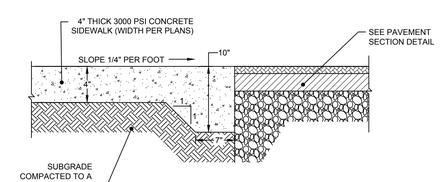
CANOPY TREE DETAIL
NO SCALE



CONCRETE SIDEWALKS
NO SCALE

PLACE A TOOLED CONTROL JOINT 1" DEEP WITH 1/8" RADII IN THE SIDEWALK AT ±5' INTERVALS. INTERVALS SHALL BE ADJUSTED AS NECESSARY SUCH THAT NO SECTION IS MORE THAN 6' OR LESS THAN 4'.

A 1/2" EXPANSION JOINT WILL BE REQUIRED AT 30' INTERVALS AND WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE, INCLUDING BUILDINGS. SIDEWALKS, STEPS, ETC.



FLUSH SIDEWALK
NO SCALE

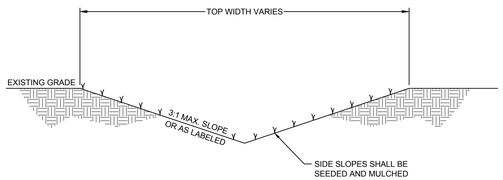
TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
CONSTRUCTION DETAILS

JOB NO. 48235
SHEET NO. C6.0

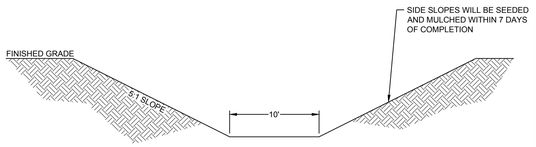
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TYPICAL DITCH/SWALE

NO SCALE



FLAT BOTTOM DITCH

NO SCALE

CONSTRUCTION SEQUENCING

1. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE PADS. (SEE DETAIL)
2. INSTALL SILT FENCE, SKIMMER BASIN AND CHECK DAMS WHERE SHOWN IN EXISTING DITCHES TO PREVENT OFF-SITE SEDIMENTATION.
3. PERFORM GRADING, INCLUDING FILLING OF EXISTING DITCHES, AND INSTALL STORM DRAINAGE.
4. INSTALL THE REMAINING SEDIMENT AND EROSION CONTROL PROTECTION.
5. INSTALL THE STONE BASE AND ASPHALT FOR THE PROPOSED ROAD.
6. PROVIDE GROUNDCOVER IN ACCORDANCE WITH DETAIL MARKED 'EROSION CONTROL MEASURES', THIS SHEET.
7. MONITOR AND MAINTAIN THE INSTALLED EROSION CONTROL MEASURES AND REPAIR AS NECESSARY.
8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. ONCE SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES, AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUNDCOVER IS NOT ADEQUATE. SKIMMER BASINS MAY NOT BE REMOVED UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED, NCDEQ SHOULD BE NOTIFIED 10 DAYS PRIOR TO REMOVAL OF A BASIN.
9. UPON NCDEQ APPROVAL, SKIMMER, DISCHARGE PIPE, SPILLWAY, AND BAFFLES SHALL BE REMOVED AND CONNECTION TO DOWNSTREAM DRAINAGE SHALL BE MADE. GRADE BASIN AREA ACCORDING TO FINISHED GRADES AND IMMEDIATELY SEED AND MULCH.
10. ONCE THE SKIMMER BASIN AREA IS VEGETATED AND THE REMAINDER OF THE SITE IS FULLY STABILIZED, REMOVE ANY REMAINING EROSION CONTROL DEVICES.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS OF THE DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PROVIDED ON ALL AREAS OF THE SITE WHICH ALL DISTURBED OR GRADED.

PROVIDE A GROUNDCOVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY FOR SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH, FOR SLOPES 4:1 OR FLATTER OF ANY LENGTH (EXCEPT FOR PERIMETERS AND HQW ZONES), AND SLOPES NO STEEPER THAN 2:1 AND LESS THAN 10' IN LENGTH.

PROVIDE GROUNDCOVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN 7 CALENDAR DAYS FOR SLOPES STEEPER THAN 3:1 OR SLOPES 3:1 OR FLATTER GREATER THAN 50' IN LENGTH, FOR HIGH QUALITY WATER (HWQ) ZONES, AND PERIMETER DIKES, SWALES, DITCHES AND SLOPES.

PROVIDE GROUNDCOVER (TEMPORARY OR PERMANENT) ON ALL EXPOSED SLOPES WITH IN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING; AND, A PERMANENT GROUNDCOVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

THE CONTROL MEASURES SHALL BEGIN PRIOR TO ANY LAND DISTURBING ACTIVITY INCLUDING CLEARING; SHALL CONTINUE DURING CONSTRUCTION AND SHALL CONTINUE WITH THE NECESSARY MAINTENANCE UNTIL THE DISTURBED LAND IS STABILIZED. COMPLIANCE WITH LOCAL AND/OR STATE SOIL EROSION AND SEDIMENTATION CONTROL LAWS SHALL BE THE ENTIRE RESPONSIBILITY OF THE CONTRACTOR. THIS PARAGRAPH IS INTENDED TO SERVE ONLY AS A GUIDE TO THE CONTRACTOR FOR COMPLIANCE WITH SUCH LAWS. ORDERS, RULES AND REGULATIONS CONCERNING EROSION AND SEDIMENTATION CONTROL PROTECTION OF EXISTING STRUCTURES AND FACILITIES FROM SEDIMENTATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ITEMS TO BE PROTECTED SHALL INCLUDE, BUT ARE NOT LIMITED TO, CATCH BASINS, NATURAL WATERWAYS, DRAINAGE DITCHES, WALKS, DRIVES, ROADS, LAWNS, AND STREAMS.

EROSION CONTROL MEASURES

NO SCALE

SEEDBED PREPARATION

CONSTRUCTION SPECIFICATIONS

1. PREPARE SOIL AS NECESSARY TO ESTABLISH AN ADEQUATE SEEDBED FOR RECEIVING SEED USING TILLAGE AND/OR REMOVAL OF DEBRIS (ROCKS, ROOTS, OBSTRUCTIONS). CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. SOIL SHALL RECEIVE LIME, FERTILIZER,AND/OR SUPERPHOSPHATE UNIFORMLY AS NEEDED PER RECOMMENDATIONS FROM NORTH CAROLINA DEPARTMENT OF AGRICULTURE OR OTHER COMMERCIAL LABORATORY.
3. SEED ON A FRESHLY PREPARED SEEDBED AND ENSURE SEED IS LIGHTLY COVERED FOLLOWING INSTALLATION.
4. MULCH IMMEDIATELY AFTER SEEDING.
5. CONTRACTOR SHALL SEED ALL AREAS THAT ARE DISTURBED WITHIN TWO DAYS. INSPECT ALL SEEDED AREAS AND MAKE SURE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETE, AN INSPECTION WILL BE COMPLETED TO DETERMINE IF ADDITIONAL SEEDING WILL BE REQUIRED.

*APPLY:
FERTILIZER, LIME, AND MULCH SHALL BE APPLIED AT RATES RECOMMENDED BY NCDA (OR OTHERS). OTHERWISE, APPLY AS DESCRIBED BELOW.

AGRICULTURAL LIMESTONE - 1-1.5 TONS/ACRE ON COURSE TEXTURED SOILS AND 2-3 TONS/ACRE IN FINE-TEXTURED SOILS.
SOILS WITH PH OF 6 OR HIGHER NEED NOT BE LIMED.
FERTILIZER - 700/1000 LBS/ACRE (10-10-10)
MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)
ANCHOR - ASPHALT EMULSION AT 450 GAL/ACRE

PERMANENT SEEDING SCHEDULE FOR COASTAL PLAIN

DATE	TYPE	BROADCAST SEEDING RATES
SEP 1 - MAR 31	COMMON BERMUDA 'SAHARA' (UNHULLED) REBEL II FESCUE	130 LBS/ACRE 175 LBS/ACRE
APR 1 - AUG 31	COMMON BERMUDA 'SAHARA' (HULLED) REBEL II FESCUE	90 LBS/ACRE 175 LBS/ACRE
AUG 15 - APR 30	PERENNIAL RYE (AS A NURSE PLANT)	40 LBS/ACRE IN ADDITION TO OTHER SEED TYPES

TEMPORARY SEEDING SCHEDULE

DATE	TYPE	PLANTING RATES
APR 15 - AUG 15	GERMAN MILLET	40 LBS/ACRE
AUG 15 - APR 15	RYE GRAIN	120 LBS/ACRE

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

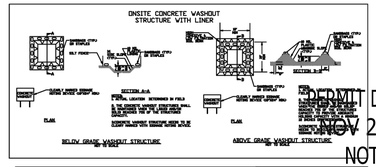
EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA Environmental Quality

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part II, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY
11-06-25

PERMIT DRAWINGS
NOV 26, 2025
NOT FOR CONSTRUCTION

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
REVISED CONSTRUCTION SEQUENCING	11/26/2025

DATE 10/29/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE NO SCALE

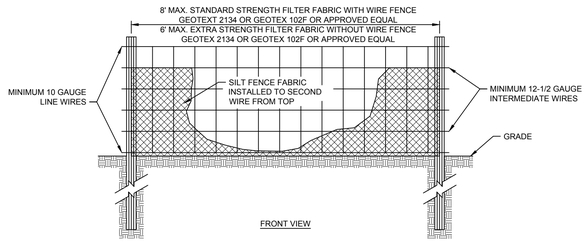
TIMMONS GROUP

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
EROSION & SEDIMENT CONTROL PLAN
NORTH CAROLINA LICENSE NO. C-1652

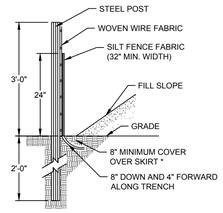
JOB NO. 48235
SHEET NO. C6.1

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FRONT VIEW



SIDE VIEW

CONSTRUCTION SPECIFICATIONS

1. USE SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461.
2. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0-120 DEGREES F.
3. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.33 LB/LF STEEL WITH A MINIMUM LENGTH OF 5'. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
4. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.

MAINTENANCE

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE

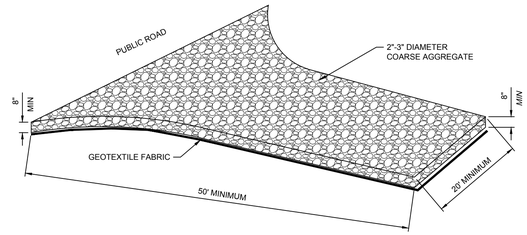
NO SCALE

CONSTRUCTION SPECIFICATIONS:

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL, AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLAN.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

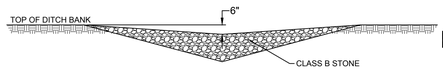
MAINTENANCE

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH TWO-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

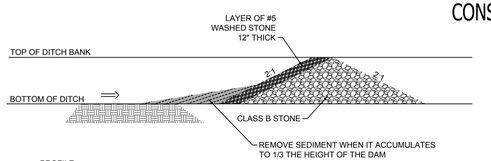


TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

NO SCALE



SECTION

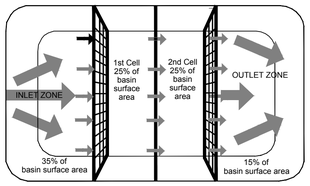


PROFILE

FILTER DAM IS TO BE IN PLACE UNTIL GRASS IS ESTABLISHED IN BOTTOM OF DITCH SUFFICIENT TO PREVENT EROSION

CHECK DAM

NO SCALE

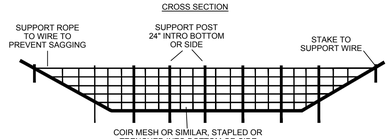


PLAN VIEW

NOTES:

1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL

CROSS SECTION



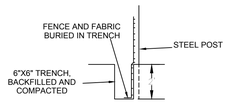
MAINTENANCE

INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

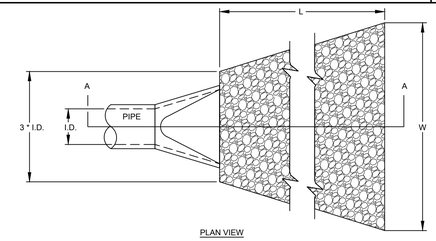
REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



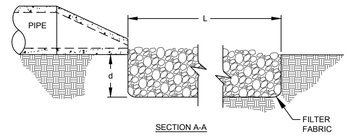
SECTION VIEW AT OPENING

COIR BAFFLES

NO SCALE



PLAN VIEW



SECTION A-A

NOTES:

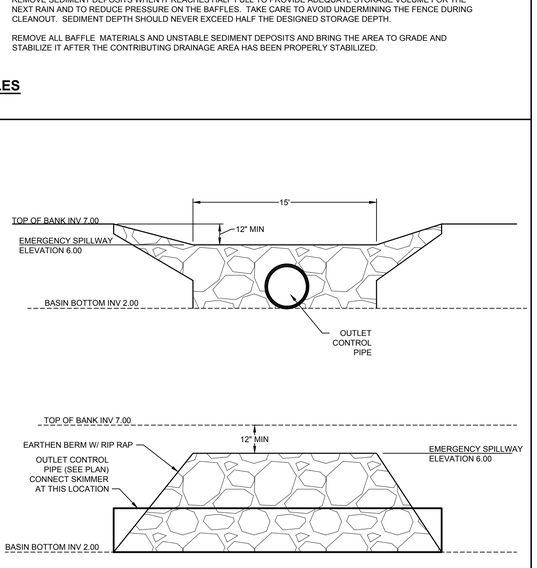
1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

MAINTENANCE

INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

OUTLET PROTECTION

NO SCALE



PERSPECTIVE VIEW

NOTES:

PROVIDE A SMALL PILE OF RIP RAP OR CONCRETE MASONRY BLOCK DIRECTLY BELOW SKIMMER TO PREVENT SKIMMER FROM RESTING ON SOIL.

ALL SCHEDULE 40 PVC PIPE & FITTINGS SHALL BE 6" MIN. DIA.

SKIMMER TO BE TETHERED

SEE N.C. DENR EROSION and SEDIMENT CONTROL PLANNING and DESIGN MANUAL FOR CONDITIONS WHERE PRACTICE APPLIES; PLANNING CONSIDERATION & DESIGN CRITERIA.

6" SKIMMER

NO SCALE

SEDIMENT BASIN EMERGENCY SPILLWAY

NO SCALE

DATE:

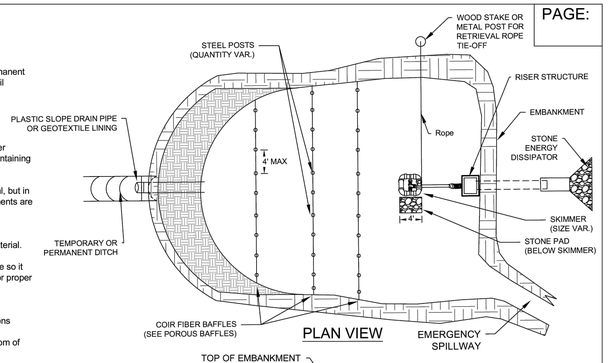
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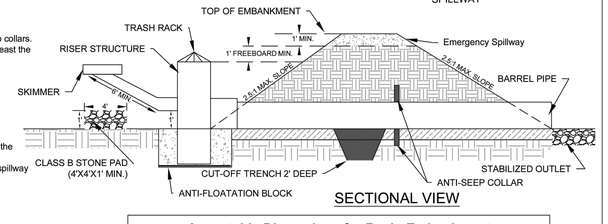
NOTES:

1. Install temporary sediment basins to the approved design. If the basin will eventually be converted to a permanent SCM device, the basin must function as a temporary sediment basin and meet the following parameters until completion of the project:
   - Maximum Drainage Area: 100 acres
   - Minimum Sediment Storage Volume: 1800 cubic feet per acre of disturbed area
   - Minimum Surface Area: 435 square feet per cfs of Q_{10} peak inflow
   - Minimum dewatering time: 48 hours
2. Clear, grub, and strip topsoil from areas under the embankment to remove trees, vegetation, roots, and other objectionable material. Delay clearing the pool area until the dam is complete. Stockpile all topsoil or soil containing organic matter for use on the outer shell of the embankment to facilitate vegetative establishment.
3. Place temporary sediment control measures below the basin and stockpile as needed.
4. Excavate a cut-off trench along the center line of the earth fill embankment. Cut trench to stable soil material, but in no case make it less than 2 feet deep with maximum side slopes no steeper than 1:1. Compaction requirements are the same as those for the embankment.
5. Extend the cut-off trench into both abutments to at least the elevation of the riser crest.
6. Keep the trench dry during backfilling and compaction operations.
7. Fill material should be clean mineral soil, free of roots, woody vegetation, rocks, and other objectionable material. Areas of approved fill should be shown on the plans.
8. Scarify areas on which fill is to be placed prior to placing. Ensure that fill material contains sufficient moisture so it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction.
9. Place fill material in 6 to 8 inch continuous layers over the entire length of fill area and compact.
10. Construct the embankment to an elevation 10% higher than the design height to allow for settling.
11. Securely attach the riser to the barrel or barrel stub to make a watertight structural connection. All connections should be made using approved watertight assemblies.
12. If no riser structure is to be used, couple the skimmer arm directly into the embankment 1 foot from the bottom of the basin.
13. The arm pipe connecting the skimmer to the riser shall have a minimum length of 6 feet.
14. Place barrel and riser on a firm, smooth foundation of impervious soil.
15. Do not use pervious material such as sand, gravel, or crushed stone as backfill around the pipe or anti-seep collars.
16. Place fill material around the pipe spillway in 4-inch layers, and compact it under and around the pipe to at least the same density as the adjacent embankment.
17. Place a minimum depth of 2 feet of compacted backfill over the pipe spillway before crossing it with any construction equipment.
18. Anchor riser in place by concrete or other satisfactory means to prevent floatation.
19. In no case should the pipe conduit be installed by cutting a trench through the dam after the embankment is complete.
20. Install the emergency spillway in undisturbed soil.
21. Discharge water into the basin in a manner to prevent erosion.
22. Construct basin so that the disturbed area is minimized, divert surface water from bare areas and complete the embankment before the area is cleared.
23. Stabilize the emergency spillway embankment and all other disturbed area above the crest of the principal spillway immediately after construction.
24. Seed and place matting for erosion control on interior and exterior side slopes.
25. Install Porous Baffles as specified on following sheets.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any repairs immediately.
2. Remove sediment and restore basin to its original dimensions when it accumulates to one-half the design depth.
3. Place removed sediment in an area with sediment control measures to ensure no loss of sediment off-site.
4. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement.
5. Remove all trash and other debris form the riser and pool area.





SECTIONAL VIEW

Acceptable Dimensions for Basin Embankment

Fill Height	Minimum Top Width
Less than 10.0 ft	8.0 ft
10.0 ft to 15.0 ft	10.0 ft

SEDIMENT BASIN

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042614 KIMBERLY D. HANBY 10-31-25

PERMIT DRAWINGS
OCT 29, 2025
NOT FOR CONSTRUCTION

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE: 10/29/2025
DRAWN BY: BCD
DESIGNED BY: KDH
CHECKED BY: KDH
SCALE: NO SCALE

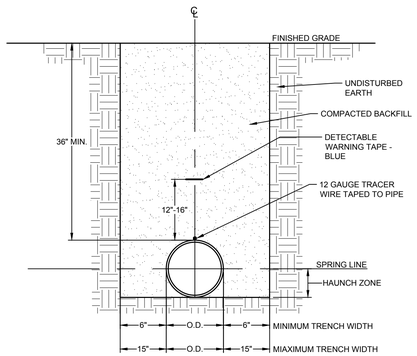
TIMMONS GROUP

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA
NORTH CAROLINA LICENSE NO. C-1652
EROSION & SEDIMENT CONTROL PLAN

JOB NO. 48235
SHEET NO. C6.2

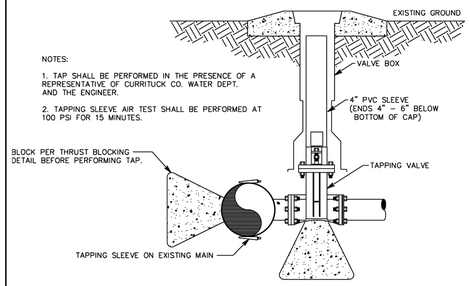
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S:\10948235 - Ashbrook Estates - Maple, NC\DWG\Sheet\C0748235C-C6.1 DTEROS.dwg | Plotted on 10/29/2025 10:56 AM | by Kim Hanby



1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND THE BRACING.
2. BACKFILL IN AREAS TO REMAIN GRASSED MAY BE NATIVE MATERIAL. BACKFILL IN AREAS TO RECEIVE PAVEMENT OR BUILDING FOUNDATIONS SHALL BE SUITABLE NATIVE MATERIAL OR SELECT OFF-SITE MATERIAL.
3. BACKFILL SHALL BE TAMPED IN 6" LAYERS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
4. BEDDING MATERIAL BENEATH TYPICAL TRENCH SHALL BE INSTALLED ONLY AS NECESSARY WHEN NATIVE SOILS ARE UNSTABLE.

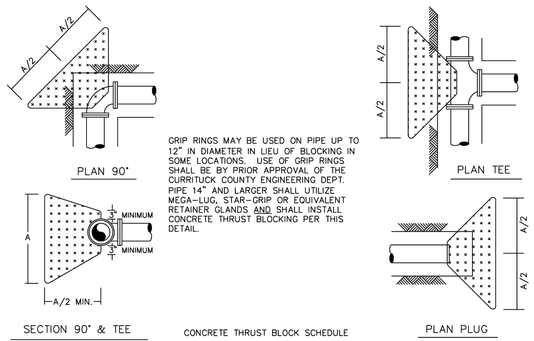
TYPICAL WATERLINE TRENCH DETAIL
NO SCALE



NOTES:

1. TAP SHALL BE PERFORMED IN THE PRESENCE OF A REPRESENTATIVE OF CURRITUCK CO. WATER DEPT. AND THE ENGINEER.
2. TAPPING SLEEVE AIR TEST SHALL BE PERFORMED AT 100 PSI FOR 15 MINUTES.

TAPPING DETAIL
NTS



GRIP RINGS MAY BE USED ON PIPE UP TO 12" IN DIAMETER IN LIEU OF BLOCKING IN SOME LOCATIONS. USE OF GRIP RINGS SHALL BE BY PRIOR APPROVAL OF THE CURRITUCK COUNTY ENGINEERING DEPT. PIPE 14" AND LARGER SHALL UTILIZE MEGA-LUG, STAR-GRIP OR EQUIVALENT RETAINER GLANDS AND SHALL INSTALL CONCRETE THRUST BLOCKING PER THIS DETAIL.

SECTION 90° & TEE

CONCRETE THRUST BLOCK SCHEDULE

FITTING	PIPE SIZE (NOM. DIA. IN INCHES)									
	2"	4"	6"	8"	10"	12"	16"	18"	20"	24"
TEE	1.6	1.9	2.8	3.8	4.7	5.9	7.5	8.5	9.4	11.3
90° BEND	1.5	1.9	2.8	3.8	4.7	5.9	7.5	8.5	9.4	11.3
45° BEND	1.0	1.4	2.1	2.8	3.5	4.3	5.5	6.2	6.9	7.7
22 1/2° BEND	.8	1.0	1.5	2.0	2.5	3.1	4.0	4.5	4.9	5.5

TABLE "A" DIMENSIONS (IN FEET)

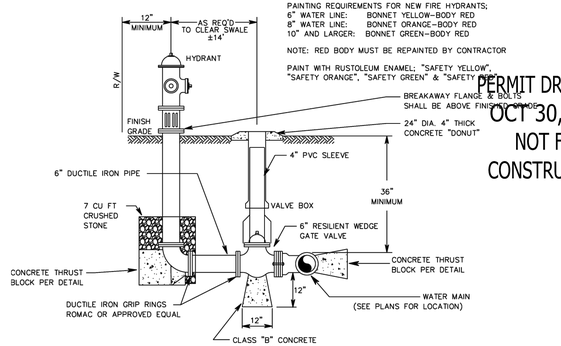
THRUST BLOCK DETAIL
NTS

HYDRANT TO BE M+H 129 TRAFFIC MODEL FOR 3.5' BURY WITH 5 1/4" VALVE OPENING

PAINTING REQUIREMENTS FOR NEW FIRE HYDRANTS;
6" WATER LINE: BONNET YELLOW-BODY RED
8" WATER LINE: BONNET ORANGE-BODY RED
10" AND LARGER: BONNET GREEN-BODY RED

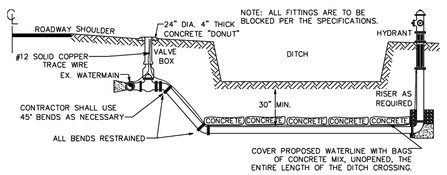
NOTE: RED BODY MUST BE REPAINTED BY CONTRACTOR

PAINT WITH RUSTOLEUM ENAMEL; "SAFETY YELLOW", "SAFETY ORANGE", "SAFETY GREEN" & "SAFETY RED"

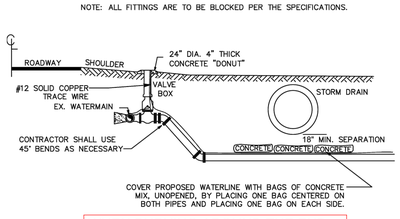


NOTES:
1. DO NOT BLOCK HYDRANT DRAIN WITH THRUST BLOCKING
2. COAT TIE RODS & NUTS WITH EPOXY
3. DO NOT SUPPORT VALVE BOX DIRECTLY ON VALVE
4. ALL JOINTS SHALL BE MECHANICAL JOINTS
5. INSTALL REFLECTIVE HYDRANT MARKER, STIMPSONITE, MODEL 88AB, TWO-WAY BLUE REFLECTOR IN CENTERLINE OF PAVEMENT PERPENDICULAR TO HYDRANT LOCATION USING E-BOND EPOXY ADHESIVE 1240/1241 PER MANUFACTURERS SPECIFICATIONS.

FIRE HYDRANT DETAIL
NTS

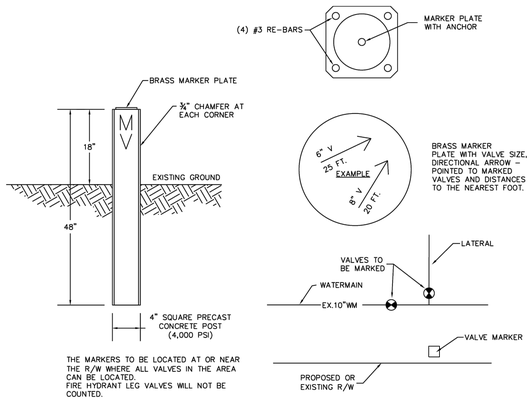


DITCH CROSSING DETAIL
NTS



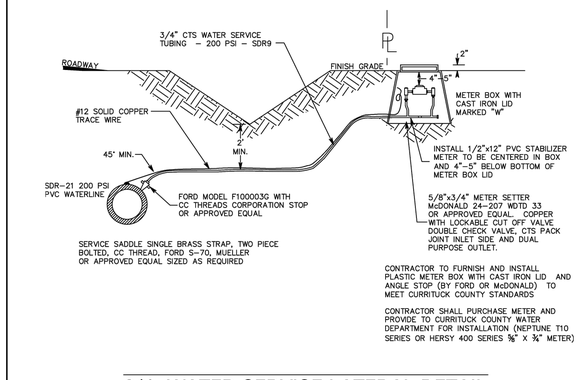
WHEN BURYING AROUND THE END OF A CULVERT, THE UTILITY SHOULD BE LOCATED A MINIMUM OF 5 FEET FROM THE NEAREST PART OF THE CULVERT INCLUDING THE WINGWALLS AND SCOUR APRON, AND BURIED AT A MINIMUM DEPTH OF 2 FEET BELOW THE STREAM BED.

CULVERT CROSSING DETAIL
NTS



THE MARKERS TO BE LOCATED AT OR NEAR THE R/W WHERE ALL VALVES IN THE AREA CAN BE LOCATED. FIRE HYDRANT LEG VALVES WILL NOT BE COUNTED.

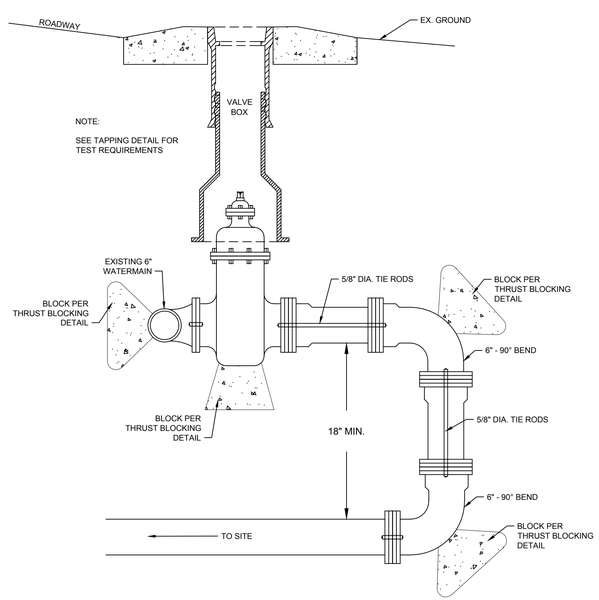
VALVE MARKER DETAIL
NTS



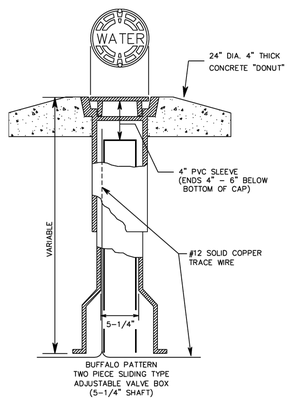
CONTRACTOR TO FURNISH AND INSTALL PLASTIC METER BOX WITH CAST IRON LID AND ANGLE STOP (BY FORD OR McDONALD) TO MEET CURRITUCK COUNTY STANDARDS

CONTRACTOR SHALL PURCHASE METER AND PROVIDE TO CURRITUCK COUNTY WATER DEPARTMENT FOR INSTALLATION (NEPTUNE T10 SERIES OR HERSY 400 SERIES ⅝" X ¾" METER)

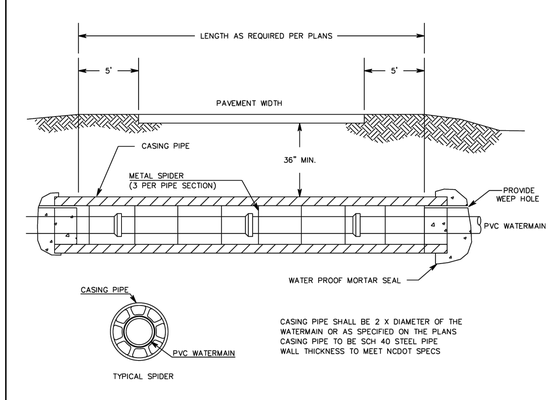
3/4" WATER SERVICE LATERAL DETAIL
NTS



CONNECTION USING 90° BENDS
NO SCALE

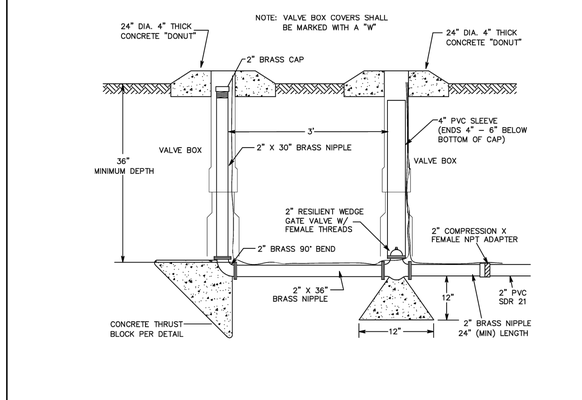


VALVE BOX
NTS



CASING PIPE SHALL BE 2 X DIAMETER OF THE WATERMAIN OR AS SPECIFIED ON THE PLANS CASING PIPE TO BE SCH 40 STEEL PIPE WALL THICKNESS TO MEET NCDOT SPECS

ROAD BORE DETAIL
NTS



2" BLOW-OFF DETAIL
NTS

PERMIT DRAWINGS
OCT 30, 2025
NOT FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 042614 ENGINEER KIMBERLY D. HAMBY 10-30-25

THIS DRAWING PREPARED AT THE
ELIZABETH CITY OFFICE
1805 West City Drive, Unit E | Elizabeth City, NC 27909
TEL 252.621.5030 FAX 252.562.6974 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE 10/30/2025
DRAWN BY BCD
DESIGNED BY KDH
CHECKED BY KDH
SCALE NO SCALE

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ASHBROOK ESTATES
CRAWFORD TOWNSHIP - CURRITUCK COUNTY - NORTH CAROLINA

UTILITY DETAILS

JOB NO. 48235
SHEET NO. C6.3

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TIMMONS GROUP

1805 West City Drive
Unit E
Elizabeth City, NC 27909

P 252.621.5030
F 252.562.6974
www.timmons.com

November 3, 2025

Ms. Caitlin A Spear, District Engineer
N. C. Department of Transportation
1929 North Road St.
Elizabeth City, NC 27909

RE: Encroachment Form
Ashbrook Estates
Timmons Project No. 48235

Dear Ms. Spear:

Please accept this request for a Three Party Right of Way Encroachment Agreement for Ashbrook Estates.

Thank you for your attention to this project. If you have any questions concerning this submission, please do not hesitate to contact me at (252) 621-5029.

Sincerely,
Timmons Group

Kimberly D. Hamby

Kimberly D. Hamby, PE
Sr. Project Manager

cc: file
Ashbrook Estates, LLC

JOSH STEIN
Governor
D. REID WILSON
Secretary
WILLIAM E. TOBY VINSON, JR
Director

NORTH CAROLINA
Environmental Quality

November 17, 2025

Ashbrook Estates, LLC
Attn: Stuart Innes – Managing Member
P.O. Box 85
Moyock, NC 27958

Subject: **State Stormwater Management Permit No. SW7251103**
Ashbrook Estates
Low Density Subdivision Project
Currituck County

Dear Stuart Innes:

The Washington Regional Office received a complete State Stormwater Management Permit Application for the subject project on November 4, 2025. Staff review of the plans and specifications has determined that the project, as proposed, complies with the Stormwater Regulations set forth in 15A NCAC 2H.1000 amended on January 1, 2017 (2017 Rules). We are hereby forwarding Permit No. SW7251103 dated November 17, 2025, for the construction of the built-upon areas (BUA) and vegetated conveyances associated with the subject project.

This permit shall be effective from the date of issuance until rescinded and the project shall be subject to the conditions and limitations as specified therein and does not supersede any other agency permit that may be required. Failure to comply with these requirements will result in future compliance problems. Please note that this permit is not transferable except after notice to and approval by the Division.

This cover letter, attachments, and all documents on file with DEMLR shall be considered part of this permit and is herein incorporated by reference.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing by filing a written petition with the Office of Administrative Hearings (OAH). The written petition must conform to Chapter 150B of the North Carolina General Statutes and must be filed with the OAH within thirty (30) days of receipt of this permit. You should contact the OAH with all questions regarding the filing fee (if a filing fee is required) and/or the details of the filing process at 6714 Mail Service Center, Raleigh, NC 27699-6714, or via telephone at 919-431-3000, or visit their website at www.NCOAH.com. Unless such demands are made this permit shall be final and binding.

If you have any questions concerning this permit, please contact Denis Hyska in the Washington Regional Office, at (252) 948-3973 or denis.hyska@deq.nc.gov.

Sincerely,

Denis Hyska, CAPM
Division of Energy, Mineral and Land Resources

Enclosures: Attachment A – Max Allowable BUA per Lot
Attachment B – Designer's Certification Form
Application Documents

cc: Kim Hamby, PE – Timmons Group. (kim.hamby@timmons.com)
Currituck County – Bill Newns (bill.newns@currituckcountync.gov)
Washington Regional Office

STATE OF NORTH CAROLINA

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF ENERGY, MINERAL AND LAND RESOURCES

STATE STORMWATER MANAGEMENT PERMIT

LOW DENSITY SUBDIVISION DEVELOPMENT

In compliance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations promulgated and adopted by the North Carolina Environmental Management Commission, including 15A NCAC 02H.1000 amended on January 1, 2017 (2017 Rules), the "stormwater rules"),

PERMISSION IS HEREBY GRANTED TO

Ashbrook Estates, LLC

Ashbrook Estates

Maple Road, 1.0 mile from its intersection with NC Hwy 158

Maple, Currituck County

FOR THE

construction, management, operation and maintenance of built-upon area (BUA) for a 24% low density subdivision project (the "low density area") discharging to Class C, Sw waters as outlined in the application, approved stormwater management plans, supplements, calculations, operation and maintenance agreement, recorded documents, specifications, and other supporting data (the "approved plans and specifications") as attached and/or on file with and approved by the Division of Energy, Mineral and Land Resources (the "Division" or "DEMLR"). The project shall be constructed, operated and maintained in accordance with these approved plans and specifications. The approved plans and specifications are incorporated by reference and are enforceable parts of this permit.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the following specified conditions and limitations. The permit issued shall continue in force and effect until the permittee files a request with the Division for a permit modification, transfer, or rescission; however, these actions do not stay any condition. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit for cause as allowed by the laws, rules, and regulations contained in 15A NCAC 2H.1000 and NCGS 143-215.1
et.al.

1. BUA REQUIREMENTS. The maximum amount of BUA allowed for the entire project is 550,219 square feet. The BUA requirements and allocations for this project are as follows:

   a. LOW DENSITY AREA BUA LIMITS. The low-density area, in the approved plans and specifications, must not exceed 24% per the requirements of the stormwater rules. Within this low-density area, this permit approves a percent BUA of 9.66% and the construction of a total of 550,219 square feet of BUA. This permit does provide an allocation of 5,000 square feet of BUA for future development within this low-density area.

   b. BUA FOR INDIVIDUAL LOTS. Each of the fifty-two (52) lots are limited to a maximum of BUA of 8,000 square feet, as indicated in the approved plans and specifications. **The maximum BUA assigned to each lot via this permit and the recorded deed restrictions and protective covenants may not be increased or decreased by either the individual lot owner or the permittee unless and until the permittee notifies the Division and obtains written approval from the Division.**

2. PERVIOUS AREA IMPROVEMENTS. At this time, none of the pervious area improvements listed in G.S. 143-214.7(b2) or the Stormwater Design Manual have been proposed for this project. Pervious area improvements will be allowed in this project if documentation is provided demonstrating those improvements meet the requirements of the stormwater rule.

3. LOW DENSITY AREA REQUIREMENTS. The low-density area requirements for this project are as follows:

   a. LOW DENSITY AND CONVEYANCE DESIGN. The low-density area is permitted based on the design criteria presented in the sealed, signed and dated supplement and as shown in the approved plans and specifications. This low-density area and conveyances must be provided and maintained at the design condition.

   b. PIPING. Other than the piping shown on the approved plans, only minimal amounts of piping under driveways and roads is allowed within the low-density area when it cannot be avoided. No additional piping is allowed.

   c. DISPERSED FLOW. The low-density area has maximized dispersed flow of stormwater runoff through vegetated areas and minimized the channelization of flow.

   d. VEGETATED CONVEYANCES. Stormwater runoff that could not be released as dispersed flow may be transported by vegetated conveyances with minimum side slopes of 3:1 (H:V) designed to not erode during the peak flow from the 10-year storm event as defined in the stormwater rules and approved by the Division

4. NON-ENFORCEABLE SCMS. The two wet ponds shown on the plans are **not** required by the Division and have not been demonstrated to meet the Minimum Design Criteria and therefore are not considered a part of the approved stormwater treatment system. These additional measures are incorporated only by reference and are not enforceable parts of the permit.

5. VEGETATED SETBACKS. A 50-foot wide vegetative setback must be provided and maintained in grass or other vegetation adjacent to all surface waters as shown on the approved plans. The setback is measured horizontally from the normal pool elevation of impounded structures, from the top of bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline.

   a. RELEASE OF STORMWATER NOT TREATED IN A STORMWATER CONTROL MEASURE (SCM). Stormwater that is not treated in an SCM, such as in the low-density area (including roof drains), must be released at the edge of the vegetated setback and allowed to flow through the setback as dispersed flow.

6. RECORDED DOCUMENT REQUIREMENTS. The stormwater rules require the following documents to be recorded with the Office of the Register of Deeds prior to the sale of individual lots or groups of lots:

   a. ACCESS AND/OR EASEMENTS. The entire stormwater conveyance system and maintenance accesses must be located in public rights-of-way, dedicated common areas that extend to the nearest public right-of-way, and/or permanent recorded easements that extend to the nearest public right-of-way for the purpose of inspection, operation, maintenance, and repair.

   b. OPERATION AND MAINTENANCE AGREEMENT. The operation and maintenance agreement must be recorded with the Office of the Register of Deeds.

   c. FINAL PLATS. The final recorded plats must reference the operation and maintenance agreement and must also show all public rights-of-way, dedicated common areas, and/or permanent drainage easements, in accordance with the approved plans.

   d. DEED RESTRICTIONS AND PROTECTIVE COVENANTS. Recorded deed restrictions and protective covenants must include, at a minimum, the following statements related to stormwater management:

      i. The following covenants are intended to ensure ongoing compliance with State Stormwater Management Permit Number SW7251103, as issued by the Division of Energy, Mineral and Land Resources (the "Division") under 15A NCAC 02H.1000, effective January 1, 2017.
      ii. The State of North Carolina is made a beneficiary of these covenants to the extent necessary to maintain compliance with the Stormwater Management Permit.
      iii. These covenants are to run with the land and be binding on all persons and parties claiming under them.
      iv. The covenants pertaining to stormwater may not be altered or rescinded without the express written consent of the Division.
      v. Alteration of the drainage as shown on the approved plans may not take place without the concurrence of the Division.
      vi. The maximum built-upon area (BUA) per lot is **8,000** square feet. This allotted amount includes any BUA constructed within the lot property boundaries, and that portion of the right-of-way between the front lot line and the edge of the pavement not shown on the approved plans. BUA has the same meaning as G.S. 143-214.7, as amended.
      vii. The maximum allowable BUA shall not be exceeded on any lot until the permit is modified to ensure compliance with the stormwater rules, permit, and the approved plans and specifications.
      viii. Filling in, piping or altering any vegetated conveyances (ditches, swales, etc.) associated with the development, except for average driveway crossings, is prohibited by any persons.

ix. A 50-foot wide vegetative setback must be provided and maintained adjacent to all surface waters in accordance with 15A NCAC 02H.1003(4) and the approved plans.

x. All roof drains shall be released no closer than at the edge of the 50-foot wide vegetated setback and allowed to flow through the setback as dispersed flow. At no time shall stormwater runoff be piped into or through the setback.

xi. Any individual or entity found to be in noncompliance with the provisions of a stormwater management permit or the requirements of the stormwater rules is subject to enforcement procedures as set forth in NCGS 143, Article 21.

e. DEEDS FOR INDIVIDUAL LOTS. The permittee shall record deed restrictions and protective covenants prior to the issuance of a certificate of occupancy to ensure the permit conditions and the approved plans and specifications are maintained in perpetuity.

7. CONSTRUCTION. During construction, erosion shall be kept to a minimum and any eroded areas of the on-site stormwater system will be repaired immediately.

a. PROJECT CONSTRUTION, OPERATION AND MAINTNEANCE. During construction, all operation and maintenance for the project and stormwater system shall follow the Erosion Control Plan requirements until the Sediment-Erosion Control devices are no longer needed.

b. FINAL GRADING. The vegetated areas and vegetated conveyances shall be entirely constructed and vegetated. Once the final grading is completed and the site is stabilized, the permittee shall provide and perform the operation and maintenance as outlined in the applicable section below.

8. MODIFICATIONS. No person or entity, including the permittee, shall alter any component shown in the approved plans and specifications, except for minimum driveway crossings. Prior to the construction of any modification to the approved plans, the permittee shall submit to the Director, and shall have received approval for modified plans, specifications, and calculations including, but not limited to, those listed below. For changes to the project that impact the certifications, a new or updated certification(s), as applicable, will be required and a copy must be submitted to the appropriate DEQ regional office upon completion of the modification.

a. Any modification to the approved plans and specifications, regardless of size including the BUA, details, etc.

b. Redesign or addition to the approved amount of BUA.

c. Further development, subdivision, acquisition, lease or sale of any, all or part of the project and/or property area as reported in the approved plans and specifications.

d. The construction of any permeable pavement, #57 stone area, public trails, or landscaping material within the common areas to be considered a permeable surface that were not included in the approved plans and specifications.

e. Altering, modifying, removing, relocating, redirecting, regarding, or resizing of any component of the approved stormwater collection system and/or vegetative conveyance shown on the approved plan, except for minimum driveway crossings within the low density area.

f. The construction of any allocated future BUA.

g. Adding the option to use permeable pavement or #57 stone within the lots as a permeable surface. The request may require a proposed amendment to the deed restrictions and protective covenants for the subdivision to be submitted and recorded.

h. Other modifications as determined by the Director.

9. DESIGNER'S CERTIFICATION. Upon completion of the project, the permittee shall determine if the project is in compliance with the approved plans and take the necessary following actions:

a. If the permittee determines that the project is in compliance with the approved plans, then within 45 days of completion, the permittee shall submit to the Division one hard copy and one electronic copy of the following:

   i. The completed and signed Designer's Certification provided in Attachment A noting any deviations from the approved plans and specifications. Deviations may require approval from the Division.
   ii. A copy of the recorded operation and maintenance agreement.
   iii. Unless already provided, a copy of the recorded deed restrictions and protective covenants; and
   iv. A copy of the recorded plat delineating the public rights-of-way, dedicated common areas and/or permanent recorded easements, when applicable.

b. If the permittee determines that the project is <u>not</u> in compliance with the approved plans, the permittee shall submit an application to modify the permit within 30 days of completion of the project or provide a plan of action, with a timeline, to bring the site into compliance.

10. OPERATION AND MAINTENANCE. The permittee shall provide and perform the operation and maintenance necessary, as listed in the signed operation and maintenance agreement to assure that all components of the permitted on-site stormwater system are maintained at the approved design condition. The approved operation and maintenance agreement must be followed in its entirety and maintenance must occur at the scheduled intervals.

    a. CORRECTIVE ACTIONS REQUIRED. In the event that the low-density area fails to meet the requirements of low density, the permittee shall take immediate corrective actions. This includes actions required by the Division and the stormwater rules such as the construction of additional or replacement on-site stormwater systems. These additional or replacement measures shall receive a permit from the Division prior to construction.

    b. MAINTENANCE RECORDS. Records of maintenance activities must be kept and made available upon request to authorized personnel of the Division. The records will indicate the date, activity, name of person performing the work and what actions were taken.

11. CURRENT PERMITTEE NAME OR ADDRESS CHANGES. The permittee shall submit a completed Permit Information Update Application Form to the Division within 30 days to making any one or more of the following changes:

    a. A name change of the current permittee;

    b. A name change of the project;

    c. A mailing address change of the permittee.

12. TRANSFER. This permit is not transferable to any person or entity except after notice to and approval by the Director. Neither the sale of the project and/or property, in whole or in part, nor the conveyance of common area to a third party constitutes an approved transfer of the permit.

    a. TRANSFER REQUEST. The transfer request must include the appropriate application, documentation and the processing fee as outlined in 15A NCAC 02H.1045(2) and must be submitted upon occurrence of any one or more of the following events:

        i. The sale or conveyance of the project and/or property area in whole or in part, except in the case of an individual residential lot sale that is made subject to the recorded deed restrictions and protective covenants;
        ii. The assignment of declarant rights to another individual or entity;
        iii. The sale or conveyance of the common areas to a Homeowner's or Property Owner's Association, subject to the requirements of NCGS 143-214.7(c2);
        iv. Dissolution of the partnership, corporate, or LLC entity, subject to NCGS 55-14-05 or NCGS 57D-6-07 and 08;
        v. Bankruptcy.
        vi. Foreclosure, subject to the requirements of Session Law 2013-121;

    b. TRANSFER INSPECTION. Prior to transfer of the permit, a file review and site inspection will be conducted by Division personnel to ensure the permit conditions have been met and that the project and the on-site stormwater system complies with the permit conditions. Records of maintenance activities performed to date may be requested. Projects not in compliance with the permit will not be transferred until all permit and/or general statute conditions are met.

13. COMPLIANCE. The permittee is responsible for complying with the terms and conditions of this permit and the approved plans and specifications until the Division approves the transfer request.

    a. REVIEWING AND MONITORING EACH LOT FOR COMPLIANCE. The permittee is responsible for verifying that the proposed BUA on each individual lot, within each drainage area and for the entire project does not exceed the maximum amount allowed by this permit. The permittee shall review all individual lot plans for new construction and all subsequent modifications and additions for compliance. The plans reviewed must include all proposed BUA, grading, and driveway pipe placement. The permittee shall not approve any lot plans where the maximum allowed BUA limit has been exceeded or where modifications are proposed to the grading and/or to the stormwater collection system and/or to the vegetated conveyance unless and until a permit modification has been approved by the Division. The permittee shall review and routinely monitor the project and each lot to ensure continued compliance with the conditions of the permit, the approved plans and specifications, and the recorded deed restrictions and protective covenants. The permittee shall notify any lot owner that is found to be in noncompliance with the conditions of this permit in writing and shall require timely resolution.

    b. ARCHITECTURAL REVIEW BOARD (ARB) OR COMMITTEE (ARC). The permittee may establish an ARB or ARC to conduct individual lot reviews. However, any approval given by the ARB or ARC on behalf of the permittee does not relieve the permittee of the responsibility to maintain compliance with the conditions of the permit and the approved plans and specifications.

    c. APPROVED PLANS AND SPECIFICATIONS. A copy of this permit, approved plans, application, supplements, operation and maintenance agreement, all applicable recorded documents, and specifications shall be maintained on file by the permittee at all times.

    d. MAINTENANCE ACCESS. SCMs, stormwater collection systems, and vegetated conveyances must be accessible for inspection, operation, maintenance and repair as shown on the approved plans.

    e. DIVISION ACCESS. The permittee grants Division Staff permission to enter the property during normal business hours to inspect all components of the permitted project.

    f. ENFORCEMENT. Any individual or entity found to be in noncompliance with the provisions of a stormwater management permit or the requirements of the stormwater rules is subject to enforcement procedures as set forth in NCGS 143 Article 21.

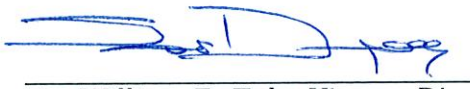
    g. ANNUAL CERTIFICATION. The permittee shall electronically submit to the Division an annual certification completed by either the permittee or their designee confirming the projects conformance with permit conditions.

    h. OBTAINING COMPLIANCE. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of modified plans and certification in writing to the Director that the changes have been made.

i. OTHER PERMITS. The issuance of this permit does not preclude the permittee from obtaining and complying with any and all other permits or approvals that are required for this development to take place, as required by any statutes, rules, regulations, or ordinances, which are imposed by any other Local, State or Federal government agency having jurisdiction. Any activities undertaken at this site that cause a water quality violation or undertaken prior to receipt of the necessary permits or approvals to do so are considered violations of NCGS 143-215.1, and subject to enforcement procedures pursuant to NCGS 143-215.6.

The permit was issued this the 17th day of November 2025.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



For William E. Toby Vinson, Director
Division of Energy, Mineral and Land Resources
By Authority of the Environmental Management Commission

Permit Number SW7251103

Attachment A

Certification Forms

The following blank Designer Certification forms are included and specific for this project:

- As-Built Permittee Certification
- As-Built Designer's Certification for Low Density Projects

A separate certification is required for each SCM. These blank certification forms may be copied and used, as needed, for each SCM and/or as a partial certification to address a section or phase of the project.

AS-BUILT PERMITTEE CERTIFICATION

I hereby state that I am the current permittee for the project named above, and I certify by my signature below, that the project meets the below listed Final Submittal Requirements found in NCAC 02H.1042(4) and the terms, conditions and provisions listed in the permit documents, plans and specifications on file with or provided to the Division.

☐ Check here if this is a partial certification. Section/phase/SCM #?_____
☐ Check here if this is part of a Fast Track As-built Package Submittal.

Printed Name_____Signature_____

I, _____, a Notary Public in the State of _____

County of _____, do hereby certify that _____

personally appeared before me this _____ day of _____, 20_____

and acknowledge the due execution of this as-built certification. (SEAL)

Witness my hand and official seal

_____

My commission expires _____

Permittee's Certification NCAC .1042(4)	Completed / Provided	N/A
A. DEED RESTRICTIONS / BUA RECORDS		
1. The deed restrictions and protective covenants have been recorded and contain the necessary language to ensure that the project is maintained consistent with the stormwater regulations and with the permit conditions.	Y or N	
2. A copy of the recorded deed restrictions and protective covenants has been provided to the Division.	Y or N	
3. Records which track the BUA on each lot are being kept. (See Note 1)	Y or N	
B. MAINTENANCE ACCESS		
1. The SCMs are accessible for inspection, maintenance and repair.	Y or N	
2. The access is a minimum of 10 feet wide.	Y or N	
3. The access extends to the nearest public right-of-way.	Y or N	
C. EASEMENTS		
1. The SCMs and the components of the runoff collection / conveyance system are located in recorded drainage easements.	Y or N	
2. A copy of the recorded plat(s) is provided.	Y or N	
D. SINGLE FAMILY RESIDENTIAL LOTS - Plats for residential lots that have an SCM include the following:	Y or N	
1. The specific location of the SCM on the lot.	Y or N	
2. A typical detail for the SCM.	Y or N	

3. A note that the SCM is required to meet stormwater regulations and that the lot owner is subject to enforcement action as set forth in NCGS 143 Article 21 if the SCM is removed, relocated or altered without prior approval.	Y or N	
E. OPERATION AND MAINTENANCE AGREEMENT	Y or N	
1. The O&M Agreement is referenced on the final recorded plat.	Y or N	
2. The O&M Agreement is recorded with the Register of Deeds and appears in the chain of title.	Y or N	
F. OPERATION AND MAINTENANCE PLAN – maintenance records are being kept in a known set location for each SCM and are available for review.	Y or N	
G. DESIGNER'S CERTIFICATION FORM – has been provided to the Division.	Y or N	

Note 1- Acceptable records include ARC approvals, as-built surveys, and county tax records.

Provide an explanation for every requirement that was not met, and for every "N/A" below. Attach additional sheets as needed.

AS-BUILT DESIGNER'S CERTIFICATION FOR LOW DENSITY PROJECTS

I hereby state that I am a licensed professional and I certify by my signature and seal below, that I have observed the construction of the project named above to the best of my abilities with all due care and diligence, and that the project meets all of the MDC found in 15A NCAC 02H.1003, in accordance with the permit documents, plans and specifications on file with or provided to the Division, except as noted on the "AS-BUILT" drawings, such that the intent of the stormwater rules and the general statutes has been preserved.

☐ Check here if this is a partial certification. Section or phase_____

☐ Check here if this is part of a Fast-Track As-Built Package Submittal per 15A NCAC 02H .1044(3).

☐ Check here if the Designer did not observe the construction but is certifying the project.

☐ Check here if pictures of the project are provided.

Printed Name_____Signature _____

NC Registration Number_____Date _____

SEAL:

Consultant's Mailing Address:

_____

City:_____State:_____ Zip:_____

Phone:(___) _____

Consultant's Email address:

_____

① Circle N if the as-built value differs from the Plan/permit. If N is circled, provide an explanation on page 3.
② N/E = Not Evaluated (provide explanation on page 2). ③N/A = Not Applicable to this project/plan.

Consultant's Certification (MDC 15A NCAC 02H .1003)			
Project Density and Built-Upon Area	①As-built	②N/E	③N/A
1. The project has areas of high density based on natural drainage area boundaries, variations in land use or construction phasing.	Y or N		
2. The project's built-upon area does not exceed the maximum limit specified in the permit.	Y or N		
Dispersed Flow	①As-built	②N/E	③N/A
1. The project maximizes dispersed flow through vegetated areas and minimizes channelized flow.	Y or N		

Vegetated Conveyances	①As-built	②N/E	③N/A
1. Stormwater that is not released as dispersed flow is transported by vegetated conveyances.	Y or N		
2. The project has a minimal amount of non-vegetated conveyances to reduce erosion.	Y or N		
3. Other than minimal piping under driveways and roads, no piping has been added beyond what is shown on the approved plans.	Y or N		
4. Side slopes are no steeper than 3H:1V.	Y or N		
5. The conveyance does not erode in response to the peak flow from the 10-year storm.	Y or N		
Curb outlet systems (if applicable)	①As-built	②N/E	③N/A
1. The swale or vegetated area can carry the peak flow from the 10-year storm at a non-erosive velocity.	Y or N		
2. The longitudinal slope of the swale or vegetated areas does not excee 5%.	Y or N		
3. The swale has a trapezoidal cross-section and a minimum bottom wid of two feet.	Y or N		
4. The minimum length of the swale or vegetated area is 100 feet.	Y or N		
5. Side slopes are no steeper than 3H:1V.	Y or N		
6. The project utilizes treatment swales designed per Section .1061 in lieu of the curb outlet system requirements.	Y or N		
Vegetated Setbacks (if applicable)	①As-built	②N/E	③N/A
1. The width of the vegetated setback is at least 50'.	Y or N		
2. The width of the vegetated setback has been measured from the norm pool of impounded waters, the MHW line of tidal waters, or the top of bank of each side of rivers or streams.	Y or N		
3. The vegetated setback is maintained in grass or other vegetation.	Y or N		
4. BUA that meets the requirements of NCGS 143-214.7(b2)(2) is locate in the setback.	Y or N		
5. BUA that does NOT meet the requirements of NCGS 143-214.7(b2)(2) located within the setback and is limited to: • Publicly-funded linear projects (road, greenway, or sidewalk) • Water dependent structures • Minimal footprint uses such as poles, signs, utility appurtenances, and security lights.	Y or N		
6. The amount of BUA within the setback is minimized, and channeling of the runoff from the BUA has been avoided.	Y or N		

7. Stormwater is not discharged (via swale or pipe) through a vegetated setback. Stormwater is released at the edge of the setback and allowed to flow through the setback as dispersed flow.	Y or N		
Outlets	①As-built	②N/E	③N/A
1. Stormwater outlets do not cause erosion downslope of the discharge point during the peak flow from the 10-year storm.	Y or N		
Variations	①As-built	②N/E	③N/A
1. The project has variations from the MDC that were not previously approved. (Modification may be required.)	Y or N		
Deed restrictions (if applicable)	①As-built	②N/E	③N/A
1. Deed restrictions are recorded and ensure that the project and the BUA will be maintained in perpetuity consistent with the permit, approved plans, and specifications.	Y or N		
For Subdivisions Only (Residential or Commercial)	①As-built	②N/E	③N/A
1. The number of platted lots is consistent with the approved plans.	Y or N		
2. The project area is consistent with the approved plans.	Y or N		
3. The layout of the lots and streets is consistent with the approved plan.	Y or N		
4. The width / radius of streets, paved accesses, cul-de-sacs and sidewal is consistent with the approved plan.	Y or N		
5. No piping, other than those minimum amounts needed under a driveway or under a road, has been added.	Y or N		
6. The lot grading, road grading, vegetated conveyances, piping, inverts, and elevations are consistent with the approved plans.	Y or N		

Provide an explanation for every requirement that was not met, and for every "N/A" below. Attach additional sheets as needed.