AGENDA | REGULAR TOWN COUNCIL MEETING

September 26, 2023 at 6:00 PM
Council Chambers - Apex Town Hall, 73 Hunter Street
The meeting will adjourn when all business is concluded or 10:00 PM, whichever comes first

Town Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tempore: Audra Killingsworth
Council Members: Brett D. Gantt; Terry Mahaffey; Edward Gray; Arno Zegerman
Interim Town Manager: Shawn Purvis
Assistant Town Managers: Demetria John and Marty Stone
Town Clerk: Allen Coleman | Town Attorney: Laurie L. Hohe

COMMENCEMENT

Call to Order | Invocation | Pledge of Allegiance

CONSENT AGENDA

All Consent Agenda items are considered routine, to be enacted by one motion with the adoption of the Consent Agenda, and without discussion. If a Council Member requests discussion of an item, the item may be removed from the Consent Agenda and considered separately. The Mayor will present the Consent Agenda to be set prior to taking action on the following items:

CN1 Budget Ordinance Amendment No. 9 – White Oak Creek Consortium Reimbursement

Marty Stone, P.E., Assistant Town Manager, Development and Operations Portfolio

CN2 Construction Contract Award - Carolina Civilworks, Inc. - Sunset Hills Pump Station Improvement Project

Matthew Reker, Utilities Engineer, Water Resources Department

CN3 Construction Contract Award – Lanier Construction Company Inc. – Apex West Greenway and Capital Project Ordinance Amendment No. 2024-6

Angela Reincke, Parks Planning & Project Manager, Parks, Recreation and Cultural Res. Dept.

CN4 Construction Contract Technical Amendment – Fred Smith Co. - Beaver Creek Greenway (Phase 1, Phase1A, and Phase 2)

Angela Reincke, Parks Planning & Project Manager, Parks, Recreation and Cultural Res. Dept.

CN5 Council Meeting Minutes – Various

Allen Coleman, Town Clerk

CN6 Design-Build Delivery Method for Construction Projects and Design-Build of a Bike Park Facility at Hunter Street Park

Angela Reincke, Parks Planning & Project Manager, Parks, Recreation and Cultural Res. Dept.

CN7 Fee-In-Lieu (FIL) of Land Dedication - Townes on Tingen

Angela Reincke, Parks Planning & Project Manager, Parks, Recreation and Cultural Res. Dept.

CN8 Ordinance Amendment Chapter 20 - Section150(13) - No Parking in a Bike Lane

Russell Dalton, Traffic Engineering Manager, Transportation & Infra. Dev. Dept.

CN9 Resolution - Abandon Existing Utility Easements

Steve Adams, Real Estate and Utilities Acquisition Specialist, Transportation & Infra. Dev. Dept.

CN10 Resolution - Water Shortage Response Plan

Lori Avent, Water Resources Specialist, Water Resources Department

PRESENTATIONS

PR1 Proclamation – Cyber Security Awareness Month – October 2023

Conrad Sain, IT Security Administrator, Information Technologies (IT) Department

PR2 Proclamation – Hindu Heritage Month – October 2023

Celeste Sherer, Diversity, Equity, and Inclusion (DEI) Coordinator, DEI Department

PR3 Vision Zero Traffic Safety Program - One (1) Year Update

Russell Dalton, Traffic Engineering Manager, Transportation & Infra. Dev. Dept. and,

Sajid Hassan, Traffic Safety Engineer, Transportation & Infra. Dev. Dept.

PR4 Wake County Land Cover Analysis & Tree Canopy Assessment

Timothy Maloney, Director, Wake County Department of Planning, Development & Inspections, and

Bill Shroyer, Senior GIS Analyst, Wake County Department of Planning, Development & Inspections

REGULAR MEETING AGENDA

Mayor Gilbert will call for additional Agenda items from Council or Staff and set the Regular Meeting Agenda prior to Council actions.

PUBLIC FORUM

Public Forum allows the public an opportunity to address the Town Council. The speaker is requested not to address items that appear as Public Hearings scheduled on the Regular Agenda. The Mayor will recognize those who would like to speak at the appropriate time. Large groups are asked to select a representative to speak for the entire group. Comments must be limited to 3 minutes to allow others the opportunity to speak.

PUBLIC HEARINGS

PH1 Annexation No. 764 - Pleasant Plains Elementary School - 30.047 acres

Dianne Khin, Director, Planning Department

PH2 Unified Development Ordinances (UDO) Amendments - September 2023

Amanda Bunce, Current Planning Manager, Planning Department

OLD BUSINESS

OB1 Report of Separation Agreement and Release

Laurie Hohe, Town Attorney

NEW BUSINESS

NB1 Unified Development Ordinance (UDO) Possible Amendments - Increase Resource Conversation Area (RCA) requirement and Solar Panels

Amanda Bunce, Current Planning Manager, Planning Department

UPDATES BY TOWN MANAGER

CLOSED SESSION

Council will enter into closed session pursuant to:

CS1 Jacques K. Gilbert, Mayor

NCGS §143-318.11(a)(6):

"To consider the qualifications, competence, performance, character, fitness, conditions of appointment, or conditions of initial employment of an individual public officer or employee or prospective public officer or employee; or to hear or investigate a complaint, charge, or grievance by or against an individual public officer or employee."

CS2 Allen Coleman, Town Clerk

NCGS §143-318.11(a)(6):

"To consider the qualifications, competence, performance, character, fitness, conditions of appointment, or conditions of initial employment of an individual public officer or employee or prospective public officer or employee; or to hear or investigate a complaint, charge, or grievance by or against an individual public officer or employee."

ADJOURNMENT

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Marty Stone, P.E., Assistant Town Manager

Department(s): Administration

Requested Motion

Motion to adopt Budget Ordinance Amendment No. 9 which appropriates funds to pay amounts due under the first amendment to the Utility Infrastructure Reimbursement Agreement with Pulte Home Company, LLC, Standard Pacific of the Carolinas, LLC, and Taylor Morrison of Carolinas, Inc. and which authorizes a transfer of funds from the Water Sewer HB 463 Capital Fund to fund the payment.

Approval Recommended?

Yes

Item Details

The Town of Apex, Pulte Home Company, LLC, Standard Pacific of the Carolinas, LLC, and Taylor Morrison of Carolinas, Inc. executed an Amendment to the original Utility Infrastructure Agreement on September 25, 2020. Under the terms of that agreement, Pulte Home Company, LLC, Standard Pacific of the Carolinas, LLC, and Taylor Morrison of Carolinas, Inc. are ultimately due either 20% of the new Capital Reimbursement Fees or the old acreage fees that were in the original Developer's Agreement, whichever is greater, up to the final approved actual construction cost of $3,995,345.27. In this case, the acreage fees are the basis for reimbursement. The calculated reimbursement due is $161,226.30, all of which is for sewer as shown on the attached spreadsheet. After this payment, the balance of eligible reimbursement is $903,236.32 for sewer only, which may be paid in the future as benefited lands develop.

Funds for the reimbursement will be covered by a transfer from the Water Sewer HB 463 Capital Reserve Fund.

Attachments

- CN1-A1: Budget Ordinance Amendment No. 9 - White Oak Creek Consortium Reimbursement
- CN1-A2: White Oak Creek Consortium Summary, Audit ending 6/30/2023 - White Oak Creek Consortium Reimbursement

Town of Apex

Budget Ordinance Amendment No. 9

BE IT ORDAINED, by the Council of the Town of Apex that the following Budget Amendment for the Fiscal Year 2023-2024 Budget Ordinance be adopted:

Water Sewer HB 463 Capital Reserve Fund

Section 1. Revenues:

Appropriated Fund Balance	$161,226
Total Revenues	**$161,226**

Section 2. Expenditures:

Transfer to Water Sewer Fund	$161,226
Total Expenditures	**$161,226**

Water Sewer Fund

Section 3. Revenues:

Transfer from Water Sewer HB 463 Capital Reserve Fund	$161,226
Total Revenues	**$161,226**

Section 4. Expenditures:

Sewer Maintenance Capital Improvements	$161,226
Total Expenditures	**$161,226**

Section 5. Within five (5) days after adoption, copies of this Amendment shall be filed with the Finance Officer and Town Clerk.

Adopted this the 26th day of September, 2023.

Attest:

Jacques K. Gilbert, Mayor

Allen L. Coleman, CMC, NCCCC
Town Clerk

WHITE OAK CREEK CONSORTIUM SUMMARY

Plat	Total Acreage	# Units	Water CRFs Paid	Water Acreage Fees Paid	*Potential Water Acreage Fees*	Sewer CRFs Paid	Sewer Acreage Fees Paid	*Potential Sewer Acreage Fees*	Date Acreage Fees Paid	Date W/S CRF's Paid	Applicable Acreage Fee for Each Water & Sewer	Date Plat Recorded
CASTLEBERRY ESTATES												
	18.232	19	$ 33,877.00		$ 32,816.70	$ 69,825.00		$ 32,816.70		At Permit	$ 1,800.00	1/25/2022
Totals	**18.2315**	**19**	**$ 33,877.00**	**$ -**	**$ 32,816.70**	**$ 69,825.00**	**$ -**	**$ 32,816.70**	**$ -**			
CASTLEBERRY TRAILS												
	11.952	19	$ 33,877.00		$ 20,437.92	$ 69,825.00		$ 20,437.92		7/24/2020	$ 1,710.00	10/21/2020
Totals	**11.952**	**19**	**$ 33,877.00**	**$ -**	**$ 20,437.92**	**$ 69,825.00**	**$ -**	**$ 20,437.92**				
CRESTMONT (WOCC)												
Ph 1A	8.54	30	$ 87,440.00	$ 16,268.70		$ 96,900.00	$ 16,268.70		5/27/2016	At Permit	$ 1,905.00	6/30/2016
Ph 1B	5.37	18	$ 56,792.00	$ 10,283.55		$ 57,290.00	$ 10,283.55		7/22/2016	At Permit	$ 1,915.00	9/22/2016
Ph 2A	5.3	15	$ 49,020.00	$ 4,959.85		$ 52,755.00	$ 4,959.85		1/27/2017	10/2/2017	$ 1,915.00	12/20/2017
Ph 2B	7.83	32	$ 104,576.00	$ -	$ 15,307.65	$ 112,544.00	$ -	$ 15,307.65		10/2/2017	$ 1,955.00	1/9/2018
Ph 3	7.87	34	$ 109,487.00	$ 15,071.05		$ 114,616.00	$ 15,071.05		11/4/2016	At Permit	$ 1,915.00	2/20/2017
Ph 4	19.4	22	$ 71,896.00	$ 37,151.00		$ 77,374.00	$ 37,151.00		6/21/2017	10/2/2017	$ 1,915.00	11/9/2017
Ph 5	11.6	12	$ 39,216.00	$ -	$ 22,678.00	$ 42,204.00	$ -	$ 22,678.00		11/13/2017	$ 1,955.00	3/23/2018
Totals	**65.91**	**163**	**$ 518,427.00**	**$ 83,734.15**	**$ 37,985.65**	**$ -**	**$ 553,683.00**	**$ 37,985.65**				
ELLSWORTH (Low Density- Conditional Zoning)												
Only 1 Phase	30.675	37	$ 23,179.00		$ 61,963.50	$ 44,775.00		$ 61,963.50		At Permit	$ 2,020.00	9/29/2022
Totals	**30.675**	**37**	**$ 23,179.00**	**$ -**	**$ 61,963.50**	**$ 44,775.00**	**$ -**	**$ 61,963.50**				
GREEN LEVEL ESTATES												
	18.79	29	$ 65,072.00		$ 30,439.80	$ 105,153.00		$ 30,439.80		Various Dates	$ 1,620.00	9/29/2017
Totals	**18.79**	**29**	**$ 65,072.00**		**$ 30,439.80**	**$ 105,153.00**	**$ -**	**$ 30,439.80**				
GREENMOOR (WOCC)												
Ph 1A	22.1	49	$ 143,338.00	$ 49,283.00		$ 163,603.00	$ 49,283.00		12/21/2016	At Permit	$ 2,230.00	12/22/2016
Ph 1B	12.89	34	$ 107,634.00	$ 28,873.60		$ 118,390.00	$ 28,873.60		4/27/2017	At Permit	$ 2,240.00	5/30/2017
Ph 1C	10.14	15	$ 43,080.00		$ 22,713.60	$ 53,387.00		$ 22,713.60		At Permit	$ 2,240.00	8/25/2017
Ph 2A	10.88	37	$ 120,916.00		$ 24,860.80	$ 130,129.00		$ 24,860.80		12/20/2017	$ 2,285.00	1/3/2018
Ph 2B	6.43	21	$ 68,628.00		$ 14,692.55	$ 73,857.00		$ 14,692.55		12/20/2017	$ 2,285.00	1/19/2018
Ph 2C & 2D	20.72	67	$ 218,956.00		$ 48,174.00	$ 235,639.00		$ 48,174.00		3/29/2018	$ 2,325.00	3/29/2018
Ph 2E	21.54	52	$ 169,936.00		$ 49,218.90	$ 182,884.00		$ 49,218.90		10/26/2017	$ 2,285.00	10/26/2017
Ph 2F & 2H	16.58	35	$ 65,360.00		$ 38,548.50	$		$ 38,548.50		5/2/2018	$ 2,325.00	10/2/2018

WHITE OAK CREEK CONSORTIUM SUMMARY

Audit ending 6/30/2023

Plat	Total Acreage	# Units	Water CRFs Paid	Water Acreage Fees Paid	*Potential Water Acreage Fees*	Sewer CRFs Paid	Sewer Acreage Fees Paid	*Potential Sewer Acreage Fees*	Date Acreage Fees Paid	Date W/S CRF's Paid	Applicable Acreage Fee for Each Water & Sewer	Date Plat Recorded
Ph 2G & 2I	17.2	44	$ 143,792.00		$ 39,990.00	$ 154,748.00		$ 39,990.00		5/2/2018	$ 2,325.00	6/28/2018
Ph 2J	4.16	16	$ 52,288.00		$ 9,672.00	$ 56,272.00		$ 9,672.00		4/26/2018	$ 2,325.00	5/7/2018
Totals	**142.64**	**370**	**$ 1,133,928.00**	**$ 78,156.60**	**$ 247,870.35**	**$ 1,239,249.00**	**$ 78,156.60**	**$ 247,870.35**				
JAINIX GREEN (Medium Density- Conditional Zoning)												
Only 1 Phase	6.58	13	$ 3,566.00	$ -	$ 14,212.80	$ 7,350.00	0	$ 14,212.80		At Permit	$ 2,160.00	6/2/2022
Totals	**6.58**	**13**	**$ 3,566.00**	**$ -**	**$ 14,212.80**	**$ 7,350.00**	**$ -**	**$ 14,212.80**				
LAKE CASTLEBERRY (WOCC)												
Ph 1-2 #1	73.485	55	$ 131,546.00	$ 116,106.30		$ 191,941.00	$ 116,106.30		3/4/2016	At Permit	$ 1,590.00	8/17/2016
Ph 1-2 #2	13.495	32	$ 64,481.00		$ 21,457.05	$ 116,810.00		$ 21,457.05		at Permit	$ 1,590.00	8/11/2017
Ph 1-2 #3	9.346	15	$ 39,856.00	$ 14,860.14		$ 52,951.00	$ 14,860.14		9/13/2016	Various Dates	$ 1,590.00	5/8/2017
Ph 3	11.47	25	$ 81,700.00		$ 18,581.40	$ 87,925.00		$ 18,581.40		4/16/2018	$ 1,620.00	11/26/2018
Ph 4	25.716	20	$ 35,660.00		$ 42,302.82	$ 73,500.00		$ 42,302.82		10/14/2019	$ 1,645.00	10/24/2019
Totals	**133.512**	**147**	**$ 353,243.00**	**$ 130,966.44**	**$ 82,341.27**	**$ 523,127.00**	**$ 130,966.44**	**$ 82,341.27**				
REAMS GROVE PUD-CZ												
Only 1 Ph	18.879	70	$ 124,810.00	$ -	$ 53,616.36	$ 257,250.00	$ -	$ 53,616.36			$ 2,840.00	7/12/2023
Totals	**18.879**	**70**	**$ 124,810.00**	**$ -**	**$ 53,616.36**	**$ 257,250.00**	**$ -**	**$ 53,616.36**				
ROBERTS CROSSING (PUD-CZ)												
Ph 1&2	24.3457	110	$ 196,130.00	$ -	$ 59,525.24	$ 404,250.00	$ -	$ 59,525.24		Various Dates	$ 2,445.00	5/3/2021
Totals	**24.3457**	**110**	**$ 196,130.00**	**$ -**	**$ 59,525.24**	**$ 404,250.00**	**$ -**	**$ 59,525.24**				
THE GLEN AT GREEN LEVEL CROSSING												
	6.856	13	$ 40,960.00	$ 11,330.18		$ 41,209.00	$ 11,330.18		4/28/2016	At Permit	$ 1,580.00	8/26/2016
Totals	**6.856**	**13**	**$ 40,960.00**	**$ 11,330.18**	**$ -**	**$ 41,209.00**	**$ 11,330.18**	**$ -**				
THE PARK AT WIMBERLY (PUD-CZ)												
Ph 3	11.389	29	$ 44,575.00	$ -	$ 31,433.64	$ 91,875.00	$ -	$ 31,433.64			$ 2,760.00	3/16/2023
Totals	**11.389**	**29**	**$ 44,575.00**	**$ -**	**$ 31,433.64**	**$ 91,875.00**	**$ -**	**$ 31,433.64**				

WHITE OAK CREEK CONSORTIUM SUMMARY

Audit ending 6/30/2023

Plat	Total Acreage	# Units	Water CRFs Paid	Water Acreage Fees Paid	*Potential Water Acreage Fees*	Sewer CRFs Paid	Sewer Acreage Fees Paid	*Potential Sewer Acreage Fees*	Date Acreage Fees Paid	Date W/S CRF's Paid	Applicable Acreage Fee for Each Water & Sewer	Date Plat Recorded
THE PINES AT WAKE CROSSING												
Ph 1A	8.759	22	$ 56,411.00	$ 13,926.81		$ 20,816.00	$ 13,926.81		2/10/2017	At Permit	$ 1,590.00	4/18/2017
Ph 1B	16.715	49	$ 143,243.00	$ 26,409.70		$ 34,209.00	$ 26,409.70		2/11/2016	At Permit	$ 1,580.00	6/6/2016
Ph 2	18.119	20	$ 44,570.00		$ 29,352.78	$ 21,552.00		$ 29,352.78		1/24/2018	$ 1,620.00	8/23/2017
Ph 3-4	22.871	49	$ 160,132.00		$ 37,737.15	$ 47,383.00		$ 37,737.15			$ 1,650.00	1/31/2018
PREPAID CREDITS						$ 357,000.00						
Totals	**66.464**	**140**	**$ 404,356.00**	**$ 40,336.51**	**$ 67,089.93**	**$ 480,960.00**	**$ 40,336.51**	**$ 67,089.93**				
THE POINT AT LAKE CASTLEBERRY												
	36.3	47	$ 83,801.00		$ 59,713.50	$ 172,725.00		$ 59,713.50		11/13/2019	$ 1,645.00	11/13/2019
Totals	**36.3**	**47**	**$ 83,801.00**	**$ -**	**$ 59,713.50**	**$ 172,725.00**	**$ -**	**$ 59,713.50**				
THE PRESERVE AT WHITE OAK CREEK (WOCC)												
Ph 1A	18.8228	50	$ 155,350.00	$ 42,163.07		$ 161,126.00	$ 42,163.07		11/9/2016	At Permit	$ 2,240.00	11/17/2016
Ph 1B & 2A	22.6296	40	$ 118,713.00	$ 50,690.30		$ 141,568.00	$ 50,690.30		7/7/2017	At Permit	$ 2,240.00	7/13/2017
Ph 2B	20.8224	51	$ 166,668.00		$ 47,579.18	$ 179,367.00		$ 47,579.18		12/28/2017	$ 2,285.00	1/9/2018
Ph 2C & 3C	15.7099	33	$ 107,844.00		$ 36,525.52	$ 116,061.00		$ 36,525.52		4/6/2018	$ 2,325.00	5/21/2018
Ph 3A	9.3664	51	$ 166,033.00	$ 21,008.96		$ 177,487.00	$ 21,008.96		7/7/2017	At Permit	$ 2,240.00	8/18/2017
Ph 3B	10.9929	34	$ 60,622.00		$ 25,558.49	$ 124,950.00		$ 25,558.49		11/16/2018	$ 2,325.00	2/21/2018
Ph 3D	3.4423	17	$ 30,311.00		$ 8,003.35	$ 62,475.00		$ 8,003.35		7/11/2018	$ 2,325.00	8/1/2018
Ph 4A	15.9896	19	$ 32,094.00		$ 40,053.95	$ 66,150.00		$ 40,053.95		At Permit	$ 2,505.00	6/6/2022
Ph 4B	12.7981	36	$ 58,839.00		$ 32,059.24	$ 121,275.00		$ 32,059.24		At Permit	$ 2,505.00	6/23/2022
Totals	**130.574**	**331**	**$ 896,474.00**	**$ 113,862.33**	**$ 189,779.73**	**$ 1,150,459.00**	**$ 113,862.33**	**$ 189,779.73**				
WEDDINGTON												
Ph 1	8.731	16	$ 52,288.00		$ 19,950.34	$ 56,272.00		$ 19,950.34		4/5/2018	$ 2,285.00	4/6/2018
Ph 2	23.733	67	$ 218,956.00		$ 55,179.23	$ 235,639.00		$ 55,179.23		6/5/2018	$ 2,325.00	6/11/2018
Ph 3	15.545	15	$ 26,745.00		$ 36,142.13	$ 55,125.00		$ 36,142.13		11/26/2018	$ 2,325.00	12/13/2018
Ph 4A	5.09	18	$ 32,094.00		$ 12,012.40	$ 66,150.00		$ 12,012.40		5/14/2019	$ 2,360.00	5/31/2019
Ph 4B	5.149	18	$ 32,094.00		$ 12,151.64	$ 66,150.00		$ 12,151.64		8/16/2019	$ 2,360.00	8/21/2019
Ph 5	76.847	0	$ -			$ -				N/A	RCA Plat	
Ph 6	16.975	56	$ 99,848.00		$ 19,950.34	$ 205,800.00		$ 19,950.34		9/20/2019	$ 2,360.00	9/27/2019
Totals	**152.07**	**190**	**$ 462,025.00**	**$ -**	**$ 155,386.06**	**$ 685,136.00**	**$ -**	**$ 155,386.06**				

WHITE OAK CREEK CONSORTIUM SUMMARY

Audit ending 6/30/2023

Plat	Total Acreage	# Units	Water CRFs Paid	Water Acreage Fees Paid	*Potential Water Acreage Fees*	Sewer CRFs Paid	Sewer Acreage Fees Paid	*Potential Sewer Acreage Fees*	Date Acreage Fees Paid	Date W/S CRF's Paid	Applicable Acreage Fee for Each Water & Sewer	Date Plat Recorded
WHITE OAK CREEK, REGENCY & ENCLAVE												
Ph 1 Encl	19.015	40	$ 121,345.00	$ 20,702.18		$ 35,485.00	$ 20,702.18		7/28/2015	At Permit	$ 1,420.00	3/22/2016
Ph 1A	14.316	18	$ 56,250.00	$ 8,825.00		$ 10,368.00	$ 8,825.00		7/28/2015	At Permit	$ 1,420.00	9/24/2015
Ph 1B	11.031	31	$ 97,138.00	$ 15,664.02		$ 18,337.00	$ 15,664.02		12/7/2015	At Permit	$ 1,420.00	1/28/2016
Ph 1C	12.849	11	$ 34,491.00	$ 20,301.42		$ 6,441.00	$ 20,301.42		3/11/2016	At Permit	$ 1,580.00	3/22/2016
Ph 2 Encl	10.173	21	$ 64,857.00	$ 16,073.34		$ 16,089.00	$ 16,073.34		8/25/2016	At Permit	$ 1,580.00	12/15/2016
Ph 3 Encl	38.412	32	$ 89,853.00	$ 61,075.08		$ 40,294.00	$ 61,075.08		12/15/2016	At Permit	$ 1,590.00	4/12/2017
Ph 3A	6.020	15	$ 47,496.00	$ 9,511.60		$ 9,993.00	$ 9,511.60		8/25/2016	At Permit	$ 1,580.00	1/10/2017
Ph 3B	10.382	34	$ 82,599.00		$ 16,818.84	$ 82,889.00		$ 16,818.84		At Permit	$ 1,620.00	9/9/2017
Ph 4	11.709	33	$ 87,308.00	$ 18,617.31		$ 52,153.00	$ 18,617.31		3/8/2017	At Permit	$ 1,590.00	4/6/2017
Ph 5	21.210	41	$ 73,103.00		$ 34,360.20	$ 143,025.00		$ 34,360.20		11/7/2018	$ 1,620.00	11/8/2018
Ph 6	37.824	31	$ 101,308.00		$ 61,274.88	$ 10,200.00	$ 29,977.00	$ 31,297.88		3/27/2018	$ 1,620.00	3/29/2018
PREPAID CREDITS			$ -			$ 510,000.00						
Missed CRF and Over Credits			-$10,400.00			-$81,967.00						
Totals	**193**	**307**	**$ 855,748.00**	**$ 170,769.95**	**$ 112,453.92**	**$ 935,274.00**	**$ 200,746.95**	**$ 82,476.92**				

GRAND TOTALS	**1,068.1**	**2,034**	**$ 5,274,048.00**	**$ 629,156.16**	**$ 1,257,066.37**	**$ 6,278,442.00**	**$ 1,129,082.01**	**$ 1,227,089.37**				
	20% OF TOTAL	$ 1,054,809.60				$ 1,255,688.40						

CREDITS TO DATE SUMMARY:

DESCRIPTION	WATER	SEWER	TOTAL
White Oak Creek Consortium Maximum Credit	$ 735,937.57	$ 3,259,407.70	$ 3,995,345.27
Total Acreage Fees (Paid + Potential)	$ 1,886,222.53	$ 2,356,171.38	$ 4,242,393.90
Total Reimbursement Eligible	**$ 735,937.57**	**$ 2,356,171.38**	**$ 3,092,108.95**
1st Reimbursment Payment (10/16/20)- EFT# 1818	$ (459,980.41)	$ (2,037,215.86)	$ (2,497,196.27)
2nd Reimbursement payment (11/18/22)- Ck# 258819	$ (275,957.16)	$ (157,729.22)	$ (433,686.38)
			$ -
			$ -
Reimbursement Due through 6/30/2023	**$ 0.00**	**$ 161,226.30**	**$ 161,226.30**
BALANCE OF REMAINING CREDITS AFTER THIS REIMBURSEMENT	$ -	$ 903,236.32	$ 903,236.32

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Matthew Reker, Utilities Engineer

Department(s): Water Resources

Requested Motion

Motion to award the construction contract with Carolina Civilworks, Inc. for the Sunset Hill Pump Station Improvement project and to authorize the Interim Town Manager, or their designee, to execute the contract on behalf of the Town.

Approval Recommended?

Yes

Item Details

The Town received two bids for the Sunset Hills Pump Station Improvement Project on the original bid date of August 16, 2023. Due to insufficient number of bids, a second advertisement was required with a bid opening date of August 31, 2023. Carolina Civilworks, Inc., was the low bidder with a total base bid price of $3,750,916.00. This American Rescue Plan Act (ARPA) funded project will construct a new pump station outside of the 100-yr floodplain and lower the necessary wet well elevation to provide gravity sewer underneath Middle Creek and serve the Feltons Grove High School project. The new Sunset Hills Pump Station will also allow the Town to take the Colvin Park pump station off line in the future.

The Town's engineer (CDM Smith), recently estimated the construction cost to be approximately $4,400,000. Both bidders generally met all requirements but the low bid was over $900,000 cheaper than the other contractor. CDM Smith recommends awarding the contract to Carolina Civilworks, Inc. CDM Smith also recommends the Town adding alternatives #1-#3, bringing the total construction cost to $3,760,056.

Attachments

- CN2-A1: Recommendation of Award - Construction Contract Award - Carolina Civilworks, Inc. - Sunset Hills Pump Station Improvement Project
- CN2-A2: Certified Bid Tab - Construction Contract Award - Carolina Civilworks, Inc. - Sunset Hills Pump Station Improvement Project

- CN2-A3: Notice of Award - Construction Contract Award - Carolina Civilworks, Inc. - Sunset Hills Pump Station Improvement Project
- CN2-A4: Carolina Civilworks Bid Package - Construction Contract Award - Carolina Civilworks, Inc. - Sunset Hills Pump Station Improvement Project
- CN2-A5: Agreement - Construction Contract Award - Carolina Civilworks, Inc. - Sunset Hills Pump Station Improvement Project

5400 Glenwood Avenue, Suite 400
Raleigh, North Carolina 27612
tel: 919 325-3500
fax: 919 781-5730

September 1, 2023

Mr. Matthew Reker
Town of Apex
Department of Water and Utility Operations
105-A Upchurch Street
Apex, NC 27502

Subject: Town of Apex, North Carolina
Sunset Hills Lift Station Improvements
Engineer's Recommendation of Award

Dear Mr. Reker:

On Wednesday August 16, 2023 two bids were received for the Sunset Hills Lift Station Improvements project, but returned to the bidders. The project was re-advertised and two bids were received and opened on August 31, 2023. CDM Smith has reviewed these bids and has prepared the enclosed certified bid tabulation for your reference. The Bidders are listed in the bid tabulation in numerical order based on the low bidder first.

The two bidders on the project are as follows:

Bidder	**Total Base Bid**
Carolina Civilworks, Inc.: Durham, NC	$3,750,916.00
J. Cumby Construction: Cookeville, TN	$4,694,000.00

Both bidders acknowledged the receipt of the five (5) addenda and notice for re-advertisement. Included in each Bid were bid bonds in the amount of five (5) percent of the Grand Total Base Bid and identification of minority business participation. All other required documentation was provided with each bid. No mathematical or clerical errors were found in the bids with the exception of a single error by J. Cumby Construction, Inc. for the Total Bid Price (including alternate bid items) on page 4 of the Bid Form.

The Bid Documents identified three (3) alternate bid items as listed below.

- Bid Alternate 1 – 5'-0" Diameter Polymer Concrete Doghouse Manhole
- Bid Alternate 2 – 5'-0" Diameter Polymer Concrete Influent Drop Manhole
- Bid Alternate 3 – 4'-0" Diameter Polymer Concrete Manhole

CDM Smith recommends accepting the Base Bid with Additive Bid Alternates #1, #2, and #3.

WATER + ENVIRONMENT + TRANSPORTATION + ENERGY + FACILITIES

Based on the information above, CDM Smith recommends that the Town of Apex award a construction contract in the amount of $3,760,056.00 to Carolina Civilworks for the referenced project. Along with this recommendation, CDM Smith is enclosing a copy of the Certified Bid Tabulation.

Should you have any questions about this information, please do not hesitate to contact us.

Thank you,

Beau M Mackie
NC PE: 047161
2023.09.01 13:46:38-04'00'

Beau M. Mackie, P.E.
CDM Smith

cc: W. Mason, P.E., CDM Smith
L. Halladay, EIT, CDM Smith

*** * * * * BID TABULATION * * * * ***

SUNSET HILLS LIFT STATION IMPROVEMENTS

Apex, North Carolina

BID: August 31, 2023 11:00 A.M.

Bidder	License No.	Class	Bid Bond	Acknowledgement of Addenda No. 1 thru No. 5	Provided required MB Documents	Total Base Bid (Including Unit Price)	Alternate 1 (5'-0" Polymer Doghouse MH)	Alternate 2 (5'-0" Polymer Drop MH)	Alternate 3 (4'-0" Polymer MH)	Base Bid with Alternates 1, 2, and 3
Carolina Civil Works Inc.	74658	Unclassified	Yes	Yes	Yes	**$3,750,916.00**	-$5,445.00	$13,656.00	$929.00	**$3,760,056.00**
J Cumby Construction Inc.	82136	Building, Public Facillities	Yes	Yes	Yes	**$4,694,000.00**	-$8,000.00	$5,500.00	-$1,000.00	**$4,690,500.00**

The bids tabulated herein were publicly opened and ready aloud at 11:00 am on the 31st of August 2023 at the Town of Apex Water Administration Building 105-B Upchurch Street Apex, NC 27502 and all said bids were accompanied by either a certified check or bidder's bond.

CDM Smith
5400 Glenwood Ave. Suite 400
Raleigh, NC 27604

NORTH CAROLINA PROFESSIONAL SEAL 047161 ENGINEER BEAU M. MACKIE

Beau M Mackie
NC PE: 047161
2023.09.01 13:48:38-04'00'

NOTICE OF AWARD

Date of Issuance:

Owner:	Town of Apex	Owner's Contract No.: N/A
Engineer:	CDM Smith	Engineer's Project No.: 39221 - 255840
Project:	Sunset Hills Lift Station Improvements	Contract Name: N/A
Bidder:	Carolina Civilworks Inc.	
Bidder's Address:	3511 E US 70 Hwy Durham, NC 27703	

TO BIDDER:

You are notified that Owner has accepted your Bid dated August 31, 2023 for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:
Sunset Hills Lift Station Improvements
The Contract Price of the awarded Contract is: Three million seven hundred sixty thousand and fifty nine dollars ($ 3,760,059.00).

This price includes Bid Alternates 1 through 3.

[4] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award or has been transmitted or made available to Bidder electronically. *[revise if multiple copies accompany the Notice of Award]*

☒ a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner [4] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security *[e.g., performance and payment bonds]* and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: Town of Apex
Authorized Signature

By: Shawn Purvis

Title: Interim Town Manager

Copy: Engineer

Acceptance of Notice

Receipt of the above Notice of Award is hereby acknowledged by Carolina Civilworks Inc.

this the _____ day of _____, 20 23 .

By:_____ Title:_____

THIS PAGE INTENTIONALLY LEFT BLANK.

CAROLINA CIVILWORKS INC.

BID ENCLOSED
Sunset Hills Lift Station Improvements

Name of Bidder:	Carolina Civilworks Inc.
Address:	3511 E US 70 Hwy Durham, NC 27703
Phone Number:	919.598.9850
License #:	74658

3511 E US 70 Highway • Durham, NC 27703 • Phone: (919) 598-9850 • Fax: (919) 598-9912

BIDDER'S CHECKLIST

This checklist shall be included as the first page of the submitted bidding documents. As outlined in article 7 of the Bid Form the following items shall be included with the submitted bidding documents:

X	-	Properly Executed Bid Form (Including the acknowledgement of all Addenda)
X	A.	Required Bid security in the form of a ~~Bid Bond~~ (EJCDC No. C-430) or Certified Check (circle type of security provided); ~~Bid Bond~~ shall include an executed Power of Attorney.
X	B1.	Identification of Minority Business Participation
X	B2.	Affidavit A, Listing of Good Faith Efforts; or Affidavit B, Intent to Perform Contract with Own Workforce

BID FORM

Project: SUNSET HILLS LIFT STATION IMPROVEMENTS

Bid From: CAROLINA CIVILWORKS INC.

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

TOWN OF APEX
P.O. BOX 250, 105-B UPCHURCH ST.
APEX, NC 27502-0250

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date		
1	7/14/23	5	8/25/23
2	7/21/23		
3	8/1/23		
4	8/14/23		

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and

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observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

K. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

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4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Lump Sum Bid Price for Base Bid	$ 3,623,916.00

Bidder to include in other Bid item(s) the other costs (if any) associated with accepting such assignment and administering the assigned contract.

Total of All Lump Sums $ 3,623,916.00

UNIT PRICE BID ITEMS

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization and Demobilization (Maximum 3% of Base Bid)	LS	1	$112,000.00	$112,000.00
2	Rock Excavation by Mechanical Methods	CY	100	$150.00	$15,000.00
Total of All Unit Price Bid Items					$127,000.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Lump Sum and Unit Price Bids = Total Bid Price $ 3,750,916.00

Refer to Section 012901 for Unit Price Bid Items Measurement and Payment

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ALTERNATE BID ITEMS

Alternate Bid No. 1 – Polymer Concrete Manholes In lieu of Precast Concrete Manholes

Bidder shall complete the Alternate Bid Schedule below and provide a price reduction (Deduct) or addition (Add) for the net difference in cost to provide and install precast polymer concrete manholes in lieu of standard precast concrete manholes in the Base Bid for the depth classes and sizes described in the Alternate Bid Schedule. All polymer concrete manholes shall include composite frames and cover. The Bidder must complete the Alternate Bid Schedule in full for bid proposal to be acceptable and indicate if the prices are added or deducted.

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	5'-0" Diameter Polymer Concrete Doghouse Manhole [Add] [Deduct]	EA	1	$5,445.00	$5,445.00
2	5'-0" Diameter Polymer Concrete Influent Drop Manhole [Add] [Deduct]	EA	1	$13,656.00	$13,656.00
3	4'-0" Diameter Polymer Concrete Manhole [Add] [Deduct]	EA	1	$929.00	$929.00
Total of All Unit Price Bid Items					$9,140.00

Total of Lump Sum and Unit Price Bids = Total Bid Price $ 3,760,056.00

Material Supplier List*:

(*List must be completely filled out for bid proposal to be acceptable)

1. Submersible Wastewater Pumps: WILO
2. Grinder: ~~FRANKLIN MILLER~~ JWC
3. Vapor Phase Odor Control System: WHISPER
4. Ductile Iron Piping: US PIPE

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5. PVC Piping: NATIONAL

6. Precast Concrete Manholes: PRECAST SOLUTIONS

7. Plug Valves: DEZURIK

8. Check Valves: APCO

9. Surge Relief Valves: APCO

10. Generator: CAT

11. Variable Frequency Drives: ABB

12. Magnetic Flow Meter: ROSEMOUNT

13. Polymer Concrete Manholes (Alternate): ARMORCAST

Subcontractors List:

NCGS 143-128 Compliance - Identify the contractors selected for the subdivisions or branches of work for the following:

	Firm Name	Firm License No.
Electrical Subcontractor	BITING ELECTRIC	4565-U
Process Control System Supplier (PCSS)	CLEARWATER, INC.	N/A

Time of Completion

5.02 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

5.03 Bidder accepts the provisions of the Agreement as to liquidated damages.

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ARTICLE 6 – ATTACHMENTS TO THIS BID

6.01 The following documents are submitted with and made a condition of this Bid. Failure to provide the documentation with the bid may be grounds for rejection of the bid.:

A. Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Certified Check (circle type of security provided).

B. In accordance with GS 143-128.2(c), Bidder shall identify on its bid the minority businesses that it will use on the project and the total dollar value of the bid that will be performed by the minority businesses and list the good faith efforts (Affidavit A) made to solicit participation. A Bidder that will perform all of the work with its own workforce may submit an Affidavit (B) to that effect in lieu of the affidavit (A) required above.

1. Identification of Minority Business Participation.

2. Affidavit A, Listing of Good Faith Efforts; or Affidavit B, Intent to Perform Contract with Own Workforce.

C. Submit the Bidder's Checklist as provided in the bidding documents with the bid submittal. The Checklist shall be completed and included as the first page of the submittal.

D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

E. Contractor's License No.: 74658

F. Required Bidder Qualification Statement with supporting data; and

6.02 After the bid opening the Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low Bidder, the Bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:

A. An Affidavit (C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the goal established by the Owner and indicated in the Instruction to Bidders, paragraph Minority Participation Goals. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort; or

B. Affidavit (D) of its good faith effort to meet the goal. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.

6.03 Bidder understands that if this Bid is accepted by the Owner, Bidder shall not substitute for the subcontractors named in the Bid Documents except as allowed in the Supplementary Conditions.

ARTICLE 7 – DEFINED TERMS

7.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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ARTICLE 8 – BID SUBMITTAL

Contractor's License

A. Number: 74658

B. Classification: UNCLASSIFIED

C. Limitation: UNLIMITED

Employer's Tax ID No.: 47-1232006

BIDDER: *[Indicate correct name of bidding entity]*

CAROLINA CIVILWORKS INC.

Telephone Number: 919.598.9850

Fax Number: 919.598.9912

Contact Name and e-mail address: BRYAN HOOKER

BHOOKER@CAROLINACIVILWORKS.COM

This Bid Submitted by:

An Individual

Name: _____
(Type or print)

By: _____
(Individual's Signature)

Doing Business As: _____
(Type or print)

A Partnership

Partnership Name: _____

The Organization and Internal Affairs of the Partnership are governed by the laws of the State of: _____

By: _____
(Signature of general partner, attach evidence of authority to sign)

Name: _____
(Type or print)

Title: _____
(Type or print)

Attest: _____
(Signature of Corporate Secretary)

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A Corporation

Corporation Name: CAROLINA CIVILWORKS INC.

State of Incorporation: NORTH CAROLINA

Type (General Business, Profession, Service, Limited Liability):

GEN. BUSINESS

By: _____
(Signature, attach evidence of authority to sign)

Name: CHAD GREEN
(Type or print)

Title: PRESIDENT
(Type or print)

Attest: _____ Corporate Seal
(Signature of Corporate Secretary)

Date of Qualification to do business in North Carolina is 7/10/14

CAROLINA CIVILWORKS INC. CORPORATE SEAL NORTH CAROLINA

Limited Liability Company – LLC

Name of LLC: _____

Name of State under whose Laws the Limited Liability Company was formed: _____

By: _____
(Signature of Manager)

Name: _____
(Type or print)

Title: _____
(Type or print)

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BID BOND

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:
Carolina Civilworks Inc
3511 US Hwy 70 East
Durham, NC 27703-9409

SURETY *(Name, and Address of Principal Place of Business)*:
American Alternative Ins. Co
555 College Road East
(PO Box 5241)
Princeton, NJ 08543

OWNER *(Name and Address)*:
Matt Reker
Town of Apex
P.O. Box 250, 105-B Upchurch St.
Apex, NC 27502-0250

BID
Bid Due Date: August 31, 2023
Description *(Project Name— Include Location)*: Sunset Hills Lift Station Improvements

BOND
Bond Number: N/A
Date: August 28, 2023
Penal sum 5% of the bid amount (Words) $ 5% of the bid amount (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
Carolina Civilworks Inc (Seal)	American Alternative Insurance Corp. (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By:	By:
Signature	Signature (Attach Power of Attorney)
Chad Green	Martha P. Aycock
Print Name	Print Name
President	Attorney-in-fact
Title	Title
Attest:	Attest:
Signature	Signature

Title Corp. Secretary Title Receptionist

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project, and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall

govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

CERTIFIED COPY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the AMERICAN ALTERNATIVE INSURANCE CORPORATION, a corporation organized and existing by virtue of the laws of the State of Delaware ("Corporation") with offices at 555 College Road East, Princeton, N.J. 08543, has made, constituted and appointed, and by these presents, does make, constitute and appoint:

Martha Parrott Aycock; Keith Hayes; and J. Allen Parrott

its true and lawful Attorneys-in-Fact, at Princeton, in the State of New Jersey, each of them alone to have full power to act without the other or others, to make, execute and deliver on its behalf, as Surety or Co-surety, bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking so made, executed and delivered shall obligate said Company for any portion of the penal sum thereof in excess of the sum of One Hundred Million Dollars ($100,000,000).
Such bonds and undertakings for said purposes, when duly executed by said Attorney(s)-in-Fact, shall be binding upon said Company as fully and to thesame extent as if signed by the President of said Company under its corporate seal attested by its Secretary.
This appointment is made under and by authority of a certain Resolution adopted at a meeting of the Board of Directors of said Company duly held on the 27th day of August, 1975, a copy of which appears below.

IN WITNESS WHEREOF, the AMERICAN ALTERNATIVE INSURANCE CORPORATION has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officers this 24th day of September, 2021.

AMERICAN ALTERNATIVE INSURANCE CORPORATION CORPORATE SEAL 1923 STATE OF DELAWARE

By: _____
Michael G. Kerner
President

Attest: _____
Ignacio Rivera
Deputy General Counsel & Secretary

STATE OF NEW JERSEY, COUNTY OF SOMERSET

The foregoing instrument was acknowledged before me by means of online notarization this 24th day of September, 2021, by Michael G. Kerner and Ignacio Rivera, who are personally known to me.

JILLIAN SANFILIPPO NOTARY PUBLIC NEW JERSEY

_____
Jillian Sanfilippo, Notary Public
State of New Jersey
My Commission Expires February 8, 2026

SECRETARY'S CERTIFICATE

The undersigned, Ignacio Rivera, hereby certifies:

1. That the undersigned is Secretary of American Alternative Insurance Corporation, a corporation of the State of Delaware;
2. That the original power of attorney of which the foregoing is a copy was duly executed on behalf of said Corporation on the day of its date, and has not since been revoked, amended or modified; that the undersigned has compared the foregoing copy thereof with said original power of attorney, and that the same is a true and correct copy of said original power of attorney and of the whole thereof;
3. That the original resolution of which the following is a copy was duly adopted at, and recorded in the minutes of, a regular meeting of the Board of Directors of said Corporation duly held on August 4, 1998, and has not since been revoked, amended or modified.

   RESOLVED, that each of the following officers of this Corporation, namely, the President, the Executive Vice President, the Senior Vice Presidents, and the Vice Presidents, be, and they hereby are, authorized, from time to time in their discretion, to appoint such agent or agents or attorney or attorneys-in-fact as deemed by them necessary or desirable for the purpose of carrying on this Corporation's business, and to empower such agent or agents or attorney or attorneys-in-fact to execute and deliver, in this Corporation's name and on its behalf, and under its seal or otherwise, surety bonds, surety undertakings or surety contracts made by this Corporation as surety thereon.

   RESOLVED, that the signature of any authorized officer of the Corporation and the Corporation's seal may be affixed by facsimile to any power of attorney and revocation of any power of attorney or certificate of either given for the execution of any surety bond, surety undertaking, or surety contract, such signature and seal, when so used being hereby adopted by the Corporation as the original signature of such officer and the original seal of the Corporation, to be valid and binding upon the Corporation with the same force and effect as though manually affixed.

   FURTHER RESOLVED, that any prior appointments by the Corporation of MGAs are, in all respects, hereby ratified, confirmed and approved.

   FURTHER RESOLVED, that the Secretary or any Assistant Secretary of this Corporation is hereby authorized to certify and deliver to any person to whom such certification and delivery may be deemed necessary and desirable in the opinion of such Secretary or Assistant Secretary, a true copy of the foregoing resolution.
4. The undersigned has compared the foregoing copies of said original resolutions as so recorded, and they are the same true and correct copies of said original resolutions as so recorded and of the whole thereof.

Witness the hand of the undersigned and the seal of said Corporation this 28th day of August, 2023

AMERICAN ALTERNATIVE INSURANCE CORPORATION CORPORATE SEAL 1923 STATE OF DELAWARE

_____
Ignacio Rivera (Sep 24, 2021 16:05 EDT)
Deputy General Counsel & Secretary

TRS-1001-1

Identification of Minority Business Participation

I, CAROLINA CIVILWORKS INC.
(Name of Bidder)
do hereby certify that on this project, we will use the following minority business enterprises as construction subcontractors, vendors, suppliers, or providers of professional services.

Firm Name, Address and Phone #	Work type	*Minority Category
SOUTHERN GARDEN, INC. APEX, NC – 919.362.1050	LANDSCAPING	F

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of WAKE

(Name of Bidder)

Affidavit of CAROLINA CIVILWORKS INC.

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- [x] **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government-maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- [x] **2 --(10 pts)** Made the construction plans, specifications, and requirements available for review by prospective minority businesses or providing these documents to them at least 10 days before the bids are due.
- [x] **3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- [ ] **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- [x] **5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- [x] **6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- [x] **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- [x] **8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- [ ] **9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- [x] **10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: 8/31/23 Name of Authorized Officer: CHAD GREEN

Signature:

Title: PRESIDENT

RENEE SQUIRES FORD NOTARY PUBLIC WAKE COUNTY, NC SEAL

State of North Carolina, County of Wake

Subscribed and sworn to before me this 31st day of August 2023

Notary Public

My commission expires 10/15/24

ATTACH TO BID

State of North Carolina AFFIDAVIT B – Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____
(Name of Bidder)

In lieu of compliance with the Owner's Minority Business Participation Goals, I hereby certify that it is our intent to perform 100% of the work required for the _____

_____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type of project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____

SEAL

State of North Carolina, County of _____
Subscribed and sworn to before me this _____ day of _____ 20___
Notary Public _____
My commission expires _____

Expiration Date

12/31/2023

License No.

74658

North Carolina

Licensing Board for General Contractors

This is to Certify That:

Carolina Civilworks Inc.

Durham, NC

is duly registered and entitled to practice

General Contracting

Limitation: Unlimited

Classification: Unclassified

until

December 31, 2023

when this Certificate expires.

Witness our hands and seal of the Board.

Dated, Raleigh, N.C.

01/03/2023

This certificate may not be altered.

Lisa Piercy
Chairman

C. Frank Wiesner
Secretary-Treasurer

QUALIFICATIONS STATEMENT

THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS

1. **SUBMITTED BY:**

   Official Name of Firm: CAROLINA CIVILWORKS INC.

   Address: 3511 E US 70 HWY
   DURHAM, NC 27703

2. **SUBMITTED TO:** TOWN OF APEX

3. **SUBMITTED FOR:** SUNSET HILLS VS IMPROVEMENTS

   Owner: TOWN OF APEX

   Project Name: SUNSET HILLS VS IMPROVEMENTS

   TYPE OF WORK: REPL. OF EXIST. SANITARY SEWER PUMP STATION

4. **CONTRACTOR'S CONTACT INFORMATION**

   Contact Person: BRYAN HOOVER

   Title: CORP. SECRETARY

   Phone: 919.598.9850

   Email: BHOOVER@CAROLINACIVILWORKS.COM

5. **AFFILIATED COMPANIES:**

Name: N/A

Address:

6. **TYPE OF ORGANIZATION:**

☐ SOLE PROPRIETORSHIP

Name of Owner:

Doing Business As:

Date of Organization:

☐ PARTNERSHIP

Date of Organization:

Type of Partnership:

Name of General Partner(s):

☒ CORPORATION

State of Organization: North Carolina

Date of Organization: 7/8/14

Executive Officers:

- President: Chad Green
- Vice President(s): Matt Green
- Treasurer: N/A
- Secretary: Bryan Hooker

☐ LIMITED LIABILITY COMPANY

State of Organization: _____

Date of Organization: _____

Members: _____

_____

_____

_____

☐ JOINT VENTURE

Sate of Organization: _____

Date of Organization: _____

Form of Organization: _____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

_____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

7. LICENSING

Jurisdiction: NORTH CAROLINA

Type of License: GC: UNLIMITED & UNCLASSIFIED

License Number: 74658

Jurisdiction: _____

Type of License: _____

License Number: _____

8. CERTIFICATIONS CERTIFIED BY:

Disadvantage Business Enterprise: _____

Minority Business Enterprise: _____

Woman Owned Enterprise: _____

Small Business Enterprise: _____

Other (_____): _____

9. BONDING INFORMATION

Bonding Company: AMERICAN ALTERNATIVE INS. CO.

Address: PO BOX 5241

PRINCETON, NJ 08543

Bonding Agent: PARROTT INSURANCE

Address: PO BOX 3547

KINSTON, NC 28502

Contact Name: MARTHA AYCOCK

Phone: 252.523.1041

Aggregate Bonding Capacity: $50M

Available Bonding Capacity as of date of this submittal: $20M

10. FINANCIAL INFORMATION

Financial Institution: FIRST CITIZENS

Address: 1070 VISION DRIVE

APEX, NC 27523

Account Manager: PATRICK MACKIE

Phone: 919.363.6353

INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE LAST 3 YEARS

11. CONSTRUCTION EXPERIENCE:

Current Experience:

List on **Schedule A** all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).

Previous Experience:

List on **Schedule B** all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

☐ YES ☒ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

☐ YES ☒ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Are there any judgments, claims, disputes, or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

☐ YES ☒ NO

If YES, attach as an Attachment details including Project Owner's contact information.

12. SAFETY PROGRAM:

Name of Contractor's Safety Officer: BRYAN HOOKER / JEA SAFETY / PARAGON SAFETY

Include the following as attachments:

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) OSHA No. 500- Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V (and for each proposed Subcontractor furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) the following (attach additional sheets as necessary):

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	2023	EMR	0.90
YEAR	2022	EMR	1.34
YEAR	2021	EMR	1.24
YEAR	2020	EMR	1.60
YEAR	2019	EMR	1.23

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	2022	TRFR	0.86
YEAR	2021	TRFR	3.15
YEAR	2020	TRFR	3.72
YEAR	2019	TRFR	11.56
YEAR	2018	TRFR	1.60

Total number of man-hours worked for the last 5 Years:

YEAR	2022	TOTAL NUMBER OF MAN-HOURS	232023
YEAR	2021	TOTAL NUMBER OF MAN-HOURS	190335
YEAR	2020	TOTAL NUMBER OF MAN-HOURS	198850
YEAR	2019	TOTAL NUMBER OF MAN-HOURS	190342
YEAR	2018	TOTAL NUMBER OF MAN-HOURS	125190

Provide Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor and each of Contractor's proposed Subcontractors and Suppliers) for the last 5 years:

YEAR	2022	DART	0
YEAR	2021	DART	1.05
YEAR	2020	DART	3.72
YEAR	2019	DART	4.20
YEAR	2018	DART	1.60

13. EQUIPMENT:

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HEREWITH, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: Carolina Civilworks Inc.

BY: [signature] - Bryan Hoover

TITLE: Corp Secretary

DATED: 8/31/23

NOTARY ATTEST: [signature]

SUBSCRIBED AND SWORN TO BEFORE ME

THIS 31st DAY OF August, 2023

NOTARY PUBLIC - STATE OF North Carolina

MY COMMISSION EXPIRES: 10/15/24

RENEE SQUIRES FORD NOTARY PUBLIC WAKE COUNTY, NC

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Audited balance sheet for each of the last 3 years for firm named in Section 1.
5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
6. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
7. Required safety program submittals listed in Section 13.
8. Additional items as pertinent.

SCHEDULE A

CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SEE ATTACHED

CAROLINA CIVILWORKS INC.

CURRENT COMMITMENTS

Project:	**EM Johnson Sludge Thickener No. 4**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh 919-996-3940
Engineer:	Freese and Nichols
% Complete:	99%
Contract Amt:	$1,964,595
Sch Compl Date:	September 2023
Project Manager:	Justin Shaw
Description:	Work includes construction of new Sludge Thickener No 4 and associated piping. Modifications to the splitter box. Addition of a new sludge pump and replacement of 3 existing pumps. Electrical and SCADA upgrades

Project:	**NRRRF Alum Facility BP 11**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh 919-996-3940
Engineer:	Hazen and Sawyer
% Complete:	99%
Contract Amt:	$2,535,212
Sch Compl Date:	TBD
Project Manager:	Justin Shaw
Description:	Work includes construction of Alum Facility at Neuse River Wastewater Treatment Plant. Project was bid to Crowder Construction as the Construction Manager. We are currently performing CO work.

Project:	**West & Cabarrus**
Location:	Raleigh, NC
Owner/GC:	Clancy and Theys
Engineer:	John R McAdams
% Complete:	99%
Contract Amt:	$3,813,692
Sch Compl Date:	August 2023
Project Manager:	Bryan Hooker
Description:	Work includes storm water and sewer for construction of new site development. Included 830 LF of 10x6 and 12x5 box culvert that was critical path for construction of the building.

PO Box 80337 • Raleigh, NC 2762 919) 239-4645 • Fax: (919) 239-4650

CAROLINA CIVILWORKS INC.

Project:	**State Street Water and Sewer Improvements**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh
Engineer:	CDM Smith
% Complete:	85%
Contract Amt:	$6,672,450
Sch Compl Date:	February 2024
Project Manager:	Matt Green
Description:	Work includes 9,870 LF of 6-30" waterline, valves, and other appurtenances, 16,350 LF of 8" sanitary sewer lines, manholes, 5400 LF of 8" CIPP liner, replacement of active sewer services, reconnection of existing fire services, fire hydrants, traffic control, asphalt paving and erosion control.

Project:	**Searstone Phase II**
Location:	Cary, NC
Owner/GC:	Clancy & Theys
Engineer:	Withers & Ravenel
% Complete:	99%
Contract Amt:	$4,179,866
Sch Compl Date:	2024
Project Manager:	Bryan Hooker
Description:	Work includes water, sewer, and storm drain for addition to retirement community. Work included large underground detention system.

Project:	**2021 Water and Sewer Point Repairs**
Location:	Durham, NC
Owner/GC:	City of Durham
Engineer:	City of Durham
% Complete:	75%
Contract Amt:	$5,477,414
Sch Compl Date:	December 2023
Project Manager:	Matt Green
Description:	Work includes repairs to the City's sewer system to include point repairs, manhole installations, aerial crossing repairs, rim and cover adjustments, service installations.

CAROLINA CIVILWORKS INC.

Project:	**Pump Station 14 Force Main Replacement**
Location:	Wilmington, NC
Owner/GC:	Cape Fear Public Utility Authority
Engineer:	HDR Engineering
% Complete:	85%
Contract Amt:	$9,627,303
Sch Compl Date:	October 2023
Project Manager:	Eddie Mullen
Description:	Work includes 14,299 LF of 20-24" PVC force main, 500 LF of 8" PVC force main, connection to existing force mains, traffic control, asphalt paving, 20-24" valves, 1020 LF of 24" directional drill.

Project:	**Quail Hollow & Brentwood Water Main Replacements**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh
Engineer:	W.K. Dickson
% Complete:	75%
Contract Amt:	$4,068,029
Sch Compl Date:	December 2023
Project Manager:	Bryan Hooker
Description:	Work involves replacement of approx. 600 LF of 8" sanitary sewer mains, 11,350 LF of 6-8" water mains and associated services. Also included is asphalt patching, mill & overlay and other misc. site restoration items.

Project:	**Southern NHC Regional Pump Station**
Location:	Wilmington, NC
Owner/GC:	Cape Fear Public Utility Authority
Engineer:	Black & Veatch
% Complete:	75%
Contract Amt:	$6,905,475
Sch Compl Date:	January 2024
Project Manager:	Eddie Mullen
Description:	Work includes 12,300 LF of 8-16" PVC force main and a new regional pump station. Also included are a jack & bore, horizontal directional drills, CIP concrete, asphalt paving, electrical & SCADA improvements.

CAROLINA CIVILWORKS INC.

Project:	**Seaboard Station**
Location:	Raleigh, NC
Owner/GC:	Clancy and Theys
Engineer:	Stewart
% Complete:	50%
Contract Amt:	$2,571,152
Sch Compl Date:	December 2023
Project Manager:	Bryan Hooker
Description:	Work includes storm drain, water and sanitary sewer for re-development of the existing Seaboard Station shopping center in downtown Raleigh. Also included are underground detention / sand filter systems, asphalt patching and traffic control.

Project:	**H-12 Felton Grove High School**
Location:	Apex, NC
Owner/GC:	Clancy and Theys
Engineer:	CLH Design
% Complete:	5%
Contract Amt:	$14,200,971
Sch Compl Date:	August 2025
Project Manager:	Matt Green
Description:	Work includes water & sewer for new WCPSS high school. This also includes significant offsite utility work for water main extensions and a sewer outfall to connect to an exist. Apex PS.

**This is not an extensive list. Other small projects are currently underway and details can be provided upon request.

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SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SEE ATTACHED

CAROLINA CIVILWORKS INC.

COMPLETED PROJECTS

Project:	**US 17 Regional Pump Station and Force Main**
Location:	Leland, NC
Owner/GC:	H2Go
Engineer:	The Wooten Company
% Complete:	100%
Contract Amt:	$2,139,620
Completion Date:	July 2018
Description:	Work included construction of 1260 GPM submersible pump station, 6900 LF of 12" force main, 290 LF of 36" steel encasement by bore and jack. 3500 LF of force main by horizontal directional drill.

Project:	**US 74/76 Warehouse – Fire Protection Main**
Location:	Brunswick County, NC
Owner/GC:	Brunswick County Utilities
Engineer:	HDR
% Complete:	100%
Contract Amt:	$822,667.15
Completion Date:	Nov 2018
Description:	Work included 9400 LF of 12" waterline and appurtenances. 400 LF of 12" horizontal direction drills. Clearing, erosion control, and testing.

Project:	**SAS Building A**
Location:	Cary, NC
Owner/GC:	ST Wooten
Engineer:	George Finch Boney and Associates, PA
% Complete:	100%
Contract Amt:	$2,192,346
Completion Date:	Dec 2018
Description:	Work included 9400 LF of 12" waterline and appurtenances. 400 LF of 12" horizontal direction drills. Clearing, erosion control, and testing.

CAROLINA CIVILWORKS INC.

Project:	**Brockton Lake and Dam Phase 1**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh
Engineer:	CDM Smith
% Complete:	100%
Contract Amt:	$1,870,299
Completion Date:	May 2018
Description:	Work included by-pass pumping lake, 500 LF of stream restoration, new box culvert in upper lake, sanitary sewer replacements, lake sediment removal, landscaping, erosion control.

Project:	**Hydrant Repair and Replacement Project**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh 919-996-3490
Engineer:	City of Raleigh
% Complete:	100%
Contract Amt:	$3,440,683
Sch Compl Date:	June 2019
Project Manager:	Matt Green
Description:	Work includes repair or replacement of public and private fire hydrants in the City of Raleigh. The majority of these are in Water distribution zone 1, however, other locations throughout the city may be required. Work also includes water and sewer service repairs as needed.

Project:	**UNC Central Campus 15C Site Utilities Alternate**
Location:	Chapel Hill, NC
Owner/GC:	TA Loving / Clancy & Theys – a Joint Venture
Engineer:	CRA Associates, Inc.
% Complete:	100%
Contract Amt:	$745,570
Sch Compl Date:	Aug 2018
Project Manager:	Bryan Hooker
Description:	Work includes installation of 18" chilled water piping and new 3x4 steam tunnel from Stadium Drive to new indoor practice facility at UNC Chapel

CAROLINA CIVILWORKS INC.

Project:	**Stormwater Management Unit Price Contract B**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh 919-996-3940
Engineer:	City of Raleigh
% Complete:	100%
Contract Amt:	$2,067,202
Sch Compl Date:	July 2019
Project Manager:	Matt Green
Description:	Work includes construct/repair/replace certain storm drainage items at any location within the City of Raleigh when needed; primarily various projects associated with the City's Drainage Petition Program. Involves pipe replacement of various sizes, drainage structure replacement, grading, paving, and erosion control.

Project:	**Pump Stations 26 & 27 Upgrades**
Location:	Wilmington, NC
Owner/GC:	Echo Farms, LLC
Engineer:	Norris and Tunstall Consulting Engineers, P.C.
% Complete:	100%
Contract Amt:	$1,482,440
Sch Compl Date:	Nov 2019
Project Manager:	Eddie Mullen
Description:	Work includes pump replacement, new generators with platforms, new suction and discharge piping, fencing, and new building at PS 27. Work includes new force main with directional drills, starting and testing.

Project:	**Pump Station 12 Force Main Replacement**
Location:	Wilmington, NC
Owner/GC:	Cape Fear Public Utility Authority
Engineer:	McKim and Creed
% Complete:	100%
Contract Amt:	$1,877,778
Sch Compl Date:	June 2020
Project Manager:	Eddie Mullen
Description:	Work included 4230 LF of 16" forcemain along with directional drills. Fittings, asphalt paving, storm drain replacement, in residential areas.

CAROLINA CIVILWORKS INC.

Project:	**Neuse River Pump Station Interim**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh
Engineer:	Highfill Infrastructure
% Complete:	100%
Contract Amt:	$2,150,301
Sch Compl Date:	March 2020
Project Manager:	Justin Shaw
Description:	Work included installation of pump #4, pump suction and discharge piping, electrical modifications, ventilation modifications, roof repairs, wet well cleanout, SCADA modifications, and bypass of 21MGD pump station

Project:	**Raleigh Executive Jetport**
Location:	Sanford, NC
Engineer:	Michael Baker Engineering, Inc.
% Complete:	100%
Contract Amt:	$1,254,185
Sch Compl Date:	January 2020
Project Manager:	Justin Shaw
Description:	Install new 10" PVC waterline, pump house and a steel fire suppression tank. Work included electrical, grading, erosion control alongside active runways and airplane hangers.

Project:	**Pullen Park Sanitary Sewer Improvements**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh
Engineer:	The Wooten Company
% Complete:	100%
Contract Amt:	$590,653
Sch Compl Date:	September 2020
Project Manager:	Matt Green
Description:	Work included 995 LF of 8/12" sanitary sewer by open cut, 300 LF of 8" sanitary sewer by pipe bursting. New and rehabilitation of sanitary manholes.

CAROLINA CIVILWORKS INC.

Project:	**Contract 2 – Water and Raw Water Mains**
Location:	Leland, NC
Owner/GC:	Brunswick Regional Water and Sewer H2Go
Engineer:	The Wooten Company
% Complete:	100%
Contract Amt:	$6,325,353
Sch Compl Date:	May 2022
Project Manager:	Eddie Mullen
Description:	Work included installation of 21,150 LF of 12-24" water and raw water mains, 5056 LF of 16-24" directional drills, 765 LF of 24-48" steel encasement by bore and jack.

Project:	**2014 Sewer Line Replacement/Rehabilitation No 4.**
Location:	Raleigh
Owner/GC:	City of Raleigh
Engineer:	URS Corporation
% Complete:	100%
Contract Amt:	$2,168,430
Sch Compl Date:	June 2021
Project Manager:	Matt Green
Description:	Work included replacement 2559 LF of 6-16" sanitary sewer, 1182 LF of 8" CIPP lining, Replacement of 22 manholes, rehabilitation of 9 manholes, 33 sanitary sewer services, traffic control, asphalt paving, and erosion control.

Project:	**Water Main Replacement 2012 Project 3 – Phase B**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh
Engineer:	The Wooten Company
% Complete:	100%
Contract Amt:	$7,349,692
Sch Compl Date:	May 2020
Project Manager:	Matt Green
Description:	Work 14,750 LF of 8" gravity sewer lines, 20,785 LF of 6-12" waterlines, water and sewer services, asphalt paving, traffic control.

CAROLINA CIVILWORKS INC.

Project:	**Oberlin Road Water Line**
Location:	Raleigh, NC
Owner/GC:	City of Raleigh
Engineer:	CJS Conveyance, PLLC
% Complete:	100%
Contract Amt:	$3,455,712
Sch Compl Date:	April 2022
Project Manager:	Matt Green
Description:	Work included installation of 6100 LF of 12" DIP waterline on Oberlin Road and abandonment of existing 8" waterline. Included replacement of water services, hydrants, reconnection of existing mains, 36" bore under Wade Ave, traffic control, and asphalt patching.

Project:	**Storm Drain Point Repairs Due to Hurricane Florence**
Location:	Wilmington, NC
Owner/GC:	City of Wilmington
Engineer:	City of Wilmington
% Complete:	100%
Contract Amt:	$2,884,915
Sch Compl Date:	September, 2021
Project Manager:	Eddie Mullen
Description:	Work included point repairs to the City's storm drain system from 15" to 60". Work included pipe repairs, storm box repairs, well pointing, traffic control, and asphalt patching.

Project:	**Parallel Force Mains – Phase II**
Location:	Cary, NC
Owner/GC:	Town of Cary
Engineer:	The Wooten Company
% Complete:	100%
Contract Amt:	$2,960,800
Sch Compl Date:	October 2021
Project Manager:	Justin Shaw
Description:	Work included one mechanical bar scree, 7 wastewater grinder unites, 3 temporary bypass/pigging stations, 1000 LF of 6" forcemain, various pump station sitework improvements, and electrical improvements.

CAROLINA CIVILWORKS INC.

Project:	**Virginia Mills Pump Station Replacement**
Location:	Swepsonville, NC
Owner/GC:	Town of Swepsonvillle
Engineer:	Alley, Williams, Carmen & King, Inc.
% Complete:	100%
Contract Amt:	$1,311,237
Sch Compl Date:	September 2021
Project Manager:	Justin Shaw
Description:	Work included installation of a new sewer pump station including 2 – 750 GPM 70 Hp pumps, 12' precast concrete wet well, electrical, and new sanitary sewer wetwell.

Project:	**2019 Sanitary Sewer Repair Program**
Location:	Durham, NC
Owner/GC:	City of Durham
Engineer:	City of Durham
% Complete:	100%
Contract Amt:	$4,461,535
Sch Compl Date:	January 2022
Project Manager:	Matt Green
Description:	Work included miscellaneous repairs to the City's sewer system to include manhole replacement, point repairs, reach repairs, aerial crossing repairs, sanitary service repairs, traffic control asphalt patching, and by-pass pumping.

**This list is meant to display our range project size and scope and is not a complete list of all our completed projects. Please contact our office for further information.

SCHEDULE C - LIST OF MAJOR EQUIPMENT AVAILABLE

ITEM	PURCHASE DATE	CONDITION	ACQUIRED VALUE
CAT EXCAVATORS	2019-2022	GOOD	N/A
KOMATSU EXCAVATORS	2023	↓	↓
CAT WHEEL LOADERS	2018		
KOMATSU WHEEL LOADERS	2015/2023		
DUMP TRUCKS	2018 - 2022		

CAROLINA CIVILWORKS INC.

August 31st, 2023

Town of Apex
Attn: Matt Reker
PO Box 250
105-B Upchurch Street
Apex, NC 27502

RE: Carolina Civilworks Financial Information

To whom it may concern,

We consider all of our financial information – including the audited balance sheets requested – to be confidential. If it is determined that we are low, responsible and responsive bidder, we do not have a problem sharing this with the Town of Apex, if required.

Sincerely,

Chad Green, President
Carolina Civilworks Inc.

3511 E US 70 Highway • Durham, NC [illegible]ne: (919) 598-9850 • Fax: (919) 598-9912

CAROLINA CIVILWORKS INC.

AFFIDAVIT OF ORGANIZATION AND AUTHORITY

AND

SWORN STATEMENT

{STATE OF NORTH CAROLINA}

{COUNTY OF WAKE}

Chad Green being first duly sworn on oath deposes and says that Carolina Civilworks Inc. is organized as indicated below and that all statements herein are made on behalf of Carolina Civilworks Inc. and that this deponent is authorized to make them.

1. CORPORATION

   Carolina Civilworks Inc. is a corporation organized and existing under the laws of North Carolina and its President is Chad Green, its Vice President is Matt Green, its Secretary is Bryan Hooker and it does have a corporate seal. The President, Vice President and Secretary are authorized to sign construction contracts, documents and bid for the company.

Chad Green, President
Carolina Civilworks Inc.

Corporate Seal

CAROLINA CIVILWORKS INC. CORPORATE SEAL NORTH CAROLINA

PO Box 80337 • Raleigh, NC 2762[illegible] 19) 598-9850 • Fax: (919) 598-9912

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2022

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	1	0
(G)	(H)	(I)	(J)

Numb ys

Total days a work	Total number of days of job transfer or restriction
0	1
(K)	(L)

- Page 61 -

Injury and Illness Types

Total number of...	(M)		(M)
(1) Injury	1	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Establishment information

Your establishment name Carolina Civilworks Inc

Street 3511 E US 70 HWY

City Durham NC Zip 27703

Industry description (e.g., Manufacture of motor truck trailers)
Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1623

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees 39

Total hours worked by all employees last year 232023

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

President
Title

919-598-9850
Phone

2/1/2023
Date

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2021

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

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Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	1	1	1
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
3	5
(K)	(L)

Injury and Illness Types

Total number of...	(M)		(M)
(1) Injury	3	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

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Establishment information

Your establishment name: Carolina Civilworks Inc

Street: 3511 E US 70 HWY

City: Durham NC Zip: 27703

Industry description (e.g., Manufacture of motor truck trailers)
Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1623

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees: 88

Total hours worked by all employees last year: 190335

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

President
Title

919-598-9850
Phone

2/1/2021
Date

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2020

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

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Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	3	0	0
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
217	0
(K)	(L)

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Injury and Illness Types

Total number of...	(M)		
(1) Injury	3	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Establishment information

Your establishment name Carolina Civilworks Inc

Street 3511 E US 70 HWY

City Durham NC Zip 27703

Industry description (e.g., Manufacture of motor truck trailers)
Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1623

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees 25

Total hours worked by all employees last year 198850

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

President
Title

919-598-9850
Phone

2/1/2021
Date

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

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OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2019

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

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Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	4	1	6
(G)	(H)	(I)	(J)

N f Days

Total number of days away from work	Total number of days of job transfer or restriction
282	28
(K)	(L)

Injury and Illness Types

Total number of...	(M)		(M)
(1) Injury	11	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

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Establishment information

Your establishment name Carolina Civilworks Inc

Street 3511 E US 70 HWY

City Durham NC Zip 27703

Industry description (e.g., Manufacture of motor truck trailers)
Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 6 2 3

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees 20

Total hours worked by all employees last year 190342.5

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

President
Title

919-598-9850
Phone

2/1/2020
Date

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2018

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	1	0	1
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
206	0
(K)	(L)

Injury and Illness Types

Total number of...	(M)		
(1) Injury	2	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

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Establishment information

Your establishment name Carolina Civilworks Inc.

Street 3200 Glen Royal Rd, Suite 112

City Raleigh State North Carolina Zip 27617

Industry description (e.g., Manufacture of motor truck trailers)

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)

1 6 2 3

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees 57

Total hours worked by all employees last year 125190.5

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

President
Title

919-239-4645
Phone

1/26/2019
Date

CAROLINA CIVILWORKS INC.

August 31st, 2023

Town of Apex
Attn: Matt Reker
PO Box 250
105-B Upchurch Street
Apex, NC 27502

RE: Subcontractor's Safety Information

To whom it may concern,

At the time of preparing this bid, we do not know if subcontractors will have work that is 10% or greater in value than the total amount of the Bid. If determined to be the low, responsible and responsive bidder and we do have subs that meet this requirement, we are happy to provide all requested info in a timely manner.

Sincerely,

Chad Green, President
Carolina Civilworks Inc.

Chad J Green

4828 Grenshadow Court – Fuquay Varina, NC 27526
Phone: (919) 422-2907 E-mail: cgreen@carolinacivilworks.com

Chad is a results driven professional with experience managing a wide variety of sitework packages. He has a proven ability to obtain project leads, develop customer relationships, create accurate estimates, and provide a smooth transition to construction phase. Chad applies his engineering background and construction experience to purchase and utilize equipment, procure materials on a budget, and contract subcontractors to ensure a productive and safe project. He consistently achieves results by implementing cost reduction techniques and following through with strict schedule requirements.

Areas of Expertise/Key Competencies

Customer Development	P&L / Cashflow Analysis
Problem Prevention and Problem Solving	Accuracy
Staff Development and Training	Productivity Improvements
Quality Assurance	Estimating
Task Planning	Technology
Budgeting & Cost Controls	Innovative

Professional Career Summary

Carolina Civilworks Inc.
President **Current**
Initiate startup for new civil construction company and manage on-going operations. Oversee all aspects of new business including estimating, accounting procedures and software, vendor/customer relationships, contracts, insurance, project profitability, and staffing.

Centurion Construction Company, Inc
VP of Pre-Construction **2009-2014**
Co-lead start-up and development of infrastructure division within Company. Responsible for all pre-construction site activities for the company. Obtained project leads, prepared bids, negotiated with private developers, and recommended design changes to meet owner's job specific needs or cost constraints. Hired qualified individuals capable of performing sitework, procured equipment, and negotiate with subcontractors and vendors for awarded projects.

Canco Construction NC, Inc Durham, NC
General Business Manager **2003-2009**
Actively managed and co-lead business by developing techniques to analyze cash flow, profitability, and cost reduction. Reduced overhead by 20% in 2009 alone. Produced and analyzed monthly reports including A/R, A/P, cash flow, profit and loss to determine upcoming budgets. Instituted proper insurance requirements for General Liability and Worker's Compensation. Hired and trained office personnel and field staff of 20 to 25 employees including heavy equipment operators, drivers, and mechanics. Revitalized safety program and decrease the Experience Modification Rate by 32%.

Project Manager **2005-2009**

Implemented projects from contract negotiation through the completion of all punch lists for grading and site utility projects ranging from $100,000 to $3,000,000. Prepared submittals, formulated and supervised crews, purchased materials, and obtained subcontractors for fast-paced projects. Ensured complete compliance with project schedule, contract requirements, local municipal standards and specifications, and owners' expectations.

Major Projects	Contract Amt	Profit (%)
• UNC Jackson Circle Parking Deck	$3,000,000	27%
• NCSU Alumni Center	$1,000,000	23%
• Prestonwood Country Club	$600,000	34%

Estimator **2003-2009**

Provided accurate estimating to achieve annual sales goals. Streamlined techniques to eliminate errors and instill faster bid time. Initiated and maintained contact with potential clients through the bid process by coordinating, collaborating, and communicating regularly. Instilled confidence in customers by providing precise budgets and value engineering for individualized projects. Ability to investigate applicable standards and specifications for projects with strict and intricate requirements.

Key Awarded Projects	Contract Amt
• RDU Terminal C Taxiway D Relocation	$380,000
• North Carolina Women's Prison Site Package	$600,000
• Wyeth Pharmaceuticals Site Package	$450,000

Mark IV Automotive, Easley, SC
Co-op Student **2002**

Worked with R&D sample shop to manufacture the latest power steering hoses for customers such as Ford and Chrysler. Developed W-drawings to provide sample shop with back-up quality control. Designed tooling for machinery to minimize operator error.

Robert Bosch Corporation Research & Development, Charleston, SC
Co-op Student **2000- 2001**

Assisted development of the EV-14 fuel injector for the Research and Development department. Investigated honing operation and applied Six Sigma techniques to improve processes. Evaluated fuel injector's functionality to high/low pressure and high/low temperature by setting parameters on the Hydropulse test stand. Created, communicated, and trained staff on all manufacturing processes in the R&D sample shop.

Education/Licensure/Memberships

Clemson University, Clemson, SC
Bachelor of Science in Mechanical Engineering, with Honors

Completion of Fundamentals of Engineering Exam
North Carolina License in Public Utilities (Water and Sewer Lines)
NC-AWWA
NC Rural Water Association
National Utility Contractors Association

Matthew C. Green

164 The Preserve Trail – Chapel Hill, NC 27517
Phone: (919) 395-3392 E-mail: mgreen@carolinacivilworks.com

Matt has worked in the utility and grading business since 2000. He graduated from North Carolina State University where he received a Bachelor of Science in Construction Engineering and Management. Below is his work history and significant projects.

Professional Career Summary

Carolina Civilworks Inc.
Vice President **August 2014 - Current**
Initiate startup for new Civil Construction Company and manage on-going operations. Oversee all aspects of new business including project management, accounting procedures and software, vendor/customer relationships, contracts, insurance, project profitability, and project staffing.

Centurion Construction Company, Inc
Vice President / Field Operations **August 2009 – July 2014**
Assisted in startup of an infrastructure division within Centurion Construction Company. Managing projects ranging up to $6,000,000. Board Member.

Canco Construction NC, Inc
Executive Vice President **2003-August 2009**
Project Manager **2000-2003**

Oversaw all aspects of privately held construction company. Supervised 35 employees. Managed self-performed jobs ranging up to $3,000,000. Utilized on-site project management to effectively run daily production. Typical annual sales ranging between $3-6 million. Privately held company had no other executive officers or directors from April 2006.

Key Projects

NC Women's Prison – Site Package (2008-2009) Raleigh, NC
- Delivered site package on time and under budget while encountering numerous design challenges.

West @ North Condominiums (2008) Raleigh, NC
- Due to age and location of existing site, numerous conflicts with existing utilities, contaminated soil, maintaining downtown traffic, and overall logistics. Multiple-level excavations turned over approximately two weeks ahead of schedule.

Jackson Circle Parking Garage (2005-2006) Chapel Hill, NC
- Oversaw rock/earth excavation of 60,000 cubic yards. Major excavation completed within a one month time frame prior to initiation of structure. Three-story parking garage commenced and completed within a twelve-month period

RDU Parking Garage (2005) Raleigh, NC
- Managed various crews while installing infrastructure over a 15 acre site. Managed coordination between subcontractors and general public to minimize disruption to RDU Airport operations. Self-performed infrastructure installation up to 72" diameter RCP.

Ellis-Don Construction, Inc
Assistant Project Manager **1998-2000**

Responsibilities included – Generating change orders, as well as awarding and generating contracts to subcontractors and vendors. Managing progress with subcontractors through daily communication. Incorporating value engineering. Generating cash-flow data. Approving invoices, reviewing pay applications from subcontractors, quality control, shop drawing submittals, processing and generating RFI's, as-built shop drawings, and close-out documentation. Project size was approximately $29 million.

Education/Licensure/Memberships

NC General Contractors Highway License
NC General Contractors License
Successfully completed FE Exam
National Utility Contractors Association

Bryan J. Hooker

2227 The Circle – Raleigh, NC 27608
Phone: (919) 332-2828 E-mail: bhooker@carolinacivilworks.com

WORK EXPERIENCE:

Carolina Civilworks Inc., Raleigh, NC
Corp. Secretary / Project Manager / Estimator, July 2014 – Present

- Responsible for managing and estimating complete site packages as well as various utility projects in both public and private sectors throughout the Triangle and Eastern NC
- Work with developers and engineers to budget, value engineer and tackle design and constructability issues to ensure future potential projects can be completed on time and within budget
- Maintain accurate, constantly updated bid list and solicitation system so that all subcontractors and suppliers are well informed and able to provide the best possible proposals and quotations
- Perform buy-out, write subcontracts/purchase orders and assemble schedule of values for awarded projects
- Work closely with the Project Team through the life of projects to provide detailed change order requests, track schedules and account for all deviations from bid design drawings/specs

Centurion Construction Company, Inc., Raleigh, NC
Project Engineer, December 2011 – July 2014

- Estimated utility projects and site packages in value anywhere from $50k to $14M
- Developed complete bid packages by containing internal costs and obtaining competitive proposals from all subcontractors and suppliers
- Worked with owners/land developers and general contractors to help accurately budget costs throughout all stages of site development and design
- Organized, prepared and closely monitored submittal process with subcontractors, engineers and owners

Intern, May 2011 – December 2011

- Assist lead estimator on utility projects for Centurion's Civil Group
- Performed accurate and effective quantity take-offs for both public and private jobs
- Responsible for compiling, reviewing and sending out submittals for all active jobs
- Attend pre-bid meetings for various potential projects throughout the area

Prospect Waterproofing, Sterling, VA
Intern, June - August 2010

- Processed new jobs, contracts, change orders, revisions, plans and shop drawings
- Assisted project managers with submittal packages and other various tasks
- Attended pre-bid meetings and site visits for potential jobs

ADDITIONAL:

Computer Skills:

- Proficient with InSite Sitework, Timberline Estimating, Timberline Project Management, Primavera P6 Project Management & Scheduling, AutoCAD Civil 3D, SolidWorks, Microsoft Office, Windows

Organizations:

- NUCA – National Utility Contractors Association
- AWWA – American Water Works Association

EDUCATION:

North Carolina State University, Raleigh, NC
B.S., Civil Engineering : December 2011
B.S., Construction Engineering & Management : December 2011

Passed Fundamentals of Engineering Exam in Apr

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between Town of Apex ("Owner") and

("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: _____

ARTICLE 3 – ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by CDM Smith.

3.02 The Owner has retained CDM Smith ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work will be substantially completed within 360 days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 450 days after the date when the Contract Times commence to run.

B. Parts of the Work shall be substantially completed on or before the following Milestone(s):

1. Substantial completion of pump station to be in operation by December 2024

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the

actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner $750 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $750 for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
4. Milestones: Contractor shall pay Owner $750 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.
5. Liquidated damages shall be assessed to provide bypass pumping for the Felton Grove school improvements sanitary sewer if not substantially completed by the established milestone in Paragraph 4.02.B

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

A. All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. Total of Unit Price Work $_____.

C. All Work, at the prices stated in Contractor's Bid, is attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 25th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract

    a. 95 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

    b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 Interest on final payments due to prime contracts shall accrue in accordance with North Carolina General Statute 143-134.1.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.

B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to ___, inclusive).
2. Performance bond (pages ___ to ___, inclusive).
3. Payment bond (pages ___ to ___, inclusive).
4. Power of Attorney (pages ___ to ___, inclusive).
5. Certificate of Insurance (pages ___ to ___, inclusive).
6. General Conditions (pages ___ to ___, inclusive).
7. Supplementary Conditions (pages ___ to ___, inclusive).
8. Specifications as listed in the table of contents of the Project Manual.
9. Drawings (not attached but incorporated by reference) consisting of ___ sheets with each sheet bearing the following general title: ___ **[or]** the Drawings listed on the attached sheet index.
10. Addenda (numbers ___ to ___, inclusive).
11. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages ___ to ___, inclusive), including E-Verify Affidavit.
    b. Notice of Award (pages ___ to ___, inclusive).

c. Documentation submitted by Contractor prior to Notice of Award.

d. Affidavits.

12. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

a. Notice to Proceed.

b. Work Change Directives.

c. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 E-Verify

A. Contractor hereby acknowledges that “E-Verify” is the federal E-Verify program operated by the US Department of Homeland Security and other federal agencies which is used to verify the work authorization of newly hired employees pursuant to federal law and in accordance with Article 2, Chapter 64 of the North Carolina General Statutes. Contractor further acknowledges that all employers, as defined by Article 2, Chapter 64 of the North Carolina General Statutes, must use E-Verify and after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS §64-26(a). Contractor hereby pledges, attests, and warrants through execution of this Agreement that Contractor complies with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes and further pledges, attests and warrants that any subcontractors currently employed by or subsequently hired by Contractor shall comply with any and all E-Verify requirements. Failure to comply with the above requirements shall be considered a breach of this Agreement.

10.07 Iran Divestment Act Certification

A. N.C.G.S. 147-86.60 prohibits the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina from contracting with any entity that is listed on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C.G.S. 147-86.58. N.C.G.S. 147-86.59 further requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer’s Final Divestment List. As of the date of execution of this Agreement Contractor hereby certifies that it is not listed on the Final Divestment List created by the North Carolina State Treasurer and that Contractor will not utilize any subcontractors found on the Final Divestment List.

10.08 Anti-Human Trafficking

A. The Contractor warrants and agrees that no labor supplied by the Contractor or the Contractor’s subcontractors in the performance of this Agreement shall be obtained by means of deception, coercion, intimidation, or force, or otherwise in violation of North Carolina law, specifically Article 10A, Subchapter 3 of Chapter 14 of the North Carolina General Statutes, Human Trafficking.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

OWNER:	CONTRACTOR:
Town of Apex	
By:	By:
Title:	Title:
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest:
Title:	Title:
Address for giving notices:	Address for giving notices:
P.O. Box 250	
Apex, NC 27502-0250	
	License No.: _____ *(where applicable)*

If Contractor is a corporation, partnership, or joint venture, attach evidence of authority to sign.

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

_____
Vance Holloman, Finance Director

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| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Angela Reincke, Parks Planning Project Manager

Department(s): Parks, Recreation, and Cultural Resources

Requested Motion

Motion to award the construction contract with Lanier Construction Company, Inc., for Apex West Greenway construction project and adopt Capital Project Ordinance Amendment 2024-6, and authorize the Interim Town Manager, or their designee, to execute on behalf of the Town.

Approval Recommended?

Yes

Item Details

This is a project to construct 750 linear feet of greenway to existing side path along the south side of Olive Chapel Rd to the American Tobacco Trail at future Wake County Trailhead site. The first bid opening was scheduled on June 23, 2023. The project needed to be rebid as there were only 2 bidders. Sealed bids for construction and furnishing of all materials were received and opened on July 13, 2023. It is the recommendation of staff that the contract be awarded to Lanier as the lowest responsible bidder.

Partial funding for the project was awarded in the amount of $150,000 from Wake County Parks and Open Space. Remaining funding is already available in the Capital Project Fund. Previous transfers from the Recreation Reserve to the Beaver Creek Greenway Project (prior to the additional LAPP funding award in August) will be reallocated to the Apex West Greenway Project.

Bid Summary (Responsive Bids):

Engineers Estimate	$392,873.25
Lanier	$712,077.00
H&H	$975,000.00

Attachments

- CN3-A1: Project Map - Construction Contract Award - Lanier Construction Company, Inc. - Apex West Greenway
- CN3-A2: Bid Tabulation - Construction Contract Award - Lanier Construction Company, Inc. - Apex West Greenway

- CN3-A3: Capital Project Ordinance Amendment No. 2024-6 - Construction Contract Award - Lanier Construction Company, Inc. - Apex West Greenway
- CN3-A4: Construction Contract - Construction Contract Award - Lanier Construction Company, Inc. - Apex West Greenway
- CN3-A5: Notice of Award - Construction Contract Award - Lanier Construction Company, Inc. - Apex West Greenway

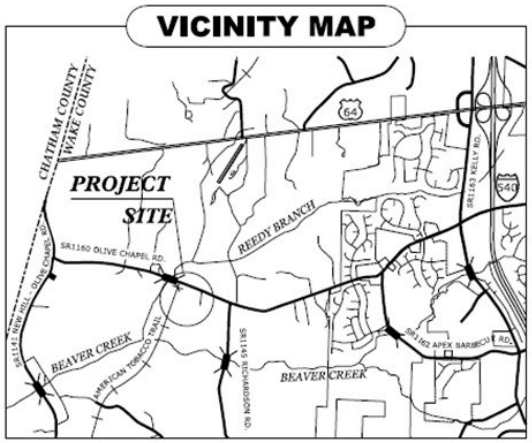
CONSTRUCTION PLANS FOR:

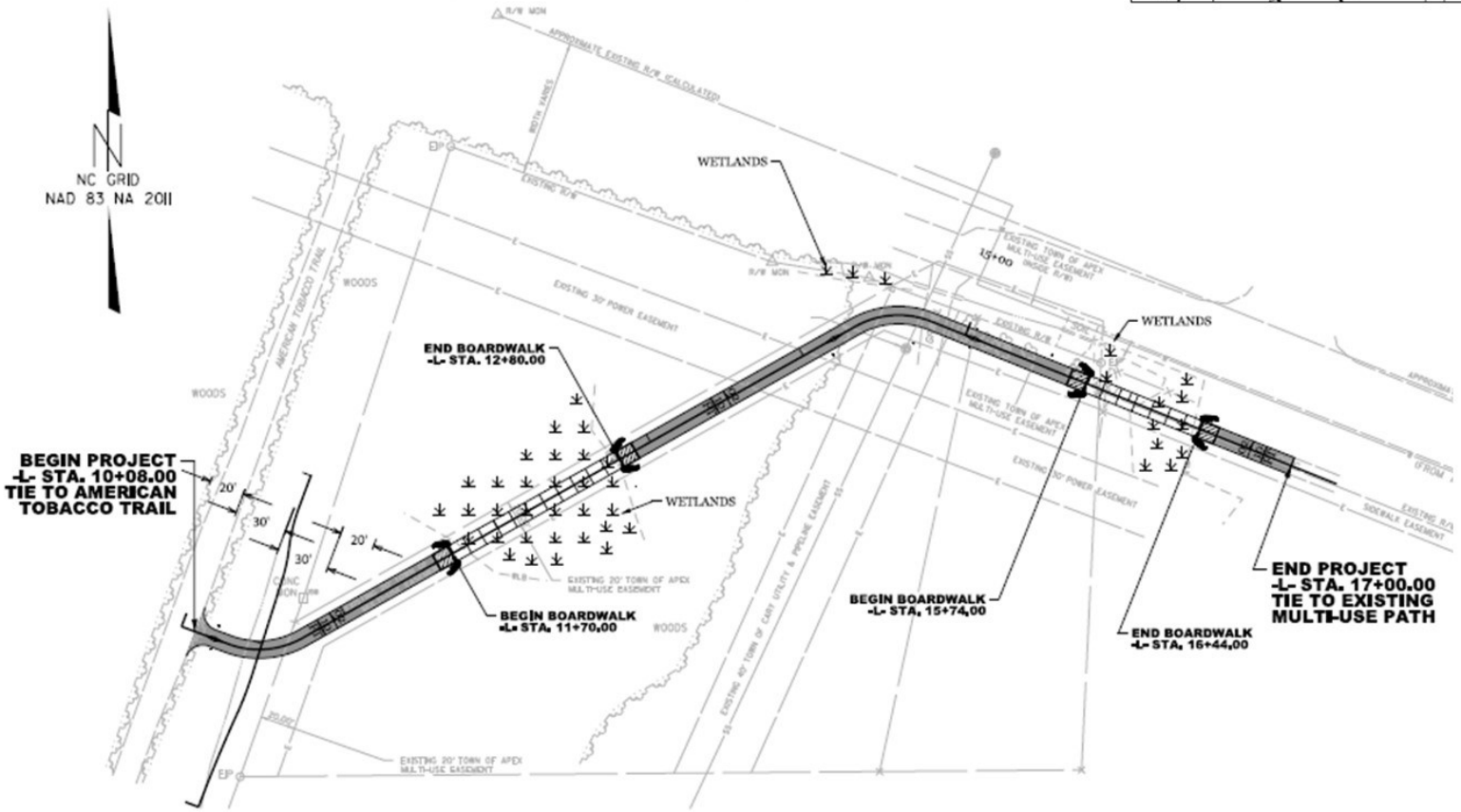
TOWN OF APEX
NORTH CAROLINA

APEX WEST GREENWAY

LOCATION;
FROM OLIVE CHAPEL RD. TO AMERICAN TOBACCO TRAIL

TYPE OF WORK:
GRADING, PAVING, STRUCTURE, DRAINAGE, & EROSION CONTROL





CERTIFIED BID TABULATION

Project: Apex West Greenway (American Tobacco Trail Connector)
Bid Opening: 2:00 p.m., July 13, 2023
Location: Town of Apex
Apex Senior Center
63 Hunter Street
Apex, NC 27502

Bid No.	Bidder Name	Bid Amount (as from bid Form)	Alternate Price	Non-Collusion Affidavit	Add 1	Add 2	Add 3	GC License#	Bid Bond	DBE Form
1	Lanier Construction Co	$712,077.00	NA	y	y	y	y	18152	y	y
2	H&H Ent of Kinghtdate	$975,000.00	NA	y	y	y	y	74272	y	y
3		$	$							
4		$	$							
5		$	$							
6		$	$							
7		$	$							
8		$	$							
9		$	$							
10		$	$							

Angela Reincke, Parks Planning Project Manager

Town of Apex- Parks, Recreation & Cultural Resources

This is to certify that the bids tabulated herein were publicy opened and read aloud at the time, date, and location listed above.

Town of Apex

CAPITAL PROJECT ORDINANCE AMENDMENT 2024-6

67 - Recreation Capital Project Fund

BE IT ORDAINED, by the Council of the Town of Apex that the Capital Project Ordinance previously entitled "Recreation Capital Project Fund" be amended as follows:

Section 1. The revenues anticipated for the projects are:

67-9200-0002-39777: Beaver Creek: Transfer from Rec Reserve	**(565,000)**
67-9200-0010-39777: Apex West Greenway: Transfer from Rec Reserve	565,000
Total Revenues	**$0**

Section 2. The expenditures anticipated are:

67-9200-0002-47300: Capital Outlay Improvements	**(565,000)**
67-9200-0010-47300: Capital Outlay Improvements	565,000
Total Expenditures	**$0**

Section 3. Within five (5) days after adoption, copies of this Amendment shall be filed with the Finance Officer and Town Clerk.

Adopted this the 26th day of September, 2023.

Attest:

Jacques K. Gilbert, Mayor

Allen L. Coleman, CMC, NCCCC
Town Clerk

TOWN OF APEX
GREENWAY CONSTRUCTION CONTRACT

FOR

Construction of Apex West Greenway (American Tobacco Trail Connector)
2925 Olive Chapel Road , Apex, NC 27502

SCOPE OF WORK

Construct Apex West Greenway (American Tobacco Trail Connector) in accordance with Plans titled " Apex West Greenway" dated 03/07/2023 including the all sheets by: Wetherill Engineering.

STATE OF NORTH CAROLINA **PURCHASE ORDER #**
COUNTY OF WAKE **GREENWAY CONSTRUCTION CONTRACT**

THIS GREENWAY CONSTRUCTION CONTRACT is entered into this the ____day of _____, 2023, by and between, _____, a _____ Corporation with its principal business offices located at_____(the "Contractor"), and the Town of Apex, a municipal corporation of the State of North Carolina, (the "Town"). Town and Contractor may collectively be referred to as "Parties" hereinafter.

WITNESSETH:

WHEREAS, Town is engaged in the planning and operation of public greenways which require construction, installation, evaluation, testing, and other related services; and

WHEREAS, the professional services of contractors from time to time are needed by the Town for the services as described above; and

WHEREAS, Contractor provides services of the nature required by the Town and employs trained and experienced technical personnel possessing adequate knowledge, skills, and experience to provide such professional services to the Town; and

WHEREAS, the Town has complied with Article 8 of Chapter 143 of the North Carolina General Statutes in announcing its need for services of the nature described in this Contract through a "Request for Proposal" and associated advertisement.

NOW THEREFORE, in consideration of the foregoing recitals, and the premises and mutual covenants herein contained, the receipt and adequacy of which is hereby acknowledged, the Parties, intending to be legally bound, hereto do contract and agree as follows:

1. DEFINITIONS

A. "Change Order" is a written order to the Contractor authorizing a change in the Contract.
B. "Contract Documents" is defined in Section 2 of this Contract.
C. "Contractor" is the entity performing construction services pursuant to this Contract.
D. "Final Acceptance" is the date on which the Town accepts the construction as totally complete. This includes inspection and acceptance of the Work by the Town and the Special Inspector.
E. "Inspection" means the examination of Work completed or in progress to determine its compliance with the Contract Documents.
F. "Liquidated damages" is the amount stated in this Contract reasonably estimated in advance to cover the consequential damages associated with the Town's loss in not being able to use the Project for its intended purposes at the end of the Contract's completion date by reason of failure of the Contractor to complete the Work within the time specified. Liquidated damages does not include the Town's extended contract administration costs (including but not limited to, additional fees for architectural and engineering services, testing services, inspection services, commissioning

services, etc.), such other damages directly resulting from delays caused solely by the Contractor, or consequential damages that the Town identified in the bid documents that may be impacted by any delay caused solely by the Contractor (e.g. delays in start other projects that are dependent on the completion of this Project, extension of leases and/or maintenance agreements for other facilities).

G. "Project" is the total construction Work to be performed under the Contract Documents by the Contractor and the Contractor's subcontractors.
H. "Special Inspector" is the entity who inspects materials, installation, fabrication, erection, placement of components and connections requiring special expertise to ensure compliance with the approved Construction Documents and referenced standards, and/or provides geotechnical inspection services.
I. "Subcontractor" shall be an entity that has entered into a direct contract with the Contractor, and includes an entity that furnishes materials designed in accordance with plans and specifications covered by the Contract Documents but does not include an entity furnishing materials not requiring the design described above.
J. "Surety" means the bonding company which is bound with and for the Contractor, and which engages to be responsible for the Contractor and the Contractor's acceptable performance of the Work.
K. "Time of Completion" is the consecutive calendar days measured from the date established in the written Notice to Proceed.
L. "Town" is the Town of Apex
M. "Written Notice" is defined as notice in writing delivered to either the Contractor or Town as identified in the Contract Documents, in person or by registered by mail.
N. "Work", when used as a noun, includes the materials, labor, and workership of the Contractor.

2. SCOPE OF SERVICES.

The Contractor agrees to provide all materials, equipment, machinery, tools, apparatus, power, sanitary facilities, water, means of transportation, incidentals, and labor necessary for the proper and lawful construction of the Apex West Greenway (American Tobacco Trail Connector) located at 2925 Olive Chapel Road, Apex, NC, 27502. Materials shall be new and of the quality specified. Construction shall include, but not necessarily be limited to, the following:

A. Asphalt Greenway Trail
B. Boardwalks
C. Erosion Control & Grading
D. Storm Drainage
E. Miscellaneous

Said construction will be performed in accordance with the "Contract Documents." The term "Contract Documents" includes this Contract and the following which are hereby incorporated into this Contract as if fully contained herein:

A. Plan sheets titled "Apex West Greenway ", dated 03/07/2023 including all sheets by Wetherill Engineering
B. Construction drawings titled " Apex West Greenway ", dated 03/07/2023.
C. Bid Advertisement

D. Town of Apex Standard Specifications and Standard Details
E. Instructions to Bidders
F. Execution of Bid
G. Bid Form
H. Bid Form Submission
I. Bid Bond
J. Accepted Form of Proposal
K. Notice of Award
L. Performance & Payment Bonds
M. Power of Attorney
N. Notice to Proceed
O. Special Provisions
P. Addenda:
   1. No. 1 Dated: 06/23/2023
   2. No. 2 Dated: 06/26/2023
   3. No. 3 Dated: 06/27/2023
   4. No. _____ Dated: _____
   5. No. _____ Dated: _____

Q. Certificate(s) of Insurance

Contractor shall maintain at its job office a complete set of the plans, drawings, and specifications for the Work which shall be available for use by the Town.

3. TIME OF COMMENCEMENT AND COMPLETION.

A. Contractor shall commence the work required in this Contract upon the issuance of a Notice to Proceed, and the Contractor shall complete the entire Work within 180 consecutive calendar days of the issuance of the Notice to Proceed ("Time of Completion"). For each day in excess thereof, liquidated damages, reasonably estimated in advance to cover the losses to be incurred by the Town by reason of failure of Contractor to complete the Work within the time specified, such time being of the essence in this Contract and a material consideration thereof, shall be assessed in the amount of $1,000.00 per calendar day. If Contractor has not satisfactorily completed the work within the times specified in the Contract Documents, the Town may declare such delay a material breach of contract and default and may pursue all available remedies outlined in the Contract Documents as well as all other available legal and equitable remedies. Any changes to the schedule(s) provided in the Contract Documents must be agreed to in writing by the Town and the Contractor.

B. If the Contractor is delayed at any time in the progress of his work by any act or negligence of the Town; Contractor's separate contractor or subcontractor; by changes ordered in the Work; by abnormal weather conditions; by any causes beyond the Contractor's control or by other causes deemed justifiable by Town, then the contract time may be reasonably extended in a written order from the Town upon written request from the Contractor. Request for extension of time shall be made in writing to the Town within twenty (20) days following the cause of delay. In case of continuing cause for delay, the Contractor shall notify the Town, with copies to the Town of the delay within twenty (20) days of the beginning of the delay and only one claim is necessary.

C. For the purpose of determining the extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the Contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Weather Service statistics for the locality where Work is performed and on daily weather logs kept on the job site by the Contractor reflecting the effect of the weather on the progress of the Work and initialed by Town's representative.

D. Time extensions for weather delays, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Town do not entitle the Contractor to compensable damages for delays. Any Contractor claim for compensable damages for delays is limited to delays caused solely by the Town or its agents. Contractor caused delays shall be accounted for before Town caused delays in the case of concurrent delays.

E. Contractor shall notify its Surety in writing of any granted extension of time.

4. CONSIDERATION AND PAYMENT OF SERVICES.

In consideration of the above services, the Town will pay the Contractor, subject to additions and deductions as provided in the Contract Documents, as follows:

Total Sum: Seven Hundred Twelve Thousand Seventy Seven Dollars ($ 712,077.00).

Summary of Contract Award:

Base Bid: $ 712,077.00
Alternate 1: $
Alternate 2: $
Total: $ 712,077.00

A. No later than the fifth day of the month, the Contractor shall submit application for payment reflecting work completed during the preceding calendar month to the Town Representative identified in Section 31 of this Contract. The request shall be in the form agreed upon between Contractor and the Town but shall show substantially the value of the work completed and materials delivered to the site during the period since the last payment and shall sum up the financial status of the Contract with following information:

1. Total of Contract including change orders.
2. Value of work completed to date.
3. Less retainage, as defined below.
4. Less previous payments.
5. Current amount due.

B. Prior to submitting the first pay application, Contractor shall prepare for the Town a schedule showing a breakdown of the Contract price into values of the various parts of the Work, arranged so as to facilitate payments to subcontractors.

C. When payment is made on account of stored materials and equipment, such materials must be stored on the Town's property, and the requests for payments shall be accompanied by invoices or bills of sale or other evidence to establish the Town's title to such materials and equipment. Such payments will be made only for materials that have been customized or fabricated specifically for this Project. Raw materials or commodity products costs may not be submitted. Responsibility for such stored materials and equipment shall remain with the Contractor regardless of title of ownership. Such stored materials and equipment shall not be removed from the Town's property. Should the space for storage on-site be limited, the Contractor, at its option, shall be permitted to store such materials and/or equipment in a suitable space off-site. Should the Contractor desire to include any such materials or equipment in its application for payment, they must be stored in the name of the Town in an independent, licensed, bonded warehouse approved by the Town and located as close to the site as possible. The warehouse selected must be approved by the Contractor's bonding and insurance companies; the material to be paid for shall be assigned to the Town. Upon approval by the Town of the storage facilities and materials and equipment, payment therefore will be made. Responsibility for such stored materials and equipment shall remain with the Contractor. Such stored materials and equipment shall not be moved except for transportation to the Project site.

D. Retainage: In accordance with N.C.G.S 143-134.1, for projects costing more than $100,000.00, the Town may withhold a percentage of payment until the Project has been satisfactorily completed. Retainage on periodic and final payment for this Project shall be as follows:
   a. Retainage withheld shall not exceed 5% at any time.
   b. The same terms shall apply to the general contractor and subcontractors alike.
   c. Following 50% completion of the Project, the Town, with written consent from the Surety, shall not retain further retainage if the Contractor continues to perform satisfactorily and any nonconforming work identified in writing prior to that time has been corrected by the Contractor and accepted by the Town. The Project shall be deemed 50% complete when the Contractor's gross Project invoices, excluding the value of materials stored off-site, equal or exceed 50% of the value of the Contract, except the value of materials stored on-site shall not exceed 20% of the Contractor's gross Project invoices for the purpose of determining whether the Project is 50% complete.
   d. If the Town determines that the Contractor is not performing satisfactorily, the Town may reinstate retainage for each subsequent periodic payment application up to 5%. Following 50% completion of the Project, Town is authorized to withhold additional retainage not to exceed 5% from a subsequent periodic payment application if the amount of total retainage withheld falls below 2.5%, through the completion of the Project.

E. If the pay application is approved by the Town, the Town will process all pay applications within 30 days after receipt from the Contractor. Town has the right to require the Contractor to produce for inspection all of Contractor's records and charges to verify the accuracy of all applications for payment. Town shall pay Contractor's invoices at times set forth above unless a bona fide dispute exists between Town and Contractor concerning the accuracy of said invoice or the services covered thereby.

5. FINAL PAYMENT.

A. Upon completion, the Contractor shall submit satisfactory evidence that all payrolls, material bills and other costs incurred by the Contractor in connection with the construction of the work have been paid in full. Final payment will be made within forty-five (45) days after acceptance of all work by the Town and after receipt of the final pay request which shall include the Contractor's affidavit, sworn and notarized, in the following form:

"This is to certify that all costs of materials, equipment, labor, subcontracted work, and all else entering into the accomplishment of this contract, including payrolls, have been paid in full, and no claims or liens exist against Contractor in connection with this Contract."

The Town may withhold payment for any of the following reasons:

1. Faulty or defective work not corrected.
2. The unpaid balance remaining on the Contract is not sufficient to complete the work in the sole judgement and discretion of the Town.
3. To provide a sufficient contract balance to cover liquidated damages that will be assessed.
4. Evidence that subcontractors have not been paid.

B. Prior to submitting request for final payment to the Town, Contractor shall provide the following:

1. Warranties and bonds, guarantees, maintenance agreements, as-built drawings, certificates of inspection or approval from agencies having jurisdiction.
2. List of minority business subcontractors and material suppliers showing breakdown of contract amounts and total actual payments to subcontractors and material suppliers.
3. Contractor's affidavit of payment to material suppliers and subcontractors.
4. Consent of Surety to final Payment.
5. Certificates of state agencies (if any) required by law.

6. CONSTRUCTION SUPERVISION AND SCHEDULE

A. Throughout the progress of the Work, the Contractor shall keep at the job site, a competent superintendent and supervisory staff satisfactory to the Town. The superintendent and supervisory staff shall not be changed without the consent of the Town unless said superintendent ceases to be employed by the Contractor or ceases to be competent as determined by the Contractor or Town. The superintendent and other staff designated by the Contractor in writing shall have authority to act on behalf of the Contractor, and instructions, directions or notices given to the superintendent shall be as binding as if given to the Contractor. However, directions, instructions, and notices shall be confirmed in writing.

B. Contractor shall examine and study the drawings and specifications and fully understand the Project design and shall provide constant and efficient supervision to the Work. Should Contractor discover any discrepancies of any sort in the drawings or specifications, Contractor shall report them to the Town without delay. Contractor will not be held responsible for discrepancies in the drawings and/or specifications but shall be held responsible to report them should they become known to Contractor.

C. Contractor is required to attend job site progress conferences as called by the Town. The Contractor shall be represented at these job progress conferences by both home office and

Project personnel. These representatives shall have authority to act on behalf of the Contractor. These meetings shall be open to subcontractors, material suppliers and any others who can contribute toward maintaining required job progress. It shall be the principal purpose of these meetings, or conferences, to effect coordination, cooperation and assistance in every practical way toward the end of maintaining progress of the Project on schedule and to complete the Project within the specified contract time. The Contractor shall be prepared to assess progress of the Work as required in the Contract Documents and to recommend remedial measures for correction of progress as may be appropriate. The Contractor shall turn over a copy of his daily reports to the Town at the job site progress conference. Town will determine daily report format.

D. Contractor shall prepare the Project construction schedule which shall graphically show all outstanding features of the Work required to construct the Project from start to finish and within the allotted time established in the Contract. Contractor shall maintain a Project progress schedule for the Town and shall notify the Town of any requested changes in the Project schedule.

E. The Project construction schedule shall indicate the estimated starting and completion dates for each major element of the Work by area and shall schedule dates for all outstanding features, including but not limited to the placing of orders for materials, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all required inspections. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

F. The Contractor is responsible for its Work activities and will notify Town of any required changes to its Work. If any Work activities are behind schedule the Contractor shall, in writing, describe what measures will be taken to bring each such activity back on schedule and to ensure that the Contract completion date is not exceeded. A plan of action and recovery schedule shall be developed and submitted to the Town by the Contractor, when (1) the Contractor indicates delays, that are in the opinion of the Town, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled completion is brought into question; (2) the updated construction schedule is thirty (30) days behind the planned or baseline schedule and no legitimate time extensions, as determined by the Town, are in process; or (3) the Contractor desires to make changes in the sequencing of Work or the planned duration of future activities which in the opinion of the Town, are of a major nature. The plan of action, when required shall be submitted to the Town for review within two (2) business days of the Contractor receiving the Town's written demand. The recovery schedule, when required, shall be submitted to the Town within five (5) calendar days of the Contractor's receiving the Town's written demand. Failure to provide an updated construction schedule or a recovery schedule may be grounds for rejection of payment applications or withholding of funds.

G. The proposed Project construction schedule shall be presented to the Town no later than fifteen (15) calendar days after the issuance of the written Notice to Proceed. No application for payment will be reviewed or paid until this schedule is accepted by the Town.

7. USE OF PREMISES.

A. Contractor shall confine its apparatus, the storage of materials and the operations of its workers to limits indicated by law, ordinances, permits or directions of the Town and shall not exceed those established limits in its operations.

B. Contractor shall enforce the Town's instructions regarding signs, advertisements, fires and smoking.

C. No firearms, any type of alcoholic beverages, or drugs (other than those prescribed by a physician) will be permitted at the job site.

8. PROTECTION OF WORK, PROPERTY AND THE PUBLIC.

A. The Contractor shall be responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the Town, and by laws or ordinances governing such conditions. Contractor shall be responsible for any damage to the Town's property, or of that of others on the job, by them, their personnel, or their subcontractors, and shall pay for or repair any such damages. Contractor shall be responsible for and pay for any damages caused to the Town.

B. The Contractor shall provide cover and protect all portions of the Project being constructed when the Work is not in progress as needed, provide and set all temporary roofs, covers, and all other materials necessary to protect all the Work on the Project, whether set by the Contractor, or any of the subcontractors. Any Work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the Town.

C. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the Town.

D. The Contractor shall protect all trees and shrubs designated to remain in the vicinity of the operations by building substantial boxes around same. Contractor shall barricade all walks, roads, etc., as directed by the Town to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the Work shall be well barricaded and properly lighted at night.

E. The Contractor shall provide all necessary safety measures for the protection of all persons on the job and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the Work. Contractor shall clearly mark or post signs warning of hazards existing and shall barricade excavations and similar hazards. Contractor shall protect against damage or injury resulting from falling materials and shall maintain all protective devices and signs throughout the progress of the Work.

F. The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.

G. The Contractor shall designate a responsible person of its organization as safety officer/inspector to inspect the Project site for unsafe health and safety hazards, to report these hazards to the Contractor for correction, and whose duties also include accident prevention on the Project, and to provide other safety and health measures on the Project site as required by the terms and conditions of the Contract Documents. The name of the safety inspector shall be made known to the Town at the time of the preconstruction conference and in all cases prior to any Work starting on the Project.

H. In the event of emergency affecting the safety of life, the protection of Work, or the safety of adjoining properties, the Contractor is hereby authorized to act at Contractor's own discretion, without further authorization from anyone, to prevent such threatened injury or damage.

I. Any and all costs associated with correcting damage caused to adjacent properties of the construction site or staging area shall be borne by the Contractor. These costs shall include but not be limited to flooding, mud, sand, stone, debris, and discharging of waste products.

9. UTILITIES.

Contractor shall provide necessary and adequate facilities for water, electricity, gas, oil, sewer and other utility services which may be necessary and required for completion of the Project including all utilities required for testing, cleaning, balancing, and sterilization of designated plumbing, mechanical and electrical systems. Any permanent meters installed shall be listed in the Contractor's name until Work has a Final Acceptance. The Contractor will be solely responsible for all utility costs prior to Final Acceptance. Contractor shall contact all affected utility companies prior to bid to determine their requirements to provide temporary and permanent service and include all costs associated with providing those services in their bid. Coordination of the Work of the utility companies during construction is the sole responsibility of the Contractor.

10. CHANGE ORDERS.

A. In the event Town has changes in the Work not covered by the Contract, these changes will not invalidate or relieve Contractor from any guarantee it has given in this Contract. These changes will not relieve the Surety or Sureties of any bonds and all extra Work shall be performed under the conditions of this Contract. Except in an emergency endangering life or property, changes in Work shall ***not*** proceed without a Change Order approved by the Town. Contractor shall provide a complete breakdown of all labor and material costs with the Change Order request. The breakdown shall include the Contractor's allowance for overhead and profit not to exceed 10% of the net cost of the change with Work provided directly by the Contractor. For purposes of this Contract, "net cost" shall mean the difference between all proper cost additions and deductions. No claim for adjustments of the contract price shall be valid unless the procedure outlined in this section is followed. Any Work performed pursuant to an approved change order shall be governed by the terms of this Contract.

B. The Parties agree that there are two methods that may be utilized to determine the cost of changes:

1. If unit prices are quoted in the proposal or bid and the additional work is covered by those unit prices, or can be subsequently agreed to by the Parties, the cost of the change shall be computed by application of the unit prices based on quantities. If this method is used no additional allowances shall be made for overhead and profit.

2. If the additional work is not covered by unit prices, unit prices were not provided in the proposal or bid, or the Parties mutually agree, then Town and Contractor may negotiate and agree upon the value of the change prior to the issuance of the Change Order and the Change Order shall identify the corresponding lump sum adjustment to the contract price.

C. In the event concealed conditions are discovered in the performance of the Work below grade, or in the event concealed or unknown conditions in an existing structure vary from the conditions indicated in the Contract Documents, the contract sum and time for completion may be adjusted by Change Order upon claim by either party made within thirty (30) days after the condition has been identified. The cost shall be determined by one of the methods outlined in this Contract.

D. Change Orders shall be submitted by the Contractor for the Town's review and approval. Contractor shall provide all applicable supporting data and information. Delay in approval of a Change Order due to Contractor's failure to submit proper documentation shall not be grounds for a time extension or basis of a claim. The Town shall respond to the Contractor's proposal within fourteen calendar (14) days of receipt of the proposal. If accepted, the Town shall prepare the Change Order for the Contractor's signature. The Town shall execute the approved Change Order within seven (7) days of receipt from the Contractor. The Contractor shall notify its bonding company that the Contract has been changed by the amount of the Change Order and provide a copy of the approved Change Order to the Surety. In the event a Change Order cannot be agreed upon by the Parties, nothing in this Contract shall preclude the Town from performing, or having performed, the Work requested in a Change Order.

11. MINOR CHANGES.

The Town may order minor changes in the Work not involving an adjustment in the Contract sum or Time for Completion, and not inconsistent with the intent of the Contract Documents. Such changes shall be executed by written order and shall be binding on the Contractor and subject to the terms of this Contract.

12. INSPECTION OF THE WORK.

A. It is a condition of this Contract that the Work shall be subject to inspection during normal working hours and during any time Work is in preparation and progress by the Town or a Special Inspector designated by the Town, and those persons required by state law to test Work for official approval. The Contractor shall therefore provide safe access to the Work at all times for such inspections.

B. All Work shall be inspected by the Town or Special Inspector (if applicable) prior to being covered by the Contractor. Contractor shall give a minimum two weeks' notice of needed inspections unless otherwise agreed to by all parties. If an inspection fails, all costs associated with additional re-inspections shall be borne by the Contractor.

C. Where special inspection or testing is required by virtue of any state laws, instructions of the Town, specifications, or codes, the Contractor shall give adequate notice to the Town of the time set for such inspection or test. Such special tests or inspections will be made in the presence of the Town's representative, and it shall be the Contractor's responsibility to serve ample notice of such tests.

D. All laboratory tests shall be paid by the Town unless provided otherwise in the Contract Documents, except the Contractor shall pay for laboratory tests to establish design mix for concrete, and for additional tests to prove compliance with Contract Documents where materials have tested deficient except when the testing laboratory did not follow the appropriate ASTM testing procedures.

E. Should any Work be covered up or concealed prior to inspection and approval by the Town or Special Inspector, such Work shall be uncovered or exposed for inspection, if requested by the Town. Inspection of the Work will be made upon notice from the Contractor that the Work has been uncovered or exposed. In the event Work has been covered or concealed, all costs involved in uncovering, repairing, replacing, recovering and restoring to design condition said Work will be paid by the Contractor.

13. TOWN'S RIGHT TO PERFORM WORK.

If at any point during the performance or progress of the work, or during the period of guarantee, Contractor fails to perform the Work in a satisfactory manner or to perform in accordance with the terms of this Contract, the Town, after seven (7) days' written notice to the Contractor from the Town, may perform or have performed that portion of the Work. The cost of the associated Work may be deducted from any amounts due or that become due to the Contractor. In the event the cost of such performance exceeds the amount due the Contractor, then the Contractor or the Surety (if applicable), or both, shall be liable for and shall pay to the Town the amount of the excess.

14. UNCORRECTED FAULTY WORK

Should the correction of faulty or damaged Work be considered inadvisable by the Town, the Work will not be corrected and the Town shall be reimbursed by the Contractor for the devaluation of the Project as a result of the faulty Work. A change order will be issued to reflect the reduction in Contract sum.

15. FINAL INSPECTION AND FINAL ACCEPTANCE

A. Upon notification from the Contractor that the Project is complete and ready for inspection, the Town shall complete a final inspection to verify that the Project is complete. The Contractor shall schedule the final inspection at a time and date acceptable to the Town.

B. Upon final inspection, the Town shall, if job conditions warrant, record a list of items that are found to be incomplete or not in accordance with the Contract Documents. At the conclusion of the Town's final inspection, the Town shall make one of the following determinations:

1. That the Project is completed and accepted.

2. That the Project will be accepted subject to the correction of any identified discrepancies or faulty construction.

3. That the Project is not complete and a date for another final inspection will be established.

The date of Final Acceptance will establish the beginning of the guarantees and warranties period and the termination of utility cost to the Contractor. No liquidated damages will be assessed after this date.

16. CORRECTION OF WORK PRIOR TO FINAL PAYMENT

A. Any Work, materials, fabricated items or other parts of the Work which are not in accordance with the Contract shall be promptly removed from the Work site by the Contractor and shall be immediately replaced by new Work in accordance with the Contract Documents at no additional cost to the Town. Work or property of other contractors or the Town, damaged or destroyed by virtue of such faulty Work, shall be made good at the expense of the Contractor.

B. Correction of faulty Work described above shall commence within twenty-four (24) hours after receipt of notice from the Town, and shall make satisfactory progress, as determined by the Town, until completed.

C. Should Contractor fail to proceed with the corrections in a timely fashion Town may complete the Work in accordance with this Contract.

17. CORRECTION OF WORK AFTER FINAL PAYMENT

Neither the final payment or use of the premises by the Town, nor any provision of the Contract, nor any other act or instrument of the Town, shall relieve the Contractor from responsibility for negligence, or faulty material or workership, or failure to comply with the drawings and specifications. Contractor shall correct or make good any defects due thereto and repair any damage resulting there from, which may appear during the guarantee period following Final Acceptance of the Work. The Town will report any defects as they may appear to the Contractor and establish a time limit for completion of corrections by the Contractor. The Town will be the judge as to the responsibility for correction of defects.

18. MINORITY BUSINESS PARTICIPATION

Contractor is required to identify participation of Minority and Women-Owned Business Enterprises (MWBE) in its proposal and document how that participation is achieved. There is a verifiable goal of ten percent (10%) for participation by minority businesses in the total value of work for the Project. Contractor shall comply with the document titled "Guidelines For Recruitment and Selection of Minority Businesses For Participation In Town of Apex Construction Contracts", including associated Affidavits and Appendices which are hereby incorporated herein.

19. APPLICABILITY OF LAWS AND REGULATIONS.

The Contractor shall adhere to all laws, ordinances, and regulations of the United States, the State of North Carolina, the County of Wake, and the Town of Apex in the performance of the services outlined in this Contract and any attached specifications. This Contract shall be governed by the laws of the State of North Carolina.

Contractor shall obtain all required permits and inspections and shall give all notices required by law in performance of this Project. In the event Contractor observes that any drawings or specifications are not in compliance with any such rules, laws, or regulations, Contractor shall promptly notify the Town in writing. Contractor shall not perform any Work knowing it to be contrary to any laws, ordinances, codes, rules or regulations.

All Work under this Contract shall be performed in accordance with the North Carolina Building Code and all other applicable state or national codes.

20. E-VERIFY COMPLIANCE.
The Contractor shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify). Contractor shall require all of the Contractor's subcontractors to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify).

21. QUALITY AND WORKERSHIP.
Contractor shall provide services in accordance with all governing agency regulations and shall be held to the same standard and shall exercise the same degree of care, skill and judgment in the performance of services for Town as is ordinarily provided by a similar professional under the same or similar circumstances at the time in North Carolina. Contractor hereby certifies that Contractor is a licensed general contractor as defined by N.C.G.S. 87-1.

22. SURETY.
If at any time after the execution of this Contract and the surety bonds included in the Contract Documents for the faithful performance of the Contract, the Town shall deem the surety or sureties upon such bonds to be unsatisfactory, or if, for any reason, such bonds cease to be adequate to cover the performance of the Work, the Contractor shall, at its expense, within five (5) days after the receipt of notice from the Town so to do, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the Town. In such event no further payment to the Contractor shall be deemed to be due under this Contract until such new or additional security for the faithful performance of the Work shall be furnished in manner and form satisfactory to the Town.

23. BOND REQUIREMENTS.
Within ten (10) days of the award of the Contract, Contractor shall provide the Town of Apex with a contract payment bond and a contract performance bond executed by a surety company authorized to do business in North Carolina, each in an amount equal to 100 percent of the amount of the Contract. All bonds shall be in conformity with N.C.G.S. 44A-33 and countersigned by an authorizing agent of the bonding company.

Failure on the part of the Contractor to file acceptable bonds within the required timeframe shall be just cause for the forfeiture of the bid bond or bid deposit and rescinding award of the Contract. Award may then be made to the next lowest responsible bidder or the Work may be re-advertised.

24. CONTRACTOR'S WARRANTIES.
The Contractor, in executing this Contract, unconditionally guarantees the materials and workmanship against defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the Final Acceptance of the Work by the Town and shall replace all such defective materials or workmanship without cost to the Town. In the case where materials or equipment carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that specific equipment or material. During the manufacturer's warranty period the Contractor shall be responsible for the replacement of such defective equipment or materials.

Nothing in this section shall preclude the Town from bringing an action for latent defects caused by the negligence of the Contractor which is concealed, hidden, or not readily apparent to the Town at the time of Final Acceptance, in accordance with applicable law. Guarantees that are stipulated in the specifications or drawings shall govern those particular materials or equipment.

25. CODES AND STANDARDS.

Wherever reference is made to codes, standard specifications, or other data published by regulating agencies it shall be understood that said reference is to the latest edition published prior to the date of the Contract Documents. These regulating agencies include, but are not limited to, North Carolina state building codes, federal specifications, national electric codes, ASTM specifications and various institute specifications.

26. INDEMNIFICATION.

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Town and its agents, consultants, elected officials, and employees, from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance or failure of performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting there from, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, the Contractor's subcontractor, or the agents of either the Contractor or the Contractor's subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this section.

27. INSURANCE.

Work under this Contract shall not begin until the Contractor has obtained all required insurance set forth below and verifying certificates of insurance have been provided to the Town. All required certificates of insurance, endorsements, and blanket additional insured policy provisions are attached and considered part of this Contract. These certificates shall document that coverages afforded under the policies will not be cancelled, reduced in amount or eliminated without written notice, by certified mail, to the Town of such alteration or cancellation. Notwithstanding the foregoing, neither the requirement of Contractor to have sufficient insurance nor the requirement that Town is named as an additional insured, shall constitute waiver of the Town’s governmental immunity in any respect, under North Carolina law.

a. Worker’s Compensation and Employer's Liability

The Contractor shall provide and maintain, until Final Acceptance, Worker's compensation insurance, as required by law, as well as employer's liability coverage with a minimum limit of $1,000,000.

b. Public Liability and Property Damage

The Contractor shall provide and maintain, until Final Acceptance, comprehensive general liability insurance, including coverage for premises operations, independent contractors, completed operations, products and contractual exposures, as shall protect such contractors from claims arising out of any bodily injury, including accidental death, as well as from claims for property damages which may arise from operations under this Contract, whether such operations be by the Contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them and the minimum limits of such insurance shall be as follows:

Commercial General Liability:

Each Occurrence: Two Million ($2,000,000)
General Aggregate: Four Million ($4,000,000)
Products-Completed/Operations Aggregate: Four Million ($4,000,000)

Such coverage for completed operations must be maintained for at least two (2) years following Final Acceptance of the Work performed under the Contract.

c. Commercial Automobile Liability Coverage

The Contractor shall purchase and maintain, until Final Acceptance, commercial automobile liability insurance as follows:

Combined Single Limit Per Accident: Two Million ($2,000,000) for bodily injury, death of any person, and property damage covering vehicles owned, non-owned, and hired by Contractor and used during construction.

d. **Property Insurance (Builder's Risk/Installation Floater**)

The Contractor shall purchase and maintain property insurance until Final Acceptance, upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Town, the Contractor, the subcontractors and sub-subcontractors in the Work and shall insure against the perils of fire, wind, rain, flood, extended coverage, and vandalism and malicious mischief. If the Town is damaged by failure of the Contractor to purchase or maintain such insurance, then the Contractor shall bear all reasonable costs properly attributable thereto; the Contractor shall obtain and maintain similar property insurance on portions of the Work stored off the site when request for payment per articles so includes such portions.

e. Environmental Pollution Liability

If the Work includes the use or release of pollutants Contractor shall maintain Environmental Pollution Liability in the following minimum amounts:

Each Occurrence: Two Million ($1,000,000)
Aggregate: Four Million ($4,000,000)

f. Deductible

Any deductible, if applicable to loss covered by insurance provided, is to be borne by the Contractor.

g. Other Insurance

The Contractor shall obtain such additional insurance as may be required by the Town or by the General Statutes of North Carolina including motor vehicle insurance, in amounts not less than the statutory limits.

Commercial General Liability and Commercial Automobile Liability limits can be satisfied under a combination of Primary and Umbrella/Excess Liability Insurance policies.

Waiver of Subrogation is required on General Liability, Auto Liability, Worker's Compensation and Umbrella policies.

Town of Apex is to be named as Additional Insured on General Liability and Automobile Liability policies.

h. Proof of Carriage

The Contractor shall furnish the Town with satisfactory proof of carriage of the insurance required before approval of the insurance is granted by the Town.

28. SUBCONTRACTORS.

Contractor shall be fully responsible for Contractor's own acts or omissions as well as those of any subcontractor retained to perform services pursuant to this Contract. Contractor acknowledges that no contractual relationship exists between the subcontractor and the Town in regards to this Contract and that the subcontractor is acting as an agent or employee of the Contractor. Contractor acknowledges that the terms of this Contract apply to each subcontractor as it does to the Contractor and Contractor will take whatever steps necessary to bind all subcontractors working on this Project to these terms.

29. DEFAULT.

In the event the Contractor fails to begin the Work pursuant to the Contract Documents within the time specified, or the progress of the Work is not maintained on schedule, or the Work is not completed within the time specified, or fails to perform the Work with sufficient staff and equipment or with sufficient materials to ensure the prompt completion of said Work, or shall perform the Work unsuitably or shall discontinue the prosecution of the Work, or if the Contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against Contractor unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the Work in an acceptable manner, the Town may give notice in writing, sent by certified mail, return receipt requested, to the Contractor and its surety of such delay, neglect or default, specifying the same, and if the Contractor within a period of seven (7) days after such notice shall not proceed in accordance with the notice, then the Town shall, declare this Contract in default. Upon a declaration of default the following shall apply:

The Surety shall promptly take over the Work and complete the performance of this Contract in the manner and within the time frame specified. In the event the Surety shall fail to take over the Work to be done under this Contract within seven (7) days after being so notified and notify the Town in

writing, sent by certified mail, return receipt requested, that it is taking the same over and stating that it will diligently pursue and complete the same, the Town shall have full power and authority, without violating the Contract, to take the prosecution of the Work out of the hands of said Contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said Contract according to the terms and provisions thereof or use such other methods as in Town's opinion shall be required for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Town, together with the costs of completing the Work under Contract, shall be deducted from any monies due or which may become due said Contractor and Surety. In the event the expense shall exceed the sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Town the amount of said excess.

30. TERMINATION FOR CONVENIENCE.

Town shall have the right to terminate this Contract for the Town's convenience upon thirty (30) days written notice to Contractor. Contractor shall terminate performance of services on a schedule acceptable to the Town. Unless otherwise notified, upon termination Contractor shall discontinue all Work and the placement of orders for materials and supplies in connection with this Contract.

Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the Work completed in conformity with this Contract; plus, (2) such other costs actually incurred by Contractor as are permitted by the Contract and approved by Town. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Contract. Contractor shall not be entitled to any claim or claim of lien against Town for any additional compensation or damages in the event of such termination and payment.

31. NOTICE.

Any formal notice, demand, or request required by or made in connection with this Contract shall be deemed properly made if delivered in writing in person by registered mail to the address specified below.

TO CONTRACTOR:	TO TOWN: Town of Apex Attn: _____ PO Box 250 Apex, NC 27502 _____@apexnc.org

32. NONWAIVER FOR BREACH.

No breach or non-performance of any term of this Contract shall be deemed to be waived by either party unless said breach or non-performance is waived in writing and signed by the parties. No waiver of any breach or non-performance under this Contract shall be deemed to constitute a waiver of any subsequent breach or non-performance and for any such breach or non-performance each party shall be relegated to such remedies as provided by law.

33. CONSTRUCTION.
Should any portion of this Contract require judicial interpretation, it is agreed that the Court or Tribunal construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against any one party by reason of the rule of construction that a document is to be more strictly construed against the party who prepared the documents.

34. NO REPRESENTATIONS.
The parties hereby warrant that no representations about the nature or extent of any claims, demands, damages, or rights that they have, or may have, against one another have been made to them, or to anyone acting on their behalf, to induce them to execute this Contract, and they rely on no such representations; that they have fully read and understood this Contract before signing their names; and that they act voluntarily and with full advice of counsel.

35. SEVERABILITY.
In the event for any reason that any provision or portion of this Contract shall be found to be void or invalid, then such provision or portion shall be deemed to be severable from the remaining provisions or portions of this Contract, and it shall not affect the validity of the remaining portions, which portions shall be given full effect as if the void or invalid provision or portion had not been included herein.

36. COUNTERPARTS.
This Contract may be executed in two or more counterparts, each of which shall be deemed an original, and all of which together shall constitute one instrument.

37. MODIFICATION.
This Contract contains the full understanding of the parties. Any modifications or addendums to this Contract must be in writing and executed with the same formality as this Contract.

38. BINDING EFFECT.
The terms of this Contract shall be binding upon the parties' heirs, successors, and assigns.

39. ASSIGNMENT.
Contractor shall not assign, sublet, or transfer any rights under or interest in (including, but without limitation, monies that may become due or monies that are due) this Contract without the written consent of the Town. Nothing contained in this paragraph shall prevent Contractor from employing such independent consultants, associates, and sub-contractors as it may deem appropriate to assist Contractor in the performance of services rendered.

40. INDEPENDENT CONTRACTOR.
Contractor is an independent contractor and shall undertake performance of the services pursuant to the terms of this Contract as an independent contractor. Contractor shall be wholly responsible for the methods, means and techniques of performance.

41. NON-APPROPRIATION.
Notwithstanding any other provisions of this Contract, the parties agree that payments due hereunder from the Town are from appropriations and monies from the Town Council and any other governmental entities.

In the event sufficient appropriations or monies are not made available to the Town to pay the terms of this Contract for any fiscal year, this Contract shall terminate immediately without further obligation of the Town.

42. IRAN DIVESTMENT ACT CERTIFICATION.

N.C.G.S. 147-86.60 prohibits the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina from contracting with any entity that is listed on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C.G.S. 147-86.58. N.C.G.S. 147-86.59 further requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer's Final Divestment List. As of the date of execution of this Contract the Contractor hereby certifies that the Contractor is not listed on the Final Divestment List created by the North Carolina State Treasurer and that the Contractor will not utilize any subcontractors found on the Final Divestment List.

43. ANTI-HUMAN TRAFFICKING.

The Contractor warrants and agrees that no labor supplied by the Contractor or the Contractor's subcontractors in the performance of this Agreement shall be obtained by means of deception, coercion, intimidation or force, or otherwise in violation of North Carolina law, specifically Article 10A, Subchapter 3 of Chapter 14 of the North Carolina General Statutes, Human Trafficking.

In witness thereof, the contracting parties, by their authorized agents, affix their signatures and seals this_____day of_____, 2023.

Contractor:_____	**Town of Apex**
_____ (Print name)	_____ Shawn Purvis, Interim Town Manager
_____ Signature	Attest:
_____ Title	_____ Allen L. Coleman, CMC, NCCCC, Town Clerk
Attest:	*This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.*
_____ Secretary (if a corporation)	_____ Finance Director

NOTICE OF AWARD

September 20, 2023

Project:	Apex West Greenway (American Tobacco Trail Connector)
Bidder:	Henry Lanier Lanier Construction Co., Inc.
Bidders' Address:	1505 Browntown Road, Snow Hill, NC 28580

You are notified that the Town has considered the Bid received from you on July 13, 2023 for the above-named project and that you are the Successful Bidder and awarded the Contract for: Apex West Greenway (American Tobacco Trail Connector).

As stipulated in the Instruction to Bidders, you are required to furnish the required Insurance Certificate within ten calendar days from the date of this Notice to you.

You should also deliver to Owner (4) counterparts of the Agreement, fully executed by Bidder. If you fail to furnish said documents within ten days from the date of this Notice, the Town will be entitled to consider all your rights arising out of the Town's Acceptance of your Bid as abandoned. The Town will be entitled to such other rights as may be granted by law.

TOWN OF APEX

BY: _____ _____
Shawn Purvis, Interim Town Manager Date

ACCEPTANCE OF NOTICE
Receipt is hereby acknowledged

BY: _____ _____
(signature) Date

_____
(written)

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Angela Reincke, Parks Planning Project Manager

Department(s): Parks, Recreation, and Cultural Resources

Requested Motion

Motion to award a construction contract, upon NCDOT concurrence, for EB-6021 Beaver Creek Greenway (PH1, 2 and 1A) construction which amends the previous action by Town Council on August 8, 2023, to ensure compliance with Locally Administered Project funding requirements, and to authorize Interim Town Manager, or their designee, to execute the contract on behalf of the Town.

Approval Recommended?

Yes

Item Details

This is a locally administered federal-aid project (LAPP) to complete a greenway improvement from Kelly Road park to the Nature park with connectivity to Kelly West and Greenbrier subdivisions. Originally the project was approved for a reimbursement with a maximum of $1,052,881.60, but Capital Area Metropolitan Organization's Executive Board has approved additional funding which would provide for a reimbursement to a maximum of $4,495,510. The purpose of this action is to correct the previous motion which referenced an award of a contract with NC DOT. This action clarifies that the award is not to or with NCDOT but instead is pending NCDOT Concurrence which is required for reimbursement. Sealed bids for construction and furnishing of all material s were received and opened on Thursday, June 22, 2023. It is the recommendation of staff that the contract be awarded to Fred Smith Co. as the lowest responsible bidder, upon concurrence from NCDOT.

Bid Summary (Responsive bids):

Engineers Updated Estimate	$6,323,822.00
Fred Smith Co	$6,592,956.00
Crowder Construction	$6,941,974.91

Attachments

- CN4-A1: Beaver Creek Greenway Bid and Funding Memo dated July 31, 2023 - Beaver Creek Greenway Construction (Phase 1, Phase1A, and Phase 2)

- CN4-A2: Construction Contract - Beaver Creek Greenway Construction (Phase 1, Phase1A, and Phase 2)
- CN4-A3: Plat Map - Beaver Creek Greenway Construction (Phase 1, Phase1A, and Phase 2)
- CN4-A4: Bid Tabulation - Beaver Creek Greenway Construction (Phase 1, Phase1A, and Phase 2)
- CN4-A5: Notice of Award - Beaver Creek Greenway Construction (Phase 1, Phase1A, and Phase 2)

July 31, 2023

To: Mayor Gilbert and Town Council

Cc: Demetria John, Assistant Town Manager; Craig Setzer, PRCR Director; Amanda Grogan, Budget Director; Antwan Morrison, Finance Director

From: Shawn Purvis, Deputy Town Manager

Re: Beaver Creek Greenway Bid Award and Project Funding

The purpose of this memo is to provide Town Council with information about the Beaver Creek Greenway project bidding and potential grant funding available from the Locally Administered Projects Program (LAPP). The memo provides a brief background of the project costs and information about the potential LAPP funding available for Town Council to consider as they review the recommended options and the implications of each option.

Background

The Beaver Creek Greenway project was part of the 2017 Parks Bond referendum. The greenway will connect Kelly Road Park to the Nature Park and provide for future extensions and connections to the west of the Nature Park. The original project budget at the time of the referendum was approximately $4.02 million. Design alterations, right-of-way acquisition, and increasing costs with the Senior Center and Pleasant Park created delays for the Beaver Creek Greenway project. The Town bid the project in July 2022 with a revised total budget estimate of approximately $6.56 million. The Town has a funding reimbursement agreement for $1.05 million from LAPP for the project, with funds from the Recreation Capital Reserve covering the remainder of the project costs. After receiving only two bids in 2022 and being unable to open them, staff consulted with Capital Area Metropolitan Planning Organization (CAMPO) about potential modifications to the project and additional LAPP funding. CAMPO staff recommended the Town rebid the project and apply for additional LAPP funding. The Town opened bids for the project on June 22, 2023, with the apparent low bid of $6.59 million. The construction bid brought the total projected budget to $8.67 million, which was $2.11 million over the most recent estimate.

Discussion

To be considered for additional LAPP funding from CAMPO, the Town needs to demonstrate a full commitment to the project for NCDOT to provide concurrence of the award. The Town is eligible to make a funding request to CAMPO for an additional $3.44 million, for a total of $4.49 million. The project is eligible for additional funding because the Town did not receive the full amount eligible or requested for the first LAPP funding agreement in 2020 ($1.05 million). Town staff has submitted a request to CAMPO, who is prepared to consider it at their next board meeting on August 16, 2023. CAMPO staff has provided a recommendation for the board to award the funding. The Town's commitment to the project with the current budget would be $7.62 million. If CAMPO awards the full funding requested, the Town's funding obligation would be $4.18 million.

Recommendation

The Beaver Creek Project was part of the original package of projects supported by the 2017 Parks Bond referendum. Increased costs for the Senior Center and Pleasant Park reduced available bond monies for the greenway, but the project remained a priority. The total project cost is more than double the original estimate but additional LAPP funding is available that, if awarded, would bring the Town's financial commitment close to the original project budget of $4.02 million. Staff recommends Town Council consider the following options.

- **Delay the project until a future date.** If Council does not wish to proceed at this time, the project can be delayed and rebid in the future. It is unknown what effect a delay would have on the cost of the project although it would likely increase. There may not be additional LAPP funds available in the future.

- **Award the project bid and approve the necessary budget amendment to fully fund the project.** If Council chooses to move forward with the project, Council will need to approve a budget amendment that allocates additional funding ($2.1 million) from the Recreation Capital Reserve. This allocation will fund the project and indicate a commitment of $7.62 million from the Town and $1.05 million from LAPP. The allocation would reduce the Recreation Capital Reserve by approximately half. Fully committing to the project will also allow the Town to receive support for an additional $3.44 million of LAPP funding. The additional LAPP funding is not guaranteed until awarded by the CAMPO board.

TOWN OF APEX
GREENWAY CONSTRUCTION CONTRACT

FOR

Construction of Beaver Creek Greenway Extension Phases 1, 2 and 1A
Apex, NC

SCOPE OF WORK

Construct Beaver Creek Greenway Extension Phases 1, 2 and 1A in accordance with Construction Plans titled "EB-6021 Beaver Creek Greenway Extension, Phases 1, 2 and 1A" dated August 27, 2021, including all sheets: by Kimley-Horn.

THIS GREENWAY CONSTRUCTION CONTRACT is effective the ___ day of ____ 2023, by and between, FSC II, LLC dba Fred Smith Company, a North Carolina limited liability corporation with its principal business offices located at 701 Corporate Center Drive Suite 101 Raleigh NC 27607 (the "Contractor"), and the Town of Apex, a municipal corporation of the State of North Carolina, (the "Town"). Town and Contractor may collectively be referred to as "Parties" hereinafter.

WITNESSETH:

WHEREAS, Town is engaged in the planning and operation of public greenways which require construction, installation, evaluation, testing, and other related services; and

WHEREAS, the professional services of contractors from time to time are needed by the Town for the services as described above; and

WHEREAS, Contractor provides services of the nature required by the Town and employs trained and experienced technical personnel possessing adequate knowledge, skills, and experience to provide such professional services to the Town; and

WHEREAS, the Town has complied with Article 8 of Chapter 143 of the North Carolina General Statutes in announcing its need for services of the nature described in this Contract through a "Request for Proposal" and associated advertisement.

NOW THEREFORE, in consideration of the foregoing recitals, and the premises and mutual covenants herein contained, the receipt and adequacy of which is hereby acknowledged, the Parties, intending to be legally bound, hereto do contract and agree as follows:

1. DEFINITIONS

A. "Change Order" is a written order to the Contractor authorizing a change in the Contract.
B. "Contract Documents" is defined in Section 2 of this Contract.
C. "Contractor" is the entity performing construction services pursuant to this Contract.
D. "Final Acceptance" is the date on which the Town accepts the construction as totally complete. This includes inspection and acceptance of the Work by the Town and the Special Inspector.
E. "Inspection" means the examination of Work completed or in progress to determine its compliance with the Contract Documents.
F. "Liquidated damages" is the amount stated in this Contract reasonably estimated in advance to cover the consequential damages associated with the Town's loss in not being able to use the Project for its intended purposes at the end of the Contract's completion date by reason of failure of the Contractor to complete the Work within the time specified. Liquidated damages does not include the Town's extended contract administration costs (including but not limited to, additional fees for architectural and engineering services, testing services, inspection services, commissioning services, etc.), such other damages directly resulting from delays caused solely by the Contractor, or consequential damages that the Town identified in the bid documents that may be impacted by any delay caused solely by the Contractor (e.g. delays in start other projects that are dependent on

the completion of this Project, extension of leases and/or maintenance agreements for other facilities).

G. "Project" is the total construction Work to be performed under the Contract Documents by the Contractor and the Contractor's subcontractors.
H. "Special Inspector" is the entity who inspects materials, installation, fabrication, erection, placement of components and connections requiring special expertise to ensure compliance with the approved Construction Documents and referenced standards, and/or provides geotechnical inspection services.
I. "Subcontractor" shall be an entity that has entered into a direct contract with the Contractor, and includes an entity that furnishes materials designed in accordance with plans and specifications covered by the Contract Documents but does not include an entity furnishing materials not requiring the design described above.
J. "Surety" means the bonding company which is bound with and for the Contractor, and which engages to be responsible for the Contractor and the Contractor's acceptable performance of the Work.
K. "Time of Completion" is the consecutive calendar days measured from the date established in the written Notice to Proceed.
L. "Town" is the Town of Apex
M. "Written Notice" is defined as notice in writing delivered to either the Contractor or Town as identified in the Contract Documents, in person or by registered by mail.
N. "Work", when used as a noun, includes the materials, labor, and workership of the Contractor.

2. SCOPE OF SERVICES.

The Contractor agrees to provide all materials, equipment, machinery, tools, apparatus, power, sanitary facilities, water, means of transportation, incidentals, and labor necessary for the proper and lawful construction of the Beaver Creek Greenway Extension Phases 1, 2 and 1A, located in Apex, NC as identified by the Town representative named in Section 31 of this Contract. Materials shall be new and of the quality specified. Construction shall include, but not necessarily be limited to, the following:

A. Grading
B. Drainage
C. Paving
D. Curb and Gutter
E. Traffic Control
F. Signing
G. Erosion Control
H. Structures

Said construction will be performed in accordance with the "Contract Documents." The term "Contract Documents" includes this Contract and the following which are hereby incorporated into this Contract as if fully contained herein:

A. Construction Plan sheets titled "EB-6021 Beaver Creek Greenway Extension, Phases 1, 2 and 1A" dated August 27, 2021, including all sheets: by Kimley-Horn.
B. Bid Advertisement
C. Town of Apex Standard Specifications and Standard Details
D. Instructions to Bidders
E. Execution of Bid
F. Bid Form

G. Bid Form Submission
H. Bid Bond
I. Accepted Form of Proposal
J. Notice of Award
K. Performance & Payment Bonds
L. Power of Attorney
M. Notice to Proceed
N. Special Provisions
O. Project Manual for EB-6021 Beaver Creek Greenway Extension, Phases 1, 2 and 1A including all technical specifications
P. Addenda:
   1. No. ___1___ Dated: June 16, 2023_
   2. No. _____ Dated: _____
   3. No. _____ Dated: _____
   4. No. _____ Dated: _____
   5. No. _____ Dated: _____

Q. Certificate(s) of Insurance

Contractor shall maintain at its job office a complete set of the plans, drawings, and specifications for the Work which shall be available for use by the Town.

3. TIME OF COMMENCEMENT AND COMPLETION.

A. Contractor shall commence the work required in this Contract upon the issuance of a Notice to Proceed, and the Contractor shall complete the entire Work within 540 consecutive calendar days of the issuance of the Notice to Proceed ("Time of Completion"). For each day in excess thereof, liquidated damages, reasonably estimated in advance to cover the losses to be incurred by the Town by reason of failure of Contractor to complete the Work within the time specified, such time being of the essence in this Contract and a material consideration thereof, shall be assessed in the amount of $1,000.00 per calendar day. If Contractor has not satisfactorily completed the work within the times specified in the Contract Documents, the Town may declare such delay a material breach of contract and default and may pursue all available remedies outlined in the Contract Documents as well as all other available legal and equitable remedies. Any changes to the schedule(s) provided in the Contract Documents must be agreed to in writing by the Town and the Contractor.

B. If the Contractor is delayed at any time in the progress of his work by any act or negligence of the Town; Contractor's separate contractor or subcontractor; by changes ordered in the Work; by abnormal weather conditions; by any causes beyond the Contractor's control or by other causes deemed justifiable by Town, then the contract time may be reasonably extended in a written order from the Town upon written request from the Contractor. Request for extension of time shall be made in writing to the Town within twenty (20) days following the cause of delay. In case of continuing cause for delay, the Contractor shall notify the Town, with copies to the Town of the delay within twenty (20) days of the beginning of the delay and only one claim is necessary.

C. For the purpose of determining the extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the Contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Weather Service statistics for the

locality where Work is performed and on daily weather logs kept on the job site by the Contractor reflecting the effect of the weather on the progress of the Work and initialed by Town's representative.

D. Time extensions for weather delays, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Town do not entitle the Contractor to compensable damages for delays. Any Contractor claim for compensable damages for delays is limited to delays caused solely by the Town or its agents. Contractor caused delays shall be accounted for before Town caused delays in the case of concurrent delays.

E. Contractor shall notify its Surety in writing of any granted extension of time.

4. CONSIDERATION AND PAYMENT OF SERVICES.

In consideration of the above services, the Town will pay the Contractor, subject to additions and deductions as provided in the Contract Documents, as follows:

Total Sum: Six Million Five Hundred Ninety Two Thousand Nine Hundred Fifty Six Dollars and Zero Cents ($6,592,956.00).

Summary of Contract Award:

Base Bid:	$6,592,956.00
Alternate 1:	$_____
Alternate 2:	$_____
Total:	$6,592,95.00

A. No later than the fifth day of the month, the Contractor shall submit application for payment reflecting work completed during the preceding calendar month to the Town Representative identified in Section 31 of this Contract. The request shall be in the form agreed upon between Contractor and the Town but shall show substantially the value of the work completed and materials delivered to the site during the period since the last payment and shall sum up the financial status of the Contract with following information:

1. Total of Contract including change orders.
2. Value of work completed to date.
3. Less retainage, as defined below.
4. Less previous payments.
5. Current amount due.

B. Prior to submitting the first pay application, Contractor shall prepare for the Town a schedule showing a breakdown of the Contract price into values of the various parts of the Work, arranged so as to facilitate payments to subcontractors.

C. When payment is made on account of stored materials and equipment, such materials must be stored on the Town's property, and the requests for payments shall be accompanied by invoices or bills of sale or other evidence to establish the Town's title to such materials and equipment. Such payments

will be made only for materials that have been customized or fabricated specifically for this Project. Raw materials or commodity products costs may not be submitted. Responsibility for such stored materials and equipment shall remain with the Contractor regardless of title of ownership. Such stored materials and equipment shall not be removed from the Town's property. Should the space for storage on-site be limited, the Contractor, at its option, shall be permitted to store such materials and/or equipment in a suitable space off-site. Should the Contractor desire to include any such materials or equipment in its application for payment, they must be stored in the name of the Town in an independent, licensed, bonded warehouse approved by the Town and located as close to the site as possible. The warehouse selected must be approved by the Contractor's bonding and insurance companies; the material to be paid for shall be assigned to the Town. Upon approval by the Town of the storage facilities and materials and equipment, payment therefore will be made. Responsibility for such stored materials and equipment shall remain with the Contractor. Such stored materials and equipment shall not be moved except for transportation to the Project site.

D. Retainage: In accordance with N.C.G.S 143-134.1, for projects costing more than $100,000.00, the Town may withhold a percentage of payment until the Project has been satisfactorily completed. Retainage on periodic and final payment for this Project shall be as follows:
    a. Retainage withheld shall not exceed 5% at any time.
    b. The same terms shall apply to the general contractor and subcontractors alike.
    c. Following 50% completion of the Project, the Town, with written consent from the Surety, shall not retain further retainage if the Contractor continues to perform satisfactorily and any nonconforming work identified in writing prior to that time has been corrected by the Contractor and accepted by the Town. The Project shall be deemed 50% complete when the Contractor's gross Project invoices, excluding the value of materials stored off-site, equal or exceed 50% of the value of the Contract, except the value of materials stored on-site shall not exceed 20% of the Contractor's gross Project invoices for the purpose of determining whether the Project is 50% complete.
    d. If the Town determines that the Contractor is not performing satisfactorily, the Town may reinstate retainage for each subsequent periodic payment application up to 5%. Following 50% completion of the Project, Town is authorized to withhold additional retainage not to exceed 5% from a subsequent periodic payment application if the amount of total retainage withheld falls below 2.5%, through the completion of the Project.

E. If the pay application is approved by the Town, the Town will process all pay applications within 30 days after receipt from the Contractor. Town has the right to require the Contractor to produce for inspection all of Contractor's records and charges to verify the accuracy of all applications for payment. Town shall pay Contractor's invoices at times set forth above unless a bona fide dispute exists between Town and Contractor concerning the accuracy of said invoice or the services covered thereby.

5. FINAL PAYMENT.

A. Upon completion, the Contractor shall submit satisfactory evidence that all payrolls, material bills and other costs incurred by the Contractor in connection with the construction of the work have been paid in full. Final payment will be made within forty-five (45) days after acceptance of all work by the Town and after receipt of the final pay request which shall include the Contractor's affidavit, sworn and notarized, in the following form:

"This is to certify that all costs of materials, equipment, labor, subcontracted work, and all else entering into the accomplishment of this contract, including payrolls, have been paid in full, and no claims or liens exist against Contractor in connection with this Contract."

The Town may withhold payment for any of the following reasons:

1. Faulty or defective work not corrected.
2. The unpaid balance remaining on the Contract is not sufficient to complete the work in the sole judgement and discretion of the Town.
3. To provide a sufficient contract balance to cover liquidated damages that will be assessed.
4. Evidence that subcontractors have not been paid.

B. Prior to submitting request for final payment to the Town, Contractor shall provide the following:

1. Warranties and bonds, guarantees, maintenance agreements, as-built drawings, certificates of inspection or approval from agencies having jurisdiction.
2. List of minority business subcontractors and material suppliers showing breakdown of contract amounts and total actual payments to subcontractors and material suppliers.
3. Contractor's affidavit of payment to material suppliers and subcontractors.
4. Consent of Surety to final Payment.
5. Certificates of state agencies (if any) required by law.

6. CONSTRUCTION SUPERVISION AND SCHEDULE

A. Throughout the progress of the Work, the Contractor shall keep at the job site, a competent superintendent and supervisory staff satisfactory to the Town. The superintendent and supervisory staff shall not be changed without the consent of the Town unless said superintendent ceases to be employed by the Contractor or ceases to be competent as determined by the Contractor or Town. The superintendent and other staff designated by the Contractor in writing shall have authority to act on behalf of the Contractor, and instructions, directions or notices given to the superintendent shall be as binding as if given to the Contractor. However, directions, instructions, and notices shall be confirmed in writing.

B. Contractor shall examine and study the drawings and specifications and fully understand the Project design and shall provide constant and efficient supervision to the Work. Should Contractor discover any discrepancies of any sort in the drawings or specifications, Contractor shall report them to the Town without delay. Contractor will not be held responsible for discrepancies in the drawings and/or specifications but shall be held responsible to report them should they become known to Contractor.

C. Contractor is required to attend job site progress conferences as called by the Town. The Contractor shall be represented at these job progress conferences by both home office and Project personnel. These representatives shall have authority to act on behalf of the Contractor. These meetings shall be open to subcontractors, material suppliers and any others who can contribute toward maintaining required job progress. It shall be the principal purpose of these meetings, or conferences, to effect coordination, cooperation and assistance in every practical way toward the end of maintaining progress of the Project on schedule and to complete the Project within the specified contract time. The Contractor shall be prepared to assess progress of the Work as required in the Contract Documents and to recommend remedial measures for correction of progress as may be appropriate. The Contractor shall turn over a copy of his daily reports to the Town at the job site progress conference. Town will determine daily report format.

D. Contractor shall prepare the Project construction schedule which shall graphically show all outstanding features of the Work required to construct the Project from start to finish and within the allotted time established in the Contract. Contractor shall maintain a Project progress schedule for the Town and shall notify the Town of any requested changes in the Project schedule.

E. The Project construction schedule shall indicate the estimated starting and completion dates for each major element of the Work by area and shall schedule dates for all outstanding features, including but not limited to the placing of orders for materials, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all required inspections. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

F. The Contractor is responsible for its Work activities and will notify Town of any required changes to its Work. If any Work activities are behind schedule the Contractor shall, in writing, describe what measures will be taken to bring each such activity back on schedule and to ensure that the Contract completion date is not exceeded. A plan of action and recovery schedule shall be developed and submitted to the Town by the Contractor, when (1) the Contractor indicates delays, that are in the opinion of the Town, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled completion is brought into question; (2) the updated construction schedule is thirty (30) days behind the planned or baseline schedule and no legitimate time extensions, as determined by the Town, are in process; or (3) the Contractor desires to make changes in the sequencing of Work or the planned duration of future activities which in the opinion of the Town, are of a major nature. The plan of action, when required shall be submitted to the Town for review within two (2) business days of the Contractor receiving the Town's written demand. The recovery schedule, when required, shall be submitted to the Town within five (5) calendar days of the Contractor's receiving the Town's written demand. Failure to provide an updated construction schedule or a recovery schedule may be grounds for rejection of payment applications or withholding of funds.

G. The proposed Project construction schedule shall be presented to the Town no later than fifteen (15) calendar days after the issuance of the written Notice to Proceed. No application for payment will be reviewed or paid until this schedule is accepted by the Town.

7. USE OF PREMISES.

A. Contractor shall confine its apparatus, the storage of materials and the operations of its workers to limits indicated by law, ordinances, permits or directions of the Town and shall not exceed those established limits in its operations.

B. Contractor shall enforce the Town's instructions regarding signs, advertisements, fires and smoking.

C. No firearms, any type of alcoholic beverages, or drugs (other than those prescribed by a physician) will be permitted at the job site.

8. PROTECTION OF WORK, PROPERTY AND THE PUBLIC.

A. The Contractor shall be responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the Town, and by laws or ordinances governing such conditions. Contractor shall be responsible for any damage to the Town's property, or of that of others on the job, by them, their personnel, or their subcontractors, and shall pay for or repair any such damages. Contractor shall be responsible for and pay for any damages caused to the Town.

B. The Contractor shall provide cover and protect all portions of the Project being constructed when the Work is not in progress as needed, provide and set all temporary roofs, covers, and all other materials necessary to protect all the Work on the Project, whether set by the Contractor, or any of the subcontractors. Any Work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the Town.

C. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the Town.

D. The Contractor shall protect all trees and shrubs designated to remain in the vicinity of the operations by building substantial boxes around same. Contractor shall barricade all walks, roads, etc., as directed by the Town to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the Work shall be well barricaded and properly lighted at night.

E. The Contractor shall provide all necessary safety measures for the protection of all persons on the job and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the Work. Contractor shall clearly mark or post signs warning of hazards existing and shall barricade excavations and similar hazards. Contractor shall protect against damage or injury resulting from falling materials and shall maintain all protective devices and signs throughout the progress of the Work.

F. The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.

G. The Contractor shall designate a responsible person of its organization as safety officer/inspector to inspect the Project site for unsafe health and safety hazards, to report these hazards to the Contractor for correction, and whose duties also include accident prevention on the Project, and to provide other safety and health measures on the Project site as required by the terms and conditions of the Contract Documents. The name of the safety inspector shall be made known to the Town at the time of the preconstruction conference and in all cases prior to any Work starting on the Project.

H. In the event of emergency affecting the safety of life, the protection of Work, or the safety of adjoining properties, the Contractor is hereby authorized to act at Contractor's own discretion, without further authorization from anyone, to prevent such threatened injury or damage.

I. Any and all costs associated with correcting damage caused to adjacent properties of the construction site or staging area shall be borne by the Contractor. These costs shall include but not be limited to flooding, mud, sand, stone, debris, and discharging of waste products.

9. UTILITIES.

Contractor shall provide necessary and adequate facilities for water, electricity, gas, oil, sewer and other utility services which may be necessary and required for completion of the Project including all utilities required for testing, cleaning, balancing, and sterilization of designated plumbing, mechanical and electrical systems. Any permanent meters installed shall be listed in the Contractor's name until Work has a Final Acceptance. The Contractor will be solely responsible for all utility costs prior to Final Acceptance. Contractor shall contact all affected utility companies prior to bid to determine their requirements to provide temporary and permanent service and include all costs associated with providing those services in their bid. Coordination of the Work of the utility companies during construction is the sole responsibility of the Contractor.

10. CHANGE ORDERS.

A. In the event Town has changes in the Work not covered by the Contract, these changes will not invalidate or relieve Contractor from any guarantee it has given in this Contract. These changes will not relieve the Surety or Sureties of any bonds and all extra Work shall be performed under the conditions of this Contract. Except in an emergency endangering life or property, changes in Work shall ***not*** proceed without a Change Order approved by the Town. Contractor shall provide a complete breakdown of all labor and material costs with the Change Order request. The breakdown shall include the Contractor's allowance for overhead and profit not to exceed 10% of the net cost of the change with Work provided directly by the Contractor. For purposes of this Contract, "net cost" shall mean the difference between all proper cost additions and deductions. No claim for adjustments of the contract price shall be valid unless the procedure outlined in this section is followed. Any Work performed pursuant to an approved change order shall be governed by the terms of this Contract.

B. The Parties agree that there are two methods that may be utilized to determine the cost of changes:

1. If unit prices are quoted in the proposal or bid and the additional work is covered by those unit prices, or can be subsequently agreed to by the Parties, the cost of the change shall be computed by application of the unit prices based on quantities. If this method is used no additional allowances shall be made for overhead and profit.
2. If the additional work is not covered by unit prices, unit prices were not provided in the proposal or bid, or the Parties mutually agree, then Town and Contractor may negotiate and agree upon the value of the change prior to the issuance of the Change Order and the Change Order shall identify the corresponding lump sum adjustment to the contract price.

C. In the event concealed conditions are discovered in the performance of the Work below grade, or in the event concealed or unknown conditions in an existing structure vary from the conditions indicated in the Contract Documents, the contract sum and time for completion may be adjusted by Change Order upon claim by either party made within thirty (30) days after the condition has been identified. The cost shall be determined by one of the methods outlined in this Contract.

D. Change Orders shall be submitted by the Contractor for the Town's review and approval. Contractor shall provide all applicable supporting data and information. Delay in approval of a Change Order

due to Contractor's failure to submit proper documentation shall not be grounds for a time extension or basis of a claim. The Town shall respond to the Contractor's proposal within fourteen calendar (14) days of receipt of the proposal. If accepted, the Town shall prepare the Change Order for the Contractor's signature. The Town shall execute the approved Change Order within seven (7) days of receipt from the Contractor. The Contractor shall notify its bonding company that the Contract has been changed by the amount of the Change Order and provide a copy of the approved Change Order to the Surety. In the event a Change Order cannot be agreed upon by the Parties, nothing in this Contract shall preclude the Town from performing, or having performed, the Work requested in a Change Order.

11. MINOR CHANGES.

The Town may order minor changes in the Work not involving an adjustment in the Contract sum or Time for Completion, and not inconsistent with the intent of the Contract Documents. Such changes shall be executed by written order and shall be binding on the Contractor and subject to the terms of this Contract.

12. INSPECTION OF THE WORK.

A. It is a condition of this Contract that the Work shall be subject to inspection during normal working hours and during any time Work is in preparation and progress by the Town or a Special Inspector designated by the Town, and those persons required by state law to test Work for official approval. The Contractor shall therefore provide safe access to the Work at all times for such inspections.

B. All Work shall be inspected by the Town or Special Inspector (if applicable) prior to being covered by the Contractor. Contractor shall give a minimum two weeks' notice of needed inspections unless otherwise agreed to by all parties. If an inspection fails, all costs associated with additional re-inspections shall be borne by the Contractor.

C. Where special inspection or testing is required by virtue of any state laws, instructions of the Town, specifications, or codes, the Contractor shall give adequate notice to the Town of the time set for such inspection or test. Such special tests or inspections will be made in the presence of the Town's representative, and it shall be the Contractor's responsibility to serve ample notice of such tests.

D. All laboratory tests shall be paid by the Town unless provided otherwise in the Contract Documents, except the Contractor shall pay for laboratory tests to establish design mix for concrete, and for additional tests to prove compliance with Contract Documents where materials have tested deficient except when the testing laboratory did not follow the appropriate ASTM testing procedures.

E. Should any Work be covered up or concealed prior to inspection and approval by the Town or Special Inspector, such Work shall be uncovered or exposed for inspection, if requested by the Town. Inspection of the Work will be made upon notice from the Contractor that the Work has been uncovered or exposed. In the event Work has been covered or concealed, all costs involved in uncovering, repairing, replacing, recovering and restoring to design condition said Work will be paid by the Contractor.

13. TOWN'S RIGHT TO PERFORM WORK.

If at any point during the performance or progress of the work, or during the period of guarantee, Contractor fails to perform the Work in a satisfactory manner or to perform in accordance with the terms of this Contract, the Town, after seven (7) days' written notice to the Contractor from the Town, may perform or have performed that portion of the Work. The cost of the associated Work may be deducted from any amounts due or that become due to the Contractor. In the event the cost of such performance exceeds the amount due the Contractor, then the Contractor or the Surety (if applicable), or both, shall be liable for and shall pay to the Town the amount of the excess.

14. UNCORRECTED FAULTY WORK

Should the correction of faulty or damaged Work be considered inadvisable by the Town, the Work will not be corrected and the Town shall be reimbursed by the Contractor for the devaluation of the Project as a result of the faulty Work. A change order will be issued to reflect the reduction in Contract sum.

15. FINAL INSPECTION AND FINAL ACCEPTANCE

A. Upon notification from the Contractor that the Project is complete and ready for inspection, the Town shall complete a final inspection to verify that the Project is complete. The Contractor shall schedule the final inspection at a time and date acceptable to the Town.

B. Upon final inspection, the Town shall, if job conditions warrant, record a list of items that are found to be incomplete or not in accordance with the Contract Documents. At the conclusion of the Town's final inspection, the Town shall make one of the following determinations:

1. That the Project is completed and accepted.

2. That the Project will be accepted subject to the correction of any identified discrepancies or faulty construction.

3. That the Project is not complete and a date for another final inspection will be established.

The date of Final Acceptance will establish the beginning of the guarantees and warranties period and the termination of utility cost to the Contractor. No liquidated damages will be assessed after this date.

16. CORRECTION OF WORK PRIOR TO FINAL PAYMENT

A. Any Work, materials, fabricated items or other parts of the Work which are not in accordance with the Contract shall be promptly removed from the Work site by the Contractor and shall be immediately replaced by new Work in accordance with the Contract Documents at no additional

cost to the Town. Work or property of other contractors or the Town, damaged or destroyed by virtue of such faulty Work, shall be made good at the expense of the Contractor.

B. Correction of faulty Work described above shall commence within twenty-four (24) hours after receipt of notice from the Town, and shall make satisfactory progress, as determined by the Town, until completed.

C. Should Contractor fail to proceed with the corrections in a timely fashion Town may complete the Work in accordance with this Contract.

17. CORRECTION OF WORK AFTER FINAL PAYMENT

Neither the final payment or use of the premises by the Town, nor any provision of the Contract, nor any other act or instrument of the Town, shall relieve the Contractor from responsibility for negligence, or faulty material or workership, or failure to comply with the drawings and specifications. Contractor shall correct or make good any defects due thereto and repair any damage resulting there from, which may appear during the guarantee period following Final Acceptance of the Work. The Town will report any defects as they may appear to the Contractor and establish a time limit for completion of corrections by the Contractor. The Town will be the judge as to the responsibility for correction of defects.

18. MINORITY BUSINESS PARTICIPATION

Contractor is required to identify participation of Minority and Women-Owned Business Enterprises (MWBE) in its proposal and document how that participation is achieved. There is a verifiable goal of seven percent (7%) for participation by minority businesses in the total value of work for the Project. Contractor shall comply with the document titled "Guidelines For Recruitment and Selection of Minority Businesses For Participation In Town of Apex Construction Contracts", including associated Affidavits and Appendices which are hereby incorporated herein.

19. APPLICABILITY OF LAWS AND REGULATIONS.

The Contractor shall adhere to all laws, ordinances, and regulations of the United States, the State of North Carolina, the County of Wake, and the Town of Apex in the performance of the services outlined in this Contract and any attached specifications. This Contract shall be governed by the laws of the State of North Carolina.

Contractor shall obtain all required permits and inspections and shall give all notices required by law in performance of this Project. In the event Contractor observes that any drawings or specifications are not in compliance with any such rules, laws, or regulations, Contractor shall promptly notify the Town in writing. Contractor shall not perform any Work knowing it to be contrary to any laws, ordinances, codes, rules or regulations.

All Work under this Contract shall be performed in accordance with the North Carolina Building Code and all other applicable state or national codes.

20. E-VERIFY COMPLIANCE.

The Contractor shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify). Contractor shall require all of the Contractor's subcontractors to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify).

21. QUALITY AND WORKERSHIP.

Contractor shall provide services in accordance with all governing agency regulations and shall be held to the same standard and shall exercise the same degree of care, skill and judgment in the performance of

services for Town as is ordinarily provided by a similar professional under the same or similar circumstances at the time in North Carolina. Contractor hereby certifies that Contractor is a licensed general contractor as defined by N.C.G.S. 87-1.

22. SURETY.

If at any time after the execution of this Contract and the surety bonds included in the Contract Documents for the faithful performance of the Contract, the Town shall deem the surety or sureties upon such bonds to be unsatisfactory, or if, for any reason, such bonds cease to be adequate to cover the performance of the Work, the Contractor shall, at its expense, within five (5) days after the receipt of notice from the Town so to do, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the Town. In such event no further payment to the Contractor shall be deemed to be due under this Contract until such new or additional security for the faithful performance of the Work shall be furnished in manner and form satisfactory to the Town.

23. BOND REQUIREMENTS.

Within ten (10) days of the award of the Contract, Contractor shall provide the Town of Apex with a contract payment bond and a contract performance bond executed by a surety company authorized to do business in North Carolina, each in an amount equal to 100 percent of the amount of the Contract. All bonds shall be in conformity with N.C.G.S. 44A-33 and countersigned by an authorizing agent of the bonding company.

Failure on the part of the Contractor to file acceptable bonds within the required timeframe shall be just cause for the forfeiture of the bid bond or bid deposit and rescinding award of the Contract. Award may then be made to the next lowest responsible bidder or the Work may be re-advertised.

24. CONTRACTOR'S WARRANTIES.

The Contractor, in executing this Contract, unconditionally guarantees the materials and workmanship against defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the Final Acceptance of the Work by the Town and shall replace all such defective materials or workmanship without cost to the Town. In the case where materials or equipment carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that specific equipment or material. During the manufacturer's warranty period the Contractor shall be responsible for the replacement of such defective equipment or materials.

Nothing in this section shall preclude the Town from bringing an action for latent defects caused by the negligence of the Contractor which is concealed, hidden, or not readily apparent to the Town at the time of Final Acceptance, in accordance with applicable law. Guarantees that are stipulated in the specifications or drawings shall govern those particular materials or equipment.

25. CODES AND STANDARDS.

Wherever reference is made to codes, standard specifications, or other data published by regulating agencies it shall be understood that said reference is to the latest edition published prior to the date of the Contract Documents. These regulating agencies include, but are not limited to, North Carolina state building codes, federal specifications, national electric codes, ASTM specifications and various institute specifications.

26. INDEMNIFICATION.

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Town and its agents, consultants, elected officials, and employees, from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance or failure of performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the

Work itself) including the loss of use resulting there from, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, the Contractor's subcontractor, or the agents of either the Contractor or the Contractor's subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this section.

27. INSURANCE.

Work under this Contract shall not begin until the Contractor has obtained all required insurance set forth below and verifying certificates of insurance have been provided to the Town. All required certificates of insurance, endorsements, and blanket additional insured policy provisions are attached and considered part of this Contract. These certificates shall document that coverages afforded under the policies will not be cancelled, reduced in amount or eliminated without written notice, by certified mail, to the Town of such alteration or cancellation. Notwithstanding the foregoing, neither the requirement of Contractor to have sufficient insurance nor the requirement that Town is named as an additional insured, shall constitute waiver of the Town's governmental immunity in any respect, under North Carolina law.

A. Worker's Compensation and Employer's Liability

The Contractor shall provide and maintain, until Final Acceptance, Worker's compensation insurance, as required by law, as well as employer's liability coverage with a minimum limit of $1,000,000.

B. Public Liability and Property Damage

The Contractor shall provide and maintain, until Final Acceptance, comprehensive general liability insurance, including coverage for premises operations, independent contractors, completed operations, products and contractual exposures, as shall protect such contractors from claims arising out of any bodily injury, including accidental death, as well as from claims for property damages which may arise from operations under this Contract, whether such operations be by the Contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them and the minimum limits of such insurance shall be as follows:

Commercial General Liability:

Each Occurrence: Two Million ($2,000,000)
General Aggregate: Four Million ($4,000,000)
Products-Completed/Operations Aggregate: Four Million ($4,000,000)

Such coverage for completed operations must be maintained for at least two (2) years following Final Acceptance of the Work performed under the Contract.

C. Commercial Automobile Liability Coverage

The Contractor shall purchase and maintain, until Final Acceptance, commercial automobile liability insurance as follows:

Combined Single Limit Per Accident: Two Million ($2,000,000) for bodily injury, death of any person, and property damage covering vehicles owned, non-owned, and hired by Contractor and used during construction.

D. Property Insurance (Builder's Risk/Installation Floater)

The Contractor shall purchase and maintain property insurance until Final Acceptance, upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Town, the Contractor, the subcontractors and sub-subcontractors in the Work and shall insure against

the perils of fire, wind, rain, flood, extended coverage, and vandalism and malicious mischief. If the Town is damaged by failure of the Contractor to purchase or maintain such insurance, then the Contractor shall bear all reasonable costs properly attributable thereto; the Contractor shall obtain and maintain similar property insurance on portions of the Work stored off the site when request for payment per articles so includes such portions.

E. Environmental Pollution Liability

Pollution Liability in the following minimum amounts:

Each Occurrence: Two Million ($1,000,000)

Aggregate: Four Million ($4,000,000)

F. Deductible

Any deductible, if applicable to loss covered by insurance provided, is to be borne by the Contractor.

G. Other Insurance

The Contractor shall obtain such additional insurance as may be required by the Town or by the General Statutes of North Carolina including motor vehicle insurance, in amounts not less than the statutory limits.

Commercial General Liability and Commercial Automobile Liability limits can be satisfied under a combination of Primary and Umbrella/Excess Liability Insurance policies.

Waiver of Subrogation is required on General Liability, Auto Liability, Worker's Compensation and Umbrella policies.

Town of Apex is to be named as Additional Insured on General Liability and Automobile Liability policies.

H. Proof of Carriage

The Contractor shall furnish the Town with satisfactory proof of carriage of the insurance required before approval of the insurance is granted by the Town.

28. SUBCONTRACTORS.

Contractor shall be fully responsible for Contractor's own acts or omissions as well as those of any subcontractor retained to perform services pursuant to this Contract. Contractor acknowledges that no contractual relationship exists between the subcontractor and the Town in regards to this Contract and that the subcontractor is acting as an agent or employee of the Contractor. Contractor acknowledges that the terms of this Contract apply to each subcontractor as it does to the Contractor and Contractor will take whatever steps necessary to bind all subcontractors working on this Project to these terms.

29. DEFAULT.

In the event the Contractor fails to begin the Work pursuant to the Contract Documents within the time specified, or the progress of the Work is not maintained on schedule, or the Work is not completed within the time specified, or fails to perform the Work with sufficient staff and equipment or with sufficient materials to ensure the prompt completion of said Work, or shall perform the Work unsuitably or shall discontinue the prosecution of the Work, or if the Contractor shall become insolvent or be declared bankrupt

or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against Contractor unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the Work in an acceptable manner, the Town may give notice in writing, sent by certified mail, return receipt requested, to the Contractor and its surety of such delay, neglect or default, specifying the same, and if the Contractor within a period of seven (7) days after such notice shall not proceed in accordance with the notice, then the Town shall, declare this Contract in default. Upon a declaration of default the following shall apply:

The Surety shall promptly take over the Work and complete the performance of this Contract in the manner and within the time frame specified. In the event the Surety shall fail to take over the Work to be done under this Contract within seven (7) days after being so notified and notify the Town in writing, sent by certified mail, return receipt requested, that it is taking the same over and stating that it will diligently pursue and complete the same, the Town shall have full power and authority, without violating the Contract, to take the prosecution of the Work out of the hands of said Contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said Contract according to the terms and provisions thereof or use such other methods as in Town's opinion shall be required for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Town, together with the costs of completing the Work under Contract, shall be deducted from any monies due or which may become due said Contractor and Surety. In the event the expense shall exceed the sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Town the amount of said excess.

30. TERMINATION FOR CONVENIENCE.

Town shall have the right to terminate this Contract for the Town's convenience upon thirty (30) days written notice to Contractor. Contractor shall terminate performance of services on a schedule acceptable to the Town. Unless otherwise notified, upon termination Contractor shall discontinue all Work and the placement of orders for materials and supplies in connection with this Contract.

Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the Work completed in conformity with this Contract; plus, (2) such other costs actually incurred by Contractor as are permitted by the Contract and approved by Town. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Contract. Contractor shall not be entitled to any claim or claim of lien against Town for any additional compensation or damages in the event of such termination and payment.

31. NOTICE.

Any formal notice, demand, or request required by or made in connection with this Contract shall be deemed properly made if delivered in writing in person by registered mail to the address specified below.

TO CONTRACTOR:	TO TOWN:
FSC ll, LLC dba Fred Smith Company Attn: Walter Biele 701 Corporate Center Drive Suite 101 Raleigh, NC 27607 Email: wbiele@fredsmithcompany.net	Town of Apex Attn: Angela Reincke PO Box 250 Apex, NC 27502 Email: Angela.Reincke@apexnc.org

32. NONWAIVER FOR BREACH.

No breach or non-performance of any term of this Contract shall be deemed to be waived by either party unless said breach or non-performance is waived in writing and signed by the parties. No waiver of any

breach or non-performance under this Contract shall be deemed to constitute a waiver of any subsequent breach or non-performance and for any such breach or non-performance each party shall be relegated to such remedies as provided by law.

33. CONSTRUCTION.
Should any portion of this Contract require judicial interpretation, it is agreed that the Court or Tribunal construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against any one party by reason of the rule of construction that a document is to be more strictly construed against the party who prepared the documents.

34. NO REPRESENTATIONS.
The parties hereby warrant that no representations about the nature or extent of any claims, demands, damages, or rights that they have, or may have, against one another have been made to them, or to anyone acting on their behalf, to induce them to execute this Contract, and they rely on no such representations; that they have fully read and understood this Contract before signing their names; and that they act voluntarily and with full advice of counsel.

35. SEVERABILITY.
In the event for any reason that any provision or portion of this Contract shall be found to be void or invalid, then such provision or portion shall be deemed to be severable from the remaining provisions or portions of this Contract, and it shall not affect the validity of the remaining portions, which portions shall be given full effect as if the void or invalid provision or portion had not been included herein.

36. COUNTERPARTS.
This Contract may be executed in two or more counterparts, each of which shall be deemed an original, and all of which together shall constitute one instrument.

37. MODIFICATION.
This Contract contains the full understanding of the parties. Any modifications or addendums to this Contract must be in writing and executed with the same formality as this Contract.

38. BINDING EFFECT.
The terms of this Contract shall be binding upon the parties' heirs, successors, and assigns.

39. ASSIGNMENT.
Contractor shall not assign, sublet, or transfer any rights under or interest in (including, but without limitation, monies that may become due or monies that are due) this Contract without the written consent of the Town. Nothing contained in this paragraph shall prevent Contractor from employing such independent consultants, associates, and sub-contractors as it may deem appropriate to assist Contractor in the performance of services rendered.

40. INDEPENDENT CONTRACTOR.
Contractor is an independent contractor and shall undertake performance of the services pursuant to the terms of this Contract as an independent contractor. Contractor shall be wholly responsible for the methods, means and techniques of performance.

41. NON-APPROPRIATION.
Notwithstanding any other provisions of this Contract, the parties agree that payments due hereunder from the Town are from appropriations and monies from the Town Council and any other governmental entities. In the event sufficient appropriations or monies are not made available to the Town to pay the terms of this

Contract for any fiscal year, this Contract shall terminate immediately without further obligation of the Town.

42. IRAN DIVESTMENT ACT CERTIFICATION.
N.C.G.S. 147-86.60 prohibits the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina from contracting with any entity that is listed on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C.G.S. 147-86.58. N.C.G.S. 147-86.59 further requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer's Final Divestment List. As of the date of execution of this Contract the Contractor hereby certifies that the Contractor is not listed on the Final Divestment List created by the North Carolina State Treasurer and that the Contractor will not utilize any subcontractors found on the Final Divestment List.

43. ANTI-HUMAN TRAFFICKING.
The Contractor warrants and agrees that no labor supplied by the Contractor or the Contractor's subcontractors in the performance of this Agreement shall be obtained by means of deception, coercion, intimidation or force, or otherwise in violation of North Carolina law, specifically Article 10A, Subchapter 3 of Chapter 14 of the North Carolina General Statutes, Human Trafficking.

In witness thereof, the contracting parties, by their authorized agents, affix their signatures and seals this _____day of _____, 2023.

Contractor:_____	**Town of Apex**
_____	_____
(Print name)	Shawn Purvis, (Interim)Town Manager
_____	
Signature	Attest:
_____	_____
Title	Allen L. Coleman, CMC, NCCCC, Town Clerk
	This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.
Attest:	
_____	_____
Secretary (if a corporation)	Antwan Morrison, Finance Director

DocuSign Envelope ID: 31785F19-6B88-4051-9916-A2B8B5176FFF

TIP PROJECT: EB-6021

PROJECT REFERENCE NO.	SHEET NO.
EB-6021	1

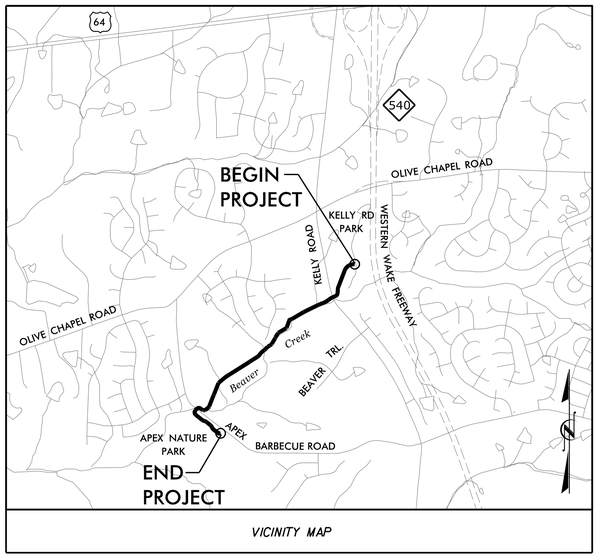
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TOWN OF APEX

BEAVER CREEK GREENWAY EXTENSION PHASES 1, 2 & 1A

FROM KELLY ROAD PARK TO APEX NATURE PARK

CONSTRUCTION PLAN



VICINITY MAP

NAD 83**

GRAPHIC SCALE

20 0 40
PLANS
20 0 40
PROFILE (HORIZONTAL)
2 0 4
PROFILE (VERTICAL)

JACQUES GILBERT
MAYOR

CATHERINE CROSBY
TOWN MANAGER

BUILDING INSPECTIONS TOWN OF APEX CERTIFICATION

This drawing has been reviewed by the Town of Apex Building Inspections Department, and to the best of my knowledge and belief, conforms to the requirements established within the Town's Code of Ordinances and the North Carolina State Building Codes. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer/engineer/contractor is solely responsible for meeting all applicable requirements.

By: Approved sewens 09/15/2021 2:33:56 PM Date: _____

PUBLIC WORKS TRANSPORTATION TOWN OF APEX CERTIFICATION

This drawing has been reviewed by the Town of Apex, and to the best of my knowledge and belief, provides an acceptable transportation system with consideration for the elements contained within the Transportation Plan conforming to the requirements established in the Standard Specifications of the Town of Apex. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer/engineer/contractor is solely responsible for meeting all applicable requirements.

By: Approved rdalton 09/08/2021 3:56:13 PM Date: _____

ELECTRIC TOWN OF APEX CERTIFICATION

This drawing has been reviewed by the Town of Apex Electric Department, and to the best of my knowledge and belief, conforms to the requirements established in the Standard Specifications and Construction Details and the Unified Development Ordinance of the Town of Apex. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer / engineer / contractor is solely responsible for meeting all applicable requirements.

By: Approved rsmith 09/08/2021 1:04:19 PM Date: _____

WATER RESOURCES SOIL EROSION & SEDIMENTATION CONTROL TOWN OF APEX CERTIFICATION

This drawing has been reviewed by the Town of Apex, and to the best of my knowledge and belief, conforms to the requirements established in the Soil Erosion and Sedimentation Control Ordinance of the Town of Apex. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer/ engineer/contractor is solely responsible for meeting all applicable requirements.

This signature does not constitute plan approval, only plan requirements. A separate letter of plan approval will be mailed to the financially responsible person at a later date according to the construction sequence.

By: N / A sforster 09/15/2021 3:55:09 PM Date: _____

FIRE DEPARTMENT TOWN OF APEX CERTIFICATION

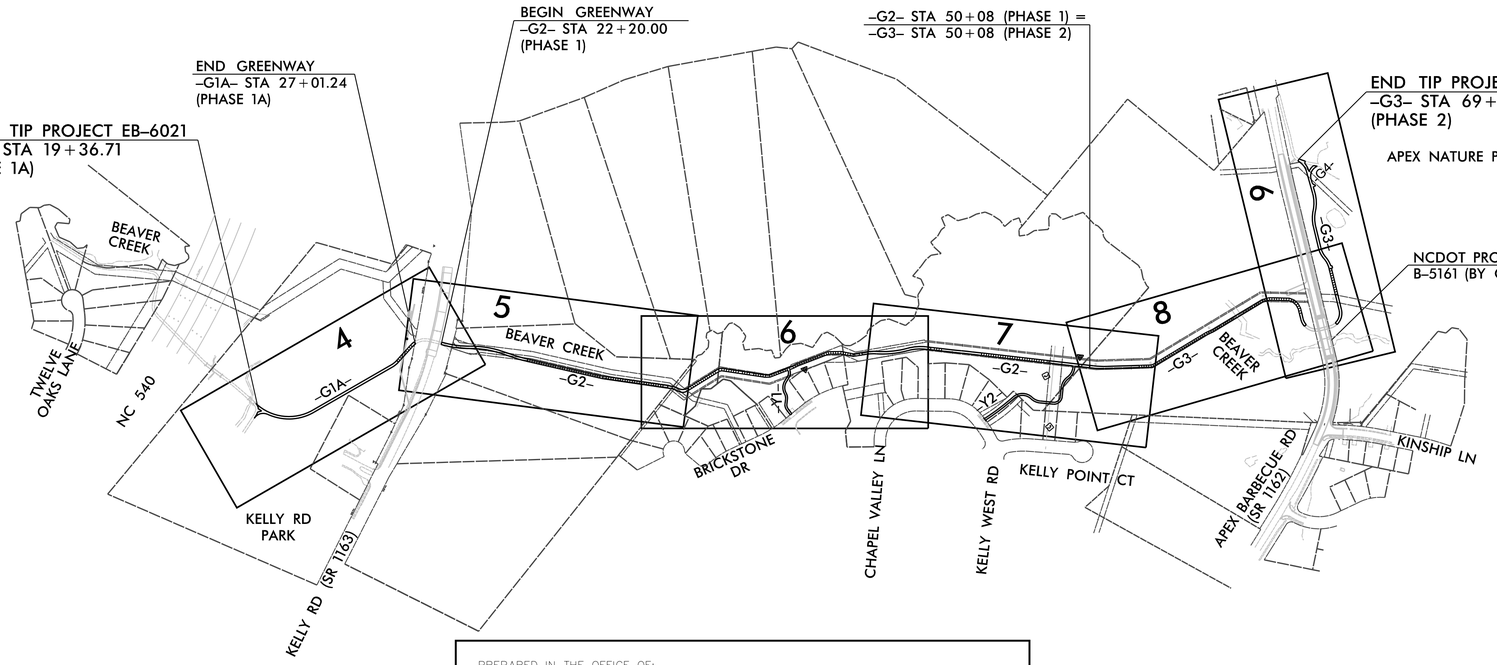
This drawing has been reviewed by the Town of Apex Fire Department, and to the best of my knowledge and belief, conforms to the requirements established within the Town's Standard Specifications, Fire Protection Ordinances, and the North Carolina International Fire Code. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer/ engineer/contractor is solely responsible for meeting all applicable requirements.

By: Approved khuegerich 09/08/2021 3:41:05 PM Date: _____

WATER RESOURCES STORMWATER ENGINEERING TOWN OF APEX CERTIFICATION

This drawing has been reviewed by the Town of Apex Water Resources Stormwater &Utility Engineering Division and to the best of my knowledge and belief, conforms to the requirements established in the Standard Specifications and Construction Details and the Unified Development Ordinance of the Town of Apex. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer/engineer/contractor is solely responsible for meeting all applicable requirements. **This signature serves as the stormwater permit for this project.**

By: Approved sforster 09/15/2021 2:55:16 PM Date: _____



NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024436 JEFFREY W. MOORE
8/27/2021

LINEAR PROJECT STORMWATER MANAGEMENT NOTE

THIS PROJECT MEETS THE SPIRIT AND INTENT OF SECTION E-5 OF THE NORTH CAROLINA DIVISION OF ENVIRONMENTAL QUALITY (DEQ) STORMWATER DESIGN MANUAL FOR LINEAR TRANSPORTATION PROJECTS. THE TOWN OF APEX IS THE OWNER AND DEVELOPER OF THIS GREENWAY SYSTEM THAT IS NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT. THE GREENWAY IS BEING CONSTRUCTED WITHIN AN EXISTING GREENWAY EASEMENT CORRIDOR AND ON TOWN OF APEX OWNED PROPERTY FOR THE PURPOSE OF PROVIDING A LINEAR PEDESTRIAN CORRIDOR FOR PUBLIC BENEFIT AS PART OF THE WAKE COUNTY GREENWAY PLAN.

PARKS, RECREATION, AND CULTURAL RESOURCES TOWN OF APEX CERTIFICATION

These plans have been reviewed by the Town of Apex, and to the best of my knowledge and belief, conform to representations made by the developer to myself and the Parks, Recreation, and Cultural Resource Advisory Commission consistent with the projects requirements for public Parks and Recreation, either in total or in part, as outlined in Section 7.3 of the Town's Unified Development Ordinance and Article IV, Section 19 of the Town Code. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer / engineer /contractor is solely responsible for meeting all applicable requirements.

By: Approved arencke 09/09/2021 12:10:10 PM Date: _____

WATER RESOURCES UTILITY ENGINEERING TOWN OF APEX CERTIFICATION

This drawing has been reviewed by the Town of Apex Water Resources Department, and to the best of my knowledge and belief, conforms to the requirements established in the Standard Specifications and Construction Details of the Town of Apex. However, this signature does not constitute a variance from any requirements contained in any federal, state, or local code, law, specification, rule or ordinance. The developer/engineer/contractor is solely responsible for meeting all applicable requirements.

By: Approved smiller 02/16/2021 12:19:51 PM _____ Date: _____

PLANNING/ZONING TOWN OF APEX CERTIFICATION

This construction drawing has been reviewed by the Town of Apex Planning Department, and to the best of my knowledge and belief, conforms to the Subdivision or Site Plan that was approved by the Town of Apex Board of Commissioners, and meets the Town of Apex Zoning, Subdivision, or Unified Development Ordinance. This signature does not constitute a variance from any requirements of the originally approved Subdivision or Site Plan cited above, or any federal, state, or local code, law, specification, rule, guideline, or ordinance. It is the sole responsibility of the owner/developer, or any of his agents or contract professionals to ensure that this construction plan meets all the aforementioned requirements.

By: _____ Date: _____

PREPARED IN THE OFFICE OF:

Kimley»Horn ©2019

NC LICENSE #F-0102
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NORTH CAROLINA 27601
PHONE: (919) 677-2000

PROPOSED PUBLIC INFRASTRUCTURE	
WATER LINES	N/A
SEWER LINES	N/A
PUBLIC STREETS	N/A
CURB & GUTTER	N/A
STORM DRAIN	N/A
SIDEWALK/GREENWAYS	6,190 LF

OWNER:
TOWN OF APEX
PARKS, RECREATION AND CULTURAL RESOURCES
53 HUNTER STREET
APEX, NC 27502
ANGELA REINCKE
919.372.7468
angela.reincke@apexnc.org

ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601
JEFFREY W. MOORE, P.E.
919.677.2000
jeff.moore@kimley-horn.com

SURVEYOR*:
THE WOOTEN COMPANY
120 NORTH BOYLAN AVE.
RALEIGH, NC 27603
TIMOTHY R. INGOLD, PLS, CFS
919.828.0531
tingold@thewootencompany.com

*NCDOT SURVEY FROM B-5161 WAS USED IN CONJUNCTION
**SEE PLANS FOR VERTICAL DATUM

K:\RAL_Roadway\011200026 – Beaver Creek Greenway\Plan\Plan Sheets\BCG_1sht.dgn 8/27/2021

BID TABULATION

TIP No.: **EB-6021**
Route: Beaver Creek Greenway Extension, Phases 1, 2, and 1A

CONSTR. COST	CONSTR. COST	CONSTR. COST
$ 6,323,822.00	**$ 6,592,956.00**	**$ 6,941,974.91**

Line Item	Item Number	Sec No.	Pay Item	Total Quantity	Unit	Engineer's Estimate		Fred Smith Company		Crowder Construction	
						Unit Price	Total Cost	Unit Price	Total Cost	Unit Price	Total Cost
1	0000100000-N	800	MOBILIZATION	1	LS	$ 105,090.00	$ 105,090.00	$ 329,000.00	$ 329,000.00	$ 347,098.74	$ 347,098.74
2	0000400000-N	801	CONSTRUCTION SURVEYING	1	LS	$ 61,220.00	$ 61,220.00	$ 65,000.00	$ 65,000.00	$ 49,500.00	$ 49,500.00
3	0043000000-N	226	GRADING	1	LS	$ 1,602,750.00	$ 1,602,750.00	$ 1,830,000.00	$ 1,830,000.00	$ 1,375,500.00	$ 1,375,500.00
4	0050000000-E	226	SUPPLEMENTARY CLEARING AND GRUBBING	1	ACR	$ 10,000.00	$ 10,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
5	0057000000-E	226	UNDERCUT EXCAVATION	2100	CY	$ 75.00	$ 157,500.00	$ 40.00	$ 84,000.00	$ 115.00	$ 241,500.00
6	0195000000-E	265	SELECT GRANULAR MATERIAL	2500	CY	$ 40.00	$ 100,000.00	$ 60.00	$ 150,000.00	$ 175.00	$ 437,500.00
7	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	7300	SY	$ 4.25	$ 31,025.00	$ 3.25	$ 23,725.00	$ 6.81	$ 49,713.00
8	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	20	TON	$ 45.00	$ 900.00	$ 70.00	$ 1,400.00	$ 262.64	$ 5,252.80
9	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	50	SY	$ 5.00	$ 250.00	$ 5.00	$ 250.00	$ 65.84	$ 3,292.00
10	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	132	LF	$ 125.00	$ 16,500.00	$ 170.00	$ 22,440.00	$ 274.92	$ 36,289.44
11	0453000000-E	310	15" PIPE END SECTION	4	EA	$ 1,000.00	$ 4,000.00	$ 1,250.00	$ 5,000.00	$ 4,958.14	$ 19,832.56
12	1121000000-E	520	AGGREGATE BASE COURSE	1215	TON	$ 70.00	$ 85,050.00	$ 65.00	$ 78,975.00	$ 83.34	$ 101,258.10
13	1220000000-E	545	INCIDENTAL STONE BASE	100	TON	$ 70.00	$ 7,000.00	$ 60.00	$ 6,000.00	$ 36.98	$ 3,698.00
14	1525000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	75	TON	$ 150.00	$ 11,250.00	$ 225.00	$ 16,875.00	$ 300.00	$ 22,500.00
15	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	10	TON	$ 600.00	$ 6,000.00	$ 775.00	$ 7,750.00	$ 1,000.00	$ 10,000.00
16	1880000000-E	SP	GENERIC PAVING ITEM - GRANITE SCREENINGS	140	TON	$ 60.00	$ 8,400.00	$ 75.00	$ 10,500.00	$ 99.83	$ 13,976.20
17	2022000000-E	815	SUBDRAIN EXCAVATION	56	CY	$ 20.00	$ 1,120.00	$ 38.00	$ 2,128.00	$ 53.69	$ 3,006.64
18	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	84	CY	$ 55.00	$ 4,620.00	$ 60.00	$ 5,040.00	$ 155.24	$ 13,040.16
19	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	500	LF	$ 12.00	$ 6,000.00	$ 35.00	$ 17,500.00	$ 45.52	$ 22,760.00
20	2070000000-E	815	SUBDRAIN PIPE OUTLET	2	EA	$ 330.00	$ 660.00	$ 350.00	$ 700.00	$ 1,184.96	$ 2,369.92
21	2077000000-E	815	6" OUTLET PIPE	12	LF	$ 35.00	$ 420.00	$ 60.00	$ 720.00	$ 90.32	$ 1,083.84
22	2591000000-E	848	4" CONCRETE SIDEWALK	600	SY	$ 55.00	$ 33,000.00	$ 50.00	$ 30,000.00	$ 62.50	$ 37,500.00
23	2612000000-E	848	6" CONCRETE DRIVEWAY	70	SY	$ 110.00	$ 7,700.00	$ 78.00	$ 5,460.00	$ 75.50	$ 5,285.00
24	2738000000-E	SP	4" REINFORCED SIDEWALK	2510	SY	$ 100.00	$ 251,000.00	$ 85.00	$ 213,350.00	$ 80.00	$ 200,800.00
25	3575000000-E	SP	PVC FENCE AND PLANTER BOX RESET	32	LF	$ 75.00	$ 2,400.00	$ 128.00	$ 4,096.00	$ 381.74	$ 12,215.68
26	3575000000-E	SP	STANDARD METAL HANDRAIL	880	LF	$ 100.00	$ 88,000.00	$ 44.00	$ 38,720.00	$ 374.74	$ 329,771.20
27	3578000000-N	SP	FIXED BOLLARDS (STEEL)	8	EA	$ 500.00	$ 4,000.00	$ 1,250.00	$ 10,000.00	$ 3,500.45	$ 28,003.60
28	3578000000-N	SP	REMOVABLE BOLLARDS (STEEL)	4	EA	$ 1,000.00	$ 4,000.00	$ 2,000.00	$ 8,000.00	$ 4,886.89	$ 19,547.56
29	3578000000-N	SP	WOOD BOLLARDS	20	EA	$ 300.00	$ 6,000.00	$ 775.00	$ 15,500.00	$ 1,108.56	$ 22,171.20
30	3628000000-E	876	RIP RAP, CLASS I	300	TON	$ 75.00	$ 22,500.00	$ 125.00	$ 37,500.00	$ 147.79	$ 44,337.00
31	3649000000-E	876	RIP RAP, CLASS B	90	TON	$ 65.00	$ 5,850.00	$ 175.00	$ 15,750.00	$ 136.76	$ 12,308.40
32	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	1480	SY	$ 5.00	$ 7,400.00	$ 3.50	$ 5,180.00	$ 6.54	$ 9,679.20
33	4025000000-E	901	CONTRACTOR FURNISHED, TYPE E SIGN	14	SF	$ 40.00	$ 560.00	$ 19.50	$ 273.00	$ 25.50	$ 357.00
34	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	105	LF	$ 15.00	$ 1,575.00	$ 7.00	$ 735.00	$ 18.15	$ 1,905.75
35	4102000000-N	904	SIGN ERECTION, TYPE E	7	EA	$ 160.00	$ 1,120.00	$ 350.00	$ 2,450.00	$ 75.00	$ 525.00
36	4360000000-N	SP	TOWN OF APEX GREENWAY SIGN - DIRECTIONAL	7	EA	$ 700.00	$ 4,900.00	$ 2,700.00	$ 18,900.00	$ 215.00	$ 1,505.00
37	4360000000-N	SP	TOWN OF APEX GREENWAY SIGN - ID SIGN	1	EA	$ 900.00	$ 900.00	$ 4,000.00	$ 4,000.00	$ 215.00	$ 215.00
38	4360000000-N	SP	TOWN OF APEX GREENWAY SIGN - MILEAGE	1	EA	$ 500.00	$ 500.00	$ 4,600.00	$ 4,600.00	$ 215.00	$ 215.00
39	4360000000-N	SP	STOCKPILE AND RELOCATE TOWN OF APEX MESSAGE BOARD	1	EA	$ 200.00	$ 200.00	$ 6,000.00	$ 6,000.00	$ 1,811.85	$ 1,811.85
40	4360000000-N	SP	STOCKPILE AND RELOCATE TOWN OF APEX WOOD DIR SIGN ("PINE LOOP")	1	EA	$ 100.00	$ 100.00	$ 6,000.00	$ 6,000.00	$ 1,811.85	$ 1,811.85
41	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	1	LS	$ 25,000.00	$ 25,000.00	$ 50,000.00	$ 50,000.00	$ 29,461.54	$ 29,461.54
42	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	84	LF	$ 3.00	$ 252.00	$ 7.50	$ 630.00	$ 6.00	$ 504.00
43	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	280	TON	$ 60.00	$ 16,800.00	$ 80.00	$ 22,400.00	$ 66.27	$ 18,555.60
44	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	110	TON	$ 60.00	$ 6,600.00	$ 100.00	$ 11,000.00	$ 75.17	$ 8,268.70
45	6012000000-E	1610	SEDIMENT CONTROL STONE	135	TON	$ 55.00	$ 7,425.00	$ 95.00	$ 12,825.00	$ 156.10	$ 21,073.50

Line Item	Item Number	Sec No.	Pay Item	Total Quantity	Unit	Unit Price	Total Cost	Unit Price	Total Cost	Unit Price	Total Cost
46	6015000000-E	1615	TEMPORARY MULCHING	9	ACR	$ 1,200.00	$ 10,800.00	$ 1,200.00	$ 10,800.00	$ 1,650.00	$ 14,850.00
47	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	900	LB	$ 5.00	$ 4,500.00	$ 2.00	$ 1,800.00	$ 6.90	$ 6,210.00
48	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	5	TON	$ 1,500.00	$ 7,500.00	$ 750.00	$ 3,750.00	$ 1,080.00	$ 5,400.00
49	6024000000-E	1622	TEMPORARY SLOPE DRAINS	400	LF	$ 11.00	$ 4,400.00	$ 25.00	$ 10,000.00	$ 73.14	$ 29,256.00
50	6030000000-E	1630	SILT EXCAVATION	120	CY	$ 35.00	$ 4,200.00	$ 2.00	$ 240.00	$ 160.15	$ 19,218.00
51	6036000000-E	1631	MATTING FOR EROSION CONTROL	270	SY	$ 3.00	$ 810.00	$ 3.50	$ 945.00	$ 2.65	$ 715.50
52	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	55	SY	$ 10.00	$ 550.00	$ 6.50	$ 357.50	$ 6.50	$ 357.50
53	6042000000-E	1632	1/4" HARDWARE CLOTH	520	LF	$ 7.00	$ 3,640.00	$ 6.95	$ 3,614.00	$ 6.95	$ 3,614.00
54	6070000000-N	1639	SPECIAL STILLING BASINS	4	EA	$ 150.00	$ 600.00	$ 1,500.00	$ 6,000.00	$ 3,012.47	$ 12,049.88
55	6084000000-E	1660	SEEDING & MULCHING	15	ACR	$ 2,250.00	$ 33,750.00	$ 1,600.00	$ 24,000.00	$ 2,125.00	$ 31,875.00
56	6087000000-E	1660	MOWING	9	ACR	$ 250.00	$ 2,250.00	$ 175.00	$ 1,575.00	$ 175.00	$ 1,575.00
57	6090000000-E	1661	SEED FOR REPAIR SEEDING	150	LB	$ 10.00	$ 1,500.00	$ 6.90	$ 1,035.00	$ 6.90	$ 1,035.00
58	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	1	TON	$ 1,500.00	$ 1,500.00	$ 1,200.00	$ 1,200.00	$ 600.00	$ 600.00
59	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	300	LB	$ 6.00	$ 1,800.00	$ 6.90	$ 2,070.00	$ 6.90	$ 2,070.00
60	6108000000-E	1665	FERTILIZER TOPDRESSING	8	TON	$ 1,000.00	$ 8,000.00	$ 750.00	$ 6,000.00	$ 1,237.50	$ 9,900.00
61	6114500000-N	1667	SPECIALIZED HAND MOWING	20	MHR	$ 80.00	$ 1,600.00	$ 125.00	$ 2,500.00	$ 95.00	$ 1,900.00
62	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	6	EA	$ 2,000.00	$ 12,000.00	$ 1,072.50	$ 6,435.00	$ 3,136.29	$ 18,817.74
63	6132000000-N	SP	FILTER SACK INLET PROTECTION	1	EA	$ 200.00	$ 200.00	$ 524.50	$ 524.50	$ 1,109.59	$ 1,109.59
64	6132000000-N	SP	TEMPORARY STREAM CROSSING (-G2- STA. 31+80)	1	EA	$ 6,000.00	$ 6,000.00	$ 10,000.00	$ 10,000.00	$ 34,843.26	$ 34,843.26
65	6132000000-N	SP	TEMPORARY STREAM CROSSING (-G2- STA. 40+28)	1	EA	$ 6,000.00	$ 6,000.00	$ 10,000.00	$ 10,000.00	$ 34,843.26	$ 34,843.26
66	6132000000-N	SP	TEMPORARY STREAM CROSSING (-G2- STA. 48+28)	1	EA	$ 6,000.00	$ 6,000.00	$ 10,000.00	$ 10,000.00	$ 34,843.26	$ 34,843.26
67	6147000000-E	SP	TEMPORARY SILT FENCE & TREE PROTECTION FENCE	12735	LF	$ 4.00	$ 50,940.00	$ 3.00	$ 38,205.00	$ 2.95	$ 37,568.25
68	6147000000-E	SP	TREE PROTECTION FENCE	1240	LF	$ 3.00	$ 3,720.00	$ 2.75	$ 3,410.00	$ 2.65	$ 3,286.00
69	6147000000-E	SP	MUD MATS	2610	LF	$ 50.00	$ 130,500.00	$ 5.00	$ 13,050.00	$ 92.19	$ 240,615.90
70	6680000000-E	SP	TOPSOIL	20	CY	$ 75.00	$ 1,500.00	$ 120.00	$ 2,400.00	$ 102.00	$ 2,040.00
71	6680000000-E	SP	SOIL AMENDMENTS	5	CY	$ 200.00	$ 1,000.00	$ 120.00	$ 600.00	$ 97.00	$ 485.00
72	8860000000-N	SP	BRIDGE #1 (-G3- STA. 56+88.00)	1	LS	$ 260,000.00	$ 260,000.00	$ 540,000.00	$ 540,000.00	$ 330,651.86	$ 330,651.86
73	8860000000-N	SP	TIMBER BOARDWALK #1 (-G1A- STA. 25+95.13 to 26+81.13)	86	LF	$ 1,150.00	$ 98,900.00	$ 2,100.00	$ 180,600.00	$ 1,895.75	$ 163,034.50
74	8860000000-N	SP	TIMBER BOARDWALK #2 (-G2- STA. 25+88.83 to 31+86.23)	598	LF	$ 1,150.00	$ 687,700.00	$ 885.00	$ 529,230.00	$ 775.51	$ 463,754.98
75	8860000000-N	SP	TIMBER BOARDWALK #3 (-G2- STA. 32+76.23 to 40+49.78)	774	LF	$ 1,150.00	$ 890,100.00	$ 910.00	$ 704,340.00	$ 798.50	$ 618,039.00
76	8860000000-N	SP	TIMBER BOARDWALK #4 (-G2- STA. 43+39.00 to 43+84.00)	45	LF	$ 1,150.00	$ 51,750.00	$ 1,010.00	$ 45,450.00	$ 883.51	$ 39,757.95
77	8860000000-N	SP	TIMBER BOARDWALK #5 (-G2- STA. 45+53.00 to 48+36.00)	283	LF	$ 1,150.00	$ 325,450.00	$ 925.00	$ 261,775.00	$ 808.25	$ 228,734.75
78	8860000000-N	SP	TIMBER BOARDWALK #6 (-G3- STA. 52+15.62 to 56+63.00)	448	LF	$ 1,150.00	$ 515,200.00	$ 1,110.00	$ 497,280.00	$ 1,108.14	$ 496,446.72
79	8860000000-N	SP	TIMBER BOARDWALK #7 (-G3- STA. 57+13.00 to 59+98.39)	286	LF	$ 1,150.00	$ 328,900.00	$ 1,130.00	$ 323,180.00	$ 1,126.93	$ 322,301.98
80	8860000000-N	SP	TIMBER BOARDWALK #8 (-G3- STA. 63+25.00 to 64+25.00)	100	LF	$ 1,150.00	$ 115,000.00	$ 1,195.00	$ 119,500.00	$ 1,223.77	$ 122,377.00
81	6240000000-N	1670	CALYCANTHUS FLORIDUS 'MICHALE LINDSEY' 'SWEET SHRUB'	18	EA	$ 100.00	$ 1,800.00	$ 127.00	$ 2,286.00	$ 127.00	$ 2,286.00
82	6370000000-N	1670	ILEX GLABRA 'SHAMROCK' ' INKBERRY'	32	EA	$ 100.00	$ 3,200.00	$ 84.50	$ 2,704.00	$ 84.50	$ 2,704.00
83	6470000000-N	1670	MAGNOLIA GRANDIFLORA 'BRACKENS' SOUTHERN MAGNOLIA	3	EA	$ 1,000.00	$ 3,000.00	$ 1,112.00	$ 3,336.00	$ 1,112.00	$ 3,336.00
84	6510000000-N	1670	OXYDENDRUM ARBOREUM 'SOURWOOD'	3	EA	$ 750.00	$ 2,250.00	$ 730.00	$ 2,190.00	$ 730.00	$ 2,190.00
85	6605000000-N	1670	TAXODIUM DISTICHUM 'BALD CYPRESS'	3	EA	$ 1,000.00	$ 3,000.00	$ 1,082.00	$ 3,246.00	$ 1,082.00	$ 3,246.00
86	6640000000-N	1670	CLETHRA ALNIFOLIA 'SUMMERSWEET CLETHRA'	14	EA	$ 100.00	$ 1,400.00	$ 63.00	$ 882.00	$ 63.00	$ 882.00
87	6640000000-N	1670	NYSSA SYLVATICA 'SOUR GUM'	3	EA	$ 1,000.00	$ 3,000.00	$ 1,082.00	$ 3,246.00	$ 1,082.00	$ 3,246.00
88	6645000000-N	SP	TRASH RECEPTACLE	2	EA	$ 265.00	$ 530.00	$ 955.00	$ 1,910.00	$ 995.00	$ 1,990.00
89	6645000000-N	SP	RECYCLING RECEPTACLE	2	EA	$ 710.00	$ 1,420.00	$ 955.00	$ 1,910.00	$ 955.00	$ 1,910.00
90	6645000000-N	SP	DOG WASTE STATION	2	EA	$ 150.00	$ 300.00	$ 1,279.00	$ 2,558.00	$ 1,279.00	$ 2,558.00
91	6650000000-E	1670	MULCH FOR PLANTING	25	CY	$ 125.00	$ 3,125.00	$ 78.00	$ 1,950.00	$ 78.00	$ 1,950.00
92	6655000000-E	1670	WATER FOR PLANTING	50	M/G	$ 100.00	$ 5,000.00	$ 270.00	$ 13,500.00	$ 270.00	$ 13,500.00
						TOTAL	**$ 6,323,822.00**	**TOTAL**	**$ 6,592,956.00**	**TOTAL**	**$ 6,941,974.91**

NOTICE OF AWARD

September 26, 2023

Project:	Beaver Creek Greenway Extension, Phases 1, 2 and 1A
Bidder:	Jason M Williams FSC II, LLC dba Fred Smith Company
Bidders' Address:	701 Corporate Center Drive, Ste. 101, Raleigh, NC 27607

You are notified that the Town has considered the Bid received from you on May 31, 2023 for the above-named project and that you are the Successful Bidder and awarded the Contract for: Beaver Creek Greenway Extension, Phases 1, 2 and 1A.

As stipulated in the Instruction to Bidders, you are required to furnish the required Insurance Certificate within ten calendar days from the date of this Notice to you.

You should also deliver to Owner (4) counterparts of the Agreement, fully executed by Bidder. If you fail to furnish said documents within ten days from the date of this Notice, the Town will be entitled to consider all your rights arising out of the Town's Acceptance of your Bid as abandoned. The Town will be entitled to such other rights as may be granted by law.

TOWN OF APEX

BY: _____ _____
Shawn Purvis, Interim Town Manager Date

ACCEPTANCE OF NOTICE
Receipt is hereby acknowledged

BY: _____ _____
(signature) Date

_____
(written)

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Allen Coleman, Town Clerk

Department(s): Town Clerk's Office

Requested Motion

Motion to approve, as submitted or amended, Meeting Minutes from the following meeting:

- September 12, 2023 – Regular Town Council Minutes

Approval Recommended?

The Town Clerk recommends the Town Council approve the meeting minutes as presented or amended.

Item Details

In accordance with 160A-72 of North Carolina General Statues (NCGS), the Governing Board has the legal duty to approve all minutes that are entered into the official journal of the Board's proceedings.

Attachments

- CN5-A1: **DRAFT** Minutes – September 12, 2023 – Regular Town Council Minutes

DRAFT MINUTES

TOWN OF APEX
REGULAR TOWN COUNCIL MEETING
TUESDAY, SEPTEMBER 12, 2023
6:00 PM

The Apex Town Council met for a Regular Town Council Meeting on Tuesday, September 12, 2023 at 6:00 PM in the Council Chambers at Apex Town Hall, located at 73 Hunter Street in Apex, North Carolina.

This meeting was open to the public. Members of the public were able to attend this meeting in-person or watch online via the livestream on the Town's YouTube Channel. The recording of this meeting can be viewed here: https://www.youtube.com/watch?v=31j_nWswKo0

[ATTENDANCE]

Elected Body
Mayor Jacques K. Gilbert (presiding)
Mayor Pro Tempore Audra Killingsworth
Councilmember Brett Gantt
Councilmember Ed Gray
Councilmember Arno Zegerman
Absent: Councilmember Terry Mahaffey

Town Staff
Interim Town Manager Shawn Purvis
Assistant Town Manager Demetria John
Assistant Town Manager Marty Stone
Town Attorney Laurie Hohe
Town Clerk Allen Coleman
Deputy Town Clerk Ashley Gentry
Planning Director Dianne Khin
All other staff members will be identified appropriately below

[COMMENCEMENT]

Mayor Gilbert called the meeting to order, and invited those who were able to stand for the presentation of colors by American Legion Apex Post 124.

Mayor Gilbert then invited everyone to join in a moment of silence. He then led those in attendance in the Pledge of Allegiance.

Mayor Gilbert noted that anyone who wished to speak in Public Forum or Public Hearing should sign in with the Town Clerk.

[SLIDE 1]



[CONSENT AGENDA]

Mayor Gilbert requested that Consent Item 5 – Report of Separation Agreement and Release, be removed from the Consent Agenda tonight and continued to the September 26, 2023 Regular Council Meeting. He said they would be adding a Closed Session item for that tonight when they set the Regular Meeting Agenda.

A **motion** was made by **Councilmember Zegerman,** seconded by **Councilmember Gantt,** to approve the Consent Agenda, with the continuation of Consent Item 5 to September 26, 2023.

VOTE: UNANIMOUS (4-0)

CN1 Annexation No. 764 – Pleasant Plains Elementary School – 30.047 acres (REF: RES-2023-057, RES-2023-058, and OTHER-2023-087)

Council voted to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution setting the Date of a Public Hearing for September 26, 2023, on the Question of Annexation – Apex Town Council's intent to annex 30.047 acres, Pleasant Plans Elementary School, Annexation No. 764 into the Town Corporate Limits.

CN2 Contract Multi-Year – ITpipes Opco, LLC – July 1, 2023 through June 30, 2026 – ITpipes Mobile Units CCTV Condition Assessment and Data (REF: CONT-2023-274)

Council voted to approve a Standard Services Agreement with ITpipes Opco LLC., and the Town of Apex, for software support for ITpipes Mobile CCTV platform, effective July 1, 2023 through June 30, 2026, and to authorize the Interim Town Manager to execute on behalf of the Town.

CN3 Contract Multi-Year – Ferguson Enterprises, LLC and Sensus USA Inc. – October 1, 2023 through September 30, 2038 – Advanced Metering Infrastructure (AMI) System (REF: CONT-2023-275)

Council voted to approve a Master Services Agreement (MSA) between the Town of Apex and Ferguson Enterprises, LLC and Sensus USA Inc., for a meter system upgrade, effective October 1,

2023 through September 30, 2038, and authorize the Interim Town Manager to execute on behalf of the Town.

CN4 Council Meeting Minutes – Various

Council voted to approve, as submitted or amended, Meeting Minutes from the following meetings:
August 15, 2023 – Work Session Minutes
August 22, 2023 – Regular Town Council Minutes

~~**CN5 Report of Separation Agreement and Release**~~

Continued to September 26, 2023 Regular Town Council Meeting, per Council vote.

CN6 Resolution – Approve Sell and Issuance of $3,460,000 Two-Third Public Improvement Bonds, Series 2023A and $24,500,000, General Obligation (GO) Transportation Bonds, Series 2023B (REF: RES-2023-059)

Council voted to approve a Resolution providing sell and issuance of $3,460,000 Two-Third Public Improvement Bonds, Series 2023A and $24,500,000 General Obligation (GO) Transportation Bonds, Series 2023B.

CN7 Resolution - Public Utility Easement Abandonment (REF: RES-2023-060)

Council voted to approve a resolution titled "Resolution to Abandon Portion of Existing Public Utility Easement" which will abandon areas shown on the attached exhibit, more specifically property located at 1000 Vision Drive (Home Depot).

CN8 Surplus Badge and Service Weapon - Retiring Police Officer Jeff Antonsen

Council voted to declare one (1) badge and (1) service weapon (Glock Model 17 9mm handgun, Serial Number XTA-781) as surplus property; and, award to Retiring Officer Jeff Antonsen who retired from the Apex Police Department.

CN9 Tax Reports – June and July 2023 (REF: OTHER-2023-090 and OTHER-2023-091)

Council voted to approve the Wake County Tax Administration Tax Report for the Town of Apex dated July 04, 2023 and the Wake County Tax Administration Tax Report for the Town of Apex dated August 05, 2023.

[PRESENTATIONS]

PR1 Proclamation – Hispanic Heritage Month – September 15 through October 15, 2023 (REF: PRO-2023-024)

Mayor Gilbert and the rest of Council read the Hispanic Heritage Month Proclamation in unity.

Linda Graham Jones, DEI Director, Celeste Sherer, DEI Coordinator, and representatives from La Fiesta Cristiana received the proclamation and took a picture with the Mayor and Council.

A representative from La Fiesta Cristian spoke about how Hispanic Heritage Month recognizes diversity in the community. He said it also recognizes the achievements of Latinos in building prosperous and healthy communities everywhere. He thanked Apex DEI and Parks and Rec Departments for working with La Fiesta Cristiana and other groups to organize and celebrate Hispanic Heritage Month. He said a few years ago, there were no events planned, but that now there are six. He invited people to join in celebrating Hispanic and Latino culture through these events. He commended Chief Armstrong for partnering with them in the ID program they had put together. He thanked the town for the proclamation, and said they are building trust by building community. He said it was his honor to accept the proclamation on behalf of Apex's Hispanic and Latino community.

PR2 Proclamation – Indigenous Peoples Day – October 9, 2023 (REF: PRO-2023-025)

Mayor Gilbert and the rest of Council read the Indigenous Peoples Day Proclamation in unity.

Representatives of the Triangle Native American Society, Jesalyn Keziah, JB Wynn, JD Freeman, And Ryan Stan, received the Proclamation and took a picture with the Mayor and Council.

Ms. Keziah thanked the town for celebrating with them, and said town leadership was setting an example across the triangle for what is possible when people come together. She said the Native community in this area loves it, and they have had a relationship with this land, its people, and its communities for a long time. He said Native people are still here and are a part of the community in everyday life. She invited all to attend community events that Triangle Native American Society hosts. She said North Carolina is home to the largest Native Population on the East Coast, and added that there are about 13,000 Native people in the Triangle. She said the community is excited to be here and appreciates all of the support.

Mr. Freeman said he wanted to thank the town for its support and for the indigenous peoples day celebrations. He said it is great to be in Apex, and he said he hopes to see citizens of Apex at the upcoming celebration.

PR3 Proclamation – Patriot's Day, Honoring and Remembering – September 11, 2023 (REF: PRO-2023-026)

Mayor Gilbert and the rest of Council read the Patriot's Day, Honoring and Remembering Proclamation in unity.

Representatives from American Legion, Fire Chief Tim Herman, Police Chief Jason Armstrong, and other police officers accepted the proclamation and took a photo with the Mayor and Council.

PR4 Proclamation – Party in the Peak Day 2023 – Saturday, September 23, 2023 (REF: PRO-2023-027)

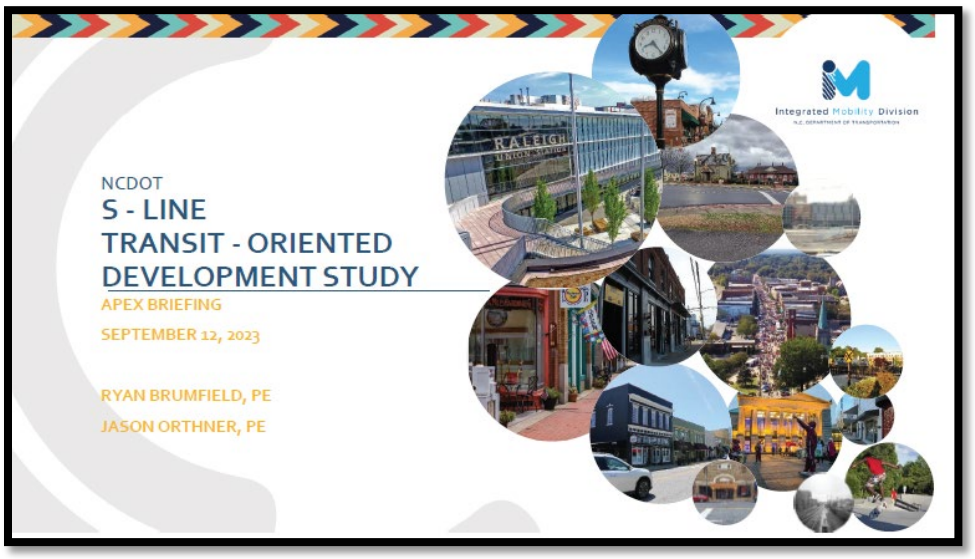
Mayor Gilbert the rest of Council read the Party in the Peak Day proclamation in unity.

Communications Coordinator Kerrin Cox and other event planning staff received the proclamation and took a picture with the Mayor and Council.

PR5 S-Line Transit Oriented Development (TOD) Study – Final Report

Ryan Brumfield, PE, Director, Integrated Mobility Division, NCDOT, and **Jason Orthner, PE, Director, Rail Division, NCDOT** gave the following presentation regarding the S-Line Transit Oriented Development Study Final Report.

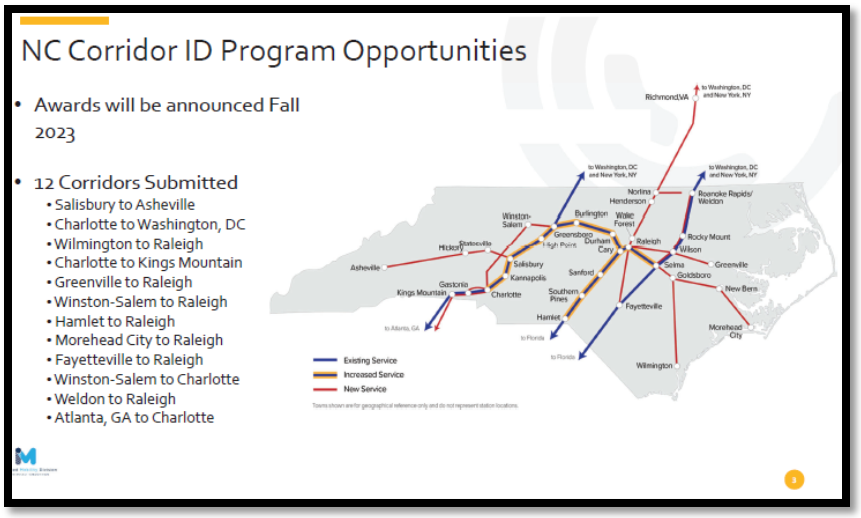
[PR5 – SLIDE 1]



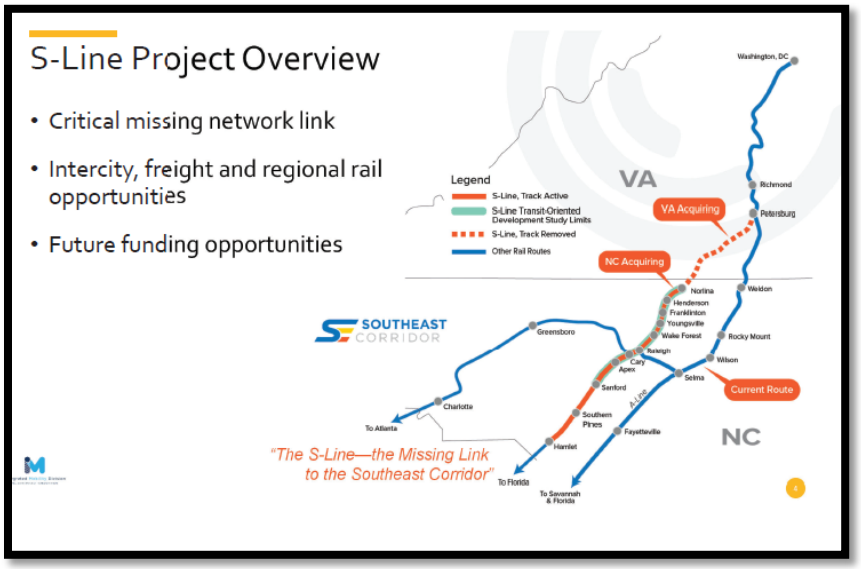
[PR5 – SLIDE 2]



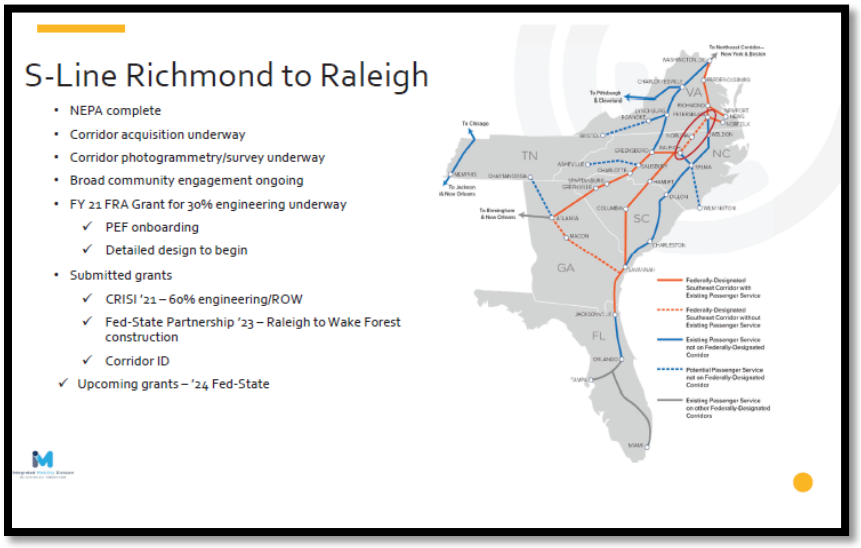
[PR5 – SLIDE 3]



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2 **[PR5 – SLIDE 4]**

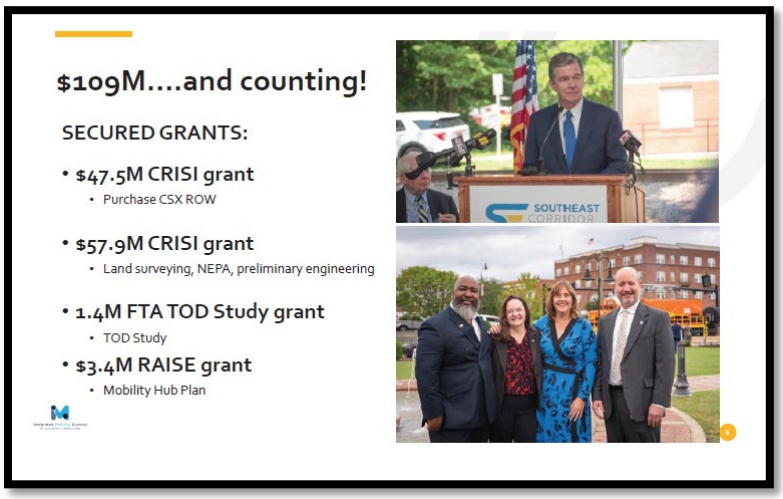


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4 **[PR5 – SLIDE 5]**



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[PR5 – SLIDE 6]



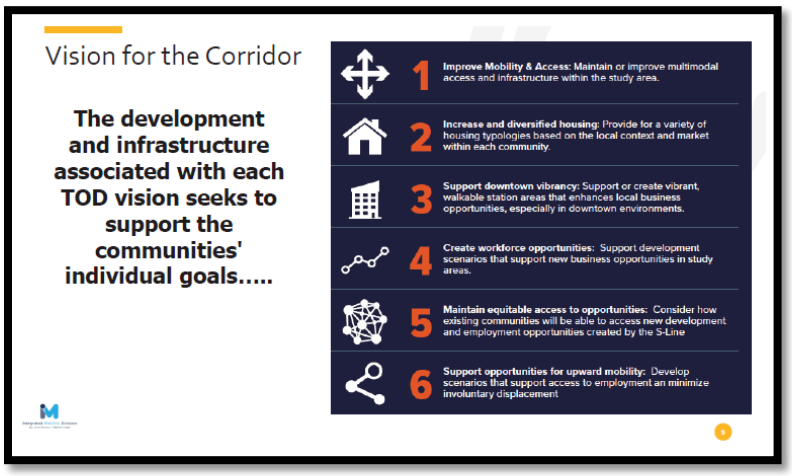
[PR5 – SLIDE 7]



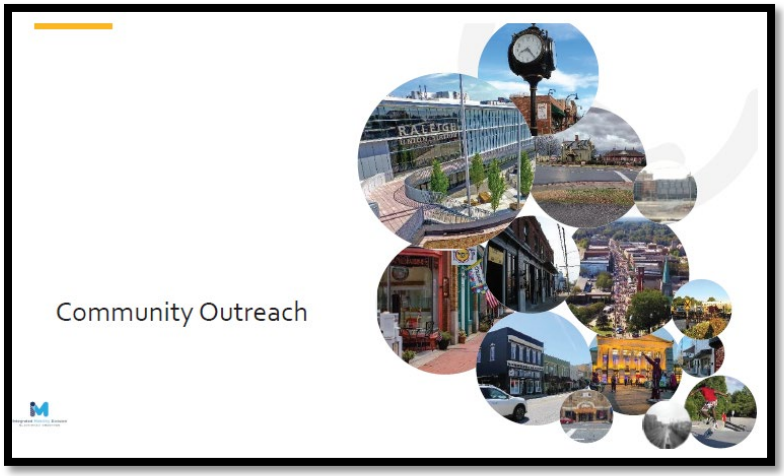
[PR5 – SLIDE 8]



[PR5 – SLIDE 9]



[PR5 – SLIDE 10]



[PR5 – SLIDE 11]



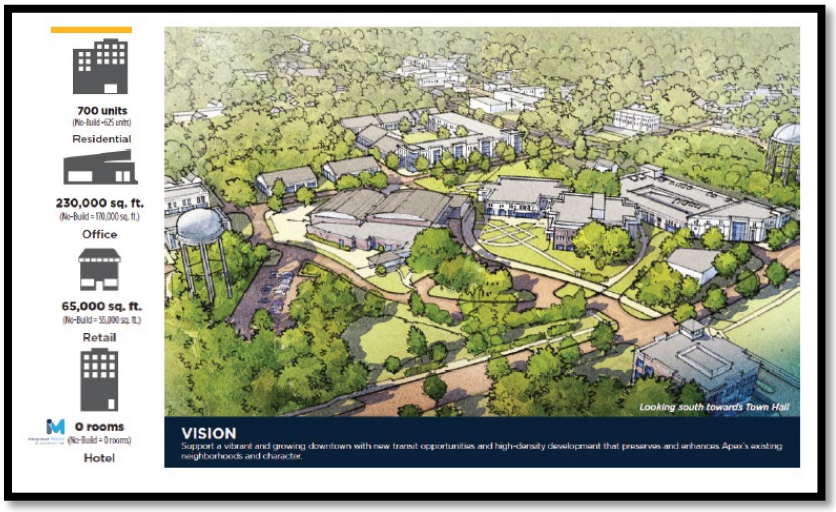
[PR5 – SLIDE 12]



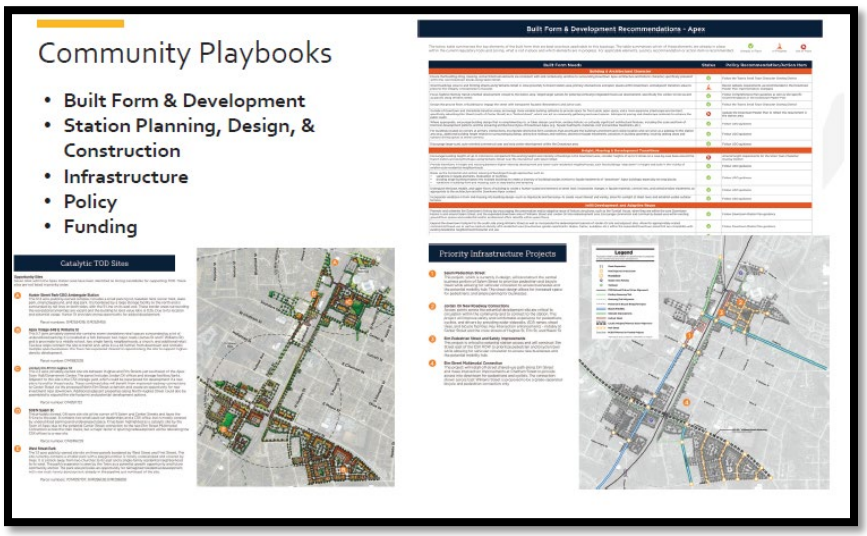
[PR5 – SLIDE 13]



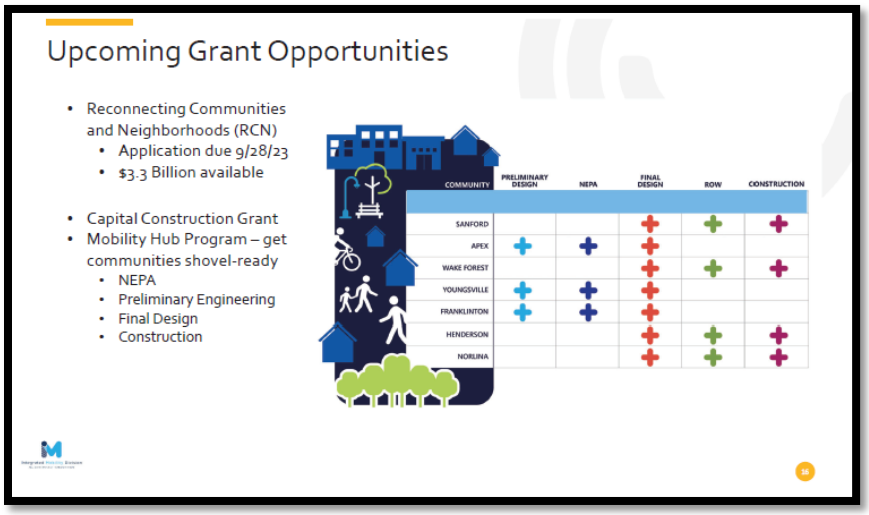
[PR5 – SLIDE 14]



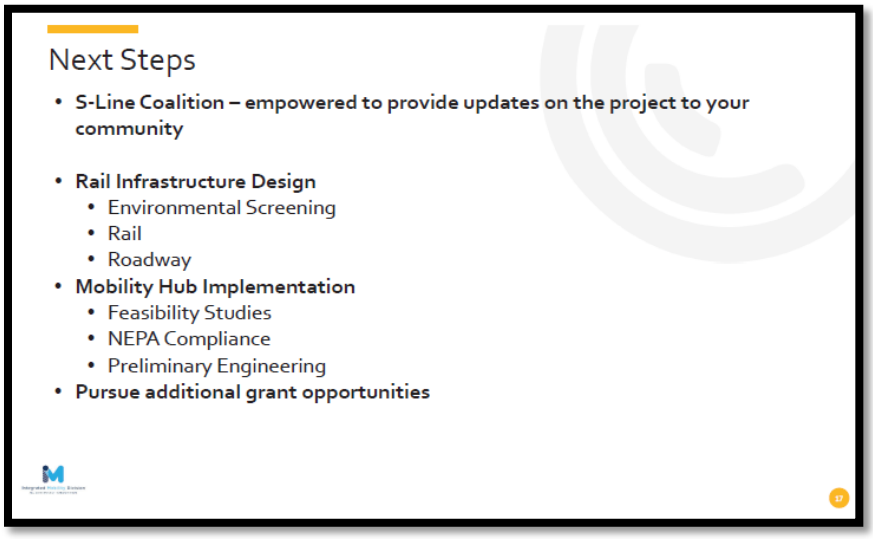
[PR5 – SLIDE 15]



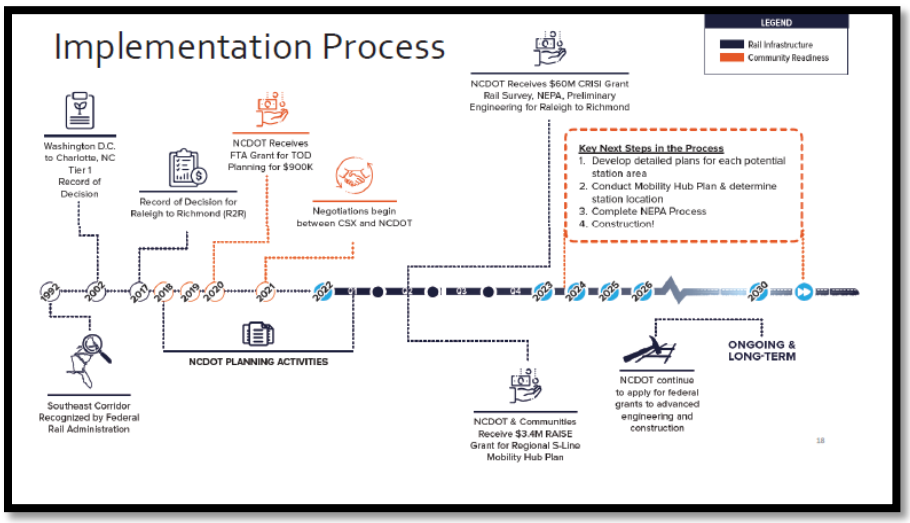
[PR5 – SLIDE 16]



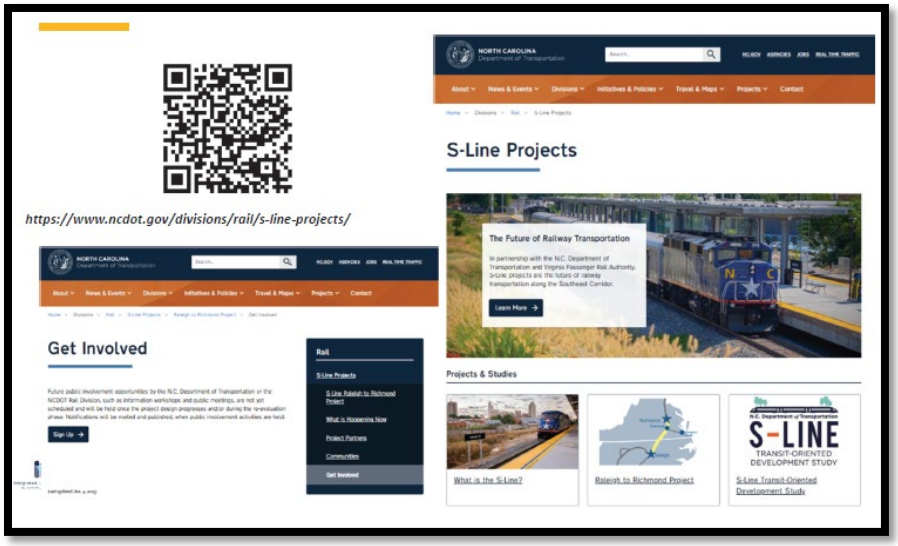
[PR5 – SLIDE 17]



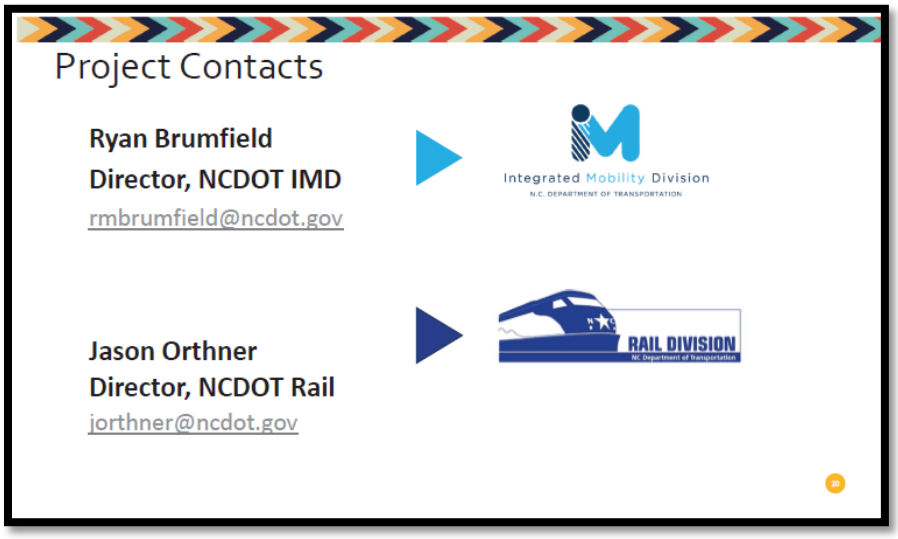
[PR5 – SLIDE 18]



[PR5 – SLIDE 19]



[PR5 – SLIDE 20]



Councilmember Gantt said it was an honor to be a part of this process, and he said staff members Dianne Khin and Shannon Cox were an important part of those meetings and actually working with NCDOT on behalf of the town. He said it has been great to take advantage of the funding opportunities available to build transit options that aren't just roads.

Councilmember Gray said this was a huge undertaking, and this project was Council was thinking about Apex in 20-30 years from now. He thanked Councilmember Gantt and staff for their leadership and hard work on this project.

Interim Town Manager Purvis said there was still lots of work to be done on this project. He said NCDOT is seeking a grant on the next phase of work. He said he would like to provide information on this and how Apex can participate. He requested that this item be added onto the next Council Work Session, September 19, 2023. He said the funding application for that grant is September 28.

[REGULAR MEETING AGENDA]

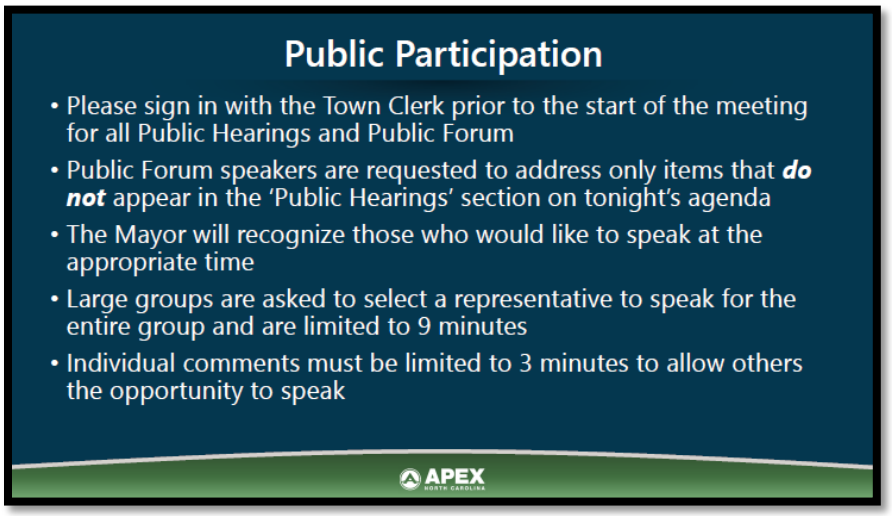
Councilmember Zegerman requested that New Business Item 2 be removed, since Councilmember Mahaffey was not present tonight, and for it to be continued until the next Regular Council meeting on September 26, 2023.

A **motion** was made by **Mayor Pro Tempore Killingsworth,** seconded by **Councilmember Zegerman,** to approve the Regular Meeting Agenda, with the continuation of New Business Item 2 to September 26, 2023 and the addition of a Closed Session item (NCGS§ 143-318.11(a)(3).

VOTE: UNANIMOUS (4-0)

[PUBLIC FORUM]

[SLIDE 2]



First to speak was **Dawn Cozzolino** of 3632 Bosco Road:

"Dawn Cozzalino, 3632 Bosco Road. I'm here tonight to voice my concerns about our rural New Hill Community, provide awareness of how critical our farm and land assets are, they do good for the environment, and they fight climate change. This is a turning point for the Town Council and future generations. Our number 1 industry is agriculture, yet we are second worst in the country, just behind Texas, for farm land preservation. We love where we live. These are photos of our farm. Jenna will share comments on why this saying is true as she presents her comments on open house meetings. We are a rural community, we want to keep it rural, we don't want a Starbucks on every corner. For the Western Big Branch and Force Main, I didn't hear any other feasible options proposed that would not interfere with our community. They are out there, but I'm not hearing about them. Take a look at these photos, these are photos of similar structures proposed for the Force Main and the Big Branch. It's not hidden, it's not underground. They're huge, permanent buildings with razor wire, cement risers, venting, even with filtration for smell. And that will impact property values and a lot of other things. Heat map, we're in the grey area, Apex is in the red area surrounding us. This is called sprawl. By definition it is expansion into the countryside in a manner that is disorganized and unattractive. Tree canopy study monetized, $2,800 per person, and that's including vulnerable communities by tree removal. Wake County's tree canopy is valued at 3.2 billion dollars. Apex was number 1 for losing the most acres, 2,180, and 15% out of Wake County. That's a 10-year study by the way, and it's three years old already. Talking about changing canopy loss, we're in the green as a gain, and Apex is in the yellow as a loss. This is Jordan Lake, this is our major water supply, there's only 8.8% allocated. The urban heat index is 4 degrees higher going 3.5 miles in 6 minutes from Bosco Road into Apex, Apex has too many goals, too far, too unsustainable and by looking at where we are going with things you're going to be changing your name to "the peak of good living has peaked" if we keep up with the sprawl. It's not unforeseeable that this would happened, and this is what progress looks like in Chatham County and Durham County, this is water protection that's just been blatantly violated. Thank you very much."

Mayor Gilbert thanked Ms. Cozzalino for her comments.

Next to speak was **Donald Braden** of 1321 Elk River Drive:

"Thank y'all for having us, Mayor, Council. I don't really need to tell you what a quasi-judicial meeting is, but I wrote the definition on here and it says "a hearing body to determine facts" and it says the commission is supposed to consider facts, competent substantial evidence that is under testimony, and complete evidence. The town commission are also required to be neutral in decisions, not allowing people to talk for or against applications when applying for a hearing, they must not disclose the conversations before public hearing. I'm talking about, we had a BOA meeting on August 15 on Preserves on Holt, and when I went back and read all of my information here it says "in order to approve a variance permit the BOA must find all of the following standards are being met, which included unnecessary hardship, hardship results and particular conditions not resolved by applicant consistent with the UDO variance, is consistent with the purpose and intent of the ordinance, that safety and substantial justice is achieved. Number 1, there was a traffic model that was presented at the meeting, but it was not evidence, it was a model and not an actual traffic study, so that was not hard evidence. Number 2, they said it was a hardship getting in and out of the

property, the property currently has an access road off of Holt, and at the Council Meeting, from the Council notes, it states on Page 53 that there is access to the property off of Holt Road, and it does not have to come off of Elk River Drive. It says that a variance permit is supposed to require all of the standard to be met. And I think particularly on the first standard and for the 4th standards, those areas were not met. Town Council has the scope to appeal this decision, and they had a vote on this with hearsay, and not all the facts and findings that are supposed to be in the process. And I know the Town Council are able in scope to appeal this decision to Superior Court, and we hope you will consider doing that for us. We also are considering a formal complaint to the NC Bar Association for the way that the BOA conducted meetings and voted on a lot of hearsay information, and not actual evidence. Thank you."

Next to speak was **Armando Garr** of 1339 Elk River Drive:

"Hello, my name is Armando Garr, 1339 Elk River Drive in the Courtyard on Holt. This is also regarding the quasi-judicial hearing from the BOA, and at that time, the applicant had some expert witnesses, a group of engineers, and one of them testified that the town staff and himself had checked with the DOT, and in no uncertain terms, access to Holt Road would not be allowed. However, he had nothing in writing to show these uncertain terms, it was just hearsay. Later he said that the DOT had said that there would be no access to Holt, and again there was no evidence of this. He was asked later if the right-in right-out driveway would be an acceptable option, and he said that in his experience it would not be approved. Again, it was his opinion, not facts. The BOA was sold on the fact that the DOT had denied access to Holt road. This land can access directly to Holt Road or through our neighborhood, by the way of a 55+ neighborhood. And again, the BOA was sold on the concept that access to Holt was denied already. So, I called the NCDOT, and I was told for a single-family home, no permit is required. No question, this would be the end of it. By the way, the applicant, for a few weeks, had a listing in the real estate website for a single house that was 2 million dollars, and they never sold, so then they went back to the idea of 3 homes. So, they are now trying to get 3 homes in the neighborhood. So, I asked the DOT if it's more than 2 houses, what happens? They say the owner would need to request a permit to the DOT and the DOT would conduct a study, and from that study they would determine if access to Holt Road would be acceptable. At that time a few weeks ago, this request hadn't been submitted yet. So, they hadn't even tried to find out if the access would be accepted or not. I also ask in our specific case, this 1305 lot, what is the status, and I was told if the Town of Apex accepts access through our community, through Elk Rover Drive, then the DOT sees no need to have a secondary access to Holt. So, this is critical, because the BOA was sold on the concept that access to Holt Road was already denied. Again, DOT said if Apex grants the access then there's no need for access to Holt Road. So, I just want you to make that distinction, because lawyers tend to get those confused you know? Thank you."

Next to speak was **Chuck Mattina** of 1328 Elk River Drive:

"Chuck Mettina, 1328 Elk River Drive. I want to talk a little bit about an actual document that was filed at the Board of Adjustment. This is the Finding of Fact that was submitted on 08.15.2023. I have one copy, if you'd like I'd be happy to share. Basically, it says on page 1 it says that "all persons

who desired to present evidence relevant to the variance on 1305 Holt Road were allowed the opportunity to present evidence." That is factually untrue. We had to obtain standing, and only one of residents obtained standing and that was Don Braden. So, the idea that all people who desired to speak were given the opportunity to speak is factually not true. That should make this whole finding null and void right there. It is signed by Chairman Carmac, by the way. You heard other people talk about the fact that the whole idea of was their decision based on NCDOT fact or hearsay. There was no evidence presented on that. Realistically, as Armando said, they can build one home on that lot. So, this is not necessarily, the hardship is coming from the fact that they want to build three homes. And the reason they do not want to come off of Holt is not about the road, it's what's underneath the road. If they come in off of Holt, that property has a septic system which can only support one home. So, in order to build 3 homes, they need to come in off of Elk River Drive to have access to water and sewer. So, I think the whole variance is kind of an end around to get water and sewer, so they can build the 3 homes. The last thing I wanted to kind of talk about is that this other thing is in the 4th criteria, which is consistent with the regulation, the UDO, such that public safety is secured. One of the things we represented to the board that they summarily ignored is the fact that one Elk River Drive there's 21 homes. 7 residents on Elk River Drive suffer from health issues, including cerebral palsey, Parkinson's, a gentleman who is blind in one eye, someone who is relegated to an electric wheelchair, and someone with Alzheimer's. There study, as Armando just said, which is based on opinion, on a model, will only have 25 percent more traffic coming down on our road. So, they're going to put 25% more traffic down a road that has 7 homes with some serious health issues, again we're a 55+ community, so that's to be expected. So, we feel like that was not addressing the idea of public safety being secured. That's putting the public safety "of the three homes" over the public safety of the 21 homes on Elk River Drive. So again, we fell like what was put into this and signed by the Chair and signed by a planner is factually untrue, and should not be submitted as evidence of fact. Thank you."

Next to speak was **James Jesserer** of 1366 Elk River Drive:

Again, I appreciate the opportunity to come before the Board and Council to speak tonight. We, the members of the Courtyards on Holt, 85 households strong, are heartened to learn that Mayor Gilbert has scheduled an Apex Town Council Meeting this Tuesday, and later we believe there will be a discussion about the recent Apex Board of Adjustment's approval of Variance #23VAR01, 1305 Holt Road. The Courtyards on Holt, to remind you all, even though I know we came before the same body in January, we're a 55+ HOA managed community off Holt Rd in Apex. In truth, we are a 70+ year old community with many of whom suffering the ravishes of time and fate with significant issues such as dementia, Parkinson's and various visual, hearing and mobility issues. A 30% increase in traffic, which the aforementioned Variance represents, was an unacceptable risk to our aged and vulnerable residents. On January 10th, 2023, Public Hearing #7, Rezoning Case 22CZ20, the Applicant came before the Apex Town Council seeking rezoning of a parcel of land identified as 1305 Holt Rd with a subsequent connection to a new 4 home development via Elk River, one of the more heavily populated roads in the Courtyard on Holt. These to be built homes would replace a recently demolished home that had a driveway on Holt to Holt at 1305. The COH residents and our selected speakers on that night expressed our case for outright rejection of this arbitrary connection via Elk River Drive and encouraged the Applicant to use the existing driveway at 1305 Holt Road for

their development. One of the most cogent remarks that evening was from one of the Town Council members, and I apologize I do not remember which one of you it was, and I noticed that Councilman Mahaffey isn't here this evening, but one of you asked, "does anyone know anywhere in the area of a new development artificially grafted onto an existing 55+ community?" The answer that night, and the answer tonight, is still the same. It's a resounding no. The Apex Town Council, after careful consideration of both parties' point of view, voted unanimously to reject the application on the grounds of incompatibility of the two developments. By the way that's an incompatibility that still exists to this day. The Courtyard on Holt quietly celebrated the fairness and transparency of the January decision, and honestly in April we even breathed a sigh of relief when 1305 Holt Rd was posted on numerous websites for sale as a single spec home with a Holt Road driveway priced at just under 2 million dollars. Unfortunately, we were naive and ignorant, because simultaneously the Applicant and his legal counsel, Morningstar Law Firm, whom I recognize is present in this room tonight, in conjunction with the Apex Planning Department were engaged in some legal Jiu-Jitsu to subvert the Apex Town Council January meeting and January decision via a variance request to the Apex Board of Adjustment. At the first BOA meeting over 100 Courtyards on Holt residents attended the meeting and successfully argued for a continuance to allow us time to secure legal representation. We were given 30 days which we thought would be adequate, not fully understanding that the landscape, in terms of legal representation and expert witnesses is almost exclusively tilted in favor of developers. We were repeatedly denied representation. Developers are the bread and butter for many law firms and multiple firms simply did not wish to be associated with any case perceived as anti-developer. After numerous declinations, we found an attorney willing to take our case. At the next BOA meeting the COH ranks swelled to over 120 residents and despite what we thought was adequate legal representation, and as other speakers have spoken about already, multiple hearsay statements referencing DOT opinions or directives made by the Applicant's expert witnesses, their legal counsel Morningstar, were allowed to be entered as facts. And let's make sure we understand, in terms of hearsay, any statement made or linked to an NCDOT opinion or rulings on this without it being in writing or you being an NCDOT official, were classic forms of hearsay. And yet they were allowed to be entered as fact. The Minutes of the meeting, are quite frankly, I would probably be in a position to give you specific examples of hearsay, however the minutes of the meeting are in dispute, and therefore I am not able to give you more than what I've said which is any statement alluding to NCDOT is hearsay. As a result, when you allow that much hearsay evidence, that's a gross violation of a quasi-judicial hearing. And some of those statement may have inadvertently tripped over into perjury, which is a class 1 misdemeanor. Additionally, a BOA member, Mr. Pai, failed to acknowledge his association with the Applicant despite acknowledging said association at the first BOA meeting, depriving our attorney the fundamental right to probe the nature of that association, an association that might have compromised or biased the BOA's members' questions and eventual decision. Furthermore, it appeared to our community that several BOA members were predisposed to a stub road connection and had fixed and hard opinions, insusceptible to change, or on egress from the immediate onset of the BOA meeting. Such fixed opinions are an anathema to a proper and legal BOA meeting, and are against BOA structure and standings. The BOA meeting was never made aware of the Apex Town Council's decision on the Applicant's basically same request in January 2023 during the public BOA meeting. Is it unreasonable to assume that such knowledge may have impacted the Board's thinking, line of questioning, and subsequent decision? Why was this information not shared and to what purpose?

Was this more legal sleight of hand? The BOA voted that night 4 to 1 to approve the Applicant's request allowing the Applicant to build 3 homes attached to our Senior community exclusively via Elk River Drive. The only no vote was Board of Adjustment member Tracy Taylor. The residents of COH, comprised of over 170 voters who annually pay in excess of $350,000 in property taxes, respectfully request that the Mayor joined by the members of the Town Council and Ms. Hohe reject this flawed BOA decision, replete with multiple legal and ethical violations/ issues made by a panel of unelected and therefore unaccountable officials, and dismiss this BOA decision and the Applicant's case with prejudice. I repeat, I'm requesting it to be done with prejudice. After all, who runs the Town of Apex? We believe that the elected Mayor and the elected Town Council have the final say which allows the voters the opportunity to eventually at election time demonstrate their support or disapproval. Apex is no longer a sleepy little town where deals can be made in dark rooms by influential, well connected people against the collective will of the people using the cloak of a quasi-judicial proceeding to mask an ugly reality. Good governance requires forthright transparency guided by the firm hand of justice in fairness to all. At this point the Courtyard on Holt residents are a marginalized group of seniors deprived due process by an abuse of power and an abuse of authority. We ask the Mayor and Town Council to right this wrong. Thank you very much.

Next to speak was **Elizabeth Stitt** of 3113 Friendship Road:

"Mayor, Town Council, good evening. Since I have a few extra minutes, I'm going to say a couple thank you's to start with. Because generally, three minutes doesn't give you time to raise an issue and say thank you, so since I've got that I wanted to mention a couple of things. Friendship Road is going to be closed tomorrow, September 13th and 14th, to finally be repaired. There is a section of road that's been marked since December, and I wanted to thank the Mayor, he allowed me to go on a ride along with a DOT official. He stopped and looked down the side and he could see how unsafe it was. So, this particular work order that's been in place since December I believe is happening because of that so I appreciate the fact that you didn't have control of the road, but by helping me make connections, it's allowing our community to have a safe road. The second thank you I want to say is to Dianne and the planning staff for coming out to our two community open houses, it's really hard for us to get into town, today there was actually a major accident on the 540 bridge because the traffic has been, new traffic lanes, so there were people who got here late because they had to drive around different directions. But coming out to our community meeting, making it easier to engage is greatly appreciated. And I've got a third thank you, the final thank you before I get into the meat of what I wanted to talk about is to Interim Town Manager Shawn Purvis, I just want to say thank you for the email you sent. I raised some concerns today that each of you were copied on, didn't expect a response that quickly, so I just wanted to say thank you, it's a pleasurable change. Tonight, I love the fact that tonight was Indigenous Peoples night, because they love our trees. We love our trees, and we want to honor the legacy of their heritage in our Friendship community, but also the rest of us who live out there also value our trees, and I think that's reflected in the tree canopy study, and you're going to hear much more about trees so I'm not going to go into a lot of depth around that. But I do want to point out an obvious, blaring elephant in the room. The town is going to do the Big Branch Force Main, and it is going to remove 18 acres of trees through our communities, and there's no mitigation plan. There's no intent to replant a single tree back because you need that easement open. Somehow, someway, we need to have 18 acres of

trees. We don't want to lose a single one of those. We need a different strategy for Friendship and New Hill. Our communities have distinct cultures, we're not meant to look like Apex. We respect Apex, we are part of the greater community, but what we bring in terms of diversity is very important. We want to enable our communities to look like our communities, we don't want to look like Apex. So hopefully through this whole strategy of working with the town and coming up with a land use map, we're able to come up with something that really reflects our communities, and not making us look like the rest of Apex. A part of that is protecting our roads. Our roads are overcrowded based on the Apex process. Something in our transportation studies need to change. Is it the rate of background projects and the growth rate need to be changed? Something need to be done differently for our communities. We don't want the repeat of what we're fighting with right now. But I do think we're at a tipping point, I think there's a lot of social media happening right now, where people are saying enough is enough, that there's this feeling that we just hit too much. One of the individuals with me tonight did a posting on Next-door, and he just said, hey I'm hearing a lot of concerns about development, I'd like to get your thoughts. He had over 269 comments to just a simple question. So out of that, there is a group that has started, and it involves Apex residents, the ETJ, Wake County, members and we invite anyone what wants to come to some of those meetings to start talking about community solutions and what we can bring to you. We don't expect the town to come up with all the ideas, we'd like to present our ideas to say "this is what's meaningful to us, this is what we want." I'm also hosting a meeting with Cheryl Stallings, Wake County Commissioner, your former fellow Council member, to talk about what's unique about Wake County, we're all Wake County out there. And Wake County's priority are the voluntary ag district to preserve farmland, if you go and look at the GIS maps and you turn on the voluntary ag district map, you'll see that we just recently got 118 acres under that program, we have another 38 that should be in that program, so 150 acres within a couple of months. We're reaching out to some of the other large property owners to consider going under that program. And what that says is we are pledging a commitment for at least 10 years not to develop our property. Because we recognize the importance of our farms to the overall community. That's going to have an impact on the plans you make for 2045. Because you've got properties that are committing to stay and protect what we have. Wake County is also dealing with wells going dry. There is a number of resources they provided I plan to share that when you develop communities around farmland and you carry off stormwater, that stormwater does not go back into the ground, and so you start drying out the land around it. The trees start dying off, the grass starts dying off, people's well start going dry. We don't want our wells to go dry so I will be forwarding that information to you. Obviously, I've got a large group with a couple of different focuses, we're going to start aligning., and showing up more, because we realize that's what it takes to get change. So, I ask that you take the time to seriously have conversations with us. Coming to the town meetings where you have a 3-minute monologue, and yeah, I know I come on a regular basis, and there's not a need to respond to me every single time, but there's people who come and don't feel like they're heard, or that it's making a difference. And so, it's taken me a while to get my community to say "look guys, I keep showing up." There's a joke about me being a stormtrooper, and I actually have a cardboard cutout, I need to open it up and take a picture of me, to have the stormtroopers behind me to say look if I can keep showing up so can you, and we together can have a better outcome. The one thing I want to close with is, it's just not all on Apex. We know our community is impacted by Holly Springs. So I plan to meet with Holly Springs about a couple things but right now, Holly Springs has 2 potential rezoning cases that was going to be heard on

September 19, it's been pushed out to October 17, where Anjem and those different properties are going to be increasing their density, which means they had new traffic studies, and their original traffic study had money allotted to extend the turn lanes on Old US 1 and Friendship Road, that initially the town was going to build and then extend. And then of course the various properties, Holland Road Mixed Use Assembly was going to have some money, and we have included Paul Miller in those conversations because he owns the corner and he knows he's going to have to do something. So, we are looking beyond just the Town of Apex, and this is where collaborative working with each other is very important. And so, I'm going to circle back to where I started, where the Mayor had helped me get in touch with Brandon Jones at the DOT. I would have never met him on my own. We're getting a safer road, and I think we can get a better outcome if we keep making connections and working together, versus 3-minute monologues, hey I did talk 9 minutes imagine that! So long story short, I will share Dawn's presentation and her slides on the next time I come, so thank you."

Next to speak was **Pamela Thomas** of 507 Fantell Lane:

"As of September 29, it will be my one-year anniversary in Apex, North Carolina. So yes, I ain't going to mess up like I did last time, oh my goodness. To God be the glory, y'all. Since March public forum, I had an unexpected impromptu experience here that was a little traumatic, but it was real. It was very real. And it was evidence of the trauma, however I'm still free in 2023, free to grow, free to love, and free to heal in Apex, North Carolina, okay so again, one-year anniversary coming up. I am blessed by the best to announce that the non-profit vision God gave me has been offered 7 figures. That non-profit is Liberty Nest PPT Ministry, we advocate for orphans, widows, elderly, poor, oppressed, to ensure their home, or nest, is safe as well as well as suitable for any physical disabilities, adequate living space, and empower them to use their voice to address injustices and/or lack of corrective actions taken on their behalf. We facilitate specialty gatherings that will inspire strength and provoke us to begin again with unwavering faith, that Matthew 17: 13-14 is the best road to travel, we were talking a lot about roads here, enter at the straight gate. And because wide is the gate and broad is the way that leads to destruction. I am the founder, Pamela Patrice Thomas, or PPT, of Liberty Nest PPT Ministries, United States Navy Veteran, while serving my country I supported the chaplain corps, a religious program specialist, I also supported active reserve status of the Marine Corps, Semper Fidelis, yes I sure did, I am now a member of the local American Legion Post, I transferred my membership, so when it comes to Liberty Nest PPT Ministries, it is a faith-based meeting od need ministry God gave me during a national pandemic, the Bible, the inspired word of God, our road map for living was good enough for our ancestors, it's still good enough for me, and it helps fuel my passion to make a difference in the lives of others. This vision quickly expanded March of 2023 from a desire for a monthly women veteran gathering to reach out to touch the world, with a constant reminder that Matthew 25 and 40 is the wisest way to live, and the king shall answer and say unto them, verily I say unto you, inasmuch as you have done it to one of the least of these my brethren, you have done it unto me. I remain humble and honored to share my journey that led me to declare that I am free in 2023, free to grow, free to love, and free to heal. And I'm committed to making a difference in the lives of others. I do have some handouts. I thank you for your attention."

Next to speak was **Dylan Hale** of 202 Nottinghill Walk:

"I don't know how I'm going to follow that but I'm going to do my best. Anyway, I'm Dylan Hale of 2020 Nottinghill Walk, and as most of you know, I'm sure the Town Council is aware, I'm actually a candidate for Town Council coming up in the election in November. I'm not coming to you as a candidate tonight, I'm coming to you as a 13-year resident of Apex. And if I was coming to you speaking as a candidate, I'd probably be jumping for joy right now over this ball you guys have dropped on the ground with the Town Manager. And you can tell from my demeanor, I'm not jumping for joy. I'm fairly upset about it, and I think a lot of people in this town are too, as evidenced by the group here. And I'd like to also, before I go into this separation agreement, I got the details of it here in case anybody doesn't know, but I'd also like to voice my support for the Courtyards at Holt, the people in New Hill, and the people in downtown Apex, whose land you seem to disregard. As a realtor, property rights are vitally important to me, and I don't like to see this threat of eminent domain being thrown around without the respect of private property ownership of Apex citizens. So anyway, let's get into this settlement agreement. So, the Town Manager, if anybody doesn't know, had resigned according to this agreement. The town accepts her resignation. So, when you guys hired her, it's my understanding, you brought in a company, Developmental Associates, and did a nationwide search to find the Rockstar person that was going to come in and put our town back on the top list of best places to live in America where we were a few years ago. Now we're not in Money Magazine's top 100. So, we're looking for somebody to do that, and what we found was someone who worked for 2 years and then resigned apparently, although I'm a little skeptical of that assessment of the situation. Part of her resignation package, you've got a severance package paying her 231,000 dollars for this upcoming year, that she's not working. I'm curious if you couldn't find anybody in Apex that would take that job, and maybe do a good enough job that you wouldn't have to do a mutual resignation agreement after 2 years. I would think that there's some people in this room that would love to have a 231,000 dollar a year job serving the town that they love. She's got health and dental insurance for the next year. She's got 40 hours of paid leave that she's going to accrue, over the next year that she's not working. She's paid 281 hours, is that right, of paid leave that she's already accrued, retirement benefits? For a woman who worked here for 2 years, and now you're paying her for another year. All told it comes up to about 750,000 dollars of Apex taxpayer's money. I don't think that you would hire me to be your realtor, or somebody to cut your grass and enter into a contract with them, that says hey if you don't like the way I'm cutting your grass, or if I come to you at any point and say I'm going to retire from cutting your grass, I'm going to pay you to cut that grass for the next year. And the reason you hired this person is because it's our money you're spending and not yours, and I challenge you to make a change and do better. If you want somebody to pay 231,000 dollars to next year, there's your guy right there. Look inside of Apex, look at people who live here, who have passion for this community, who actually want to be here, look internally, look at Parks and Rec, look at some of the people that already work for the town, and afford them opportunities for these great positions, instead of going on a headhunt to find somebody who is not qualified for the job. That's all I got. Thank you."

Mayor Gilbert thanked Mr. Hale for his comments.

[PUBLIC HEARINGS]

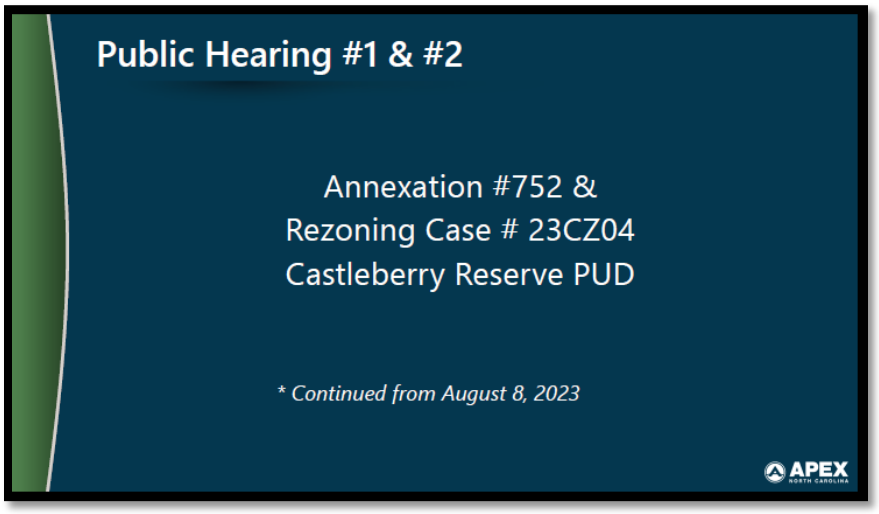
PH1 Annexation No. 752 - Castleberry Assemblage - 90.24 acres *(continued from August 8, 2023)* **(REF: ORD-2023-083)**

AND

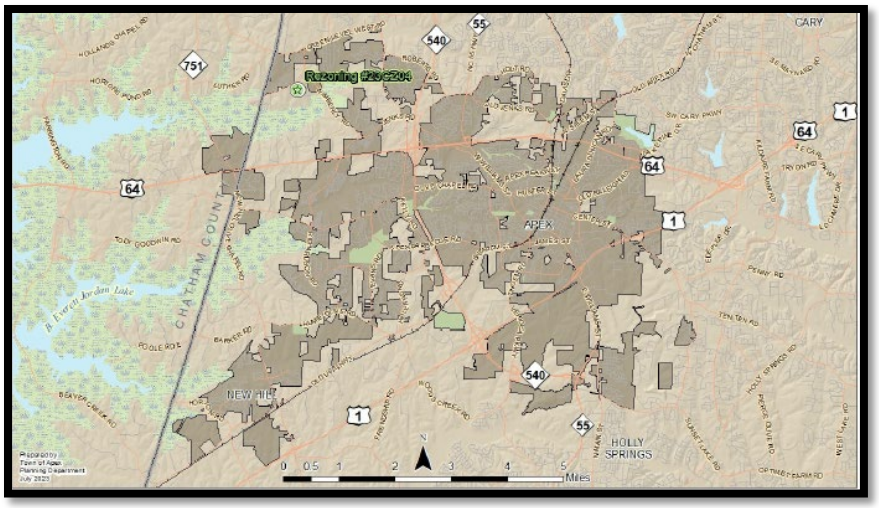
PH2 Rezoning Case No. 23CZ04 - Castleberry Reserve PUD *(continued from August 8, 2023)* **(REF: ORD-2023-084)**

June Cowles, Senior Planner, gave the following presentation regarding Annexation No. 752 – Castleberry Assemblage and Rezoning No. 23CZ04 – Castleberry Reserve PUD.

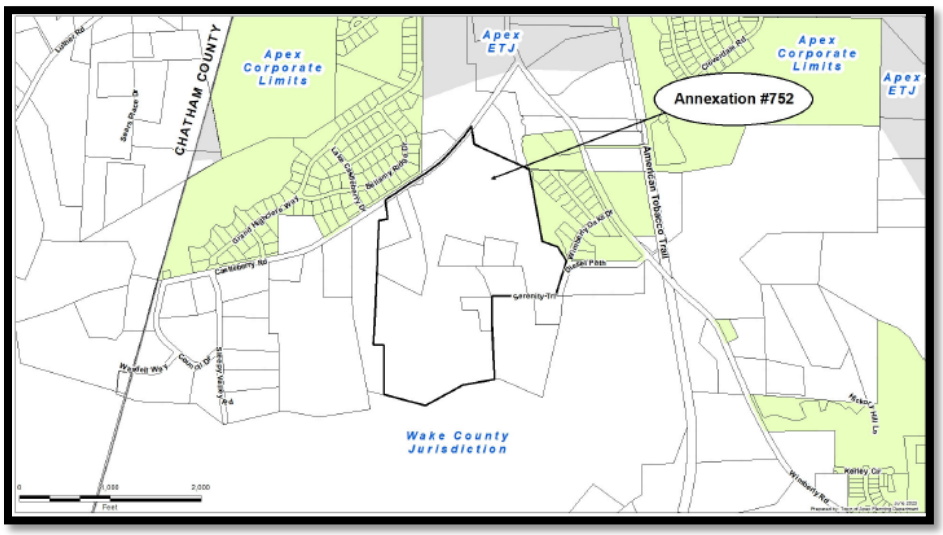
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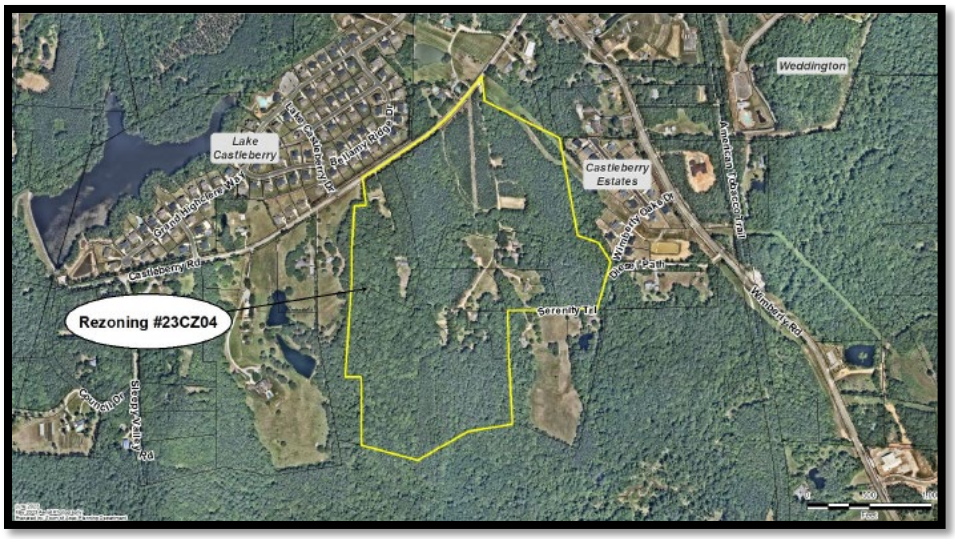
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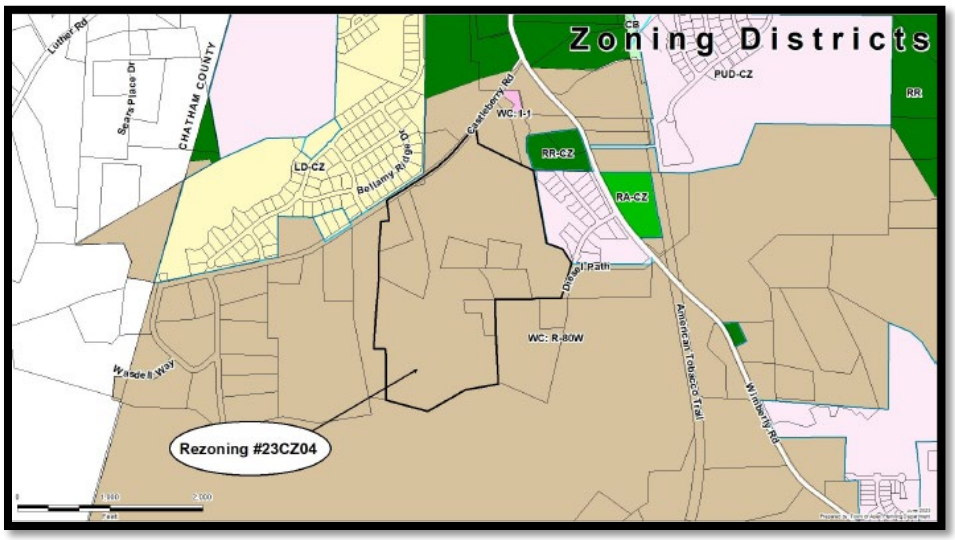
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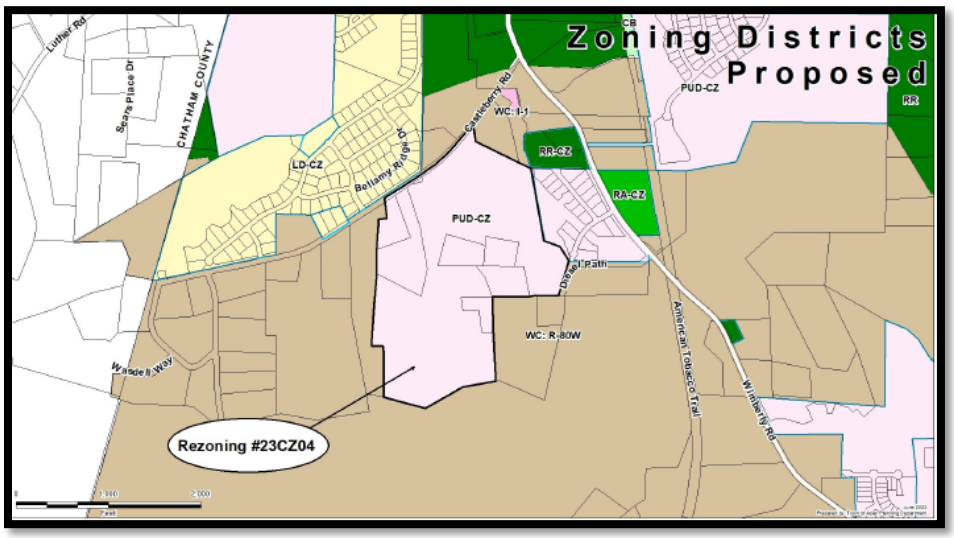
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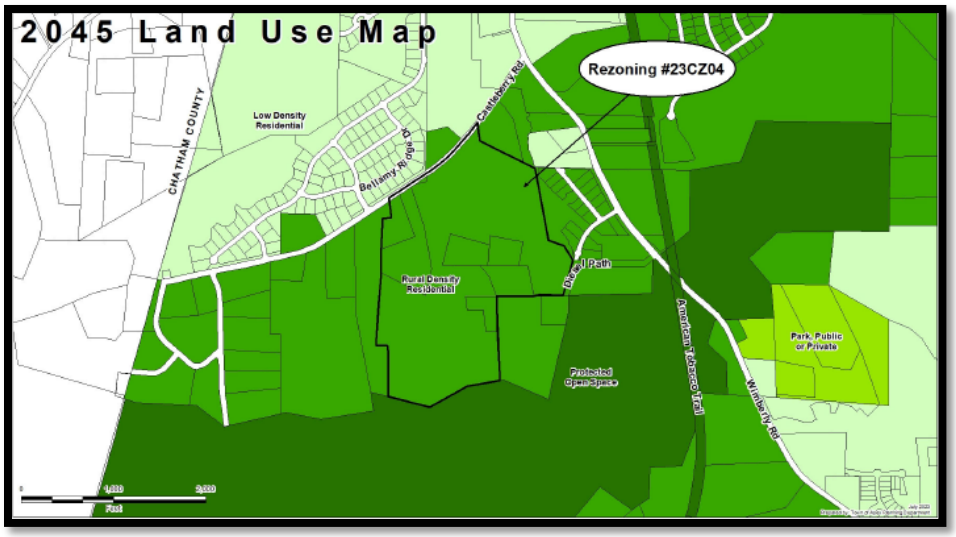
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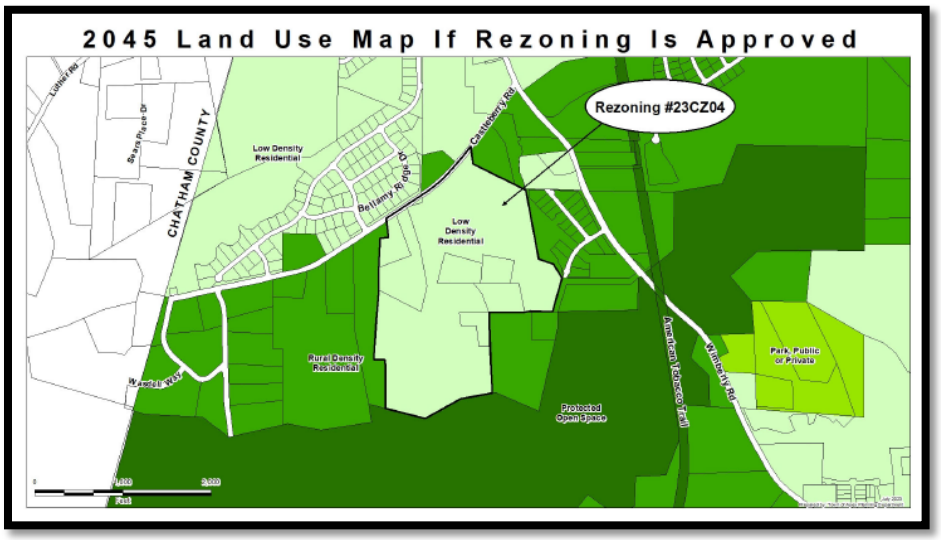
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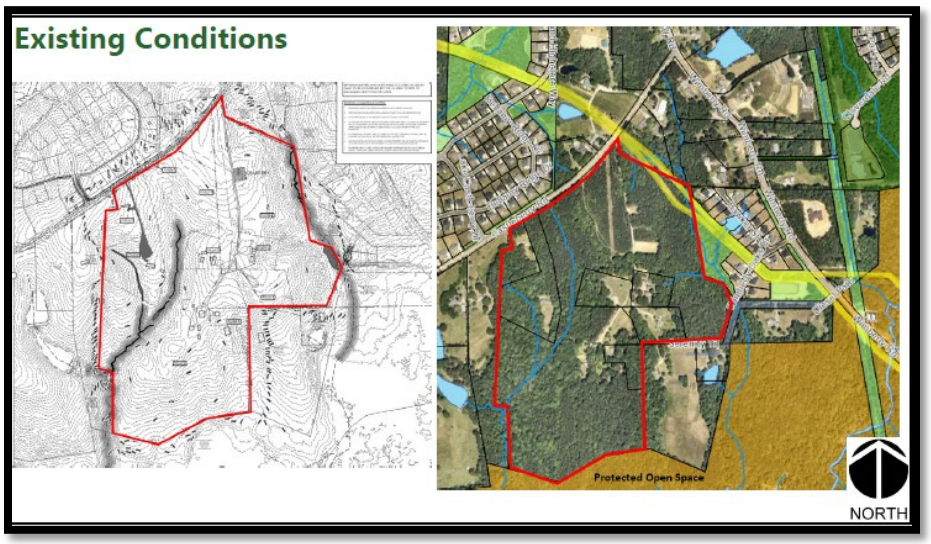
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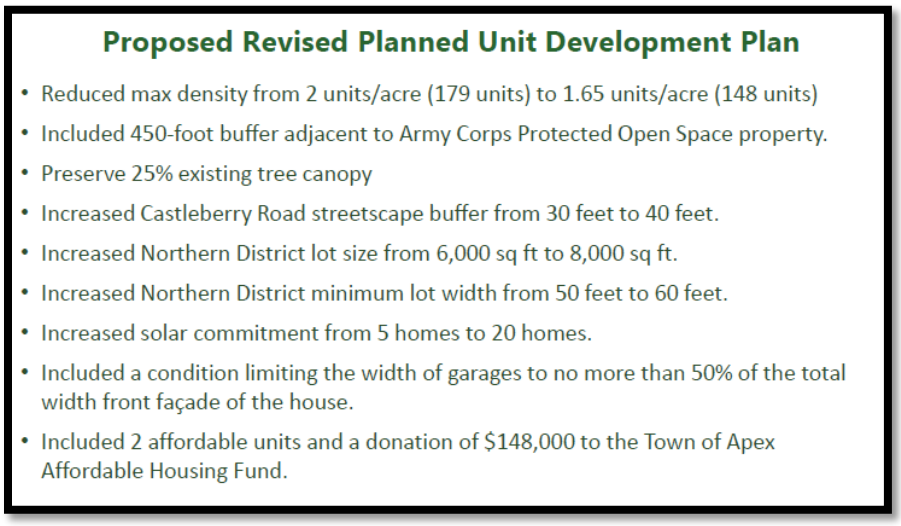
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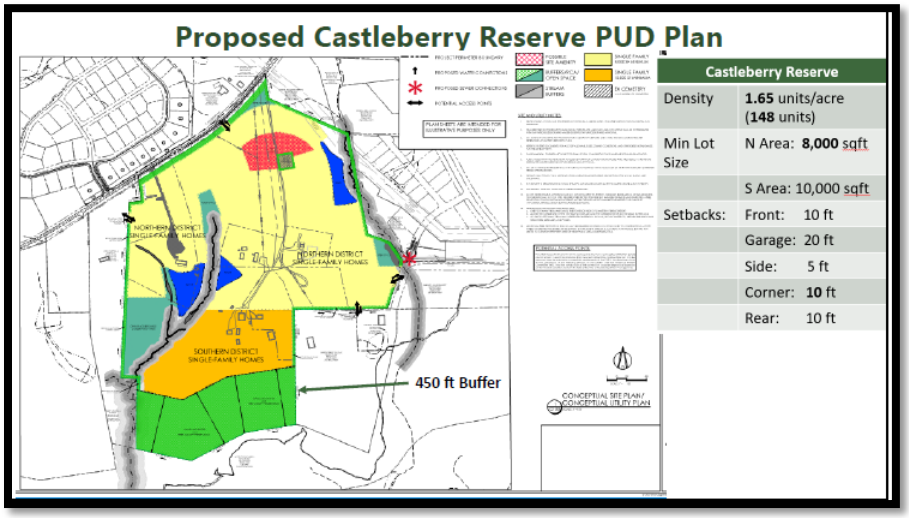
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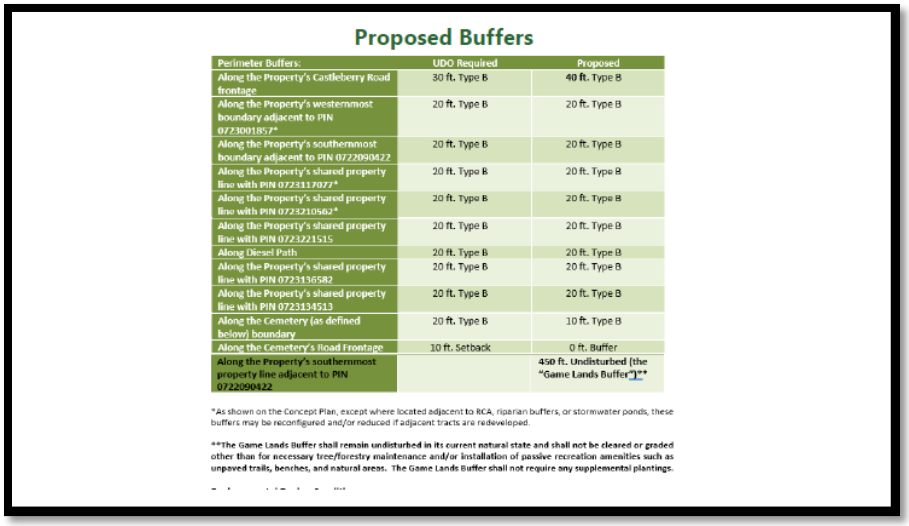
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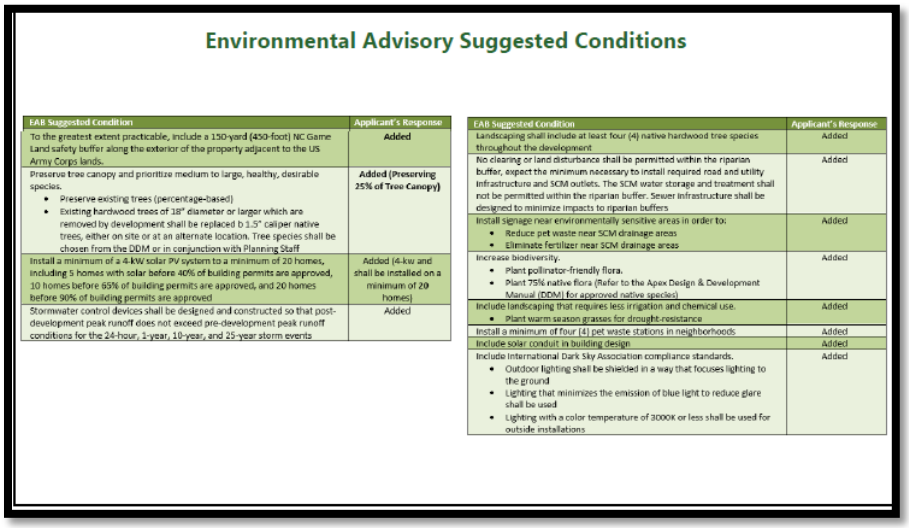
Proposed Buffers

Perimeter Buffers:	UDO Required	Proposed
Along the Property's Castleberry Road frontage	30 ft. Type B	40 ft. Type B
Along the Property's westernmost boundary adjacent to PIN 0723001857*	20 ft. Type B	20 ft. Type B
Along the Property's southernmost boundary adjacent to PIN 0722090422	20 ft. Type B	20 ft. Type B
Along the Property's shared property line with PIN 0723117077*	20 ft. Type B	20 ft. Type B
Along the Property's shared property line with PIN 0723210562*	20 ft. Type B	20 ft. Type B
Along the Property's shared property line with PIN 0723221515	20 ft. Type B	20 ft. Type B
Along Diesel Path	20 ft. Type B	20 ft. Type B
Along the Property's shared property line with PIN 0723336582	20 ft. Type B	20 ft. Type B
Along the Property's shared property line with PIN 0723334513	20 ft. Type B	20 ft. Type B
Along the Cemetery (as defined below) boundary	20 ft. Type B	10 ft. Type B
Along the Cemetery's Road Frontage	10 ft. Setback	0 ft. Buffer
Along the Property's southernmost property line adjacent to PIN 0722090422		450 ft. Undisturbed (the "Game Lands Buffer")**

*As shown on the Concept Plan, except where located adjacent to RCA, riparian buffers, or stormwater ponds, these buffers may be reconfigured and/or reduced if adjacent tracts are redeveloped.

**The Game Lands Buffer shall remain undisturbed in its current natural state and shall not be cleared or graded other than for necessary tree/forestry maintenance and/or installation of passive recreation amenities such as unpaved trails, benches, and natural areas. The Game Lands Buffer shall not require any supplemental plantings.

[SLIDE 16]



Environmental Advisory Suggested Conditions

EAB Suggested Condition	Applicant's Response
To the greatest extent practicable, include a 150-yard (450-foot) NC Game Land safety buffer along the exterior of the property adjacent to the US Army Corps lands.	Added
Preserve tree canopy and prioritize medium to large, healthy, desirable species. • Preserve existing trees (percentage-based) • Existing hardwood trees of 18" diameter or larger which are removed by development shall be replaced b 1.5" caliper native trees, either on site or at an alternate location. Tree species shall be chosen from the DDM or in conjunction with Planning Staff	Added (Preserving 25% of Tree Canopy)
Install a minimum of a 4-kW solar PV system to a minimum of 20 homes, including 5 homes with solar before 40% of building permits are approved, 10 homes before 65% of building permits are approved, and 20 homes before 90% of building permits are approved	Added (4-kw and shall be installed on a minimum of 20 homes)
Stormwater control devices shall be designed and constructed so that post-development peak runoff does not exceed pre-development peak runoff conditions for the 24-hour, 1-year, 10-year, and 25-year storm events	Added

EAB Suggested Condition	Applicant's Response
Landscaping shall include at least four (4) native hardwood tree species throughout the development	Added
No clearing or land disturbance shall be permitted within the riparian buffer, expect the minimum necessary to install required road and utility infrastructure and SCM outlets. The SCM water storage and treatment shall not be permitted within the riparian buffer. Sewer infrastructure shall be designed to minimize impacts to riparian buffers	Added
Install signage near environmentally sensitive areas in order to: • Reduce pet waste near SCM drainage areas • Eliminate fertilizer near SCM drainage areas	Added
Increase biodiversity. • Plant pollinator-friendly flora. • Plant 75% native flora (Refer to the Apex Design & Development Manual (DDM) for approved native species)	Added
Include landscaping that requires less irrigation and chemical use. • Plant warm season grasses for drought-resistance	Added
Install a minimum of four (4) pet waste stations in neighborhoods	Added
Include solar conduit in building design	Added
Include International Dark Sky Association compliance standards. • Outdoor lighting shall be shielded in a way that focuses lighting to the ground • Lighting that minimizes the emission of blue light to reduce glare shall be used • Lighting with a color temperature of 3000K or less shall be used for outside installations	Added

[SLIDE 17]

Environmental Advisory Suggested Conditions

EAB Suggested Condition	Applicant's Response
Implement low impact development (LID) techniques as defined by the NC Department of Environmental Quality.	Not Added
Stormwater re-use application • Integrate irrigation from the SCM (wet pond) on site	Not Added
Implement green infrastructure. • Provide diverse and abundant pollinator and bird food sources (e.g. nectar, pollen, and berries from blooming plants) that bloom in succession from spring to fall, which should be 100% native for birds and 75% for pollinators • Provide and allow for undisturbed spaces (e.g. leaf piles, unmown fields, fallen trees) for nesting and overwintering for native pollinators and wildlife.	Not Added
Install community gardens and native pollinator demonstration gardens	Not Added

[SLIDE 18]

Affordable Housing

- Proposing 2 affordable units
- Provide a $148,000 donation to the Town of Apex Affordable Housing Fund

Additional Architecture Condition

- Garages on the front façade of homes that face the street shall not exceed 50% of the total width of the house and garage together.

Conceptual Building Elevations



[SLIDE 19]

Off-Site Bicycle and Pedestrian Improvements



- Extend sidewalk along Wimberly Road
- Upgrade existing crossing with High visibility crosswalk markings and signs
- Install push button rapid-flashing crosswalk beacon system

[SLIDE 20]

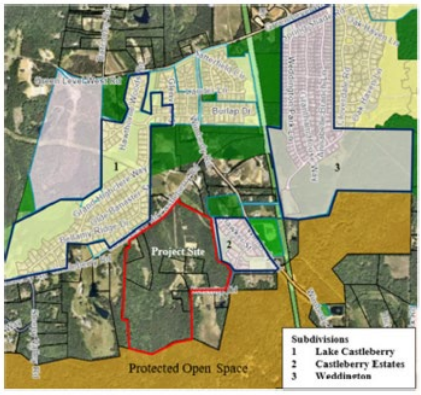
Off-Site Bicycle and Pedestrian Improvements



- Install 5 foot wide sidewalk across from Lake Castleberry entry, along the south side of Castleberry Road to the Castleberry Reserve sidewalk

[SLIDE 21]

Surrounding Neighborhoods



[SLIDE 22]

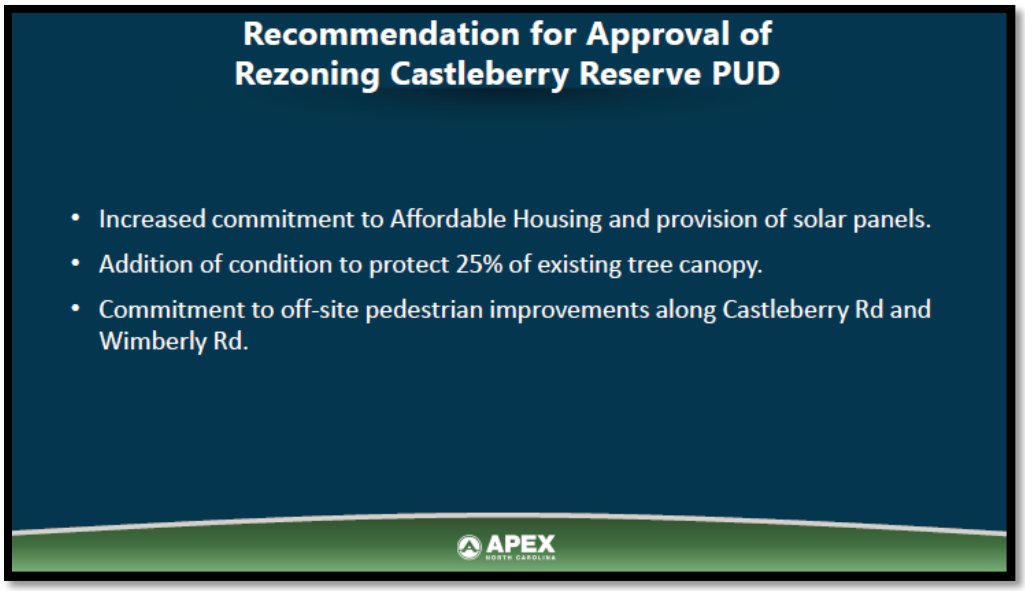
Castleberry Reserve Project
Comparison to Adjacent Neighborhoods

Subdivision	Density	Min Lot Size	Setbacks		Minimum Distance to Protected Open Space
Proposed Castleberry Reserves	1.65	8,000 (northern area) 10,000 (southern area)	Front: Garage: Side: Corner: Rear:	10 ft 20 ft 5 ft 10 ft 10 ft	450 ft
Lake Castleberry (1)	1.28	10,000	Front: Side: Corner: Rear:	25 ft 10 ft 15 ft 20 ft	1,471 ft
Castleberry Estates (2)	0.98	12,000	Front: Garage: Side: Corner: Rear:	15 ft 20 ft 8 ft 15 ft 15 ft	386 ft
Weddington (3)	1.48	8,000	Front: Side: Corner: Rear:	20 ft 5 ft, aggregate 15 ft 10 ft 15 ft	650 ft

[SLIDE 23]

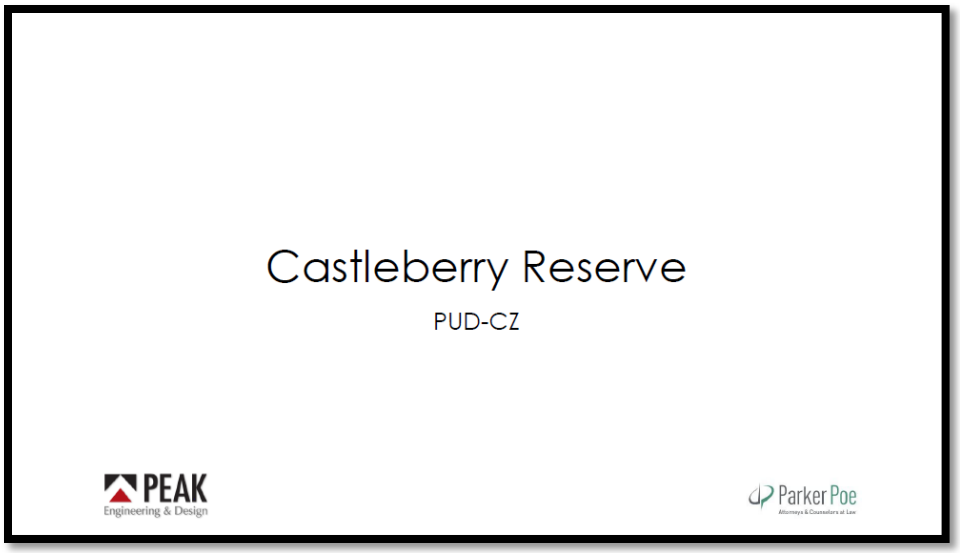


[SLIDE 24]

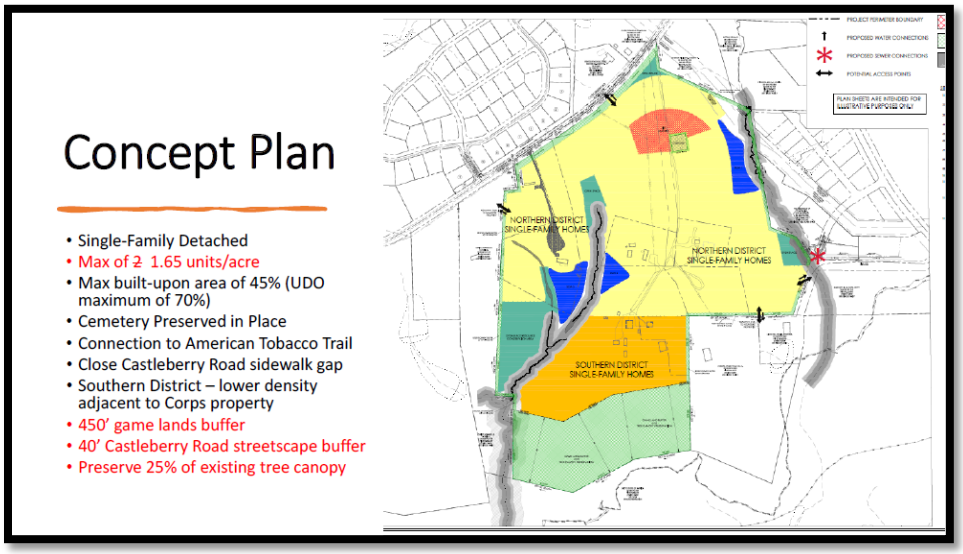


Matthew Carpenter, of Parker Poe, on behalf of the applicant, gave the following presentation.

[CASTLEBERRY APPLICANT – SLIDE 1]



[CASTLEBERRY APPLICANT – SLIDE 2]



[CASTLEBERRY APPLICANT – SLIDE 3]

Council/Staff Concern	Change to Case
Consistency w/ 2045 LUM Designation. More specifically, density is too high.	• Reduced maximum density from 2 units/acre to 1.65 units/acre.
Rezoning is not consistent with the 450-foot Game Lands Buffer recommended by the North Carolina Wildlife Resource Commission and the EAB.	• Committed to 450-foot Game Lands Buffer. • No grading within the buffer, but buffer may be used for passive recreational activities such as unpaved trails.
Minimum lot sizes and minimum lot widths are smaller than existing neighborhoods in the area.	• Increased minimum lot size in the Northern District to 8,000 sf. Minimum lot size in the Southern District is 10,000 sf. • Increased minimum lot width in the Northern District to 60 ft.
Tree Coverage and existing rural character along Castleberry Road.	• Committed to preserving 25% of existing tree canopy. • Widened streetscape buffer along Castleberry Road to 40 ft.
Affordable Housing. Are two for sale affordable units at 135% AMI the best use of funds?	• Committed to a donation of $148,000 to the Affordable Housing Fund ***in addition*** to the 2 affordable units.
Environmental Conditions	• Increased solar commitment from 5 homes to 20 homes (as recommended by the EAB).

[CASTLEBERRY APPLICANT – SLIDE 4]

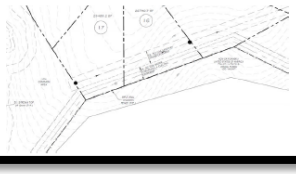
Consistent w/ Peak Plan 2030

Peak Plan Policy	Case Commitment
"Protection of environmental and natural resources"	• Large RCA to buffer Corps property • Treat stormwater quality to reduce nitrogen • 5 homes constructed with solar panels • Max built upon area of 45% (70% required) • Max density of ~~2 units/acre~~ 1.65 units/acre • Lower density and larger lot sizes adjacent to Corps land • 450' Game Lands Buffer • Preserve 25% of existing Tree Canopy • 20 homes with solar • Castleberry Rd. streetscape buffer widened to 40'
"A variety of housing types available to a range of incomes"	• 2 affordable housing units • Additional homes add to housing supply • $148,000 donation to affordable housing fund
"A well-connected pedestrian and bicycle network"	• Fill a gap in pedestrian connectivity by construction off-site sidewalk to connect to American Tobacco Trail and to connect sidewalk gap left by Lake Castleberry • Castleberry Road speed limit reduction
"Preservation of historic places and cultural resources"	• Preservation of the historic cemetery in its current location

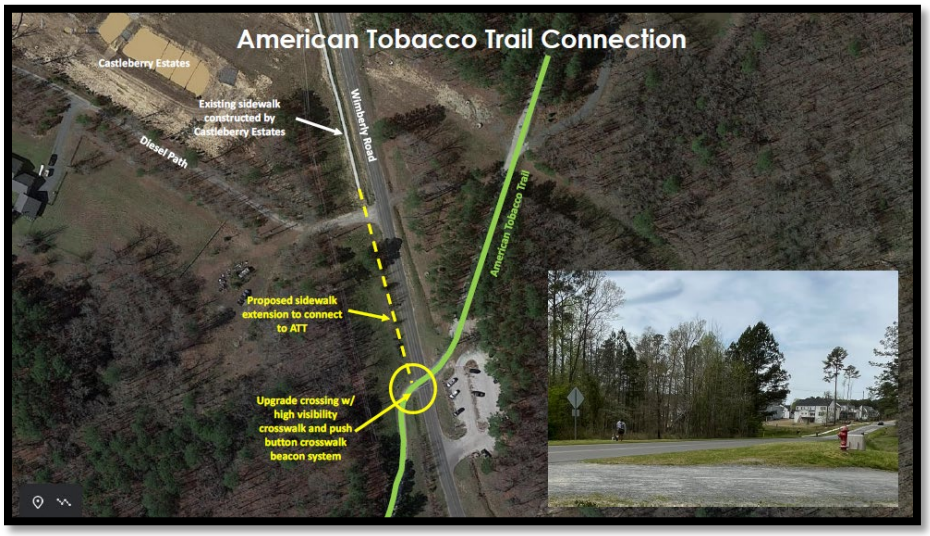
[CASTLEBERRY APPLICANT – SLIDE 5]

Army Corps Property Buffer Comparisons

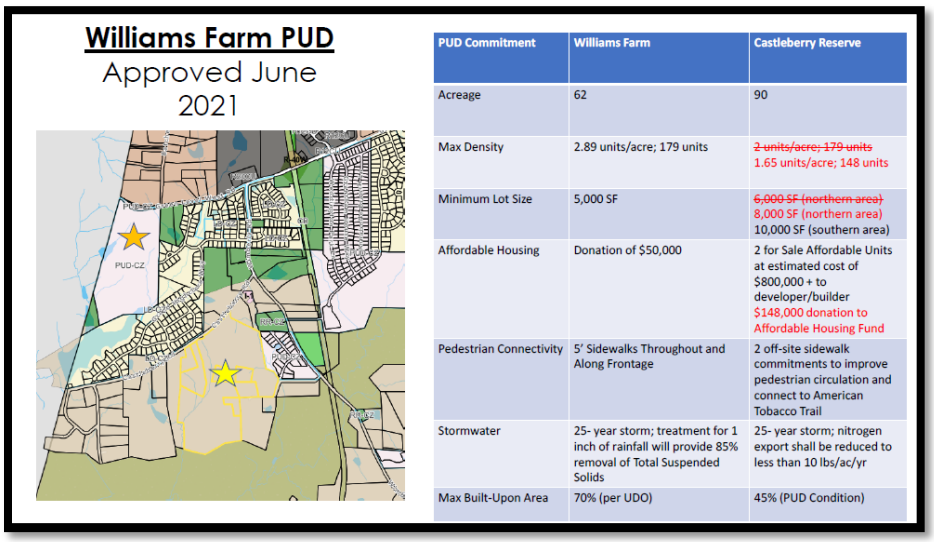
Project/Subdivision	Year Zoning Approved	Max Density Permitted	Max Built Upon Area	Buffer/RCA Adjacent to Army Corps Property (Narrowest Point)
Apex Gateway Phase 1	2023	1,000,000+ sf Industrial	70%	40' Type A Buffer
Willow Mills Subdivision	2018	1 unit/acre	50%	75'
Saddlebrook Subdivision	2015	1.63 units/acre	70%	25'
Arcadia Subdivision	2015	3 units/acre	70%	150' (Utility Easements run through RCA)
Buckhorn Preserve Subdivision	2016	2.83 units/acre	70%	0'
Weddington Pool	2015			100'
Weston Subdivision	2023	1 unit/acre	60%	0' (utility easements adjacent to Open Space)
Castleberry Reserve	***TBD***	***~~2 units/acre~~; 1.65 units/acre***	***45%***	***~~237'~~ – ~~349'~~; 450'***



[CASTLEBERRY APPLICANT – SLIDE 6]



[CASTLEBERRY APPLICANT – SLIDE 7]



PUD Commitment	Williams Farm	Castleberry Reserve
Acreage	62	90
Max Density	2.89 units/acre; 179 units	~~2 units/acre; 179 units~~ 1.65 units/acre; 148 units
Minimum Lot Size	5,000 SF	~~6,000 SF (northern area)~~ 8,000 SF (northern area) 10,000 SF (southern area)
Affordable Housing	Donation of $50,000	2 for Sale Affordable Units at estimated cost of $800,000 + to developer/builder $148,000 donation to Affordable Housing Fund
Pedestrian Connectivity	5' Sidewalks Throughout and Along Frontage	2 off-site sidewalk commitments to improve pedestrian circulation and connect to American Tobacco Trail
Stormwater	25- year storm; treatment for 1 inch of rainfall will provide 85% removal of Total Suspended Solids	25- year storm; nitrogen export shall be reduced to less than 10 lbs/ac/yr
Max Built-Upon Area	70% (per UDO)	45% (PUD Condition)

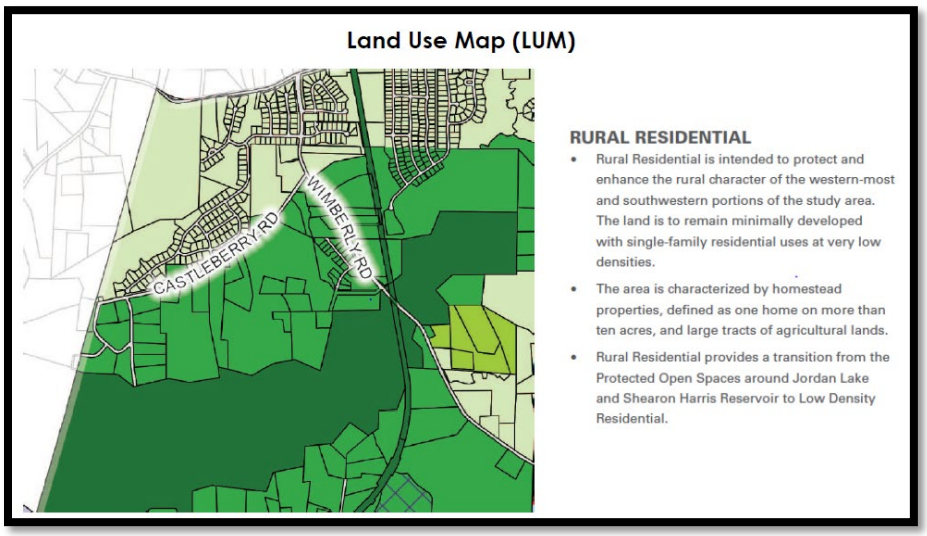
[CASTLEBERRY APPLICANT – SLIDE 8]



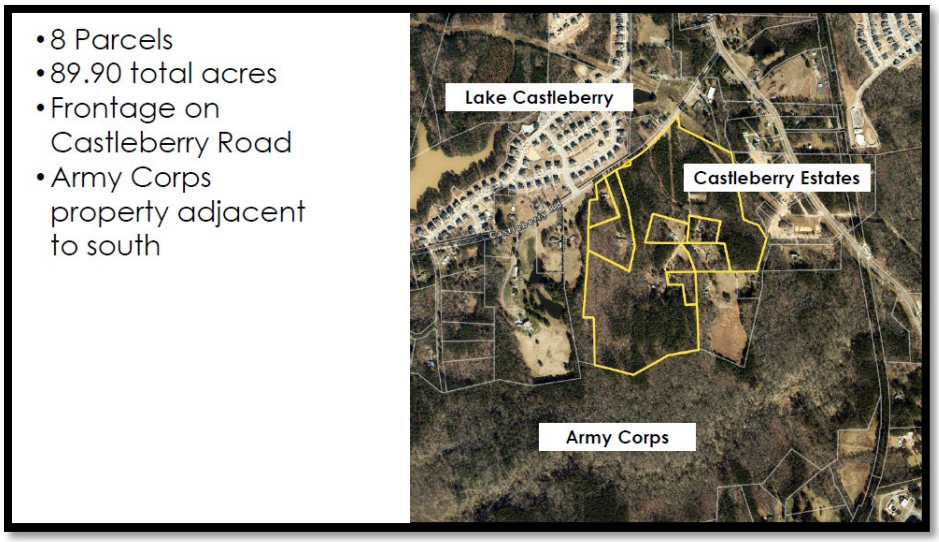
[CASTLEBERRY APPLICANT – SLIDE 9]



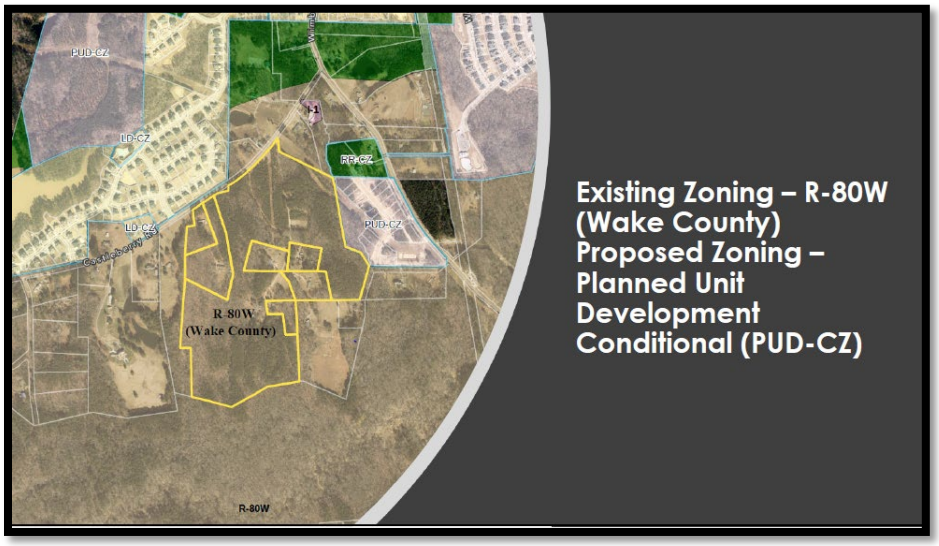
[CASTLEBERRY APPLICANT – SLIDE 10]



[CASTLEBERRY APPLICANT – SLIDE 11]



[CASTLEBERRY APPLICANT – SLIDE 12]



Councilmember Gantt said he thinks a lot of these updates address concerns raised in the last meeting, but that there are tradeoffs to these changes. He said it's likely that the cost of these changes has increased the cost of the development, which would either reduce developer profit or increase home prices. He asked for an estimate on how much home prices have gone up as a result of these changes.

Mr. Carpenter said he doesn't have an exact value, but the way he described the tradeoff was generally correct. He said lower density costs more, and a lot of it has to do with land costs in the area. He said he thinks it is a valid consideration in these cases to look at how lowered density affects home prices.

Councilmember Zegerman asked if he had an estimate of the average sales price of the homes.

Mr. Carpenter said they don't know yet. They had looked at some of the surrounding neighborhoods, and those prices were around 1.3-1.4 million. He said the goal was to stay below that, but there are still other phases of approval for this project and it may be more than 2 years before any homes are built.

Councilmember Gantt said he was glad they included the 450-foot buffer to the southern lands, but that if they extended that to the other adjacent properties it would cut into their developable land greatly. He asked what the outreach has been to the neighboring properties.

Mr. Carpenter said they haven't talked to the property owners to the west specifically, but each rezoning that comes in is looked at on a case by case basis. He said Council could consider something like if those owners came in with a well-designed project and had a 375-foot-buffer. He said they haven't notified them about this change because it does not encumber their property legally in any way. He said they did have 2 neighborhood meetings, and at that time the buffer was around 250-300 feet.

As the Public Hearing had remained open from the August 8th Council meeting, and nobody signed up to speak additionally, **Mayor Gilbert** closed Public Hearing and moved into discussion.

Councilmember Gray said in looking at these applications, the balancing point is a difficult one. He said he likes the idea of maintaining as many rural properties as possible, but by law and the NC Constitution, there are only so many limitations they can place on a person for selling their land. He said he couldn't tell Councilmember Zegerman not to do anything with his own driveway, even if he really liked the way it was. He said it's about finding the balance of allowing people to do what they want with their land, and the Council having the ability to place reasonable restrictions on what those things can be. He said as long as things fall within the land use map and town ordinances, it is very difficult to tell someone who wants to sell their land that they can't do that. He said that would be overstepping as a government, and opening up a lawsuit for the town. He said in this case, the balance was struck very well by the steps that were taken since the August 8th meeting. He said they are getting trees, lower density as this is farther from the center of town, sidewalks, more solar, and an affordable housing donation. He said with all of this, it is then Council's job to see if this is meeting the needs of the public. He said this project is bringing a lot of things for residents with it, whether they are near Castleberry or not. He said they are doing what they can to preserve land and trees, providing infrastructure improvements, providing sidewalks, and it is done in a reasonable

way and with goodwill from the developer. He said however, he would love to be in a position where this property owner was wanting to keep their property vacant, but there being growth and development is a blessing that very few communities have. He said they are doing better when they take these opportunities for the benefit of everybody. He says he is more than in favor of this, and he thanked the applicant for the work they did to address their prior concerns.

Mayor Pro Tempore Killingsworth said they have addressed all of the concerns brought forth by the Council, so she was also in favor.

Councilmember Zegerman said he did want to recognize the applicant for making the concessions, and that they were significant and meaningful. He said he is stuck on the density. He said this an area where residents have asked them to build lower density developments, and previous Councils and staff have been deliberate about picking future designations for this land. He said 1 unit per 5 acres would not really be realistic, but that there was still a big difference in that and 1.65 units per acre. He said they are still not hitting that mark of what residents have asked them to do here. He said gathering feedback from residents, and combining that with analysis and expertise from staff is important, and that it is not the right to do to not honor that or come as close as possible to doing so based on what they concluded with the future land maps. He said because of that, he would not be in support of this rezoning.

Councilmember Gantt said almost none of the rezonings they have approved since he and Mayor Pro Tempore Killingsworth have been on Council have been built yet. He said most of the construction between 2010 and 2020 was executive housing, which he considers this to be as well. He said he believes there are stronger ordinances now for things like tree preservation and mass grading. He said the effort to maintain trees and things like game land buffers were not present in the former developments. He said compared to the 5 years prior to him and Mayor Pro Tempore Killingsworth being on Council, the 5 years they have been on Council have seen a 50% reduction in the amount of land that has been rezoned, with 80% of people. He said he thinks there needs to be a compelling reason to not go 1 per 5 acres, and he said that was aspirational more than optimistic to achieve that. He said he is seeing a lot of features in this project that make it compelling to vote for and to change the land use map.

A **motion** was made by **Mayor Pro Tempore Killingsworth,** seconded by **Councilmember Gray,** to approve Annexation No. 752 – Castleberry Assemblage **AND** Rezoning No. 23CZ04 – Castleberry Reserve PUD.

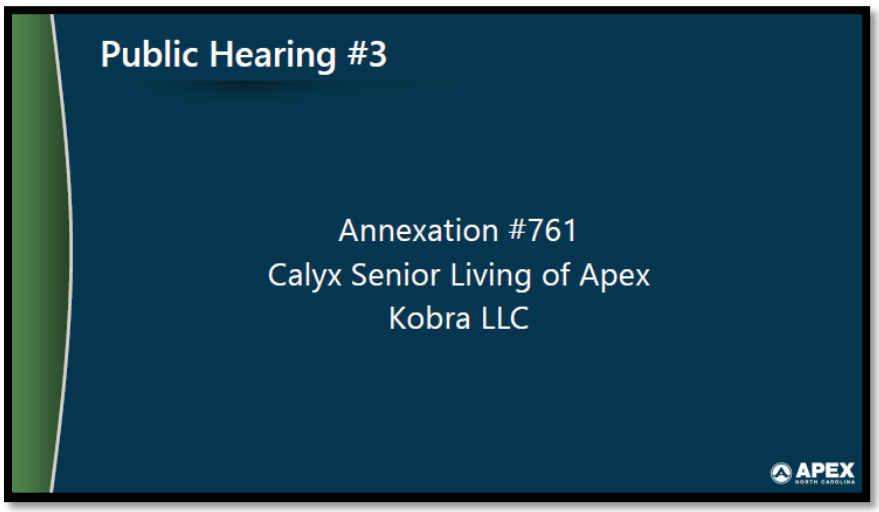
Before the vote, **Mayor Gilbert** thanked the applicant for their efforts and for working with staff to address Council concerns. He said he was not optimistic at the last meeting they would get to this point, but they have and he was happy about that.

VOTE: 3-1, Councilmember Zegerman dissenting

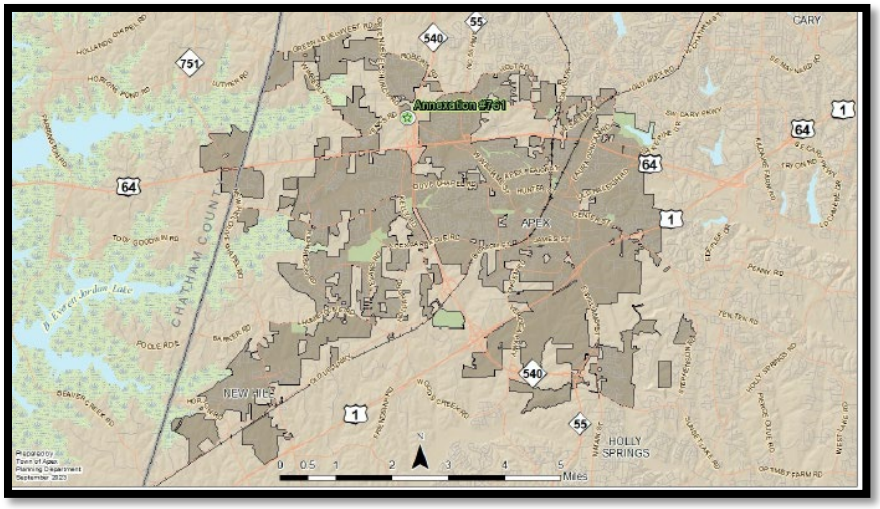
PH3 Annexation No. 761 - Calyx Senior Living of Apex (Kobra LLC) - 7.259 acres (REF: ORD-2023-097)

Dianne Khin, Planning Director, gave the following presentation regarding Annexation No. 761.

[SLIDE 25]



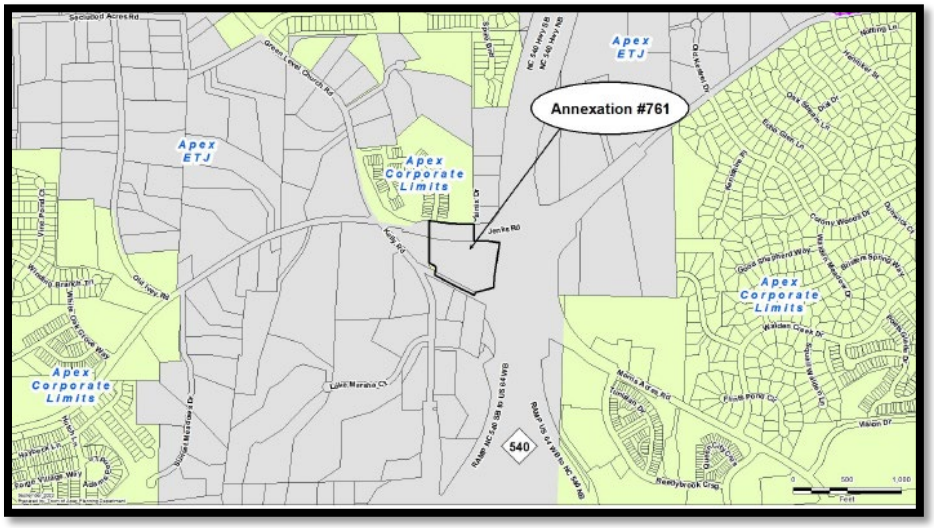
[SLIDE 26]



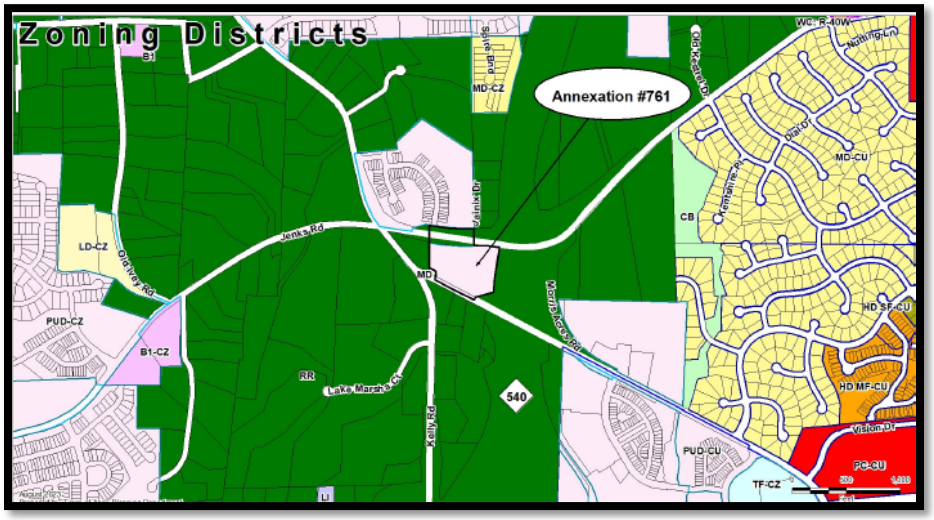
[SLIDE 27]



[SLIDE 28]



[SLIDE 29]



Mayor Gilbert opened up Public Hearing for this item.

First to speak was **Pam Porter** of TMT TLA Associates:

"Thank you, Dianne, for the presentation, Pam Porter with TMT TLA Associates, we're working on the site plan and CDs for Kalyx, I have nothing to add I'm just here to answer any questions, and Frederick Faison is also here if you have questions for him as well."

Councilmember Gantt asked if there was an off-site sidewalk connecting to Kelly Road for this rezoning, and if so is that part of the site plan.

Ms. Porter said it was a part of the rezoning, but cannot recall if it was part of the site plan.

Councilmember Gantt said he thinks that would be a crucial connection.

With no further sign ups, **Mayor Gilbert** closed public hearing and brought discussion back to Council.

A **motion** was made by **Councilmember Gray,** seconded by **Councilmember Gantt,** to approve Annexation No. 761 – Kalyx Senior Living of Apex (Kobra LLC)

VOTE: UNANIMOUS (4-0)

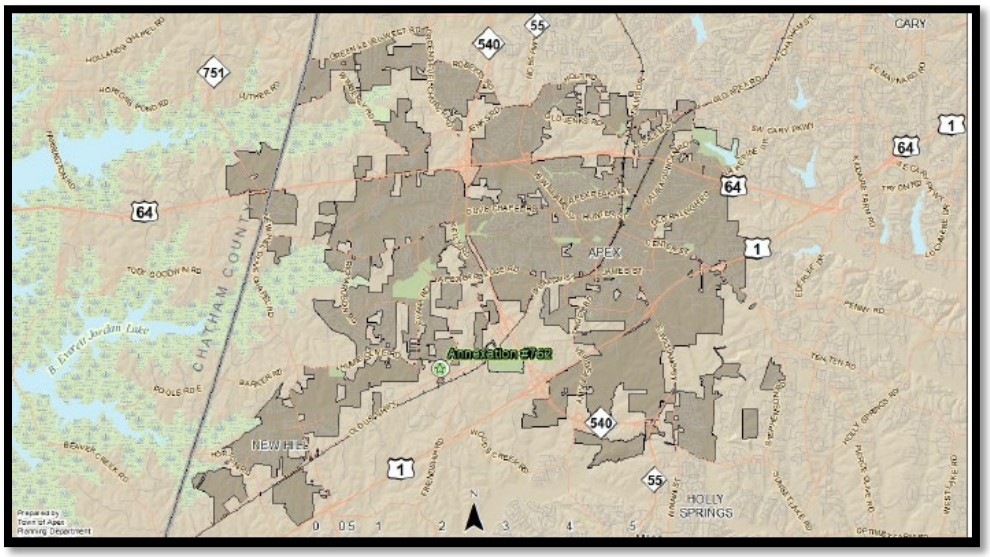
PH4 Annexation No. 762 - The Summit (FKA Holland Road Mixed Use) - 29.4692 acres (REF: ORD-2023-098)

Director Khin gave the following presentation regarding Annexation No. 762 – The Summit (FKA Holland Road Mixed Use).

[SLIDE 30]



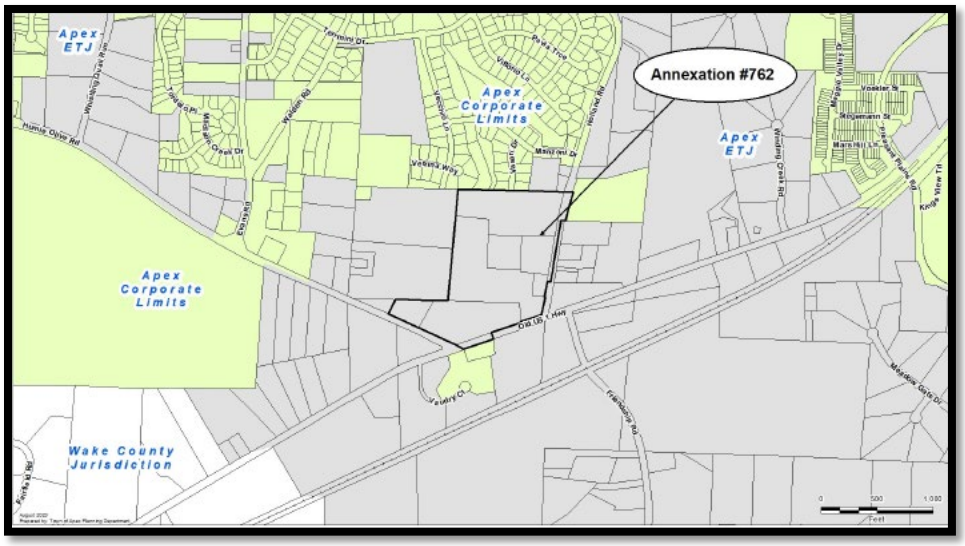
[SLIDE 31]



[SLIDE 32]



[SLIDE 33]



[SLIDE 34]



Mayor Gilbert opened up public hearing for this item. With no one signed up to speak, he closed public hearing and brought discussion back to Council.

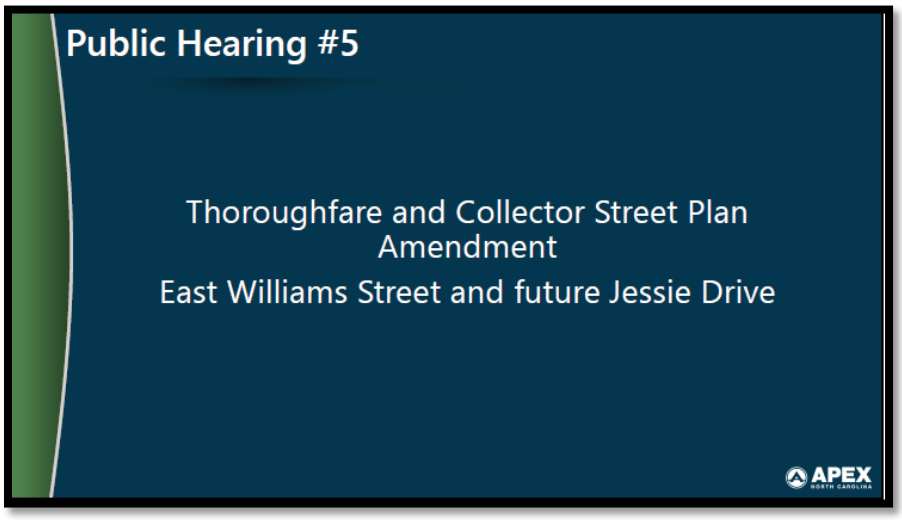
A **motion** was made by **Councilmember Gantt,** seconded by **Mayor Pro Tempore Killingsworth,** to approve Annexation No. 762 – The Summit (FKA Holland Road Mixed Use).

VOTE: UNANIMOUS (4-0)

PH5 Thoroughfare and Collector Street Plan Amendment - East Williams Street and future Jessie Drive *(continued from August 8, 2023)*

Shannon Cox, Long-Range Planning Manager, gave the following presentation regarding the Thoroughfare and Collector Street Plan Amendment – East Williams Street and future Jessie Drive.

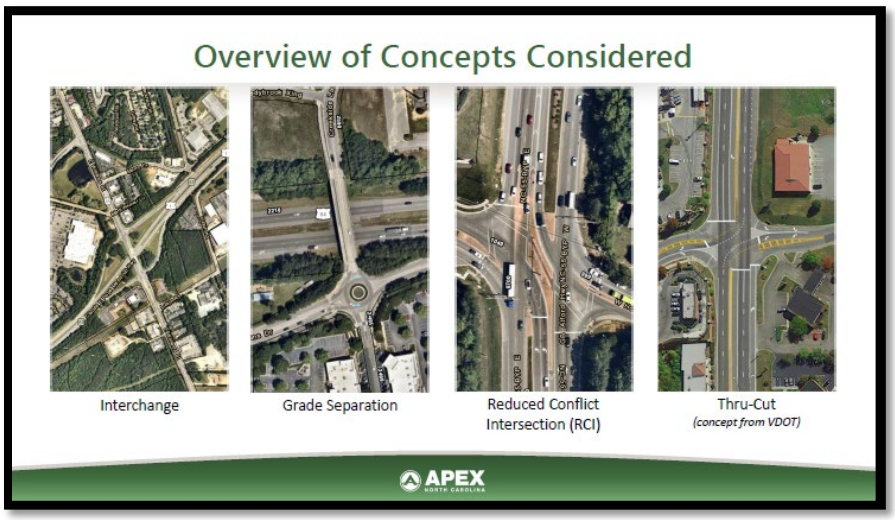
[SLIDE 35]



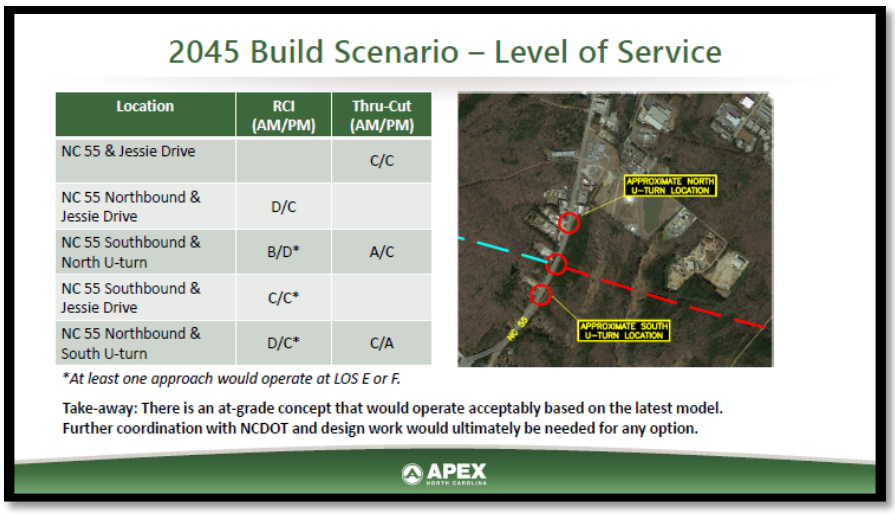
[SLIDE 36]



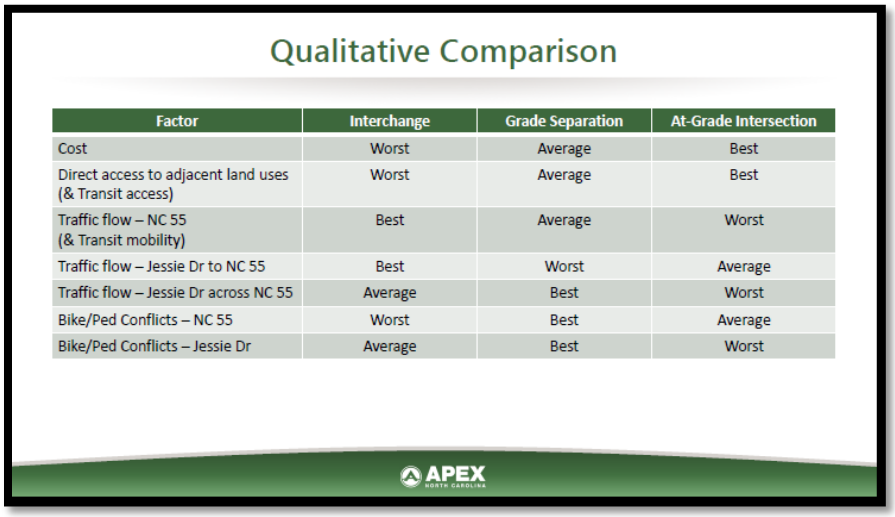
[SLIDE 37]



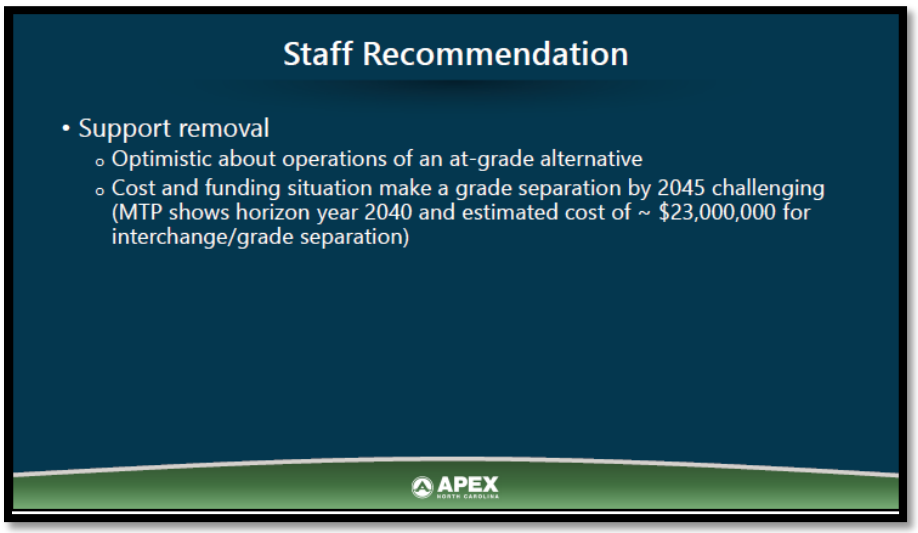
[SLIDE 38]



[SLIDE 39]



[SLIDE 40]



Councilmember Zegerman asked if they removed this, but by 2045 there was a different option, would that be a viable alternative or would this be locking the town in.

Ms. Cox said there isn't a development to look at, so it is difficult to say how the land would develop, and restrict roadway options in the future. She said any project looks for connectivity along Williams, and may want to consider showing additional connectivity on the long-range plan.

Councilmember Zegerman asked if turbo roundabouts could potentially a viable option for this location in the future.

Ms. Cox said there would be a detailed study and all options would be considered if the project moved forward. She said her understanding is that the traffic would be far too great for a roundabout style solution, but an alternative study could look at that.

Councilmember Zegerman asked who bear the cost for the intersection, and would it be the developer if that land gets developed.

Ms. Cox said there is no DOT or town project to fund it at this time, and any development would go through the zoning and traffic impact process to determine what level they would be required to build this project.

Councilmember Gantt asked if they had considered how traffic may flow differently in the future from different roads. He is wondering if Jessie would be a 55 connector or more of an East-West connector.

Ms. Cox said they would be losing the Jessie Drive connection if grade separation or an interchange is not built, but funding is also a factor.

Councilmember Gantt said he thinks the transit plan has a bus in this area.

Ms. Cox said that is correct.

Councilmember Gantt asked if that would have to be changed if this was approved.

Ms. Cox said they don't know how this would impact the future planned routes yet.

Kevin Dean, 300 South Main Street Holly Springs, said they would lose the direct connection across 55 from Jessie Drive, but there are benefits of there being additional access points through Veridea and south of Jessie Drive. He said this will bring opportunities to gets people west through the Veridea development. He said this is a balance of network efficiency and safety.

Councilmember Gantt asked if Jessie Drive was considered a way to get east to west in Wake County.

Mr. Dean said with the future opening of 540, it would take a lot of demand for that east to west travel off of the more local roads.

Councilmember Zegerman asked if there was any way for more bike/pedestrian connections from Veridea across 55.

Mr. Dean said in the plan there are already a couple areas of at-grade crossings with pedestrian and bike accommodations, including a center refuge. He said the one like this in Holly Springs has not had any pedestrian-related traffic incident in the 3.5 years of data that has been collected.

Councilmember Zegerman asked if there was data regarding how many bikes and pedestrians are crossing there.

Mr. Dean said he does not have that data available.

Councilmember Gantt said it likely isn't many because people don't feel safe.

Jason Barron, of Morningstar Law Group, on behalf of the applicant, gave some information to Council. He thanked the staff and Council for working with them. He said their preference would be one of the at-grade options.

Mayor Gilbert opened public hearing for this item. With no one signed up to speak, he closed public hearing and moved discussion back to Council.

Councilmember Zegerman said there were two things he was stuck on. He said they don't know what is going to develop east of 55, and how those uses can be connected with Veridea. He added that there was virtually no accommodation for bikes and pedestrians if they removed grade separated crossings. He said only one pedestrian crossing in and out of Veridea is not enough. He said he is hesitant to remove the requirement at this point, because he doesn't think it would serve the entire community.

Councilmember Gray said at the current cost of the intersection, it doesn't seem like there is really a perfect solution. He said they don't know exactly how many people use an at-grade crossing. He said he feels this is a good solution for a project that would be coming in 2045 at the earliest. He said he thinks the staff recommendation gives a good amount of flexibility. He said he likes the idea of roundabouts, but the hurdle is to convincing drivers in North Carolina of that mode of transport. He said they are popping up in more rural areas in places, and that people will eventually come around them as a more efficient form of intersection.

Councilmember Zegerman asked where he was getting that timeline from. He said the land owner is trying to get these going now, and if a rezoning came in within the next 2 years, this intersection would need to be a part of that. He doesn't think it would be a 20-30-year timeline for this to get built.

Councilmember Gray said he was noting where the slides referred to it as 2045 building scenario.

Councilmember Gantt said it would likely be closer to 2045 if they kept the grade separation.

Councilmember Zegerman said it would cost town money and time to add in another pedestrian bridge, if they had to in order to overcome poor design of an intersection.

Ms. Cox said it was possible to still keep a grade separation or interchange on the plan, with the intersection being initially built at-grade. She said that was the most likely scenario.

Councilmember Zegerman asked who would be paying for that.

Ms. Cox said most likely public funds.

Councilmember Gantt said that would likely increase the cost as that land would have already been developed at that point.

Ms. Cox said the right-of-way needed would not have been planned for with this type of intersection.

Mayor Pro Tempore Killingsworth said she was all for whatever they could do to facilitate the building of Jessie Drive and the connectivity in this area. She said there needs to be alternatives from the major corridors, and this would help that happen. She said they are asking for flexibility in design, and that's what she sees here. She said they know NCDOT does not take pedestrians into account much with their plans, so the town has to compensate that. She said she would support a bike/pedestrian bridge in this area.

Councilmember Zegerman asked if they were talking about flexibility, then why not leave in the grade separated crossing, and then potentially negotiate down as part of a potential rezoning when there is a better sense of traffic impact. He said he would rather negotiate down if the impact was not too high versus trying to negotiate up to a grade separated crossing if it was deemed to be necessary for the development.

Councilmember Gray said he understands, but he thinks this is the high point for negotiation, because they have the additional flexibility.

Mayor Pro Tempore Killingsworth said they know NCDOT does not have this on their plan.

Councilmember Zegerman said yes, and then it becomes a town problem, and that is what makes him cagey about this.

Councilmember Gray said this given flexibility and help give a starting point in a conversation with a developer, and that he was in favor.

Councilmember Gantt said no developer would likely be willing to build a bridge at all, and that his understanding was that this area had already been rezoned.

Councilmember Zegerman said nothing has been proposed yet for development, so they don't yet know the traffic impact. He said he agrees with Mayor Pro Tempore Killingsworth that they need the Jessie Drive connection. He said he thinks they should wait until they see what develops in this area to have this conversation.

A **motion** was made by **Councilmember Gray,** seconded by **Mayor Pro Tempore Killingsworth,** to approve the Thoroughfare and Collector Street Plan Amendment – East Williams Street and future Jessie Drive.

Before the vote, **Councilmember Gantt** said he would argue that development in this area was desirable, because the neighborhoods in that area feel isolated. He said he has heard they feel like the town ignores them. He thinks this would enhance the developability of this area.

VOTE: 3-1, Councilmember Zegerman dissenting

Mayor Gilbert called for a recess break at 8:27p.m.

Mayor Gilbert returned from recess at 8:37p.m.

[NEW BUSINESS]

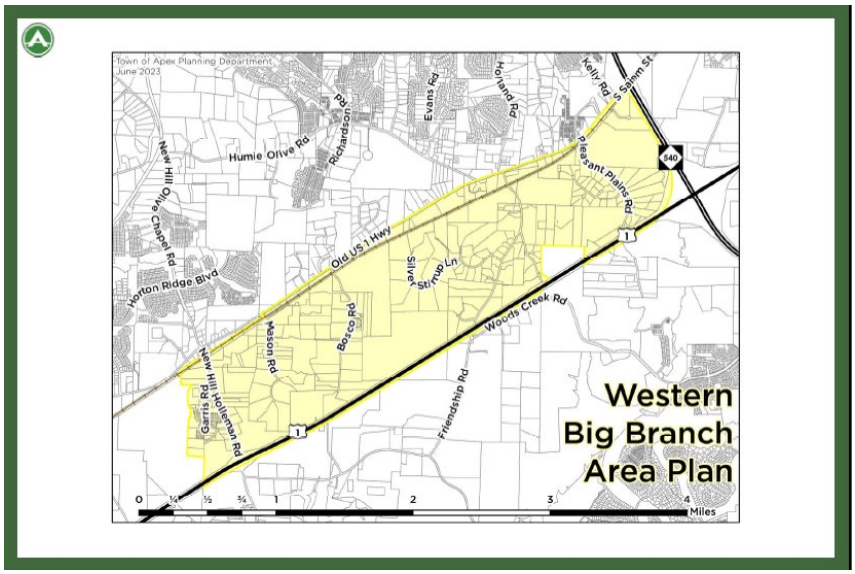
NB1 Western Big Branch Area Plan Update

Jenna Shouse, Senior Long-Range Planner, gave the following presentation regarding the Western Big Branch Area Plan Update.

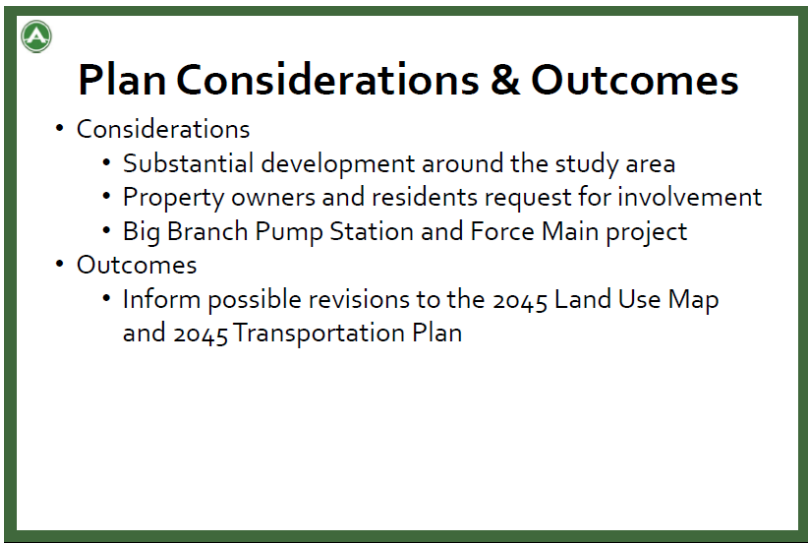
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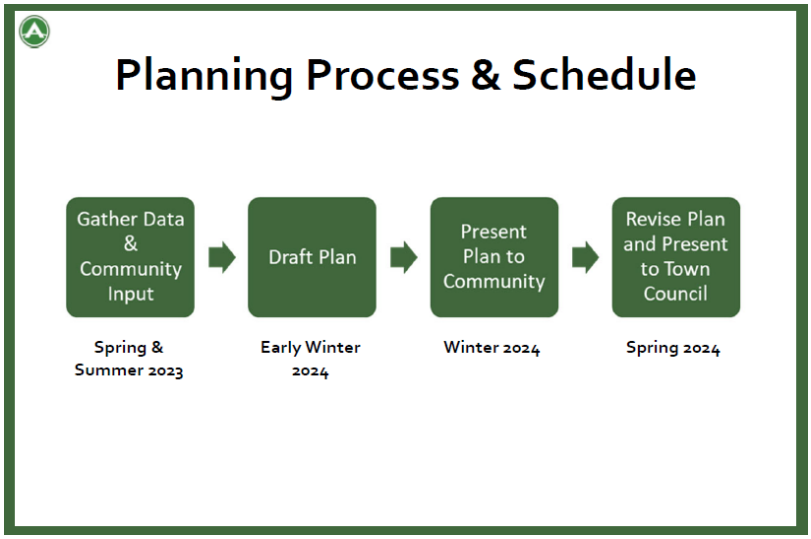
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[NB1 - SLIDE 3]



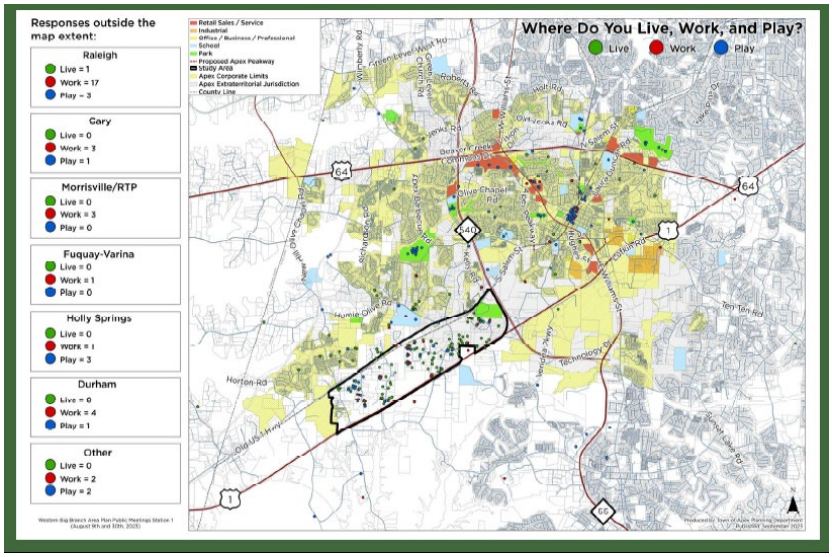
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[NB1 - SLIDE 5]



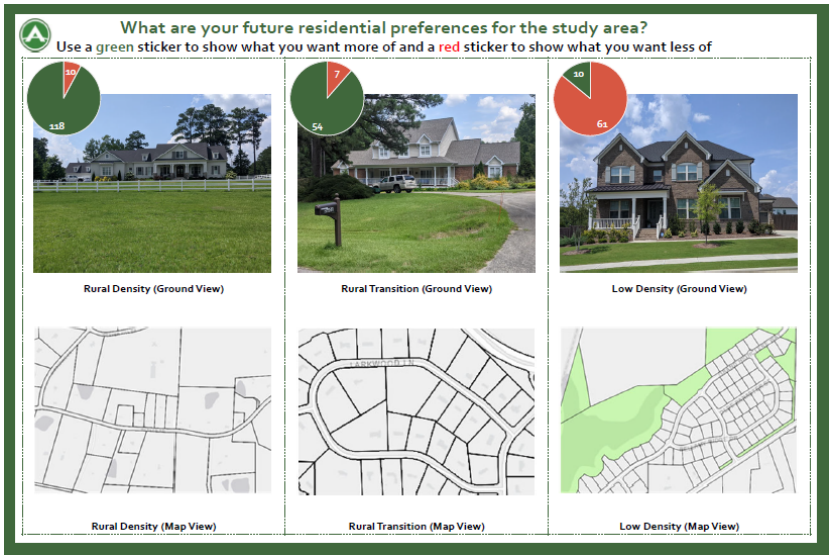
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[NB1 – SLIDE 7]



[NB1 – SLIDE 8]



[NB1 – SLIDE 9]



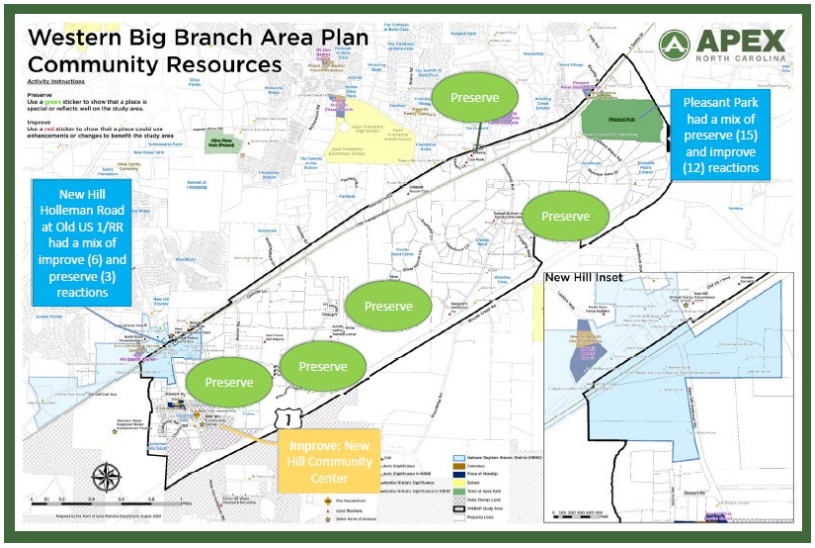
[NB1 – SLIDE 10]



[NB1 – SLIDE 11]



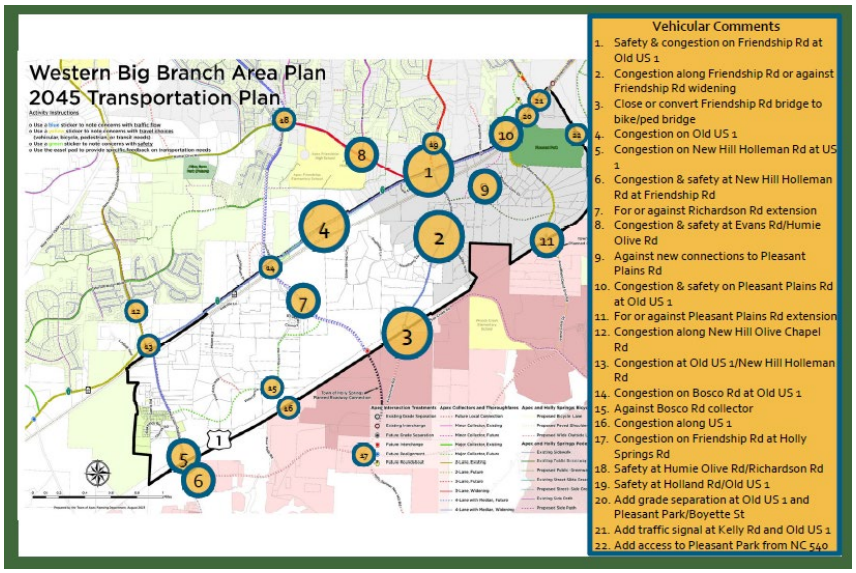
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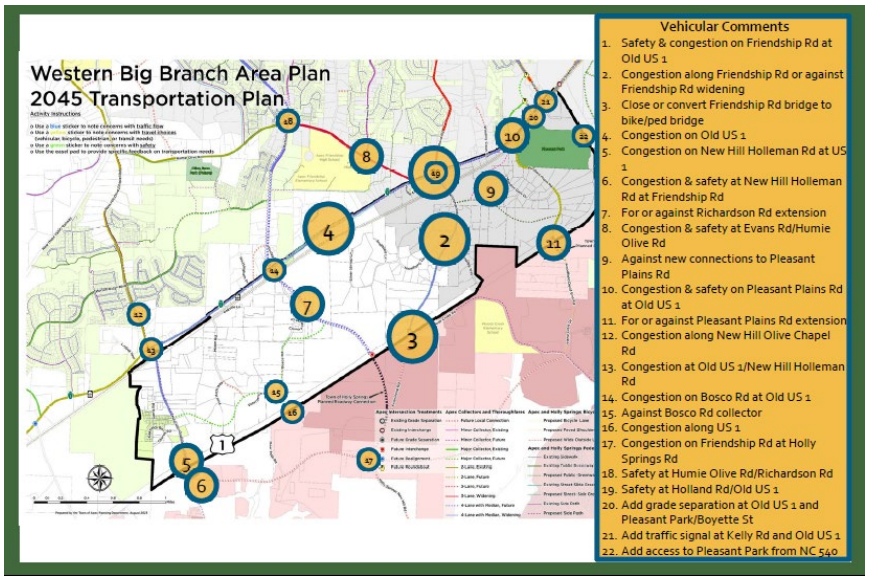
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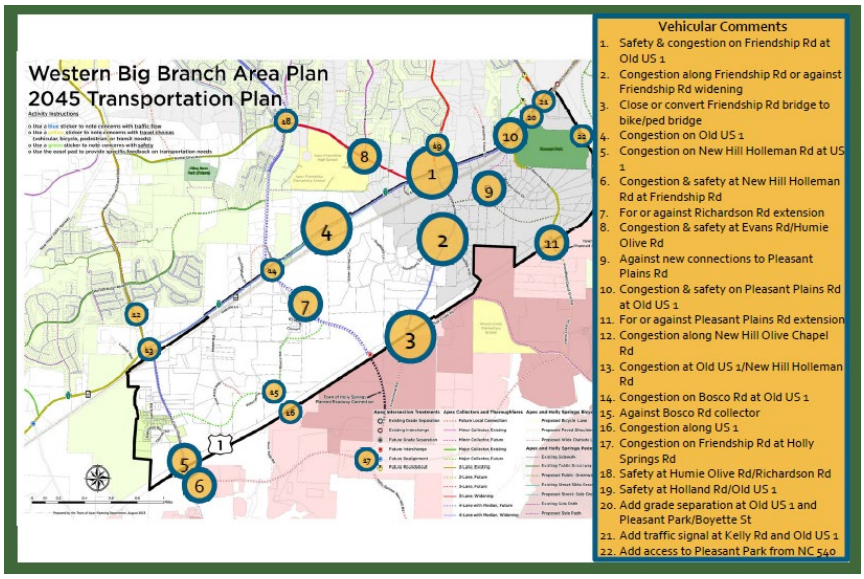
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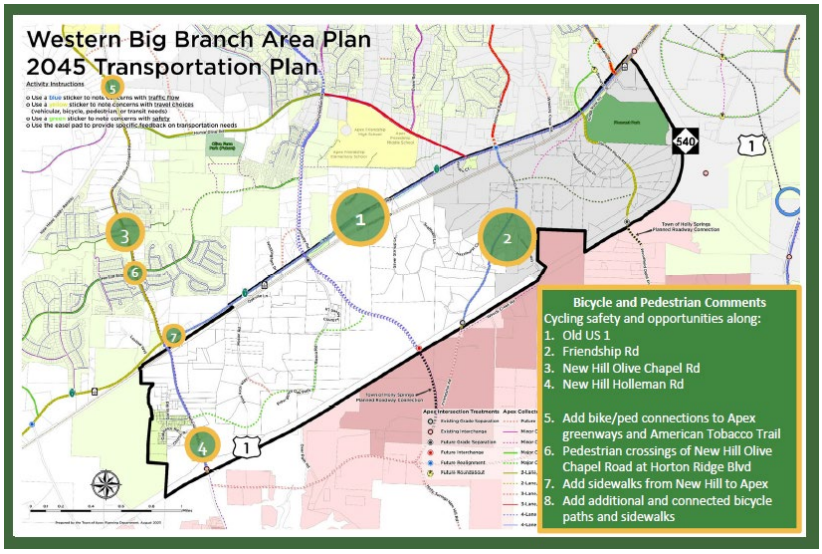
[NB1 – SLIDE 15]



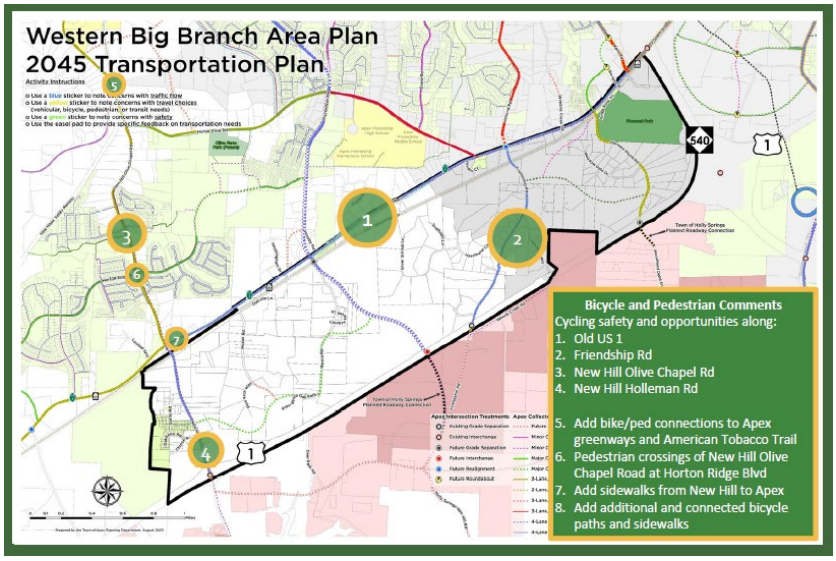
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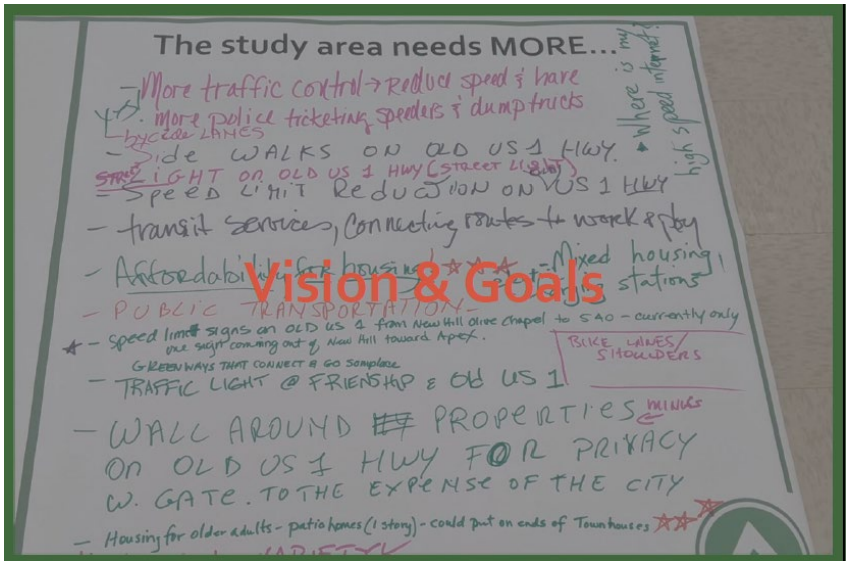
[NB1 – SLIDE 17]



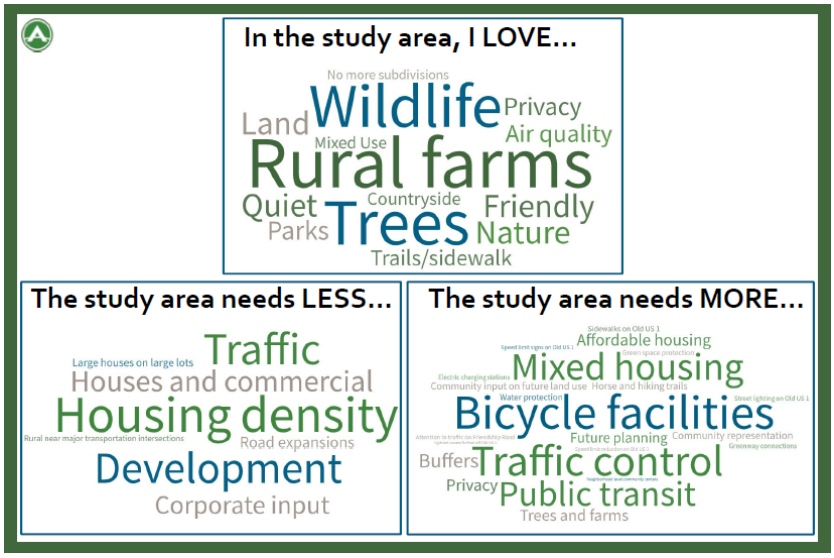
[NB1 – SLIDE 18]



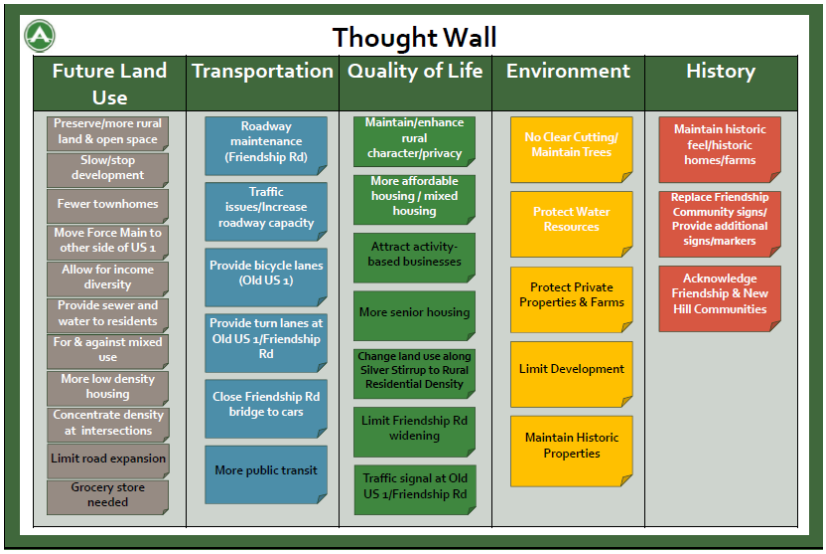
[NB1 – SLIDE 19]



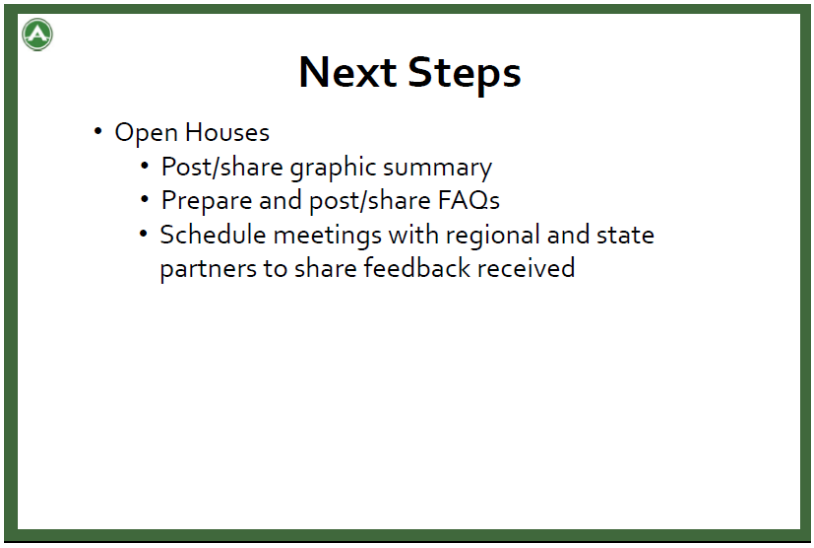
[NB1 - SLIDE 20]



[NB1 - SLIDE 21]



[NB1 - SLIDE 22]



Councilmember Gantt asked if at the booth people were thinking about they wanted for their own property, or what they wanted their neighbors to do.

Ms. Shouse said according to Director Khin, both responses were heard.

Mayor Pro Tempore Killingsworth thanked Ms. Shouse for the presentation. She said one of the difficult things was that they were getting opinions on opposite ends of things from people at this event it seems like. She said that can make planning out in this area more difficult, but she appreciates that this area got the opportunity to give their input.

Councilmember Gray asked if there was an opportunity for people in this area to give their input in a virtual format if they were unable to attend the event in person.

Ms. Shouse said that was not an option this time. She said it was considered, but these stations were very involved, and would be difficult to do in a virtual environment.

Councilmember Gray said he was concerned bout not capturing a potential silent majority whose views may not have been reflected in this environment. He said it may be good to assess this through a bit broader lens and include other nearby communities. He said he appreciates the work done on this and the open houses were great.

Councilmember Gantt asked if where people were from was considered in the pie chart data of what kinds of housing and developments people preferred.

Ms. Shouse said no.

Councilmember Gantt said he didn't see evidence of a lot of tradeoffs for these things. He said he was wondering if they would trade more traffic and housing in order to get the downtown that seems to be highly desired. He said for there to be investment, there has to be some density in order to support a downtown and commercial interests. He said highly rural environments cannot support that. He said there's no reason to put more transit options or sidewalks in if so few people live there, as other parts of town would be more benefitted by those investments.

Director Khin said she spoke to people about where they would like to see these things come in. She said they would like to see a downtown area come in where Vicious Fishes is. She said a grocery store they would like in an area that is already zoned commercial. She said there is a disconnect between density and intensity of uses they want in the area and transportation improvements they want. She said it may be difficult but they will try to work with it.

Councilmember Gantt said it seems like unless a change would be very special or unique, there is a lot of inertia to keep things more in line with how they already are.

Director Khin said she isn't totally sure, but there is a group that wants to be moved from low density to rural density residential. She said it isn't unprecedented for a rural density area to want to remain that way, even if they are surrounded by corporate limits.

Councilmember Zegerman said he agreed with Councilmember Gray that an online component to this would be good. He said he attended both sessions and they were great, and got great feedback from the community. He said it's difficult to determine some things because where people live is not captured in what they are wanting to see. He said he would support adding in an online component to these kinds of events moving forward.

Ms. Shouse said they could look at adding an online component before they revise it and send it back out to the community in the winter.

Councilmember Zegerman said it would be great to be able to overlay an individual's residential area with the types of things they were wanting to see.

Mayor Gilbert asked if Ms. Shouse could explain the state and local partners that were referenced and what the timeline could be like for those.

Ms. Shouse said today they met with Holly Springs staff and CAMPO, and are planning to meet with NCDOT as well to discuss what they have heard.

Mayor Gilbert asked how they should go about navigating those decisions with Holly Springs, since these issues in this area could be political.

Councilmember Gray said there may be a good opportunity to do a joint Work Session with Holly Springs. He said even other than this, there are good examples of things where there is interoperability with them. He said that would be a good way to come together and think about these things in a more critical way. He said it would be easier to evaluate the political concerns if they got together with them and worked to understand things from their perspective.

Councilmember Zegerman said he liked the idea of a joint Work Session, as Apex and Holly Springs are working together on lots of things and are close to many of the developments they are both bringing in. He said the joint Collaboration Sessions are good for establishing relationships, but it would also be beneficial to do a joint Work Session as the next step and discuss these topics.

Councilmember Gray said it may be in their interest to establish a standing committee between Holly Springs and Apex to act as an interface when they identify things where the town is doing something that may impact the other.

Councilmember Zegerman added that it would be also be good to help identify opportunities. He said they could work together on things like grants, and work together to help bring money for projects into the Western Wake region.

Councilmember Gantt said this is worth discussing, but they need to acknowledge that this may come with a loss of control for the town that they may not end up liking.

Councilmember Gray said he agreed, and it was like a mini CAMPO. He said it doesn't necessarily have to be giving concessions to each other, but rather to look at what the realistic limitations and concerns are. He said even if these things don't come with concessions, it could still help them make decisions.

Town Clerk Coleman said staff would research those options and get back to them.

~~**NB2 Unified Development Ordinance (UDO) Possible Amendments – Increase Resource Conservation Area (RCA) requirement and Solar Panels**~~

Continued to September 26, 2023 Regular Town Council meeting, per Council vote earlier in the meeting.

[UPDATES BY INTERIM TOWN MANAGER]

Interim Town Manager Shawn Purvis said Councilmember Zegerman had mentioned a young resident who had a fascination with solid waste vehicles, and wanted to thank Public Works staff and GFL for helping give him a special birthday celebration on September 1. He said the Lake Pine Drive project was finished, and it was a big project involving Cary and the state as well. He extended thanks to Russell Dalton and Adam Stephenson for their work throughout the project. He said they are in final stages of inspection with Public Safety Station 6, and if all goes well, everything should be running and open with it around mid-October. He added that Pleasant Park was also in its final stages before opening, but the splash pad would not be ready for opening yet. He said the Communications

team won their first National award for their work on the text outage reporting system with Electric Utilities. He also reminded everyone of Party in the Peak on Saturday, September 23 from 10-5 at the Apex Town Hall Campus, and encouraged people to come out and celebrate the 150th.

[CLOSED SESSION]

A **motion** was made by **Councilmember Gantt,** seconded by **Mayor Pro Tempore Killingsworth,** to enter into Closed Session pursuant to NCGS §143-318.11(a)(3) and NCGS §143-318.11(a)(6).

VOTE: UNANIMOUS (4-0)

Council entered into open session at 9:10 p.m.

CS1 Laurie Hohe, Town Attorney, Legal Department

NCGS §143-318.11(a)(3):

"To consult with an attorney employed or retained by the public body in order to preserve the attorney-client privilege between the attorney and the public body."

CS2 ADDED Jacques K. Gilbert, Mayor, Governing Body

NCGS §143-318.11(a)(3):

"To consult with an attorney employed or retained by the public body in order to preserve the attorney-client privilege between the attorney and the public body."

CS3 Allen Coleman, Town Clerk

NCGS §143-318.11(a)(6):

"To consider the qualifications, competence, performance, character, fitness, conditions of appointment, or conditions of initial employment of an individual public officer or employee or prospective public officer or employee; or to hear or investigate a complaint, charge, or grievance by or against an individual public officer or employee."

Council returned to open session at 11:20 p.m.

Mayor Gilbert adjourned the meeting at 11:21 p.m.

Jacques K. Gilbert
Mayor

Allen Coleman, CMC, NCCCC
Town Clerk to the Apex Town Council

Submitted for approval by Town Clerk Allen Coleman and approved on _____.

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for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Angela Reincke, Parks Planning Project Manager

Department(s): Parks, Recreation, and Cultural Resources

Requested Motion

Motion to approve the establishment of criteria for a Design-Build delivery method for Construction Projects and for the Design-Build of the Bike Park Facility at Hunter Street Park.

Approval Recommended?

Yes

Item Details

Design-Build is a construction contracting method in which both the design and construction services are incorporated into one contract with a single responsible party as opposed to the design being contracted separately between the town and an engineer/architect and the construction being secured by a different contract between the town and a general contractor.

In accordance with N.C.G.S. 143-128.1A the Town of Apex crafted criteria that the Town must establish to utilize the design-build method of delivery for construction projects. Parks, Recreation and Cultural Resources is seeking to utilize the design-build method of delivery for the additions to Hunter Street Park for the Bike Park due to the unique properties of a pump track and mountain bike training course facility and the special skills and knowledge needed to design and construct such a facility.

Once the criteria are approved the Town will notice the Request for Qualifications for potential bidders on the project.

Attachments

- CN6-A1: Design-Build Criteria - Design-Build Delivery Method for Construction Projects and Design-Build of a Bike Park Facility at Hunter Street Park

Establishment of criteria for a Design-Build delivery method for Construction Contracts and Approval for the Design and Build of a Bike Park Facility at Hunter Street Park Apex, NC.

Abstract: In accordance with N.C.G.S 143-128.1A the Town of Apex is memorializing criteria that the Town must establish to utilize the design-build method of delivery for construction projects. The Town of Apex Parks Recreation and Cultural Resources Department is seeking to utilize the design-build method of delivery for the additions to Hunter Street Park, 1250 Ambergate Station, Apex NC. This delivery method will provide the needed flexibility to complete the project on time and within budget without sacrificing quality.

Part I: The first step in the process for utilizing the design-build delivery method is that a governmental entity is to establish in writing the criteria used for determining the circumstances under which the design-build method is appropriate for a project. The following is the criteria that is being proposed:

Criteria 1: The Design-Build delivery method may be used if it is determined that, for the project, the Town of Apex has professional personnel that are both qualified and experienced to thoroughly define project requirements prior to the issuance of a request for qualifications (RFQ) for a design-builder. Consideration will be given to the qualifications and experience of the personnel in the Parks Recreation and Cultural Resources Department. Additionally, the Town of Apex should have the availability of professional personnel in the areas of purchasing, finance and legal to assist in the development of an RFQ.

Criteria 2: The design-build delivery method may be used if a project has a firm date by which a facility must be operational and the normal delivery method is likely not to be timely (typically RFQ, study, design, bid and construct). The size and cost of a project will dictate complexity and schedule.

Criteria 3: The ability to ensure that a quality project can be delivered. The design-build delivery method may be used if it is determined that the Town of Apex has experienced personnel to ensure that the design-build firm will provide a quality project within the budget constraints established by Council. Consideration will be given to the qualifications and experience of the personnel in the Parks Recreation and Cultural Resources Department.

Criteria 4: The Town of Apex should have the capacity and ability to manage and oversee the project, this includes the availability of experienced staff or outside consultants who are experienced with the design-build method of project delivery. The design-build delivery method may be used if it is determined that the Town of Apex has professional and experienced personnel that are knowledgeable of design-build projects or, in the alternative, experienced consultants local to the Town of Apex who are available to be retained to perform the construction management of a design-build contract.

Criteria 5: A good-faith effort to comply with G.S. 143-128.2, G.S. 143-128.4, and to recruit and select small business entities. The design-build delivery method may be used if it is determined that, for the project, requirements will be imposed which ensure that contractors will comply with the M/WBE goals outlined in G.S. 143-128.2 and G.S. 143-128.4.

Criteria 6: The criteria utilized by the Town of Apex, including a comparison of the costs and benefits of using the design-build delivery method for a given project in lieu of the other delivery methods identified. The criteria utilized by the Town of Apex when considering a design-build delivery method for a project will be as follows:

1. Is the project well defined and does it include qualitative and quantitative characteristics that make a design-build contract more appropriate than other methods of delivery?
2. Is the project timeline overly constrained and will it be necessary to have the facility complete and operational within a short timeframe?
3. Will it be necessary to have beneficial use of a portion of the facility while it is under construction?
4. Given the scope of the project, is there a maximum budget that must be adhered to in order to allow negotiations and flexibility to make appropriate decisions on scope as the project progresses?
5. Does the design-build delivery method meet the ultimate operational goals established for a given facility and the quality of product achieved as a result of a more fluid and flexible delivery method?

In general terms, if it is determined that the expected expense of a design-build project will be no more than ten percent (10%) greater than the expected expense of a traditional RFQ, study, design, bid and construct project, the design-build delivery method may be utilized.

Part 2: Applying the criteria to the Hunter Street Bike Park Project. The second step for the process in determining whether to use the design build delivery method for a project is to apply the criteria to the project. ln applying the criteria to the Hunter

Street Park Bike Addition, it is recommended that the design-build delivery method be used for this project. This determination is based upon a review of the above criteria as it relates to this project as follows:

Criteria 1: Through the Parks Recreation and Cultural Resources Department, the Town of Apex has professional personnel that are both qualified and experienced to thoroughly define project requirements prior to the issuance of a request for qualifications for a design builder. Additionally, professional personnel are available in the areas of purchasing, finance and legal to assist in the development of an RFQ.

Criteria 2: The addition to Hunter Street Park, by way of the Bike Park, will provide the residents of the Town the opportunity to recreate, enhance skills and engage with others in the community. In order to provide residents with this facility, the construction must be completed by October 30, 2024. This is a period of approximately 12-months. Typical procedure would be to procure a design consultant, complete design and then undertake construction. This process would take approximately 18-24 months thus preventing the Town of Apex from providing this facility in a timely manner. The Design-Build process provides the best option for the Town of Apex to meet this timeframe.

Criteria 3: Within the Parks Recreation and Cultural Resources Department, the Town of Apex has professional and experienced personnel to ensure that the design-build firm will provide a quality project within the budget constraints established by Council.

Criteria 4: Within the Parks Recreation and Cultural Resources Department, the Town of Apex has professional and experienced personnel that are knowledgeable of design-build projects. Should it become necessary to contract the construction management of a design-build contract, there are experienced consultants local to the Town of Apex that are available.

Criteria 5: The Town of Apex complies with G.S. 143-128.2, G.S. 143-128.4. The RFQ will include selection criteria evaluation of potential design build firm plans to encourage participation by historically underutilized business firms, as defined by G.S. 143-128.4.

Criteria 6: As stated under Criteria #2, one of the benefits of the Design-Build process is that it may reduce the overall project schedule by 6 to 12 months. This has a direct benefit on the project budget. The design-build delivery method is not expected to involve any additional expense beyond the expected expense of a traditional RFQ, study, design, bid, and project construction. The budget for the renovation of the Hunter Street Bike Park Project is $225,000.00. By reducing the

time frame by 12 months, we are eliminating the price escalation that would occur within that year. Additionally, the scope of the design efforts will be reduced. This enables more of the approved project budget to go directly towards the physical improvements of the facility. It is expected that the design-build process will enable an extra 5% of existing funds (about $11,250) to be allocated to the construction over what our typical design-bid-build process would allow. Bike Parks are a unique facility type that involve forming dirt mounds and creating tracks with skill elements made from natural materials such as rocks, boulders, logs, stumps, etc. The use of a design-builder gives the Town of Apex the ability to save additional funds. The Town of Apex is able to do this by utilizing available materials. The material will be incorporated into the design and that can be field adjusted during the construction without requiring additional time delays to update plans. These benefits to both the project schedule and cost make the design-build option more appealing than the more conventional design-bid and construction-bid-build in this instance.

Fiscal Note: There is no fiscal impact to the establishment of this policy and approval of the utilization of design-build delivery method.

Recommendation: Approve the criteria for use of the design-build delivery method and authorize Town staff to move forward with use of the design-build delivery method for the construction of the Hunter Street Bike Park Project.

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for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Angela Reincke, Parks Planning Project Manager

Department(s): Parks, Recreation and Cultural Resources

Requested Motion

Motion to approve a fee-in-lieu of dedication for the Townes on Tingen

Approval Recommended?

Yes

Item Details

Every person who subdivides or develops land for residential purposes shall prior to the time of final approval of the Master Subdivision Plan or Minor or Major Site Plan agree to dedicate a portion of such land, as set forth in this Article 14 of the Unified Development Ordinance (UDO) for the purpose of providing park, recreation or open space sites to serve the future residents of the neighborhood within the Town of Apex corporate limits. The Townes at Tingen was rezoned to HDMF-CZ through Rezoning Case No. 21CZ27 (1010 Tingen Rd) and also to HDMF-CZ through Rezoning Case No. 23CZ07 (940 Tingen Rd). The combined 2.48-acre project is located on the west side of Tingen Road south of Apex Elementary School and north of Habor Haven Drive planned for 20 Single Family Attached units that are being provided as one-hundred percent (100%) affordable housing through a partnership with an affordable housing provider.

Exemptions: When a development contains 45 units or less in a single-family attached subdivision only the payment of fees-in-lieu shall be required, unless the development abuts an existing or planned park or greenway. As such, the Townes on Tingen subdivision with 20 Affordable Single Family Attached units are being recommended to pay a fee-in-lieu of land dedication.

Attachments

- CN7-A1: Townes on Tingen Subdivision Plan - Fee-In-Lieu (FIL) of Land Dedication


N/F ALBERT BYRD HEIRS
PIN: 0741-26-1922
D.B. 1854, PG. 663
ZONING: RA
USE: SF
N/F BOARD OF EDUCATION OF WAKE COUNTY
PIN: 0741-26-2284
D.B. 1206, PG. 475
ZONING: RA
USE: SCHOOL
N/F ALBERT BYRD HEIRS
PIN: 0741-26-1811
D.B. 1326, PG. 514
ZONING: RA
USE: SF
N/F JOHN AMOROSO
PIN: 0741-26-6820
D.B. 7287, PG. 240
ZONING: RA
USE: SF
N/F JOHN AMOROSO
PIN: 0741-26-6639
D.B. 7287, PG. 240
ZONING: RA
USE: SF
N/F HARRISON EASTON
PIN: 0741-26-9830
D.B. 7558, PG. 104
ZONING: RA
USE: SF
N/F ISOLINE BYRD
PIN: 0741-26-1618
D.B. 1340, PG. 108
ZONING: RA
USE: SF
N/F MANGUM HEIRS
PIN: 0741-26-0058
D.B. 08-E, PG. 1350
ZONING: RA
USE: SF
N/F JOSEPH GALLOWAY
PIN: 0741-26-8852
D.B. 315, PG. 00-E
ZONING: RA
USE: VACANT
N/F BALDWIN CEMETERY
PIN: 0741-26-7558
D.B. 1000, PG. 0001
ZONING: RA
USE: SF
N/F FRANCIS CHAVIS
PIN: 0741-26-9566
D.B. 16625, PG. 473
ZONING: RA
USE: SF
N/F DANIEL EPPS
PIN: 0741-26-7486
D.B. 17051, PG. 1299
ZONING: RA
USE: VACANT
N/F ISOLINE BYRD
PIN: 0741-26-1618
D.B. 1340, PG. 108
ZONING: RA
USE: SF
N/F WESTHAVEN TOWNHOMES HOMEOWNERS ASSOCIATION
PIN: 0741-26-1195
D.B. 13251, PG. 1696
ZONING: RA
USE: HOA
WESTHAVEN TOWNHOMES
B.M. 2006, PG. 1552
WESTHAVEN TOWNHOMES
B.M. 2003, PG. 386
BENCHMARK
CRZ
TINGEN ROAD (NCSR 1153)
PUBLIC R/W WIDTH VARIES
FANNER STREET
(50' PUBLIC R/W)
OWLSMOOR LANE
(50' PUBLIC R/W)
HARBOR HAVEN DRIVE
50' PUBLIC R/W
B.M. 2001, PG. 2353
PEACE HAVEN PL
(PRIVATE)
10' TYPE 'A' BUFFER
30' TYPE 'B' BUFFER
B.M. 2001, PG. 2353
50' TYPE 'B' BUFFER
B.M. 2001, PG. 2353
OPEN SPACE-1
7,870 SF
(0.18 Ac)
(HOA MAINTAINED)
OPEN SPACE-2
2,157 SF
(0.05 Ac)
(HOA MAINTAINED)
OPEN SPACE-3
1,475 SF
(0.03 Ac)
(HOA MAINTAINED)
OPEN SPACE-4
7,819 SF
(0.18 Ac)
(HOA MAINTAINED)
RETAINING WALL #1
SCM
SCM MAINTENANCE AND ACCESS EASEMENT
20'TOA PUBLIC SANITARY SEWER EASEMENT
20'TOA PUBLIC DRAINAGE EASEMENT
30'TOA PUBLIC SANITARY SEWER EASEMENT
30'TOA PUBLIC DRAINAGE EASEMENT
PUBLIC SIDEWALK EASEMENT
PUBLIC ACCESS EASEMENT
PUBLIC DRAINAGE EASEMENT
PUBLIC SIDEWALK EASEMENT
PUBLIC ACCESS EASEMENT
80' ULTIMATE ROW
40' ROW FROM ℄
50' ROW
24' BOC TO BOC
1" EIS
FLAT EIS
ECM = CONTROL
N.C. GRID COORDINATE
NAD 83 (2011)
N= 716,853.62
E= 2,042,741.33
U.S. SURVEY FEET
NO MONUMENT FOUND HERE (PILE OF DEBRIS)
BP 134.00.00
BP 135.00.00
EIP 113.83' SOUTHERLY
N 87°40'19" E 116.01'
N 88°16'28" E 215.58'
386.99'
N 87°38'14" E
TIE ONLY
N 86°06'06" W 60.18'
TIE ONLY
N 86°06'06" W 189.62'
S 26°53'11" W 66.01'
S 26°53'11" W 66.01'
S 26°53'11" W 66.01

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Russell Dalton, Traffic Engineering Manager

Department(s): Transportation & Infrastructure Development

Requested Motion

Motion to adopt an Ordinance Amendment to Chapter 20 Traffic – Section 150 with the addition of subsection (13) prohibiting parking in a bike lane, except that a driver may stop temporarily during the actual loading and unloading of passengers or materials unless deliveries are otherwise prohibited.

Approval Recommended?

Yes

Item Details

The Town currently has no restrictions on parking in bike lanes. Information on how various local communities regulate parking in bike lanes was presented to the Planning Committee, and the committee recommended a town wide restriction for parking in bike lanes except for loading and unloading activity.

Attachments

- CN8-A1: Ordinance - Ordinance Amendment Chapter 20 - Section150(13) - No Parking in a Bike Lane

ORDINANCE NO. 2023-0926-__

AN ORDINANCE TO AMEND SECTION 20-150 OF THE CODE OF ORDINANCES OF THE TOWN OF APEX

NOW, THEREFORE, BE IT ORDAINED by the Town Council of the Town of Apex as follows:

Section 1. Section 20-150 of the Code of Ordinances of the Town of Apex is hereby amended to read as follows, with additions shown as bold, underlined text:

Sec. 20-150. – Stopping, standing or parking prohibited in certain places.

No person shall stop, stand or park a vehicle, attended or unattended, except when necessary to avoid conflict with other traffic or in compliance with the directions of a police officer or traffic control device in any of the following places:

(13) In a bike lane, except that a driver may stop temporarily during the actual loading and unloading of passengers or materials unless deliveries are otherwise prohibited.

Section 2. It is the intention of the governing body, and it is hereby ordained that the provisions of this ordinance shall become and be made a part of the Code of Ordinances and the sections of this ordinance may be renumbered to accomplish such intention.

Section 3. Severability, Conflict of Laws. If this ordinance or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

Section 4. Effective Date. This ordinance shall be effective upon adoption.

Introduced by Council Member: _____

Seconded by Council Member: _____

This the ____ day of _____, 2023.

Attest: TOWN OF APEX, NORTH CAROLINA

_____	_____
Allen Coleman, CMC, NCCCC Town Clerk	Jacques K. Gilbert Mayor

Approved As To Form:

_____

Laurie L. Hohe,
Town Attorney

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Steve Adams, Utility Acquisition & Real Estate Specialist

Department(s): Transportation & Infrastructure Development

Requested Motion

Motion to adopt a Resolution entitled "A Resolution to Abandon Existing Utility Easements" for multiple Dry Utility Easements (DUE) located at The Park at Wimberly.

Approval Recommended?

Yes

Item Details

The Town of Apex currently has multiple Dry Utility Easements (DUE) on multiple properties in the development known as The Park at Wimberly and shown on Book of Maps 2023 Page 1353.
Town staff has determined that there is no need for these easements presently or in the future and seeks to abandon the easements shown on the proposed abandonment plat.

Staff recommends donation of the land and easements.

Attachments

- CN9-A1: Resolution - Abandon Existing Utility Easements
- CN9-A2: Plat Map – Book 2023-Page 1353 - Resolution - Abandon Existing Utility Easements
- CN9-A3: Plat Map - Book 2023-Page 1354 – Resolution - Abandon Existing Utility Easements
- CN9-A4: Plat Map – Book 2023-Page 1355 - Resolution - Abandon Existing Utility Easements
- CN9-A5: Plat Map – Book 2023-Page 1356 - Resolution - Abandon Existing Utility Easements
- CN9-A6: Plat Map – Book 2023-Page 1357 - Resolution - Abandon Existing Utility Easements
- CN9-A7: Plat Map – Book 2023-Page 1358 - Resolution - Abandon Existing Utility Easements
- CN9-A8: Plat Map – Book 2023-Page 1359 - Resolution - Abandon Existing Utility Easements
- CN9-A9: Plat Map – Book 2023-Page 1360 - Resolution - Abandon Existing Utility Easements
- CN9-A10: Plat Map – Book 2023-Page 1361 - Resolution - Abandon Existing Utility Easements
- CN9-A11: Plat Map – Book 2023-Page 1362 - Resolution - Abandon Existing Utility Easements
- CN9-A12: Plat Map – Book 2023-Page 1363 - Resolution - Abandon Existing Utility Easements
- CN9-A13: Plat Map - Park at Wimberly Pl[illegible]esolution - Abandon Existing Utility Easements

- CN9-A14: Plat Map - Park at Wimberly Phase1-S2 – Resolution - Abandon Existing Utility Easements
- CN9-A15: Plat Map - Park at Wimberly Phase1-S3 - Resolution - Abandon Existing Utility Easements
- CN9-A16: Plat Map - Park at Wimberly Phase1-S4 - Resolution - Abandon Existing Utility Easements
- CN9-A17: Plat Map - Park at Wimberly Phase1-S5 - Resolution - Abandon Existing Utility Easements

APEX 1873 NORTH CAROLINA

RESOLUTION NO. 23-_____

A Resolution to Abandon Existing Utility Easements

WHEREAS, Wellfield Development, LLC (the **"Owner"**) is the owner of certain tracts of land in or near the Town of Apex which are described in the deeds recorded in Deed Book 18428, Page 2790; Deed Book 18428, Page 2793; Deed Book 18428, Page 2795; Deed Book 18429, Page 0004; and Deed Book 18429, Page 0008 in the Wake County Registry (the **"Subject Property"**);

WHEREAS, as part of the Park at Wimberly development, dry utility easement interests across the Subject Property are shown on an instrument recorded in Book of Maps 2023, Pages 1353-1363, Wake County Registry;

WHEREAS, the Owner desires the Town to abandon any interest the Town has in those certain areas designated as "EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED" as shown on that certain survey plat entitled "EASEMENT ABANDONMENT PLAT LOTS 56-130 THE PARK AT WIMBERLY PHASES 1 AND 2" prepared by Robinson & Plante, P.C., dated August 14, 2023, said survey being attached hereto as Exhibit A; (the "**Abandoned Easements**");

WHEREAS, the Abandoned Easements are further labeled and identified on Exhibit A as follows:

AREA 1 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (1,180 S.F.)
AREA 2 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (2,540 S.F.)
AREA 3 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (1,360 S.F.)
AREA 4 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (1,768 S.F.)
AREA 5 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (997 S.F.)
AREA 6 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (3,027 S.F.)
AREA 7 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (1,780 S.F.)
AREA 8 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (2,055 S.F.)
AREA 9 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (1,780 S.F.)
AREA 10 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (1,780 S.F.)
AREA 11 – EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED (1,520 S.F.)

WHEREAS, the Town has no need for the Abandoned Easements and they have no market value; and

WHEREAS, the Town Council considers it advisable to abandon the Abandoned Easements.

NOW, THEREFORE, BE IT RESOLVED by the Town Council as follows:

The Town Council of the Town of Apex hereby abandons any interest that the Town may have in the Abandoned Easements as shown as easement areas 1 through 11 on Exhibit A attached hereto and more particularly described above, provided however, the Town specifically retains any and all property interest it may have in the property not specifically identified as abandoned herein.

Upon motion duly made by Council Member_____, and duly seconded by Council Member _____, the above Resolution was duly adopted by the Apex Town Council at the meeting held on the ___ day of _____ 2023, in the Town Hall.

Upon call for a vote the following Council Members voted in the affirmative:

_____

_____

and the following Council Members voted in the negative:

_____

_____

This the ____ day of _____ 2023.

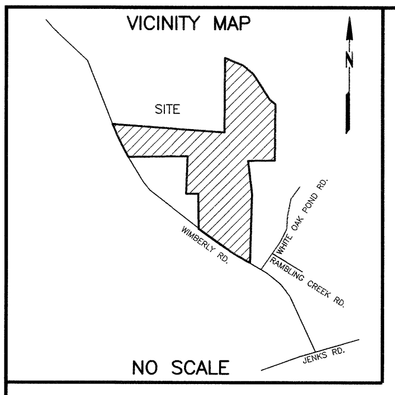
TOWN OF APEX

_____
Jacques K. Gilbert, Mayor

ATTEST:

_____
Allen L. Coleman, Town Clerk, CMC, NCCCC

VICINITY MAP



NO SCALE

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREIN, AND ALL SHEETS RELATED HERETO, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF APEX, AND THAT I HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY FREE CONSENT, CERTIFY THAT THIS PLAN COMPLIES WITH BUILDING SETBACK LINES ESTABLISHED BY THE TOWN OF APEX UNIFIED DEVELOPMENT ORDINANCE AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED AND WILL MAINTAIN THE SAME TO THE STANDARDS SET FORTH BY THE TOWN OF APEX UNIFIED DEVELOPMENT ORDINANCE UNTIL THE TOWN OR HOMEOWNERS ASSOCIATION TAKES OVER RESPONSIBILITY. FURTHERMORE, I HEREBY DEDICATE ALL ELECTRICAL SYSTEMS WHICH ARE LOCATED WITHIN THE MUNICIPAL ELECTRIC SERVICE AREA, SEWER AND WATER LINES TO THE TOWN OF APEX.

7.25.23 — DATE

OWNER WELLFIELD DEVELOPMENT, LLC
BY: Josh Swindell, member

BUFFER CERTIFICATE

ALL BUFFERS, RESOURCE CONSERVATION AREA (RCA), STORMWATER CONTROL MEASURES (SCM) AND COMMON AREAS ARE TO BE MAINTAINED BY THE OWNER. ALL LANDSCAPE BUFFERS ARE RESERVED FOR THE MAINTENANCE OF TREES AND SHRUBS PURSUANT TO ARTICLE 8 OF THE APEX UNIFIED DEVELOPMENT ORDINANCE (UDO). RCA SHOWN HEREON IS BEING PROVIDED PER THE REQUIREMENTS OF ARTICLE 8 OF THE UDO. NO TREES OR PLANTS SHALL BE REMOVED AND NO STRUCTURES ARE TO BE ERECTED INSIDE THE BUFFER OR RCA EXCEPT AS APPROVED BY THE TOWN OF APEX ON A SITE-SPECIFIC DEVELOPMENT PLAN; SUPPLEMENTARY OR REPLACEMENT PLANTINGS MUST BE APPROVED IN WRITING BY THE TOWN OF APEX PLANNING DEPARTMENT BEFORE THEY ARE INSTALLED. FENCES SHALL ONLY BE PERMITTED IN BUFFERS WHERE THEY ARE PLANNED AND CONSTRUCTED AS AN INTEGRAL PART OF THE BUFFER BY THE DEVELOPER AND SHOWN ON SITE-SPECIFIC DEVELOPMENT PLAN APPROVED BY THE TOWN OF APEX. THE RCA MUST BE PRESERVED IN PERPETUITY AND SHALL NOT BE DISTURBED IN ANY MANNER, EXCEPT IN THE CASE OF THE OPERATION AND MAINTENANCE OF PRIVATE RECREATION AREAS, PRIVATE PLAY LAWNS, SCMs, AND HISTORIC OR CULTURAL RESOURCES AS APPROVED BY THE TOWN OF APEX ON A SITE-SPECIFIC DEVELOPMENT PLAN.

7.25.23 — DATE

OWNER member, Wellfield Development

THE OPERATION AND MAINTENANCE AGREEMENT FOR ALL STRUCTURAL SCM'S HAS BEEN RECORDED IN THE WAKE COUNTY REGISTER OF DEEDS BOOK 19376 PAGE 2284-2291. ALL FUTURE DEVELOPMENT OR REDEVELOPMENT ACTIVITIES ON THIS PROPERTY SHALL BE CONSISTENT WITH THIS APPROVED PLAN. NO CHANGES TO THIS PLAN SHALL BE PERMITTED WITHOUT THE TOWN OF APEX'S WRITTEN APPROVAL.

7.25.23 — DATE

OWNER member, Wellfield Development

I, Sonya L. Wheeler, A NOTARY PUBLIC OF THE COUNTY OF WAKE STATE OF NORTH CAROLINA HEREBY CERTIFY THAT Josh Swindell PERSONALLY APPEARED BEFORE ME THIS DAY AND UNDER OATH ACKNOWLEDGED THAT THE ABOVE FORM WAS EXECUTED BY HIM/HER. WITNESS MY HAND AND SEAL THIS 25 DAY OF July 2023.

NOTARY PUBLIC Sonya L Wheeler

MY COMMISSION EXPIRES 2-15-2028

SONYA L WHEELER — Notary Public Johnston County — NORTH CAROLINA

REFERENCES:
1. MAP BY TAYLOR LAND CONSULTANTS, PLLC ENTITLED "BOUNDARY SURVEY WIMBERLY ROAD ASSEMBLAGE", AND DATED JUNE 16, 2020.
2. MAP BY TAYLOR LAND CONSULTANTS, PLLC ENTITLED "BOUNDARY SURVEY PREPARED FOR THE TOWN OF APEX", AND DATED 8/21/17.
3. MAP BY WITHERSRAVENEL ENTITLED "BOUNDARY & TOPO SURVEY OF APEX PUBLIC SAFETY STATION #6", AND DATED 11/11/2020.
4. TEMPORARY CONSTRUCTION EASEMENT
   D.B. 15961, PG. 2182
   D.B. 16934, PG. 1292
5. DUKE ENERGY PROGRESS EASEMENT
   D.B. 4323, PG. 63 (BLANKET EASEMENT WITH NO DEFINED WIDTH)
   D.B. 4817, PG. 477
   D.B. 4817, PG. 478
   D.B. 4975, PG. 541
   D.B. 6253, PG. 44
   D.B. 6253, PG. 45
   D.B. 6605, PG. 595
6. D.B. 4445, PG. 586
   D.B. 10792, PG. 1492
   D.B. 5477, PG. 27
   D.B. 5546, PG. 471
7. B.M. 1988, PG. 974
   B.M. 1993, PG. 925
   B.M. 1989, PG. 238
8. D.B. 4513, PG. 370
9. D.B. 4223, PG. 652
   D.B. 8315, PG. 861
10. ACCESS EASEMENT ABANDONMENT
    D.B. 18434, PH. 560
11. ABANDONMENT OF EASEMENT(S)
    D.B. 19266, PH. 1882
12. TEMPORARY AND PERMANENT ACCESS EASEMENT
    D.B. 19266, PH. 1884
13. WET POND OPERATION & MAINTENANCE AGREEMENT
    D.B. 19260, PH. 2292
14. PERMANENT ACCESS EASEMENT
    (PART OF WIMBERLY ROAD AREA BEING DEDICATED HEREON)
    B.M. 2021, PG. 792-793
    B.M. 2023, PG. 501-504 (SEE NOTE 17)
15. TEMPORARY ACCESS EASEMENT AND TEMPORARY TOWN OF APEX PUBLIC SEWER EASEMENT
    (PART OF ROADS BEING DEDICATED HEREON)
    B.M. 2023, PG. 501-504 (SEE NOTE 16)

WAKE COUNTY, NC 22
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01353

☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III — PROFESSIONAL LAND SURVEYOR
7/25/23 — DATE

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante — PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR — SEAL L-4432 — STUART E. PLANTE III

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

RECORDED IN BOOK OF MAPS 2023 PAGE 1353.

REZONING CONDITIONS OF APPROVAL—CASE # 19CZ22/21CZ01

ECONOMY HOUSING CONDITIONS:
ECONOMY HOUSING IS HOUSING THAT CAN BE PURCHASED BY A HOUSEHOLD THAT EARNS APPROXIMATELY THE MEDIAN HOUSHOLD INCOME FOR WAKE COUNTY, WOLFE PROPERTIES PUD WILL ADDRESS ECONOMY HOUSING BY PROVIDING A MINIMUM OF 10% OF THE TOTAL NUMBER OF UNITS OF THE DEVELOPMENT, AS DETERMINED AT THE MASTER SUBDIVISION PHASE. THE TOWNHOUSE UNITS SHALL HAVE A MINIMUM WIDTH OF 18' AND A MAXIMUM WIDTH OF 20' WITH NO GARAGES AND ALLOWABLE PARKING IN COMPLIANCE WITH SECTION8.3 HOWEVER THEY SHALL ADHERE TO ALL OTHER SETBACK AND ARCHITECTURAL CONDITIONS SET FORTH IN THE PUD PLAN.

SINGLE FAMILY DETACHED RESIDENTIAL STANDARDS:
1. VINYL SIDING IS NOT PERMITTED; VINYL WINDOWS, DECORATIVE ELEMENTS AND TRIM ARE PERMITTED.
2. GARAGE DOORS MUST CONTAIN WINDOWS, DECORATIVE DETAILS OR CARRIAGE-STYLE ADORNMENTS.
3. HOUSE ENTRANCES FOR HOMES WITH FRONT FACING SINGLE-CAR GARAGES MUST HAVE A COVERED PORCH/STOOP AREA LEADING TO THE FRONT DOOR.
4. THE GARAGE CANNOT PROTRUDE MORE THAN ONE FOOT OUT FROM THE FRONT FACADE OR FRONT PORCH UNLESS IT IS A SIDE ENTRY GARAGE.
5. THE VISIBLE SIDE OF A HOME ON A CORNER LOT FACING THE PUBLIC STREET SHALL CONTAIN AT LEAST 2 DECORATIVE ELEMENTS SUCH AS, BUT NOT LIMITED TO, THE FOLLOWING ELEMENTS; WINDOWS, BAY WINDOW, RECESSED WINDOW, DECORATIVE WINDOW, TRIM AROUND THE WINDOWS, WRAP AROUND PORCH OR SIDE PORCH, TWO OR MORE BUILDING MATERIALS, DECORATIVE BRICK/STONE, DECORATIVE TRIM, DECORATIVE SHAKE, DECORATIVE AIR VENTS ON GABLE, DECORATIVE GABLE, DECORATIVE CORNICE, COLUMN, PORTICO, BALCONY OR DORMER.
6. ALL WINDOWS ON A SIDE ELEVATION SHALL HAVE DECORATIVE TRIM, SHUTTERS OR SHALL BE A BAY WINDOW.
7. FRONT PORCHES, WHEN PROVIDED, SHALL BE AT LEAST SIX-FEET (6') DEEP.
8. A VARIED COLOR PALETTE SHALL BE UTILIZED ON HOMES THROUGHOUT THE SUBDIVISION TO INCLUDE A MINIMUM OF THREE COLOR FAMILIES FOR SIDING AND SHALL INCLUDE VARIED TRIM, SHUTTER, AND ACCENT COLORS COMPLIMENTING THE SIDING COLOR.
9. EAVES SHALL PROJECT AT LEAST 12 INCHES FROM THE WALL OF THE STRUCTURE.
10. THE ROOF SHALL BE PITCHED AT 5:12 OR GREATER FOR 75% OF THE BUILDING DESIGNS. THESE LOTS WILL BE IDENTIFIED ON THE MASTER SUBDIVISION PLAN.

RESIDENTIAL TOWNHOME STANDARDS:
1. VINYL SIDING IS NOT PERMITTED; HOWEVER, VINYL WINDOWS, DECORATIVE ELEMENTS AND TRIM ARE PERMITTED.
2. THERE SHALL BE ONE ROOF ELEMENT SUCH AS A GABLE OR DORMER ON EACH UNIT.
3. GARAGE DOORS MUST CONTAIN WINDOWS, DECORATIVE DETAILS OR CARRIAGE STYLE ADORNMENTS.
4. HOUSE ENTRANCES FOR UNITS WITH FRONT FACING SINGLE-CAR GARAGES MUST HAVE A COVERED PORCH/STOOP AREA LEADING TO THE FRONT DOOR.
5. THE GARAGE CANNOT PROTRUDE MORE THAT ONE FOOT OUT FROM THE FRONT FACADE OR FRONT PORCH.
6. ALL EXTERIOR WINDOWS SHALL HAVE DECORATIVE TRIM ON ALL FOUR SIDES.
7. ON CORNER LOTS, THE SIDE ELEVATION FACING THE PUBLIC STREET SHALL CONTAIN AT LEAST TWO DECORATIVE ELEMENTS SUCH AS BUT NOT LIMITED TO: TRIM AROUND WINDOWS, TWO OR MORE BUILDING MATERIALS, DECORATIVE BRICK/STONE OR SIDE ENTRY.

ADDITIONAL RESIDENTIAL STANDARDS:
1. ALL HOMES SHALL PROVIDE CONDUIT FOR FUTURE INSTALLATION OF ROOF TOP SOLAR PANALS, INCLUDING TOWNHOMES AND ECONOMY HOUSING UNITS,
2. CONDUCTING A SOLAR SITE ORIENTATION ANALYSIS TO PROVIDE AT LEAST SIX (6) HOMES IN THE DEVELOPMENT BUILT WITH SKW ACTIVE SOLAR SYSTEMS ON THE ROOF, WHICH IS APPROXIMATELY 5-6% OF THE OVERALL UNITS.
3. ALL HOMES SHALL HAVE A "ENERGY STAR" CERTIFICATION OFFERD AS A BUYER SELECTED OPTION DURING OR PRIOR TO CONSTRUCTION.
4. ALL HOMES WITH GARAGES SHALL HAVE THE OPTION IF A BUYER SELECTS TO ADD AN ELECTRIC VEHICLE CHARGING STATION INSTALLED IN THE GARAGE.

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREIN, AND ALL SHEETS RELATED HERETO, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF APEX, AND THAT I HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY FREE CONSENT, CERTIFY THAT THIS PLAN COMPLIES WITH BUILDING SETBACK LINES ESTABLISHED BY THE TOWN OF APEX UNIFIED DEVELOPMENT ORDINANCE AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED AND WILL MAINTAIN THE SAME TO THE STANDARDS SET FORTH BY THE TOWN OF APEX UNIFIED DEVELOPMENT ORDINANCE UNTIL THE TOWN OR HOMEOWNERS ASSOCIATION TAKES OVER RESPONSIBILITY. FURTHERMORE, I HEREBY DEDICATE ALL ELECTRICAL SYSTEMS WHICH ARE LOCATED WITHIN THE MUNICIPAL ELECTRIC SERVICE AREA, SEWER AND WATER LINES TO THE TOWN OF APEX.

8-3-2023 — DATE

OWNER TOWN OF APEX
BY:

I, LAUREN J SISSON A NOTARY PUBLIC OF THE COUNTY OF WAKE STATE OF NORTH CAROLINA HEREBY CERTIFY THAT SHAWN PURVIS PERSONALLY APPEARED BEFORE ME THIS DAY AND UNDER OATH ACKNOWLEDGED THAT THE ABOVE FORM WAS EXECUTED BY HIM/HER. WITNESS MY HAND AND SEAL THIS 30 DAY OF AUGUST.

NOTARY PUBLIC

MY COMMISSION EXPIRES OCT 3, 2027

LAUREN J SISSON — Notary Public North Carolina — Wake County — My Commission Expires Oct 3, 2027

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD-5' (NO AGGREGATE)
CORNER SIDE YARD-10'
REAR YARD-10'
DRIVEWAYS-BACK OF SIDEWALK TO GARAGE-20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT-42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD (END UNITS)-5'
REAR YARD-5'
FROM PUBLIC R/W TO GARAGE-20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE-10'
BUILDING SIDE TO REAR-30'
BUILDING REAR TO REAR-40'
MAXIMUM BUILDING HEIGHT-50', 3 STORIES

SITE DATA

OWNER:	WELLFIELD DEVELOPMENT, LLC, D.B. 18428, PG. 2795; D.B. 18429, PG. 4; D.B. 18429, PG. 8; D.B. 18428, PG. 2790; D.B. 18428, PG. 2793; REMAINING AREA B.M. 2023, PG. 501-504 PIN 0723.04-50-6472
ANNEXATION #:	#677
CURRENT ZONING DISTRICT & CASE #:	PUD-CZ (19CZ22 & 21CZ01)
PRIMARY WATERSHED PROTECTION OVERLAY DISTRICT:	CAPE FEAR
AREA OF PARENT TRACT:	40.037 ACRES (EXCLUSIVE OF R/W) 1,744,012 S.F.
FEMA DESIGNATED FLOODPLAIN:	NO PER FIRM MAPS 3720072200K AND 3720072300K
MAXIMUM ALLOWED DENSITY:	3.0 UNITS PER ACRE.
PROPOSED DENSITY:	2.96 UNITS PER ACRE
TOTAL NUMBER OF LOTS BEING PLATTED:	26 SINGLE FAMILY DETACHED LOTS 75 TOWNHOME LOTS
SINGLE FAMILY:	
MINIMUM ALLOWABLE LOT SIZE:	6,000 S.F.
MINIMUM PROPOSED LOT SIZE:	6,019 S.F.
AVERAGE SINGLE FAMILY DETACHED LOT SIZE:	7,213 S.F.
TOWNHOME:	
MINIMUM ALLOWABLE LOT WIDTH:	20'
MINIMUM PROPOSED LOT WIDTH:	26'
MAXIMUM PROPOSED LOT WIDTH:	32'
ECONOMY TOWNHOME:	
ECONOMY LOTS REQUIRED:	13
ECONOMY LOTS PROVIDED:	26
MINIMUM ALLOWABLE LOT WIDTH:	18'
MINIMUM PROPOSED LOT WIDTH:	18'
MAXIMUM ALLOWABLE BUILT UPON AREA	28.03 ACRES (70%)
PROPOSED BUILT UPON AREA:	14.33 ACRES (32.9%)
REQUIRED RCA AREA TOTAL PROJECT:	13.06 ACRES (30%)
RCA AREA PROVIDED PHASES 1 AND 2:	10.858 ACRES (27.11%)

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

IMPROVEMENT CERTIFICATE

I HEREBY CERTIFY THAT ALL STREETS, UTILITIES, AND OTHER REQUIRED IMPROVEMENTS HAVE BEEN INSTALLED IN AN ACCEPTABLE MANNER AND ACCORDING TO THE TOWN SPECIFICATIONS AND STANDARDS OR THAT GUARANTEES OF THE INSTALLATION OF THE REQUIRED IMPROVEMENTS IN AN AMOUNT AND MANNER SATISFACTORY TO THE TOWN OF APEX HAVE BEEN RECEIVED.

Liz Loftin — SUBDIVISION ADMINISTRATOR — 8-3-2023 DATE

WATER RESOURCES DIRECTOR — 8-2-23 DATE

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS FOR APEX, NORTH CAROLINA. WITH THE EXCEPTION OF SUCH VARIANCES, IF ANY, AS ARE NOTED AND THAT THIS PLAT HAS BEEN APPROVED BY THE TOWN OF APEX FOR RECORDING IN THE OFFICE OF THE REGISTER OF DEEDS OF WAKE COUNTY.

Liz Loftin — SUBDIVISION ADMINISTRATOR — 8-3-2023 DATE

WATER SUPPLY WATERSHED CERTIFICATE (FOR PRIMARY AND SECONDARY WATERSHED PROTECTION AREAS)

I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON COMPLIES WITH THE WATERSHED PROTECTION OVERLAY DISTRICT ORDINANCE OF THE TOWN OF APEX AND IS APPROVED FOR RECORDING IN THE WAKE COUNTY REGISTER OF DEEDS OFFICE. THIS PROPERTY IS LOCATED WITHIN A PROTECTED WATERSHED. DEVELOPMENT RESTRICTIONS APPLY.

8-2-23 — DATE

WATER RESOURCES DIRECTOR

CERTIFICATE OF REVIEW OFFICER:

STATE OF NORTH CAROLINA
COUNTY OF WAKE

I, Liz Loftin, REVIEW OFFICER OF WAKE COUNTY, CERTIFY THAT THIS PLAT MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

Liz Loftin — REVIEW OFFICER — 8-3-2023 DATE

APPROVAL EXPIRES IF NOT RECORDED ON OR BEFORE — 10-3-2023 DATE

TOWN OF APEX NOTES:

1. WHERE TOWN OF APEX PUBLIC UTILITIES ARE INSTALLED WITHIN PUBLIC EASEMENTS CROSSING PRIVATE PROPERTY, THE TOWN OF APEX SHALL HAVE THE RIGHT TO ENTER UPON THE EASEMENT FOR PURPOSES OF INSPECTING, REPAIRING, OR REPLACING THE UTILITIES AND APPURTENANCES.
2. NO PERSON SHALL PLACE ANY PART OF A STRUCTURE, ANY PERMANENT EQUIPMENT, OR IMPOUNDMENT UPON TOWN OF APEX PUBLIC UTILITY EASEMENTS. PROHIBITED STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO: BUILDINGS, HOUSES, AIR CONDITIONING UNITS, HEAT PUMP UNITS, DECKS, GARAGES, STORAGE/TOOL SHEDS, SWIMMING POOLS, WALLS, RETAINING WALL MECHANISMS/APPURTENANCES, AND FENCES. UPON PRIOR WRITTEN APPROVAL BY THE WATER RESOURCES DEPARTMENT, PUBLIC WORKS AND TRANSPORTATION DEPARTMENT OR ELECTRIC UTILITIES DEPARTMENT, AS APPROPRIATE, FENCES MAY BE PERMITTED TO PERPENDICULARLY CROSS EASEMENTS PROVIDED THAT A 14' ACCESS GATE IS INSTALLED ACROSS THE EASEMENT.
3. ASPHALT OR CONCRETE PRIVATE STREETS, DRIVEWAYS, WALKWAYS, PARKING LOTS, ETC. SHALL NOT BE INSTALLED OVER TOWN OF APEX PUBLIC UTILITIES AND/OR PUBLIC EASEMENTS WITHOUT THE PRIOR WRITTEN CONSENT OF THE TOWN OF APEX. WHERE APPROVED PRIVATE STREETS, DRIVEWAYS, WALKWAYS, PARKING LOTS, ETC. HAVE BEEN AND INSTALLED AND ENCROACH UPON PUBLIC EASEMENTS, THE TOWN OF APEX SHALL NOT BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY PRIVATE SITE ELEMENTS WHICH MUST BE REMOVED TO FACILITATE REPAIRS. THE TOWN OF APEX SHALL EXCAVATE AS NECESSARY TO MAKE THE REPAIR, AND SHALL BACKFILL THE DISTURBED AREA TO APPROXIMATELY THE ORIGINAL GRADE. REPLACEMENT OF PRIVATELY OWNED SITE ELEMENTS SHALL BE THE REPONSIBILITY OF THE PROPERTY OWNER AND/OR HOMEOWNER'S ASSOCIATION WITHOUT COST TO THE TOWN OF APEX.
4. ENCROACHMENT UPON TOWN OF APEX PUBLIC EASEMENTS SHALL NOT BE ENLARGED OR INCREASED BEYOND THE ENCROACHMENT RECEIVING TOWN OF APEX APPROVAL AS SHOWN IN THE APPROVED PLOT PLAN OR OTHER APPROVAL DOCUMENT ISSUED BY THE TOWN OF APEX. PROPERTY OWNER IS RESPONSIBLE FOR ANY AND ALL EXPENDITURES OF LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION, ERECTION, REPAIR, REMOVAL, AND/OR MAINTENANCE OF THE ENCROACHMENTS.
5. THE TOWN OF APEX SHALL NOT BE REQUIRED TO GIVE NOTICE TO THE PROPERTY OWNER OF ANY INSPECTION, REPAIR, REPLACEMENT, AND/OR REMOVAL OF ANY PRIVATE STRUCTURES, UTILITIES, OR SITE ELEMENTS.
6. ANY UNAPPROVED ENCROACHMENTS INTO THE TOWN OF APEX PUBLIC EASEMENTS MAY BE REMOVED BY THE TOWN OF APEX WITHOUT NOTICE TO PROPERTY OWNER(S) AND WITHOUT COST, RISK, OR LIABILITY TO THE TOWN OF APEX.
7. ALL OFF-SITE EASEMENTS SHALL BE ACQUIRED BY THE DEVELOPER AND THESE OFF-SITE EASEMENTS SHALL BE RECORDED BY A DEED OF EASEMENT PRIOR TO UTILITY INFRASTRUCTURE CONSTRUCTION APPROVAL. THESE EASEMENTS SHALL BE DEDICATED TO THE TOWN OF APEX AND LABELED "TOWN OF APEX PUBLIC UTILITY EASEMENT".
8. NO PERSON SHALL PLANT TREES, SHRUBS OR OTHER PLANTS WITHIN A TOWN OF APEX PUBLIC UTILITY EASEMENT WITHOUT PRIOR WRITTEN APPROVAL FROM THE WATER RESOURCES DEPARTMENT, PUBLIC WORKS AND TRANSPORTATION DEPARTMENT OR ELECTRIC UTILITIES DEPARTMENT, AS APPROPRIATE.
9. CONTACT THE TOWN OF APEX PLANNING DEPARTMENT FOR A COPY OF THE ZONING CONDITIONS. CONDITIONS.
10. ALL FUTURE DEVELOPMENT OR REDEVELOPMENT ACTIVITIES ON THIS PROPERTY SHALL BE CONSISTENT WITH THIS APPROVAL PLAN. NO CHANGES TO THIS PLAN SHALL BE PERMITTED WITHOUT THE TOWN OF APEX'S PRIOR WRITTEN APPROVAL. APPROPRIATE.

WETLANDS NOTE: CERTAIN PORTIONS OF THE PROPERTY DEPICTED HEREON HAVE BEEN DETERMINED TO MEET THE REQUIREMENTS FOR DESIGNATION AS A REGULATORY WETLAND AND ARE DESIGNATED HEREON AS "WETLANDS". NO SUBSEQUENT FILL OR ALTERATION OF ANY PROPERTY SO DESIGNATED SHALL BE PERMITTED EXCEPT IN COMPLIANCE WITH THE CURRENT APPLICABLE WETLANDS RULES ADOPTED BY THE FEDERAL GOVERNMENT AND/OR THE STATE OF NORTH CAROLINA. SUCH RULES MAY REQUIRE SUBMISSION OF AN APPLICATION FOR FILL BY THE PROPERTY OWNER TO THE GOVERNMENT AGENCY OR AUTHORITY THEN HAVING JURISDICTION FOR WETLANDS REGULATIONS, WHICH APPLICATION SHALL REPORT THE NAME OF THE SUBDIVISION AND MAY BE APPROVED OR DENIED WITHIN THE DISCRETION AND AUTHORITY OF SUCH AGENCY. THIS RESTRICTION SHALL RUN WITH THE LAND AND SHALL BE BINDING ON ALL PARTIES AND ALL PERSONS HAVING INTEREST THEREIN AND SHALL INURE TO THE BENEFIT OF, AND MAY BE ENFORCED BY, ANY AND ALL GOVERNMENTAL AGENCIES OR AUTHORITIES HAVING JURISDICTION FOR THE WETLANDS REGULATIONS.

RCA NOTE:
THE RESOURCE CONSERVATION AREA (RCA) SHOWN HERON IS BEING PROVIDED PER THE REQUIREMENTS OF ARTICLE 8 OF THE TOWN OF APEX'S UNIFIED DEVELOPMENT ORDINANCE (UDO). THIS RCA MUST BE PRESERVED IN PERPETUITY AND SHALL NOT BE DISTURBED IN ANY MANNER.

PARK AT WIMBERLY PHASES 1 AND 2 TOTALS

8.439 ACRES	(AREA IN LOTS)
5.149 ACRES	(AREA IN OPEN SPACE EXCLUSIVE OF RCA AREA)
10.858 ACRES	(AREA IN RCA)
+5.041 ACRES	(AREA IN R/W)
29.487 ACRES	(TOTAL PHASE 1 AND 2 AREAS)

REVISIONS	MASTER SUBDIVISION PLAT FOR		ROBINSON & PLANTE, P.C.	
	THE PARK AT WIMBERLY		LAND SURVEYING C-2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859-6030	
	PHASES 1 AND 2			
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7-25-2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE:	DRAWN BY: KW
	ZONING: PUD-CZ (ZONING CASE 19CZ22 AND 21CZ01)	PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S1 SHEET: 1 OF 11

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED

FROM BUFFER OR RCA–10'
FRONT YARD–10'
SIDE YARD–5' (NO AGGREGATE)
CORNER SIDE YARD–10'
REAR YARD–10'
DRIVEWAYS–BACK OF SIDEWALK TO GARAGE–20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT–42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES

FROM BUFFER OR RCA–10'
FRONT YARD–10'
SIDE YARD (END UNITS)–5'
REAR YARD–5'
FROM PUBLIC R/W TO GARAGE–20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE–10'
BUILDING SIDE TO REAR–30'
BUILDING REAR TO REAR–40'
MAXIMUM BUILDING HEIGHT–50', 3 STORIES

N
N.C. GRID NORTH, NAD83/2011
(SEE NOTE 2 SHEET 7)

JAMES M. SMITH
D.B. 8714, PG. 2732
LOT 3
PIN 0723.03–31–8165

JAMES M. SMITH
LOUANN J. SMITH
D.B. 3436, PG. 900
TRACT 2
B.M. 1985, PG. 86
PIN 0723.03–40–3739

30' EASEMENT
B.M. 1985, PG. 86

1/2"IPF
1/2"RBF
S 86°13'54" E 154.50'
(TIE)
3/4" IPF

TOWN OF APEX
D.B. 16911, PG. 269
B.M. 1993, PG. 263
B.M. 1993, PG. 98
PIN 0723.03–41–6124
(SEE REF. 2)

30' TOWN OF APEX ELECTRIC, WATER, AND SEWER PUBLIC UTILITY EASEMENT
D.B. 16128, PG. 2252

TOWN OF CARY
10' UTILITY AND PIPELINE EASEMENT
D.B. 16934, PG. 1292
(–U– LINE)

TOWN OF APEX
D.B. 18543, PG. 852
LOT 2A
B.M. 2021, PG. 792–793
PIN 0723.03–40–7486

R/W DEDICATION
0.570 ACRES
24,847 S.F.

BRUCE ALAN VANDE BERG
AMY CARTER VANDE BERG
D.B. 9487, PG. 1284
TRACT 1–A
B.M. 1987, PG. 1292
PIN 0723.03–40–0229

SR 1603 (60' PUBLIC R/W)
WIMBERLY ROAD
D.B. 4670, PG. 846
B.M. 1987, PG. 2038

WETLANDS

OPEN SPACE 4
0.639 ACRES
27,810 S.F.
(INCLUSIVE OF RCA 4 AND 5)
(SEE SHEET 8)

PRIVATE SCM ACCESS AND MAINTENANCE EASEMENMT

SCM 2

RETAINING WALL

20'PRSDE

S 85°45'45" E 142.69'
132.35'
S 10°26'53" E 105.97'
N 58°43'17" E 82.13'
S 63°59'14" W 91.89'
112.99'
N 63°59'14" E 43.07'
S 00°38'19" E 89.28'
S 89°21'20" W 774.04'

MIRKWOOD AVENUE
(VARIABLE WIDTH PUBLIC R/W)

S 73°38'33" E 153.10'
S 73°40'48" E 101.48'
(NEW R/W 4.471 ACRES)

TOA
30'PSDE

156.06'
108.18'

LOCH NORA STREET
(50' PUBLIC R/W)

OPEN SPACE 9
0.526 ACRES
22,916 S.F.
(INCLUSIVE OF RCA 17)
(SEE SHEET 8)

OPEN SPACE 8
2.031 ACRES
88,472 S.F.
(INCLUSIVE OF RCA 14–16)
(SEE SHEET 8)

30' TYPE 'B' THOROUGHFARE BUFFER

20' TYPE 'B' PERIMETER BUFFER

20'TCE

10'x70' STE

DRAINAGEWAY

SHEET 3 MATCHLINE

WAKE COUNTY, NC 23
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01354

☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III — 7/25/23
PROFESSIONAL LAND SURVEYOR — DATE

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47–30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III
PROFESSIONAL LAND SURVEYOR
LICENSE NO. L–4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

RECORDED IN BOOK OF MAPS 2023 PAGE 1354.

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

0 40 80 120
SCALE IN FEET

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106–117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEETS 8–10 FOR RCA AREAS AND OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

DANNY L. OTTAWAY
JOAN M. OTTAWAY
D.B. 7543, PG. 333
LOT 2B
B.M. 1987, PG. 2038
B.M. 1987, PG. 1292
PIN 0722.01–49–8843

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2		ROBINSON & PLANTE, P.C. LAND SURVEYING C–2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859–6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7–25–2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=40'	DRAWN BY: KW
	ZONING: PUD–CZ (ZONING CASE 19CZ22 AND 21CZ01)	PIN: 0723.04–50–6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S1 SHEET: 2 OF 11

TOWN OF APEX
D.B. 16911, PG. 269
B.M. 1993, PG. 263
B.M. 1993, PG. 98
PIN 0723.03-41-6124
(SEE REF. 2)

TOWN OF APEX
D.B. 16911, PG. 272
B.M. 2013, PG. 1252
PIN 0723.04-51-4178
(SEE REF. 2)

30' PRIVATE EASEMENT
B.M. 1993, PG. 98

40' UTILITY AND PIPELINE EASEMENT FOR WWRWMF
D.B. 14336, PG. 2496
D.B. 14336, PG. 2490

N.C. GRID NORTH (NAD83/2011)
(SEE NOTE 2 SHEET 7)

MIRKWOOD AVENUE
(60' PUBLIC R/W)

DOUBLE HELIX ROAD
(60' PUBLIC R/W)

20' PUBLIC GREENWAY EASEMENT

OPEN SPACE 5
3.071 ACRES
133,786 S.F.
(INCLUSIVE OF RCA 6-8)
(SEE SHEETS 9-10)

OPEN SPACE 8
2.031 ACRES
88,472 S.F.
(INCLUSIVE OF RCA 14-16)
(SEE SHEET 8)

10' TYPE 'B' PERIMETER BUFFER

20' TYPE 'B' PERIMETER BUFFER

PHASE 1
PHASE 2

MATCHLINE SHEET 2
MATCHLINE SHEET 3
MATCHLINE SHEET 4

APPROX. LOCATION 50' COLONIAL PIPELINE EASEMENT
B.M. 1988, PG. 974
B.M. 1993, PG. 925
B.M. 1987, PG. 2038
(TAKEN FROM REF. 1)

50' APPROX. LOCATION CARDINAL EXTENSION COMPANY EASEMENT
D.B. 8193, PG. 1501
D.B. 8019, PG. 849

DANNY L. OTTAWAY
JOAN M. OTTAWAY
D.B. 7543, PG. 333
LOT 2B
B.M. 1987, PG. 2038
B.M. 1987, PG. 1292
PIN 0722.01-49-8843

PRIVATE SCM ACCESS AND MAINTENANCE EASEMENMT
B.M. 2023, PG. 501-504

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III — 7/25/23
PROFESSIONAL LAND SURVEYOR — DATE

NORTH CAROLINA
WAKE COUNTY
I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

WAKE COUNTY, NC 24
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01355

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

RECORDED IN BOOK OF MAPS 2023 PAGE 1355.

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

0 40 80 120
SCALE IN FEET

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEETS 8-10 FOR RCA AREAS AND OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED
FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD-5' (NO AGGREGATE)
CORNER SIDE YARD-10'
REAR YARD-10'
DRIVEWAYS-BACK OF SIDEWALK TO GARAGE-20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT-42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES
FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD (END UNITS)-5'
REAR YARD-5'
FROM PUBLIC R/W TO GARAGE-20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE-10'
BUILDING SIDE TO REAR-30'
BUILDING REAR TO REAR-40'
MAXIMUM BUILDING HEIGHT-50', 3 STORIES

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2		ROBINSON & PLANTE, P.C. LAND SURVEYING C-2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859-6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7-25-2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=40'	DRAWN BY: KW
	ZONING: PUD-CZ (ZONING CASE 19CZ22 AND 21CZ01)	PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S3 SHEET: 3 OF 11

☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

PROFESSIONAL LAND SURVEYOR — DATE 7/25/23

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD-5' (NO AGGREGATE)
CORNER SIDE YARD-10'
REAR YARD-10'
DRIVEWAYS-BACK OF SIDEWALK TO GARAGE-20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT-42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD (END UNITS)-5'
REAR YARD-5'
FROM PUBLIC R/W TO GARAGE-20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE-10'
BUILDING SIDE TO REAR-30'
BUILDING REAR TO REAR-40'
MAXIMUM BUILDING HEIGHT-50', 3 STORIES

N.C. GRID NORTH, NAD83/2011 (SEE NOTE 2 SHEET 7)

SOLAR NOTE:
LOTS MARKED WITH A * WILL HAVE HOMES BUILT WITH A ACTIVE SOLAR SYSTEM ON THE ROOF.
SEE NOTE 2 UNDER ADDITIONAL RESIDENTIAL STANDARDS ON SHEET 1

DANNY L. OTTAWAY
JOAN M. OTTAWAY
D.B. 7543, PG. 333
LOT 2B
B.M. 1987, PG. 2038
B.M. 1987, PG. 1292
PIN 0722.01-49-8843

DOUBLE HELIX ROAD (60' PUBLIC R/W)
N 45°37'16" E 162.13'
(NEW R/W 4.471 ACRES)

SHEET 3 MATCHLINE

MATCHLINE SHEET 5

PHASE 2
PHASE 1

*LOT 27
*LOT 28
*LOT 29
*LOT 30
*LOT 31

OPEN SPACE 8
2.031 ACRES
88,472 S.F.
(INCLUSIVE OF RCA 14-16)
(SEE SHEET 8)

PRIVATE SCM ACCESS AND MAINTENANCE EASEMENMT
B.M. 2023, PG. 501-504

SCM 1

LOT 72
LOT 71 0.078 ACRES 3,389 S.F.
LOT 70 0.057 ACRES 2,479 S.F.
LOT 69 0.059 ACRES 2,559 S.F.
LOT 68 0.080 ACRES 3,500 S.F.
OPEN SPACE 7 0.043 ACRES 1,884 S.F.
LOT 67 0.076 ACRES 3,316 S.F.
LOT 66 0.054 ACRES 2,340 S.F.
LOT 65 0.054 ACRES 2,340 S.F.
LOT 64 0.054 ACRES 2,340 S.F.
LOT 63 0.054 ACRES 2,340 S.F.
LOT 62 0.076 ACRES 3,301 S.F.
LOT 124 0.078 ACRES 3,420 S.F.
LOT 125 0.054 ACRES 2,342 S.F.
LOT 126 0.054 ACRES 2,340 S.F.
LOT 127 0.054 ACRES 2,340 S.F.
LOT 128 0.054 ACRES 2,340 S.F.
LOT 129 0.054 ACRES 2,340 S.F.
LOT 130 0.076 ACRES 3,329 S.F.
LOT 56 0.085 ACRES 3,701 S.F.
LOT 57 0.059 ACRES 2,588 S.F.
LOT 58 0.066 ACRES 2,856 S.F.
LOT 59 0.070 ACRES 3,059 S.F.
LOT 60 0.073 ACRES 3,177 S.F.
LOT 61 0.105 ACRES 4,569 S.F.
LOT 26 0.158 ACRES 6,900 S.F.
LOT 25 0.167 ACRES 7,260 S.F.

MIRKWOOD AVENUE (60' PUBLIC R/W)
B.M. 2023, PG. 501-504

KERLEY CIRCLE (VARIABLE WIDTH PUBLIC R/W)
B.M. 2023, PG. 501-504

50' APPROX. LOCATION CARDINAL EXTENSION COMPANY EASEMENT D.B. 8019, PG. 1501 D.B. 8193, PG. 8146

20' PUBLIC GREENWAY EASEMENT

APPROX. LOCATION 50' COLONIAL PIPELINE EASEMENT
B.M. 1988, PG. 974
B.M. 1993, PG. 925
B.M. 1987, PG. 2038
(TAKEN FROM REF. 1)

40' UTILITY AND PIPELINE EASEMENT FOR WWRMF D.B. 14336, PG. 2496 D.B. 14336, PG. 2490 D.B. 14343, PG. 2035

OPEN SPACE 6
9.696 ACRES
422,406 S.F.
(INCLUSIVE OF RCA 9-13)
(SEE SHEETS 8-10)

OPEN SPACE 3
THAT PARK AT WIMBERLY
PHASE 3
B.M. 2023, PG. 501-504
PIN 0722.02-59-8481

THE PRESERVE AT WHITE OAK CREEK HOMEOWNERS ASSOCIATION, INC.
OPEN SPACE AND RCA AREAS
B.M. 2017, PG. 1825-1830
PIN 0722.02-89-2653

20' TYPE 'B' PERIMETER BUFFER
B.M. 2023, PG. 501-504

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

WAKE COUNTY, NC 25
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01356

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEETS 8-10 FOR RCA AREAS AND OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

0 40 80 120
SCALE IN FEET

RECORDED IN BOOK OF MAPS 2023 PAGE 1356.

REVISIONS	MASTER SUBDIVISION PLAT FOR	ROBINSON & PLANTE, P.C.
	THE PARK AT WIMBERLY	LAND SURVEYING
	PHASES 1 AND 2	C-2687
		970 TRINITY ROAD
		RALEIGH, NC 27607
		PHONE: (919)859-6030
	TOWNSHIP: WHITE OAK — COUNTY: WAKE	SURVEY DATE: 7-25-2023 — SURVEYED BY: KS
	STATE: NORTH CAROLINA	SCALE: 1"=40' — DRAWN BY: KW
	ZONING: PUD-CZ (ZONING CASE 19CZ22 AND 21CZ01) — PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP — FILE: PAWPH1S4 SHEET: 4 OF 11

SOLAR NOTE:
LOTS MARKED WITH A * WILL HAVE HOMES BUILT WITH A ACTIVE SOLAR SYSTEM ON THE ROOF.
SEE NOTE 2 UNDER ADDITIONAL RESIDENTIAL STANDARDS ON SHEET 1

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEETS 8–10 FOR RCA AREAS AND OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

N.C. GRID NORTH (NAD83/2011 (SEE NOTE 2 SHEET 7))

LOT 107
N 89°48'30" W 76.03'

TOWN OF APEX
D.B. 16911, PG. 272
B.M. 2013, PG. 1252
PIN 0723.04-51-4178
(SEE REF. 2)

40' UTILITY AND PIPELINE EASEMENT FOR WWRWMF
D.B. 14336, PG. 2496
D.B. 14336, PG. 2490
D.B. 14343, PG. 2035

N 00°10'16" E 927.54'

OPEN SPACE 5
3.071 ACRES
133,786 S.F.
(INCLUSIVE OF RCA 6-8)
(SEE SHEETS 9-10)

DOUBLE HELIX ROAD
(60' PUBLIC R/W)

PSE

S 85°47'12" E 100.00'
3/4" IPF

N 45°37'16" E 117.45'
89.04'

LOT 40

N 71°00'22" W 120.87'

20'PRSDE

SHEET 6 MATCHLINE

LOT 39
0.181 ACRES
7,884 S.F.

N 48°21'03" W 123.78'
67.97'
51.12'

WAKE COUNTY FLOOD SOILS AREA
B.M. 1993, PG. 925

OPEN SPACE 6
9.697 ACRES
422,406 S.F.
(INCLUSIVE OF RCA 9-13)
(SEE SHEETS 9-10)

LOT 38
0.181 ACRES
7,900 S.F.

10'x70' STE

S 45°37'16" W 138.60'

LOT 37
0.164 ACRES
7,159 S.F.

S 45°37'16" W 142.14'

LOT 36
0.170 ACRES
7,425 S.F.

S 45°37'16" W 147.39'

LOT 35
0.185 ACRES
8,055 S.F.

5'TOA PUE

N 40°26'46" E 109.55'
S 40°26'46" W 130.74'
123.74'
20'PRSDE
S 40°26'46" W 122.71'

LOT 34
0.153 ACRES
6,666 S.F.

S 49°07'21" W 91.38'
86.38'

LOT 33
0.161 ACRES
6,994 S.F.

5'PRWE

RETAINING WALL

S 82°03'49" W 133.31'
128.31'

LOT 32
0.198 ACRES
8,621 S.F.

20' PUBLIC GREENWAY EASEMENT

10'PRWE

N 89°07'29" E 116.43'

10'TCE

RETAINING WALL

STREAM

20' TYPE 'B' PERIMETER BUFFER
302.23'

S 89°07'29" W 331.35'

1"IPF W/CAP

1/2"IPF W/CAP

POND

50' JORDAN LAKE STREAM BUFFER
(FROM EACH SIDE TOP OF BANK OR HIGH WATER MARK)
(SEE NOTE 4)

20' TYPE 'B' PERIMETER BUFFER

S 00°33'49" W 696.33'

THE PRESERVE AT WHITE OAK CREEK HOMEOWNERS ASSOCIATION, INC.
D.B. 17584, PG. 2495
OPEN SPACE 2
THE PRESERVE AT WHITE OAK CREEK SUBDIVISION
PH. 2C & 3C
B.M. 2018, PG. 961-963
PIN 0723.04-60-7985

DEP EASEMENT
AREA OF DANGER TREE RIGHTS ALONG PROPERTY LINE
D.B. 17141, PG. 1326

14' UNDISTURBED BUFFER AND RCA
B.M. 2018, PG. 961-963

100' TOWN OF APEX STREAM BUFFER
50' ZONE 3
(FROM EACH SIDE TOP OF BANK OR HIGH WATER MARK)
(SEE NOTE 4)

THE PRESERVE AT WHITE OAK CREEK HOMEOWNERS ASSOCIATION, INC.
D.B. 18946, PG. 2091
OPEN SPACE AND RCA AREAS
B.M. 2017, PG. 1625-1630
PIN 0722.02-69-2653

MATCHLINE SHEET 3

MATCHLINE SHEET 4

(NEW R/W 4.471 ACRES)
S 44°22'44" E 307.32'

SCOOP STREET
(50' PUBLIC R/W)

*LOT 27
0.155 ACRES
6,748 S.F.
(SEE LOT 27 NOTE)

N 45°37'16" E 134.55'

*LOT 28
0.160 ACRES
6,978 S.F.

N 45°37'16" E 139.09'

*LOT 29
0.162 ACRES
7,033 S.F.

N 45°37'16" E 127.60'

*LOT 30
0.182 ACRES
7,927 S.F.

N 23°49'38" E 123.00'

*LOT 31
0.203 ACRES
8,837 S.F.

S 06°43'42" E 124.54'

20' TYPE 'B' PERIMETER BUFFER

S 06°43'42" E 410.76'

OPEN SPACE 6

N 28°05'14" E 102.56'

S 45°37'16" E 130.00'

N 39°17'16" W 161.48'

PHASE 2
PHASE 1

WAKE COUNTY, NC 26
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01357

☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III
PROFESSIONAL LAND SURVEYOR

7/25/23
DATE

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III
PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

RECORDED IN BOOK OF MAPS 2023 PAGE 1357.

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

0 40 80 120
SCALE IN FEET

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD-5' (NO AGGREGATE)
CORNER SIDE YARD-10'
REAR YARD-10'
DRIVEWAYS-BACK OF SIDEWALK TO GARAGE-20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT-42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD (END UNITS)-5'
REAR YARD-5'
FROM PUBLIC R/W TO GARAGE-20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE-10'
BUILDING SIDE TO REAR-30'
BUILDING REAR TO REAR-40'
MAXIMUM BUILDING HEIGHT-50', 3 STORIES

LOT 27 NOTE:
LOT 27 SHALL HAVE NO STRUCTURES, INCLUDING FENCES, INSTALLED IN THE TOWN OF CARY UTILITY AND PIPELINE EASEMENT.

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2		ROBINSON & PLANTE, P.C. LAND SURVEYING C-2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859-6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7-25-2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=40'	DRAWN BY: KW
	ZONING: PUD-CZ (ZONING CASE 19CZ22 AND 21CZ01)	PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S5 SHEET: 5 OF 11

LOT 121
S 89°48'30" E 110.15'
LOT 120
0.066 ACRES
2,863 S.F.
LOT 119
0.093 ACRES
4,074 S.F.
LOT 118
0.086 ACRES
3,768 S.F.
S 89°48'30" E 85.83'
LOT 117
0.048 ACRES
2,098 S.F.
S 89°48'30" E 80.02'
LOT 116
0.048 ACRES
2,080 S.F.
S 89°48'30" E 80.02'
LOT 115
0.048 ACRES
2,080 S.F.
S 89°48'30" E 80.01'
LOT 114
0.048 ACRES
2,080 S.F.
S 89°48'30" E 80.01'
LOT 113
0.068 ACRES
2,960 S.F.
LOT 112
0.068 ACRES
2,960 S.F.
S 89°48'30" E 80.01'
LOT 111
0.048 ACRES
2,080 S.F.
S 89°48'30" E 80.01'
LOT 110
0.048 ACRES
2,080 S.F.
S 89°48'30" E 80.01'
LOT 109
0.048 ACRES
2,080 S.F.
S 89°48'30" E 80.01'
LOT 108
0.048 ACRES
2,080 S.F.
S 89°48'30" E 80.01'
LOT 107
0.067 ACRES
2,912 S.F.
N 89°48'30" W 76.03'
LOT 49
N 89°48'30" W 120.00'
LOT 48
0.140 ACRES
6,120 S.F.
N 89°48'30" W 120.00'
LOT 47
0.140 ACRES
6,120 S.F.
N 89°48'30" W 120.00'
LOT 46
0.140 ACRES
6,120 S.F.
N 89°48'30" W 120.00'
LOT 45
0.140 ACRES
6,120 S.F.
N 89°48'30" W 120.00'
LOT 44
0.140 ACRES
6,120 S.F.
N 89°48'30" W 120.00'
LOT 43
0.140 ACRES
6,120 S.F.
N 89°48'30" W 120.00'
LOT 42
0.140 ACRES
6,120 S.F.
N 89°48'30" W 120.00'
LOT 41
0.157 ACRES
6,840 S.F.
N 82°14'44" W 120.34'
LOT 40
0.158 ACRES
6,867 S.F.
N 71°00'22" W 120.87'
LOT 39

DOUBLE HELIX ROAD
(60' PUBLIC R/W)
(NEW R/W 4.471 ACRES)
N 00°11'30" E 400.20'
S 00°11'30" W 423.67'

SHEET 7 MATCHLINE

PRIVATE SCM ACCESS AND MAINTENANCE EASEMENMT
10' PRIVATE SCM ACCESS AND MAINTENANCE EASEMENMT

SCM 4

OPEN SPACE 5
3.071 ACRES
133,786 S.F.
(INCLUSIVE OF RCA 6–8)
(SEE SHEETS 9–10)

OPEN SPACE 6
9.697 ACRES
422,406 S.F.
(INCLUSIVE OF RCA 9–13)
(SEE SHEETS 9–10)

TOWN OF APEX
D.B. 16911, PG. 272
B.M. 2013, PG. 1252
PIN 0723.04–51–4178
(SEE REF. 2)

N 00°10'16" E 927.54'
765.49'

20' TYPE 'B' PERIMETER BUFFER
10' TYPE 'B' PERIMETER BUFFER

40' UTILITY AND PIPELINE EASEMENT FOR WWRWMF
D.B. 14336, PG. 2496
D.B. 14336, PG. 2510
D.B. 14333, PG. 2035

WETLANDS
WETLANDS
WAKE COUNTY FLOOD SOILS AREA
B.M. 1993, PG. 925

S 32°41'37" E 376.11'

200' CLEAR CUTTING OF TREES RESTRICTED
D.B. 4450, PG. 238
D.B. 4513, PG. 370
B.M. 2000, PG. 2164

S 50°45'43" E 91.02'

1/2"IPF W/CAP
1/2"IPF W/CAP

100' TOWN OF APEX STREAM BUFFER
50' ZONE 3
(FROM EACH SIDE TOP OF BANK OR HIGH WATER MARK)
(SEE NOTE 4)

50' JORDAN LAKE STREAM BUFFER
(FROM EACH SIDE TOP OF BANK OR HIGH WATER MARK)
(SEE NOTE 4)

DEP EASEMENT
AREA OF DANGER TREE
RIGHTS ALONG PROPERTY LINE
D.B. 12140, PG. 1326

ZONE 1 30'
ZONE 2 20'
ZONE 3 50'

THE PRESERVE AT WHITE OAK CREEK HOMEOWNERS ASSOCIATION, INC.
D.B. 17584, PG. 2495
OPEN SPACE
THE PRESERVE AT WHITE OAK CREEK SUBDIVISION
PH. 2C & 3C
B.M. 2018, PG. 961–963
PIN 0723.04–60–7985

20' TYPE 'B' PERIMETER BUFFER
S 00°33'49" W 696.33'

14' UNDISTURBED BUFFER AND RCA
B.M. 2018, PG. 961–963

N.C. GRID NORTH, NAD83/2011
(SEE NOTE 2 SHEET 7)

MATCHLINE SHEET 5

WAKE COUNTY, NC 27
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01358

☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III — 7/25/23
PROFESSIONAL LAND SURVEYOR — DATE

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47–30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III
PROFESSIONAL LAND SURVEYOR
LICENSE NO. L–4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

RECORDED IN BOOK OF MAPS 2023 PAGE 1358.

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED

FROM BUFFER OR RCA–10'
FRONT YARD–10'
SIDE YARD–5' (NO AGGREGATE)
CORNER SIDE YARD–10'
REAR YARD–10'
DRIVEWAYS–BACK OF SIDEWALK TO GARAGE–20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT–42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES

FROM BUFFER OR RCA–10'
FRONT YARD–10'
SIDE YARD (END UNITS)–5'
REAR YARD–5'
FROM PUBLIC R/W TO GARAGE–20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE–10'
BUILDING SIDE TO REAR–30'
BUILDING REAR TO REAR–40'
MAXIMUM BUILDING HEIGHT–50', 3 STORIES

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

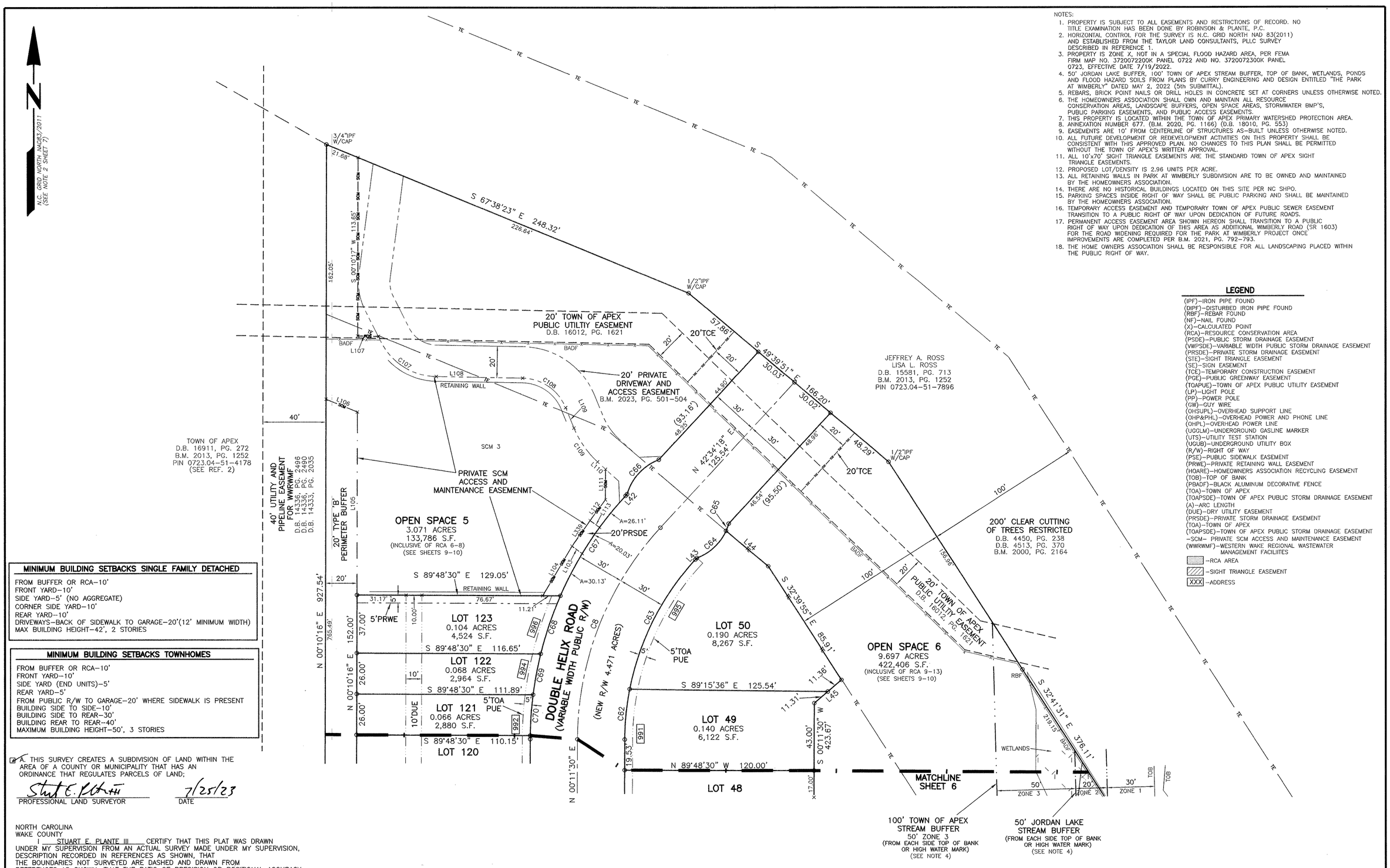
0 40 80 120
SCALE IN FEET

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106–117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEETS 8–10 FOR RCA AREAS AND OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2		ROBINSON & PLANTE, P.C. LAND SURVEYING C–2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859–6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7–25–2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=40'	DRAWN BY: KW
	ZONING: PUD–CZ (ZONING CASE 19CZ22 AND 21CZ01)	PIN: 0723.04–50–6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S6 SHEET: 6 OF 11



NOTES:

1. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD. NO TITLE EXAMINATION HAS BEEN DONE BY ROBINSON & PLANTE, P.C.
2. HORIZONTAL CONTROL FOR THE SURVEY IS N.C. GRID NORTH NAD 83(2011) AND ESTABLISHED FROM THE TAYLOR LAND CONSULTANTS, PLLC SURVEY DESCRIBED IN REFERENCE 1.
3. PROPERTY IS ZONE X, NOT IN A SPECIAL FLOOD HAZARD AREA, PER FEMA FIRM MAP NO. 3720072200K PANEL 0722 AND NO. 3720072300K PANEL 0723, EFFECTIVE DATE 7/19/2022.
4. 50' JORDAN LAKE BUFFER, 100' TOWN OF APEX STREAM BUFFER, TOP OF BANK, WETLANDS, PONDS AND FLOOD HAZARD SOILS FROM PLANS BY CURRY ENGINEERING AND DESIGN ENTITLED "THE PARK AT WIMBERLY" DATED MAY 2, 2022 (5th SUBMITTAL).
5. REBARS, BRICK POINT NAILS OR DRILL HOLES IN CONCRETE SET AT CORNERS UNLESS OTHERWISE NOTED.
6. THE HOMEOWNERS ASSOCIATION SHALL OWN AND MAINTAIN ALL RESOURCE CONSERVATION AREAS, LANDSCAPE BUFFERS, OPEN SPACE AREAS, STORMWATER BMP'S, PUBLIC PARKING EASEMENTS, AND PUBLIC ACCESS EASEMENTS.
7. THIS PROPERTY IS LOCATED WITHIN THE TOWN OF APEX PRIMARY WATERSHED PROTECTION AREA.
8. ANNEXATION NUMBER 677. (B.M. 2020, PG. 1166) (D.B. 18010, PG. 553)
9. EASEMENTS ARE 10' FROM CENTERLINE OF STRUCTURES AS-BUILT UNLESS OTHERWISE NOTED.
10. ALL FUTURE DEVELOPMENT OR REDEVELOPMENT ACTIVITIES ON THIS PROPERTY SHALL BE CONSISTENT WITH THIS APPROVED PLAN. NO CHANGES TO THIS PLAN SHALL BE PERMITTED WITHOUT THE TOWN OF APEX'S WRITTEN APPROVAL.
11. ALL 10'x70' SIGHT TRIANGLE EASEMENTS ARE THE STANDARD TOWN OF APEX SIGHT TRIANGLE EASEMENTS.
12. PROPOSED LOT/DENSITY IS 2.96 UNITS PER ACRE.
13. ALL RETAINING WALLS IN PARK AT WIMBERLY SUBDIVISION ARE TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
14. THERE ARE NO HISTORICAL BUILDINGS LOCATED ON THIS SITE PER NC SHPO.
15. PARKING SPACES INSIDE RIGHT OF WAY SHALL BE PUBLIC PARKING AND SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
16. TEMPORARY ACCESS EASEMENT AND TEMPORARY TOWN OF APEX PUBLIC SEWER EASEMENT TRANSITION TO A PUBLIC RIGHT OF WAY UPON DEDICATION OF FUTURE ROADS.
17. PERMANENT ACCESS EASEMENT AREA SHOWN HEREON SHALL TRANSITION TO A PUBLIC RIGHT OF WAY UPON DEDICATION OF THIS AREA AS ADDITIONAL WIMBERLY ROAD (SR 1603) FOR THE ROAD WIDENING REQUIRED FOR THE PARK AT WIMBERLY PROJECT ONCE IMPROVEMENTS ARE COMPLETED PER B.M. 2021, PG. 792-793.
18. THE HOME OWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR ALL LANDSCAPING PLACED WITHIN THE PUBLIC RIGHT OF WAY.

LEGEND

(IPF)-IRON PIPE FOUND
(DIPF)-DISTURBED IRON PIPE FOUND
(RBF)-REBAR FOUND
(NF)-NAIL FOUND
(X)-CALCULATED POINT
(RCA)-RESOURCE CONSERVATION AREA
(PSDE)-PUBLIC STORM DRAINAGE EASEMENT
(VWPSDE)-VARIABLE WIDTH PUBLIC STORM DRAINAGE EASEMENT
(PRSDE)-PRIVATE STORM DRAINAGE EASEMENT
(STE)-SIGHT TRIANGLE EASEMENT
(SE)-SIGN EASEMENT
(TCE)-TEMPORARY CONSTRUCTION EASEMENT
(PGE)-PUBLIC GREENWAY EASEMENT
(TOAPUE)-TOWN OF APEX PUBLIC UTILITY EASEMENT
(LP)-LIGHT POLE
(PP)-POWER POLE
(GW)-GUY WIRE
(OHSUPL)-OVERHEAD SUPPORT LINE
(OHP&PHL)-OVERHEAD POWER AND PHONE LINE
(OHPL)-OVERHEAD POWER LINE
(UGGLM)-UNDERGROUND GASLINE MARKER
(UTS)-UTILITY TEST STATION
(UGUB)-UNDERGROUND UTILITY BOX
(R/W)-RIGHT OF WAY
(PSE)-PUBLIC SIDEWALK EASEMENT
(PRWE)-PRIVATE RETAINING WALL EASEMENT
(HOARE)-HOMEOWNERS ASSOCIATION RECYCLING EASEMENT
(TOB)-TOP OF BANK
(PBADF)-BLACK ALUMINUM DECORATIVE FENCE
(TOA)-TOWN OF APEX
(TOAPSDE)-TOWN OF APEX PUBLIC STORM DRAINAGE EASEMENT
(A)-ARC LENGTH
(DUE)-DRY UTILITY EASEMENT
(PRSDE)-PRIVATE STORM DRAINAGE EASEMENT
(TOA)-TOWN OF APEX
(TOAPSDE)-TOWN OF APEX PUBLIC STORM DRAINAGE EASEMENT
-SCM- PRIVATE SCM ACCESS AND MAINTENANCE EASEMENT
(WWRWMF)-WESTERN WAKE REGIONAL WASTEWATER MANAGEMENT FACILIITES
-RCA AREA
-SIGHT TRIANGLE EASEMENT
XXX -ADDRESS

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD-5' (NO AGGREGATE)
CORNER SIDE YARD-10'
REAR YARD-10'
DRIVEWAYS-BACK OF SIDEWALK TO GARAGE-20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT-42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES

FROM BUFFER OR RCA-10'
FRONT YARD-10'
SIDE YARD (END UNITS)-5'
REAR YARD-5'
FROM PUBLIC R/W TO GARAGE-20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE-10'
BUILDING SIDE TO REAR-30'
BUILDING REAR TO REAR-40'
MAXIMUM BUILDING HEIGHT-50', 3 STORIES

☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III — 7/25/23
PROFESSIONAL LAND SURVEYOR — DATE

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

RECORDED IN BOOK OF MAPS 2023 PAGE 1359.

WAKE COUNTY, NC 28
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01359

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

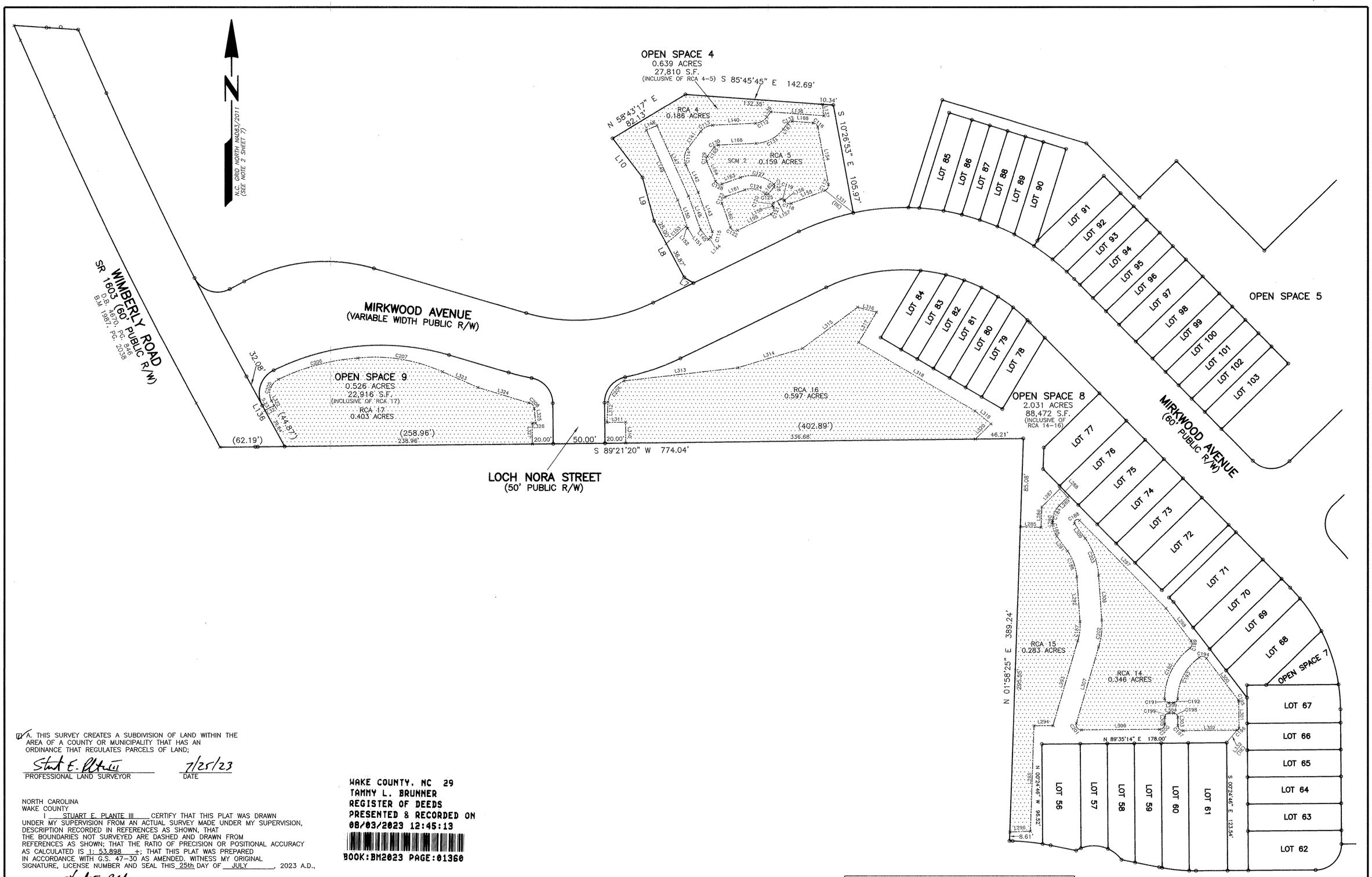
0 40 80 120
SCALE IN FEET

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEETS 8-10 FOR RCA AREAS AND OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2		ROBINSON & PLANTE, P.C. LAND SURVEYING C-2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859-6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7-25-2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=40'	DRAWN BY: KW
	ZONING: PUD-CZ (ZONING CASE 19CZ22 AND 21CZ01)	PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S7 SHEET: 7 OF 11



☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III — 7/25/23
PROFESSIONAL LAND SURVEYOR — DATE

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III
PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

RECORDED IN BOOK OF MAPS 2023 PAGE 1360.

WAKE COUNTY, NC 29
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01360

RCA NOTE:
THE RESOURCE CONSERVATION AREA (RCA) SHOWN HERON IS BEING PROVIDED PER THE REQUIREMENTS OF ARTICLE 8 OF THE TOWN OF APEX'S UNIFIED DEVELOPMENT ORDINANCE (UDO). THIS RCA MUST BE PRESERVED IN PERPETUITY AND SHALL NOT BE DISTURBED IN ANY MANNER.

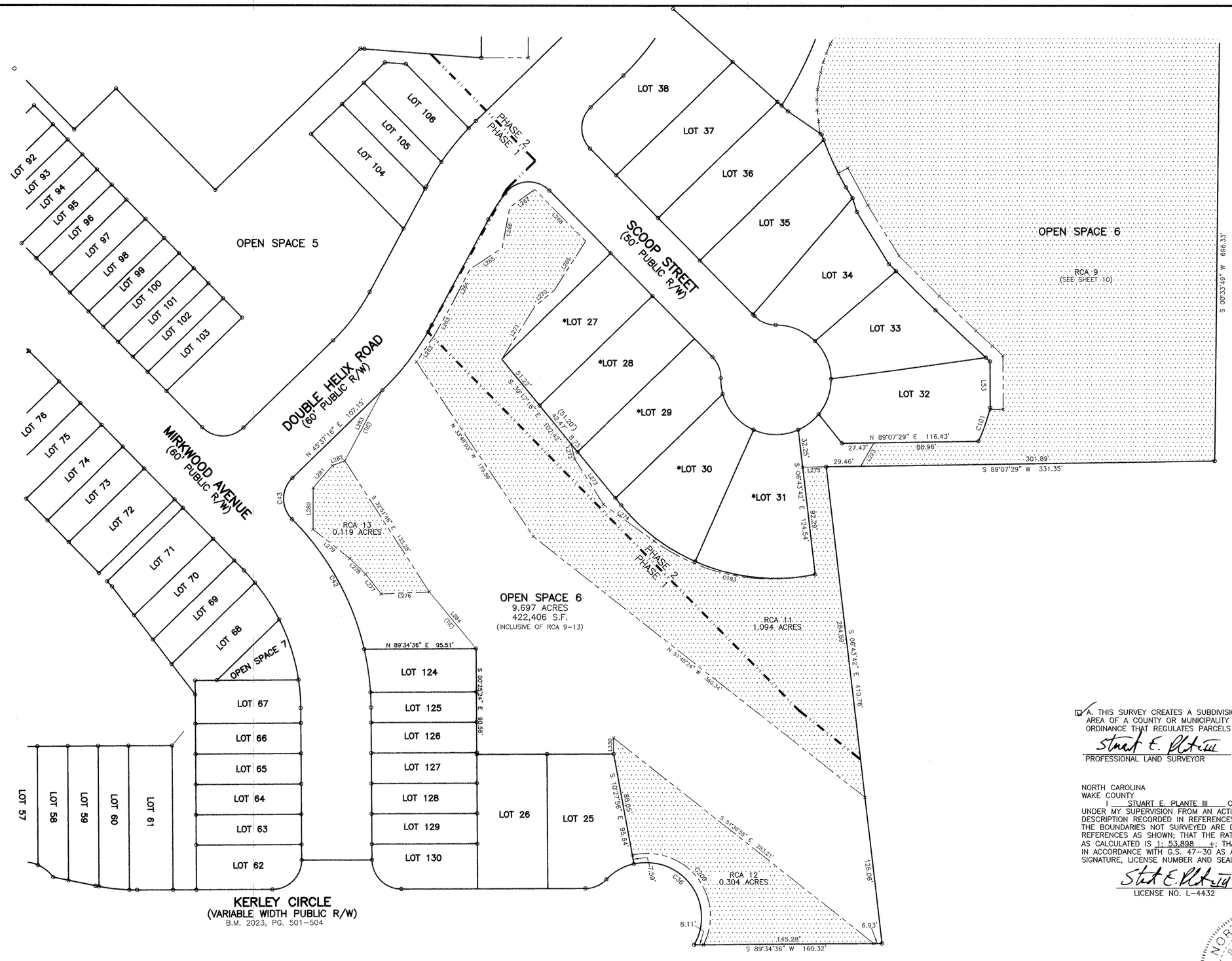
NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

0 60 120 180
SCALE IN FEET

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEETS 10 FOR OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2 RCA AREAS 4, 5, 14, 15, 16 AND 17		ROBINSON & PLANTE, P.C. LAND SURVEYING C-2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859-6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7-25-2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=60'	DRAWN BY: KW
	ZONING: PUD-CZ	PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S1 SHEET: 8 OF 11



☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III — 7/25/23

PROFESSIONAL LAND SURVEYOR — DATE

NORTH CAROLINA
WAKE COUNTY

I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND ACREAGE TOTALS.
SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEETS 10 FOR OPEN SPACE INFORMATION.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

RCA NOTE:
THE RESOURCE CONSERVATION AREA (RCA) SHOWN HERON IS BEING PROVIDED PER THE REQUIREMENTS OF ARTICLE 8 OF THE TOWN OF APEX'S UNIFIED DEVELOPMENT ORDINANCE (UDO). THIS RCA MUST BE PRESERVED IN PERPETUITY AND SHALL NOT BE DISTURBED IN ANY MANNER.

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

0 60 120 180
SCALE IN FEET

WAKE COUNTY, NC 30
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01361

RECORDED IN BOOK OF MAPS 2023 PAGE 1361.

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2 RCA AREAS 11, 12 AND 13		ROBINSON & PLANTE, P.C. LAND SURVEYING C-2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859-6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7-25-2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=60'	DRAWN BY: KW
	ZONING: PUD-CZ	PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S9 SHEET: 9 OF 11

REVISIONS	MASTER SUBDIVISION PLAT FOR THE PARK AT WIMBERLY PHASES 1 AND 2 RCA AREAS 6, 7, 8, 9 AND 10		ROBINSON & PLANTE, P.C. LAND SURVEYING C-2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859-6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 7-25-2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=60'	DRAWN BY: KW
	ZONING: PUD-CZ	PIN: 0723.04-50-6472	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S10 SHEET: 10 OF 11

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

TOWN OF APEX
73 HUNTER ST., PO BOX 250
APEX, N.C. 27502

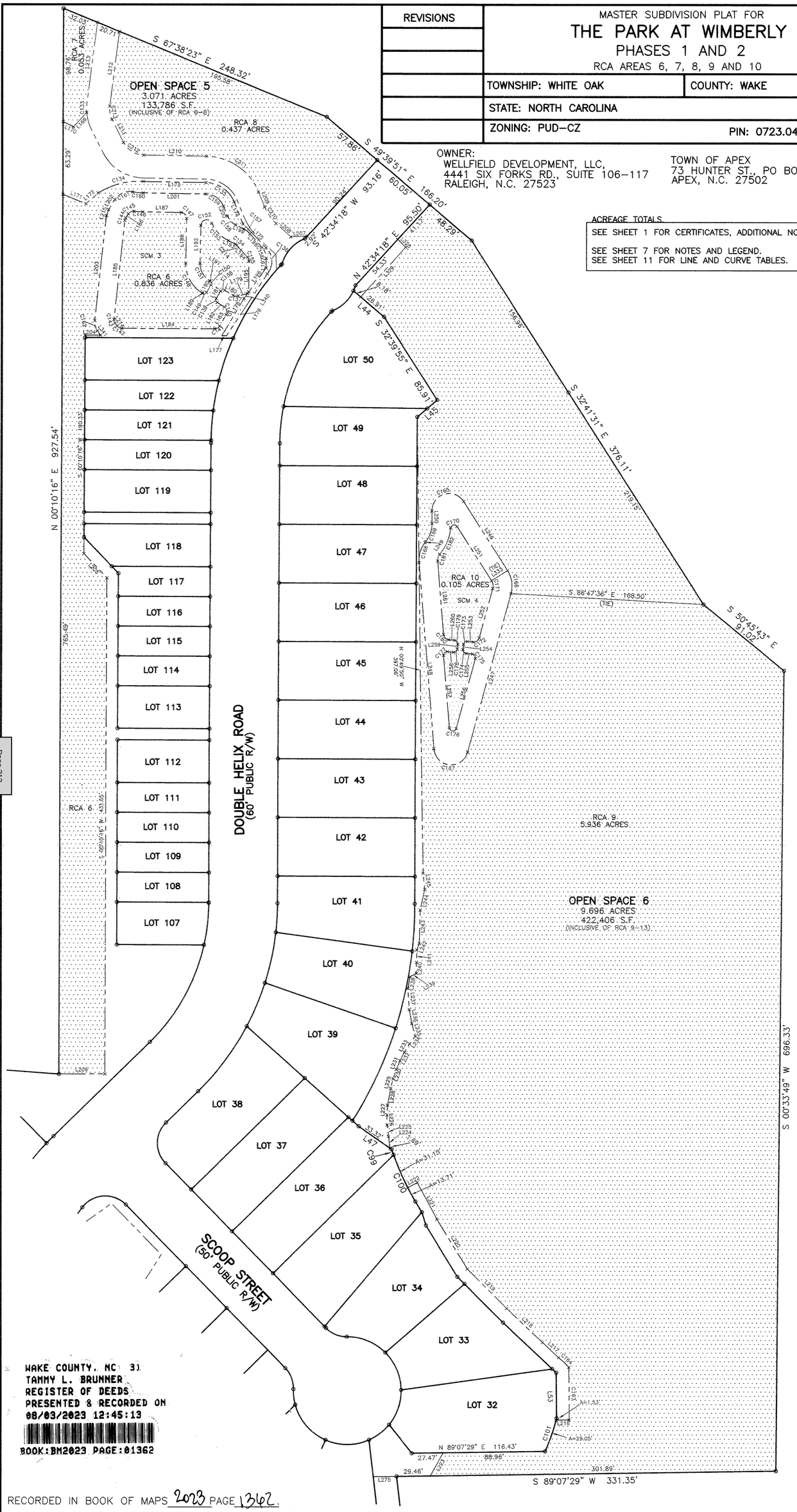
ACREAGE TOTALS
SEE SHEET 1 FOR CERTIFICATES, ADDITIONAL NOTES AND

SEE SHEET 7 FOR NOTES AND LEGEND.
SEE SHEET 11 FOR LINE AND CURVE TABLES.

RCA NOTE:
THE RESOURCE CONSERVATION AREA (RCA) SHOWN HERON IS BEING PROVIDED PER THE REQUIREMENTS OF ARTICLE 8 OF THE TOWN OF APEX'S UNIFIED DEVELOPMENT ORDINANCE (UDO). THIS RCA MUST BE PRESERVED IN PERPETUITY AND SHALL NOT BE DISTURBED IN ANY MANNER.

NOTE:
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0 60 120 180
SCALE IN FEET



N.C. GRID NORTH (NAD83/2011)
(SEE NOTE 2 SHEET 7)

PARK AT WIMBERLY PHASE 1 AND 2 RCA AREA TABLE

(RCA AREA)	(ACRES)	(S.F.)	(% OF SUBDIVISION)
RCA 4	0.186 ACRES	8,107 S.F.	0.46%
RCA 5	0.159 ACRES	6,929 S.F.	0.40%
RCA 6	0.836 ACRES	36,430 S.F.	2.08%
RCA 7	0.053 ACRES	2,289 S.F.	0.13%
RCA 8	0.437 ACRES	19,046 S.F.	1.09%
RCA 9	5.936 ACRES	258,585 S.F.	14.83%
RCA 10	0.105 ACRES	4,561 S.F.	0.26%
RCA 11	1.094 ACRES	47,656 S.F.	2.73%
RCA 12	0.304 ACRES	13,228 S.F.	0.76%
RCA 13	0.119 ACRES	5,194 S.F.	0.30%
RCA 14	0.346 ACRES	15,074 S.F.	0.86%
RCA 15	0.283 ACRES	12,320 S.F.	0.71%
RCA 16	0.597 ACRES	25,986 S.F.	1.49%
RCA 17	0.403 ACRES	17,564 S.F.	1.01%
TOTAL	10.858 ACRES	472,969 S.F.	27.11%

OPEN SPACE AREAS WITH RCA AREAS

OPEN SPACE 4
0.294 ACRES (AREA OUTSIDE OF RCA)
0.186 ACRES (AREA IN RCA 4)
+ 0.159 ACRES (AREA IN RCA 5)
0.639 ACRES (OPEN SPACE 4 AREA)

OPEN SPACE 5
1.745 ACRES (AREA OUTSIDE OF RCA)
0.836 ACRES (AREA IN RCA 6)
0.053 ACRES (AREA IN RCA 7)
+ 0.437 ACRES (AREA IN RCA 8)
3.071 ACRES (OPEN SPACE 5 AREA)

OPEN SPACE 6
2.139 ACRES (AREA OUTSIDE OF RCA)
5.936 ACRES (AREA IN RCA 9)
0.105 ACRES (AREA IN RCA 10)
1.094 ACRES (AREA IN RCA 11)
0.304 ACRES (AREA IN RCA 12)
+ 0.119 ACRES (AREA IN RCA 13)
9.697 ACRES (OPEN SPACE 6 AREA)

OPEN SPACE 7
0.043 ACRES (OPEN SPACE 7 AREA)

OPEN SPACE 8
0.805 ACRES (AREA OUTSIDE OF RCA)
0.346 ACRES (AREA IN RCA 14)
0.283 ACRES (AREA IN RCA 15)
+ 0.597 ACRES (AREA IN RCA 16)
2.031 ACRES (OPEN SPACE 8 AREA)

OPEN SPACE 9
0.123 ACRES (AREA OUTSIDE OF RCA)
+ 0.403 ACRES (AREA IN RCA 17)
0.526 ACRES (OPEN SPACE 9 AREA)

☑ A. THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

Stuart E. Plante III 7/25/23
PROFESSIONAL LAND SURVEYOR — DATE

NORTH CAROLINA
WAKE COUNTY
I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 25th DAY OF JULY, 2023 A.D.,

Stuart E. Plante III PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NORTH CAROLINA PROFESSIONAL SEAL L-4432 LAND SURVEYOR STUART E. PLANTE III

WAKE COUNTY, NC 31
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
08/03/2023 12:45:13
BOOK:BM2023 PAGE:01362

RECORDED IN BOOK OF MAPS 2023 PAGE 1362.

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 28°28'40" W	47.92'
L2	N 23°57'10" W	80.28'
L3	N 23°34'52" W	15.61'
L4	S 86°13'54" E	62.02'
L5	S 23°57'10" E	67.05'
L6	N 62°01'44" E	15.66'
L7	N 58°04'15" W	10.30'
L8	N 28°00'34" W	61.87'
L9	N 14°59'35" W	43.37'
L10	N 37°15'40" W	47.54'
L11	S 44°22'44" E	72.91'
L12	N 45°37'16" E	50.00'
L13	S 85°46'16" E	3.43'
L14	S 89°47'07" W	60.00'
L15	N 78°37'24" W	37.02'
L16	N 78°37'24" W	25.07'
L17	N 88°01'15" W	3.09'
L18	N 62°01'44" E	33.96'
L19	N 63°59'14" E	156.06'
L20	S 17°18'13" W	92.00'
L21	S 17°18'13" W	90.29'
L22	S 17°18'13" W	90.00'
L23	S 17°18'13" W	91.12'
L24	S 17°18'13" W	93.67'
L25	S 33°06'10" W	6.04'
L26	S 45°37'16" W	91.73'
L27	S 45°37'16" W	90.23'
L28	S 45°37'16" W	90.00'
L29	S 45°37'16" W	90.00'
L30	S 45°37'16" W	90.00'
L31	S 45°37'16" W	90.00'
L32	S 45°37'16" W	90.00'
L33	S 45°37'16" W	90.00'
L34	S 45°37'16" W	90.00'
L35	S 45°37'16" W	90.00'
L36	S 45°37'16" W	90.00'
L37	S 45°37'16" W	90.00'
L38	S 44°22'44" E	101.40'
L39	S 44°22'44" E	94.55'
L40	N 43°41'12" W	43.41'
L41	N 00°10'16" E	11.76'
L42	S 42°34'18" W	1.39'
L43	N 42°34'18" E	1.39'
L44	S 49°40'39" E	35.09'
L45	S 49°32'53" W	22.67'
L46	S 48°21'04" E	7.28'
L47	S 55°12'23" E	35.01'
L48	S 31°29'19" E	10.87'
L49	S 17°17'59" E	12.07'
L50	S 31°35'06" E	52.43'
L51	S 45°03'56" E	56.20'
L52	S 46°50'02" E	63.76'
L53	S 00°24'58" E	39.70'
L54	N 38°36'59" W	31.76'
L55	N 44°22'44" W	6.00'
L56	N 01°58'45" E	20.76'
L57	N 30°36'53" E	86.38'
L58	N 30°36'53" E	89.83'
L59	N 30°36'53" E	91.31'
L60	N 30°36'53" E	90.88'
L61	N 30°36'53" E	88.53'
L62	N 30°36'53" E	84.16'
L63	S 85°46'48" E	18.05'
L64	N 00°18'34" W	14.50'
L65	N 89°41'26" E	44.00'
L66	S 00°18'34" E	14.50'
L67	N 00°25'10" W	173.31'
L68	N 44°22'44" W	113.82'
L69	S 44°22'44" E	117.85'
L70	S 00°25'10" E	167.37'
L71	N 89°41'26" E	2.05'
L72	S 00°18'34" E	19.50'
L73	S 72°16'53" W	8.42'
L74	N 17°43'07" W	44.00'
L75	N 72°16'53" E	8.42'
L76	S 33°44'52" W	148.19'
L77	N 56°15'08" W	30.00'
L78	N 33°44'52" E	148.19'
L79	S 56°15'08" E	30.00'
L80	S 48°26'14" W	30.00'
L81	N 41°33'46" W	153.11'
L82	N 48°26'14" E	30.00'
L83	N 16°39'15" W	26.81'
L84	S 69°14'25" W	18.68'
L85	S 21°37'34" E	8.13'

LINE TABLE		
LINE	BEARING	DISTANCE
L86	N 21°37'34" W	9.15'
L87	S 41°33'46" E	153.11'
L88	S 61°31'21" W	20.00'
L89	N 28°28'40" W	5.22'
L90	N 64°15'30" E	4.44'
L91	N 28°28'40" W	10.02'
L92	N 13°36'49" W	59.34'
L93	S 13°36'49" E	52.90'
L94	N 44°22'44" W	9.50'
L95	N 45°37'16" E	44.00'
L96	S 44°22'44" E	9.50'
L97	N 89°48'30" W	9.50'
L98	N 00°11'30" E	44.00'
L99	S 89°48'30" E	9.50'
L100	N 89°48'30" W	9.50'
L101	N 00°11'30" E	44.00'
L102	S 89°48'30" E	9.50'
L103	N 53°44'19" W	7.96'
L104	S 30°38'03" W	36.53'
L105	N 00°10'16" E	116.45'
L106	N 67°39'28" W	21.60'
L107	S 89°01'23" E	13.15'
L108	S 89°01'23" E	54.82'
L109	S 22°06'39" E	14.04'
L110	S 47°27'08" E	6.84'
L111	S 00°23'51" W	19.40'
L112	S 36°08'42" W	16.44'
L113	S 53°44'19" E	7.43'
L114	S 32°41'31" E	89.09'
L115	S 23°03'47" W	19.36'
L116	S 14°58'54" W	68.95'
L117	S 13°06'53" W	46.08'
L118	S 26°57'18" W	9.25'
L119	N 89°48'30" W	50.89'
L120	S 25°26'56" W	4.10'
L121	S 05°53'11" W	113.09'
L122	S 13°28'43" W	144.92'
L123	S 24°19'29" E	107.69'
L124	N 24°19'29" W	101.86'
L125	N 13°28'43" E	150.44'
L126	N 05°53'11" E	115.21'
L127	N 25°26'56" E	22.92'
L128	S 38°36'59" E	25.30'
L129	N 38°36'59" W	41.58'
L130	N 45°37'16" E	7.97'
L131	S 44°22'44" E	9.50'
L132	S 45°37'16" W	20.00'
L133	N 70°34'09" E	10.24'
L134	S 19°25'51" E	44.00'
L135	S 70°34'09" W	10.24'
L136	N 28°28'40" W	76.95'
L137	S 07°02'08" E	11.22'
L138	N 85°45'45" W	51.32'
L139	S 37°09'22" W	6.19'
L140	S 87°29'48" W	41.07'
L141	S 36°53'46" W	21.26'
L142	S 24°01'23" E	29.03'
L143	S 19°23'30" E	40.82'
L144	S 48°35'30" W	3.03'
L145	N 39°38'39" W	11.75'
L146	N 19°23'30" W	35.17'
L147	N 24°01'23" W	74.37'
L148	S 65°58'38" W	11.00'
L149	S 24°01'23" E	73.92'
L150	S 19°23'30" E	28.92'
L151	S 50°21'22" W	0.38'
L152	N 41°33'46" W	2.45'
L153	S 48°26'14" W	25.03'
L154	S 10°26'53" E	56.43'
L155	S 69°14'25" W	35.17'
L156	N 26°00'46" W	1.00'
L157	S 63°59'14" W	8.50'
L158	S 26°00'46" E	2.11'
L159	S 63°59'14" W	35.75'
L160	N 19°15'29" W	24.64'
L161	N 70°36'31" E	20.10'
L162	N 40°21'26" E	8.51'
L163	S 70°36'31" W	18.90'
L164	N 24°01'23" W	20.71'
L165	N 36°53'46" E	11.18'
L166	N 87°29'48" E	36.58'
L167	N 37°09'22" E	7.16'
L168	S 85°45'45" E	20.23'
L169	S 42°24'27" W	17.19'
L170	N 63°04'13" W	10.11'

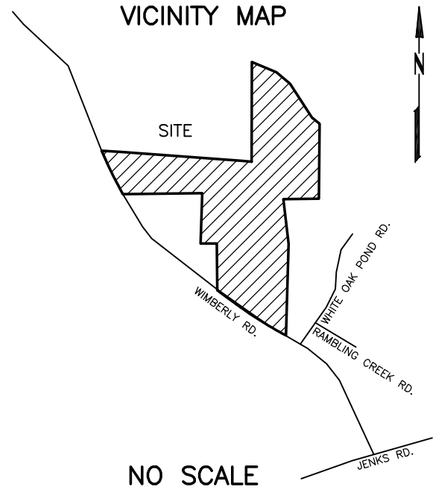
LINE TABLE		
LINE	BEARING	DISTANCE
L171	S 67°39'28" E	21.70'
L172	N 48°34'24" E	14.28'
L173	S 89°01'23" E	54.82'
L174	S 22°09'10" E	20.68'
L175	S 44°00'36" E	28.89'
L176	S 33°20'24" W	64.50'
L177	N 89°48'30" W	4.16'
L178	N 30°38'04" E	37.85'
L179	S 75°08'25" W	8.40'
L180	N 58°10'54" W	8.68'
L181	S 31°49'06" W	7.50'
L182	S 58°10'54" E	7.46'
L183	S 30°38'04" W	11.44'
L184	N 89°48'30" W	80.98'
L185	N 06°06'47" E	86.43'
L186	N 32°18'03" E	4.20'
L187	S 89°01'23" E	33.51'
L188	S 00°58'37" W	38.85'
L189	S 58°10'54" E	0.50'
L190	N 31°49'06" E	7.50'
L191	N 58°10'54" W	0.50'
L192	N 00°58'37" E	32.92'
L193	S 64°05'36" E	6.83'
L194	S 43°04'57" E	8.33'
L195	S 00°23'51" W	26.81'
L196	N 36°08'42" E	25.68'
L197	N 00°23'51" E	8.51'
L198	N 42°07'59" W	15.73'
L199	N 64°05'36" W	7.65'
L200	N 22°06'39" W	9.29'
L201	N 89°01'23" W	54.82'
L202	S 32°18'03" W	10.35'
L203	S 06°06'47" W	91.62'
L204	N 89°48'30" W	13.30'
L205	S 43°41'12" E	28.97'
L206	S 89°47'38" W	40.08'
L207	S 87°34'18" W	14.55'
L208	N 47°25'42" W	17.31'
L209	N 22°06'39" W	14.04'
L210	N 89°01'23" W	54.82'
L211	N 26°29'19" W	22.41'
L212	N 07°21'23" E	65.63'
L213	S 07°21'23" W	70.99'
L214	N 34°06'19" W	3.05'
L215	S 20°04'48" W	5.72'
L216	S 89°58'57" E	11.37'
L217	N 46°50'02" W	19.15'
L218	N 46°34'41" W	43.17'
L219	N 45°03'56" W	48.49'
L220	N 31°35'06" W	50.85'
L221	S 28°24'51" E	36.08'
L222	S 61°35'09" W	9.30'
L223	N 29°19'39" E	23.14'
L224	N 06°52'01" W	10.29'
L225	N 06°52'47" W	9.98'
L226	N 01°26'17" W	9.01'
L227	N 03°31'25" E	8.30'
L228	N 10°13'20" E	15.06'
L229	N 14°26'36" E	8.45'
L230	N 18°48'55" E	8.45'
L231	N 23°11'14" E	8.45'
L232	N 27°33'33" E	8.45'
L233	N 32°18'11" E	8.45'
L234	N 36°18'11" E	8.45'
L235	N 15°42'40" W	11.27'
L236	N 10°15'06" W	12.41'
L237	N 04°02'46" W	18.30'
L238	N 10°35'55" E	10.37'
L239	N 60°55'22" E	6.23'
L240	N 01°07'02" E	9.47'
L241	N 00°52'54" E	10.91'
L242	N 21°57'54" E	5.93'
L243	N 01°30'56" E	29.20'
L244	N 12°14'10" E	18.53'
L245	N 05°52'14" W	14.09'
L246	S 32°39'55" E	71.34'
L247	S 15°11'59" W	143.03'
L248	N 04°41'17" W	162.57'
L249	N 38°12'02" E	1.19'
L250	N 00°37'45" W	10.92'
L251	S 32°39'55" E	56.07'
L252	S 15°11'59" W	44.51'
L253	N 84°35'40" W	5.19'
L254	S 05°24'20" W	4.50'
L255	S 84°35'40" E	5.55'

LINE TABLE		
LINE	BEARING	DISTANCE
L256	S 15°11'59" W	63.31'
L257	N 04°46'10" W	63.39'
L258	S 84°35'40" E	5.42'
L259	N 05°24'20" E	4.50'
L260	N 84°35'40" W	5.19'
L261	N 04°46'10" W	64.03'
L262	N 33°52'08" E	26.73'
L263	N 29°36'42" E	30.19'
L264	N 27°07'35" E	34.70'
L265	N 55°59'23" E	33.13'
L266	N 10°31'17" E	35.29'
L267	N 54°25'48" E	26.21'
L268	S 44°25'55" E	62.03'
L269	S 32°24'43" W	49.59'
L270	S 49°55'25" W	21.83'
L271	S 32°01'51" W	53.24'
L272	S 13°21'00" E	13.11'
L273	S 32°20'05" E	46.15'
L274	S 54°12'47" E	53.05'
L275	N 89°07'29" E	20.11'
L276	S 87°30'45" W	41.16'
L277	N 38°10'54" W	21.57'
L278	N 45°01'21" W	18.91'
L279	N 51°54'58" W	40.10'
L280	N 00°12'58" E	35.59'
L281	N 40°39'57" E	25.03'
L282	N 68°54'55" E	11.39'
L283	N 27°51'46" E	68.32'
L284	S 39°27'47" E	62.79'
L285	S 88°01'15" E	19.96'
L286	N 01°58'45" E	19.62'
L287	N 44°54'42" E	24.65'
L288	S 43°34'49" E	11.00'
L289	S 44°54'41" W	11.58'
L290	S 01°58'45" W	1.94'
L291	S 35°46'58" E	17.54'
L292	S 04°05'50" E	43.48'
L293	S 16°12'59" W	85.40'
L294	S 89°33'15" W	18.30'
L295	S 01°55'49" W	102.07'
L296	S 87°56'07" W	19.99'
L297	S 44°22'44" E	119.00'
L298	S 37°25'56" E	39.61'
L299	N 89°35'13" E	4.50'
L300	S 37°25'56" E	50.64'
L301	S 00°25'24" E	26.09'
L302	S 89°35'14" W	51.89'
L303	N 00°24'47" W	8.11'
L304	S 89°35'13" W	4.50'
L305	S 00°24'47" E	6.61'
L306	S 89°35'14" W	75.42'
L307	N 16°12'33" E	76.76'
L308	N 04°05'50" W	43.48'
L309	N 35°46'58" W	17.63'
L310	N 00°38'19" W	20.21'
L311	S 89°21'41" W	17.84'
L312	N 02°39'06" E	19.77'
L313	N 83°19'48" E	110.43'
L314	N 73°20'29" E	64.94'
L315	N 53°06'46" E	66.30'
L316	S 75°30'06" E	18.90'
L317	S 30°36'53" W	34.03'
L318	S 59°23'07" E	130.27'
L319	S 51°11'54" E	19.79'
L320	S 45°22'19" W	21.03'
L321	N 61°31'21" E	10.00'
L322	N 28°28'40" W	5.22'
L323	S 66°13'44" E	37.36'
L324	S 73°11'32" E	51.12'
L325	S 05°42'54" E	14.11'
L326	S 89°21'41" W	3.35'
L327	S 00°38'19" E	20.22'
L328	S 45°48'46" E	9.75'
L329	S 42°16'38" W	58.29'
L330	N 00°02'20" E	13.66'
L331	S 50°55'18" E	34.83'
L332	S 39°23'19" W	15.62'
L333	N 57°20'05" E	16.50'
L334	S 69°26'35" W	20.00'
L335	S 68°56'18" E	13.26'
L336	S 21°03'42" W	20.00'
L337	N 68°56'18" W	13.96'
L338	S 23°03'47" W	14.28'
L339	S 35°06'01" W	20.00'
L340	N 36°08'42" E	5.29'
L341	S 34°06'19" E	4.63'
L342	S 06°43'42" E	8.52'
L343	N 21°37'34" W	3.18'
L344	S 21°37'34" E	3.84'

CURVE TABLE						
CURVE	DELTA	RADIUS	ARC	CHORD	TANGENT	CHORD BRG
C1	44°17'28"	200.00'	154.61'	150.78'	81.40'	N 84°10'28" E
C2	42°19'58"	200.00'	147.77'	144.43'	77.44'	N 85°09'13" E
C3	71°38'02"	200.00'	250.05'	234.08'	144.34'	S 80°11'45" E
C4	43°57'20"	200.00'	153.43'	149.70'	80.72'	S 22°24'04" E
C5	17°32'02"	200.00'	61.21'	60.97'	30.84'	N 36°51'15" E
C6	17°32'02"	200.00'	61.21'	60.97'	30.84'	N 36°51'15" E
C7	45°25'46"	200.00'	158.58'	154.46'	83.72'	N 22°54'23" E
C8	42°22'47"	200.00'	147.93'	144.58'	77.53'	N 21°22'54" E
C9	92°10'02"	25.00'	40.22'	36.02'	25.96'	N 17°36'21" E
C10	42°37'50"	233.50'	173.73'	169.75'	91.11'	N 85°00'17" E
C11	5°39'04"	230.00'	22.69'	22.68'	11.35'	S 76°30'20" E
C12	78°41'32"	25.00'	34.34'	31.70'	20.50'	S 39°59'05" E
C13	78°41'32"	25.00'	34.34'	31.70'	20.50'	N 38°42'27" E
C14	14°03'59"	230.00'	56.47'	56.33'	28.38'	N 71°01'13" E
C15	31°33'21"	170.00'	93.62'	92.45'	48.04'	N 79°45'55" E
C16	8°18'22"	170.00'	24.65'	24.62'	12.34'	S 80°18'14" E
C17	6°14'45"	170.00'	18.53'	18.52'	9.28'	S 73°01'41" E
C18	6°07'17"	170.00'	18.16'	18.15'	9.09'	S 66°50'40" E
C19	6°04'16"	170.00'	18.01'	18.01'	9.02'	S 60°44'53" E
C20	6°05'24"	170.00'	18.07'	18.06'	9.04'	S 54°40'03" E
C21	6°10'48"	170.00'	18.34'	18.33'	9.18'	S 48°31'57" E
C22	1°03'49"	170.00'	3.16'	3.16'	1.58'	S 44°54'38" E
C23	4°45'12"	170.00'	14.10'	14.10'	7.06'	S 42°00'08" E
C24	12°44'06"	170.00'	37.79'	37.71'	18.97'	S 33°15'28" E
C25	18°20'36"	170.00'	54.43'	54.19'	27.45'	S 17°43'07" E
C26	8°07'26"	170.00'	24.10'	24.08'	12.07'	S 04°29'07" E
C27	90°06'50"	25.00'	39.32'	35.39'	25.05'	S 44°38'01" W
C28	2°09'21"	175.00'	6.58'	6.58'	3.29'	N 89°13'54" W
C29	8°34'35"	175.00'	26.20'	26.17'	13.12'	N 83°51'56" W
C30	0°57'14"	175.00'	2.91'	2.91'	1.46'	N 79°06'01" W
C31	28°45'21"	33.50'	16.81'	16.64'	8.59'	N 51°16'35" W
C32	45°41'40"	33.50'	26.72'	26.01'	14.12'	N 88°30'05" W
C33	8°59'59"	33.50'	5.26'	5.26'	2.64'	S 64°09'06" W
C34	1°59'57"	225.00'	7.85'	7.85'	3.93'	N 79°37'22" W
C35	7°23'54"	225.00'	29.05'	29.03'	14.55'	N 84°19'18" W
C36	132°54'48"	47.00'	109.03'	86.18'	107.87'	N 36°29'35" W
C37	33°22'37"	47.00'	27.38'	26.99'	14.09'	S 60°21'43" W
C38	46°01'01"	25.00'	20.08'	19.54'	10.62'	S 66°40'55" W
C39	89°53'10"	25.00'	39.22'	35.32'	24.95'	N 45°21'59" W
C40	3°14'46"	230.00'	13.03'	13.03'	6.52'	N 02°02'46" W
C41	9°18'57"	230.00'	37.40'	37.36'	18.74'	N 08°19'38" W
C42	32°02'30"	230.00'	128.62'	126.95'	66.04'	N 29°00'21" W
C43	90°38'52"	25.00'	39.55'	35.56'	25.28'	N 00°17'50" E
C44	17°32'02"	230.00'	70.39'	70.11'	35.47'	N 36°51'15" E
C46	8°58'14"	170.00'	26.62'	26.59'	13.34'	N 32°34'21" E
C47	98°33'48"	25.00'	43.01'	37.90'	29.05'	N 86°20'22" E
C48	46°01'01"	25.00'	20.08'	19.54'	10.62'	S 21°22'13" E
C49	16°50'32"	47.00'	13.82'	13.77'	6.96'	S 06°46'59" E
C50	50°58'07"	47.00'	41.81'	40.45'	22.40'	S 40°41'18" E
C51	47°47'32"	47.00'	39.20'	38.08'	20.82'	N 89°55'52" E
C52	26°56'10"	47.00'	22.09'	21.89'	11.26'	N 52°34'01" E
C53	39°55'16"	47.00'	32.75'	32.09'	17.07'	N 19°08'19" E
C54	44°06'14"	47.00'	36.18'	35.29'	19.04'	N 22°52'26" W
C55	45°28'12"	47.00'	37.30'	36.33'	19.69'	N 67°39'39" W
C56	46°01'01"	25.00'	20.08'	19.54'	10.62'	N 67°23'15" W
C57	90°00'00"	25.00'	39.27'	35.36'	25.00'	N 00°37'16" E
C58	17°40'42"	230.00'	70.97'	70.68'	35.77'	N 36°46'55" E
C59	10°11'41"	230.00'	40.92'	40.87'	20.52'	N 22°50'44" E
C60	11°14'22"	230.00'	45.12'	45.05'	22.63'	N 12°07'43" E
C61	6°19'01"	230.00'	25.36'	25.35'	12.69'	N 03°21'01" E
C62	10°51'39"	170.00'	32.23'	32.18'	16.16'	N 05°37'20" E
C63	31°31'08"	170.00'	93.51'	92.34'	47.98'	N 26°48'44" E
C64	44°24'34"	33.50'	25.97'	25.32'	13.67'	N 46°47'29" E
C65	8°26'22"	33.50'	4.93'	4.93'	2.47'	N 20°22'01" E
C66	52°50'56"	33.50'	30.90'	29.82'	16.65'	S 42°34'18" W
C67	19°00'08"	230.00'	76.27'	75.93'	38.49'	S 33°04'14" W
C68	9°43'54"	230.00'	39.07'	39.02'	19.58'	S 18°42'13" W
C69	6°35'16"	230.00'	26.45'	26.43'	13.24'	S 10°32'38" W
C70	6°29'41"	230.00'	26.07'	26.06'	13.05'	S 04°00'09" W
C71	0°33'48"	230.00'	2.26'	2.26'	1.13'	S 00°28'25" W
C72	12°24'44"	170.00'	36.83'	36.76'	18.49'	S 06°23'52" W
C73	33°01'02"	170.00'	97.95'	96.61'	50.38'	S 29°06'45" W
C74	2°07'40"	230.00'	8.55'	8.54'	4.27'	S 44°33'26" W
C75	9°17'32"	230.00'	37.30'	37.26'	18.69'	S 38°50'50" W
C76	6°06'50"	230.00'	24.54'	24.53'	12.28'	S 31°08'39" W
C77	17°32'02"	170.00'	52.02'	51.82'	26.22'	S 36°51'15" W
C78	90°00'00"	25.00'	39.27'	35.36'	25.00'	N 89°22'44" W
C79	2°31'58"	230.00'	10.17'	10.17'	5.08'	N 45°38'43" W
C80	4°30'03"	230.00'	18.07'	18.06'	9.04'	N 49°09'43" W
C81	5°29'06"	230.00'	22.02'	22.01'	11.02'	N 54°09'18" W
C82	5°27'47"	230.00'	21.93'	21.92'	10.97'	N 59°37'44" W
C83	4°31'48"	230.00'	18.19'	18.18'	9.10'	N 64°37'32" W
C84	4°29'38"	230.00'	18.04'	18.04'	9.02'	N 69°08'15" W
C85	4°29'09"	230.00'	18.01'	18.00'	9.01'	N 73°37'38" W
C86	4°30'19"	230.00'	18.09'	18.08'	9.05'	N 78°07'22" W
C87	5°49'53"	230.00'	23.41'	23.40'	11.72'	N 83°17'28" W
C88	2°38'16"	230.00'	10.59'	10.59'	5.30'	N 87°31'33" W
C89	13°19'52"	230.00'	53.52'	53.39'	26.88'	N 84°29'23" E
C90	13°50'13"	230.00'	55.54'	55.41'	27.91'	S 70°54'20" W
C91	42°19'58"	170.00'	125.60'	122.77'	65.82'	N 85°09'13" E
C92	44°17'28"	166.60'	128.79'	125.60'	67.80'	N 84°10'28" E
C93	91°05'11"	24.91'	39.60'	35.56'	25.38'	S 72°38'45" E
C94	2°55'55"	3870.50'	198.07'	198.04'	99.05'	S 25°25'07" E
C95	4°31'30"	3925.50'	310.02'	309.94'	155.09'	N 26°12'55" W
C96	6°44'53"	350.00'	41.22'	41.20'	20.64'	S 03°06'52" W
C97	11°15'36"	350.00'	68.78'	68.67'	34.50'	S 12°07'07" W
C98	14°36'05"	350.00'	89.20'	88.95'	44.84'	S 25°02'57" W
C99	1°08'24"	258.88'	5.15'	5.15'	2.58'	S 19°37'04" E
C100	9°55'43"	258.88'	44.86'	44.80'	22.49'	S 25°09'08" E
C101	11°42'32"	149.65'	30.58'	30.53'	15.34'	S 19°13'16" W
C102	35°15'17"	170.00'	104.60'	102.96'	54.02'	N 83°48'00" W
C103	26°53'06"	170.00'	79.77'	79.04'	40.63'	N 52°43'49" W
C104	92°10'02"	15.00'	24.13'	21.61'	15.58'	N 17°36'21" E
C105	30°45'53"	90.00'	48.33'	47.75'	24.76'	N 28°59'46" W
C106	30°45'54"	70.00'	37.59'	37.14'	19.26'	S 28°59'47" E
C107	67°58'32"	40.00'	47.46'	44.72'	26.97'	S 55°02'07" E

CURVE TABLE						
CURVE	DELTA	RADIUS	ARC	CHORD	TANGENT	CHORD BRG
C108	66°54'44"	30.00'	35.04'	33.08'	19.82'	S 55°34'01" E
C109	25°19'03"	60.00'	26.51'	26.30'	13.48'	S 34°46'11" E
C110	77°13'48"	36.92'	49.77'	46.08'	29.49'	S 13°06'53" W
C111	1°36'39"	3827.49'	107.61'	107.61'	53.81'	S 27°40'52" E
C112	50°20'25"	15.00'	13.18'	12.76'	7.05'	S 62°19'35" W
C113	50°36'01"	15.00'	13.25'	12.82'	7.09'	S 62°11'47" W
C114	60°55'09"	15.00'	15.95'	15.21'	8.82'	S 06°26'12" W
C115	67°58'59"	5.00'	5.93'	5.59'	3.37'	S 14°36'00" W
C116	75°18'51"	5.00'	6.57'	6.11'	3.86'	S 48°06'19" E
C117	79°41'19"	5.00'	6.95'	6.41'	4.17'	S 29°23'46" W
C118	84°44'48"	5.00'	7.40'	6.74'	4.56'	N 68°23'10" W
C119	90°00'00"	2.00'	3.14'	2.83'	2.00'	N 71°00'46" W
C120	90°00'00"	2.00'	3.14'	2.83'	2.00'	S 18°59'14" W
C121	90°00'00"	5.00'	7.85'	7.07'	5.00'	S 18°59'14" W
C122	100°40'15"	5.00'	8.79'	7.70'	6.03'	N 65°40'39" W
C123	90°00'00"	5.00'	7.85'	7.07'	5.00'	N 25°36'31" E
C124	62°24'52"	19.50'	21.24'	20.21'	11.81'	S 78°11'03" E
C125	92°39'57"	2.00'	3.24'	2.89'	2.10'	N 86°41'25" E
C126	88°05'23"	2.00'	3.08'	2.78'	1.93'	N 03°41'16" W
C127	61°39'32"	32.00'	34.44'	32.80'	19.10'	N 78°33'43" W
C128	85°22'07"	5.00'	7.45'	6.78'	4.61'	N 66°42'26" W
C129	60°55'09"	5.00'	5.32'	5.07'	2.94'	N 06°26'12" E
C130	50°36'01"	5.00'	4.42'	4.27'	2.36'	N 62°11'47" E
C131	50°20'25"	34.50'	30.31'	29.35'	16.21'	N 62°19'35" E
C132	57°04'53"	5.00'	4.98'	4.78'	2.72'	N 65°41'49" E
C133	11°33'28"	40.00'	8.07'	8.06'	4.05'	S 01°34'39" W
C134	36°15'30"	65.00'	41.13'	40.45'	21.28'	N 75°33'04" E
C135	66°54'44"	27.00'	31.53'	29.77'	17.84'	S 55°34'01" E
C136	87°24'49"	16.41'	25.03'	22.68'	15.68'	S 02°55'39" E
C137	53°11'27"	5.00'	4.64'	4.48'	2.50'	N 84°46'38" W
C138	90°00'00"	2.50'	3.93'	3.54'	2.50'	S 76°49'06" W
C139	90°00'00"	2.50'	3.93'	3.54'	2.50'	S 13°10'54" E
C140	88°48'58"	5.00'	7.75'	7.00'	4.90'	S 13°46'25" E
C141	59°33'27"	5.00'	5.20'	4.97'	2.86'	S 60°24'47" W
C142	55°42'11"	5.00'	4.86'	4.67'	2.64'	N 61°57'24" W
C143	40°13'06"	5.00'	3.51'	3.44'	1.83'	N 13°59'46" W
C144	26°11'16"	5.00'	2.29'	2.27'	1.16'	N 19°12'25" E
C145	64°59'14"	5.00'	5.67'	5.37'	3.19'	N 64°47'40" E
C146	6°18'40"	69.50'	7.66'	7.65'	3.83'	S 85°52'03" E
C147	90°00'00"	5.00'	7.85'	7.07'	5.00'	S 44°01'23" E
C148	59°09'31"	30.00'	30.98'	29.62'	17.03'	S 28°36'09" E
C149	90°00'00"	2.50'	3.93'	3.54'	2.50'	N 76°49'06" E
C150	90°00'00"	2.50'	3.93'	3.54'	2.50'	N 13°10'54" W
C151	59°09'31"	17.50'	18.07'	17.28'	9.93'	N 28°36'09" W
C152	155°40'05"	5.00'	13.59'	9.78'	23.19'	N 78°48'39" E
C153	40°44'39"	30.00'	21.33'	20.89'	11.14'	S 43°44'44" E
C154	26°06'18"	3.50'	1.60'	1.58'	0.81'	S 51°02'27" E
C155	43°28'47"	5.00'	3.79'	3.70'	1.99'	S 21°20'33" E
C156	43°43'44"	13.50'	10.30'	10.06'	5.42'	N 21°13'05" W
C157	26°47'49"	15.00'	7.02'	6.95'	3.57'	N 50°41'41" W
C158	41°58'57"	15.00'	10.99'	10.75'	5.76'	N 43°06'07" W
C159	66°54'44"	17.00'	19.85'	18.74'	11.23'	N 55°34'01" W
C160	9°45'11"	53.00'	9.02'	9.01'	4.52'	N 84°08'47" W
C161	68°25'46"	15.00'	17.92'	16.87'	10.20'	S 66°30'56" W
C162	40°13'06"	13.50'	9.48'	9.28'	4.94'	S 13°59'46" E
C163	2°06'06"	1253.87'	45.99'	45.99'	23.00'	N 00°24'58" W
C164	11°17'06"	62.15'	12.24'	12.22'	6.14'	N 46°50'02" W
C165	147°57'51"	15.00'	38.74'	28.84'	52.25'	N 73°21'10" E
C166	47°51'54"	25.00'	20.88'	20.28'	11.10'	S 08°43'58" E
C167	160°30'16"	15.00'	42.02'	29.57'	87.32'	N 84°32'53" W
C168	42°58'12"	24.79'	18.59'	18.16'	9.76'	N 16°07'16" E
C169	38°49'47"	25.00'	16.94'	16.62'	8.81'	N 18°47'08" E
C170	142°16'37"	3.00'	7.45'	5.68'

VICINITY MAP



NO SCALE

CERTIFICATE OF REVIEW OFFICER:

STATE OF NORTH CAROLINA
COUNTY OF WAKE

I,_____, REVIEW OFFICER OF WAKE COUNTY, CERTIFY THAT THIS PLAT MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER _____ DATE _____

APPROVAL EXPIRES IF NOT RECORDED ON OR BEFORE _____ DATE _____

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE PLAT SHOWN HEREON IS EXEMPT FROM THE TOWN OF APEX SUBDIVISION REGULATION, OTHER THAN MEETING MINIMUM DIMENSIONAL STANDARDS AS REQUIRED BY N.C.G.S. §47-30(F)(11)AND §160D-802. THIS PLAT HAS BEEN APPROVED BY THE TOWN OF APEX FOR RECORDING IN THE OFFICE OF THE REGISTER OF DEEDS IN WAKE COUNTY.

SUBDIVISION ADMINISTRATOR _____ DATE _____

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREIN, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF APEX, AND ALL SHEETS RELATED HERETO, AND THAT I HEREBY ADOPT THIS EXEMPT PLAT WITH MY FREE CONSENT.

DATE _____ OWNER WELLFIELD DEVELOPMENT, LLC
BY: _____

I,_____A NOTARY PUBLIC OF THE COUNTY OF_____,

STATE OF NORTH CAROLINA HEREBY CERTIFY THAT _____ PERSONALLY APPEARED BEFORE ME THIS DAY AND UNDER OATH ACKNOWLEDGED THAT THE ABOVE FORM WAS EXECUTED BY HIM/HER. WITNESS MY HAND AND SEAL THIS _____DAY OF _____,_____.

NOTARY PUBLIC _____

MY COMMISSION EXPIRES _____

N.C. GRID NORTH (NAD83/2011)
SEE NOTE 2 SHEET 5

SITE DATA TABLE

AREA 7 ABANDONMENT–1,780 S.F.
LOT 56 PIN 0722.02-59-2865
LOT 57 PIN 0722.02-59-2895
LOT 58 PIN 0722.02-59-3824
LOT 59 PIN 0722.02-59-3844
LOT 60 PIN 0722.02-59-3874
LOT 61 PIN 0722.02-59-4804

AREA 6 ABANDONMENT–3,027 S.F.
LOT 62 PIN 0722.02-59-4789
LOT 63 PIN 0722.02-59-4883
LOT 64 PIN 0722.02-59-4885
LOT 65 PIN 0722.02-59-4888
LOT 66 PIN 0722.02-59-4980
LOT 67 PIN 0722.02-59-4983
LOT 68 PIN 0722.02-59-4969
LOT 69 PIN 0723.04-50-4041
LOT 70 PIN 0723.04-50-4033
LOT 71 PIN 0723.04-50-4016

AREA 4 ABANDONMENT–1,768 S.F.
LOT 72 PIN 0723.04-50-3079
LOT 73 PIN 0723.04-50-3151
LOT 74 PIN 0723.04-50-3133
LOT 75 PIN 0723.04-50-3125
LOT 76 PIN 0723.04-50-3107
LOT 77 PIN 0723.04-50-2189

AREA 3 ABANDONMENT–1,360 S.F.
LOT 78 PIN 0723.04-50-2216
LOT 79 PIN 0723.04-50-2207
LOT 80 PIN 0723.04-50-1288
LOT 81 PIN 0723.04-50-1279
LOT 82 PIN 0723.04-50-1350
LOT 83 PIN 0723.04-50-1331
LOT 84 PIN 0723.04-50-1312

AREA 1 ABANDONMENT–1,180 S.F.
LOT 85 PIN 0723.04-50-1456
LOT 86 PIN 0723.04-50-1475
LOT 87 PIN 0723.04-50-1485
LOT 88 PIN 0723.04-50-2404
LOT 89 PIN 0723.04-50-2424
LOT 90 PIN 0723.04-50-2443

AREA 2 ABANDONMENT–2,540 S.F.
LOT 91 PIN 0723.04-50-2470
LOT 92 PIN 0723.04-50-2399
LOT 93 PIN 0723.04-50-3308
LOT 94 PIN 0723.04-50-3316
LOT 95 PIN 0723.04-50-3335
LOT 96 PIN 0723.04-50-3344
LOT 97 PIN 0723.04-50-3352
LOT 98 PIN 0723.04-50-3371
LOT 99 PIN 0723.04-50-3289
LOT 100 PIN 0723.04-50-4208
LOT 101 PIN 0723.04-50-4217
LOT 102 PIN 0723.04-50-4225
LOT 103 PIN 0723.04-50-4244

AREA 5 ABANDONMENT–997 S.F.
LOT 104 PIN 0723.04-50-5399
LOT 105 PIN 0723.04-50-6402
LOT 106 PIN 0723.04-50-6434

AREA 9 ABANDONMENT–1,780 S.F.
LOT 107 PIN 0723.04-50-7672
LOT 108 PIN 0723.04-50-7675
LOT 109 PIN 0723.04-50-7677
LOT 110 PIN 0723.04-50-7770
LOT 111 PIN 0723.04-50-7773
LOT 112 PIN 0723.04-50-7776

AREA 10 ABANDONMENT–1,780 S.F.
LOT 113 PIN 0723.04-50-7871
LOT 114 PIN 0723.04-50-7874
LOT 115 PIN 0723.04-50-7876
LOT 116 PIN 0723.04-50-7879
LOT 117 PIN 0723.04-50-7971
LOT 118 PIN 0723.04-50-7965

AREA 11 ABANDONMENT–1,520 S.F.
LOT 119 PIN 0723.04-50-7969
LOT 120 PIN 0723.04-51-7062
LOT 121 PIN 0723.04-51-7065
LOT 122 PIN 0723.04-51-7068
LOT 123 PIN 0723.04-51-7161

AREA 8 ABANDONMENT–2,055 S.F.
LOT 124 PIN 0722.02-59-6936
LOT 125 PIN 0722.02-59-6933
LOT 126 PIN 0722.02-59-6930
LOT 127 PIN 0722.02-59-6838
LOT 128 PIN 0722.02-59-6835
LOT 129 PIN 0722.02-59-6833
LOT 130 PIN 0722.02-59-6739

TOTAL 10' DRY UTILITY EASEMENT ABDNOMENT AREA–19,787 S.F.

OWNER:
WELLFIELD DEVELOPMENT, LLC,
D.B. 18428, PG. 2795
D.B. 18429, PG. 4
D.B. 18429, PG. 8
D.B. 18428, PG. 2790
D.B. 18428, PG. 2793
B.M. 2023, PG. 1353-1363
B.M. 2023, PG. 501-504

ANNEXATION #: 677
CURRENT ZONING DISTRICT & CASE #:
PUD-CZ (19CZ22 & 21CZ01)
PRIMARY WATERSHED PROTECTION OVERLAY DISTRICT:
CAPE FEAR
AREA OF PARENT TRACT:
40.037 ACRES (EXCLUSIVE OF R/W)
1,744,012 S.F.
FEMA DESIGNATED FLOODPLAIN:
NO PER FIRM MAPS 3720072200K
AND 3720072300K

LEGEND

(RBS)–REBAR SET
(IPF)–IRON PIPE FOUND
(DIPF)–DISTURBED IRON PIPE FOUND
(RBF)–REBAR FOUND
(NF)–NAIL FOUND
(X)–CALCULATED POINT
(RCA)–RESOURCE CONSERVATION AREA
(PSDE)–PUBLIC STORM DRAINAGE EASEMENT
(VWPSDE)–VARIABLE WIDTH PUBLIC STORM DRAINAGE EASEMENT
(PRSDE)–PRIVATE STORM DRAINAGE EASEMENT
(STE)–SIGHT TRIANGLE EASEMENT
(SE)–SIGN EASEMENT
(TCE)–TEMPORARY CONSTRUCTION EASEMENT
(PGE)–PUBLIC GREENWAY EASEMENT
(TOAPUE)–TOWN OF APEX PUBLIC UTILITY EASEMENT
(UGGLM)–UNDERGROUND GASLINE MARKER
(UTS)–UTILITY TEST STATION
(UGUB)–UNDERGROUND UTILITY BOX
(R/W)–RIGHT OF WAY
(PSE)–PUBLIC SIDEWALK EASEMENT
(PRWE)–PRIVATE RETAINING WALL EASEMENT
(HOARE)–HOMEOWNERS ASSOCIATION RECYCLING EASEMENT
(TOB)–TOP OF BANK
(BADF)–BLACK ALUMINUM DECORATIVE FENCE
(TOA)–TOWN OF APEX
(TOAPSDE)–TOWN OF APEX PUBLIC STORM DRAINAGE EASEMENT
(A)–ARC LENGTH
(DUE)–DRY UTILITY EASEMENT
(WWRWMF)–WESTERN WAKE REGIONAL WASTEWATER MANAGEMENT FACILIITES
–SCM– PRIVATE SCM ACCESS AND MAINTENANCE EASEMENT
–RCA AREA
–SIGHT TRIANGLE EASEMENT
–ABANDONED DRY UTILITY EASEMENT
XXX –ADDRESS

REFERENCES:
1. MAP BY TAYLOR LAND CONSULTANTS, PLLC ENTITLED "BOUNDARY SURVEY WIMBERLY ROAD ASSEMBLAGE", AND DATED JUNE 16, 2020.
2. MAP BY TAYLOR LAND CONSULTANTS, PLLC ENTITLED "BOUNDARY SURVEY PREPARED FOR THE TOWN OF APEX", AND DATED 8/21/17.
3. MAP BY WITHERSRAVENEL ENTITLED "BOUNDARY & TOPO SURVEY OF APEX PUBLIC SAFETY STATION #6", AND DATED 11/11/2020.
4. TEMPORARY CONSTRUCTION EASEMENT
   D.B. 15961, PG. 2182
   D.B. 16934, PG. 1292
5. DUKE ENERGY PROGRESS EASEMENT
   D.B. 4323, PG. 63 (BLANKET EASEMENT WITH NO DEFINED WIDTH)
   D.B. 4817, PG. 477
   D.B. 4817, PG. 478
   D.B. 4975, PG. 541
   D.B. 6253, PG. 44
   D.B. 6253, PG. 45
   D.B. 6605, PG. 595
6. D.B. 4445, PG. 586
   D.B. 10792, PG. 1492
   D.B. 5477, PG. 27
   D.B. 5546, PG. 471
7. B.M. 1988, PG. 974
   B.M. 1993, PG. 925
   B.M. 1989, PG. 238
8. D.B. 4513, PG. 370
9. D.B. 4223, PG. 652
   D.B. 8315, PH. 861
10. ACCESS EASEMENT ABANDONMENT
    D.B. 18434, PH. 560
11. ABANDONMENT OF EASEMENT(S)
    D.B. 19266, PH. 1882
12. TEMPORARY AND PERMANENT ACCESS EASEMENT
    D.B. 19266, PH. 1884
13. WET POND OPERATION & MAINTENANCE AGREEMENT
    D.B. 19260, PH. 2252
14. PERMANENT ACCESS EASEMENT
    (PART OF WIMBERLY ROAD AREA BEING DEDICATED HEREON)
    B.M. 2021, PG. 792-793
    B.M. 2023, PG. 501-504 (SEE NOTE 17)
15. TEMPORARY ACCESS EASEMENT AND TEMPORARY TOWN OF APEX PUBLIC SEWER EASEMENT
    (PART OF ROADS BEING DEDICATED HEREON)
    B.M. 2023, PG. 501-504 (SEE NOTE 16)
16. THE PARK AT WIMBERLY
    PHASE 3
    B.M. 2023, PG. 501-504
17. THE PARK AT WIMBERLY
    PHASE 1 AND 2
    B.M. 2023, PG. 1353-1363

☐D. THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXEMPTION OR EXCEPTION TO THE DEFINITION OF SUBDIVISION.

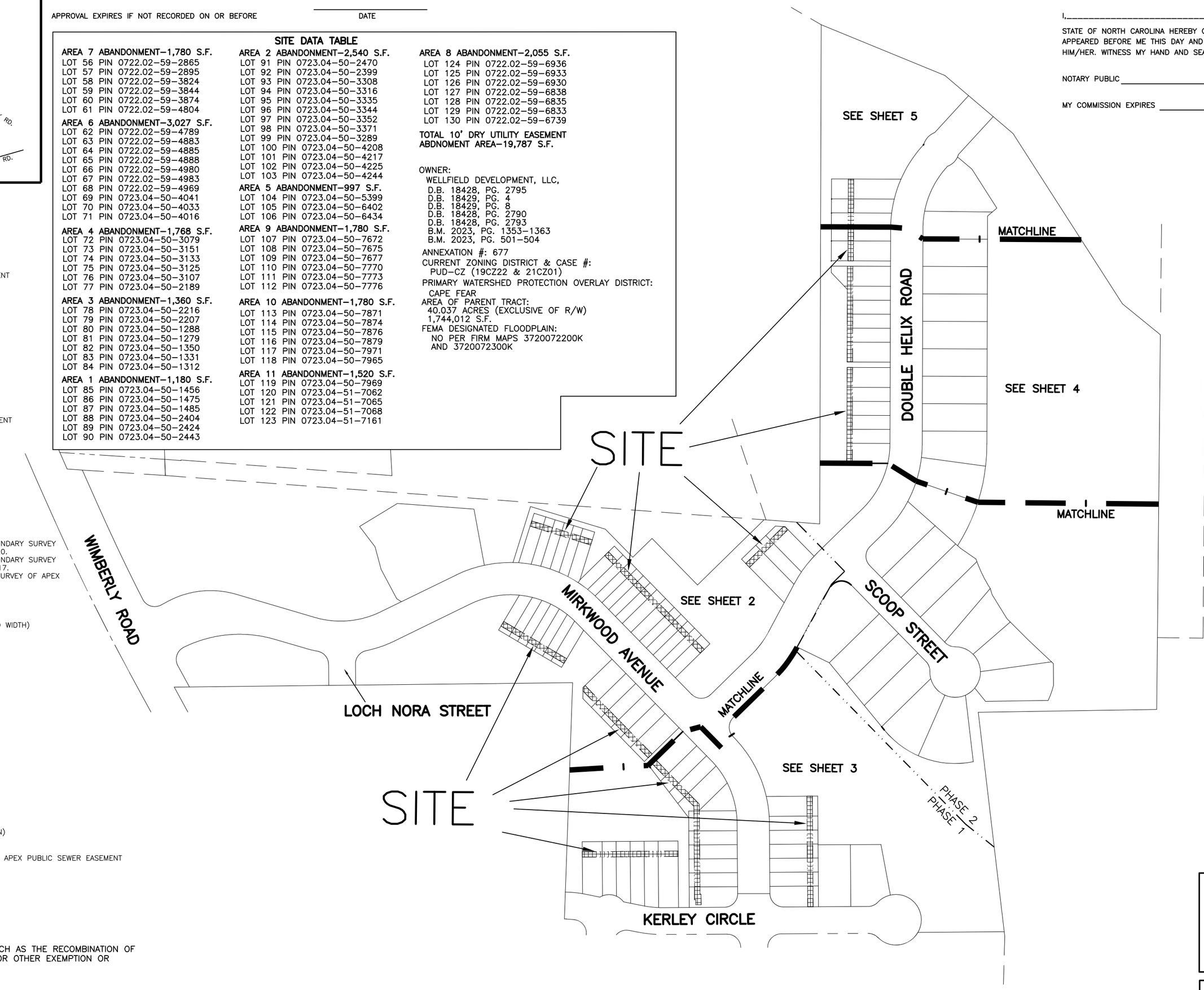
PROFESSIONAL LAND SURVEYOR _____ DATE _____

NORTH CAROLINA
WAKE COUNTY
I STUART E. PLANTE III CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN REFERENCES AS SHOWN, THAT THE BOUNDARIES NOT SURVEYED ARE DASHED AND DRAWN FROM REFERENCES AS SHOWN; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1: 53,898 +; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 17TH DAY OF AUGUST, 2023 A.D.,

_____ PROFESSIONAL LAND SURVEYOR
LICENSE NO. L-4432

NOTE:
MISCLOSURE WAS DISTRIBUTED BY THE COMPASS METHOD. THE DISTANCES ON THIS MAP ARE ADJUSTED HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED. ALL AREA CALCULATED BY COORDINATE COMPUTATION.

RECORDED IN BOOK OF MAPS_____PAGE_____.



LINE TABLE

LINE	BEARING	DISTANCE
L1	N 17°18'13" E	10.00'
L2	S 72°41'47" E	118.00'
L3	S 17°18'13" W	10.00'
L4	N 72°41'47" W	118.00'
L5	N 45°37'16" E	10.00'
L6	S 44°22'44" E	254.00'
L7	S 45°37'16" W	10.00'
L8	N 44°22'44" W	254.00'
L9	N 30°36'53" E	10.00'
L10	S 59°23'07" E	136.00'
L11	S 30°36'53" W	10.00'
L12	N 59°23'07" W	136.00'
L13	N 45°37'16" E	4.98'
L14	S 44°22'44" E	178.00'
L15	S 45°37'16" W	10.00'
L16	N 44°22'44" W	173.21'
L17	N 01°58'45" E	6.94'
L18	S 44°22'44" E	7.46'
L19	S 45°37'16" W	100.00'
L20	N 44°22'44" W	10.00'
L21	N 45°37'16" E	97.76'
L22	S 85°46'48" E	3.38'
L23	N 45°37'16" E	10.00'
L24	S 44°22'44" E	117.85'
L25	S 00°25'10" E	167.37'
L26	N 89°41'26" E	2.05'
L27	S 00°18'34" E	19.50'
L28	S 89°41'26" W	10.00'
L29	N 00°18'34" W	9.50'
L30	S 89°41'26" W	2.03'
L31	N 00°25'10" W	173.31'
L32	N 44°22'44" W	113.82'
L33	S 00°24'46" E	10.00'
L34	S 89°35'14" W	178.00'
L35	N 00°24'46" W	10.00'
L36	N 89°35'14" E	178.00'
L37	S 00°25'24" E	205.54'
L38	S 89°41'26" W	10.00'
L39	N 00°25'24" W	205.52'
L40	N 89°34'36" E	10.00'
L41	N 00°11'22" E	178.00'
L42	S 89°48'30" E	10.00'
L43	S 00°11'22" W	178.00'
L44	N 89°48'30" W	10.00'
L45	N 00°11'22" E	178.00'
L46	S 89°48'30" E	10.00'
L47	S 00°11'22" W	178.00'
L48	N 89°48'30" W	10.00'
L49	N 00°11'30" E	152.00'
L50	S 89°48'30" E	10.00'
L51	S 00°11'30" W	152.00'
L52	N 89°48'30" W	10.00'

MINIMUM BUILDING SETBACKS SINGLE FAMILY DETACHED

FROM BUFFER OR RCA–10'
FRONT YARD–10'
SIDE YARD–5' (NO AGGREGATE)
CORNER SIDE YARD–10'
REAR YARD–10'
DRIVEWAYS–BACK OF SIDEWALK TO GARAGE–20'(12' MINIMUM WIDTH)
MAX BUILDING HEIGHT–42', 2 STORIES

MINIMUM BUILDING SETBACKS TOWNHOMES

FROM BUFFER OR RCA–10'
FRONT YARD–10'
SIDE YARD (END UNITS)–5'
REAR YARD–5'
FROM PUBLIC R/W TO GARAGE–20' WHERE SIDEWALK IS PRESENT
BUILDING SIDE TO SIDE–10'
BUILDING SIDE TO REAR–30'
BUILDING REAR TO REAR–40'
MAXIMUM BUILDING HEIGHT–50', 3 STORIES

SEE SHEETS 2–5 FOR ABANDONED DRY UTILITY EASEMENTS.
SEE SHEET 5 FOR NOTES.

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106–117
RALEIGH, N.C. 27523

THE PURPOSE OF THIS PLAT IS TO ABANDON THE EXISTING 10' DRY UTILITY EASEMENT'S AS SHOWN PREVIOUSLY RECORDED IN BOOK OF MAPS 2023, PAGES 1353–1363, WAKE COUNTY REGISTRY ON TOWNHOME LOTS 56–130 PHASES 1 & 2. SEE B.M. 2023, PG. 1353–1363 FOR ALL OTHER RECORDING INFORMATION UNLESS OTHERWISE NOTED.

PRELIMINARY PLAT– NOT FOR RECORDATION, CONVEYANCE, OR SALE

0 150 300 450
SCALE IN FEET

REVISIONS	EASEMENT ABANDONMENT PLAT LOTS 56–130 THE PARK AT WIMBERLY PHASES 1 AND 2		ROBINSON & PLANTE, P.C. LAND SURVEYING C–2687 970 TRINITY ROAD RALEIGH, NC 27607 PHONE: (919)859–6030	
	TOWNSHIP: WHITE OAK	COUNTY: WAKE	SURVEY DATE: 8–14–2023	SURVEYED BY: KS
	STATE: NORTH CAROLINA		SCALE: 1"=150'	DRAWN BY: BW
	ZONING: PUD–CZ (ZONING CASE 19CZ22 AND 21CZ01)	PIN: SEE ABOVE	CHECKED & CLOSURE BY: SEP	FILE: PAWPH1S1ESMT SHEET: 1 OF 5

TOWN OF APEX
D.B. 16911, PG. 269
B.M. 1993, PG. 263
B.M. 1993, PG. 98
PIN 0723.03-41-6124
(SEE REF. 2)

TOWN OF APEX
D.B. 16911, PG. 272
B.M. 2013, PG. 1252
PIN 0723.04-51-4178
(SEE REF. 2)

30' PRIVATE EASEMENT
B.M. 1993, PG. 98

40' UTILITY AND PIPELINE EASEMENT FOR WWRWMF
D.B. 14336, PG. 2496
D.B. 14336, PG. 2490

AREA 1
EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED
(1,180 S.F.)

AREA 2
EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED
(2,540 S.F.)

AREA 3
EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED
(1,360 S.F.)

AREA 4
EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED
(1,768 S.F.)

AREA 5
EXISTING 10' DRY UTILITY EASEMENT TO BE ABANDONED
(997 S.F.)

10' TYPE 'B' PERIMETER BUFFER

20' TYPE 'B' PERIMETER BUFFER

OPEN SPACE 5
(INCLUSIVE OF RCA 6-8)

OPEN SPACE 8
(INCLUSIVE OF RCA 14-16)

SCM 1

PRIVATE SCM ACCESS AND MAINTENANCE EASEMENMT
B.M. 2023, PG. 501-504

MIRKWOOD AVENUE
(60' PUBLIC R/W)
B.M. 2023, PG. 1353-1363

DOUBLE HELIX ROAD
(60' PUBLIC R/W)
B.M. 2023, PG. 1353-1363

20' PUBLIC GREENWAY EASEMENT

30' PUBLIC SANITARY SEWER EASEMENT

50' APPROX. LOCATION CARDINAL EXTENSION COMPANY EASEMENT
D.B. 8195, PG. 1501
D.B. 8019, PG. 1501
B.M. 1987, PG. 2038

APPROX. LOCATION 50' COLONIAL PIPELINE EASEMENT
B.M. 1988, PG. 974
B.M. 1993, PG. 925
B.M. 1987, PG. 2038
(TAKEN FROM REF. 1)

PHASE 1
PHASE 2

MATCHLINE SHEET 3

DANNY L. OTTAWAY
JOAN M. OTTAWAY
D.B. 7543, PG. 333
LOT 2B
B.M. 1987, PG. 2038
B.M. 1987, PG. 1292
PIN 0722.01-49-8843

OWNER:
WELLFIELD DEVELOPMENT, LLC,
4441 SIX FORKS RD., SUITE 106-117
RALEIGH, N.C. 27523

☐D. THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXEMPTION OR EXCEPTION TO THE DEFINITION OF SUBDIVISION.

PROFESSIONAL LAND SURVEYOR _____ DATE _____

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LICENSE NO. L-4432

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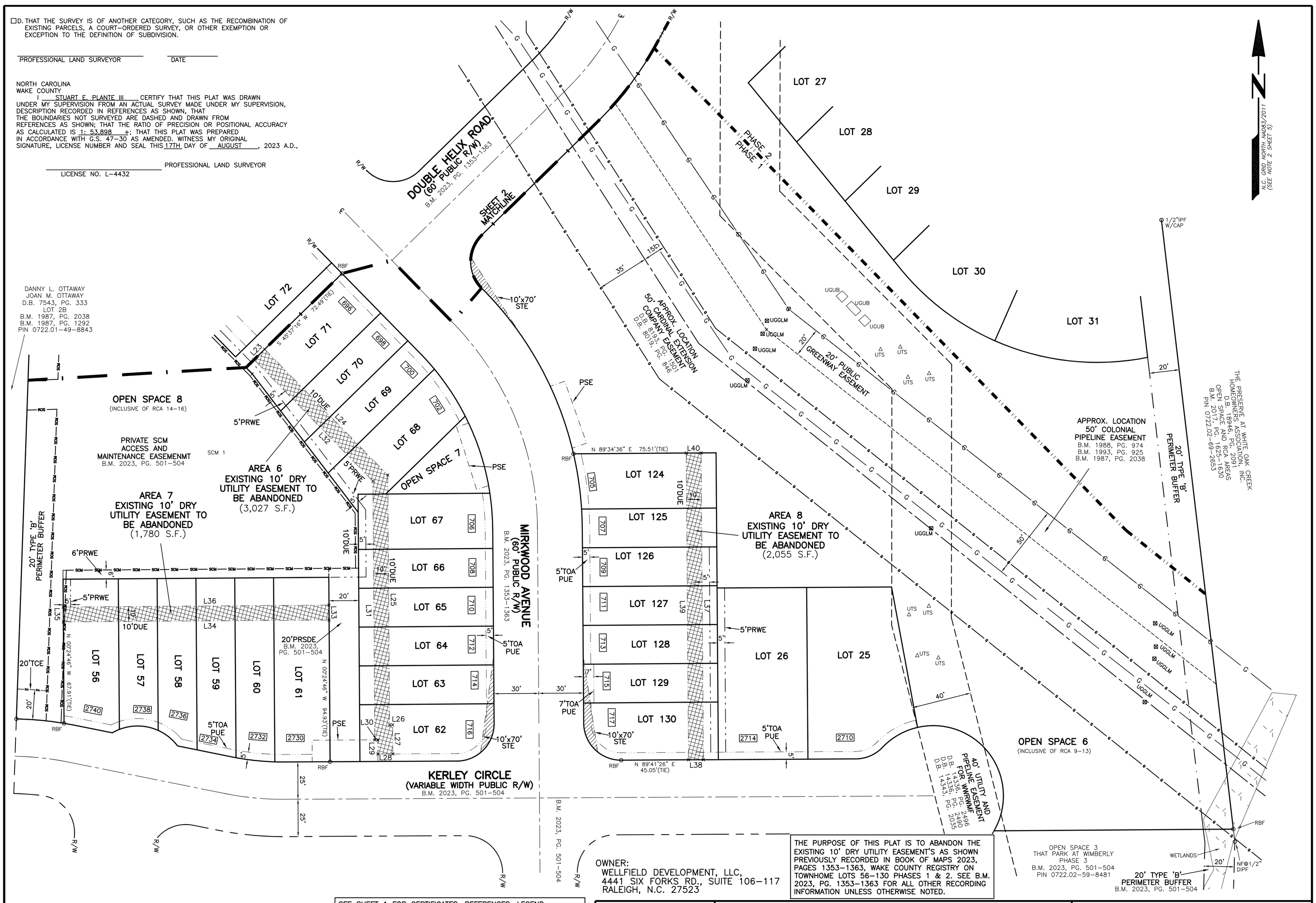
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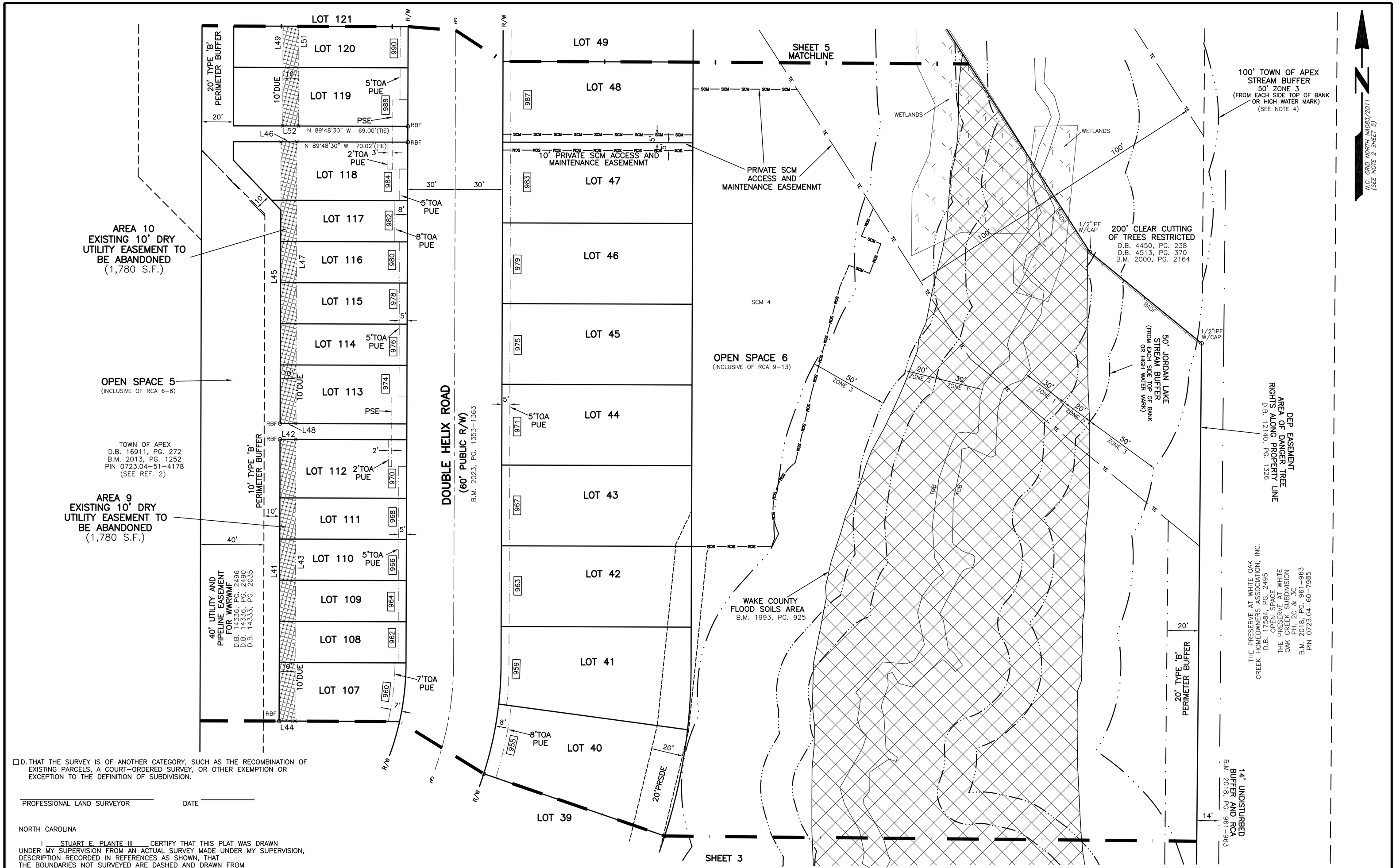
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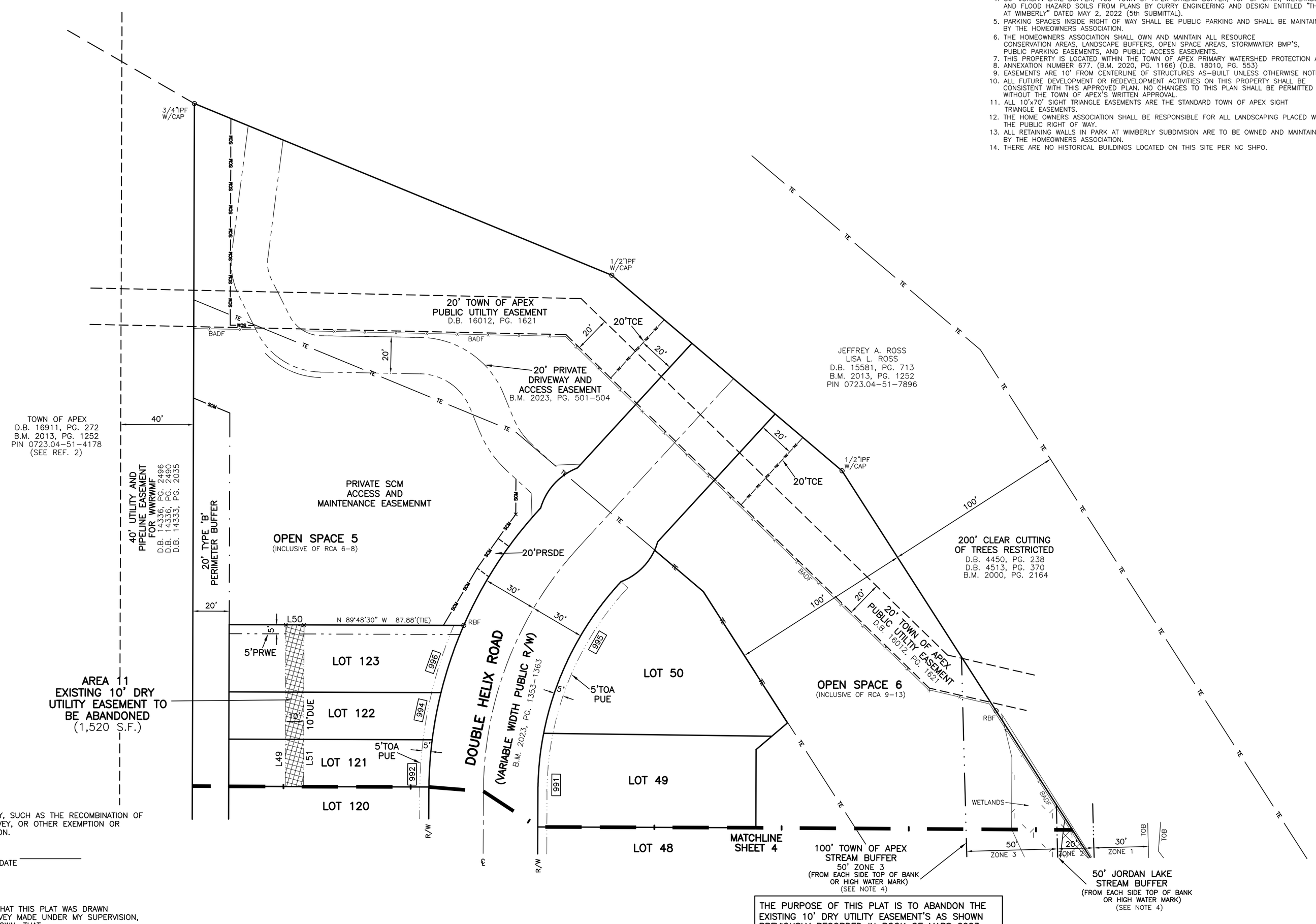
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N.C. GRID NORTH (NAD83/2011)
(SEE NOTE 2 SHEET 5)

NOTES:
1. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD. NO TITLE EXAMINATION HAS BEEN DONE BY ROBINSON & PLANTE, P.C.
2. HORIZONTAL CONTROL FOR THE SURVEY IS N.C. GRID NORTH NAD 83(2011) AND ESTABLISHED FROM THE TAYLOR LAND CONSULTANTS, PLLC SURVEY DESCRIBED IN REFERENCE 1.
3. PROPERTY IS ZONE X, NOT IN A SPECIAL FLOOD HAZARD AREA, PER FEMA FIRM MAP NO. 3720072200K PANEL 0722 AND NO. 3720072300K PANEL 0723, EFFECTIVE DATE 7/19/2022.
4. 50' JORDAN LAKE BUFFER, 100' TOWN OF APEX STREAM BUFFER, TOP OF BANK, WETLANDS, PONDS AND FLOOD HAZARD SOILS FROM PLANS BY CURRY ENGINEERING AND DESIGN ENTITLED "THE PARK AT WIMBERLY" DATED MAY 2, 2022 (5th SUBMITTAL).
5. PARKING SPACES INSIDE RIGHT OF WAY SHALL BE PUBLIC PARKING AND SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
6. THE HOMEOWNERS ASSOCIATION SHALL OWN AND MAINTAIN ALL RESOURCE CONSERVATION AREAS, LANDSCAPE BUFFERS, OPEN SPACE AREAS, STORMWATER BMP'S, PUBLIC PARKING EASEMENTS, AND PUBLIC ACCESS EASEMENTS.
7. THIS PROPERTY IS LOCATED WITHIN THE TOWN OF APEX PRIMARY WATERSHED PROTECTION AREA.
8. ANNEXATION NUMBER 677. (B.M. 2020, PG. 1166) (D.B. 18010, PG. 553)
9. EASEMENTS ARE 10' FROM CENTERLINE OF STRUCTURES AS-BUILT UNLESS OTHERWISE NOTED.
10. ALL FUTURE DEVELOPMENT OR REDEVELOPMENT ACTIVITIES ON THIS PROPERTY SHALL BE CONSISTENT WITH THIS APPROVED PLAN. NO CHANGES TO THIS PLAN SHALL BE PERMITTED WITHOUT THE TOWN OF APEX'S WRITTEN APPROVAL.
11. ALL 10'x70' SIGHT TRIANGLE EASEMENTS ARE THE STANDARD TOWN OF APEX SIGHT TRIANGLE EASEMENTS.
12. THE HOME OWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR ALL LANDSCAPING PLACED WITHIN THE PUBLIC RIGHT OF WAY.
13. ALL RETAINING WALLS IN PARK AT WIMBERLY SUBDIVISION ARE TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
14. THERE ARE NO HISTORICAL BUILDINGS LOCATED ON THIS SITE PER NC SHPO.



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| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: September 26, 2023

Item Details

Presenter(s): Lori Avent, Water Resource Specialist

Department(s): Water Resources

Requested Motion

Motion to adopt a Resolution entitled "A Resolution Approving Water Shortage Response Plan" to implement water conservation measures to respond to drought or other water shortage conditions as set out in the Water Shortage Response Plan (WSRP).

Approval Recommended?

Yes

Item Details

The Water Shortage Response Plan (WSRP) is required by NC Division of Water Resources and is the water conservation stages the Town will implement in cases of drought and water emergencies. It closely follows the Apex Water Conservation Ordinance, which is included as an attachment in the WSRP. The plan is mandated to be updated every five years. The Town did not receive any feedback from the 30-day public comment period that ended on June 26, 2023. This update involves minor edits to the plan to align with the current Town of Apex Water Conservation Ordinance language. Upon formal adoption of the WSRP and associated water conservation ordinance, Apex will follow all State regulations and requirements related to water conservation and will be consistent with the measures of other local municipalities.

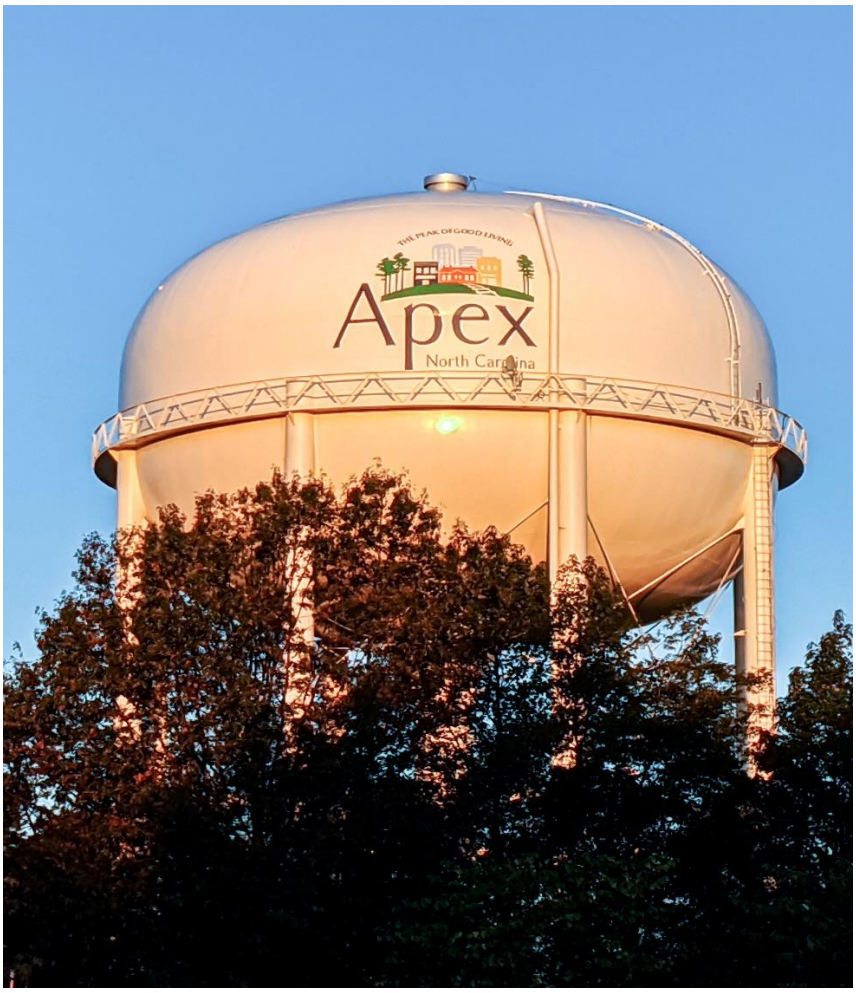
Attachments

- CN10-A1: Water Shortage Response Plan (WSRP) 2023 - Resolution - Water Shortage Response Plan
- CN10-A2: Acceptance Letter - Resolution - Water Shortage Response Plan
- CN10-A3: Resolution - Resolution - Water Shortage Response Plan

Town of Apex

Water Shortage Response Plan

2023



APEX
NORTH CAROLINA

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Attachments

Attachment 1 Town of Apex 2021 Water Usage

Attachment 2 Town of Apex 2022 Water Usage

Appendix

A Water Conservation Ordinance, Effective February 2, 1999, Amended 2021

SECTION 1

Introduction

The purpose of this Water Shortage Response Plan (WSRP) is to provide a framework for making water supply and conservation decisions during times when water supplies in the region may be low either due to drought conditions, water quality problems, or disruptions in facility operations. This Plan supplements the Town of Apex's *Water Conservation Ordinance* (Appendix A), which became effective February 2, 1999 and was most recently amended in 2021.

The Town of Apex has been required by the State to have a WSRP since 2001 by both our Jordan Lake Allocation water supply contract and our interbasin transfer certificate. More recently, as of July 1, 2009 all public and privately owned water systems subject to GS 143-355 (I) are required to have an approved WSRP as part of their Local Water Supply Plan (LWSP). Rules governing water use during droughts and water emergencies (15A NCAC 02E.0607) require specific items that must be included in those plans. This WSRP was developed in accordance with the *Water Shortage Response Plan Guidelines* provided by the NC Division of Water Resources (DWR).

SECTION 2

Water Supply Assessment

The Town of Apex and the Town of Cary have a joint allocation of the water supply storage volume in the Jordan Lake water supply pool. 95.9 percent of the Jordan Lake estimated 100 million gallons per day (MGD) safe yield has been allocated in the Round 4 allocations. Of the allocated 95.9 MGD, 46.2 MGD of the water supply pool (on an average annual basis), is allocated to the Towns of Apex and Cary. The Town of Apex portion of this safe yield allocation is 10.6 MGD.

The Towns of Apex and Cary share a raw water intake at Jordan Lake. The water is treated at the Cary/Apex Water Treatment Plant (WTP). The permitted treatment capacity of the water plant is 56 MGD, with the Apex portion of the treatment allocation being 12.88 MGD.

Two graphs shown as Attachments 1 and 2 at the end of this document illustrate historical water usage for the Town of Apex by month for the calendar years 2021 and 2022.

A large system of interconnections exists between many distribution systems in the region, such as Raleigh, Cary, and Durham. These interconnections provide the Town with access to several back-up supplies in the event of a failure that may require the repair of pipelines. The interconnections provide the Town with the flexibility to respond to drought periods and other water supply emergencies. The Town of Apex also has a letter agreement with the Town of Holly Springs from which it could receive emergency water supplies.

SECTION 3

Water Shortage Response Plan

The purpose of this Water Shortage Response Plan (WSRP) is to deal with short-term water shortage, which may be caused by drought, water quality problems, or disruptions in facility operations. The North Carolina Division of Water Resources (DWR) *Water Shortage Response Handbook for North Carolina Water Supply Systems* (2003) requires that municipalities develop a Water Shortage Response Plan/Program that includes the following components:

1. Adopt an ordinance to provide authority to enact system measures to reduce demand in the case of an emergency;
2. Develop a method to evaluate ability to meet demand;
3. Develop procedures for implementing appropriate water use restriction stages;
4. Identify person(s) responsible for implementing the water shortage response protocols;
5. Develop a method to notify system employees and the customers of the shortage;
6. Develop a method to measure the supply and demand and identify the conditions that trigger more or less restrictive measures;
7. Identify the levels of required response and actions to be taken;
8. Identify the enforcement and variances of the water shortage plan;
9. Develop a method for the Town to review and comment on the water shortage response protocols, revision of the protocols, and the evaluation of the effectiveness of the protocols.

Each of these components has been implemented by the Town of Apex and is described in the following sections.

3.1 Authority of Plan

NC DWR recommends that every municipality adopt an ordinance to "provide for the declaration of a water shortage and specify voluntary and mandatory conservation measures to be imposed at each level of water shortage severity."

The Town Manager has the authority to implement measures outlined in the water conservation ordinance to address potential water shortages, including Section 12-101, *Continuing Water Conservation Measures* which includes the odd/even outdoor irrigation schedule; and Section 12-102, *Stages of Conservation Measures in Response to Water Shortage*. In the Town Manager's absence, the Deputy Town Manager and the Assistant Town Managers have vested authority to implement such measures. The Town Manager and/or the Deputy Town Manager and Assistant Town Managers will initiate water shortage response Stages 1, 2, 3, and Emergency/Rationing according to various factors affecting water supply and demand.

3.1.1 Contact information

Town Manager: (919) 249-1042

Deputy Town Manager: (919) 249-3302

Assistant Town Manager: (919) 249-3353

Assistant Town Manager: (919) 372-7356

3.2 Plan Activation and Notification Protocol

Once the potential for a water shortage has been declared, the following plan implementation and communication steps are taken. The Town Manager (or designee) shall then implement the appropriate water shortage response stage by issuing a declaration to take effect within 10 days of the date when the trigger was reached. Mandatory measures will remain in effect until declared otherwise by the Town Manager, and updates to the plan over the duration of the water shortage will be provided in the sequence outlined below.

1. The Town Manager (or designee) notifies the Mayor, Town Council, neighboring municipal contract water recipients (if any), and Town employees.
2. The Communications Manager will contact the media (if is unavailable, media contacts will be made by the Town Manager's designee). The media, including television, newspaper, and radio, will help to inform the public. The phone number of the Water Resources Department (919) 362-8166 will be provided for additional information if needed by the public. Informational mailings will be distributed to residents via monthly utility bills. In addition, the Town's website, www.apexnc.org, will be updated with the latest information, and all relevant social media platforms will be used to lead the public back to the website.
3. Water Resources staff will coordinate with Finance Department Customer Service so Town employees can help provide accurate information to the public and to get a list of major water customers.
4. Staff will call major water customers (both irrigation and water accounts) and inform them of the implemented measures.
5. Staff will contact the Fire Department and coordinate with bulk users.
6. Staff will supply fliers for distribution by field employees to place on customers' doors or provide to customers that need more information.
7. Notices will be placed at municipal buildings.

3.3 Water Shortage Stages

Apex's water shortage response consists of four stages as summarized in Table 3-1. The stages have been designed and are defined to represent an increasing level of severity of water shortage, subsequently triggering an increasing level of response to reduce the Town of Apex water demands. The stages are triggered when the water supply and/or the demand changes. The Town's ability to meet demand is dependent on several components of the water supply system: the water source (Jordan Lake and/or purchase from others), raw water intake and pipeline, treatment plant, storage tanks, and distribution system. The Town continually monitors its water demand and supply, especially during times of drought conditions.

Stage 1
Spray irrigation is limited to once per week. Hand-watering, drip irrigation and subsurface irrigation is permitted every day. Athletic field irrigation is permitted. No new 45-day landscape permits shall be issued. Permits already issued during a stage 1 declaration would continue to be honored until the 45-day period has expired. Other outdoor water uses such as pressure washing, car washing, and keeping swimming pools filled are allowed, although customers are strongly encouraged to minimize such uses.

Stage 2
Spray irrigation using potable water is not allowed. No new turf watering exemption permits will be issued, and any previously issued exemption permits for watering periods that have not expired will be rescinded. Hand watering, drip irrigation, and subsurface irrigation are still allowed. Other outdoor water uses such as pressure washing, car washing, and keeping swimming pools filled are allowed, although customers are strongly encouraged to minimize such uses. The filling of a newly constructed swimming pool or watering for dust control or compaction will require the approval of the Water Resources Director. No using water from any fire hydrant for any purpose other than fire suppression or public emergency.

Stage 3
No outdoor water use with potable water is allowed, including but not limited to: spray irrigation, hand watering, drip irrigation, and subsurface irrigation, ornamental fountains, car washing, pressure washing, and keeping swimming pools filled. No new turf watering exemption permits will be issued and any previously issued permits for watering periods that have not expired will be rescinded. Firefighting and utility system maintenance are the only allowable outdoor water uses.

Emergency/Rationing
In this stage, the goal is to ensure there is drinking water available to protect public health (e.g., health care, drinking water, basic sanitation). Customers are encouraged to use the minimum amount of water needed for public health protection. No outdoor water use with potable water is allowed, including but not limited to: spray irrigation, hand watering, drip irrigation, and subsurface irrigation, ornamental fountains, car washing, pressure washing, and keeping swimming pools filled. As in Stage 3, no new turf watering exemption permits will be issued and any previously issued permits for watering periods that have not expired

will be rescinded. Firefighting and utility system maintenance are the only allowable outdoor water uses.

Table 3-1: Water Shortage Response Stage Summary	Year-round Water Conservation Program	Stage 1	Stage 2	Stage 3	Emergency/ Rationing
Outdoor Spray Irrigation	Three days per week	One day per week	None	None	None
Hand watering, drip irrigation, subsurface irrigation, athletic field maintenance	Allowed	Allowed	Allowed	None	None
Other outdoor water use such as pressure washing, car washing, keeping swimming pools filled	Allowed	Allowed	Allowed	None	None
Filling of newly constructed or drained swimming pools. Watering for dust control or compaction.	Allowed	Requires approval of the Water Resources Director	None	None	None
45 Day New Turf Landscape Permits	Allowed	No new permits issued. Permits already issued will be honored until expired	No new permits issued. Permits already issued will be rescinded	None	None

3.4 Water Shortage Triggers

The goal of having staged trigger points is to provide the Town the ability to reduce its demands during times of water shortages and thereby extend the timeframe between reaching successive trigger points. Triggers are based on the ability to meet water demands and are influenced by several components of the Town's water supply system: the water source, raw water intake and pipeline, treatment plant, storage tanks, and the distribution system. Town staff continually evaluates the status of these components to determine if a

water shortage condition exists or is approaching. The primary trigger is the water supply storage in Jordan Lake.

3.4.1 Jordan Lake Water Supply Storage Allocation

Apex and Cary have a joint allocation of the water supply storage volume in the Jordan Lake water supply pool. Apex Water Resources staff communicates regularly with the Cary staff regarding available water supply, especially during drought conditions.

The Town of Cary is responsible for tracking the amount of water in storage for the Apex/Cary allocation on a daily basis using daily and monthly water demand estimates, and daily lake inflows obtained from the U.S. Army Corps of Engineers (USACE). Cary staff uses these storage estimates to predict a worst case scenario of the number of days of water supply that remains. This worst case scenario does not take into account any inflow to Jordan Lake; in other words, it is assumed that there is zero inflow to the lake. The number of days of remaining water supply is calculated by dividing the storage volume in the jointly allocated water supply pool by the average water demand for the previous 30 days. From these values, Apex staff determines the number of days of storage available to the Town based on the Town's percentage of the allocation and the recent demand profile.

DWR has recommended guidelines for monitoring the available water supply and when necessary, implementing a minimum of three stages of water shortage response: voluntary, mandatory, and emergency. As described previously, the Town of Apex has four water shortage stages: Stage 1, Stage 2, Stage 3, and Emergency/Rationing. Table 3-2 shows Apex's four water shortage stages and the associated number of days of remaining storage which act as the triggers to implement each stage. Table 3-3 shows the water supply response triggers for increasing days of supply remaining; this table would be used when coming out of a drought situation.

Table 3-2: Water Shortage Response Triggers for Declining Days of Supply Remaining

Stage	Triggers When Days of Supply Remaining is Declining
(Water Shortage declared) Stage 1	Days of Supply Remaining 120 days or less
Stage 1 to Stage 2	Stage 1 has been in place for 28 continuous days AND Days of Supply Remaining 90 days or less
Stage 2 to Stage 3	Days of Supply Remaining 60 days or less
Stage 3 to Emergency/ Rationing	Days of Supply Remaining 30 days or less

Table 3-3: Water Shortage Response Triggers for Increasing Days of Supply Remaining

Stage	Triggers When Days of Supply Remaining is Increasing
Emergency/ Rationing to Stage 3	Days of Supply Remaining has been at least 60 days for at least 14 continuous days
Stage 3 to Stage 2	Days of Supply Remaining has been at least 90 days for at least 14 continuous days
Stage 2 to Stage 1	Days of Supply Remaining has been at least 120 days for at least 14 continuous days
Water Shortage ended	Jordan Lake Water Supply allocation is 100% full for at least 14 continuous days

The triggers shown in Tables 3-2 and 3-3 serve as guidelines and are used by the Town of Apex in combination with an assessment of the other factors that influence water supply and demand as described in this section to determine the timing of implementation of the appropriate water shortage stages during periods of water shortage.

3.4.2 Other Factors

The Town recognizes that there are several other factors to be considered when evaluating the potential for water shortage conditions. These factors include:

1. Jordan Lake Elevation. The lake elevation is influenced most by the amount of inflow to the lake from upstream and the amount of water released from the dam to the Cape Fear River downstream. Apex Water Resources staff communicates regularly with the Cary staff regarding lake elevation, especially during drought conditions. The Town of Cary is responsible for monitoring the lake levels and how the elevation compares to the elevations of the raw water intakes in Jordan Lake. The elevation of the top pipe of the primary raw water intake is at 208.3 feet mean sea level, while the elevation of the top pipe of the lower intake is 204.25 feet mean sea level. Extension devices have been fabricated to allow adjustments to the elevation of either intake.
2. A sudden loss of supplemental water supplies during periods of high demand;
3. The occurrence of a major water transmission main break, fire, or any other emergency that would require high volumes of water, such that demand could exceed supply;
4. An indication of short or long-term water quality concerns regarding Jordan Lake or other sources;
5. An accidental or intentional contamination of the water system;
6. The level of interbasin transfers relative to Apex and Cary's interbasin transfer (IBT) certificate amount;
7. A drought advisory issued by the NC Drought Management Advisory Council;
8. A mechanical failure at the WTP or within the distribution system;
9. US Army Corps of Engineers' operation of Jordan Lake in drought contingency mode.

3.5 Enforcement

If there is a violation of any provision of the water conservation ordinance including the mandatory water conservation measures, the violator is subject to a penalty of up to $1,000.00 per violation per day. A warning is issued for a first offense. Subsequent violations will be subject to the penalty fee. The Town may also choose to discontinue water service if necessary due to continuing violations. Citizens are encouraged to report violators to the Town of Apex Water Resources Department.

3.6 Variances

The Town recognizes that the requirements for water use reduction in Table 3-1 may have significantly more impact on some customers than on others and in some cases could affect public health and safety. To be considered for a variance, customers may submit a letter requesting the variance to the Water Resources Director at PO Box 250, Apex, NC 27502. The letter must include an explanation of why the requirements in Table 3-1 are not appropriate, cause extreme hardship, or affect health and safety. If a variance from either the Stage 3 or Emergency/Rationing requirements is requested, the letter should include proposed water use reductions and an explanation of why they are more appropriate.

A decision by the Water Resources Director or designee to approve or deny variance requests can be expected within two weeks and will be based upon consideration of criteria including but not limited to: impact on water demand, expected duration of water shortage, alternative source options, social and economic importance, purpose of water use (i.e., necessary use of drinking water) and the prevention of structural damage.

3.7 Plan Evaluation

The Town of Apex is committed to providing a safe and reliable water supply to its citizens. The Town understands that an effective WSRP is necessary to reduce system demands during a water shortage situation. After a plan implementation, the Town will evaluate the effectiveness of the trigger thresholds to prolong the Town's water supply and the efficiency of conservation to reduce water demands. The effectiveness of the protocols will be measured by the frequency of their activation, the number of violation citations, and if desired reductions were attained. Table 3-4 indicates the potential expected reduction from normal use for each stages, depending on the time of year.

Table 3-4: Expected Water Use Reductions*

Water Shortage Response Stage	May through October	November through April
Stage 1	**13%**	**6%**
Stage 2	**32%**	**10%**
Stage 3	**38%**	**17%**
Emergency/Rationing	**46%**	**29%**
Expected Approximate Reductions Relative to Normal Water Use		

**Town of Cary staff developed these numbers based on historic customer billing records.*

3.8 Plan Revisions

Water Shortage Response Plans should be updated regularly in response to changing conditions within the community. Circumstances warranting an updated plan may include new development, water supply demands, or changes in the number or types of available water supplies. A work group of Town staff will review procedures after each emergency reduction stage and will recommend necessary improvements to the Town Manager.

This plan will also be subject for review following any water shortage declaration. If indicated by these reviews or at a minimum of every five years as required by the provisions of GS 143-355 (l) the WSRP will be updated and submitted to NC DWR for review. An opportunity for public comment will be provided for any update of the WSRP before presentation to the Town Council for approval. The Town of Apex Water Resources Director (or designee) is responsible for initiating all WSRP updates.

3.9 Conservation Measures

The Town of Apex has multiple conservation measures that apply year-round even when there is no water shortage. The measures are in place in an effort to responsibly manage the valuable resource and to extend the Town's water supply during times of approaching drought conditions. The measures are listed below and explained in detail in Apex's *Water Conservation Ordinance* (Appendix A):

1. Mandatory year-round odd/even outdoor watering,
2. Prohibited operating conduct for irrigations systems;
3. Requiring rain sensors on all automatic irrigation systems;
4. Operation of the rain sensors;
5. Irrigation surcharge;
6. Preventing damage to the system;
7. Improper connections;
8. Prohibiting unauthorized use.

In addition to the year-round measures outlined in the water conservation ordinance, the Town also has water conservation education and incentive based measures that assist the Town's goal of responsible resource management. These education and incentive based year-round conservation components are as follows:

1. Water Conservation webpage – The Town's website contains information on household water conservation tips, an educational outline on the year-round irrigation restrictions, and frequently asked questions related to the water conservation ordinance.
2. Water Conservation pamphlet – The pamphlet is provided to all citizens on an as needed basis and details water conservation information including the schedule for the odd/even irrigation schedule requirements, ways to save water, current water restrictions, as well as contact information to call for questions on water conservation

or on concerns in reference to significant water losses at a residence or from public water infrastructure.

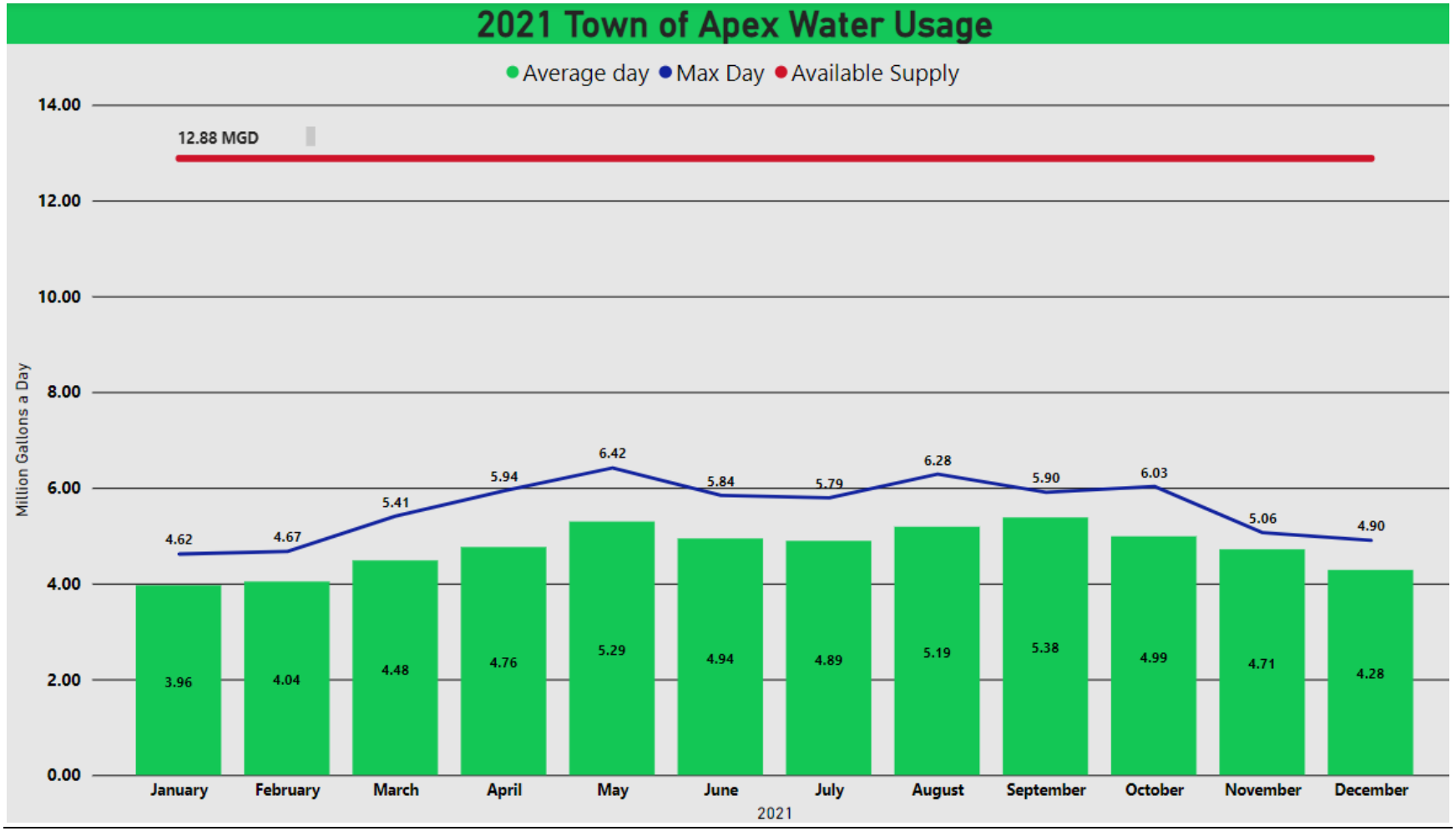
3. Rain barrels – The Town encourages citizens to purchase rain barrels from reputable suppliers. Rain barrels provides citizens with an alternative method for water conservation by using the rain barrels for landscape watering and is an educational opportunity for the community.

4. Track your water usage by registering for eservices and calculate how much water you use using online water usage calculator at http://www.home-water-works.org/

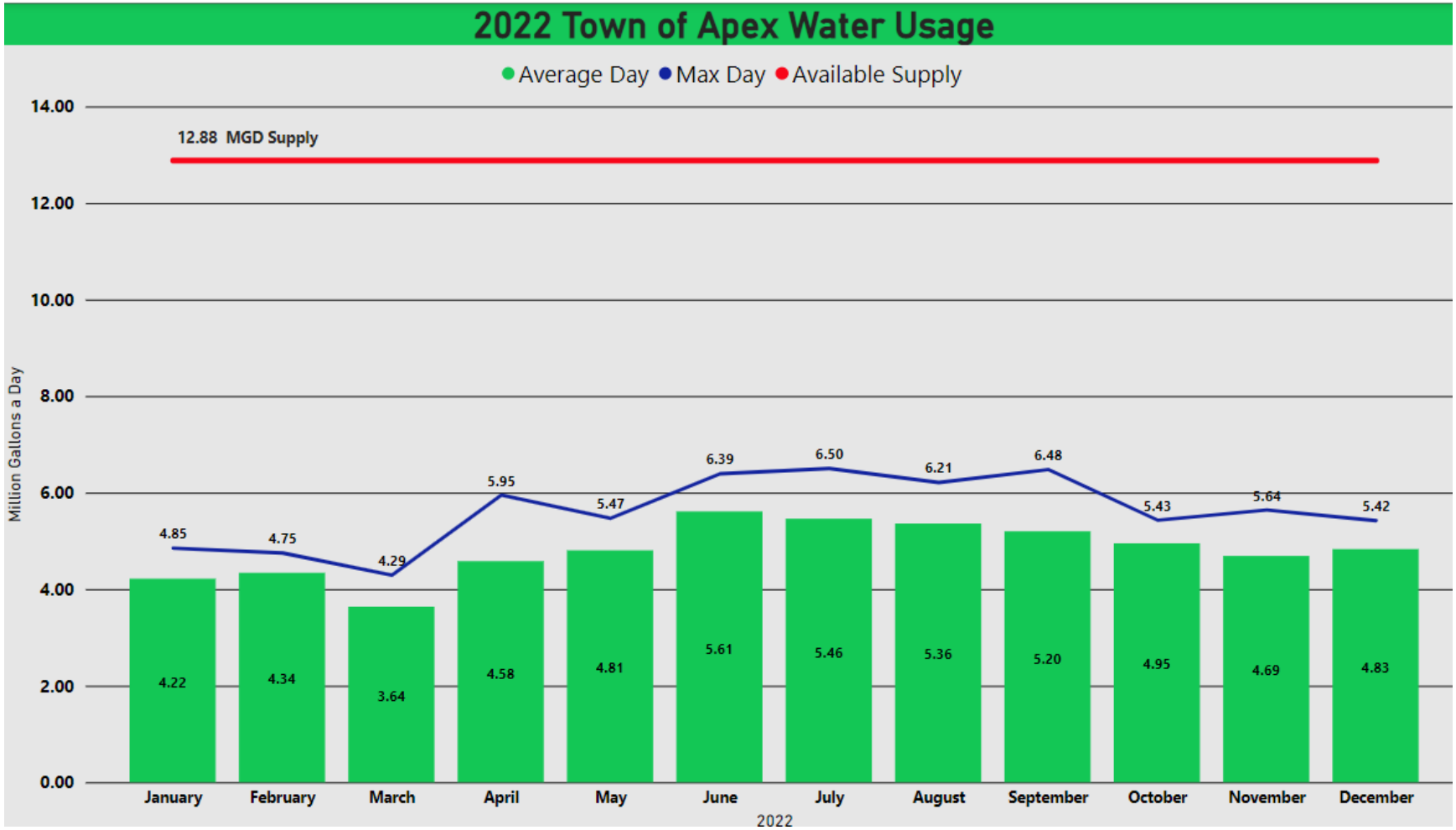
3.10 Public Comment

The public will be given an opportunity for plan review and comment. A draft plan will be posted on the Town's website at www.apexnc.org at least 30 days prior to the plan adoption and comments may be submitted online.

ATTACHMENT 1



ATTACHMENT 2



APPENDIX A

Water Conservation Ordinance

DIVISION 5. WATER CONSERVATION[1]

Sec. 12-100. Definitions.

Customer means any person in whose name the town maintains an account for water use, or who is responsible for payment of water passing through a particular meter. All customers are responsible for any use of water that passes through the meter for which they have an account or are otherwise responsible and are deemed to be users hereunder.

Hand-watering means any form of irrigation that is connected to the town's public water supply system and held in hand during irrigation use.

Impervious surface means any surface which cannot be penetrated by water or which causes water to run off the surface, including streets, driveways and sidewalks.

Irrigation means the act of applying water to the outdoor landscape through means such as moveable sprinklers, installed watering systems, hoses or other devices.

Irrigation system means a device or combination of devices that transmit or apply town water or any mixture containing town water to residential or commercial lawns, landscapes or green space.

Person means any individual, corporation, company, association, partnership, or other entity.

Water resources director means the town department head in charge of the water resources department.

Rain sensor means a device that measures rainfall and overrides the irrigation cycle of an irrigation system, thus turning it off, when a predetermined amount of rain has fallen. To meet the requirements of this division, a rain sensor shall be adjusted to shut off irrigation systems when one-fourth inch of rain has fallen.

Town manager means, for the purposes of this division, the town manager or the town manager’s designee.

Town water means all water available to the town for treatment and any treated water introduced by the town into its potable water distribution system. Not included in this definition is any treated wastewater effluent reclaimed for reuse in irrigation or other approved uses.

Trigger means conditions defined in the water shortage response plan (WSRP) which will cause a water shortage to be declared or ended, or cause water shortage response stages to be increased or decreased in severity.

Water shortage exists when the town cannot satisfy the ordinary demands and requirements of water consumers served by the town without depleting the water supply to a level that jeopardizes the continued availability of water for human consumption, sanitation, and fire protection.

Water system means the system of pipes, valves, meters, tanks, pumps, and treatment facilities owned and operated by the Town of Apex for the purpose of collecting, treating, and distributing town water.

(Ord. of 2-2-99, § 1; Ord. No. 07-0807-09, § 1, 8-7-07; Ord. No. 2010-0420-05, § 1, 4-20-10)

[1]Editor's note(s)—An Ordinance adopted Feb. 2, 1999, deleted §§ 12-100—12-104 in their entirety and replaced them with similar provisions to read as herein set out. Former §§ 12-100—12-104 derived from the 1973 Code and an Ordinance of July 24, 1986.

Cross reference(s)—Definitions and rules of construction generally, § 1-3.

Sec. 12-101. Continuing water conservation measures.

The water conservation measures enumerated in this section shall apply to all town water customers, town water users, and other persons at all times whether or not a water shortage exists:

(1) *Mandatory year-round odd/even watering schedule.* Properties with odd-numbered addresses may water lawns and/or landscapes only on Tuesday, Thursday and Saturday. Properties with even numbered addresses may water lawns and/or landscapes only on Wednesday, Friday and Sunday. No lawns and/or landscapes shall be watered on Monday. Hand-watering is permitted every day.

Exemption: Property owners may obtain a 45-day new landscape permit from the water resources department for the purpose of establishing new plantings. New plantings for the purpose of this permit are defined as large commercial plantings or the installation of new sod or seed to a bare area of more than 50 percent of the grassed or proposed grassed area of a residential yard. Such a permit may not be granted for over-seeding of established grass. The permit will become effective at the requested start date and expire 45 days later.

(2) *Prohibited conduct in operating irrigation systems.* No person shall operate or maintain an irrigation system in a manner that:

a. Allows water from emitting devices to fall on impervious surfaces to the extent that water runs off the property being irrigated onto public streets or property; or

b. Allows water from emitting devices to fall on any surface such that water accumulates to the extent that it runs off the property being irrigated onto public streets or property.

(3) *Rain sensors required.* Rain sensors are required on all automatic irrigation systems. The sensors shall be installed in appropriate locations in order to prevent irrigation during periods of rainfall.

(4) *Operation of rain sensors*. Rain sensors shall be adjusted and set so that for each rainfall event, the sensors shut off the irrigation system after one-fourth inch of rainfall has occurred. Rain sensors shall be installed according to the manufacturer's instructions and in a location that provides full exposure to rainfall. Rain sensors shall be maintained in proper working condition.

(5) *Irrigation surcharge.* The charges for water used for irrigation shall be computed by multiplying the customer's otherwise applicable water rate by a multiplier established by the town council and revised from time to time.

(6) *Damage to system.* No person shall damage, cut, break, obstruct, alter, interfere with, or tamper with any water pipe, water main, hydrant sewer pipe, water tank, water meter, water meter box, or any other part of the water system without the express written permission of the town.

(7) *Improper connections.* No person shall make a connection to any portion of the water system in a manner that violates the North Carolina State Building Code or the rules governing public water systems promulgated by the State of North Carolina or any agency thereof.

(8) *Unauthorized use.* No person shall consume, use, or otherwise take water from the water system without first obtaining permission from the town and making arrangements to pay the applicable fees for the water.

(Ord. of 2-2-99, § 1; Ord. No. 07-0807-09, § 2, 8-7-07; Ord. No. 2010-0420-05, § 1, 4-20-10)

Sec. 12-102. Stages of conservation measures in response to water shortage.

(a) The mandatory odd/even watering schedule shall be enforced year-round. To avoid or lessen the impact of a water shortage, the town manager will institute stages 1, 2, 3 and emergency/rationing by written

declaration, which shall be effective upon being signed and posted on the town bulletin board and a copy placed with the town clerk.

(b) The town manager shall base directed action upon a review of all factors that affect the town's water supply including, but not limited to, current water supply, stream flow, lake level, seasonal effect on water supply, and current consumption rates. The water shortage response triggers for declining days of supply as well as increasing days of supply will be followed as outlined in the town's water shortage response plan (WSRP). The following table illustrates the irrigation restrictions associated with each stage of mandatory water conservation:

	Stage 1	Stage 2	Stage 3	Emergency/ Rationing
Spray Irrigation	1 day/week	Not allowed	Not allowed	Not allowed
Hand Watering	Allowed	Allowed	Not allowed	Not allowed
Drip Irrigation[1]	Allowed	Allowed	Not allowed	Not allowed
Subsurface Irrigation[2]	Allowed	Allowed	Not allowed	Not allowed
Athletic Field Irrigation	Allowed	Allowed	Not allowed	Not allowed
New Turf Watering Exemption[3]	No new permits	No new permits	No new permits	No new permits

[1] Drip irrigation is the slow, even application of low-pressure water to soil and plants using plastic tubing placed directly at the root zone.

[2] Subsurface irrigation is irrigation that occurs underground, down as far as 9—12" to effectively irrigate the root zone with much less potential for evaporation than traditional spray irrigation systems.

[3] Exemptions granted prior to the declaration of a water shortage would continue to be honored until the 45-day period has expired.

(1) *Stage 1.* In stage 1, the town shall publicize and request the public to comply with the following conservation measures:

a. Spray irrigation is limited to once per week. Hand-watering is permitted every day. Athletic field irrigation is permitted.

b. No new 45-day landscape permits shall be issued. Permits already issued during a stage 1 declaration would continue to be honored until the 45-day period has expired.

c. Reuse household water when possible, (within state gray water laws).

d. Limit vehicle washing to the minimum.

e. Refrain from washing down outside areas such as sidewalks, patios, etc.

f. Use shower for bathing rather than bathtub, and limit shower to no more than four minutes.

g. Limit flushing of toilets by multiple usages.

h. Refrain from leaving faucets running while shaving or while rinsing dishes.

i. Limit the use of clothes washers and dishwashers and when used, to operate fully loaded.

j. Install water-flow restrictive devices in showerheads.

k. Use disposable and biodegradable dishes.

1. Install water-saving devices such as bricks, plastics, bottles or commercial units in toilet tanks.

m. Limit hours of operation of water-cooled air conditioners.

(2) *Stage 2.* In stage 2, the town shall continue all recommendations of stage 1 and the following measures shall be mandatory:

a. Spray irrigation is not allowed. Hand-watering is permitted.

b. Filling of newly constructed or drained swimming or wading pools shall require the approval of the water resources director. Makeup water is allowed for maintaining the operation of swimming or wading pools.

c. No introducing water into any ornamental fountain, pool or pond or other structure making similar use of water.

d. No using water from public or private fire hydrants for any purposes other than fire suppression or other public emergency.

e. Watering for dust control or compaction shall require the approval of the water resources director.

f. No using water for any unnecessary purpose or intentionally wasting water.

(3) *Stage 3.* In stage 3, all the provisions of stages 1 and 2 apply and, in addition, the following measures shall be mandatory:

a. Spray irrigation is not allowed. Hand-watering is not allowed. The irrigation of athletic fields is not allowed.

b. No nonessential use of water for commercial or public use, and the use of single service plates and utensils is encouraged and recommended in restaurants.

c. No washing down outside areas such as streets, driveways, service station aprons, parking lots, office buildings, exterior of existing or newly constructed homes or apartments, sidewalks, or patios, or use of water for other similar purposes.

d. Washing of vehicles is not permitted.

(4) *Emergency/rationing stage.* In this stage, all the provisions of stages 1 through 3 apply and, in addition, the following measures are mandatory:

a. No using water outside of structures for any use other than emergencies involving fire. Fire protection will be maintained, but where possible, tank trucks shall use raw water.

b. All industrial uses of water are prohibited.

c. All other uses of water will be limited to those uses necessary to meet essential health and safety needs of customers.

d. No introducing water into swimming pools.

(Ord. of 2-2-99, § 1; Ord. of 3-20-00, § 1; Ord. No. 07-0807-09, § 3, 8-7-07; Ord. No. 2010-0420-05, § 1, 4-20-10)

Sec. 12-103. Violation, enforcement and penalties.

(a) *Violations.* It shall be unlawful for any person to violate any provision of this division including any mandatory water conservation measure.

(b) *Criminal penalties.* Violations of this section shall not be a crime under G.S. 14-4, or other law.

(c) *Civil penalties.* Any person who violates this division is subject to a civil penalty of up to $1,000.00 per violation, per day, for so long as the violation exits. Violations and penalties shall be determined by the water resources director. In determining the amount of a civil penalty, the water resources director shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, efforts to correct the violation, the compliance history of the parties against whom the violation is assessed, the cost of enforcement to the town, whether the violation was willful or intentional and any other factor as justice requires. The town shall serve a written citation on the violator, and the customer if different, by personal delivery or by certified or registered mail, return receipt requested. The citation shall describe the violation and shall specify the amount of the civil penalty levied. If a person fails to pay a civil penalty within ten days after receiving written notice of violation, then the town may recover the penalty through a civil action in the nature of debt, including all further accruing penalties for continuing violations.

(d) *Continuing violation.* Each day that a violation continues shall constitute an additional and separate violation.

(e) *Discontinuance of service.* The town may discontinue service to a customer upon a determination by the water resources director that the customer violated a provision of this division. Prior to discontinuance, the water resources director shall give the customer written notice of the violation and an opportunity to contest the discontinuance within 48 hours.

(f) *Multiple remedies.* The town may seek to enforce this division through any appropriate equitable or legal action or through any combination of these or the foregoing remedies.

(g) *Appeal.* A person who is assessed civil penalties or whose service is discontinued may appeal to the board of adjustment by serving written notice to the town clerk within ten days of the service of citation or notice of discontinuance. An order of discontinuance is not stayed pending appeal to the board of adjustment.

(Ord. of 2-2-99, § 1; Ord. No. 07-0807-09, § 4, 8-7-07; Ord. No. 2010-0420-05, § 1, 4-20-10)

Sec. 12-104. Reserved.

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
RICHARD E. ROGERS, JR.
Director

NORTH CAROLINA
Environmental Quality

July 21, 2023

Lori Avent, Water Resources Specialist
Apex
P.O. Box 250
Apex, NC 27502

Subject: WSRP Meets Minimum Criteria
Apex
PWSID#: 03-92-045
Wake County

Dear Lori Avent,

This letter is to notify you that our staff has reviewed the information contained in the Water Shortage Response Plan (WSRP) update submitted by your office. Since all the required information is complete, the WSRP for the Apex water system hereby meets the minimum criteria established in North Carolina General Statute 143-355.2 (a) and 15A NCAC 02E. 0607.

The Water Shortage Response Plan must next be adopted by your water system's governing board; a model WSRP resolution is available online on the right side of the Local Water Supply Plan page at: https://www.ncwater.org/WUDC/app/LWSP/learn.php. Once adopted, a copy of the signed resolution must be submitted to Linwood Peele, Water Supply Planning Branch Supervisor, at the address printed at the bottom of this letter or by e-mail to the review engineer shown below. Please note, the WSRP cannot be considered compliant with the requirements of NCGS 143-355(l) until an adopted resolution is received by the Division.

Please be advised that the review process for Water Shortage Response Plans is separate from the review process for your Local Water Supply Plan (LWSP). If you have submitted your LWSP but haven't already been contacted by the Division, you will receive notification as soon as the review of your LWSP is complete.

Thank you very much for your efforts to provide your customers with a safe and reliable supply of drinking water. We look forward to continuing to work with you in these efforts. Please contact your review engineer, Vardry Austin, at vardry.austin@deq.nc.gov or 919-707-9002, or Linwood Peele at linwood.peele@ncdenr.gov or (919) 707-9024, if we can be of further assistance.

Sincerely,

Karen Higgins, Planning Section Chief
Division of Water Resources, NCDEQ

RESOLUTION NO. 23-0926-__

RESOLUTION APPROVING WATER SHORTAGE RESPONSE PLAN

WHEREAS, North Carolina General Statute 143-355 (l) requires that each unit of local government that provides public water service and each large community water system shall develop and implement water conservation measures to respond to drought or other water shortage conditions as set out in a Water Shortage Response Plan and submitted to the Department for review and approval; and

WHEREAS, as required by the statute and in the interests of sound local planning, a Water Shortage Response Plan for the Town of Apex, has been developed and submitted to the Apex Town Council for approval; and

WHEREAS, the Apex Town Council finds that the Water Shortage Response Plan is in accordance with the provisions of North Carolina General Statute 143-355 (l) and that it will provide appropriate guidance for the future management of water supplies for the Town of Apex, as well as useful information to the Department of Environment and Natural Resources for the development of a state water supply plan as required by statute;

NOW, THEREFORE, BE IT RESOLVED by the Apex Town Council of the Town of Apex that the Water Shortage Response Plan entitled, Town of Apex Water Shortage Response Plan 2023 dated 2023, is hereby approved and shall be submitted to the Department of Environment and Natural Resources, Division of Water Resources; and

BE IT FURTHER RESOLVED that the Town of Apex intends that this plan shall be revised to reflect changes in relevant data and projections at least once every five years or as otherwise requested by the Department, in accordance with the statute and sound planning practice.

Upon motion duly made by Council Member _____ and duly seconded by Council Member _____, the above resolution was duly adopted by the Apex Town Council at the meeting held on the ____ day of _____, 2023, in the Town Hall.

Upon a call for a vote the following Council Members voted in the affirmative:

_____

_____

_____

And the following Council Members voted in the negative:

_____

_____

_____

This the _____ day of _____, 2023.

TOWN OF APEX

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Allen Coleman, CMC, NCCCC
Town Clerk

Proclamation

Cyber Security Awareness Month 2023

from the Office of the Mayor

WHEREAS, Cyber Security Awareness Month is an internationally recognized campaign held each October to promote cyber security and offer education about its importance; and,

WHEREAS, The town's IT Department works hard to keep town and resident data safe and secure, and to ensure town employees can provide exceptional service to residents without interruption or danger; and,

WHEREAS, Risks to privacy online represent a serious threat to an individual's finances, medical history, identity information, and sensitive documents; and,

WHEREAS, This year's theme for Cybersecurity Awareness Month is, "it's easy to stay safe online", and there are 4 key behaviors people are encouraged to focus on to stay cyber secure: using strong passwords and a password manager, turning on multi-factor authentication, recognizing and reporting phishing, and keeping software updated; and,

WHEREAS, The Town of Apex recognizes its responsibility to safeguard the information entrusted to it by our residents, and to strive to take a proactive and adaptive approach to cyber security in order to uphold this duty now and in the future.

NOW, THEREFORE, I, Jacques K. Gilbert, Mayor of Apex, North Carolina, do hereby proclaim the Month of October 2023, "Cyber Security Awareness Month" in the Town of Apex, and encourage all residents to examine their internet habits and implement cyber security practices that can help keep themselves and their families safe from online threats.

I hereby set my hand and have caused the Seal of the Town of Apex, North Carolina, to be affixed this the 26th day of September 2023

Jacques Gilbert, Mayor

Proclamation

Hindu Heritage Month 2023

from the Office of the Mayor

WHEREAS, The Town of Apex takes pride in celebrating Hindu Heritage Month throughout October, and acknowledges and applauds the extraordinary accomplishments of Hindu Americans; and,

WHEREAS, The Hindu Community has made expansive contributions to societies across the world, with advances in fields such as education, medicine, philosophy, art, dance, yoga, music, and literature; and,

WHEREAS, The Town of Apex is extremely grateful to be home to a vibrant Hindu Community which has contributed greatly to making Apex The Peak of Good Living; and,

WHEREAS, Hindu traditions and values provide followers with invaluable solutions to many of life's problems, and often serve as a source of inspiration and reflection to over a billion people globally who look to the teachings of Hinduism for guidance; and,

WHEREAS, During this month, the Hindu Community in the United States and Apex will celebrate its rich heritage by focusing on its culture and the diverse spiritual traditions rooted in India, and the town is excited to join them in celebration.

NOW, THEREFORE, I, Jacques K. Gilbert, Mayor of Apex, North Carolina, do hereby proclaim the Month of October, 2023, "Hindu Heritage Month" in the Town of Apex, and encourage all residents to immerse themselves in this beautiful culture by joining in the celebrations of Hindu Heritage Month throughout October.

I hereby set my hand and have caused the Seal of the Town of Apex, North Carolina, to be affixed this the 26th day of September 2023

Jacques Gilbert, Mayor

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PRESENTATION

Meeting Date: September 26, 2023

Item Details

Presenter(s): Russell Dalton, Traffic Engineering Manager, & Sajid Hassan, Traffic Safety Engineer

Department(s): Transportation & Infrastructure Development

Requested Motion

Staff to present a one-year update on the Vision Zero traffic safety program since adoption of the Apex Vision Zero Action Plan.

Approval Recommended?

N/A

Item Details

The Vision Zero Action Plan is the Town's roadmap to reaching zero traffic-related fatalities and severe injuries by 2035.

On August 9, 2022, staff provided a presentation to Town Council including a schedule update, a development plan, and adoption of the Vision Zero Action Plan. A presentation will be provided tonight on a one-year update since adoption.

Attachments

- PR2-A1: Vision Zero 1-year Update Presentation



September 26, 2023

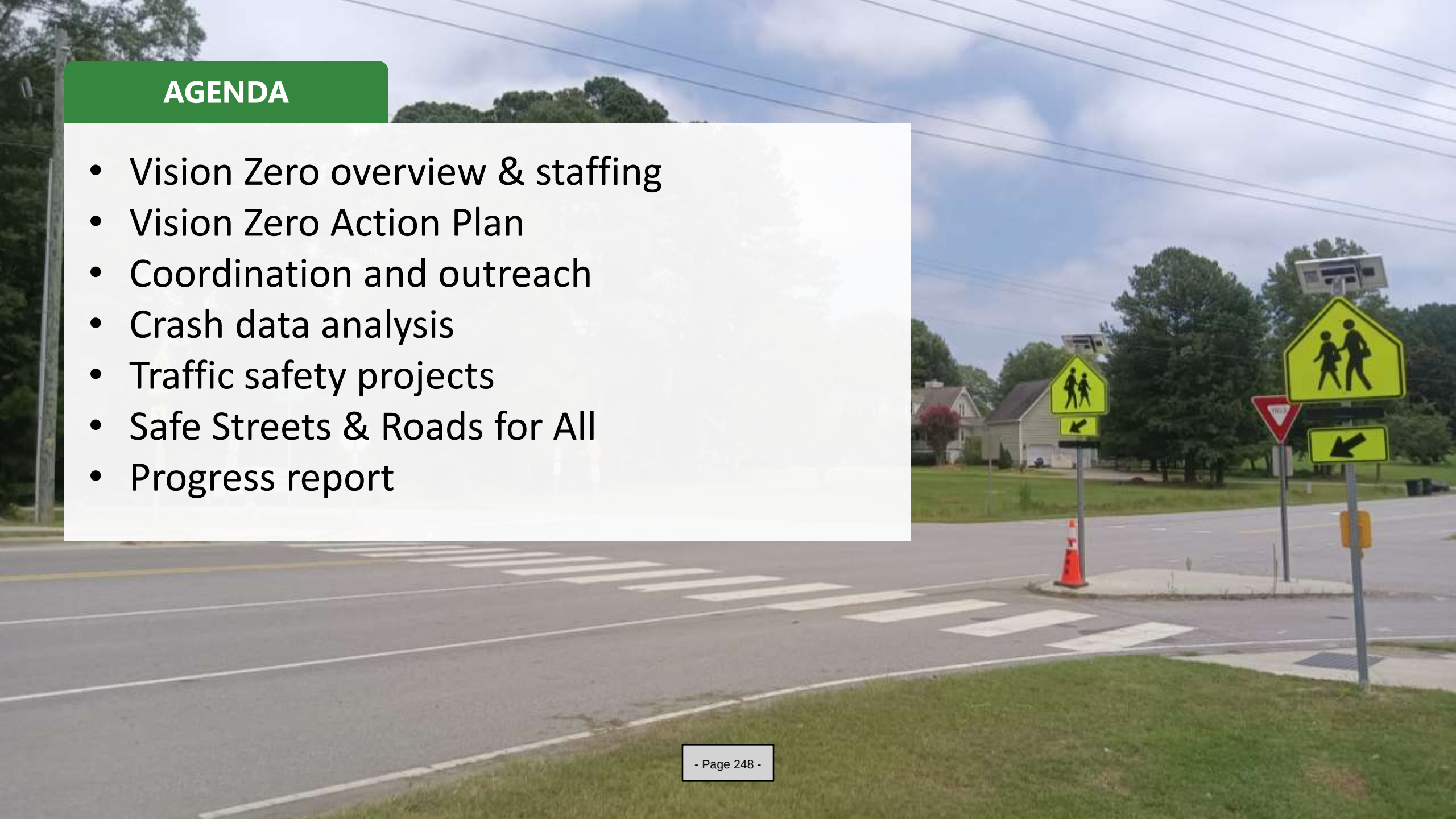
Town Council Presentation

Vision Zero 1-year Update

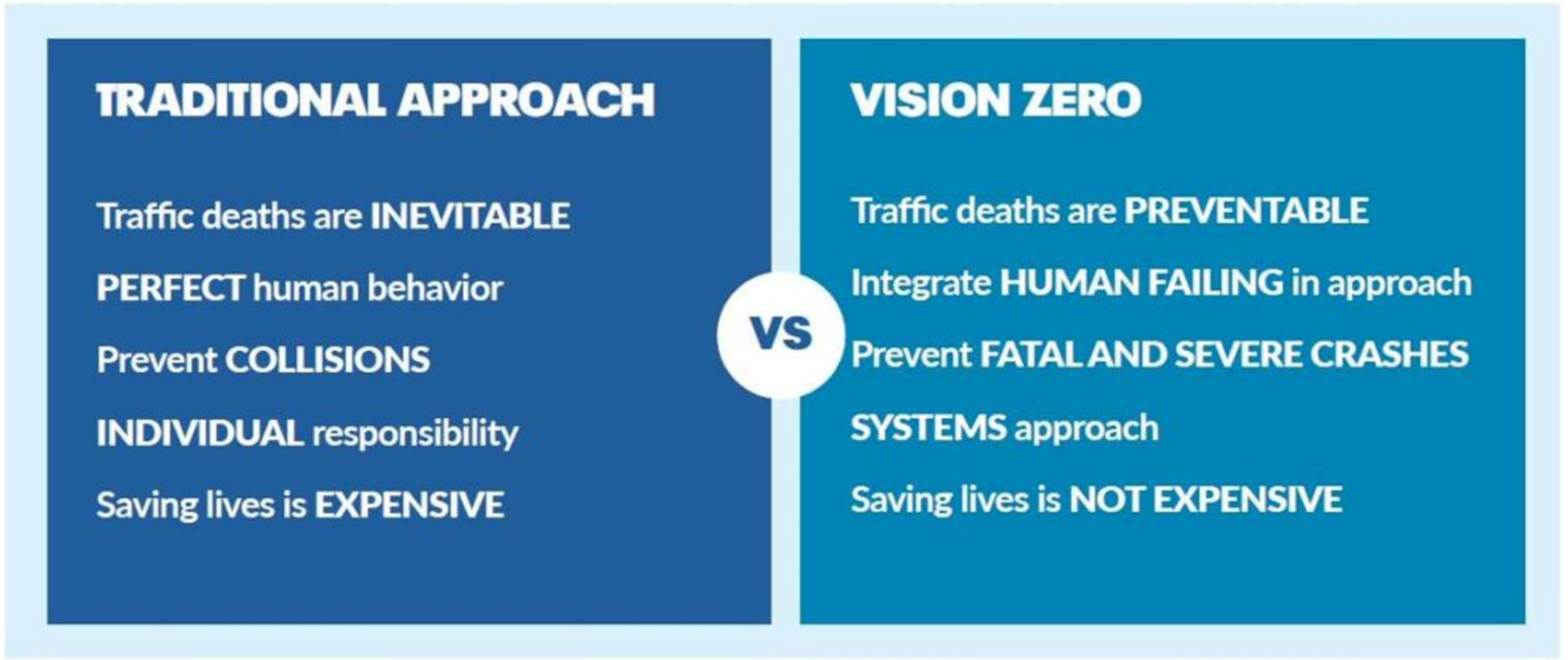
APEX NORTH CAROLINA

AGENDA

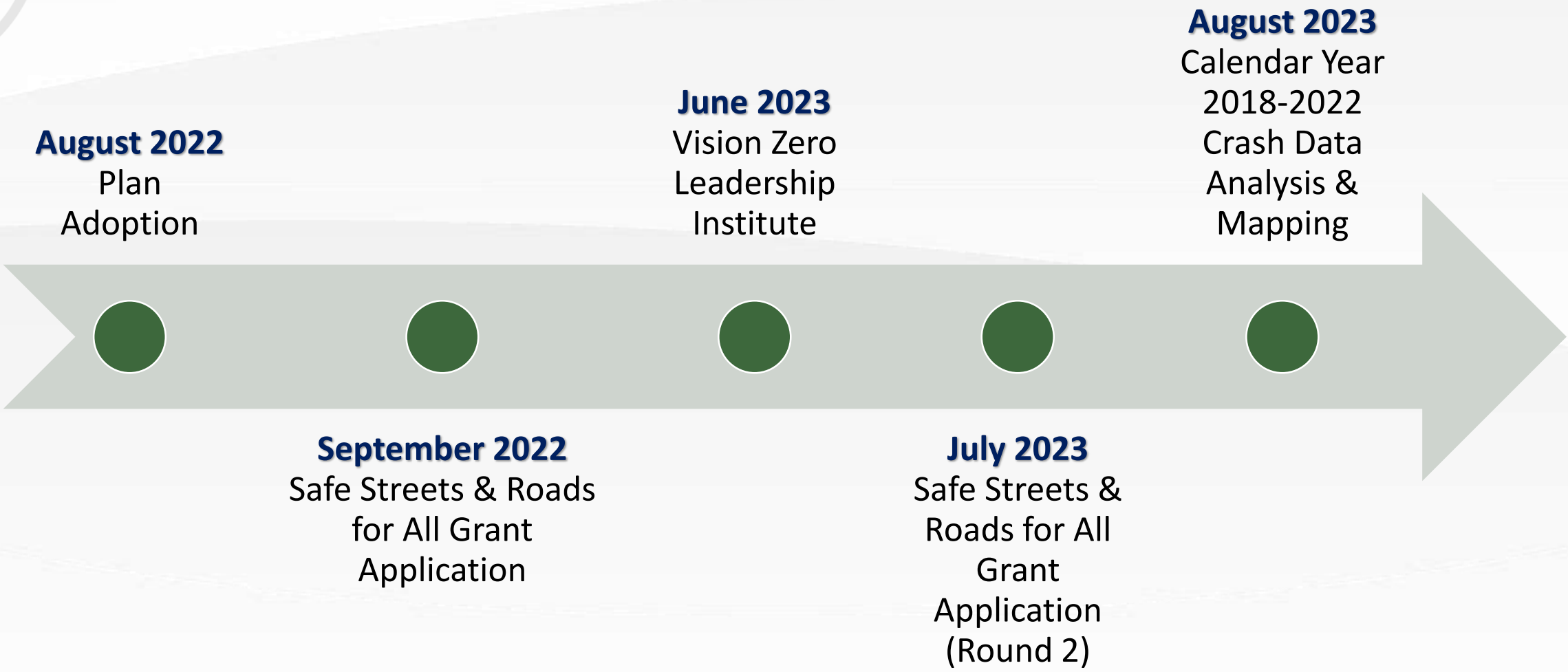
- Vision Zero overview & staffing
- Vision Zero Action Plan
- Coordination and outreach
- Crash data analysis
- Traffic safety projects
- Safe Streets & Roads for All
- Progress report



What is Vision Zero?



Vision Zero Timeline in Apex



Traffic Safety Engineer

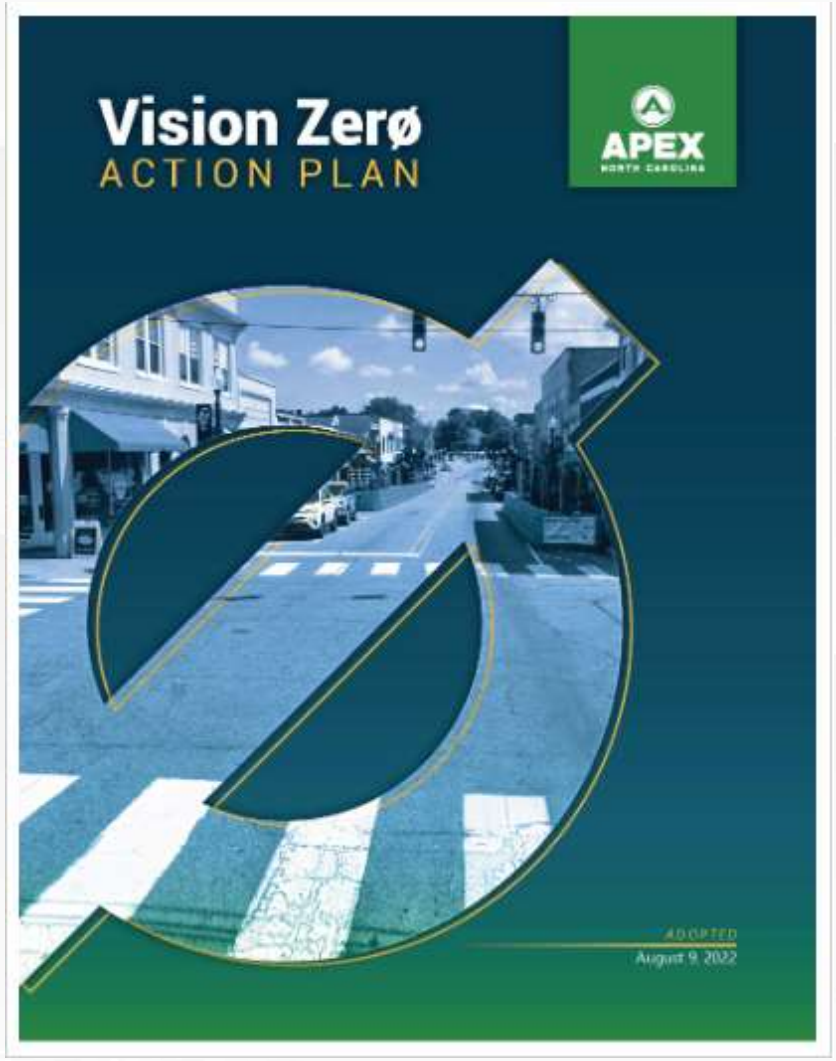
- Sajid Hassan, PE (hired March 2023)
  - 15+ Years of transportation engineering experience
  - Formerly with NCDOT and other NC municipalities
- Manages:
  - Vision Zero Program
  - Traffic Calming Program
  - Traffic Safety Studies
  - Pedestrian Studies

Vision Zero Task Force

- Traffic Services
- Long Range Planning/Transit Planning
- Police
- Communications
- Diversity, Equity & Inclusion
- Public Works Street Operations
- Fire Department

Interdepartmental and multi-disciplinary approach to traffic safety

The Vision Zero Action Plan is the Town's roadmap to reaching zero traffic-related fatalities and severe injuries by 2035



FIVE "E" APPROACH



Engineering



Education



Encouragement



Enforcement



Evaluation

GOALS

1. **Promote a culture of traffic safety that prioritizes equity and inclusion.**
2. **Address collisions through infrastructure investments.**
3. **Enhance Town policies, processes, and evaluation to incorporate Vision Zero tenets.**
4. **Create and leverage partnerships to improve traffic safety and awareness.**

28 Actionable Strategies under the Five E's


Engineering (7)


Education (5)


Encouragement (6)


Enforcement (4)


Evaluation (6)

Each Strategy identifies which of the 4 Goals are met, a Leading Department, Supporting Department(s), and a Timeframe

Statewide Program

- Facilitated by UNC Highway Safety Research Center (HSRC)
- Funded through Governor's Highway Safety Program (GHSP)
- Wilmington, Knightdale & Leland are current assigned community partners with Apex
- Quarterly meetings with all NC Vision Zero communities

Leadership Institute

The NC Vision Zero Leadership Institute is team training resource for North Carolina communities that have or are planning to start a Vision Zero initiative.

- Key takeaways (2023)
  - Encourage participation
  - Expand traffic safety/traffic calming countermeasures toolbox
  - Utilize modular pilots
  - Promote Safe Routes to School

Apex Vision Zero Website

Background | **Programs & Initiatives** | **Stakeholders** | **Progress**

The Resolution to Support Vision Zero Apex was approved by the Apex Town Council on July 21, 2020 affirming the Town's commitment to eliminating traffic deaths and serious injuries. It also provided a framework for Town departments and community stakeholders to work together to achieve this goal.

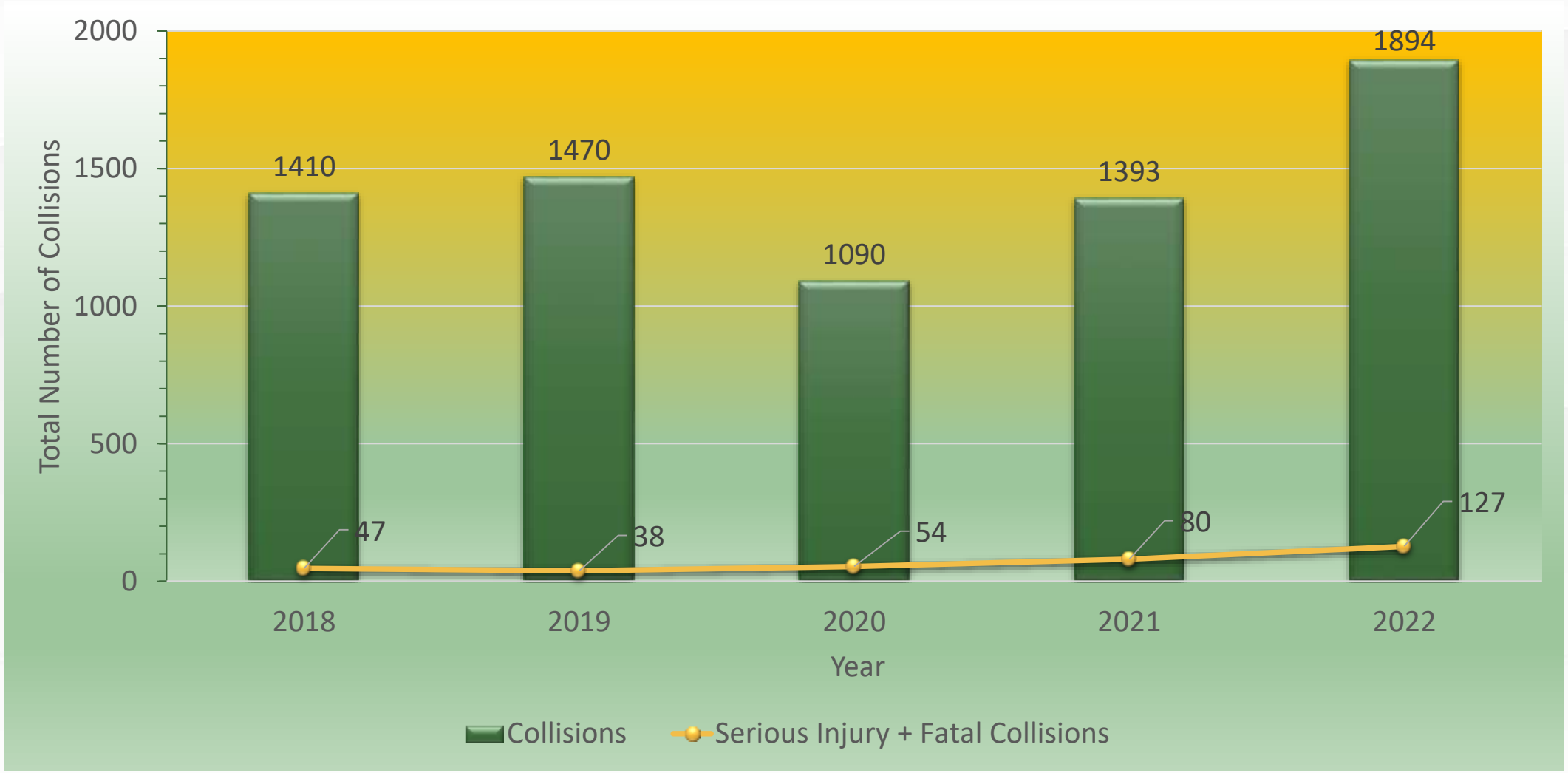
Vision Zero started in Sweden in the 1990s. It has been adopted by many countries around the world and cities within the United States. North Carolina adopted the Vision Zero program in 2015, and launched NC Vision Zero as a resource for municipalities.

Approximately 6,709 motor vehicle-related crashes occurred in Apex over a 5-year period from 2015-2019 resulting in 237 severe injury crashes and 4 fatalities. Crash data analysis and mapping will be updated and published annually as part of implementation of the Actionable Strategies outlined in the Action Plan.

Crash Data Analysis

- Action Plan crash data was based on fiscal year (July 1-June 30)
- Timeframe was later revised to comply with calendar year grant application requirements
- Current 5-year crash data as of September 2023 is calendar year 2018-2022

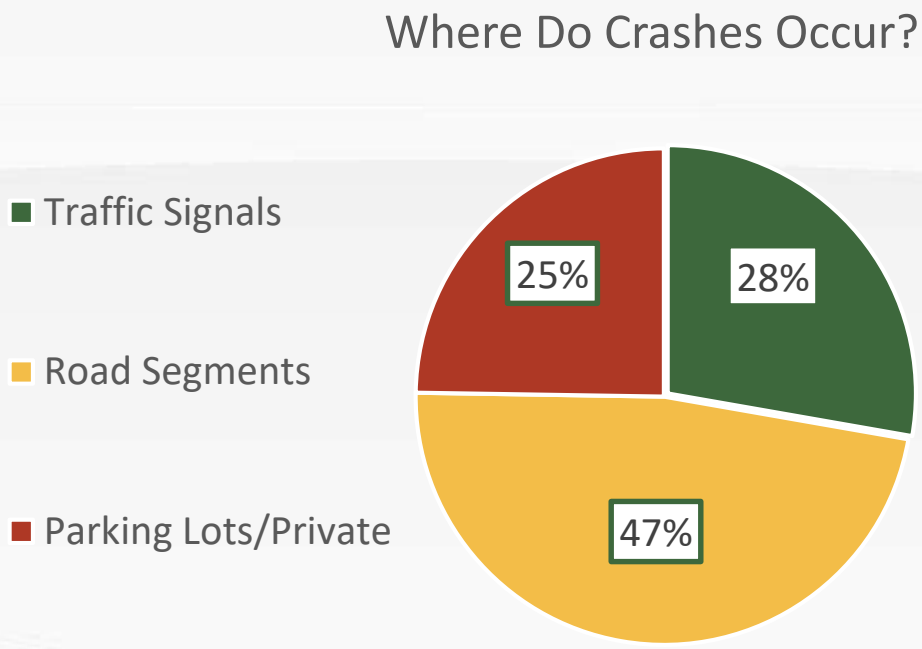
Total Number of Crashes

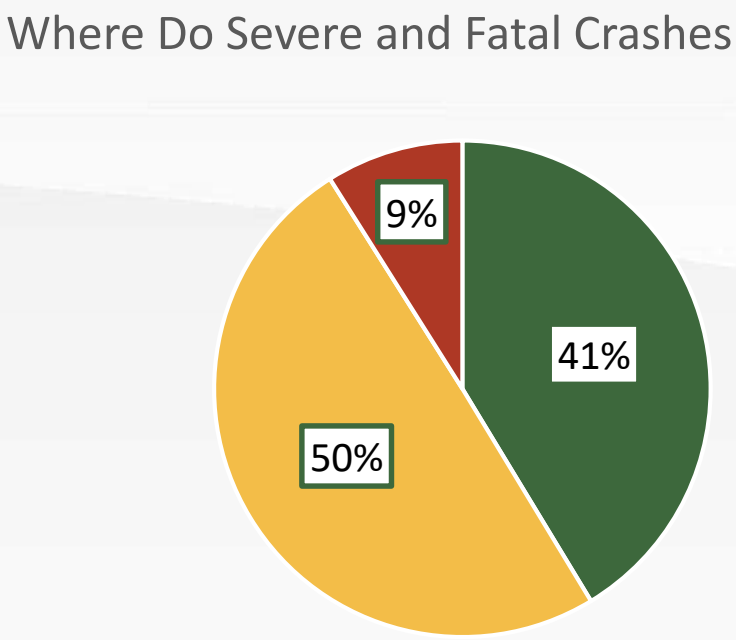


Number of Crashes Involving Cyclists and Pedestrians



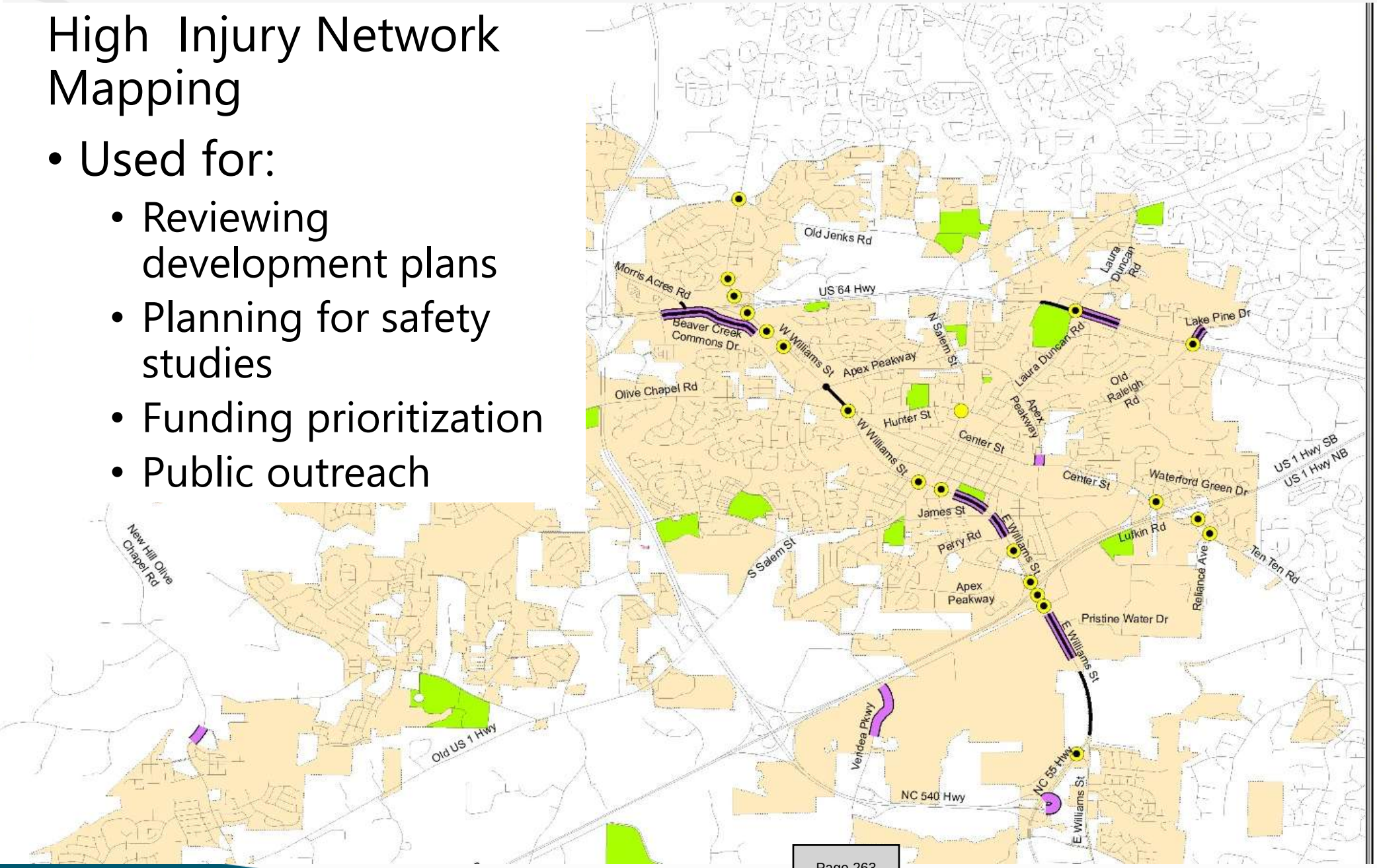
Where Crashes Occur





High Injury Network Mapping

- Used for:
  - Reviewing development plans
  - Planning for safety studies
  - Funding prioritization
  - Public outreach



NC 55 at Hughes St Pedestrian Safety Project

Engineering Education Encouragement Enforcement Evaluation

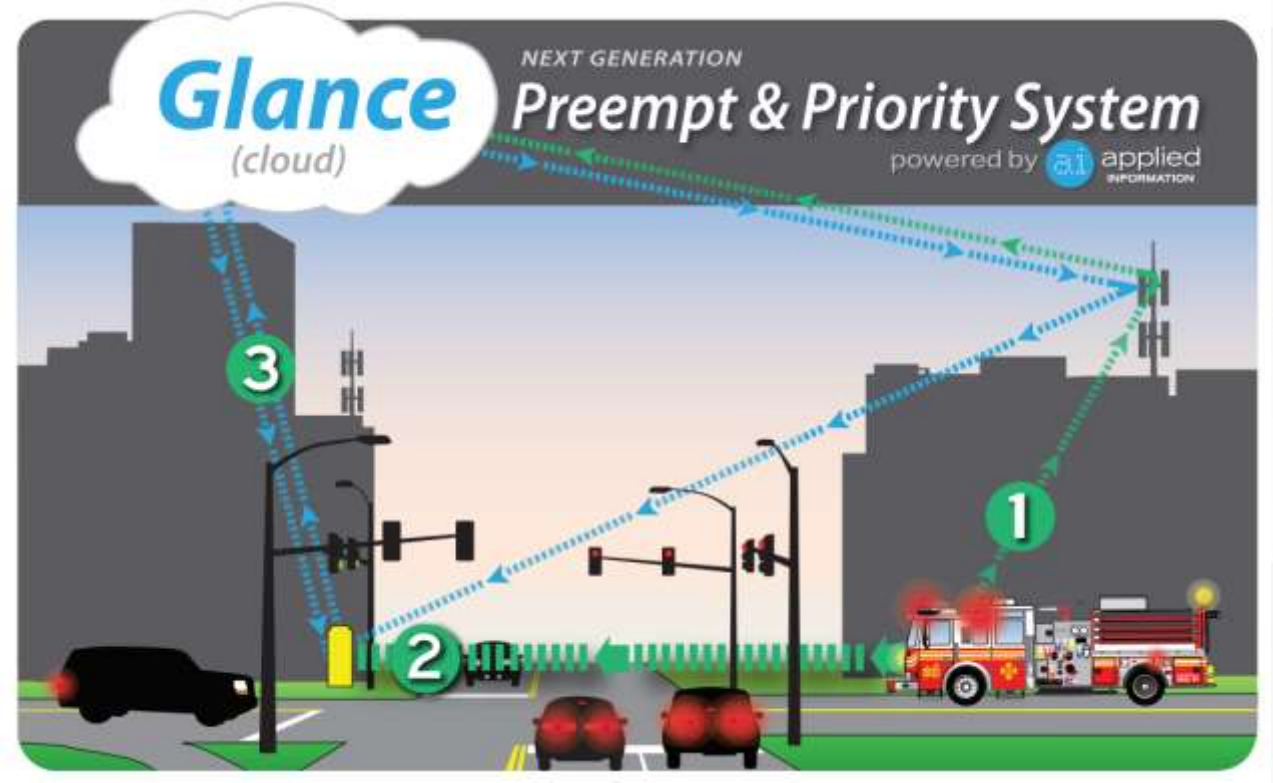
- Pilot study with UNCC (LIDAR unit & data processing)
  - Implemented Leading Pedestrian Interval
  - Adjusted Red Clearance Intervals
  - Installed turning vehicle yield to pedestrians signs
  - Restriped crosswalks and stop bars
  - Red light running violations highest on Fridays between 11 AM – 1 PM; targeted enforcement
  - Recommended Watch 4 Me NC and Safe Routes to School outreach at Apex Middle School



NC 55 at Hughes St (2023)

GPS Cellular Emergency Vehicle Preemption (EVP) Phase 1 Project

- Installation of equipment
  - Install at 10 traffic signals on NC 55 and Salem St
  - Five (5) other traffic signals have equipment pre-installed
  - Install equipment in fire trucks
  - Interoperability with Cary EVP
- VHB selected for signal design



- Next steps: NCDOT approval & equipment installation

Corridor Safety Studies (FY23)

- Two high injury network corridors
  - Beaver Creek Commons Drive, NC 55 to Creekside Landing Drive
  - Ten Ten Road, US 1 to Reliance Avenue
- RK&K selected to perform studies
- Preliminary recommendations include:
  - Signs and markings
  - Signal phasing and timing
  - Modifications to driveway access
  - Maintenance/clearing of vegetation
- Next steps: finalize reports late 2023 and conduct outreach



Beaver Creek Commons Dr at Zeno Rd (2023)



Ten Ten Rd at US 1/Lufkin Road (2023)

Safe Streets and Roads for All (SS4A) Grant Program

U.S. Department of Transportation

- Submitted grant application for FY24 grant funding (July)
  - Six (6) Supplemental Planning, Analysis & Demonstration Projects
  - 19 Implementation Projects
  - Six (6) of the 19 implementation projects address Low-Cost/High-Impact Improvements on the High Injury Network
    - Roadside issues/strike hazards
    - Advance warning signs, overhead signs and supplemental signs
    - Advance warning systems and driver information displays
    - Geometric design and pavement marking countermeasures
- Awards to be announced in December 2023

Engineering

- 7 Actionable Strategies
- Progress on 6 out of 7
- Work toward a performance evaluation process for prioritizing projects based on safety needs
- Notable activities:
  - Crosswalk lighting standards
  - Safety studies on the High Injury Network
  - Updated standards for ADA-PROWAG compliance
  - Multiple Safe Routes to School Projects



North Salem Street Sidewalk (2023)

Education

- 5 Actionable Strategies
- Progress on 5 out of 5
- Notable activities:
  - Traffic Safety Presentation Outreach Programs
  - Power of Youth Educational Programs
  - Governor's Highway Safety Program & Watch for Me NC
  - Traffic Safety Campaigns
  - Dynamic Message Boards & Radar Speed Signs
  - Defensive Driving Cornerstone Modules







Encouragement ★★★★★★

- 6 Actionable Strategies
- Progress on 6 out of 6
- Notable activities:
  - Walk to School events & materials
  - Safe Routes to School and Vision Zero outreach at events
  - Vision Zero webpage and progress updates
  - Vision Zero Leadership Institute
  - Statewide Vision Zero coordination



Walk to School Day, Olive Chapel ES (2023)

Enforcement ★★★★

- 4 Actionable Strategies
- Progress on 4 out of 4
- Notable activities:
  - Watch for Me NC targeted enforcement
  - Data-driven enforcement initiatives
  - Governor's Highway Safety Program DWI Grant Officer
  - "Move over" enforcement on US 1 & US 64
  - Training on biased policing issues



BAT mobile

Evaluation

- 6 Actionable Strategies
- Progress on 5 out of 6
- Work to establish performance measures for traffic enforcement campaigns
- Notable activities:
  - Draft policy and prioritization for bus stop improvements
  - Municipal speed limit and traffic calming policy review
  - 2018-2022 crash data analysis
  - Monthly Task Force meetings
  - Traffic Safety Engineer



Hughes St at NC 55 Bus Stop (2023)

Major Initiatives for 2024

- Capital Improvement Program
  - Phase 1 emergency vehicle preemption installation
  - Phase 2 emergency vehicle preemption prioritization
  - Safety improvements from FY24 high-injury network studies
  - Prioritize FY25 studies
- Third round of school principal updates & interviews for Safe Routes to School program
- Review of policies and ordinances for possible changes

Thank you!

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PRESENTATION

Meeting Date: September 26, 2023

Item Details

Presenter(s): Timothy Maloney, Director, and Bill Shroyer, Senior GIS Analyst, Wake County Department of Planning, Development & Inspections

Department(s): Wake County Department of Planning, Development & Inspections

Requested Motion

Receive as information regarding the Wake County Land Cover Analysis & Tree Canopy Assessment led by Wake County and Davey Resource Group.

Approval Recommended?

N/A

Item Details

The Town of Apex participated in a county-wide planning effort led by Wake County and their consultant to analyze existing land cover and tree cover conditions within Wake County. One goal of this study was to identify potential opportunities for tree cover restoration, with a focus on equity for vulnerable communities. Findings were provided for each municipality within Wake County. The project team will provide a brief summary of the study, recommendations, and next steps. The final report is available at:

https://www.wake.gov/departments-government/planning-development-inspections/planning/wake-county-tree-canopy-assessment

Attachments

- PR3-A1: Apex Land Cover Analysis & Tree Canopy Assessment

WAKE COUNTY
NORTH CAROLINA

APEX LAND COVER ANALYSIS & TREE CANOPY ASSESSMENT

Community Report | Town of Apex


SEABOARD
1138
VA DIV.
12 VDC
BATTERY BOX
SEABOARD AIR LINE RAILROAD



This report belongs to a series of reports produced by the Wake County Land Cover Analysis and Tree Canopy Assessment (Wake LCA/TCA), a countywide initiative led by Wake County Government in consultation with Davey Resource Group, Inc.

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Executive Summary



Foreword

The Wake LCA/TCA utilized geospatial analysis to identify and measure countywide land cover, including tree canopy, as it existed in 2020. The project also evaluated tree canopy type and health and measured the change in tree canopy cover over the ten-year period from 2010–2020.

This is not a policy document; it is a summary report offering a visual, high-level overview of the project, the accompanying analyses and the results. The report intention is to leave readers with an impression of the intrinsic value of tree canopy an understanding of how land cover data can be leveraged as a resource for policymakers, researchers, civic organizations, residents and stakeholders of the greater Wake community.

Background

County Growth and Development

Wake County has experienced high population and job growth over the last decade, with significant ongoing and anticipated development occurring in the next five years. As economic opportunity and population growth fuel land development, the county is consequently experiencing a conversion of open spaces, natural areas and agricultural lands into built environments at a similarly rapid rate.

County Response

This growth has underscored the necessity of intentionally prioritizing tree canopy management and understanding the associated impacts on the environment to ensure sustainability and livability in Wake County communities. Recognizing this necessity, the Wake County Department of Planning, Development and Inspections (PDI) received state-administered federal funding, made available by the American Rescue Plan Act., to commission the Wake LCA/TCA.

PDI contracted Davey Resource Group, Inc. (DRG), a national environmental consulting firm, to lead the project and perform the analysis, which encompasses the entirety of Wake County's 857 square miles of land area and includes the planning jurisdiction of each of the county's 12 core municipalities: Apex, Cary, Fuquay-Varina, Garner, Holly Springs, Knightdale, Morrisville, Raleigh, Rolesville, Wake Forest, Wendell and Zebulon.

Purpose

Provide data to guide and support planning and implementation efforts on both a county and municipal level.

County Goals

- Support a higher quality of life for vulnerable residents and communities.
- Preserve and enhance the County residents' quality of life through coordinated land use and transportation planning.
- Preserve and protect a clean and abundant water supply.
- Preserve open space and expand access to parks, preserves, recreation resources and greenways.
- Promote sustainability and address issues associated with climate change.

Municipal Collaboration

Wake County worked closely with municipal partners to determine the project scope. Additionally, the Wake LCA/TCA provides comprehensive deliverables for the county's 12 core municipalities, including the data and this report.

Project Objectives

Analyze

Analyze the existing land cover conditions.

Evaluate

Evaluate tree canopy type, health and change over a ten-year span (2010-2020).

Measure

Measure the environmental and socioeconomic impact of tree canopy cover.

Identify

Identify potential opportunities for canopy restoration, with a focus on equity for vulnerable communities.

Apex

Incorporated in 1873 and situated between Cary and Holly Springs in southwest Wake County, Apex's corporate limits encompass a total land area of 16,217 acres — equivalent to roughly 25 square miles. The town planning jurisdiction includes an additional 7,981 acres.

Growth and Development

From 2010-2020, the town population climbed from 37,476 to 58,780 residents — an increase of 57%, which is roughly six times greater than the growth rate of North Carolina (9.5%) and almost eight times greater than the national growth rate over the same period (7.4%).

The study area of this report is the Apex planning jurisdiction, which spans a total area of approximately 24,199 acres. Within these bounds are a variety of community green spaces, five individual watersheds and a diversity of land uses, including agriculture, industrial, commercial and residential areas.

The planning jurisdiction is comprised of two distinct jurisdictional types: corporate limits and extra-territorial jurisdiction.

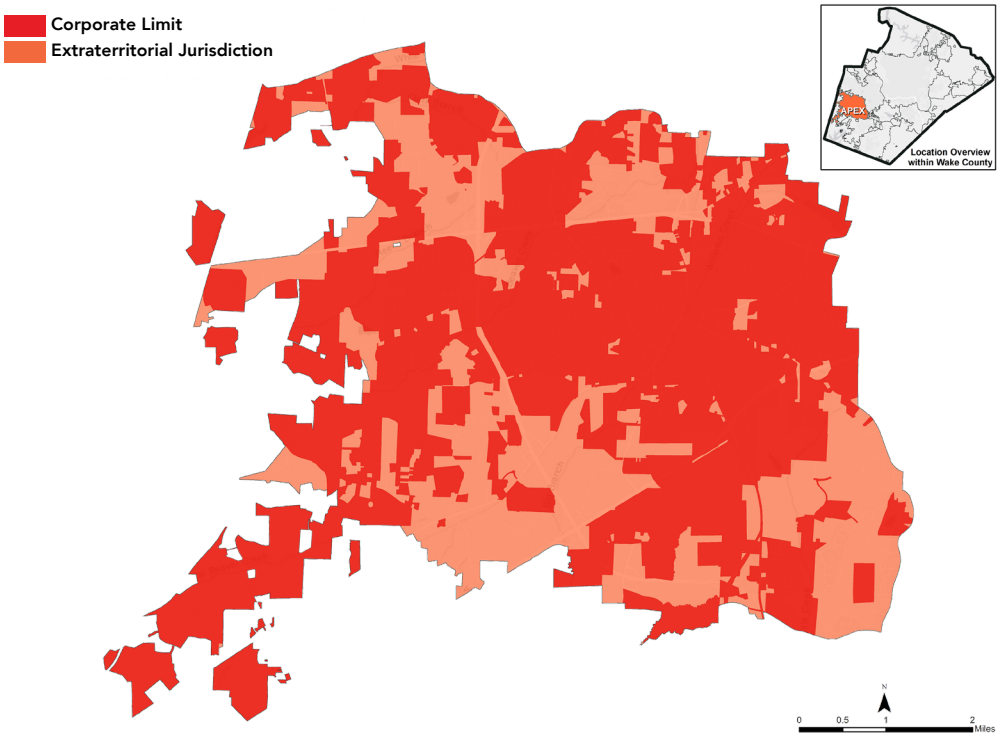
Corporate Limits

The corporate limits (i.e., town limits) are the incorporated land area belonging to a municipality. At the time of analysis, the Town of Apex corporate limits consisted of 16,127 acres.

Extra-territorial Jurisdiction

Extra-territorial jurisdiction (ETJ) describes land that is physically located outside of the corporate limits, but where Apex holds regulatory authority over land development and building construction. At the time of analysis, the Apex ETJ contained 7,981 acres.

MAP E.1 APEX PLANNING JURISDICTION (2022)



Land Cover

DRG employed geospatial analysis and remote-sensing methods to identify the land cover composition throughout the planning jurisdiction of Apex. The analysis utilized 2020 imagery made available by the United States Department of Agriculture's National Agriculture Imaging Program (NAIP). Imagery analysis is cost-effective and attains a high degree of accuracy.

Land cover data are a valuable resource for supporting a variety of multidisciplinary efforts, including environmental management, resource conservation, urban planning, sustainable development, emergency preparedness and climate change mitigation.

The analysis classified the entire land area within the planning jurisdiction into five distinct types of land cover (Figure E.1).

Tree Canopy — **12,196 acres**

Land area that is covered by tree trunks, branches and leaves, as seen from above.

Vegetation — **5,590 acres**

Shrubs, grasses and other low-lying vegetation that allow rainfall to infiltrate soil.

Impervious Surface — **4,840 acres**

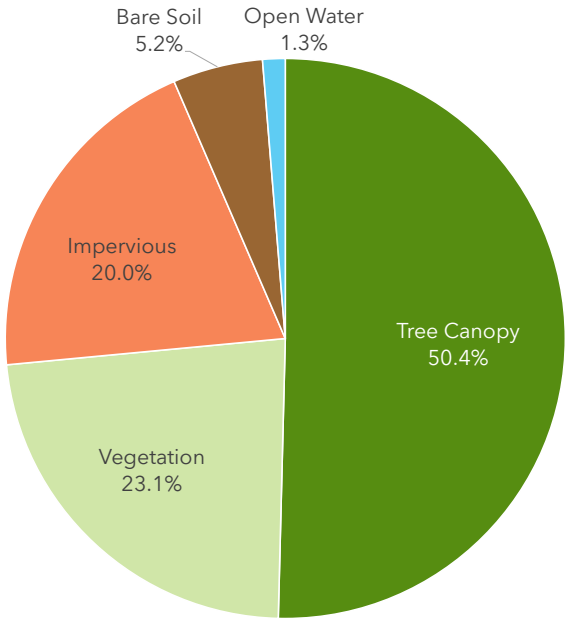
Buildings, roads, sidewalks and other paved or built areas that do not allow rainfall to infiltrate the soil.

Bare Soil — **1,258 acres**

Exposed soil that lacks vegetation, such as vacant lots, construction sites, agricultural fields and baseball infields.

Open Water — **315 acres**

Lakes, ponds, streams, wetlands and other water features.

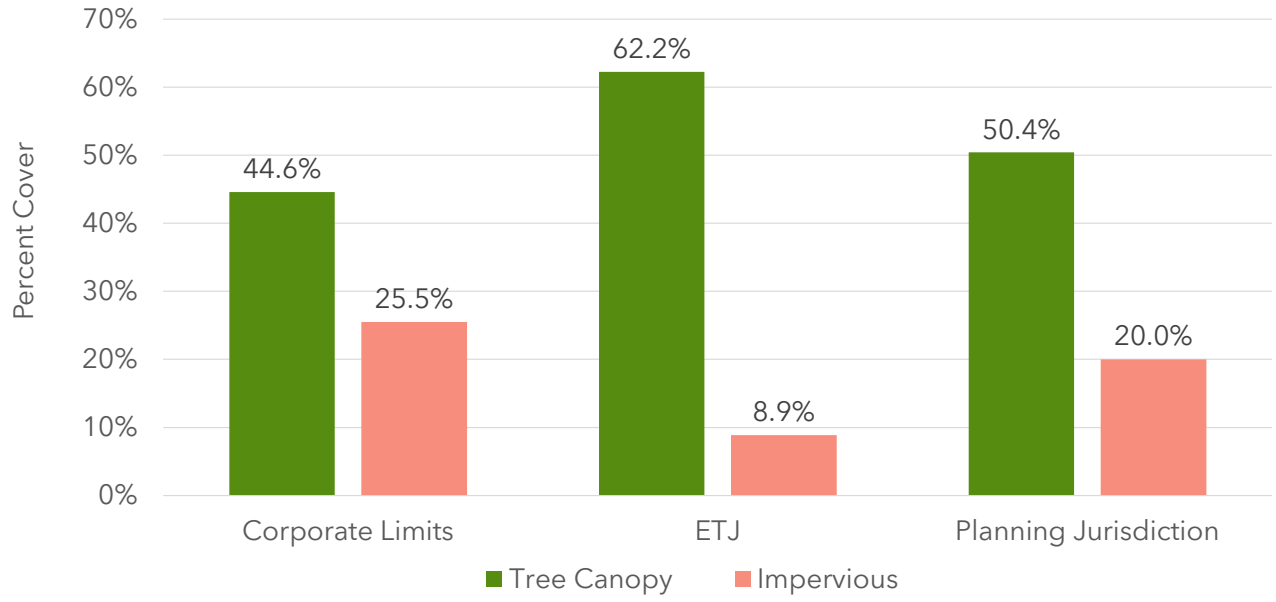


E.1 PLANNING JURISDICTION LAND COVER (2020)

Jurisdictional Analysis

To further support planning and implementation efforts, the study looked within the planning jurisdiction and individually examined the corporate limits and ETJ (Figure E.2).

E.2 TREE CANOPY AND IMPERVIOUS SURFACE BY JURISDICTION TYPE (2020)





Canopy Assessment

A canopy assessment takes a detailed look at the tree canopy data obtained from the land cover analysis. DRG employed a variety of remote-sensing methods to extrapolate additional information such as canopy type, canopy health and canopy change over time.

Canopy Type

Canopy type analyses support sustainable forest management and natural resource planning. The data can also help inform decisions about zoning, infrastructure development and urban expansion.

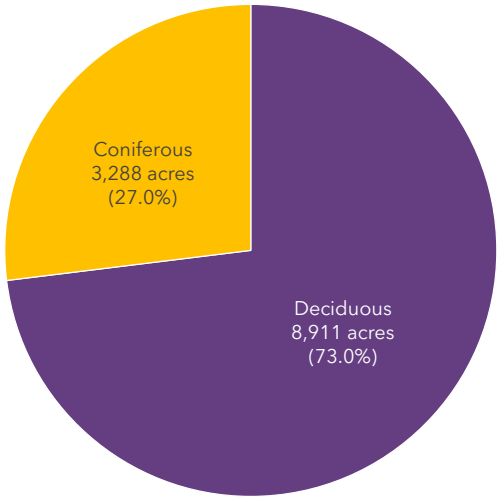
The assessment classified tree canopy into two distinct forest types (Figure E.3):

Coniferous — 3,288 acres

The canopy is characterized by the predominance of cone-bearing trees which typically retain their leaves or needles year-round. Wax-leaf evergreens, such as hollies and magnolias, are included in this category.

Deciduous — 8,911 acres

The canopy is characterized predominately by trees which lose their leaves during winter. In North Carolina, common deciduous species include oak, hickory, maple, beech and elm.



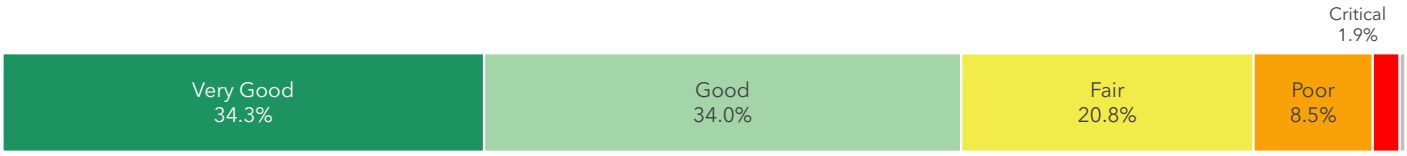
E.3 PLANNING JURISDICTION CANOPY TYPE (2020)

Canopy Health

A canopy health assessment provides valuable insights into overall forest well-being and vitality. The data aids in the detection and management of diseases, nutrient deficiencies and environmental stressors. The analysis also supports proactive tree maintenance in public areas (greenways, parking lots, etc.) or along major road corridors utilized by first responders, a key aspect of an emergency preparedness plan.

Tree canopy throughout the planning jurisdiction is assessed to be predominantly in Very Good and Good condition (Figure E.4).

FIGURE E.4 PLANNING JURISDICTION CANOPY HEALTH (2020)



Canopy Change

To measure temporal change in the amount of tree canopy, DRG compared 2020 tree canopy to canopy as it existed in 2010 by performing an additional land cover analysis utilizing 2010 NAIP imagery.

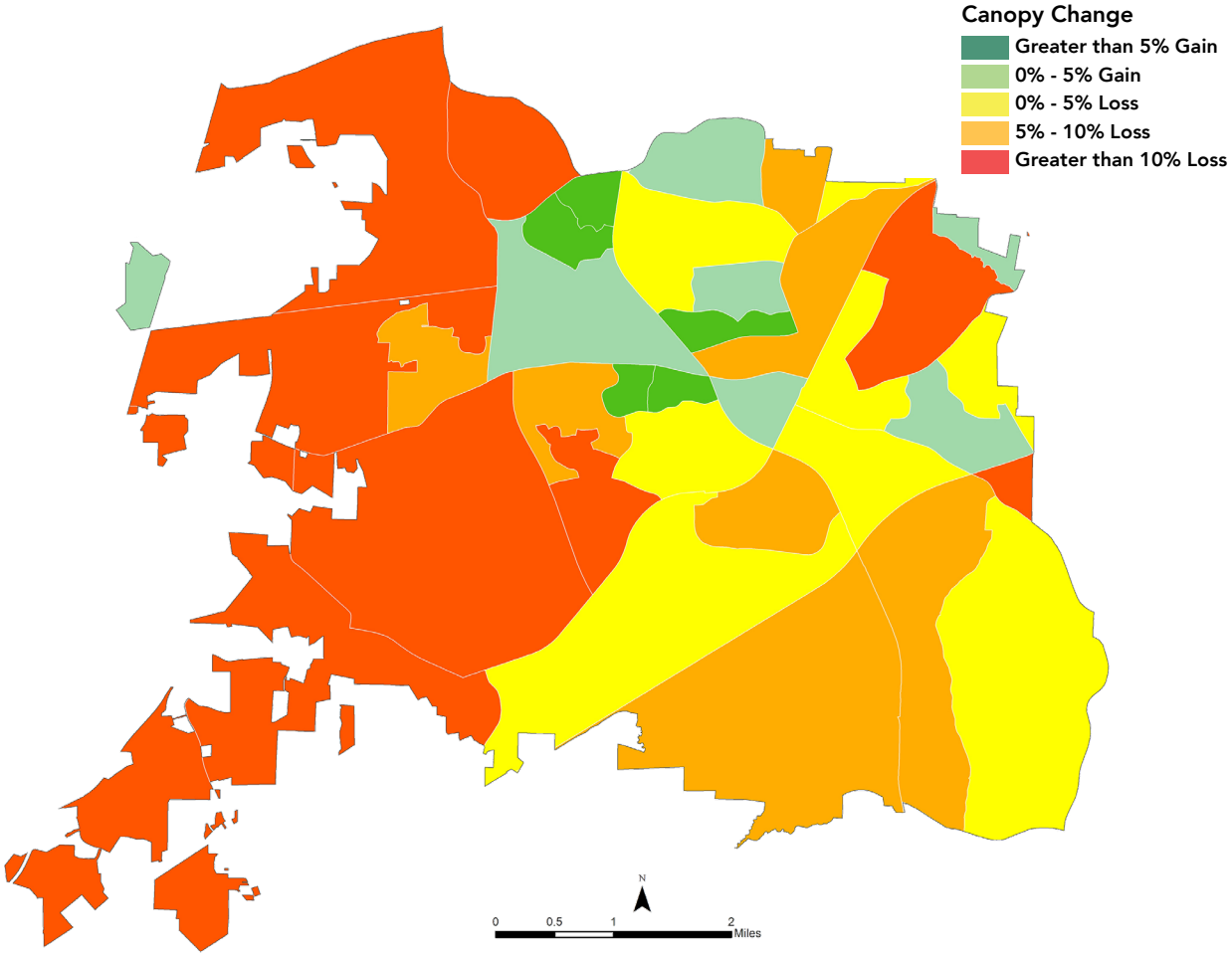
Canopy Loss

From 2010-2020, the Apex planning jurisdiction lost 2,180 acres of tree canopy. The loss represents a 15.2% decrease in the total amount of canopy and a 9.0% decline in canopy cover relative to overall land cover.

Specific to the corporate limits, the amount of tree canopy declined by 23.3%, resulting in a 13.6% decrease in canopy coverage relative to the other types of land cover.

Mapping canopy change by census block group illustrates the geographic distribution of canopy gains and losses throughout the planning jurisdiction over the ten-year span (Map E.1).

MAP E.2 CANOPY CHANGE (2010–2020) BY BLOCK GROUP



Benefits and Value of Apex's Tree Canopy

Trees help clean the air we breathe, filter the water we drink and mitigate the impacts of a changing climate. Through their natural biological and ecological functions, trees provide critical community infrastructure.

The ecosystem service capacity of tree canopy within the Apex planning jurisdiction was measured and valued using i-Tree, a software suite made available by the U.S. Forest Service.

THE TOTAL VALUE OF APEX'S TREE CANOPY IS $131 MILLION

Carbon Storage = $71,344,176

Trees are carbon sinks; they absorb carbon dioxide from the atmosphere and convert it into glucose, which is used as food for the tree. The leftover carbon is then stored within tree tissue, including the trunk, branches, leaves and roots.

Over their lifespan, Apex's trees are estimated to have collectively removed and **stored over 418,316 tons of carbon** from the atmosphere.

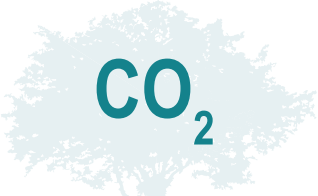
Total Annual Benefits = $59,744,666

The benefits analysis measured and valued three specific ecosystem service functions of tree canopy: **air pollution removal**, **carbon sequestration** and **stormwater capture**.

EACH YEAR, APEX'S TREES:



REMOVE 451 TONS
OF POLLUTANTS FROM THE AIR



ABSORB 16,984 TONS
OF CARBON DIOXIDE

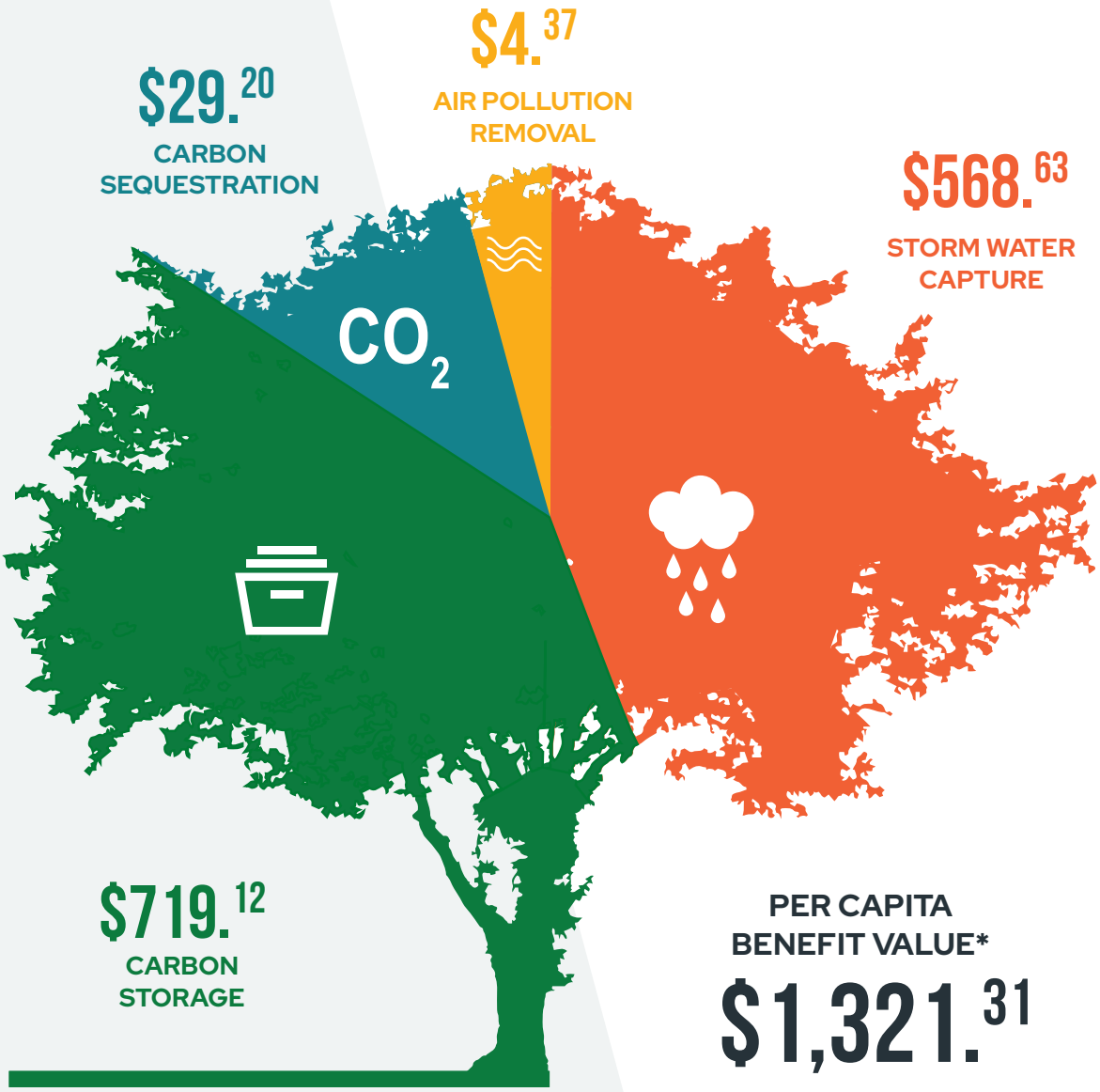


INTERCEPT 331.8 MILLION
GALLONS OF STORMWATER

Additional, less quantifiable canopy benefits include, but are not limited to:

- Increased property values.
- Shade and cooler air in the summer.
- Energy conservation.
- Improved physical health.
- Improved mental well-being.
- Increased biodiversity and habitat.

SPENDING TIME AROUND TREES AND LOOKING AT TREES REDUCES STRESS, LOWERS BLOOD PRESSURE AND IMPROVES MOOD.



What do your community's trees do for you?

Trees provide substantial added value to the quality of life of Apex's residents. The ecosystem services contributed to the community by its tree canopy infrastructure can be quantified and valued on an individual level.

Over their lifespan, Apexs trees have stored an estimated accumulated total of 4.22 tons of carbon per resident, translating to a per capita carbon storage value of $719.12.

Per resident, Apex's tree canopy annually removes nine pounds of air pollution, capture 3,345 gallons of stormwater and absorbs 342 pounds of carbon. These vital eco-services translate to an annual per capita value of $602.20.

The combined per capita benefit value of Town of Apex's tree canopy is estimated to be $1,321.31.

**Per capita refers to the average value per Apex resident. As of 2020, Apex had a resident population of 58,780 with a tree canopy valuation, , specific to the corporate limits, of $77,666,790.*

Planting Opportunities

A key aspect of the study used the land cover data and additional remote sensing methods to perform a priority planting analysis which identified realistic Potential Planting Area (PPAs) throughout the entirety of the Apex planning jurisdiction.

Identification

Possible planting locations were initially identified from land area classified by the LCA as Bare Soil or Vegetation. These locations were then filtered by size to only include locations greater than or equal to an area of 200 square feet — the approximate size of a standard parking lot island.

To further refine the analysis, the possible planting locations were filtered to exclude "no planting" areas where tree planting is either prohibited or otherwise not desirable. The exclusionary layer of "no planting" locations included utility easements, access easements, public rights-of-way, recreational fields and active agriculture or horticulture sites. The remaining locations are the Potential Planting Area.

The priority planting analysis identified 23,235 individual PPAs totaling 4,616 acres.

Assessment

The PPAs are individually assessed across three separate measures of community vulnerability:

1. Heat Islands

Heat islands are generally found in urbanized areas that experience higher temperatures than outlying areas. Impervious surfaces such as buildings, roads and other infrastructure absorb and re-emit the sun's heat. In urbanized areas, where these structures are highly concentrated and greenery is limited, this phenomenon creates "islands" of higher temperatures relative to outlying areas. Known as the urban heat island effect, daytime temperatures can range from approximately 1–7°F higher than temperatures in outlying areas and nighttime temperatures range from 2–5°F higher.

2. Stormwater

Stormwater refers to water that originates from a precipitation event, such as rain, that does not soak into the ground. The excess water is runoff that flows over land and carries soil, pollutants and other materials into our rivers, lakes and bays.

3. Social Equity

Social equity refers to the concept of fairness and justice in the distribution of resources and opportunities in a society, particularly as it relates to historically marginalized and disadvantaged groups.

Prioritization

The individual assessments are then combined to produce a composite vulnerability index. The index provides a total aggregate vulnerability score for each PPA and is used to prioritize the planting locations on a five-category ordinal scale (Very High, High, Medium, Low, Very Low).

The priority ranking corresponds to the assessed need for additional tree canopy to help mitigate the harmful impacts associated with each area of vulnerability and boost overall community resiliency.

The analysis identified 16.9% of PPAs as Very High priority and 23.5% as High priority.

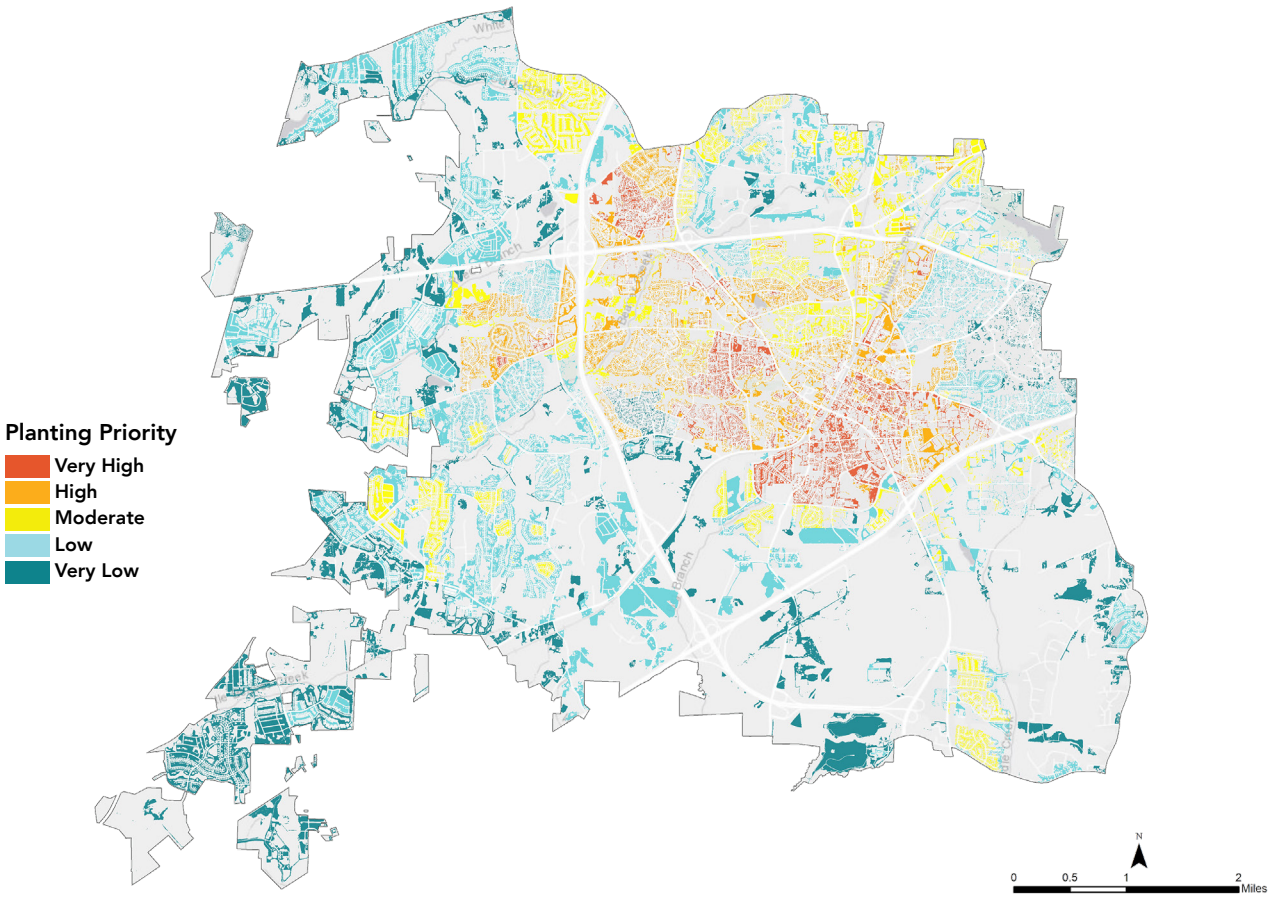
Tree Placement Modeling

A GIS-based algorithm modeled how many trees could be planted within each PPA. The model differentiated between tree canopy size at maturity (large, medium and small), giving preference to large-growing trees and utilizing spacing commonly suggested for a landscape setting (Table 3.3).

The tree placement model identified 229,001 total individual tree planting sites.

- 54.8% of sites suitable for large trees (125,581 sites)
- 12.1% of sites suitable for medium trees (27,658 sites)
- 33.1% of sites suitable for small trees (75,762 sites)

MAP E.3 POTENTIAL PLANTING AREA (2020) PRIORITIZED BY THE COMPOSITE VULNERABILITY INDEX



Looking Ahead

The information in this study establishes baseline statistics for land cover and tree canopy in the Town of Apex planning jurisdiction. It should be considered as a starting point — a springboard for conversations and identification of opportunities that can enhance tree canopy. The data can be leveraged to support tree planting initiatives and tree maintenance. Additionally, the data can assist policymakers, planners and community stakeholders in securing funding to support these activities.

Plant New Trees

This report and the accompanying GIS data provide a tool to help Apex identify and prioritize tree planting based on canopy cover and environmental and socio-economic needs. The information can be used to encourage and support tree planting on both public and private properties.

Review Ordinances and Policies

Existing regulatory and policy documents, such as development ordinances and land use plans, can be evaluated in the context of the data provided by the LCA/TCA project. The data can help identify how and where to incentivize and encourage tree planting, tree protection and other ways to expand tree canopy. Review of internal policies, procedures and current projects' impact on publicly owned trees can also be helpful when identifying ways to increase tree planting and protect existing tree canopy.

Small changes in the design of public projects, including sidewalk installation, street and infrastructure improvements, can improve impacts to trees.





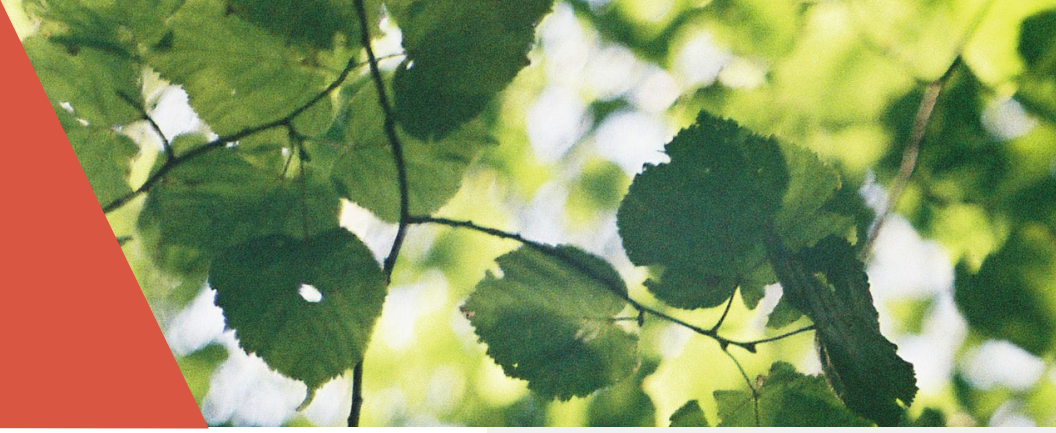
Community Outreach and Involvement

Outreach and education campaigns — including volunteer programs — can encourage residents to care for and retain existing trees. Involving residents in community tree initiatives is a great way to spread the word on the benefits of trees and develop a culture of tree appreciation that can have significant long-term impacts on tree canopy across Apex. Partnering with local organizations to help spread the word is a way to help get the message out.

Seek New Sources of Funding

The information provided in this study can be used to secure new grant funding with government agencies (state/federal) and private foundations. In addition to the traditional grant programs that support trees, exploring grants that connect to the benefits that trees provide to Apex, like improving air quality (public health) and increasing canopy in low-income/low canopy areas (equity and environmental justice) can help broaden the types of funding opportunities available.

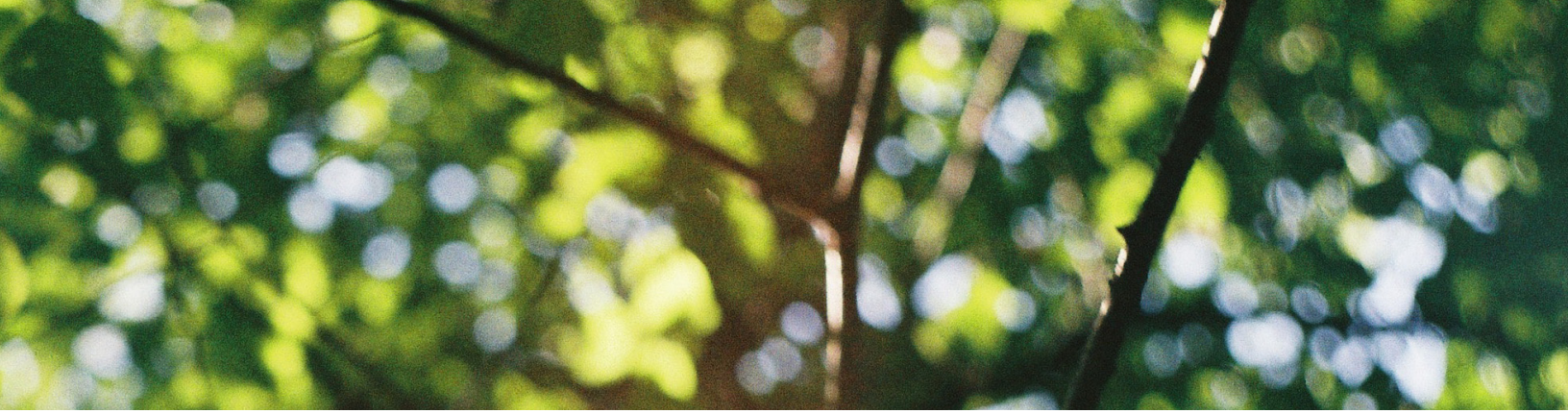
Section One



Land Cover

In This Section:

- Land Cover Types
- Geographies of Study
- Apex Land Cover



Introduction

A land cover analysis was conducted by Davey Resource Group, Inc., a national urban forestry consulting firm, in collaboration with the Wake County government. The assessment utilized leaf-on, multispectral aerial imagery, vintage 2020, that was available from the National Agricultural Imagery Program (NAIP) and processed by the United States Department of Agriculture. A full discussion of the analytical methods and data sources can be found in the Methodology.

What is Land Cover?

Land cover describes the physical surface types of a given area, as viewed from above.

Why is Land Cover Important?

The analysis informs our understanding and management of natural resources by providing valuable information about the types and distribution of land cover. The data aids in land-use planning, resource conservation, climate change mitigation and sustainable development.

Where is Land Cover Data Acquired?

Land cover data can be acquired from a variety of techniques including remote sensing, ground surveys and aerial imagery. This study utilized an object-based image analysis (OBIA) semi-automated feature extraction method to process and analyze high-resolution color infrared (CIR) aerial imagery and remotely sensed data.



How is Land Cover Data Useful?

The metrics and resulting maps hold a variety of multidisciplinary practical applications, including within the following areas of interest:

Urban Planning

Land cover data can help identify development trends and patterns. Additionally, the data can aid in identifying land areas suitable for development, wildlife conservation, or other types of land uses.

Environmental Monitoring

Land cover data can be used to monitor changes in the environment, including deforestation, urbanization and the expansion of agricultural areas. It helps in assessing the impact of human activities on the natural environment.

Natural Resource Management

Land cover data can provide information on the distribution and extent of natural resources such as forests, water resources and wildlife habitats. This information can be used to support sustainable management of these resources.

Emergency Preparedness

Land cover data can be used to assess the risk of natural disasters such as floods, landslides and wildfires. It helps in identifying areas that are most vulnerable to these disasters and in planning disaster response and management activities.

Climate Change

Land cover data can be used to track, model and analyze the effects of land cover and land cover changes on climate patterns.

LAND COVER DATA CAN BE USED TO TRACK, MODEL AND ANALYZE CHANGES ON CLIMATE PATTERNS.



Land Cover Types

The analysis utilized the following categories to describe land cover:

Bare Soil

Land areas consisting of exposed soil that lacks vegetation, such as vacant lots, construction sites, agricultural fields and baseball infields.

Grass/Low-lying Vegetation

Pervious land (i.e., surfaces that allow rainwater infiltration) that is covered by shrubs, grasses and other low-lying vegetation that allow rainfall to infiltrate soil. Parks, golf courses and commercial and residential lawns and garden beds are land uses generally characterized by relatively high percentages of grass/low-lying vegetation.

Impervious Surface

Impervious surface describes land area that is covered by buildings, roads, sidewalks and other paved or built areas that do not allow rainfall to infiltrate the soil.



Tree Canopy

Tree canopy describes land area that is covered by tree trunks, branches and leaves, as seen from above. Tree canopy can be further divided into two types:

Coniferous

Land area that is covered predominately by coniferous trees, such as pines and spruce. In general, conifers retain their leaves year-round. Wax-leaf evergreens, such as hollies and magnolias, are included in this category.



Deciduous

Land area that is covered predominately by deciduous trees, such as oaks and maples. Deciduous trees shed their leaves seasonally.

Water

Lakes, ponds, streams, wetlands and other water features.

Geographies of Study

The study examined land cover within the following geographic areas of interest:

Planning Jurisdiction

Land area over which a municipality has zoning control. The planning jurisdiction is comprised of a municipality's corporate limits and extra-territorial jurisdiction (Map 1.1).

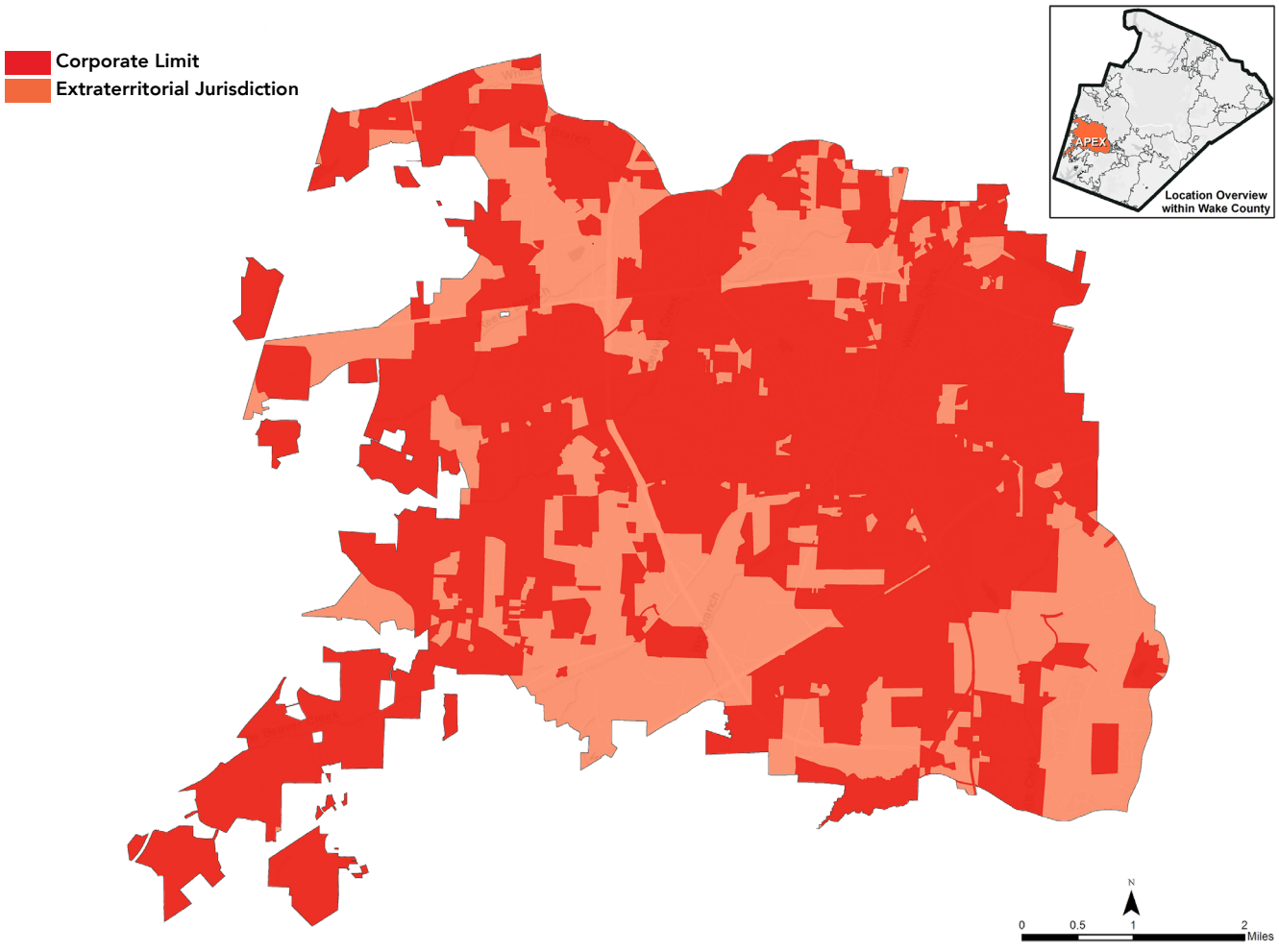
Corporate Limits

The incorporated land area belonging to each municipality.

Extra-Territorial Jurisdiction (ETJ)

ETJ describes land that is physically located outside of municipal corporate limits but where a municipality holds regulatory authority over land development and building construction.

MAP 1.1 PLANNING JURISDICTION (2022)



Census-Based

Census-based geographies are useful units of analysis due to the wealth of demographic and socio-economic information collected by the U.S. Census Bureau (Map 1.2).

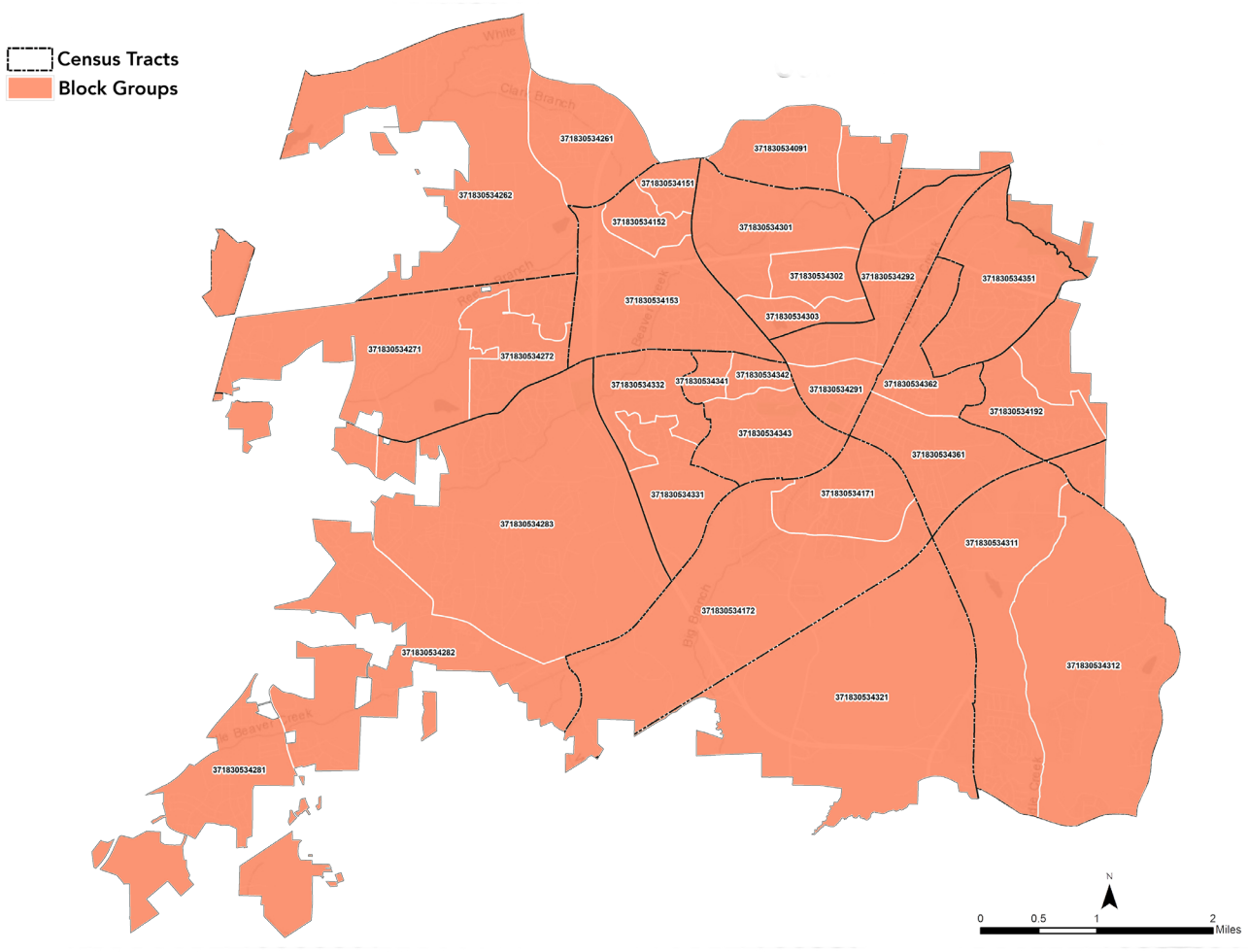
Census Tracts

Census Tracts (CTs) are small, relatively permanent statistical subdivisions of a county or statistically equivalent entity. The primary purpose is to provide a stable set of geographic units for the presentation of statistical data. CTs generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. A CT usually covers a contiguous area; however, the spatial size varies widely depending on population density.

Block Groups

Block Groups (BGs) are statistical divisions of census tracts that are generally defined to contain between 600 and 3,000 people. BGs are used to present data and usually cover a contiguous area. Within the standard census geographic hierarchy, BGs never cross state, county, or census tract boundaries, but may cross the boundaries of any other geographic entity, such as municipal corporate limits.

MAP 1.2 CENSUS TRACTS AND BLOCK GROUPS (2022)



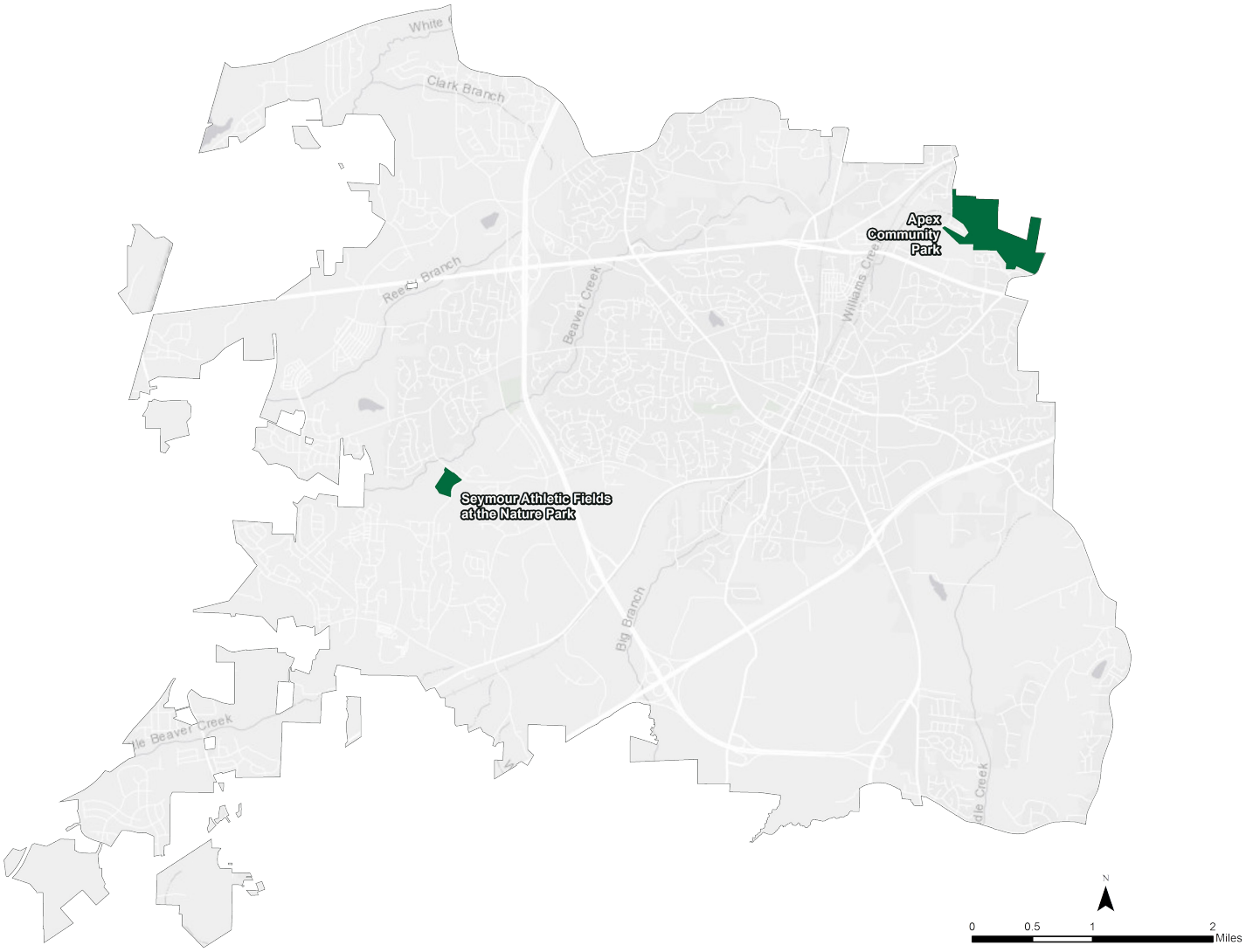
Green Spaces

Green spaces generally refer to areas designed or preserved for their environmental, social, or recreational benefits. The Wake LCA/TCA project specifically looked at land designated as one of three primary green space types: Parks, Open Spaces and Greenways.

The dataset utilized in the analysis was obtained from Wake County in July 2022 and is not considered to be inclusive of all community green spaces throughout the county. As such, land cover metrics and resulting summary statistics should not be considered as an authoritative or exhaustive representation of Wake County's green spaces.

Map 1.3. exhibits the location of the individual green space highlighted within this report: Apex Community Park and Seymour Athletic Fields.

MAP 1.3 GREEN SPACE FOCUS: APEX COMMUNITY PARK AND SEYMOUR ATHLETIC FIELDS (2022)

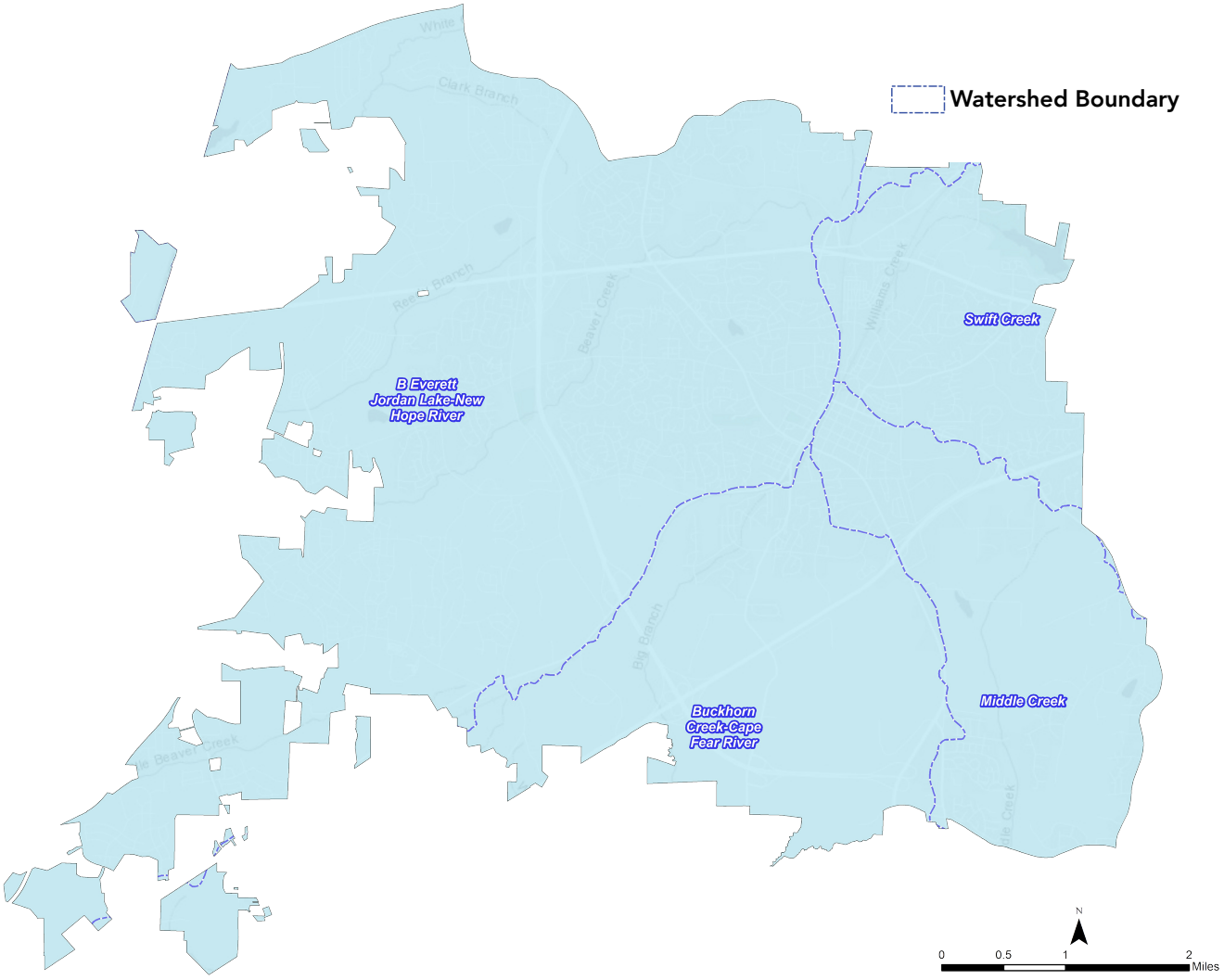


Watersheds

A watershed is the land area that drains to a common body of water, such as a stream, lake, bay, or ocean. Also called a drainage basin, a watershed includes hills, lowlands and the body of water into which runoff drains. Apex's planning jurisdiction contains portions of five watersheds: Crabtree Creek, B. Everett Jordan Lake, Middle Creek, Swift Creek and Buckhorn Creek-Cape Fear River (Map 1.4).

Watersheds that contain a reservoir or proposed reservoir used for drinking water are classified as Water Supply Watersheds (WSWS). Apex contains portions of two WSWS within its jurisdiction: B. Everett Jordan Lake and Swift Creek. The Apex Utilities Department uses Jordan Lake to provide water and utility services to its residents.

MAP 1.4 WATERSHEDS (2022)



Land Cover

The Apex planning jurisdiction encompasses a total land area of 24,199 acres. Summarized below are the findings of land cover analysis (Table 1.1).

Observations

The corporate limits contain significantly more impervious surface than the ETJ (25.5% compared to 8.9%, respectively).

Impervious surface is concentrated in urbanized areas, particularly along major roadway corridors (e.g., NC Highway 55, U.S. Highway 64 and U.S. Highway 1) and commercial, industrial and high-density residential land use types.

Large concentrations of canopy are found in the south and southeast (near the NC Highway 55 and U.S. Highway 1 Interchange).

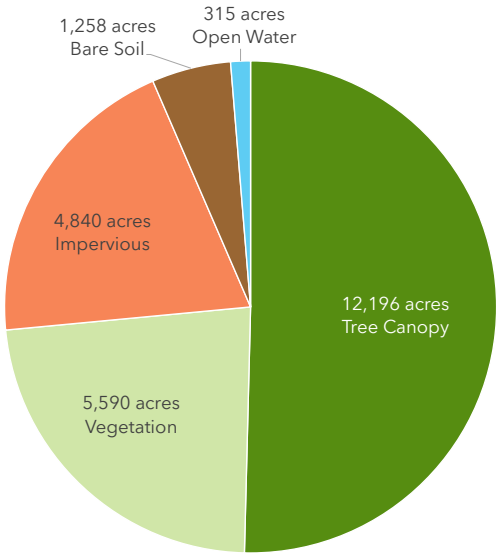


FIGURE 1.1 PLANNING JURISDICTION LAND COVER (2020)

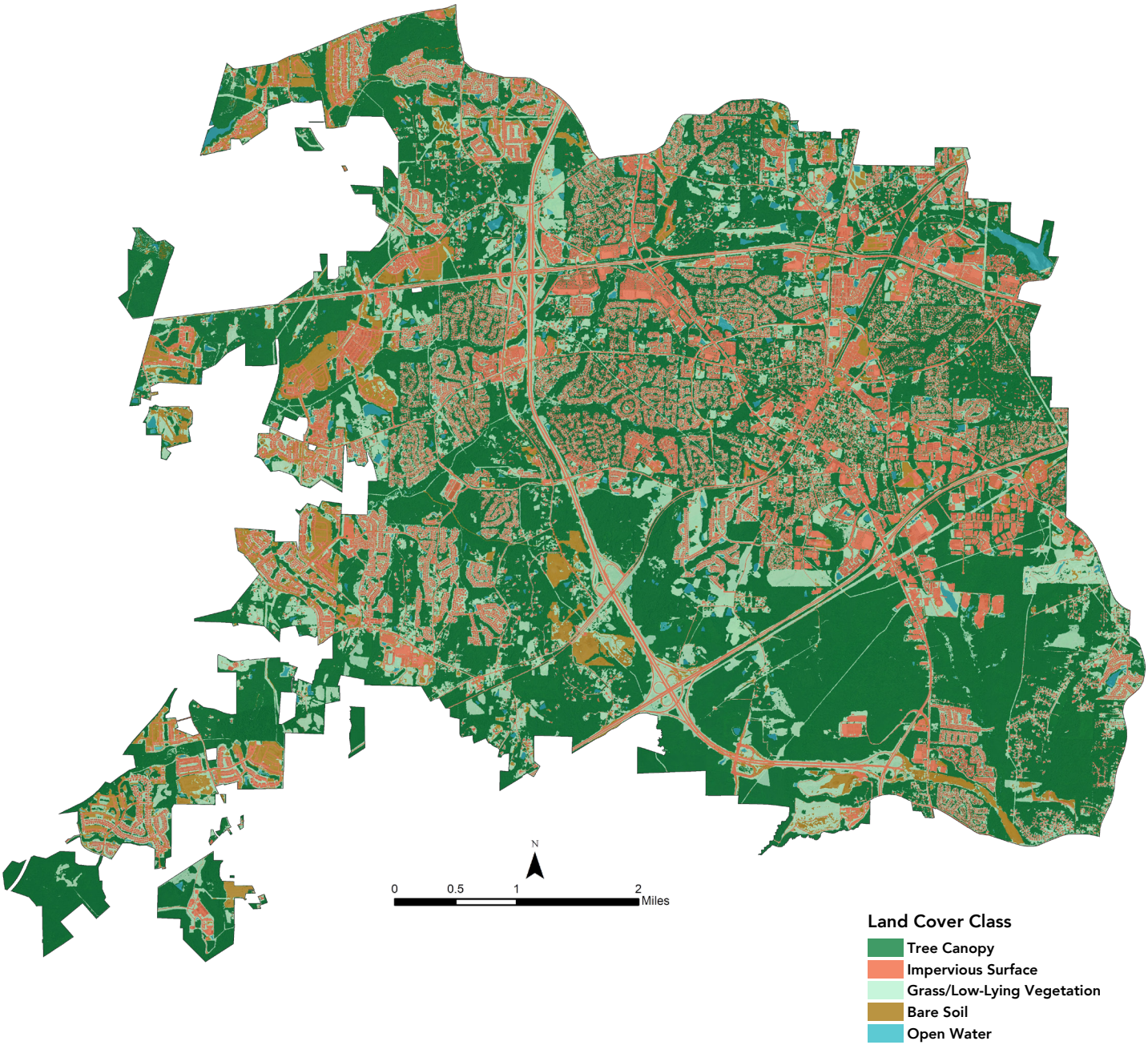
Vintage 2020

As the summary presented here is a snapshot of 2020, it is likely that the land cover composition has changed in favor of the characteristics associated with urban growth and land development: less tree canopy and more impervious surface.

TABLE 1.1 LAND COVER COMPOSITION (2020) BY JURISDICTION TYPE

JURISDICTION	TOTAL ACRES	TREE CANOPY	IMPERVIOUS	VEGETATION	BARE SOIL	OPEN WATER
Corporate Limits	16,217	44.6%	25.5%	22.0%	6.6%	1.3%
ETJ	7,981	62.2%	8.9%	25.3%	2.2%	1.4%
Planning Jurisdiction	24,199	50.4%	20.0%	23.1%	5.2%	1.3%

MAP 1.5 LAND COVER (2020)



Section Two



Canopy Assessment

In This Section:

- Canopy Benefits
- Canopy Cover
- Canopy Change (2010–2020)
- Apex Community Park



Overview

What is a Tree Canopy Assessment?

A Tree Canopy Assessment (TCA) measures and evaluates the amount and extent of tree canopy cover within a particular geographic area of interest (AOI).

Why Study Tree Canopy?

Our community forests are integral to the function and well-being of daily life. Trees provide critical environmental services and a myriad of socioeconomic benefits that improve and enhance quality of life.

Canopy assessments offer insight into the health, diversity and distribution of tree canopy.

TCAs can determine where residents are benefitting from the presence of trees, the monetary value of those benefits, how benefits change over time and where trees can be planted or preserved to maximize the positive impacts trees make on everyday life while simultaneously mitigating the adverse impacts of the built environment.

While it may not seem like one tree can make a substantial difference, collectively, Apex's trees play a significant role in supporting and enhancing community livability and resilience.



Canopy Type

Summary

Canopy types are not evenly distributed; deciduous and coniferous forest types prevail in different areas due to historical land use patterns and tree species preferences across a range of environmental factors, including topography, microclimates, soil pH and permeability and other geographical and geological characteristics.

The analysis classified tree canopy cover into two distinct forest-type classifications: coniferous or deciduous.

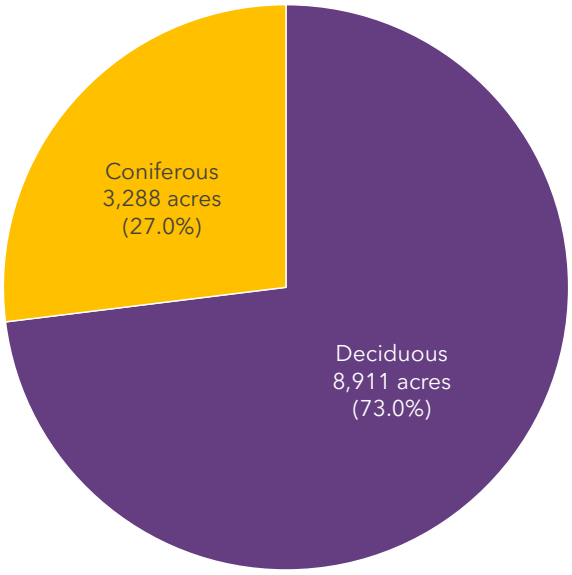


FIGURE 2.1 PLANNING JURISDICTION CANOPY TYPE (2020)

Observations

Tree canopy across Apex is a mix of 73.0% deciduous and 27.0% coniferous.

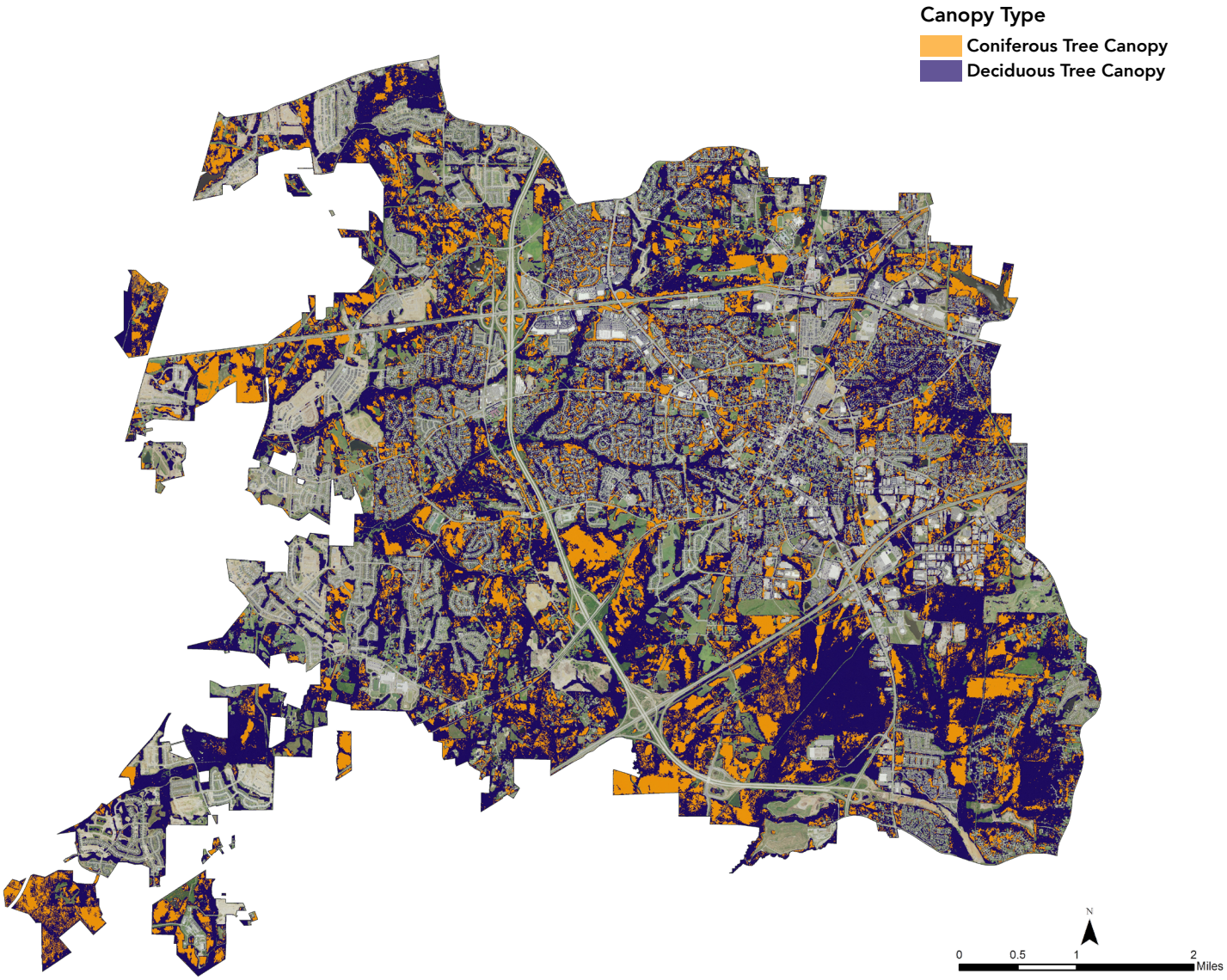
The largest concentrations of coniferous canopy appear to be primarily within or adjacent to the ETJ. It is likely some of these areas are pine stands currently or previously utilized for harvesting timber.

As growth and development within Apex continues at the current trajectory, it is expected that the overall proportion of coniferous canopy within the planning jurisdiction will decline.

TABLE 2.1 CANOPY TYPE (2020) BY JURISDICTION

JURISDICTION	DECIDUOUS			CONIFEROUS	
	ACRES	PERCENT		ACRES	PERCENT
Corporate Limits	5,349	74.0%		1,884	26.0%
ETJ	3,562	71.7%		1,404	28.3%
Planning Jurisdiction	8,911	73.0%		3,288	27.0%

MAP 2.1 CANOPY TYPE (2020)



Canopy Health

Summary

A comprehensive canopy assessment provides data on tree health and overall condition. Knowledge of where healthy canopy exists relative to less healthy canopy allows for further investigation of localized "hotspots" (e.g., concentrated areas of canopy in declining health). Targeted ground-truthing to explore areas of piqued interest or potential concern is an efficient and proactive step in maintaining and preserving the community forest (Map 2.2).

Once ground conditions are confirmed, appropriate solutions and action steps can be implemented.

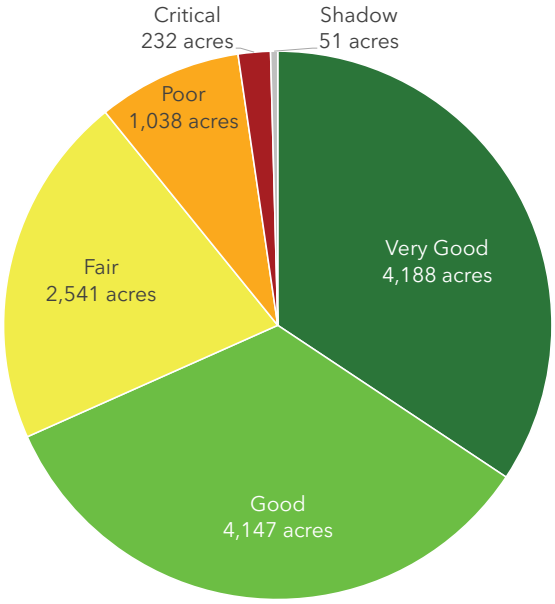


FIGURE 2.2 PLANNING JURISDICTION CANOPY HEALTH (2020)

Observations

The predominant canopy health rating within the planning jurisdiction is Very Good and Good, accounting for approximately 4,188 and 4,147 canopy acres, respectively (Figure 2.2).

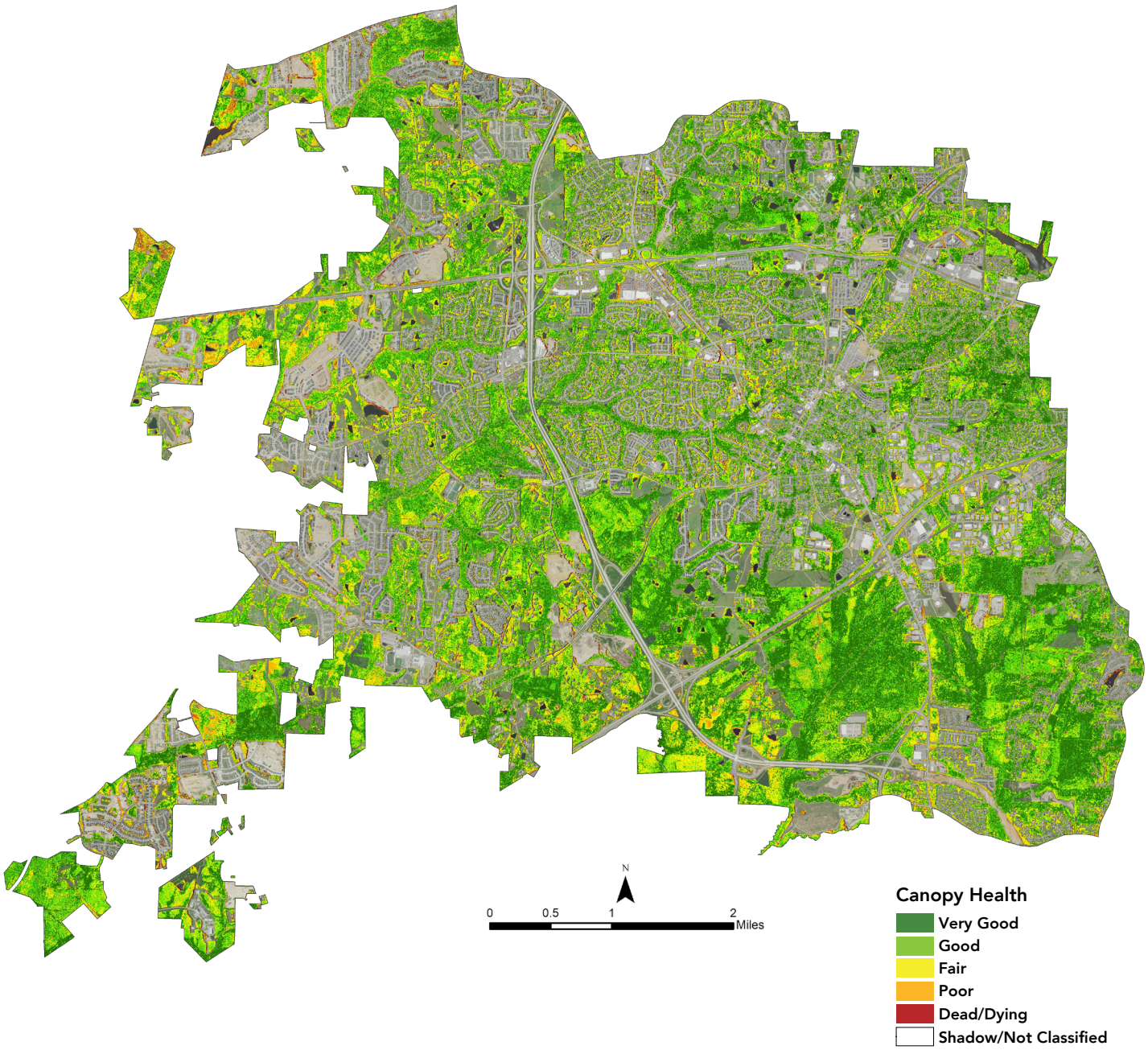
The ETJ contains a larger proportion of trees rated Fair or better than is found within the corporate limits (90.6% to 86.9%).

In general, tree canopies in and around more recent development sites are found to be less healthy. As Apex experienced a significant amount of development over the past decade, it is reasonable to anticipate that canopy health in those areas will improve over time as remaining trees adjust to the changed environment and newly planted trees become established in the landscape.

TABLE 2.2 CANOPY HEALTH (2020) BY JURISDICTION

JURISDICTION	CANOPY HEALTH					
	VERY GOOD	GOOD	FAIR	POOR	CRITICAL	SHADOW
Corporate Limits	32.6%	33.7%	21.3%	9.5%	2.3%	0.5%
ETJ	36.8%	34.4%	20.2%	7.0%	1.3%	0.3%
Planning Jurisdiction	34.3%	34.0%	20.8%	8.5%	1.9%	0.4%

MAP 2.2 CANOPY HEALTH (2020)



Canopy Benefits

Tree canopy positively impacts daily life in ways both seen and unseen. From pollution removal to aesthetic enhancement to habitat provision, the benefits that tree canopy provide to humanity and the built environment are numerous and wide-ranging. Research increasingly demonstrates the crucial role trees play in supporting individual well-being and overall community health and vitality.

The Wake LCA & TCA project took a specific look at a variety of ecosystem services provided by tree canopy. Specifically, i-Tree was utilized to quantify and value the role that trees play in cleaning the air, sequestering carbon and mitigating stormwater runoff (Table 2.3). Details on how i-Tree calculates benefits are provided in the Methodology.

The findings presented below emphasize that the value of tree canopy extends beyond the role of a tree as an aesthetic amenity — the natural, biological functions of trees provide critical infrastructure.

Total Value of $131.1 Million

Collectively, the tree canopy within the Apex planning jurisdiction holds an estimated value of $131,088,842. Total value is a combination of structural value and annual value of the annual ecosystem service benefits that trees provide.

Structural Value of $71.3 Million

Over their lifespan, the trees within Apex's planning jurisdiction have collectively removed and stored more than 418,000 tons of carbon from the atmosphere. This removal and storage service capacity has an estimated value of $71,344,176 million.

Annual Benefit Value of $59.7 Million

Apex's trees provide annual benefits totaling $59,744,666 million in air pollution removal, carbon sequestration and stormwater capture.

TABLE 2.3 ANNUAL BENEFITS AND STRUCTURAL VALUE OF APEX'S TREE CANOPY (2020)

	ANNUAL TREE BENEFITS										
JURISDICTION	AIR POLLUTION REMOVAL										
	CO		NO_2		O_3		SO_2		PM_{10}		
	ton	$	ton	$	ton	$	ton	$	ton	$	
Corporate Limits	5	4,550	20	3,429	195	109,675	6	277	41	139,199	
ETJ	3	3,130	14	2,359	134	75,439	4	191	28	95,746	
Planning Jurisdiction	9	7,680	34	5,787	329	185,114	11	468	70	234,945	

Annual Ecosystem Service Benefits

Air Quality Improvement

Apex's trees collectively remove 451 tons of pollutants from the air each year. This includes 9 tons of carbon monoxide (CO), 34 tons of nitrogen dioxide (NO_2), 329 tons of ozone (O_3), 11 tons of sulfur dioxide (SO_2) and 70 tons of dust, soot and other particulate matter (PM_{10}).



Water Quality Improvement

Trees improve water quality by intercepting and absorbing rainwater, reducing soil erosion and filtering pollutants. Apex's canopy captures over 331 million gallons of stormwater each year. This amount of water could fill almost 503 Olympic sized swimming pools!

Carbon Sequestration

Trees sequester (i.e., absorb) carbon and store it in their trunks, branches, leaves and roots. Each year, the trees within the Apex planning jurisdiction sequester 16,984 tons of carbon dioxide (CO_2) from the atmosphere.

ANNUAL TREE BENEFITS							STRUCTURAL VALUE	
	CARBON (CO_2) SEQUESTRATION		STORMWATER CAPTURE		TOTAL ANNUAL BENEFITS		CARBON STORAGE	
	ton	$	gallon	$	$		ton	$
	10,062	1,716,128	196,611,345	33,423,929	35,397,188		247,842	42,269,602
	6,921	1,180,416	135,236,457	22,990,198	24,347,478		170,475	29,074,574
	16,984	2,896,544	331,847,802	56,414,126	59,744,666		418,316	71,344,176

Canopy Cover

At the time of analysis, 2020, the Apex planning jurisdiction contained 12,199 acres of tree canopy, accounting for 50.4% of total land cover. Of that total, approximately 59% of all canopy is located within the town corporate limits (Figure 2.3).

Vintage 2020

It is important to keep in mind that this analysis is a snapshot of conditions existing in 2020 and may not be representative of the current canopy percent.

Canopy by Block Group

Map 2.3 and Map 2.4. focus on tree canopy at the block group (BG) level. As the smallest unit of analysis in the study, mapping at the BG level offers an illustration of the distribution of canopy percent and canopy change within the planning jurisdiction.

Block groups with higher percent canopy cover generally contain or overlap land area designated as ETJ or containing designated green space; BGs reporting lower canopy percents are often found to contain in-progress or recently completed development projects.

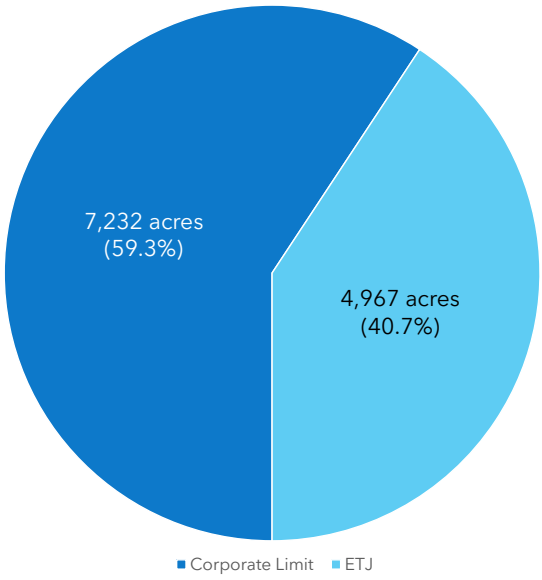
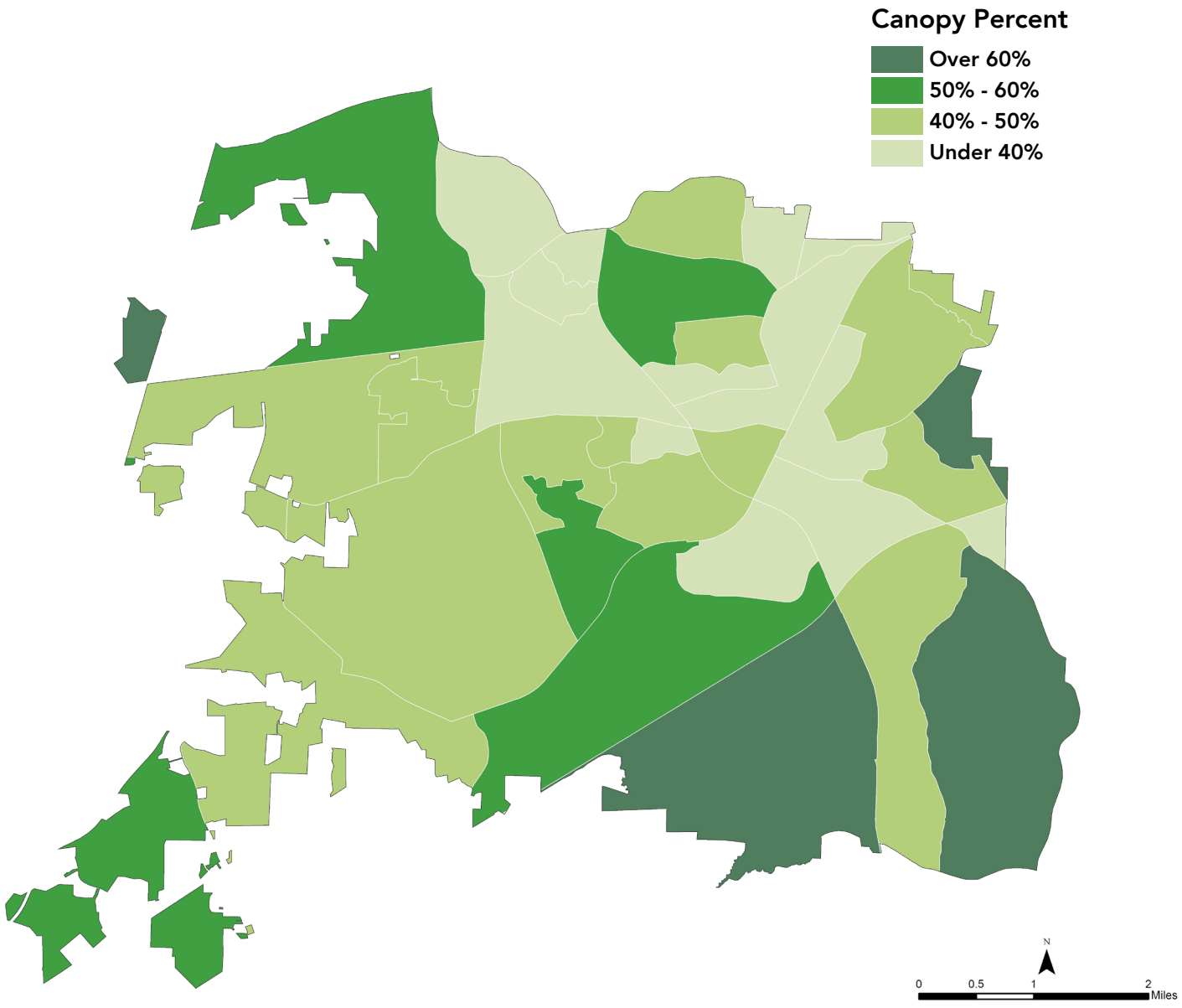


FIGURE 2.3 CANOPY COVER (2020) BY JURISDICTION

Map 2.3 visually demonstrates the correlation between population density and canopy cover. The physical size of the BG is directly related to population; the smaller the BG the more dense the resident population.



MAP 2.3 CANOPY COVER (2020) BY BLOCK GROUP



Canopy Change (2010-2020)

Summary

The Wake LCA/TCA project examined how tree canopy changed over the ten-year span from 2010 to 2020. The analysis utilized 2010 NAIP imagery to determine the historical baseline metrics for comparison.

Observations

From 2010-2020, a period marked by significant population growth and economic development, Apex lost approximately 2,200 acres of tree canopy — a 15.2% decline in the overall amount of canopy within the planning jurisdiction.

Canopy cover within the corporate limits declined by 13.6 percentage points, from 58.2% in 2010 to 44.6% as measured in 2020.

Vintage 2010 and 2020

It is important to keep in mind that this analysis is a snapshot of conditions existing in 2010 and 2020 and may not be representative of the current canopy percent within a given block group or other geographic area. To assess canopy change over time, the study performed a land cover analysis of the project area using 2010 NAIP imagery and then compared the resultant land cover data to the 2020 analysis.

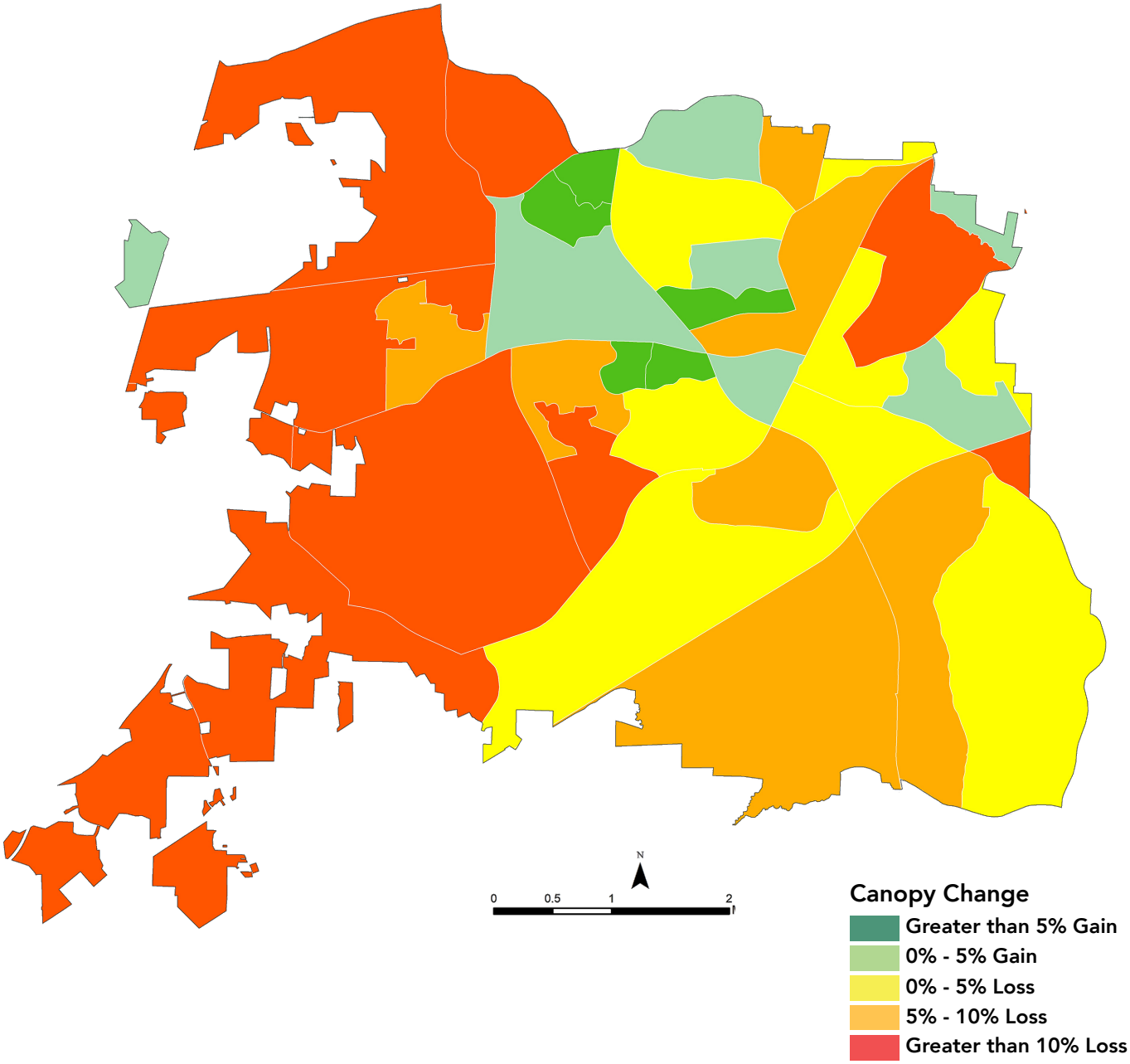
Canopy Change by Block Group

Map 2.4 provides an idea of the general location and percent of canopy change within the planning jurisdiction. Of the BGs located either entirely or partially within jurisdictional bounds, ten experienced a canopy decline in excess of 10%, primarily in western portions of the municipality.

TABLE 2.4 CANOPY PERCENT AND CANOPY CHANGE (2010-2020)

JURISDICTION	CANOPY ACRES 2020	CANOPY PERCENT 2020	CANOPY ACRES 2010	CANOPY PERCENT 2010	CANOPY CHANGE (Acres)	CANOPY CHANGE (Relative)	CANOPY CHANGE (Absolute)
Corporate Limits	7,232	44.6%	9,432	58.2%	-2,200	-23.3%	-13.6%
ETJ	4,967	62.2%	4,947	62.0%	20	0.4%	0.2%
Planning Jurisdiction	12,199	50.4%	14,379	59.4%	-2,180	-15.2%	-9.0%

MAP 2.4 CANOPY CHANGE (2010-2020) BY BLOCK GROUP



Apex Community Park

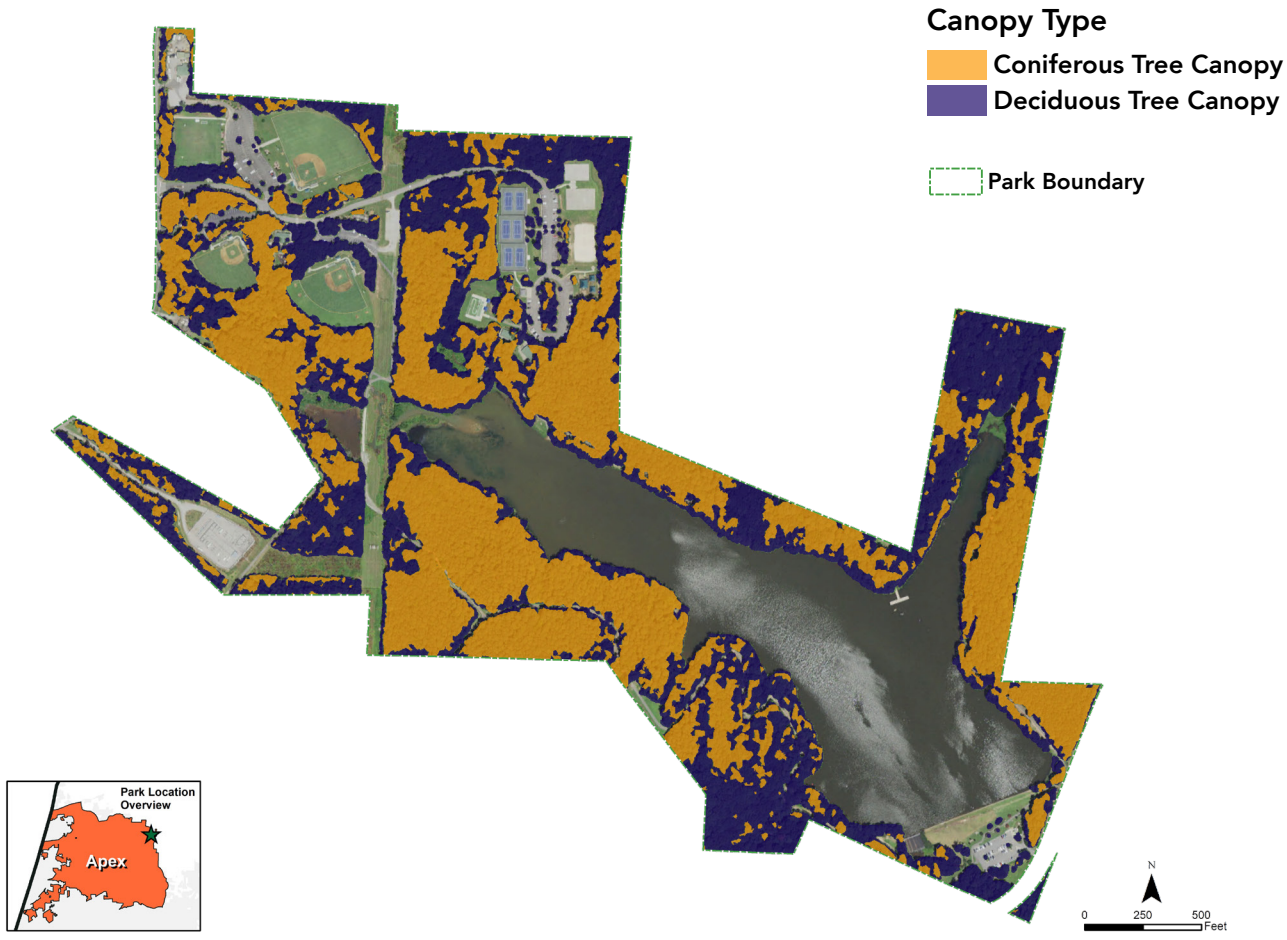
Land cover analysis is useful at the micro level (e.g., individual parks or parcels) as well as the macro (e.g., countywide). Canopy type and health mapping can be utilized to identify and investigate potential areas of concern or to help select locations for future park amenities.

Targeted ground-truthing of "hotspots" (concentrated areas of canopy in declining health) is an efficient and proactive step in maintaining and preserving community forest. Hotspots in and around high-occupancy public areas, such as greenways or playgrounds, are of particular interest when prioritizing field-checks.

Park Overview

Apex Community Park encompasses 164 acres and is a marquee park for the Town of Apex. One of the primary attractions is the park's extensive trail system, which includes both paved and unpaved paths that wind through the park's scenic natural areas. Additional amenities include athletic fields, tennis, volleyball and basketball courts, picnic areas, playground, trails, greenways and a lake.

MAP 2.5 APEX COMMUNITY PARK: CANOPY TYPE (2020)



Canopy Cover

Approximately 57.7% of the park is covered by tree canopy.

Canopy Type

The park contains 94.6 canopy acres, of which 46% is deciduous and 54% is coniferous.

Canopy Health

The median health rating of deciduous canopy within Apex Community Park is Very Good while the median rating for coniferous canopy is Good.

TABLE 2.5 APEX COMMUNITY PARK: CANOPY TYPE AND HEALTH (2020)

CANOPY TYPE	TREE HEALTH RATING BY PERCENT OF CANOPY					
	VERY GOOD	GOOD	FAIR	POOR	CRITICAL	SHADOW
DECIDUOUS	50.1%	21.8%	14.5%	9.8%	2.7%	1.0%
CONIFEROUS	17.5%	45.3%	30.2%	4.0%	0.3%	0.1%

MAP 2.6 APEX COMMUNITY PARK: CANOPY HEALTH (2020)



Section Three



Planting Opportunities

In This Section:

- Where Should Trees Be Planted?
- Identifying Planting Ares
- Assessing Vulnerability
- Prioritizing Planting Areas
- Tree Placement Modeling



Where Should Trees be Planted?

Land cover analysis helps identify opportunities to plant new trees and expand canopy cover to increase and more evenly distribute the benefits of trees. While vacant planting sites present opportunities to plant trees, not all open spaces are candidates for tree planting — examples include roads, sport and recreation areas and agricultural fields.

Ultimately, trees should be planted in sensible and suitable locations, after a thorough assessment of the site and desired outcomes for the planting.

The priority planting analysis sought to identify potential planting area, eliminate those areas most likely to be unfit for planting trees and then prioritize the remaining areas based on optimizing community benefits derived from tree canopy.

The analysis followed a three-step process:

Step 1. Identify realistic Potential Planting Area

- The results from the land cover analysis are used to identify potential planting areas.
- The potential planting area are then refined by filtering through an exclusionary layer of “no planting” areas.
- The result is a GIS polygon layer of realistic Potential Planting Area (PPA).

Step 2. Perform vulnerability assessments

- The PPA is individually assessed across three separate measures of community vulnerability: urban heat islands, stormwater and social equity.
- The three individual measures are combined into a single composite vulnerability index.

Step 3. Prioritize the PPAs

- The PPA is prioritized by the vulnerability index and assigned a priority rank on a five-category ordinal scale (Very High, High, Medium, Low, Very Low).
- The priority rank for each PPA corresponds to the contribution of tree canopy in mitigating the identified vulnerabilities.

Identifying Planting Areas

Potential Planting Area

The identification of potential tree planting locations follows from the land cover analysis. First, the Bare Soil and Vegetation land cover types are combined into a single dataset. The dataset is then refined by excluding areas deemed not suitable for planting trees.

The assessment identified 23,235 areas totaling 4,616 acres for planting.

The smallest areas identified were 200 square feet, approximately the size of a parking lot island.

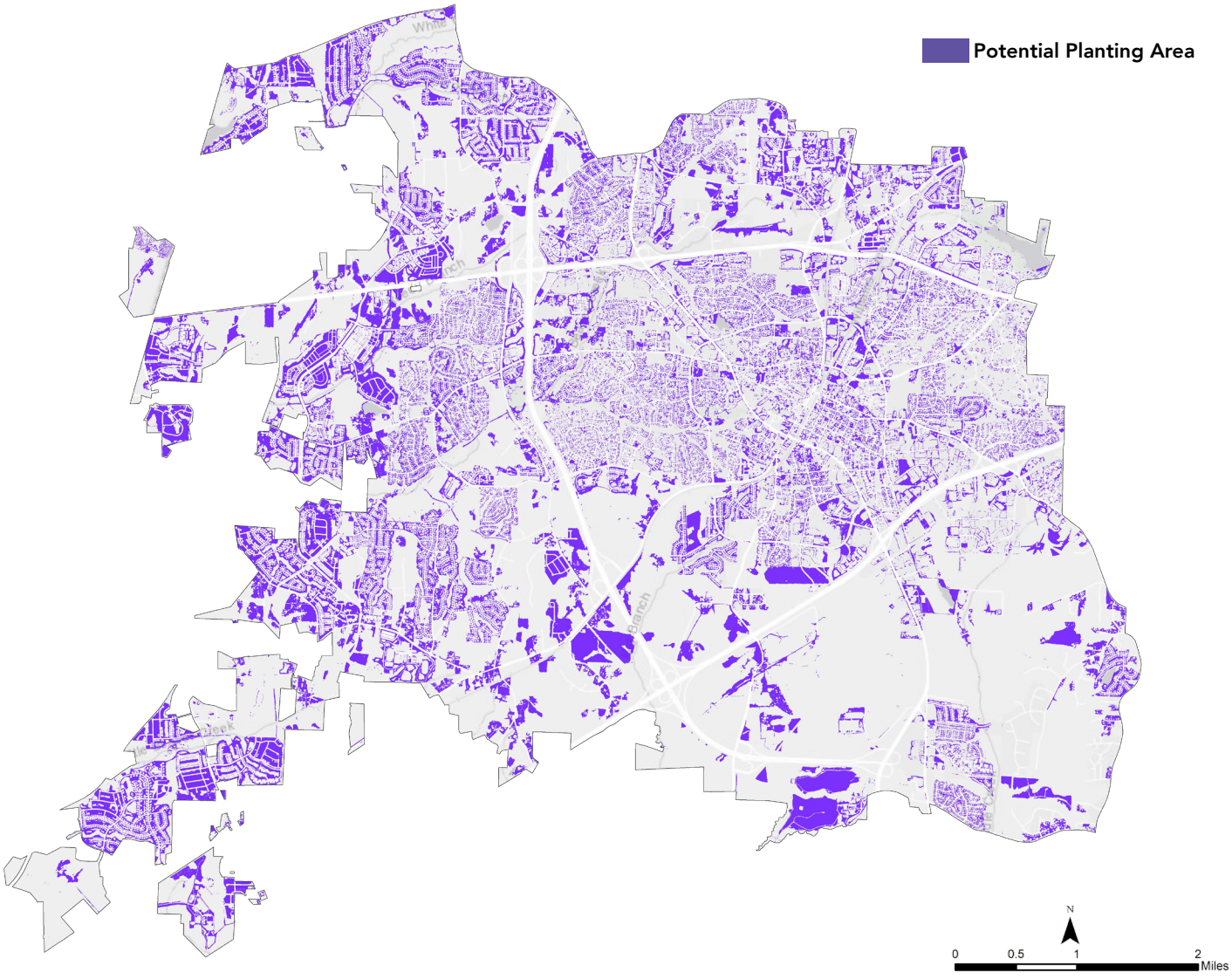
Vintage 2020

It is important to note that the analysis reflects planting areas as they were in 2020. Given the pace of development within Apex, some of the identified planting areas may no longer be suitable. For example, a tract of land under development in 2020 may have been classified as Bare Soil and therefore may be identified by this analysis as a PPA.

"No-Planting Areas"

- Sports fields (soccer, football, baseball, softball, etc.)
- Playgrounds
- Major utility corridors
- Golf courses
- Airports
- Wetland areas
- Substations
- Visible cropland
- Water treatment facilities
- Major Utility Easements
- Access Easements
- Parcels with agriculture, horticulture, or water/sewer system as current land use
- Rights-of-Way ("ROW")

MAP 3.1 POTENTIAL PLANTING AREA (2020)



Assessing Vulnerability

What is Vulnerability?

Vulnerability refers to the degree to which a system, community, or individual is susceptible to harm, damage, or negative impacts from an identified hazard. Vulnerability is influenced by various factors, such as socioeconomic status, physical and environmental conditions and access to resources and services.

Assessment

A vulnerability assessment is a process of identifying, analyzing and evaluating the vulnerabilities and risks of a system, community, or organization to potential hazards. The assessment informs decision-making and helps prioritize actions to reduce vulnerabilities and enhance resilience.

The Wake LCA/TCA project individually assessed three distinct measures of community vulnerability: urban heat islands, stormwater and social equity.

Urban Heat Islands

The urban heat island (UHI) effect refers to the phenomenon of urban areas being significantly warmer than surrounding rural areas. The sun heats impervious surfaces faster and to a higher temperature than land covered by tree canopy or vegetation. Impervious surface also takes longer to cool once the sun sets.

Areas with less tree canopy and more impervious surface are more susceptible to the UHI effect and residents within those areas are at greater risk of harm from the adverse impacts of the phenomenon.

Community Impacts

Health risks: Extreme heat increases the risk of heat-related illnesses, such as heat exhaustion and heatstroke, particularly for vulnerable populations such as the elderly, young children and those with pre-existing health conditions.

Reduced air quality: The UHI effect worsens air quality by increasing the concentration of air pollutants, such as ozone and particulate matter, which exacerbates respiratory diseases such as asthma.

Increased energy consumption: The demand for cooling can increase energy consumption, which can lead to higher greenhouse gas emissions.

Infrastructure damage: High temperatures can cause damage to infrastructure, particularly roads and buildings, due to thermal expansion and contraction.

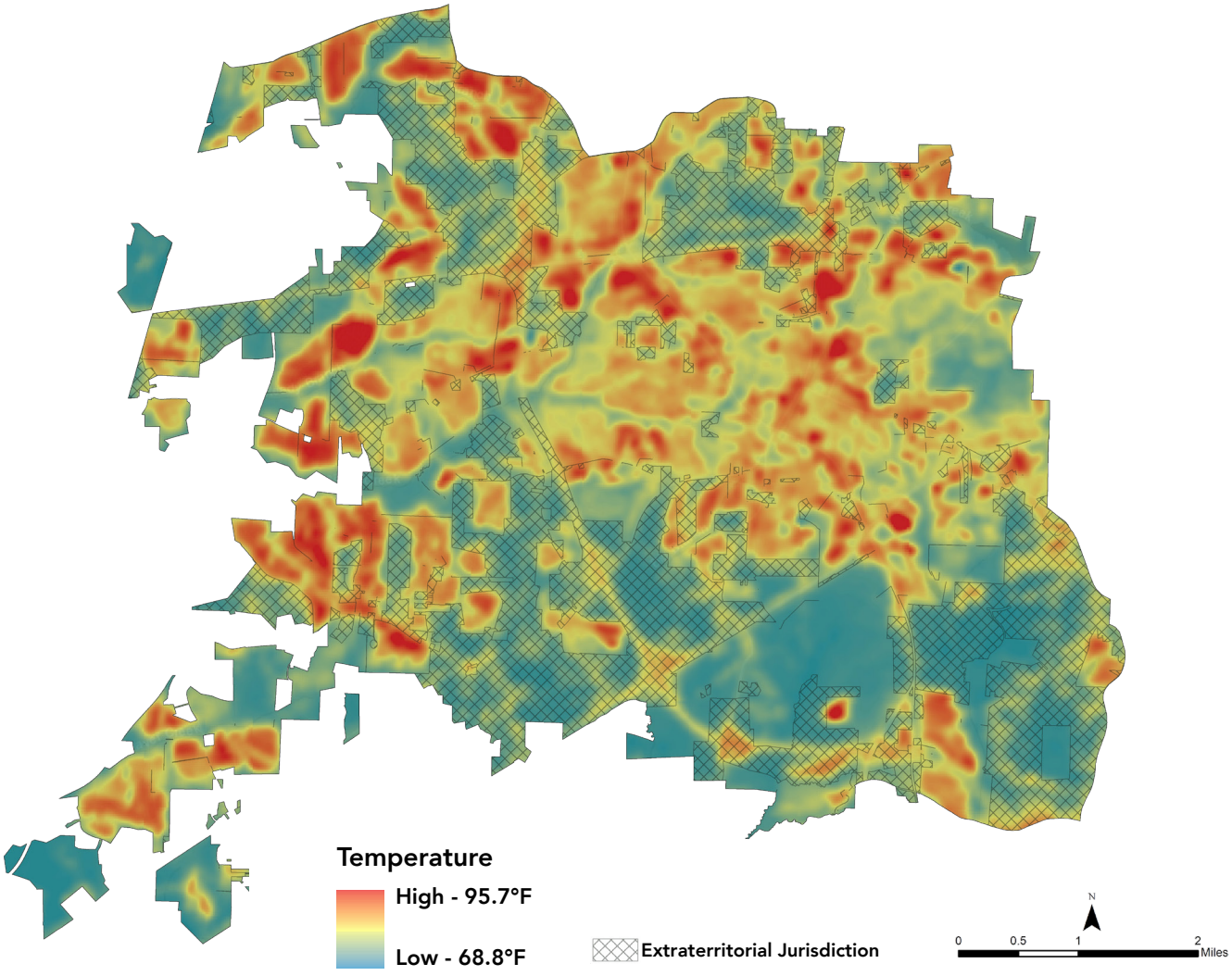
Measurement

A land surface temperature analysis identified urban heat islands within the planning jurisdiction.

Observations

The analysis visually demonstrates the UHI effect; the hottest areas align with areas of less canopy and more impervious surface. The map further shows that cooler areas are associated with areas of greater canopy coverage, many of which are located within the ETJ.

MAP 3.2 AVERAGE LAND SURFACE TEMPERATURE (2020-2022)



Stormwater

Rain that does not soak into the ground becomes runoff and carries soil, pollutants and other materials from the land into our rivers, lakes and bays. Areas with greater amounts of impervious surface relative to tree canopy generally have more pollution and less tree canopy.

The assessment identifies areas in greatest need of tree canopy to mitigate the impacts and consequences of stormwater runoff.

Community Impacts

Pollution: Stormwater runoff can carry pollutants such as oil, pesticides and fertilizers into rivers, lakes and oceans. This harms aquatic life and can make water unsafe for human use.

Soil erosion: Runoff can lead to streambank and shoreline instability, loss of habitat and decreased water quality.

Public health: Runoff can carry bacteria and other pathogens from animal waste, septic systems and other sources, leading to water supply contamination.

Flooding and infrastructure damage: Stormwater can cause damage to roads, bridges and other infrastructure, leading to costly repairs and maintenance.

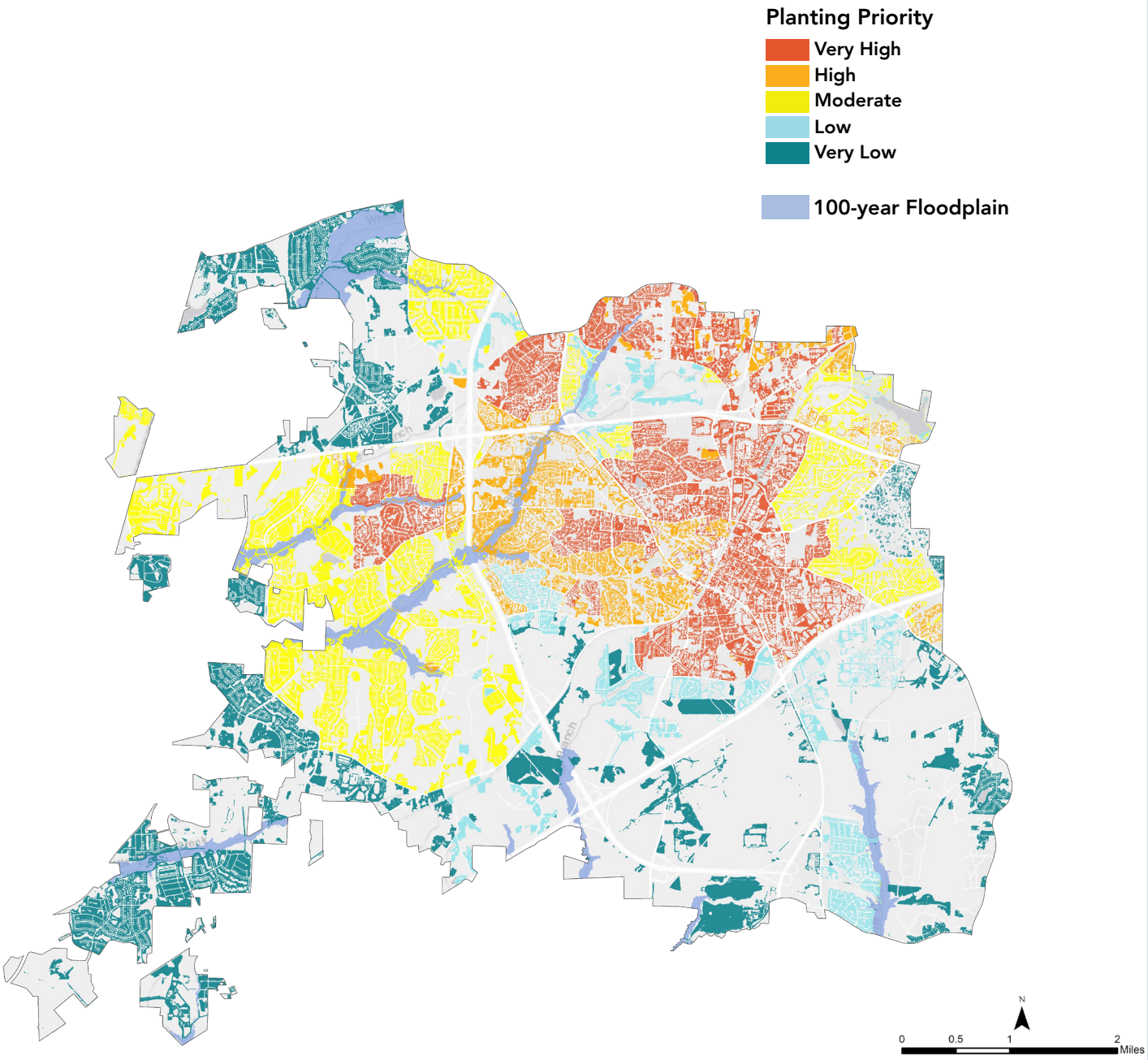
Measurement

Community vulnerability to the impacts of stormwater were measured by a multivariate analysis which measures of the following inputs: distance to hardscape, soil erosion, soil permeability, floodplain proximity, existing tree canopy and possible tree canopy.

Observations

PPAs rating Very High, High and Moderate are distributed throughout the town. Concentrations of Very High and High priority PPAs are clustered in areas with high population density and relatively high proportions of impervious surface, as compared to the bulk of the Low and Very Low PPAs. Significant concentrations of Very High and High priority PPAs are also seen in proximity to the 100-year floodplain (Map 3.3).

MAP 3.3 POTENTIAL PLANTING AREA (2020) PRIORITIZED BY STORMWATER VULNERABILITY INDEX



Social Equity

Social equity refers to the concept of fairness and justice in the distribution of resources and opportunities in a society, particularly as it relates to historically marginalized and disadvantaged groups. It recognizes that not all individuals or communities have equal access to the resources, opportunities and benefits that society has to offer and seeks to address these disparities through policy and practice.

The assessment identifies areas where tree canopy cover can be expanded to reduce vulnerability to the harmful impacts associated with social inequity.

Community Impacts

Health Risks: People in socially disadvantaged communities are more likely to experience poor health outcomes, including chronic diseases, mental health issues and shorter life expectancies.

Economic Disadvantages: Social inequity can limit access to education and job opportunities, which contributes to persistent poverty and income inequality.

Political Disengagement: People in socially disadvantaged communities are less likely to participate in political processes and civic engagement, leading to reduced representation and less investment, both public and private, in these communities.

Environmental Injustice: Social inequity leads to disproportionate impact from environmental hazards (e.g., pollution) and other forms of environmental degradation (e.g., development characterized by high population density and relatively high and low amounts of impervious surfaces and tree canopy, respectively).

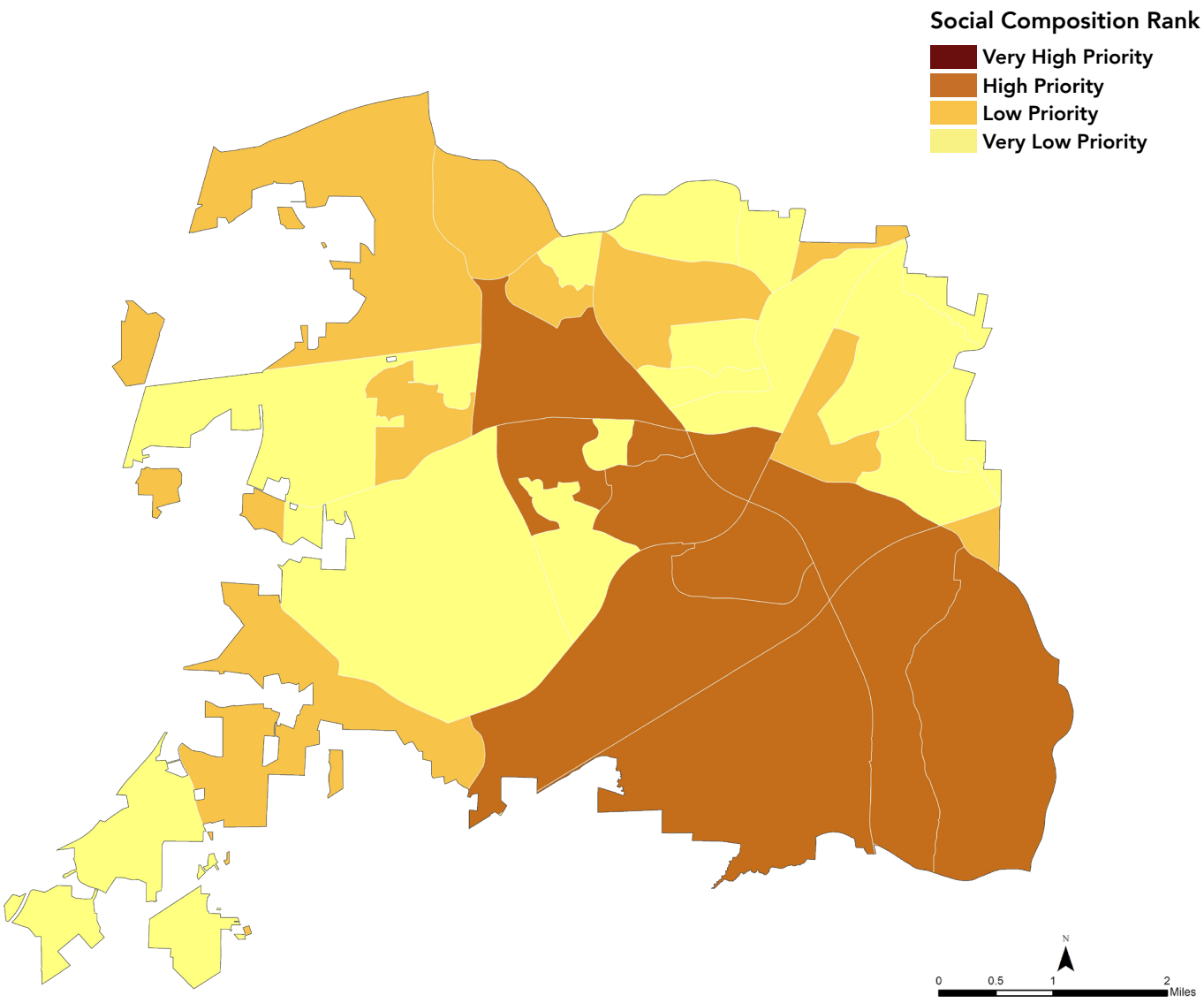
Measurement

A social equity prioritization index was generated by incorporating socioeconomic and demographic data from Wake County's Social Equity Atlas and health data from the CDC PLACES study. Areas scoring higher on the social equity index are in greater need of the environmental and socioeconomic benefits that trees can provide.

Observations

Map 3.4. illustrates the social equity index score distribution by Block Group within the Apex planning jurisdiction. The highest priority BGs are clustered in the southeastern portion of the planning jurisdiction. Higher priority BGs are where new tree plantings would make the most impact in mitigating the negative consequences of social inequity.

MAP 3.4 DISTRIBUTION OF SOCIAL EQUITY INDEX BY BLOCK GROUP



Prioritizing Planting Areas

Composite Vulnerability Index

Summary

The planting analysis ultimately prioritized the identified PPAs using a composite vulnerability index that combined ten measures of community vulnerability (Table 3.1). Each individual planting area was assigned a priority rank from Very High to Very Low. (Table 3.2).

The index is a tool for prioritizing potential planting opportunities according to where the growth and expansion of tree canopy will make the greatest contribution to mitigating vulnerability and boosting community resilience.

Observations

A total of 292 acres of land area across 3,917 individual planting areas rated as Very High priority. An additional 494 acres across 5,461 individual PPAs rated as High priority.

The greatest concentration of Very High and High priority PPAs are observed east of I-540 and south of U.S. 64 (Map 3.4).

Vintage 2020

It is important to reiterate that this analysis utilized 2020 NAIP imagery as the foundation for identifying PPAs. Some of the identified planting areas may no longer be suitable for planting. This tool should be used as a first pass at coordinating and prioritizing canopy replacement and restoration efforts.

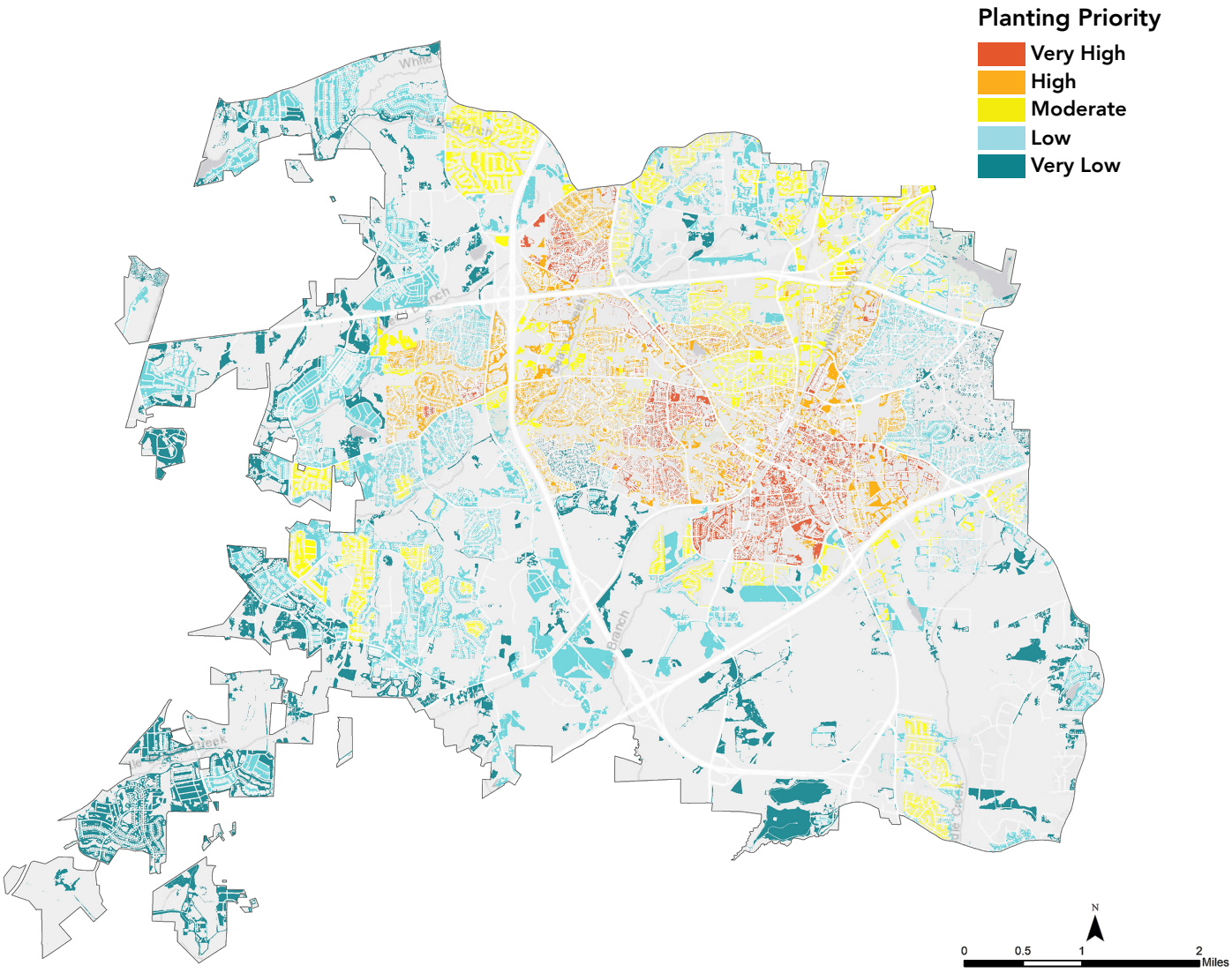
TABLE 3.1 COMPOSITE VULNERABILITY INDEX INPUT CRITERIA

COMPOSITE INDEX CRITERIA
Tree Canopy Percent
Possible Canopy Percent
Heat Islands
Social Equity Index: Score 300+ vulnerability
Mental Health
Air Quality
Stormwater
Asthma Prevalence
Soil Erosion
FEMA Floodplain

TABLE 3.2 POTENTIAL PLANTING AREA (2020) PRIORITIZED BY COMPOSITE VULNERABILITY INDEX

PRIORITY	PLANTING AREAS	TOTAL ACREAGE
Very High	3,917	292
High	5,461	494
Moderate	4,005	688
Low	6,685	1,719
Very Low	3,167	1,423

MAP 3.5 POTENTIAL PLANTING AREA (2020) PRIORITIZED BY COMPOSITE VULNERABILITY INDEX



Tree Placement Modeling

Summary

Building from the planting area analysis, a GIS-based tree placement model utilized an algorithm to determine how many trees could potentially fit within each of the identified PPAs. The model differentiates between tree size at maturity (large, medium and small), giving preference to larger canopy trees while utilizing spacing commonly suggested for a landscape setting (Table 3.3)

The tree placement model found 229,001 individual planting sites throughout the planning jurisdiction:

- 54.8% are suitable for large-growing trees (125,581 sites).
- 12.0% are suitable for medium-growing trees (27,568 sites).
- 33.2% are suitable for small-growing trees (75,852 sites).

When prioritized by the Composite Vulnerability Index, the model ranked 18,914 sites as Very High and 30,697 sites as High (8.3% and 13.4% of all sites, respectively).

Targeted Planting

To demonstrate the utility of the tree placement analysis, we took a closer look at one of Apex's Green Spaces: Seymour Athletic Fields (Map 3.5).

Within the park, the highest priority planting sites are clustered around the buildings and parking lots (i.e., impervious surfaces).

Table 3.3 Tree Placement Model: Crown Size & Spacing Parameters. A total of 58 Moderate priority tree locations were identified, including 26 sites deemed suitable for a large-maturing shade tree.

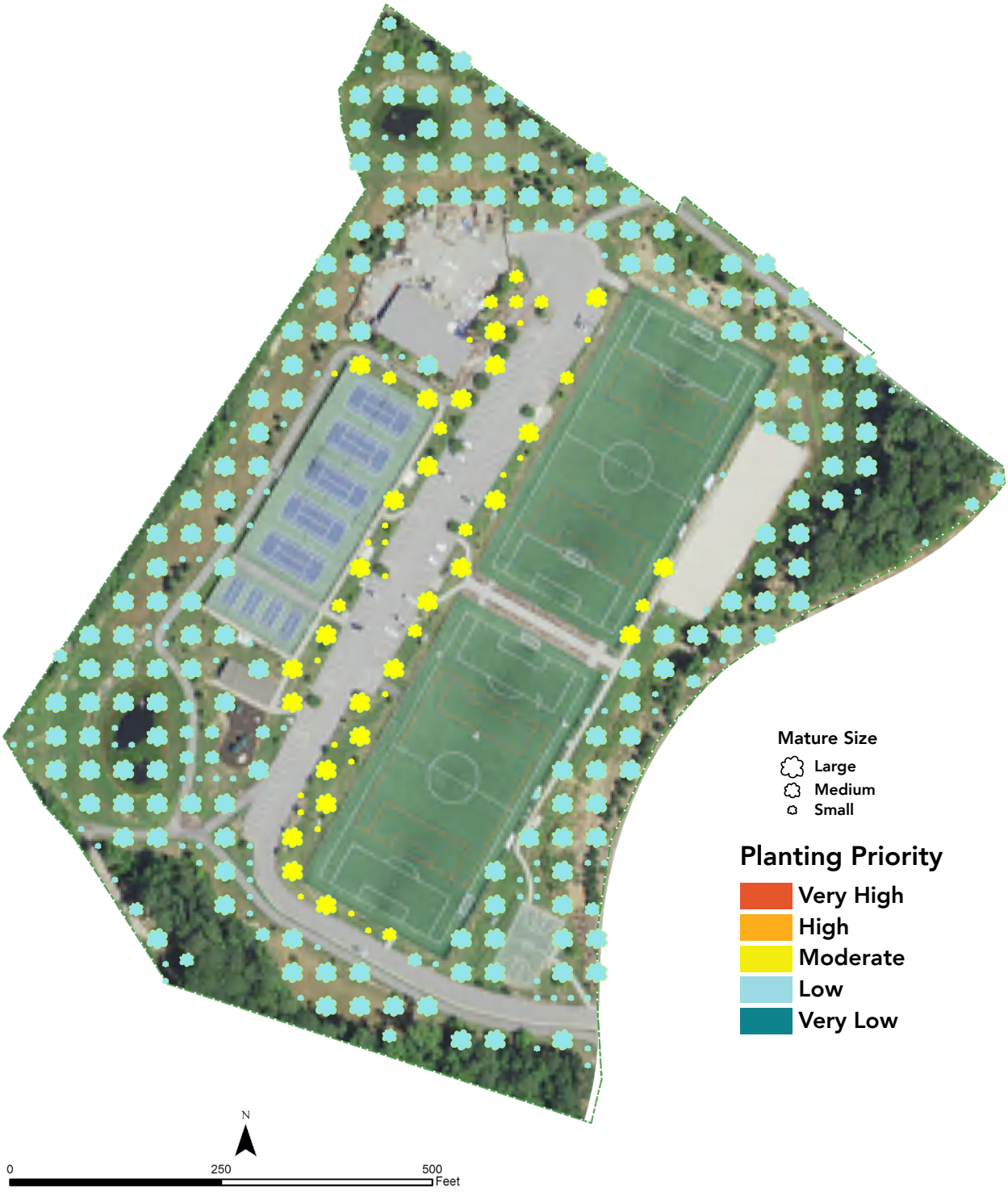
TABLE 3.3 TREE PLACEMENT MODEL CROWN SIZE & SPACING PARAMETERS

Tree Placement Model Tree Spacing		
Planting Site Size	**Mature Crown Diameter**	**No Other Trees Placed Within:**
Small	20 Feet	10 Feet
Medium	30 Feet	15 Feet
Large	40 Feet	20 Feet

TABLE 3.4 SEYMOUR ATHLETIC FIELDS: PRIORITY TREE PLANTING SITES (2020)

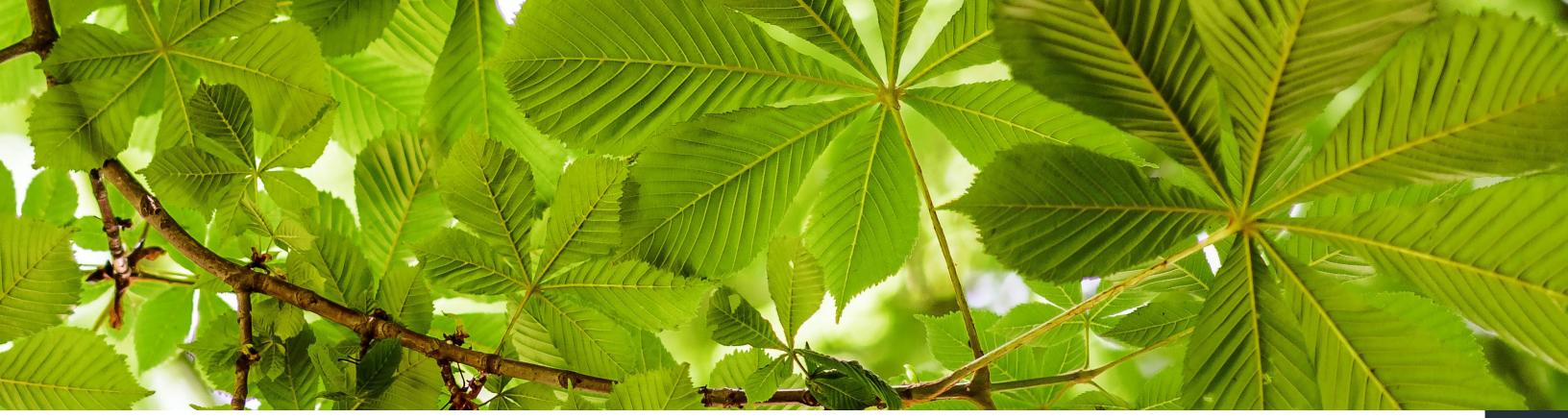
MATURE CROWN SIZE	PLACEMENT SITE PRIORITY		
	MODERATE	LOW	TOTAL
Small	20	98	118
Medium	12	22	34
Large	26	160	186
Total	58	280	338

MAP 3.6 SEYMOUR ATHLETIC FIELDS: PRIORITIZED TREE PLACEMENT MODELING (2020)





Methodology



Land cover analyses are crucial for understanding the distribution and composition of different land cover types. The following methodology outlines the steps taken to conduct a land cover assessment for a tree canopy assessment:

1. Project Study Area Description:

   The Wake LCA/TCA project study area consisted of the entirety of land area within the county limits. Additionally, the project included the entire planning jurisdiction for each of the county's twelve core municipalities, including jurisdictional land areas that extend beyond county limits. Within the defined boundary there are several parks and open spaces, watersheds, agricultural, industrial and residential areas.

2. Data Collection:

   The data collection process involved the use of high-resolution aerial imagery provided by the U.S. Department of Agriculture's National Agriculture Imagery Program (NAIP).The one-meter resolution imagery was captured in the Spring, when trees are in full leaf. The imagery was processed using photogrammetric techniques to generate a high-resolution orthophoto, which was used to identify tree canopy cover.

3. Image Analysis:

   The image analysis was conducted using a combination of manual and automated methods. The manual analysis involved visual interpretation of the orthophoto to identify individual trees and their canopy cover. The automated analysis involved the use of computer algorithms to extract information on the tree canopy cover from the orthophoto.

4. Data Analysis:

   The final dataset was used to generate several maps of the canopy cover for the municipality which illustrate a wide range of useful data including land cover types, canopy percentage, canopy health and land use types. The tree canopy cover was calculated as the percentage of the municipality covered by the crowns of the trees.

5. Interpretation and Reporting:

   The results were reported using maps, figures and tables, to facilitate understanding by the public, stakeholders and decision-makers.

Land Cover Analysis

Classification Methodology

Davey Resource Group utilized an object-based image analysis (OBIA) semi-automated feature extraction method to process and analyze current high-resolution color infrared (CIR) aerial imagery and remotely sensed data to identify tree canopy cover and land cover classifications. The use of imagery analysis is cost-effective and provides a highly accurate approach to assessing your community's existing tree canopy coverage. This supports responsible tree management, facilitates community forestry goal setting and improves urban resource planning for healthier and more sustainable urban environments.

Advanced image analysis methods were used to classify, or separate, the land cover layers from the overall imagery. The semi-automated extraction process was completed using Feature Analyst, an extension of ArcGIS®. Feature Analyst uses an object-oriented approach to cluster together objects with similar spectral (i.e., color) and spatial/contextual (e.g., texture, size, shape, pattern and spatial association) characteristics. The land cover results of the extraction process were post-processed and clipped to each project boundary prior to the manual editing process to create smaller, manageable and more efficient file sizes. Secondary source data, high-resolution aerial imagery provided by Wake County iMAPS and custom ArcGIS® tools were used to aid in the final manual editing, quality checking and quality assurance processes (QA/QC). The manual QA/QC process was implemented to identify, define and correct any misclassifications or omission errors in the final land cover layer.

Classification Workflow

1. Prepare imagery for feature extraction (resampling, rectification, etc.), if needed.
2. Gather training set data for all desired land cover classes (canopy, impervious, grass, bare soil, shadows).
3. Extract canopy layer only; this decreases the amount of shadow removal from large tree canopy shadows. Fill small holes and smooth to remove rigid edges.
4. Edit and finalize canopy layer at 1:2000 scale. A point file is created to digitize-in small individual trees that will be missed during the extraction. These points are buffered to represent the tree canopy. This process is done to speed up editing time and improve accuracy by including smaller individual trees.
5. Extract remaining land cover classes using the canopy layer as a mask; this keeps canopy shadows that occur within groups of canopy while decreasing the amount of shadow along edges.
6. Edit the impervious layer to reflect actual impervious features, such as roads, buildings, parking lots, etc. to update features.
7. Using canopy and actual impervious surfaces as a mask; input the bare soils training data and extract them from the imagery. Quickly edit the layer to remove or add any features. Davey Resource Group tries to delete dry vegetation areas that are associated with lawns, grass/meadows and agricultural fields.
8. Assemble any hydrological datasets, if provided. Add or remove any water features to create the hydrology class. Perform a feature extraction if no water feature datasets exist.
9. Use geoprocessing tools to clean, repair and clip all edited land cover layers to remove any self-intersections or topology errors that sometimes occur during editing.
10. Input canopy, impervious, bare soil and hydrology layers into Davey Resource Group's Five-Class Land Cover Model to complete the classification. This model generates the pervious (grass/low-lying vegetation) class by taking all other areas not previously classified and combining them.
11. Thoroughly inspect final land cover dataset for any classification errors and correct as needed.
12. Perform accuracy assessment. Repeat Step 11, if needed.

Automated Feature Extraction Files

The automated feature extraction (AFE) files allow other users to run the extraction process by replicating the methodology. Since Feature Analyst does not contain all geoprocessing operations that Davey Resource Group utilizes, the AFE only accounts for part of the extraction process. Using Feature Analyst, Davey Resource Group created the training set data, ran the extraction and then smoothed the features to alleviate the blocky appearance. To complete the actual extraction process, Davey Resource Group uses additional geoprocessing tools within ArcGIS®. From the AFE file results, the following steps are taken to prepare the extracted data for manual editing.

1. Davey Resource Group fills all holes in the canopy that are less than 30 square meters. This eliminates small gaps that were created during the extraction process while still allowing for natural canopy gaps.
2. Davey Resource Group deletes all features that are less than 9 square meters for canopy (50 square meters for impervious surfaces). This process reduces the number of small features that could result in incorrect classifications and also helps computer performance.
3. The Repair Geometry, Dissolve and Multipart to Singlepart (in that order) geoprocessing tools are run to complete the extraction process.
4. The Multipart to Singlepart shapefile is given to GIS personnel for manual editing to add, remove, or reshape features.

Accuracy Assessment Protocol

Determining the accuracy of spatial data is of high importance to Davey Resource Group and our clients. To achieve the best possible result, Davey Resource Group manually edited and conducted thorough QA/QC checks on all urban tree canopy and land cover layers. A QA/QC process was completed using ArcGIS® to identify, clean and correct any misclassification or topology errors in the final land cover dataset. The initial land cover layer extractions were edited at a 1:2000 quality control scale in the urban areas and at a 1:2500 scale for rural areas utilizing the most current high-resolution aerial imagery to aid in the quality control process.

To test for accuracy, random plot locations were generated throughout the area of interest and verified to ensure that the data meet the client standards. Each point was compared with the most current NAIP high-resolution imagery (reference image) to determine the accuracy of the final land cover layer. Points were classified as either correct or incorrect and recorded in a classification matrix. Accuracy was assessed using four metrics: overall accuracy, kappa, quantity disagreement and allocation disagreement. These metrics were calculated using a custom Excel® spreadsheet.

TABLE 1. LAND COVER CLASSIFICATION CODE VALUES

LAND COVER CLASSIFICATION	CODE VALUE
Tree Canopy	1
Impervious	2
Pervious (Grass/Vegetation)	3
Bare Soil	4
Open Water	5



Land Cover Accuracy

The following describes Davey Resource Group's accuracy assessment techniques and outlines procedural steps used to conduct the assessment.

1. **Random Point Generation —** Using ArcGIS, 1,000 random assessment points are generated.
2. **Point Determination —** Each point is carefully assessed by the GIS analyst for likeness with aerial photography. To record findings, two new fields, CODE and TRUTH, are added to the accuracy assessment point shapefile. CODE is a numeric value (1–5) assigned to each land cover class (Table 1) and TRUTH is the actual land cover class as identified according to the reference image. If CODE and TRUTH are the same, then the point is counted as a correct classification. Likewise, if the CODE and TRUTH are not the same, then the point is classified as incorrect. In most cases, distinguishing if a point is correct or incorrect is straightforward. Points will rarely be misclassified by an egregious classification or editing error. Often incorrect points occur where one feature stops and the other begins.
3. **Classification Matrix —** During the accuracy assessment, if a point is considered incorrect, it is given the correct classification in the TRUTH column. Points are first assessed on the NAIP imagery for their correctness using a "blind" assessment – meaning that the analyst does not know the actual classification (the GIS analyst is strictly going off the NAIP imagery to determine cover class). Any incorrect classifications found during the "blind" assessment are scrutinized further using sub-meter imagery provided by the client to determine if the point was incorrectly classified due to the fuzziness of the NAIP imagery or an actual misclassification. After all random points are assessed and recorded; a classification (or confusion) matrix is created. The classification matrix for this project is presented in Table 2. The table allows for assessment of user's/producer's accuracy, overall accuracy, omission/commission errors, kappa statistics, allocation/quantity disagreement and confidence intervals (Figure 1 and Table 3).

TABLE 2. CLASSIFICATION MATRIX

CLASSES	TREE CANOPY	IMPERVIOUS SURFACES	GRASS & LOW-LYING VEGETATION	BARE SOILS	OPEN WATER	ROW TOTAL	PRODUCER'S ACCURACY	ERRORS OF OMISSION
Tree Canopy	521	3	14	1	0	539	96.66%	3.34%
Impervious	3	151	6	1	0	161	93.79%	6.21%
Grass/ Vegetation	11	1	207	1	0	220	94.09%	5.91%
Bare Soils	1	0	6	36	0	43	83.72%	16.28%
Water	0	0	0	0	37	37	100.00%	0.00%
Column Total	536	155	233	39	37	1,000		
User's Accuracy	97.20%	97.42%	88.84%	92.31%	100.00%		Overall Accuracy	95.20%
Errors of Commission	2.80%	2.58%	11.16%	7.69%	0.00%		Kappa Coefficient	0.9240

REFERENCE DATA

The following are descriptions of each statistic as well as the results from some of the accuracy assessment tests.

4. **Overall Accuracy —** Percentage of correctly classified pixels; for example, the sum of the diagonals divided by the total points ((521+151+207+36+37)/1,000 = 95.20%).
5. **User's Accuracy —** Probability that a pixel classified on the map actually represents that category on the ground (correct land cover classifications divided by the column total ([521/536= 97.20%]).
6. **Producer's Accuracy —** Probability of a reference pixel being correctly classified (correct land cover classifications divided by the row total ([521/539 = 96.66%]).
7. **Kappa Coefficient —** A statistical metric used to assess the accuracy of classification data. It has been generally accepted as a better determinant of accuracy partly because it accounts for random chance agreement. A value of 0.80 or greater is regarded as "very good" agreement between the land cover classification and reference image.
8. **Errors of Commission —** A pixel reports the presence of a feature (such as trees) that, in reality, is absent (no trees are actually present). This is termed as a false positive. In the matrix below, we can determine that 2.8% of the area classified as canopy is most likely not canopy.
9. **Errors of Omission —** A pixel reports the absence of a feature (such as trees) when, in reality, they are actually there. In the matrix below, we can conclude that 3.34% of all canopy classified is actually classified as another land cover class.
10. **Allocation Disagreement —** The amount of difference between the reference image and the classified land cover map that is due to less than optimal match in the spatial allocation (or position) of the classes.
11. **Quantity Disagreement —** The amount of difference between the reference image and the classified land cover map that is due to less than perfect match in the proportions (or area) of the classes.
12. **Confidence Intervals —** A confidence interval is a type of a population parameter and is used to indicate the reliability of an estimate. Confidence intervals consist of a range of values (interval) that act as good estimates of the unknown population parameter based on the observed probability of successes and failures. Since all assessments have innate error, defining a lower and upper bound estimate is essential.

CONFIDENCE INTERVALS

CLASS	ACREAGE	PERCENTAGE	LOWER BOUND	UPPER BOUND
Tree Canopy	298,110.0	54.1%	54.1%	54.2%
Impervious Surfaces	82,191.6	14.9%	14.9%	15.0%
Grass & Low-Lying Vegetation	128,567.1	23.4%	23.3%	23.4%
Bare Soils	22,864.8	4.2%	4.1%	4.2%
Open Water	18,796.9	3.4%	3.4%	3.4%
Total	550,530.4	100.00%		

STATISTICAL METRICS SUMMARY

Overall Accuracy =	95.20%
Kappa Coefficient =	0.9240
Allocation Disagreement =	4%
Quantity Disagreement =	1%

ACCURACY ASSESSMENT

CLASS	USER'S ACCURACY	LOWER BOUND	UPPER BOUND	PRODUCER'S ACCURACY	LOWER BOUND	UPPER BOUND
Tree Canopy	97.2%	96.5%	97.9%	96.7%	95.9%	97.4%
Impervious Surfaces	97.4%	96.1%	98.7%	93.8%	91.9%	95.7%
Grass & Low-Lying Vegetation	88.8%	86.8%	90.9%	94.1%	92.5%	95.7%
Bare Soils	92.3%	88.0%	96.6%	83.7%	78.1%	89.4%
Open Water	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Canopy Type

A separate geospatial analysis was done to identify and classify all the forests within Wake County as either coniferous or deciduous forests. A supervised classification method was used to classify, or separate coniferous forests from deciduous forests. This semi-automated classification was done in ArcMap using the Feature Analyst extension and a 2021-high resolution leaf off imagery provided by Wake County. The leaf off imagery used for the analysis was a high-resolution imagery with a spatial resolution of 0.5 feet. The imagery was later resampled to 3.2808 feet (1-meter) to allow for easy processing in ArcMap.

Advanced image interpretation methods were used by a GIS Analyst to take training set data samples from areas of the leaf off imagery that were considered as conifers. Conifers are easy to distinguish from deciduous forests in a leaf off imagery due to their distinct dark green color. The deciduous forests on the other hand have light to deep gray hues. The Feature analyst software was then used to extract the coniferous forests and finally edited by GIS Technicians.

Prior to editing the extracted coniferous forests, the conifer layers were clipped to the overall canopy layer (Which includes both conifer and deciduous forests) to stamp out all the areas that are grass but misclassified as tree canopy due to their spectral similarities. This process is done to speed up editing time, improve accuracy and enable the inclusion of smaller individual trees in the final canopy layer.

Canopy Health

Methodology

Canopy health can be determined using near-infrared imagery and Normalized Difference Vegetation Index (NDVI) transformation. The NDVI is used to find the health of the tree canopy and to locate areas of stress in the tree's foliage. This is used by cities to assess the health of their trees and to locate areas of canopy stress in order to find problem areas. This allows identification of where plants are in very good condition and where they are in decline.

This data set should be considered as a relative health of trees compared to the surrounding trees. Some tree species have different reflectance in multispectral imagery so they could show slightly less healthy. As a part of our process, the separation of deciduous and coniferous trees is necessary due to the spectral differences. If this process was not used, most of the health data would show coniferous trees in a dead, dying, or poor health state, which would not be the case.

Process

The NAIP imagery, collected for the landcover analysis and gathered from the United States Department of Agriculture (USDA), was used to create an NDVI by utilizing the red band (Red) from the natural color image and the near infrared band (NIR) from the colored infrared image. These bands were then extracted from their images and the following equation was run.

$$NDVI = \frac{(NIR - Red)}{(NIR + Red)}$$

This returned a raster that ranges from -1 to 1, with values close to -1 being non-vegetated areas and values close to 1 are healthy vegetation. This raster was then clipped to the canopy layer derived from the landcover layer. In the case of Wake County, the NDVI was clipped to the deciduous and coniferous canopy layers, resulting in two NDVI layers.

These layers were classified into 6 classes using the natural breaks (jenks) classification methods, which is the minimization of each class's standard deviation from the class mean, while maximizing deviation from the other classes. The layers were reclassified using these 6 classes into the ranks of the tree health analysis. Below is the breakdown of the NDVI values in each health rank for both the coniferous and deciduous canopy.

DECIDUOUS CANOPY HEALTH	
NDVI Value	Health Rank
-1 - -0.105	Not Classified
-0.105 – 0.098	Dead/Dying
0.098 – 0.223	Poor
0.223 – 0.309	Fair
0.309 – 0.396	Good
0.396 - 1	Very Good

CONIFEROUS CANOPY HEALTH	
NDVI Value	Health Rank
-1 - -0.176	Not Classified
-0.176 – 0.035	Dead/Dying
0.035 – 0.168	Poor
0.168 – 0.255	Fair
0.255 – 0.349	Good
0.349 - 1	Very Good

How are Tree Canopy Benefits Are Calculated?

Air Quality

The i-Tree Canopy v7.1 Model was used to quantify the value of ecosystem services for air quality. i-Tree Canopy was designed to give users the ability to estimate tree canopy and other land cover types within any selected geography. The model used the estimated canopy percentage and reports air pollutant removal rates and monetary values for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2) and particulate matter (PM) (Hirabayashi 2014).

Within the i-Tree Canopy application, the U.S. EPA's BenMAP Model estimates the incidence of adverse health effects and monetary values resulting from changes in air pollutants (Hirabayashi 2014; US EPA 2012). Different pollutant removal values were used for urban and rural areas. In i-Tree Canopy, the air pollutant amount annually removed by trees and the associated monetary value can be calculated with tree cover in areas of interest using BenMAP multipliers for each county in the United States.

To calculate ecosystem services for the study area, canopy percentage metrics from UTC land cover data performed during the assessment were transferred to i-Tree Canopy. Those canopy percentages were matched by placing random points within the i-Tree Canopy application. Benefit values were reported for each of the five listed air pollutants.

Carbon Storage and Sequestration

The i-Tree Canopy v7.1 Model was used to quantify the value of ecosystem services for carbon storage and sequestration. i-Tree Canopy was designed to give users the ability to estimate tree canopy and other land cover types within any selected geography. The model uses the estimated canopy percentage and reports carbon storage and sequestration rates and monetary values. Methods on deriving storage and sequestration can be found in Nowak et al. 2013.

To calculate ecosystem services for the study area, canopy percentage metrics from UTC land cover data performed during the assessment were transferred to i-Tree Canopy. Those canopy percentages were matched by placing random points within the i-Tree Canopy application. Benefit values were reported for carbon storage and sequestration.

Stormwater

The i-Tree Hydro v6.1 Model was used to quantify the value of ecosystem services for stormwater runoff. i-Tree Hydro was designed for users interested in analysis of vegetation and impervious cover effects on urban hydrology. This most recent version (v6.1) allows users to report hydrologic data on the municipal level rather than just a watershed scale giving users more flexibility. For more information about the model, please consult the i-Tree Hydro v6.1 manual (http://www.itreetools.org).

To calculate ecosystem services for the study area, land cover percentages derived for the project area and all municipalities that were included in the project area were used as inputs into the model. Precipitation data from 2005–2012 was modeled within the i-Tree Hydro to best represent the average conditions over an eight-year time period. Model simulations were run under a Base Case as well as an Alternate Case. The Alternate Case set tree canopy equal to 0% and assumed that impervious and vegetation cover would increase based on the removal of tree canopy. Impervious surface was increased 6.04% based on a percentage of the amount of impervious surface under tree canopy and the rest was added to the vegetation cover class. This process was completed to assess the runoff reduction volume associated with tree canopy since i-Tree Hydro does not directly report the volume of runoff reduced by tree canopy. The volume (in cubic meters) was converted to gallons to retrieve the overall volume of runoff avoided by having the current tree canopy.

Through model simulation, it was determined that tree canopy decreases the runoff volume in the project area by 8,103,138,458 gallons per year using precipitation data from 2005–2012. This equates to approximately 27,182 gallons per acre of tree canopy (8,103,138,458 gals/298,109.95 acres).

To place a monetary value on storm water reduction, the cost to treat a gallon of storm/wastewater was taken from McPherson et al 1999. This value was $0.17 per gallon. Tree canopy was estimated to contribute roughly $1,377,533,538 to avoid runoff annually to the project area.

References for Canopy Benefit Methodology

Hirabayashi, S. 2014. i-Tree Canopy Air Pollutant Removal and Monetary Value Model Descriptions. http://www.itreetools.org/canopy/resources/iTree_Canopy_Methodology.pdf [Accessed 29 December 2022]

i-Tree Canopy v7.1. i-Tree Software Suite. [Accessed 29 December 2022] http://www.itreetools.org/canopy

i-Tree Hydro v6.1. i-Tree Software Suite. [Accessed 29 December 2022] http://www.itreetools.org/hydro/index.php

McPherson, E.G., Simpson, J.R.; Peper, P.J.; Xiao, Q. 1999. Tree Guidelines for San Joaquin Valley Communities. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Center for Urban Forest Research.

U.S. Environmental Protection Agency (US EPA). 2012. Environmental Benefits Mapping and Analysis Program (BenMAP). http://www.epa.gov/air/benmap [Accessed 29 December 2022]

U.S. Forest Service. 2012. STRATUM Climate Zones. [Accessed 29 December 2022] http://www.fs.fed.us/psw/programs/uesd/uep/stratum.shtml

Priority Planting Assessment

Summary

This analysis was conducted to assess priority planting locations within Wake County. Analysis included data sets from Wake County Open Data, The US Geological Survey, The US Department of Agriculture, The US Census Bureau and the Federal Emergency Management Agency. The resulting analysis found plantable areas in both public and private properties across the municipality.

Description

An urban tree canopy assessment was conducted by Wake County to assess land cover using 2020 aerial imagery. The study was completed in 2023. An analysis to identify the most suitable locations was conducted by analyzing each planting location to assign a priority ranking for stormwater and urban heat island.

Each data source utilized the most current version available and described in the subsequent sections. Stormwater uses the most recent NAIP imagery, soil data, flood data and benefit data. Heat islands were derived from averaging Landsat 8 surface temperature data from May 31, 2022 and Sept. 6, 2020 data to find hotspots at varying points in time to locate areas of potential heat mitigation. And social equity and health data were used to prioritize planting in area to create social equity

Methodology

In order to create a priority planting plan, the locations for planting must first be determined. Planting location polygons were created by taking all grass/open space and bare ground areas and combining them into a single dataset. Non-feasible planting areas such as agricultural fields, recreational fields, major utility corridors, airports, ROWs, etc. were removed from the possible grass and bare soil locations. This layer was reviewed and approved by Wake County before the analysis proceeded. The remaining planting space was consolidated into a single feature and then, exploded to multipart features creating separate, distinct polygons for each location.

Planting Area Exclusions:

Davey Resource Group identified and removed the following areas from the planting analysis:

- Sports fields (soccer, football, baseball, softball, etc.)
- Playgrounds
- Major utility corridors
- Golf courses
- The airport
- Wetland areas
- Substations
- Visible cropland
- Water treatment facilities

The planting area exclusions were then further refined by use of the following data layers:

Additional Exclusionary Layers

- Major Utility Easements
- Access Easements
- Parcels (Land use descriptions used: Agriculture, Horticulture, Water/Sewer System)
- ROW (This layer was created using the empty space from the parcel layer)
- Completed540_PermanentROWEasements
- Raleigh_Easement
- UtilityEasements_Wake Forest
- APEX_UtilityEasement

Stormwater:

To identify and prioritize planting potential based on the stormwater analysis, locations were assessed with several environmental features, including canopy percent, possible canopy percent, air quality, distance to hardscape, soil erosion and FEMA floodplain. These factors are based on numerous historic projects completed by DRG for stormwater analysis. Each factor was assessed using data from various sources and analyzed using separate grid maps. Values between zero and four (with zero having the lowest priority) were assigned to each grid assessed. A value of zero indicates that this classified piece of information yielded little or no overall value within the dataset. The grids were overlain with the values averaged to determine the priority levels at an area on the map. A priority ranging from Very Low to Very High was assigned to areas on the map based on the calculated average of all grid maps using quantile classification breaks within ArcGIS. This step of the process was completed to statistically subset data evenly into five classes of increasing importance. Areas of higher potential for runoff and erosion were considered higher priority due to their ability to diminish water quality within urban areas.

Urban Heat Island:

To identify and prioritize planting potential based on heat islands, a land surface temperature analysis was conducted using Landsat 8 imagery data. This data was provided via the United States Geological Survey (USGS). Specifically Landsat 8 thermal bands were used to calculate land surface temperatures. Imagery from May 31, 2022 and September 6, 2020 were used to find the radiance, at-satellite brightness and proportion of vegetation coverage. This data was then used to calculate the land surface temperature for both dates. Surface temperatures were then averaged and a priority ranking of “Very Low” to “Very High” was assigned based on the averaged temperatures using natural (Jenks) breaks classification within ArcGIS. Natural breaks create class breaks so that similar values were grouped together and maximized class differences. Classes with higher surface temperatures were considered higher priority due to the adverse effects of elevates microclimates within urban areas.

Social Equity:

Values were developed to identify and priority planting potential to improve social equity amongst the community. Analysis was conducted using the Social Equity Index data provided by Wake County and health data gathered from the CDC PLACES study. Each factor was separated into its own grid map. Values from each factor were then sorted into five classes ranked from 0–4 with zero being the lowest priority and 4 representing the highest priority. The factors were classified into five final rankings from "Very Low" to "Very High" for each of the social equity and public health criteria using quantile classification breaks within ArcGIS. Quantile is defined as classes which contain an equal number of data features with no empty classes. Areas with a higher rating are areas with higher planting priority to provide equal access to trees and tree canopy to all citizens regardless of social status.

Composite Priority:

A composite priority was created utilizing the raster calculator tool and the provided weighting scheme. Each raster dataset for stormwater, heat island and social equity were used to calculate a total aggregate value for each individual planting location polygon. The values were then binned into five classes utilizing quantile classification within ArcGIS. Quantile classification distributes values into groups where all five groups have an equal number of values. Values were binned such that higher numbers were grouped into bins representing a higher priority planting area. These bins ranged from "Very Low" on the low end to "Very High" on the upper end to mirror criteria group rankings mentioned above. Rankings were then used to combine all criteria to create a composite ranking based on all analytical factors pertaining to the municipality.

Group	Criteria	Data Origin	Last Update	Weighting	Full Weighting
Stormwater	Distance to Hardscape (Stormwater)	Wake County Urban Tree Canopy Assessment	2020	0.13	0.07
	Canopy Percent	Wake County Urban Tree Canopy Assessment	2020	0.3	0.18
	Possible Canopy Percent	Wake County Urban Tree Canopy Assessment	2020	0.25	0.16
	FEMA Floodplain	FEMA Natural Hazard	2022	0.05	0.02
	Soil Erosion	Natural Resource Conservation Service	2022	0.07	0.04
	Air Quality	i-Tree Canopy	2021	0.2	0.09
Urban Heat Island	Heat Islands – Sept. 6, 2020	Earth Explorer – USGS	2020		0.14
	Heat Islands – May 31, 2022	Earth Explorer – USGS	2020		
Social Equity	Social Equity Index	Wake County	2022	0.45	0.13
	Asthma Prevalence	CDC PLACES 2021	2021	0.2	0.06
	Mental Health Prevalence	CDC PLACES 2021	2021	0.35	0.11

Weighted Overlay Equation for Stormwater priority:
("ImperviousDistance" * 0.13) + ("Floodplain" * 0.05) + ("CanopyPercent" * 0.3) + ("SoilErosion" * 0.07) + ("PossibleCanopyPercent" * 0.25) + ("AirQuality" * 0.2)

Weighted Overlay Equation for Social Equity priority:
("SocialEquityIndex" * 0.45) + ("AsthmaPrevalence" * 0.2) + ("MentalHealthPrevalence" * 0.35)

Weighted Overlay Equation for Composite priority:
("ImperviousDistance" * 0.07) + ("Floodplain" * 0.02) + ("CanopyPercent" * 0.18) + ("SoilErosion" * 0.04) + ("PossibleCanopyPercent" * 0.16) + ("AirQuality" * 0.09) + ("HeatIslands" * 0.14) + ("SocialEquityIndex" * 0.13) + ("AsthmaPrevalence" * 0.06) + ("MentalHealthPrevalence" * 0.11)

Vulnerability Assessment Data Details

Stormwater

Distance to Hardscape (Stormwater)

Source: Wake County Urban Tree Canopy Assessment

Data: Distance to Impervious

Distance to hardscape was derived by selecting the impervious surfaces data from the landcover layer. This impervious raster layer is used as an input layer into the Euclidean Distance tool within ArcGIS to create a layer that measure straight-line distance from each impervious surface location within the municipality. These distances were grouped into five classes from 0–4. A value of 0 was given to locations that are currently represented as impervious surfaces in the land cover data while a value of 4 indicated that the open area next to the impervious surface is available for planting trees to reduce the amount of runoff and sedimentation. The table below provides exact distances to impervious surfaces per rank.

Distance to Hardscape	
Rank	**Distance to Impervious (ft)**
0	0
1	Over 100
2	51–100
3	26–50
4	1–25

Canopy Percent

Source: Wake County Urban Tree Canopy Assessment

Data: Canopy Percent

Canopy percent is a derived calculation that is determined by first calculating the total canopy acreage within each census block group (CBG). The total canopy acreage is then divided by the total area of the census block group. The resulting canopy percentage values were then grouped into five classes from 0–4 based on percent coverage. A rank of 4 was assigned to areas with the least amount of canopy percent coverage. The remaining categories are organized such that block groups with higher canopy coverage receive a lower rank. Higher rankings prioritize areas that have a low percentage of canopy coverage, therefore a higher need for tree plantings to increase canopy coverage. This will amplify the benefits the tree canopy benefits currently provide.

Canopy Percent	
Rank	**Canopy Percent**
0	Over 60.1%
1	53.45%–60.1%
2	46.81%–53.45%
3	38.7%–46.81%
4	Under 38.7%

Possible Canopy Percent

Source: Wake County Urban Tree Canopy Assessment

Data: Possible Canopy Percent

Possible canopy percent was derived by first calculating the amount of available plant acres within each census block group and then dividing the available plant acres by the total area of the CBG. The resulting percentage groups were divided into five classes from 0–4 based on percentage with 4 representing areas with the largest percentage of possible canopy. The lower the possible canopy percent, the lower the ranking received. 0 rankings were areas with the lowest percent of plantable area or the lowest among possible canopy. Prioritizing plantings in areas with a high ranking will increase canopy coverage in areas that are not currently benefiting from high amount of canopy.

Possible Canopy Percent	
Rank	**Possible Percent**
0	Under 12.5%
1	12.45%–15.64%
2	15.64%–18.6%
3	18.6%–23.0%
4	Over 23.0%

FEMA Floodplain

Source: FEMA Flood Hazard Layer

Link: https://www.fema.gov/flood-maps/national-flood-hazard-layer

Data Attribute: ZONE_LID_V & ZONESUB_LI

FEMA Flood data was collected from the FEMA website. This data is categorized first by a letter and then by a sub-ranking. Special flood hazard areas in the municipality are labeled with an AE, moderate areas are labeled with an X and a sub-category, the next denotation is labeled as 0.2% annual chance and low risk areas are noted with a X and no sub-category. These were then ranked 0–4, with 4 being the highest priority. A ranking of 4 is given to the AE & Floodway category. Planting in these locations will increase stormwater uptake and therefore reduce the amount of runoff. Lower rankings are given to the X, 1% future conditions and 0.2% annual chance and non-risk areas. Planting in areas of a higher flood risk can help decrease the amounts of standing water and runoff.

Soil Permeability — HSG	
Rank	**Threat**
0	X & Areas not included in the layer
1	0.2 PCT ANNUAL CHANCE FLOOD HAZARD
2	X & 1 PCT FUTURE CONDITIONS
3	AE
4	AE & FLOODWAY

Soil Erosion

Source: Natural Resource Conservation Service – USDA Web Soil Survey

Link: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Data Attribute: K-factor

Soil erosion was determined by analyzing the K-factor information from the USDA Soil Surveys. The data is classified into decimal numbers ranging from 0.02-0.69 with higher numbers within the range indicating the area is more susceptible to sheet and rill erosion by water. 0 rankings were given to areas that had little to no risk of erosion such as quarries, pits and other hard surface types. The ranking increases as the risk of erosion increases with the highest ranking being 4. Planting in priority areas with high rankings will help decrease erosion vulnerability.

Soil Erosion — K-factor	
Rank	**K-factor (expressed as whole numbers)**
0	0–10
1	11–20
2	21 –30
3	31–37
4	Over 38

Air Quality

Source: i-Tree Canopy

Link: https://canopy.itreetools.org/

Data Attribute: Air Pollution Removed Annually (CO – Carbon Monoxide, NO_2 – Nitrogen Dioxide, O_3 – Ozone, SO_2 – Sulfur Dioxide, PM_{10} – Particulate Matter)

Data shows the amount of air pollution in pounds that were removed annually in each block group. Amounts were classified into five groups using quantile classification within ArcGIS and ranked from 0–4 based on the amount of pollution removed. A ranking of 0 was given to areas with more pollution removed annually. This ranking increased as the pollution removed decreased. Planting in these high priority areas may help address areas of concern regarding air quality and may help to reduce pollution.

Air Quality	
Rank	**Units (lbs.)**
0	Over 46,000
1	19,300–46,000
2	10,900–19,300
3	5,800–10,900
4	0–5,800

Urban Heat Island

Land Surface Temperature (LST)

Source: Earth Explorer (USGS) Landsat 8 Thermal Imagery

Link: https://earthexplorer.usgs.gov/

Data Attribute: Land Surface Temperature (LST)

Land surface temperature was calculated using Landsat 8 imagery thermal bands. Using both thermal bands, a conversion from Digital Number (DN) to radiance, at-satellite brightness temperature and proportion of vegetation can be calculated. These values were used to find the land surface temperature. Imagery from May 31, 2022 and Sept. 6, 2020 was used to create two separate surface temperature raster datasets. The two years were averaged and binned into five classes from 0–4 based on a quantile classification with ArcGIS. Rankings were determined by the surface temperature ranges. The lowest surface temperature range received a 0 ranking. The ranking increased as the surface temperature increases with the high rank being 4. Planting in areas of high surface temperature helps mitigation urban heat islands by providing more shade to cool not only air temperature but heat absorbed by pavements.

Land Surface Temperature — 2 Year Average (2020–2022)	
Rank	**Temperature (Fahrenheit)**
0	64.88–72.15
1	72.15–75.05
2	75.05–78.2
3	78.2–81.96
4	81.96–95.77

Social Equity

Vulnerable Populations

Source: Wake County Social Equity Index

Data Attribute: Combined_S

The social equity data was curated and provided by Wake County. The higher the score given to a block group, the higher the equity need. The social equity score is classified into five groups using info provided by Wake County and ranked from 0–4 based on this score. A ranking of 0 was given to areas with a low equity score. The higher the equity score, the higher the ranking. A ranking of 4 was given to areas that have a score of 300 and over.

Wake County Social Equity Index	
Rank	**Equity Score**
0	1–75
1	150–76
2	151–225
3	226–299
4	300 and Over

Asthma

Source: Center for Disease Control (CDC) PLACES

Link: https://chronicdata.cdc.gov/browse?q=PLACES%202022

Data Attribute: Crude Prevalence

Crude Prevalence was calculated using respondents of the Behavioral Risk Factor Surveillance System (BRFSS) survey or National Survey of Children's Health. This number is a percentage that is calculated by dividing the weighted total of people who have asthma or who have been told they have asthma from a doctor by the weighted number of people who responded to either survey excluding the answers of "don't know" or "refused" in regard to Asthma. Data was recorded by census tract. The asthma rates were grouped into five classes using quantile classification within ArcGIS and ranked from 0–4. A ranking of 0 was given to the lowest prevalence recorded. This ranking increased as the asthma rates increase with the highest ranking being 4. Planting in these priority areas will potentially help decrease asthma prevalence.

CDC — Asthma	
Rank	**Crude Prevalence**
0	0.0–7.5
1	7.6–8.0
2	8.1–8.6
3	8.7–9.2
4	9.3–12.8

Mental Health

Source: Center for Disease Control (CDC) PLACES

Link: https://chronicdata.cdc.gov/browse?q=PLACES%202022

Data Attribute: Crude Prevalence

Crude Prevalence was calculated using respondents of the BRFSS survey or National Survey of Children's Health. This number is a percentage that was calculated by dividing the weighted total of people who have reported 14 or more days during the past 30 in which their mental health was not good by the weighted number of people who responded to either survey excluding the answers of "don't know" or "refused" in regard to mental health. Data was recorded by census tract. The mental health rates were grouped into five classes using quantile classification within ArcGIS and ranked from 0-4. A ranking of 0 was given to the lowest prevalence. This ranking increased as the mental health rates increased with the highest ranking being 4. Planting in these priority areas will potentially help decrease poor mental health prevalence.

CDC — Mental Health	
Rank	**Crude Prevalence**
0	0.0–10.9
1	11.0–12.3
2	12.4–13.5
3	13.6–14.6
4	14.7–22.8

Tree Placement Modeling

Summary

The purpose of this feature class was to create a tree planting placement guide for Wake County. This layer identifies possible locations for tree placement based on the placement analysis.

Description

An urban tree canopy assessment was conducted to determine the current land cover. This landcover was used to find the most suitable locations to plant trees. These locations were narrowed down to spaces over 200 square feet within cities limits and 1 acre on county lands. This analysis creates locations to plant trees based on the Tree Placement Analysis.

Use Limitations

As determined by Wake County Government.

Data Quality

Planting sites and their tree sizes were generalized based on data derived from the Priority Planting analysis and the Tree Placement model. No field verification of planting sites was conducted. Before planting, the Municipality will need to conduct site assessments to ensure planting locations can adequately sustain planting trees.

Lineage

This process used the priority planting areas to create points for tree placement. Grid area created over the designated area and points were placed within these grids within the priority planting areas. The size of the trees is determined by what is able to fit within both the grid and planting area. The model places large trees first and then uses the remaining area to place medium trees and then again for small trees.

Data Attribute Fields

ET_X – X coordinate

ET_Y – Y coordinate

Crown – The diameter of the crown

CrownSize – The size (small, medium, large) of the tree crown

UNIQUEID – unique identifying number

City_County – Specifies the city the tree falls in or if it falls in county land.

Subdivision – Specifies if it falls within a subdivion (subdivisions and planned subdivisions provided by wake county)

PublicLand_Owner – Specifies the owner (city/county/state/federal/park) of the public land. All null values are private land.

StormMean – Stormwater mean rank (mean rank of 0–4)

StormPri – Stormwater priority rank

TempMean – Heat Island mean rank (mean rank of 0–4)

TempPri – Heat Island priority rank

SocialEquMean – Social equity index mean rank (mean rank of 0–4)

SocialEquPri – Social equity index priority rank

AsthmaMean – Asthma prevalence mean rank (mean rank of 0–4)

AsthmaPri – Asthma prevalence priority rank

MentalHMean – Mental Health Prevalence mean rank (mean rank of 0–4)

MentalHPri – Mental health prevalence priority rank

SocialCompMean – Social equity composite (Social equity index, asthma and mental health) mean rank (mean rank of 0–4)

SocialCompPri – Social equity composite (Social equity index, asthma and mental health) priority rank

CompositeMean – Overall composite (Stormwater, heat island, social equity) mean rank (mean rank of 0–4)

CompositePri – Overall composite (Stormwater, heat island, social equity) priority rank

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING

Meeting Date: September 26, 2023

Item Details

Presenter(s): Dianne Khin, Director

Department(s): Planning Department

Requested Motion

Public Hearing and possible motion to adopt an Ordinance on the Question of Annexation – Apex Town Council's intent to annex 30.047 acres, Pleasant Plans Elementary School, Annexation No. 764 into the Town Corporate Limits.

Approval Recommended?

Yes

Item Details

The annexation has been certified and a public hearing has been posted as required.

Attachments

- PH1-A1: Annexation Ordinance – Annexation No. 764
- PH1-A2: Legal Description – Annexation No. 764
- PH1-A3: Aerial Map – Annexation No. 764
- PH1-A4: Plat Map – Annexation No. 764
- PH1-A5: Annexation Petition – Annexation No. 764
- PH1-A6: Public Notice - Annexation No. 764

TOWN OF APEX, NORTH CAROLINA
Municipality No. 333

After recording, please return to: Town Clerk, Town of Apex, P.O. Box 250, Apex, NC 27502

ORDINANCE NO. 2023-
ANNEXATION PETITION NO. 764
PLESANT PLAINS ELEMENTARY SCHOOL – 30.047 ACRES

AN ORDINANCE TO EXTEND THE CORPORATE LIMITS
OF THE TOWN OF APEX, NORTH CAROLINA
P.O. Box 250, Apex, North Carolina 27502

WHEREAS, the Apex Town Council has been petitioned under G.S.§160A-31, as amended, to annex the area described herein; and

WHEREAS, the Apex Town Council has by Resolution directed the Town Clerk to investigate the sufficiency of said petition; and

WHEREAS, the Town Clerk has certified the sufficiency of said petition and a public hearing on the question of this annexation was held at Apex Town Hall at 6:00 p.m. on September 12, 2023, after due notice by posting to the Town of Apex website, http://www.apexnc.org/news/public-notices-legal-ads; and

WHEREAS, the Apex Town Council does hereby find as a fact that said petition meets the requirements of G.S.§160A-31, as amended.

NOW, THEREFORE, BE IT ORDAINED by the Town Council of Apex, North Carolina:

Section 1. By virtue of the authority granted by G.S.§160A-31, as amended, the territory described in the attached property description and also shown as "Annexation Area" on the below identified survey plat is hereby annexed and made part of the Town of Apex, North Carolina, as of the date of adoption of this Ordinance on September 26, 2023. The survey plat that describes the annexed territory is that certain survey plat entitled "Annexation Map for the Town of Apex On Properties Of The Wake County Board of Education(PIN#s: 0731-64-0633 (28.823acres), 731-64-5370 (0.756acres), and Area within Seapond Public Drive Right-of-Way (ROW) (0.468)see survey map), Land Surveyor dated August 11, 2023" and recorded in Book of Maps book number 2023 and page number , Wake County Registry.

Section 2. Upon and after the adoption of this ordinance, the territory described herein and its citizens and property shall be subject to all debts, laws, ordinances and regulations in force in the Town of Apex, North Carolina, and shall be entitled to the same privileges and benefits as other parts of the Town of Apex. Said territory shall be subject to municipal taxes according to G.S.§160A-58.10, as amended.

Section 3. The Clerk of the Town of Apex, North Carolina shall cause to be recorded in the Office of the Register of Deeds of Wake County and in the Office of the Secretary of State at Raleigh, North Carolina and in the Office of the Wake County Board of Elections an accurate map of the annexed territory, described in Section 1 hereof, together with a duly certified copy of this Ordinance.

Adopted this the 26th day of September, 2023.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Allen L. Coleman, CMC, NCCCC
Town Clerk

APPROVED AS TO FORM:

_____
Laurie L. Hohe
Town Attorney

Legal Description

Town of Apex Annexation Legal Description Pleasant Plains Elementary School (E-53) (1525 South Salem Street, Apex, NC 27502)

AREA #1 TO BE ANNEXED - PIN 0731640633

BEGINNING AT A R/W MONUMENT AT THE INTERSECTION OF THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET AND THE EASTERN RIGHT OF WAY OF NC-540, AND BEING AT THE SOUTHERN MOST CORNER OF THE SUBJECT PROPERTY; THENCE, ALONG AND WITH THE R/W OF NC-540 N 39°03'04" W A DISTANCE OF 390.84' TO A R/W MONUMENT; THENCE, N 44°52'13" W A DISTANCE OF 172.42' TO

A R/W MONUMENT; THENCE, N 61°51'41" W A DISTANCE OF 203.40' TO AN IRON PIPE; THENCE, N 61°52'08" W A DISTANCE OF 98.24' TO A R/W MONUMENT; THENCE, N 45°07'01" W A DISTANCE OF 238.78' TO A R/W MONUMENT; THENCE, N 52°16'29" W A DISTANCE OF 341.83' TO AN IRON ROD IN THE CENTERLINE OF A CREEK; THENCE ALONG AND WITH THE CENTER OF SAID CREEK, WITNESSED BY A TRAVERSE LINE AS FOLLOWS N 57°22'07" E A DISTANCE OF 126.98' TO A POINT; THENCE N 77°52'52" E A DISTANCE OF 113.61' TO A POINT; THENCE N 54°47'22" E A DISTANCE OF 380.08' TO AN IRON ROD; THENCE S 86°29'22" E A DISTANCE OF 255.76' TO A POINT; THENCE N 65°59'47" E A DISTANCE OF 281.13' TO A POINT; THENCE N 49°31'01" E A DISTANCE OF 145.48' TO A POINT; THENCE N 59°32'01" E A DISTANCE OF 264.91' TO A POINT; THENCE N 09°00'41" E A DISTANCE OF 184.87' TO AN IRON ROD IN THE CENTERLINE OF A CREEK; THENCE, LEAVING SAID CREEK, S 00°18'17" W A DISTANCE OF 877.27’ TO A BENT RIGHT OF WAY MONUMENT IN THE NORTHERN RIGHT OF WAY OF SEAPOND DRIVE; THENCE, S 00°18'17" W A DISTANCE OF 60.00’ TO AND IRON PIPE WITH CAP & TACK IN THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE; THENCE ALONG AND WITH SAID RIGHT OF WAY, S 89°15'34" E A DISTANCE OF 325.52' TO AN IRON PIPE AT THE INTERSECTION OF THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE AND THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET, WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 256.55', WITH A RADIUS OF 2704.56', WITH A CHORD BEARING OF S 28°54'18" W, WITH A CHORD LENGTH OF 256.46' TO AND IRON PIPE WITH CAP & TACK; THENCE, LEAVING SAID RIGHT OF WAY, N 84°50'46" W A DISTANCE OF 203.80' TO A BENT IRON PIPE; THENCE S 00°18'01" W A DISTANCE OF

310.45' TO A BENT IRON PIPE IN THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG AND WITH SAID RIGHT OF WAY, S 38°46'26" W A DISTANCE OF 16.50' TO A POINT; THENCE S 39°23'46" W A DISTANCE OF 25.82' TO A POINT; THENCE S 37°48'48" W A DISTANCE OF 7.18' TO A R/W MONUMENT; THENCE N 50°18'09" W A DISTANCE OF 54.99' TO A R/W MONUMENT; THENCE S 39°41'24" W A DISTANCE OF 397.22' THE POINT OF BEGINNING HAVING AN AREA 28.823+/- ACRES MORE OR LESS.

AREA #2 TO BE ANNEXED – PIN 0731645370

BEGINNING AT AN IRON PIPE WITH CAP & TACK IN THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET AND BEING A COMMON CORNER WITH THE WAKE COUNTY BOARD OF EDUCATION (PIN 0731640633); THENCE, ALONG AND WITH SAID RIGHT OF WAY, WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 356.92', WITH A RADIUS OF 2704.56', WITH A CHORD BEARING OF S

35°00'19" W, WITH A CHORD LENGTH OF 356.66' TO A BENT IRON PIPE; THENCE, LEAVING SAID RIGHT OF WAY, N 00°18'01" E A DISTANCE OF 310.45' TO A BENT

IRON PIPE; THENCE S 84°50'46" E A DISTANCE OF 203.80' TO THE POINT OF BEGINNING HAVING AN AREA 0.756 ACRES MORE OR LESS.

AREA #3 TO BE ANNEXED - Seapond Drive Public R/W

BEGINNING AT AN IRON PIPE WITH CAP & TACK AT THE SOUTH WEST CORNER OF SEAPOND DRIVE AND BEING A COMMON CORNER WITH THE WAKE COUNTY BOARD OF EDUCATION (PIN 0731640633); THENCE N 00°18'17" E A DISTANCE OF 60.00' TO A R/W MONUMENT ON THE NORTHERN R/W OF SEAPOND DRIVE; THENCE, ALONG AND WITH SAID RIGHT OF WAY, S 89°15'34" E A DISTANCE OF 353.62' TO A RIGHT OF WAY MONUMENT AT THE INTERSECTION OF THE NORTHERN RIGHT OF WAY OF SEAPOND DRIVE AND THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG S. SALEM STREET RIGHT OF WAY WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 66.06', WITH A RADIUS OF 2804.10', WITH A CHORD BEARING OF S 25°28'27" W, WITH A CHORD LENGTH OF 66.06' TO AN IRON PIPE AT THE INTERSECTION OF THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE AND THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE, N 89°15'34" W A DISTANCE OF 325.52' TO THE POINT OF BEGINNING HAVING AN AREA OF 0.468 ACRES MORE OR LESS.

STATE OF NORTH CAROLINA

COUNTY OF WAKE

CLERK'S CERTIFICATION

I, Allen L. Coleman, Town Clerk, Town of Apex, North Carolina, do hereby certify the foregoing is a true and correct copy of Annexation Ordinance No. 2023-_____, adopted at a meeting of the Town Council, on the 26th day of September, 2023, the original of which will be on file in the Office of the Town Clerk of Apex, North Carolina.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official Seal of the Town of Apex, North Carolina, this the 26th day of September, 2023.

_____
Allen L. Coleman, CMC, NCCCC
Town Clerk

(SEAL)

Town of Apex Annexation Legal Description
Pleasant Plains Elementary School (E-53)
(1525 South Salem Street, Apex, NC 27502)

AREA #1 TO BE ANNEXED - PIN 0731640633

BEGINNING AT A R/W MONUMENT AT THE INTERSECTION OF THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET AND THE EASTERN RIGHT OF WAY OF NC-540, AND BEING AT THE SOUTHERN MOST CORNER OF THE SUBJECT PROPERTY; THENCE, ALONG AND WITH THE R/W OF NC-540 N 39°03'04" W A DISTANCE OF 390.84' TO A R/W MONUMENT; THENCE, N 44°52'13" W A DISTANCE OF 172.42' TO A R/W MONUMENT; THENCE, N 61°51'41" W A DISTANCE OF 203.40' TO AN IRON PIPE; THENCE, N 61°52'08" W A DISTANCE OF 98.24' TO A R/W MONUMENT; THENCE, N 45°07'01" W A DISTANCE OF 238.78' TO A R/W MONUMENT; THENCE, N 52°16'29" W A DISTANCE OF 341.83' TO AN IRON ROD IN THE CENTERLINE OF A CREEK; THENCE ALONG AND WITH THE CENTER OF SAID CREEK, WITNESSED BY A TRAVERSE LINE AS FOLLOWS N 57°22'07" E A DISTANCE OF 126.98' TO A POINT; THENCE N 77°52'52" E A DISTANCE OF 113.61' TO A POINT; THENCE N 54°47'22" E A DISTANCE OF 380.08' TO AN IRON ROD; THENCE S 86°29'22" E A DISTANCE OF 255.76' TO A POINT; THENCE N 65°59'47" E A DISTANCE OF 281.13' TO A POINT; THENCE N 49°31'01" E A DISTANCE OF 145.48' TO A POINT; THENCE N 59°32'01" E A DISTANCE OF 264.91' TO A POINT; THENCE N 09°00'41" E A DISTANCE OF 184.87' TO AN IRON ROD IN THE CENTERLINE OF A CREEK; THENCE, LEAVING SAID CREEK, S 00°18'17" W A DISTANCE OF 877.27’ TO A BENT RIGHT OF WAY MONUMENT IN THE NORTHERN RIGHT OF WAY OF SEAPOND DRIVE; THENCE, S 00°18'17" W A DISTANCE OF 60.00’ TO AND IRON PIPE WITH CAP & TACK IN THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE; THENCE ALONG AND WITH SAID RIGHT OF WAY, S 89°15'34" E A DISTANCE OF 325.52' TO AN IRON PIPE AT THE INTERSECTION OF THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE AND THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET, WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 256.55', WITH A RADIUS OF 2704.56', WITH A CHORD BEARING OF S 28°54'18" W, WITH A CHORD LENGTH OF 256.46' TO AND IRON PIPE WITH CAP & TACK; THENCE, LEAVING SAID RIGHT OF WAY, N 84°50'46" W A DISTANCE OF 203.80' TO A BENT IRON PIPE; THENCE S 00°18'01" W A DISTANCE OF 310.45' TO A BENT IRON PIPE IN THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG AND WITH SAID RIGHT OF WAY, S 38°46'26" W A DISTANCE OF 16.50' TO A POINT; THENCE S 39°23'46" W A DISTANCE OF 25.82' TO A POINT; THENCE S 37°48'48" W A DISTANCE OF 7.18' TO A R/W MONUMENT; THENCE N 50°18'09" W A DISTANCE OF 54.99' TO A R/W MONUMENT; THENCE S 39°41'24" W A DISTANCE OF 397.22' **THE POINT OF BEGINNING** HAVING AN AREA 28.823+/- ACRES MORE OR LESS.

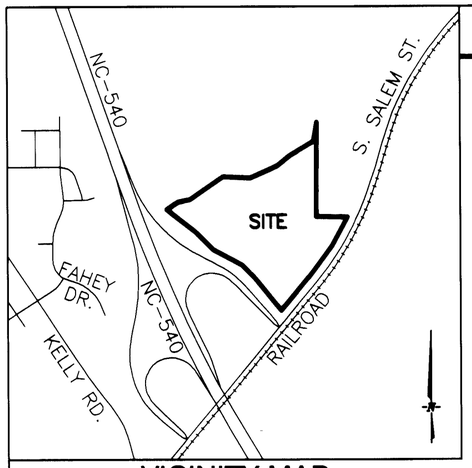
AREA #2 TO BE ANNEXED – PIN 0731645370

BEGINNING AT AN IRON PIPE WITH CAP & TACK IN THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET AND BEING A COMMON CORNER WITH THE WAKE COUNTY BOARD OF EDUCATION (PIN 0731640633); THENCE, ALONG AND WITH SAID RIGHT OF WAY, WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 356.92', WITH A RADIUS OF 2704.56', WITH A CHORD BEARING OF S 35°00'19" W, WITH A CHORD LENGTH OF 356.66' TO A BENT IRON PIPE; THENCE, LEAVING SAID RIGHT OF WAY, N 00°18'01" E A DISTANCE OF 310.45' TO A BENT IRON PIPE; THENCE S 84°50'46" E A DISTANCE OF 203.80' TO **THE POINT OF BEGINNING** HAVING AN AREA 0.756 ACRES MORE OR LESS.

AREA #3 TO BE ANNEXED - Seapond Drive Public R/W

BEGINNING AT AN IRON PIPE WITH CAP & TACK AT THE SOUTH WEST CORNER OF SEAPOND DRIVE AND BEING A COMMON CORNER WITH THE WAKE COUNTY BOARD OF EDUCATION (PIN 0731640633); THENCE N 00°18'17" E A DISTANCE OF 60.00' TO A R/W MONUMENT ON THE NORTHERN R/W OF SEAPOND DRIVE; THENCE, ALONG AND WITH SAID RIGHT OF WAY, S 89°15'34" E A DISTANCE OF 353.62' TO A RIGHT OF WAY MONUMENT AT THE INTERSECTION OF THE NORTHERN RIGHT OF WAY OF SEAPOND DRIVE AND THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG S. SALEM STREET RIGHT OF WAY WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 66.06', WITH A RADIUS OF 2804.10', WITH A CHORD BEARING OF S 25°28'27" W, WITH A CHORD LENGTH OF 66.06' TO AN IRON PIPE AT THE INTERSECTION OF THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE AND THE WESTERN RIGHT OF WAY OF SOUTH SALEM STREET; THENCE, ALONG THE SOUTHERN RIGHT OF WAY OF SEAPOND DRIVE, N 89°15'34" W A DISTANCE OF 325.52' TO **THE POINT OF BEGINNING** HAVING AN AREA OF 0.468 ACRES MORE OR LESS.


Prepared by: Town of Apex Planning Department
August 2023
May 2023 Aerial Photography
Depot 499
Flats at 499
540
Stroup St
Eva Pearl Dr
Becca Ct
West Village
Kelly Rd
Gaither St
Custom Ln
Leben St
Leo Dr
Fahey Dr
RAMP NC 540 SB to Salem
RAMP Salem to NC 540 NB
RAMP NC 540 NB to Salem
NC 540 Hwy NB
NC 540 Hwy SB
S Salem St
Annexation #764
Gilestone Dr
Salem Village, Ph 3
Pershore Dr
Flint Valley Ln
Salem Village
Padstone Dr
Salem Village, Ph 1
0
500
1,000
Feet



VICINITY MAP
NOT TO SCALE

(INSIDE TOWN LIMITS)
TOWN OF APEX CORPORATE LIMITS
DB 18998 PG 918 & BM 2021 PG 1607-1609
(INSIDE TOWN LIMITS)
(OUTSIDE TOWN LIMITS)

KLLB AIV, LLC
DB 18934 PG 582
BM 2022 PG 213-214
PIN: 0731564309

IPF 1.5" DIA SOLID
IRF 5/8"

ANNEXATION #_____

I, ALLEN COLEMAN, CMC, NCCCC, TOWN CLERK, APEX, NORTH CAROLINA CERTIFY THIS A TRUE AND EXACT MAP OF ANNEXATION ADOPTED THE ____ DAY OF _____ 20__ BY THE TOWN COUNCIL.
I SET MY HAND AND SEAL OF THE TOWN OF APEX, _____
DAY/MONTH/YEAR

_____
ALLEN COLEMAN, CMC, NCCCC, TOWN CLERK

-Seal-

CAREY B. HUNTER
DB 2368 PG 564
DB 13998 PG 2418
DB 13998 PG 2421
BM 1990 PG 95
BM 2020 PG 1668
PIN: 0731559387

TRAVERSE LINE ALONG CREEK
BM 2020 PG 1671

PROPERTY LINE IS CENTERLINE OF CREEK

N 46°31'01" E 148.48'
N 85°32'01" E 264.91'
N 05°28'41" E 184.67'
CP

LINE TABLE

LINE	BEARING		DISTANCE
L1	N 44°52'13"	W	172.42'
L2	N 61°52'08"	W	98.24'
L3	N 57°22'07"	E	126.98'
L4	N 77°52'52"	E	113.61'
L5	S 00°18'17"	W	60.00'
L6	S 35°46'26"	W	16.50'
L7	S 39°23'46"	W	25.82'
L8	S 37°48'48"	W	7.18'
L9	N 50°18'09"	W	54.99'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	2804.10'	66.06'	66.06'	S 25°28'27" W	1°20'59"	33.03'
C2	2704.56'	256.55'	256.46'	S 28°54'18" W	5°26'06"	128.37'
C3	2704.56'	356.92'	356.66'	S 35°00'19" W	7°33'41"	178.72'

TRAVERSE LINE ALONG CREEK
BM 2020 PG 1671

THE WAKE COUNTY BOARD OF EDUCATION
DB 18151 PG 294
BM 2020 PG 1671-1673
PIN: 0731552205

IRF 5/8"
S 86°29'22" E 256.76'
CP
N 85°56'47" E 281.13'

60' ACCESS EASEMENT FOR LOT 1
DB 18151 PG 1316, BM 2020 PG 1668

PROPERTY LINE IS CENTERLINE OF CREEK

N 54°47'22" E 350.08'

VARIABLE WIDTH TOWN OF APEX SANITARY SEWER EASEMENT
DB 18884 PG 2319

THE WAKE COUNTY BOARD OF EDUCATION
(#1)
DB 18151 PG 284 (LOT 2)
DB 18151 PG 288 (LOT 3)
DB 18151 PG 292 (LOTS 4 & 5)
BM 2020 PG 1668
BM 2020 PG 1671-1673
PIN: 0731640633
ZONE: PUD-CZ
ANNEXATION AREA: 28.823± ACRES

TOWN OF APEX CORPORATE LIMITS
DB 18998 PG 918 & BM 2021 PG 1607-1609
S 05°15'17" W 671.37'

LENNAR CAROLINAS, LLC
DB 18828 PG 406
BM 2022 PG 2237-2240 (NEW LOT 4)
BM 2022 PG 213-214
PIN: 0731658351

AREA TO BE ANNEXED

[1]AREA IN PIN 0731640633:	28.823±ACRES
+ [2]AREA IN PIN 0731645370:	0.756 ACRES
+ [3]AREA WITHIN SEAPOND DR:	0.468 ACRES
TOTAL AREA TO BE ANNEXED:	30.047 ACRES

IRF 5/8"
L3
L4
CP
CP

APPROX. LOCATION OF EX. PERMANENT DRAINAGE EASEMENT SCALED FROM NCDOT PLANS R-2635B

N 52°16'28" W 341.83'
(SEE NCDOT PLANS R-2635B - HM 4 PG 241, DB 14620 PG 594)
NC-540 OUTER BELTLINE
VARIABLE WIDTH PUBLIC R/W

MONF RW CAP

N 45°07'01" W 239.78'

L2

IPF 1" N 61°51'41" W 203.40'

MONF RW CAP

L1

MONF RW CAP

N 39°03'04" W 390.84'
(SEE NCDOT PLANS R-2635B - HM 4 PG 241, DB 14620 PG 594)
NC-540 OUTER BELTLINE
VARIABLE WIDTH PUBLIC R/W

MONF RW CAP

MONF RW CAP BENT S 89°15'34" E 353.62'

MONF RW CAP

(#3) SEAPOND DR. (60' PUBLIC R/W)
DB 14496 PG 1281
ANNEXATION AREA: 0.468 ACRES

(INSIDE TOWN LIMITS)
(OUTSIDE TOWN LIMITS)

IPF 1" CAP & TACK

S 89°15'34" E 338.82'

1" IPF

TOWN OF APEX UTILITY EASEMENTS, VAR. WIDTH STORM DRAIN EASEMENTS, & R/W DEDICATION (DB 18018 PG 1688 & DB 18018 PG 1688 & DB 18997 PG 2267). ADDITIONAL TEMP. CONSTR. GRADING EASEMENTS NOT SHOWN FOR CLARITY.

THE WAKE COUNTY BOARD OF EDUCATION
(#2)
DB 19301 PG 402
BM 1997 PG 796
PIN: 0731645370
ZONE: PUD-CZ
ANNEXATION AREA: 0.756 ACRES

IPF 1" CAP BENT S 89°28'46" E 203.80'

1" IPF CAP & TACK

N 00°18'01" E 316.28'

TOWN OF APEX UTILITY EASEMENTS, VAR. WIDTH STORM DRAIN EASEMENTS, & R/W DEDICATION (DB 18018 PG 1688 & DB 18018 PG 1688 & DB 18997 PG 2267). ADDITIONAL TEMP. CONSTR. GRADING EASEMENTS NOT SHOWN FOR CLARITY.

TOWN OF APEX ELECTRIC UTILITY EASEMENT
DB 14456 PG 1980 & DB 14630 PG 1618

MONF RW CAP

IPF 1" BENT

CP

MONF RW CAP

S 39°41'24" W 397.22'
SOUTH SALEM STREET/S.R. 1011 (OLD U.S. HWY 1)
VARIABLE WIDTH PUBLIC R/W
BM 2006 PG 1810, BM 2002 PG 2117, BM 2003 PG 2073, DB 19016 PG 1068, HM 4 PG 241, DB 14620 PG 594, DB 14934 PG 2762

CSX RAILROAD
100' PUBLIC R/W
DB 24 PG 162
RIGHT OF WAY & TRACK MAPS

I, GARRETT J. DORSETT, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, USING REFERENCES SHOWN HERON; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN REFERENCES SHOWN HEREON; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 1:10,000 OR HIGHER. THE PURPOSE OF THIS MAP IS TO SERVE AS AN ILLUSTRATIVE AID OF THE PROPOSED ANNEXATION OF LAND INTO THE TOWN OF APEX CORPORATE LIMITS.

WITNESS MY ORIGINAL SIGNATURE, REGISTRATION LICENSE NUMBER AND SEAL THIS 11TH DAY OF AUGUST, A.D., 2023.

PROFESSIONAL LAND SURVEYOR LICENSE # L-5351

NORTH CAROLINA PROFESSIONAL SEAL L-5351 LAND SURVEYOR GARRETT J. DORSETT

LEGEND

IPF ⊙	IRON PIPE FOUND
MONF RW ⊡	R/W MONUMENT FOUND
IRF ●	IRON ROD FOUND
CP ○	COMPUTED POINT
	EXISTING UTILITY/ACCESS/STORM DRAIN EASEMENT
	RIGHT OF WAY LINE
	TOWN OF APEX CORPORATE LIMITS
	NON-SURVEYED PROPERTY LINE
	SURVEYED PROPERTY LINE
	AREA TO BE ANNEXED

NOTES:

1. THIS MAP IS EXEMPT FROM NCGS 47-30 MAPPING REQUIREMENTS PER NCGS 47-30 PARAGRAPH (J).
2. THE PURPOSE OF THIS MAP IS TO SERVE AS AN ILLUSTRATIVE AID OF THE PROPOSED ANNEXATION OF LAND INTO THE TOWN OF APEX.
3. IT IS THE INTENTION THAT THE ANNEXATION BOUNDARY IS TO FOLLOW THE TITLE BOUNDARY OF THE PARCELS SHOWN HEREON.
4. DASHED LINES SHOWN ARE NOT SURVEYED.
5. ACREAGE COMPUTED PER COORDINATE METHOD

NC GRID (NAD 83/2011)

GRAPHIC SCALE

120 0 60 120 240 480

(IN FEET)
1 inch = 120 ft.

Dewberry

Dewberry Engineers Inc.
2610 WYCLIFF RD.
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
FAX: 919.881.9923
NCBELS # F-0929

ANNEXATION MAP for the TOWN OF APEX

ON THE PROPERTIES OF

THE WAKE COUNTY BOARD OF EDUCATION
PLEASANT PLAINS ELEMENTARY SCHOOL (E-53) AND
SEAPOND DRIVE PUBLIC RIGHT OF WAY

1325 SOUTH SALEM STREET, APEX, NORTH CAROLINA 27502

WAKE COUNTY, NORTH CAROLINA
WHITE OAK TOWNSHIP

#	DATE	BY	DESCRIPTION
			REVISIONS

DRAWN BY GJD
APPROVED BY ACH
CHECKED BY ACH
DATE 8/11/23

TITLE

ANNEXATION MAP
PLEASANT PLAINS ELEMENTARY
SCHOOL (E-53)

PROJECT NO. 50164635
SHEET NO. 1 OF 1

PETITION FOR VOLUNTARY ANNEXATION
Town of Apex, North Carolina

ANNEXATION PETITION SUBMISSION: Applications are due by 12:00 pm on the first business day of each month. See the "Annexation Petition Schedule" on the website for details.

ANNEXATION FEE: $200.00

VOLUNTARY ANNEXATION: Upon receipt of a valid petition signed by all of the owners of real property in the area described therein, the Town may annex an area either contiguous or not contiguous to its primary corporate limits when the area meets the standards set out under North Carolina General Statutes 160A-31 and 160A-58.1. A petition submitted pursuant to North Carolina General Statute 160A-58.1 need not be signed by the owners of real property that is wholly exempt from property taxation under the Constitution and laws of North Carolina, nor by railroad companies, public utilities as defined in G.S. 62-3(23), or electric or telephone membership corporations.

HARD COPY SUBMITTAL REQUIREMENTS:

- Town of Apex Petition for Annexation with original wet ink signatures. No photocopies or scanned images.
- Petition Fee

ELECTRONIC SUBMITTAL REQUIREMENTS: IDT Plans

- Town of Apex Petition for Annexation
- Written Metes and Bounds Legal Description: Submit original PDF. Scanned documents will not be accepted.
- Electronic plat submittal (18" x 24")

REVIEW AND APPROVAL PROCESS:

- **SUBMITTAL:** Submit hard copy application with original wet signatures (no photo copies or scanned images) and fee to the Department of Planning and Community Development and upload an electronic copy of the application, legal description and Annexation Plat via IDT Plans.
- **REVIEW BY STAFF:** The Planning and Community Development Department and Development Services Department review the annexation submission. Comments will be sent to the applicant via email.
- **DESIGNATION OF ANNEXATION NUMBER:** The application is assigned an annexation number once the annexation petition is received.
- **ANNEXATION PLAT SUBMISSION:** After the map and legal description are deemed sufficient by the Town of Apex, the applicant is required to submit three (3) Mylar annexation plats to the Department of Planning and Community Development by the due date on the attached Annexation Schedule.
- **1ST TOWN COUNCIL MEETING:** This Town Council Meeting is typically held the second Tuesday of each month. The Town Council will pass a resolution directing the Town Clerk to investigate the annexation petition. The Town Clerk will present to the Town Council a Certificate of Sufficiency indicating that the annexation petition is complete. A resolution setting the date of the public hearing is then approved.
- **LEGAL ADVERTISEMENT:** A legal advertisement will be published on the Town of Apex's website no more than 25 days and no less than 10 days prior to the date of the public hearing.
- **2ND TOWN COUNCIL MEETING/PUBLIC HEARING:** This Town Council Meeting is typically held the fourth Tuesday of each month. The Town Council will either adopt or deny an ordinance to extend the corporate limits of the Town of Apex.
- **RECORDATION:** If the annexation is approved by the Town Council, the Town Clerk will have the Annexation Plats recorded at the Wake County or Chatham County Register of Deeds, as appropriate. Wake County or Chatham County will keep one of the recorded plats, one copy will be returned to the Department of Planning and Community Development, and the surveying company is given the remaining recorded Annexation Plat.

FOR WELL AND/OR SEPTIC FAILURES:

If the purpose of the petition is to connect to public water and/or sewer, contact Water Resources Director Michael Deaton at 919-249-3413 or michael.deaton@apexnc.org to confirm that public water and/or sewer is available to the property. In order to receive public water and/or sewer services from the Town of Apex, refer to the checklist of items below to assist with obtaining one or both of these services:

- Apply for a plumbing permit with the Building Inspections and Permitting Department.
- The plumbing permit and associated costs for water and/or sewer will be included with the permit.

Please refer to the Town of Apex Fee Schedule for the list of current fees.

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: Annexation #764 NW-2023-014 Submittal Date: 7/14/23

Fee Paid $ NA WCPSS Check #

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, ☑ Wake County, ☐ Chatham County, North Carolina.
2. The area to be annexed is ■ contiguous, ☐ non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads, and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

OWNER INFORMATION

The Wake County Board of Education	0731640633
Owner Name (Please Print)	Property PIN or Deed Book & Page #
919-588-3572	blanfair@wcpss.net
Phone	E-mail Address
The Wake County Board of Education	0731645370
Owner Name (Please Print)	Property PIN or Deed Book & Page #
919-588-3572	blanfair@wcpss.net
Phone	E-mail Address
NCDOT	Seapond Dr. (DB 14496 PG 1281)
Owner Name (Please Print)	Property PIN or Deed Book & Page #
c/o 919-588-3572	blanfair@wcpss.net
Phone	E-mail Address

SURVEYOR INFORMATION

Surveyor: Garrett Dorsett

Phone: 984-255-7059 Fax: 919-881-9923

E-mail Address: gdorsett@dewberry.com

ANNEXATION SUMMARY CHART

Property Information		Reason(s) for annexation (select all that apply)	
Total Acreage to be annexed:	30.047 Acres	Need water service due to well failure	☐
Population of acreage to be annexed:	Zero	Need sewer service due to septic system failure	☐
Existing # of housing units:	1	Water service (new construction)	☑
Proposed # of housing units:	Prop. School	Sewer service (new construction)	☑
Zoning District*:	PUD-CZ	Receive Town Services	☑

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Department of Planning and Community Development with questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: _____ Submittal Date: _____

COMPLETE IF SIGNED BY INDIVIDUALS:

All individual owners must sign. (If additional signatures are necessary, please attach an additional sheet.)

The Wake County Board of Education, a body corporate

Please Print

By: Mark Strickland

Signature

Please Print

Mark Strickland, Chief of Facilities Operations, WCPSS

Signature

Please Print

For and on behalf of the Wake County Board of Education , pursuant to duly delegated authority

Signature

Please Print

Signature

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Katherine Griffin Trahan, a Notary Public for the above State and County, this the 11th day of, July, 2023.

Katherine Griffin Trahan

Notary Public

KATHERINE GRIFFIN TRAHAN
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires August 31 2027

SEAL

My Commission Expires: August 31, 2027

COMPLETE IF A CORPORATION:

In witness whereof, said corporation has caused this instrument to be executed by its President and attested by its Secretary by order of its Board of Directors, this the _____ day of _____, 20_____.

Corporate Name _____

SEAL

By: _____

Attest: President (Signature)

_____

Secretary (Signature)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____

Notary Public

SEAL

My Commission Expires: _____

Application #: _____ Submittal Date: _____

COMPLETE IF IN A LIMITED LIABILITY COMPANY

In witness whereof, _____ a limited liability company, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the ____ day of _____, 20____.

Name of Limited Liability Company _____

By: _____
Signature of Member/Manager

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

My Commission Expires: _____

COMPLETE IF IN A PARTNERSHIP

In witness whereof, _____, a partnership, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the _____ day of _____, 20_____.

Name of Partnership _____

By: _____
Signature of General Partner

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

My Commission Expires: _____

Media Contact:
Allen Coleman, Town Clerk to the Apex Town Council

FOR IMMEDIATE RELEASE

PUBLIC NOTICE – PUBLIC HEARING

APEX, N.C. (September 14, 2023) – The Town Council of Apex, North Carolina has scheduled a Public Hearing to be held at **6:00 p.m.** at Apex Town Hall, 73 Hunter Street, on the **26th day of September, 2023**, on the question of annexation of the following property requested by petition filed pursuant to G.S. 160A-31:

Annexation Petition No. 764
Pleasant Plains Elementary School – 30.047 acres



Residents may submit written comments to the Town Council with attention marked to the Town Clerk Allen Coleman; P.O. Box 250; Apex, NC 27502 or by email at public public.hearing@apexnc.org. Please use subject line "Annexation Petition No. 764" and include your first and last name, your address, and your phone number in your written statements. Written comments will be accepted until 3:00 PM on Tuesday, September 26, 2023.

Members of the public can access and view the meeting on the Town's YouTube Channel https://www.youtube.com/c/TownofApexGov or attend in-person.

Anyone needing special accommodations to attend this meeting and/or if this information is needed in an alternative format, please contact the Town Clerk's Office. The Town Clerk is located at 73 Hunter Street in Apex Town Hall on the 2nd Floor, (email) allen.coleman@apexnc.org or (phone) 919-249-1260. We request at least 48 hours' notice prior to the meeting to make the appropriate arrangements.

Questions should be directed to the Town Clerk's Office.

###

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING

Meeting Date: September 26, 2023

Item Details

Presenter(s): Amanda Bunce, Current Planning Manager

Department(s): Planning

Requested Motion

Public Hearing and possible motion regarding various amendments to the Unified Development Ordinance (UDO).

Approval Recommended?

The Planning Department recommends approval.

The Planning Board heard these amendments at their September 11, 2023 meeting and unanimously recommended approval.

Item Details

Requested by Planning Committee of Town Council:

1. Amendments to Secs. 4.2.2 *Use Table* and 4.4.5 *Supplemental Standards, Commercial Uses* in order to change the use "Tattoo parlor and body piercing" from a Special Use to a Permitted Use where the use is currently allowed except for within the Small-Town Character Overlay District and to remove the supplemental use standards related to signage for this use since the same standards exist in Sec. 8.7 *Signs*.

Requested by Planning Staff:

2. Amendments to Sec. 8.2.6.B *Landscape Buffers Between Uses* in order to remove greenways from the list of Class 1 uses. This change would result in no requirement for buffers along greenways.
3. Amendments to Secs. 4.4.1 *Supplemental Use Standards, Residential Uses* and 8.2.8.B *Screening, Screening Methods* in order to change references to dumpster enclosure screening standards from the *Town of Apex Design and Development Manual* to the *Town of Apex Standard Specifications and Standard Details*. Amendments to 6.1.11.I *Notification on Site Plan and Subdivision Plan and Recording of Information* in order to change a reference from the *Town of Apex Design and Development Manual* to the Site Plan Final Plat or Master Subdivision Final Plat application and to make other edits to simplify the wording of the standard.
4. Amendments to Sec. 2.3.8.D *Variance Permit, Standards* in order to change the word "ordinance" to "regulation" in accordance with State law.
5. Amendments to Sec. 4.4.2 *Supplemental Standards, Public and Civic Uses* in order to remove supplemental standards for the uses "Day Care Facility" and "Drop-In or Short-Term Child Care" in the Downtown Business (B2) zoning district as those uses are no longer permitted uses in that district.

6. Amendments to various sections of the UDO in order to reflect changes to department titles and responsibilities due to the division of the former Public Works and Transportation Department into the Public Works Department and Transportation & Infrastructure Development Department; move floodplain administrator duties to the Water Resources Department; and add Water Resources Department to the list of departments included in the Technical Review Committee. Sections affected include the following: 2.1.7.B, 2.3.7, 6.2.13.A, 7.1.7, 7.2.1, 7.5.13, 7.5.14, 7.5.16, 8.3.6.G, and 13.16.1.

Attachments

- PH2-A1: Staff Report - Unified Development Ordinance (UDO) Amendments - September 2023
- PH2-A2: Planning Board Report to Town Council - Unified Development Ordinance (UDO) Amendments - September 2023
- PH2-A3: Public Notice - Unified Development Ordinance (UDO) Amendments - September 2023
- PH2-A4: Ordinance - Unified Development Ordinance (UDO) Amendments - September 2023

Requested by Planning Committee:

1. **Amendments to Secs. 4.2.2 *Use Table* and 4.4.5 *Supplemental Standards, Commercial Uses* in order to change the use "Tattoo parlor and body piercing" from a Special Use to a Permitted Use where the use is currently allowed except for within the Small Town Character Overlay District and to remove the supplemental use standards related to signage for this use since the same standards exist in Sec. 8.7 *Signs*.**

4.2.2 Use Table

Use Type	Definition Section	Zoning Districts																						Standards
		Residential									Business						Planned Development			Other				
		RA	RR	LD	MD	HDSF	HDMF	MH	MHP	MORR	O&I	B1	B2	PC	LI	TF	MEC	TND	PUD	CB	SD	STC		Section(s)
Adult Use																								
Tattoo parlor and body piercing	4.3.5.A.4													~~S~~ P							**	S*		4.4.5.A.4; 6.3

4.4.5.A Supplemental Standards, Commercial Uses, Adult Use

…

~~4) *Tattoo parlor and body piercing.* Tattoo parlors shall comply with the following standard: Except for freestanding and façade mounted signs permitted pursuant to Sec. 8.7 *Signs*, no other advertisements, displays, or other signs or other promotional materials shall be visible to the public from sidewalks, walkways, or vehicular use areas.~~

Requested by Planning Staff:

2. **Amendments to Sec. 8.2.6.B *Landscape Buffers Between Uses* in order to remove greenways from the list of Class 1 uses. This change would result in no requirement for buffers along greenways.**

   Background: Sec. 8.2.6.B is used to determine the required landscape buffers between principal uses on adjacent properties and the buffer required along different types of roads. Greenways are rarely the principal use of a property and are typically located in easements on common areas within residential developments and sometimes in easements on non-residential properties.

8.2.6.B Landscape Buffers Between Uses

…

4) Land Use Classes

…

a) Class 1:

…

~~Greenways~~

…

3. Amendments to Secs. 4.4.1 *Supplemental Use Standards, Residential Uses* and 8.2.8.B *Screening, Screening Methods* in order to change references to dumpster enclosure screening standards from the *Town of Apex Design and Development Manual* to the *Town of Apex Standard Specifications and Standard Details.* Amendments to 6.1.11.I *Notification on Site Plan and Subdivision Plan and Recording of Information* in order to change a reference from the *Town of Apex Design and Development Manual* to the Site Plan Final Plat or Master Subdivision Final Plat application and to make other edits to simplify the wording of the standard.

4.4.1 *Supplemental Use Standards, Residential Uses*

A) *Condominium*

…

2) The overall enclosure design must comply with the standards found in the ~~Town's *Design and Development Manual*~~ ***Town of Apex Standard Specifications and Standard Details***.

…

G) *Multi-Family or Apartment*

…

2) The overall enclosure design must comply with the standards found in the ~~Town's *Design and Development Manual*~~ ***Town of Apex Standard Specifications and Standard Details***.

8.2.8.B *Screening, Screening Methods*

1) *Dumpsters*

…

d) The overall enclosure design must comply with the standards found in the ~~Town's *Design and Development Manual*~~ ***Town of Apex Standard Specifications and Standard Details***.

6.1.11 Riparian Buffers

…

I) *Notification on Site Plan and Subdivision Plan and Recording of Information*
Where required, riparian buffers shall be shown on all site plans and subdivision plans approved pursuant to Sec. 6.1.4 of this Ordinance. A certificate in the form established in the ~~*Town of Apex Design and Development Manual*~~ **Site Plan Final Plat or Master Subdivision Final Plat application** shall be ~~lettered~~ **placed** on the face of the ~~s~~**S**ite ~~p~~**P**lan **Final Plat** or ~~the recorded~~ ~~subdivision map~~ **Master Subdivision Final Plat**. ~~**P**~~**p**rior to approval of ~~a~~ **the** Final Plat ~~(with respect to a subdivision), issuance of a certificate of occupancy (with respect to a site plan), or commencement of a use, a developer shall first cause all information pertaining to required riparian buffers to be shown on the Final Plat for the property~~.

…

4. Amendments to Sec. 2.3.8.D *Variance Permit, Standards* in order to change the word "ordinance" to "regulation" in accordance with State law.

2.3.8 Variance Permit

…

D) Standards
In order to approve an application for a variance permit, the Board of Adjustment shall find the following:

1) *Unnecessary Hardship.* Unnecessary hardship would result from the strict application of the ~~ordinance~~**regulation**. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property.

…

4) *Consistency with the ~~UDO~~**Regulation**.* The requested variance is consistent with the spirit, purpose, and intent of the ~~ordinance~~**regulation**, such that public safety is secured, and substantial justice is achieved.

5. Amendments to Sec. 4.4.2 *Supplemental Standards, Public and Civic* Uses in order to remove supplemental standards for the uses "Day Care Facility" and "Drop-In or Short-Term Child Care" in the Downtown Business (B2) zoning district as those uses are no longer permitted uses in that district.

4.4.2 Supplemental Standards, Public and Civic Uses

…

C) Day Care Facility

~~1)~~ Day care facilities in the LI District shall comply with the following standards:

~~a~~**1**) The day care facility shall not exceed 20% of the gross square footage of the building in which it is located; and

~~b~~**2**) The day care facility shall be located at least 1,320 feet from any Gas and fuel, wholesale use.

~~2) Day care facilities in the B2 Downtown Business District shall not be located on North Salem Street between Center Street and West Chatham Street, and shall not be located on Commerce Street.~~

…

F) Drop-In or Short-Term Child Care

~~1)~~ Drop-in/short-term child care that also provides Youth or Day Camps shall also meet the requirements of Sec. 4.4.4.E *Youth or Day Camps*.

~~2) Drop-in or short-term child care located in the B2 Downtown Business District shall have no outdoor play areas and shall have hours of operation typical to other adjacent downtown businesses.~~

6. Amendments to various sections of the UDO in order to reflect changes to department titles and responsibilities due to the division of the former Public Works and Transportation Department into the Public Works Department and Transportation & Infrastructure Development Department; move floodplain administrator duties to the Water Resources Department; and add Water Resources Department to the list of departments included in the Technical Review Committee. Sections affected include the following:

- **2.1.7.B**
- **2.3.7**
- **6.2.13.A**
- **7.1.7**
- **7.2.1**
- **7.5.13**
- **7.5.14**
- **7.5.16**
- **8.3.6.G**
- **13.16.1**

2.1.7 Technical Review Committee

…

B) Membership

The TRC shall consist of a staff member, designated by the department head, from each of the following departments: Planning, Public Works**,** ~~and Transportation~~, **Transportation & Infrastructure Development, Water Resources,** Building Inspections ~~and~~**&** Permitting, Parks, Recreation & Cultural Resources, Police, and Fire.

2.3.7 Subdivision

…

D) Master Subdivision Plan

…

4) Minor Deviations

The Planning Director, with the consent of the ~~Public Works and~~ Transportation **& Infrastructure Development** Director**,** and Water Resources Director, may approve a minor deviation to a Master Subdivision Plan. A minor deviation shall be limited to technical or engineering considerations first discovered after Master Subdivision Plan approval which have no material effect on the character of the approved Master Subdivision Plan. Minor deviations shall be limited to slight relocation of lot lines, greenways, streets and utilities, and minor changes to grading and stormwater infrastructure.

…

F) Master Subdivision Final Plat

1) General

…

b) The Master Subdivision Final Plat shall constitute only that portion of the Master Subdivision Plan that the subdivider proposes to record and develop at the time. The Master Subdivision Final Plat shall contain no fewer than 15 lots except in the case of one of the following:

(i) Where there is a phase to be completed with fewer than 15 lots remaining or where the development contains fewer than 15 lots, in which case the application for Final Plat must contain all remaining lots;

(ii) When the lots are located in a nonresidential subdivision; or

(iii) When approved by the Planning Director, with the consent of the ~~Public Works and~~ Transportation **& Infrastructure Development** Director and Water Resources Director.

6.2.13 Flood Damage Prevention Overlay District

A) *Designation of Local Administrator*

The Town's ~~Public Works and Transportation~~ **Water Resources** Director or a designee is appointed to administer and implement the provisions of this Flood Damage Prevention Overlay District.

7.1.7 Substitution of Fees in Lieu of Public Improvements

Where, because of topographical features or other conditions peculiar to the site, strict adherence to the provisions of this Article requiring public improvements would cause an unnecessary hardship or provide an unwarranted or unrealistic result, the Town Council may authorize that the reasonable cost of such improvement if made be paid into the Town treasury in lieu of the improvement so long as same can be done without materially altering the intent of this Article; provided, however, the amount of such fee paid in substitution of the public improvement shall

reasonably relate to the applicant's fair share of the cost of such public improvements as determined by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director and the Water Resources Director or some other professional engineer approved by the Town; and provided, further, that the Town Council may in its discretion, use said fee to construct some other public improvement calculated to be of significant benefit to the said property of the applicant either directly or indirectly. Any such substitution authorized as aforesaid shall be recorded in the minutes of the Town Council with a statement of the reasoning justifying the substitution.

7.2.1 Streets

…

F) Intersections

…

4) Street jogs with centerline offsets of less than 100 feet shall be prohibited when the jog lies wholly within the subdivision, except when approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director, and shall be avoided on the exterior boundary of the subdivision, except where external access would otherwise be denied.

…

L) Traffic Calming

…

2) All new residential developments shall provide for the installation for traffic calming measure(s) on each residential street within the development where the length of the public street exceeds 1,000 feet. The location and type of traffic calming measure(s) shall be determined by the Planning Department and ~~Public Works and~~ Transportation **& Infrastructure Development Department**. Traffic calming measure(s) include but are not limited to traffic circles, roundabouts, curb extensions, chicanes, splitter islands, and designated on-street parking. Speed humps are only allowed as traffic calming measures in existing neighborhoods that meet the criteria in Sec. 7.2.1.L.3 of this Ordinance.

…

3)

…

After all of the criteria have been satisfied, the Town Council will make the final decision whether to approve the proposed installation/removal project. The Town Council reserves the right to deny any request for installation/removal of traffic calming devices on Town-maintained streets, in its sole discretion. After the project has been approved by the Town Council and submitted to the Town's ~~Public Works and~~ Transportation **& Infrastructure Development** Director, the street will be rated for priority, and then scheduled for installation/removal of the traffic calming devices in accordance with the approved sketch plan.

7.5.13 Performance Guarantee in Lieu of Construction Prior to Acceptance of Final Plat

…

C) Such guarantee shall be in an amount of not less than 125% of the estimated cost of the construction of the required improvements. The developer shall submit an estimate of this amount subject to review, modification, and approval, which shall be by the Water Resources Director or ~~Public Works and~~ Transportation & **Infrastructure Development** Director, as appropriate.

D) Performance guarantees shall run for a period of one (1) year unless otherwise determined by the Water Resources Director or ~~Public Works and~~ Transportation & **Infrastructure Development** Director, as appropriate.

E) All required construction of improvements, less the final lift of asphalts and adjustments, shall be completed within one (1) year from approval of the Final Plat unless otherwise determined by the Water Resources Director or ~~Public Works and~~ Transportation & **Infrastructure Development** Director, as appropriate.

…

7.5.14 Defects Guarantee

…

B) This guarantee shall be in the amount determined by the Water Resources Director or ~~Public Works and~~ Transportation **& Infrastructure Development** Director, as appropriate.

7.5.16 Final Plat Approval Contingent on Execution of Guarantees

No Final Plat will be approved by the Planning Director, Water Resources Director, or ~~Public Works and~~ Transportation **& Infrastructure Development** Director unless such plat is in compliance with Sec. 14.1.5.C and Secs. 7.5.12 through 7.5.15.

8.3.6.G Cross-Access and Driveway Construction Easement

1) …

…

d) The location of the cross-access and driveway construction easement and connection shall be reviewed and approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director based on the following factors which include but are not limited to:

...

…

f) Additional driveway access to the thoroughfare shall be avoided, except in cases where additional access is reviewed and approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director upon finding that such access meets the following minimum distancing requirements between driveways along the thoroughfare:

(i) 250 feet may be allowed for right-in/right-out direct access in addition to cross-access;

(ii) 500 feet may be allowed for full movement to a minor thoroughfare for direct access in addition to cross-access; and/or

(iii) 1,000 feet may be allowed for full movement to a major thoroughfare for direct access in addition to cross-access.

The ~~Public Works and~~ Transportation **& Infrastructure Development** Director may reduce the minimum spacing separation above by no more than 10% upon review of site constraints and a traffic impact analysis, when required.

2) Exceptions to the cross-access requirements may be granted by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director based on site-specific constraints that make it impractical to dedicate such cross-access and driveway construction easements and connections, including but not limited to:

13.16 Developer Agreements

…

13.16.1 the estimated cost of the road improvement, based on the approved bidding process and using the lowest bid approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director;

PLANNING STAFF RECOMMENDATION:
Planning staff recommends approval of the proposed UDO amendments.

PLANNING BOARD RECOMMENDATION:
The Planning Board heard these amendments at their September 11, 2023 meeting and unanimously recommended approval.

PLANNING BOARD REPORT TO TOWN COUNCIL
Unified Development Ordinance Amendments
Planning Board Meeting Date: September 11, 2023

Report Requirements:
Per NCGS §160D-604, all proposed amendments to the zoning ordinance or zoning map shall be submitted to the Planning Board for review and comment. If no written report is received from the Planning Board within 30 days of referral of the amendment to the Planning Board, the Town Council may act on the amendment without the Planning Board report. The Town Council is not bound by the recommendations, if any, of the Planning Board.

Planning Board Recommendation:

Motion: To recommend approval as presented.

Introduced by Planning Board member: Keith Braswell

Seconded by Planning Board member: Alyssa Byrd

☑ Approval of the proposed UDO amendment(s)
☐ Approval of the proposed UDO amendment(s) with the following conditions:

☐ Denial of the proposed UDO amendment(s)

With 8 Planning Board Member(s) voting "aye"

With 0 Planning Board Member(s) voting "no"

Reasons for dissenting votes:

This report reflects the recommendation of the Planning Board, this the 11th day of September 2023.

Attest:

Tina Sherman, Planning Board Vice-Chair

Dianne Khin Digitally signed by Dianne Khin Date: 2023.09.11 17:07:02 -04'00'

Dianne Khin, Planning Director

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARING

AMENDMENTS TO THE UNIFIED DEVELOPMENT ORDINANCE (UDO)

Pursuant to the provisions of North Carolina General Statutes §160D-601 and to the Town of Apex Unified Development Ordinance (UDO) Sec. 2.2.11, notice is hereby given of a public hearing before the Town Council of the Town of Apex for the purpose of soliciting comments relative to the following amendment(s) to the Unified Development Ordinance that are applicable Town-wide:

Requested by Planning Committee of Town Council:

1. Amendments to Secs. 4.2.2 *Use Table* and 4.4.5 *Supplemental Standards, Commercial Uses* in order to change the use "Tattoo parlor and body piercing" from a Special Use to a Permitted Use where the use is currently allowed except for within the Small Town Character Overlay District and to remove the supplemental use standards related to signage for this use since the same standards exist in Sec. 8.7 *Signs*.

Requested by Planning Staff:

2. Amendments to Sec. 8.2.6.B *Landscape Buffers Between Uses* in order to remove greenways from the list of Class 1 uses. This change would result in no requirement for buffers along greenways.
3. Amendments to Secs. 4.4.1 *Supplemental Use Standards, Residential Uses* and 8.2.8.B *Screening, Screening Methods* in order to change references to dumpster enclosure screening standards from the *Town of Apex Design and Development Manual* to the *Town of Apex Standard Specifications and Standard Details.* Amendments to 6.1.11.I *Notification on Site Plan and Subdivision Plan and Recording of Information* in order to change a reference from the *Town of Apex Design and Development Manual* to the Site Plan Final Plat or Master Subdivision Final Plat application and to make other edits to simplify the wording of the standard.
4. Amendments to Sec. 2.3.8.D *Variance Permit, Standards* in order to change the word "ordinance" to "regulation" in accordance with State law.
5. Amendments to Sec. 4.4.2 *Supplemental Standards, Public and Civic* Uses in order to remove supplemental standards for the uses "Day Care Facility" and "Drop-In or Short-Term Child Care" in the Downtown Business (B2) zoning district as those uses are no longer permitted uses in that district.
6. Amendments to various sections of the UDO in order to reflect changes to department titles and responsibilities due to the division of the former Public Works and Transportation Department into the Public Works Department and Transportation & Infrastructure Development Department; move floodplain administrator duties to the Water Resources Department; and add Water Resources Department to the list of departments included in the Technical Review Committee. Sections affected include the following:

- 2.1.7.B
- 2.3.7
- 6.2.13.A
- 7.1.7
- 7.2.1
- 7.5.13
- 7.5.14
- 7.5.16
- 8.3.6.G
- 13.16.1

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Town Council Public Hearing Date and Time: September 26, 2023 6:00 PM

You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov.

If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the Office of the Town Clerk (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Town Council vote. You must provide your name and address for the record. The written statements will be delivered to the Town Council members prior to their vote. Please include the Public Hearing name in the subject line.

The UDO can be accessed online at: http://www.apexnc.org/233.

Dianne F. Khin, AICP
Planning Director

Published Dates: September 1-26, 2023

Not secure | www.apexnc.org/DocumentCenter/View...
WebEdits | Municode | PlanViewer | iMAPS | iMAPS-BETA | IDT | Other favorites
1 of 2

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARING
AMENDMENTS TO THE UNIFIED DEVELOPMENT ORDINANCE (UDO)

Pursuant to the provisions of North Carolina General Statutes §160D-601 and to the Town of Apex Unified Development Ordinance (UDO) Sec. 2.2.11, notice is hereby given of a public hearing before the Town Council of the Town of Apex for the purpose of soliciting comments relative to the following amendment(s) to the Unified Development Ordinance that are applicable Town-wide:

Requested by Planning Committee of Town Council:

1. Amendments to Secs. 4.2.2 *Use Table* and 4.4.5 *Supplemental Standards, Commercial Uses* in order to change the use "Tattoo parlor and body piercing" from a Special Use to a Permitted Use where the use is currently allowed except for within the Small Town Character Overlay District and to remove the supplemental use standards related to signage for this use since the same standards exist in Sec. 8.7 *Signs*.

Requested by Planning Staff:

2. Amendments to Sec. 8.2.6.B *Landscape Buffers Between Uses* in order to remove greenways from the list of Class 1 uses. This change would result in no requirement for buffers along greenways.
3. Amendments to Secs. 4.4.1 *Supplemental Use Standards, Residential Uses* and 8.2.8.B *Screening, Screening Methods* in order to change references to dumpster enclosure screening standards from the *Town of Apex Design and Development Manual* to the *Town of Apex Standard Specifications and Standard Details*. Amendments to 6.1.11.I *Notification on Site Plan and Subdivision Plan and Recording of Information* in order to change a reference from the *Town of Apex Design and Development Manual* to the Site Plan Final Plat or Master Subdivision Final Plat application and to make other edits to simplify the wording of the standard.
4. Amendments to Sec. 2.3.8.D *Variance Permit, Standards* in order to change the word "ordinance" to "regulation" in accordance with State law.
5. Amendments to Sec. 4.4.2 *Supplemental Standards, Public and Civic* Uses in order to remove supplemental standards for the uses "Day Care Facility" and "Drop-In or Short-Term Child Care" in the Downtown Business (B2) zoning district as those uses are no longer permitted uses in that district.
6. Amendments to various sections of the UDO in order to reflect changes to department titles and responsibilities due to the division of the former Public Works and Transportation Department into the Public Works Department and Transportation & Infrastructure Development Department; move floodplain administrator duties to the Water Resources Department; and add Water Resources Department to the list of departments included in the Technical Review Committee. Sections affected include the following:

- 2.1.7.B
- 2.3.7
- 6.2.13.A
- 7.1.7
- 7.2.1
- 7.5.13
- 7.5.14
- 7.5.16
- 8.3.6.G
- 13.16.1

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Town Council Public Hearing Date and Time: September 26, 2023 6:00 PM

You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov.

If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the Office of the Town Clerk (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Town Council vote. You must provide your name and address for the record. The written statements will be delivered to the Town Council members prior to their vote. Please include the Public Hearing name in the subject line.

The UDO can be accessed online at: http://www.apexnc.org/233.

Dianne F. Khin, AICP
Planning Director

Published Dates: September 1-26, 2023

10:49 AM
9/1/2023

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
TEL. 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS

Modificación de la Ordenanza de Desarrollo Unificado (UDO)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-601 y con la sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del pueblo de Apex, por la presente se notifican las audiencias públicas ante el Consejo Municipal del pueblo de Apex a fin de solicitar comentarios relativos a la siguiente modificación de la Ordenanza de Desarrollo Unificado que se aplican a toda la ciudad:

A solicitud del Comité de Planificación del Consejo Municipal:

1. Enmiendas a las secciones 4.2.2 *Tabla de usos* y 4.4.5 *Normas complementarias, Usos comerciales* para cambiar el uso "Salón de tatuajes y perforaciones corporales" de un uso especial a un uso permitido, donde el uso está ahora permitido excepto en el distrito de superposición de carácter de población pequeña y para eliminar las normas de uso complementarias relacionadas con la señalización para este uso ya que existen las mismas normas en la sección 8.7 *Letreros*.

A solicitud del personal de Planificación:

2. Enmiendas a la sección 8.2.6.B *Zonas de separación paisajística entre usos* para eliminar las vías verdes de la lista de usos de clase 1. Este cambio daría lugar a que no se exigieran zonas de separación a lo largo de las vías verdes.

3. Enmiendas a las secciones 4.4.1 *Normas de uso complementarias, Usos residenciales* y 8.2.8.B *Vallado, Métodos de vallado* para cambiar las referencias a las normas de vallado de los recintos de contenedores de basura del *Manual de diseño y desarrollo del pueblo de Apex* a las *Especificaciones estándares y detalles estándares del pueblo de Apex.* Enmiendas a las secciones 6.1.11.I *Notificación sobre el plan del sitio y el plan de subdivisión y registro de información* para cambiar una referencia del *Manual de diseño y desarrollo del pueblo de Apex* a la solicitud del Plano final del plan de sitio o Plano final de subdivisión maestra y para hacer otras ediciones para simplificar la redacción de la norma.

4. Enmiendas a la sección 2.3.8.D *Permiso de variación, Normas* para cambiar la palabra "ordenanza" por "reglamento" de acuerdo con la ley estatal.

5. Enmiendas a la sección 4.4.2 *Normas complementarias, Usos públicos y cívicos* con el fin de eliminar las normas complementarias para los usos "Centro de día" y "Cuidado infantil sin cita previa o de corta duración" en el distrito de zonificación Negocios en el centro de la ciudad (B2), ya que dichos usos ya no están permitidos en dicho distrito.

6. Enmiendas a varias secciones de la UDO para que se reflejen los cambios en los títulos y responsabilidades de los departamentos debido a la división del antiguo Departamento de Obras Públicas y Transporte en el Departamento de Obras Públicas y el Departamento de Desarrollo de Transporte e Infraestructura; trasladar las funciones del administrador de terrenos inundables al Departamento de Recursos Hídricos; y agregar el Departamento de Recursos Hídricos a la lista de departamentos incluidos en el Comité de Revisión Técnica. Entre las secciones afectadas, se encuentran las siguientes:

- 2.1.7.B
- 2.3.7
- 6.2.13.A
- 7.1.7
- 7.2.1
- 7.5.13
- 7.5.14
- 7.5.16
- 8.3.6.G
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Lugar de la audiencia pública: Ayuntamiento de Apex
Cámara del Consejo, 2º piso
73 Hunter Street, Apex, Carolina del Norte

Fecha y hora de la audiencia pública del Consejo Municipal: 26 de septiembre de 2023 6:00 PM

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: https://www.youtube.com/c/townofapexgov.

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Se puede acceder a la UDO en línea en: http://www.apexnc.org/233.

Dianne F. Khin, AICP
Directora de Planificación

Fechas de publicación: 1 de septiembre-26 de septiembre de 2023

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TOWN OF APEX
POST OFFICE BOX 250
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TEL. 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS

Modificación de la Ordenanza de Desarrollo Unificado (UDO)

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A solicitud del Comité de Planificación del Consejo Municipal:

1. Enmiendas a las secciones 4.2.2 *Tabla de usos* y 4.4.5 *Normas complementarias, Usos comerciales* para cambiar el uso "Salón de tatuajes y perforaciones corporales" de un uso especial a un uso permitido, donde el uso está ahora permitido excepto en el distrito de superposición de carácter de población pequeña y para eliminar las normas de uso complementarias relacionadas con la señalización para este uso ya que existen las mismas normas en la sección 8.7 *Letreros*.

A solicitud del personal de Planificación:

2. Enmiendas a la sección 8.2.6.B *Zonas de separación paisajística entre usos* para eliminar las vías verdes de la lista de usos de clase 1. Este cambio daría lugar a que no se exigieran zonas de separación a lo largo de las vías verdes.
3. Enmiendas a las secciones 4.4.1 *Normas de uso complementarias, Usos residenciales* y 8.2.8.B *Vallado, Métodos de vallado* para cambiar las referencias a las normas de vallado de los recintos de contenedores de basura del *Manual de diseño y desarrollo del pueblo de Apex* a las *Especificaciones estándares y detalles estándares del pueblo de Apex*. Enmiendas a las secciones 6.1.11.I *Notificación sobre el plan del sitio y el plan de subdivisión y registro de información* para cambiar una referencia del *Manual de diseño y desarrollo del pueblo de Apex* a la solicitud del Plano final del plan de sitio o Plano final de subdivisión maestra y para hacer otras ediciones para simplificar la redacción de la norma.
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6. Enmiendas a varias secciones de la UDO para que se reflejen los cambios en los títulos y responsabilidades de los departamentos debido a la división del antiguo Departamento de Obras Públicas y Transporte en el Departamento de Obras Públicas y el Departamento de Desarrollo de Transporte e Infraestructura; trasladar las funciones del administrador de terrenos inundables al Departamento de Recursos Hídricos; y agregar el Departamento de Recursos Hídricos a la lista de departamentos incluidos en el Comité de Revisión Técnica. Entre las secciones afectadas, se encuentran las siguientes:

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Cámara del Consejo, 2º piso
73 Hunter Street, Apex, Carolina del Norte

Fecha y hora de la audiencia pública del Consejo Municipal: 26 de septiembre de 2023 6:00 PM

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Dianne F. Khin, AICP
Directora de Planificación

Fechas de publicación: 1 de septiembre-26 de septiembre de 2023

10:49 AM
9/1/2023

PLANNING BOARD REPORT TO TOWN COUNCIL
Unified Development Ordinance Amendments
Planning Board Meeting Date: September 11, 2023

Report Requirements:
Per NCGS §160D-604, all proposed amendments to the zoning ordinance or zoning map shall be submitted to the Planning Board for review and comment. If no written report is received from the Planning Board within 30 days of referral of the amendment to the Planning Board, the Town Council may act on the amendment without the Planning Board report. The Town Council is not bound by the recommendations, if any, of the Planning Board.

Planning Board Recommendation:

Motion: To recommend approval as presented.

Introduced by Planning Board member: Keith Braswell

Seconded by Planning Board member: Alyssa Byrd

☑ Approval of the proposed UDO amendment(s)
☐ Approval of the proposed UDO amendment(s) with the following conditions:

☐ Denial of the proposed UDO amendment(s)

With 8 Planning Board Member(s) voting "aye"

With 0 Planning Board Member(s) voting "no"

Reasons for dissenting votes:

This report reflects the recommendation of the Planning Board, this the 11th day of September 2023.

Attest:

Tina Sherman, Planning Board Vice-Chair

Dianne Khin Digitally signed by Dianne Khin Date: 2023.09.11 17:07:02 -04'00'

Dianne Khin, Planning Director

TOWN OF APEX
POST OFFICE BOX 250
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PUBLIC NOTIFICATION OF PUBLIC HEARING

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Requested by Planning Committee of Town Council:

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Town Council Public Hearing Date and Time: September 26, 2023 6:00 PM

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Dianne F. Khin, AICP
Planning Director

Published Dates: September 1-26, 2023

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Lugar de la audiencia pública: Ayuntamiento de Apex
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Dianne F. Khin, AICP
Directora de Planificación

Fechas de publicación: 1 de septiembre-26 de septiembre de 2023

AN ORDINANCE TO AMEND CERTAIN SECTIONS OF THE UNIFIED DEVELOPMENT ORDINANCE

BE IT ORDAINED by the Town Council of the Town of Apex as follows:

Section 1. Sections 4.2.2 and 4.4.5 of the Unified Development Ordinance are amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:

4.2.2 Use Table

Use Type	Definition Section	Zoning Districts																						
		Residential									Business						Planned Development			Other			Standards
		RA	RR	LD	MD	HDSF	HDMF	MH	MHP	MORR	O&I	B1	B2	PC	LI	TF	MEC	TND	PUD	CB	SD	STC	Section(s)
Adult Use																							
Tattoo parlor and body piercing	4.3.5.A.4													~~S~~ **P**							**	S*	4.4.5.A.4; 6.3

4.4.5.A Supplemental Standards, Commercial Uses, Adult Use

…

~~4) *Tattoo parlor and body piercing*. Tattoo parlors shall comply with the following standard:~~

~~Except for freestanding and façade mounted signs permitted pursuant to Sec. 8.7 *Signs*, no other advertisements, displays, or other signs or other promotional materials shall be visible to the public from sidewalks, walkways, or vehicular use areas.~~

Section 2. Section 8.2.6.B of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:

8.2.6.B Landscape Buffers Between Uses

…

4) Land Use Classes

…

a) Class 1:

…

~~Greenways~~

…

Section 3. Sections 4.4.1, 6.1.11.I, and 8.2.8.B of the Unified Development Ordinance are amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:

4.4.1 *Supplemental Use Standards, Residential Uses*

A) *Condominium*

…

2) The overall enclosure design must comply with the standards found in the ~~Town's *Design and Development Manual*~~ ***Town of Apex Standard Specifications and Standard Details***.

…

G) *Multi-Family or Apartment*

…

2) The overall enclosure design must comply with the standards found in the ~~Town's *Design and Development Manual*~~ ***Town of Apex Standard Specifications and Standard Details***.

8.2.8.B *Screening, Screening Methods*

1) *Dumpsters*

…

d) The overall enclosure design must comply with the standards found in the ~~Town's *Design and Development Manual*~~ ***Town of Apex Standard Specifications and Standard Details***.

6.1.11 Riparian Buffers

…

I) *Notification on Site Plan and Subdivision Plan and Recording of Information*
Where required, riparian buffers shall be shown on all site plans and subdivision plans approved pursuant to Sec. 6.1.4 of this Ordinance. A certificate in the form established in the ~~*Town of Apex Design and Development Manual*~~ **Site Plan Final Plat or Master Subdivision Final Plat application** shall be ~~lettered~~ **placed** on the face of the ~~s~~**S**ite ~~p~~**P**lan **Final Plat** or ~~the recorded subdivision map~~ **Master Subdivision Final Plat**. ~~**P**~~**p**rior to approval of ~~a~~ **the** Final Plat ~~(with respect to a subdivision), issuance of a certificate of occupancy (with respect to a site plan), or commencement of a use, a developer shall first cause all information pertaining to required riparian buffers to be shown on the Final Plat for the property~~.

…

Section 4. Section 2.3.8.D of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:

2.3.8 Variance Permit

…

D) Standards
In order to approve an application for a variance permit, the Board of Adjustment shall find the following:

1) *Unnecessary Hardship.* Unnecessary hardship would result from the strict application of the ~~ordinance~~**regulation**. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property.

…

4) *Consistency with the ~~UDO~~**Regulation**.* The requested variance is consistent with the spirit, purpose, and intent of the ~~ordinance~~**regulation**, such that public safety is secured, and substantial justice is achieved.

Section 5. Section 4.4.2 of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:

4.4.2 Supplemental Standards, Public and Civic Uses

…

C) Day Care Facility

~~1)~~ Day care facilities in the LI District shall comply with the following standards:

~~a~~**1**) The day care facility shall not exceed 20% of the gross square footage of the building in which it is located; and

~~b~~**2**) The day care facility shall be located at least 1,320 feet from any Gas and fuel, wholesale use.

~~2) Day care facilities in the B2 Downtown Business District shall not be located on North Salem Street between Center Street and West Chatham Street, and shall not be located on Commerce Street.~~

…

F) Drop-In or Short-Term Child Care

~~1)~~ Drop-in/short-term child care that also provides Youth or Day Camps shall also meet the requirements of Sec. 4.4.4.E *Youth or Day Camps*.

~~2) Drop-in or short-term child care located in the B2 Downtown Business District shall have no outdoor play areas and shall have hours of operation typical to other adjacent downtown businesses.~~

Section 6. Sections 2.1.7.B, 2.3.7, 6.2.13.A, 7.1.7, 7.2.1, 7.5.13, 7.5.14, 7.5.16, 8.3.6.G, and 13.16.1 of the Unified Development Ordinance are amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:

2.1.7 Technical Review Committee

…

B) Membership

The TRC shall consist of a staff member, designated by the department head, from each of the following departments: Planning, Public Works**,** ~~and Transportation~~, **Transportation & Infrastructure Development, Water Resources,** Building Inspections ~~and~~**&** Permitting, Parks, Recreation & Cultural Resources, Police, and Fire.

2.3.7 Subdivision

…

D) Master Subdivision Plan

…

4) Minor Deviations

The Planning Director, with the consent of the ~~Public Works and~~ Transportation **& Infrastructure Development** Director**,** and Water Resources Director, may approve a minor deviation to a Master Subdivision Plan. A minor deviation shall be limited to technical or engineering considerations first discovered after Master Subdivision Plan approval which have no material effect on the

character of the approved Master Subdivision Plan. Minor deviations shall be limited to slight relocation of lot lines, greenways, streets and utilities, and minor changes to grading and stormwater infrastructure.

…

F) Master Subdivision Final Plat

1) General

…

b) The Master Subdivision Final Plat shall constitute only that portion of the Master Subdivision Plan that the subdivider proposes to record and develop at the time. The Master Subdivision Final Plat shall contain no fewer than 15 lots except in the case of one of the following:

(i) Where there is a phase to be completed with fewer than 15 lots remaining or where the development contains fewer than 15 lots, in which case the application for Final Plat must contain all remaining lots;

(ii) When the lots are located in a nonresidential subdivision; or

(iii) When approved by the Planning Director, with the consent of the ~~Public Works and~~ Transportation **& Infrastructure Development** Director and Water Resources Director.

6.2.13 Flood Damage Prevention Overlay District

A) *Designation of Local Administrator*
The Town's ~~Public Works and Transportation~~ **Water Resources** Director or a designee is appointed to administer and implement the provisions of this Flood Damage Prevention Overlay District.

7.1.7 Substitution of Fees in Lieu of Public Improvements

Where, because of topographical features or other conditions peculiar to the site, strict adherence to the provisions of this Article requiring public improvements would cause an unnecessary hardship or provide an unwarranted or unrealistic result, the Town Council may authorize that the reasonable cost of such improvement if made be paid into the Town treasury in lieu of the improvement so long as same can be done without materially altering the intent of this Article; provided, however, the amount of such fee paid in substitution of the public improvement shall reasonably relate to the applicant's fair share of the cost of such public improvements as determined by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director and the Water Resources Director or some other professional engineer approved by the Town; and provided, further, that the Town Council may in its discretion, use said fee to construct some other public improvement calculated to be of significant benefit to the said property of the applicant either directly or indirectly. Any such substitution authorized as aforesaid shall be recorded in the minutes of the Town Council with a statement of the reasoning justifying the substitution.

7.2.1 Streets

…

F) Intersections

…

4) Street jogs with centerline offsets of less than 100 feet shall be prohibited when the jog lies wholly within the subdivision, except when approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director, and shall be avoided on the exterior boundary of the subdivision, except where external access would otherwise be denied.

…

L) Traffic Calming

…

2) All new residential developments shall provide for the installation for traffic calming measure(s) on each residential street within the development where the length of the public street exceeds 1,000 feet. The location and type of traffic calming measure(s) shall be determined by the Planning Department and ~~Public Works and~~ Transportation **& Infrastructure Development Department**. Traffic calming measure(s) include but are not limited to traffic circles, roundabouts, curb extensions, chicanes, splitter islands, and designated on-street parking. Speed humps are only allowed as traffic calming measures in existing neighborhoods that meet the criteria in Sec. 7.2.1.L.3 of this Ordinance.

…

3)

…

After all of the criteria have been satisfied, the Town Council will make the final decision whether to approve the proposed installation/removal project. The Town Council reserves the right to deny any request for installation/removal of traffic calming devices on Town-maintained streets, in its sole discretion. After the project has been approved by the Town Council and submitted to the Town's ~~Public Works and~~ Transportation **& Infrastructure Development** Director, the street will be rated for priority, and then scheduled for installation/removal of the traffic calming devices in accordance with the approved sketch plan.

7.5.13 Performance Guarantee in Lieu of Construction Prior to Acceptance of Final Plat

…

C) Such guarantee shall be in an amount of not less than 125% of the estimated cost of the construction of the required improvements. The developer shall submit an estimate of this amount subject to review, modification, and approval, which shall be by the Water Resources Director or ~~Public Works and~~ Transportation & **Infrastructure Development** Director, as appropriate.

D) Performance guarantees shall run for a period of one (1) year unless otherwise determined by the Water Resources Director or ~~Public Works and~~ Transportation & **Infrastructure Development** Director, as appropriate.

E) All required construction of improvements, less the final lift of asphalts and adjustments, shall be completed within one (1) year from approval of the Final Plat unless otherwise determined by the Water Resources Director or ~~Public Works and~~ Transportation & **Infrastructure Development** Director, as appropriate.

…

7.5.14 Defects Guarantee

…

B) This guarantee shall be in the amount determined by the Water Resources Director or ~~Public Works and~~ Transportation **& Infrastructure Development** Director, as appropriate.

7.5.16 Final Plat Approval Contingent on Execution of Guarantees
No Final Plat will be approved by the Planning Director, Water Resources Director, or ~~Public Works and~~ Transportation **& Infrastructure Development** Director unless such plat is in compliance with Sec. 14.1.5.C and Secs. 7.5.12 through 7.5.15.

8.3.6.G Cross-Access and Driveway Construction Easement

1) …

…

d) The location of the cross-access and driveway construction easement and connection shall be reviewed and approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director based on the following factors which include but are not limited to:

...

…

f) Additional driveway access to the thoroughfare shall be avoided, except in cases where additional access is reviewed and approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director upon finding that such access meets the following minimum distancing requirements between driveways along the thoroughfare:

(i) 250 feet may be allowed for right-in/right-out direct access in addition to cross-access;

(ii) 500 feet may be allowed for full movement to a minor thoroughfare for direct access in addition to cross-access; and/or

(iii) 1,000 feet may be allowed for full movement to a major thoroughfare for direct access in addition to cross-access.

The ~~Public Works and~~ Transportation **& Infrastructure Development** Director may reduce the minimum spacing separation above by no more than 10% upon review of site constraints and a traffic impact analysis, when required.

2) Exceptions to the cross-access requirements may be granted by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director based on site-specific constraints that make it impractical to dedicate such cross-access and driveway construction easements and connections, including but not limited to:

13.16 Developer Agreements

…

13.16.1 the estimated cost of the road improvement, based on the approved bidding process and using the lowest bid approved by the ~~Public Works and~~ Transportation **& Infrastructure Development** Director;

Section 7. These amendments shall not apply to projects for which an application for development approval has been submitted before the effective date of this ordinance.

Section 8. The Planning Director and/or Town Manager are hereby authorized to renumber, revise formatting, correct typographic errors, to verify and correct cross references, indexes and diagrams as necessary to codify, publish, and/or accomplish the provisions of this ordinance or future amendments as long as doing so does not alter the terms of this ordinance.

Section 9. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed. If any section, paragraph, subdivision, clause or provision of this ordinance shall be adjudged invalid, such adjudication shall apply only to such section, paragraph, subdivision, clause or provision so adjudged and the remainder of the ordinance shall be deemed valid and effective.

Section 10. The ordinance shall be effective upon enactment on the _____ day of _____ 2023.

Introduced by Council Member _____

Seconded by Council Member _____

Attest:

_____
Allen Coleman, CMC, NCCCC
Town Clerk

TOWN OF APEX

_____
Jacques K. Gilbert
Mayor

Approved As To Form:

_____
Laurie L. Hohe
Town Attorney

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: OLD BUSINESS

Meeting Date: September 26, 2023

Item Details

Presenter(s): Laurie Hohe, Town Attorney

Department(s): Legal Services

Requested Motion

Report to Council of Separation Agreement and Release

Approval Recommended?

N/A

Item Details

Attachments

- OB1-A1: Report of Separation Agreement and Release

STATE OF NORTH CAROLINA

COUNTY OF WAKE

SEPARATION AGREEMENT AND RELEASE

This Settlement and Separation Agreement and Release ("Agreement") is entered into between Catherine Crosby ("Ms. Crosby" or "Employee") and the Town of Apex, North Carolina ("Employer" or "the Town") (each a "Party" and collectively, "Parties").

WHEREAS, Ms. Crosby was employed with the Town as its Town Manager pursuant to the terms of an Employment Agreement entered into between Ms. Crosby and Town dated May 25, 2021 (the "Employment Agreement"), until Ms. Crosby's employment ended on July 27, 2023;

WHEREAS, the Parties dispute which provisions of the Employment Agreement apply to Ms. Crosby's separation from employment with the Town; and

WHEREAS, Employee and the Town desire to resolve all current and future disputes between them;

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, Employee and Employer agree as follows:

1. **Resignation.** The Town accepts Ms. Crosby's resignation effective July 27, 2023 (the "Separation Date").

2. **Consideration.** The Town shall pay or cause to be paid to Ms. Crosby the following sums or remit the following benefits in consideration of the promises made in this Agreement:

a. Payment of Severance. For one year following the Separation Date (the "Severance Period"), the Town will continue to pay salary to Ms. Crosby at her current rate of pay, on the existing bi-weekly payroll schedule (the "Severance Payments"). For clarity, the "current rate of pay" for Ms. Crosby as referred to in this sub-section is a gross annual salary of $231,000. All Severance Payments shall be subject to the same deductions and tax withholdings as elected by Ms. Crosby for the payroll period immediately preceding the Separation Date; provided, however, tax withholding elections may be changed upon submission of the appropriate forms in accordance with the Town's human resources policies and procedures.

b. Health and Dental Insurance Benefits. For the duration of the Severance Period, the Town shall cause Ms. Crosby to continue to receive health and dental insurance benefits under the same elections and terms under which health

and dental insurance benefits were provided to Ms. Crosby immediately prior to the Separation Date.

c. Vehicle Allowance. For the duration of the Severance Period, the Town will continue to pay Ms. Crosby a monthly vehicle allowance in the amount of $600, the sum of which allowance payments will accrue to a total benefit of $7,200 remitted during the Severance Period. The provisions of Section 2.04(B) of the Employment Agreement will continue to apply to any vehicle for which Ms. Crosby uses the vehicle allowance payments.

d. Retirement Benefits. For the duration of the Severance Period, the Town will continue to make employer contributions to Ms. Crosby's 457(b) deferred compensation plan at the same contribution rate in effect immediately prior to the Separation Date.

3. **Vacation and Sick Leave.** The Town will pay out 281 hours of accrued vacation leave to Ms. Crosby, which payment will be remitted through payroll at the end of the first full pay period following execution of this Agreement by the Parties. During the Severance Period, Employee will accrue 40 hours of additional vacation leave, to be paid out with the final Severance Payment. All payments of vacation leave shall be subject to the same deductions and withholdings as the Severance Payments. To the extent Employee becomes employed by a state or local agency in the future, the Town will provide information to Employee's future employer regarding her accrued sick time upon request. However, in the event of such employment, the Town is not obligated to make any payment to Employee or on her behalf regarding Employee's accrued sick leave.

4. **General Release and Covenant Not to Sue.**

a. General Release by Employee. Employee, for and on behalf of herself and each of her heirs, executors, administrators, personal representatives, successors and assigns, hereby acknowledges full and complete satisfaction of and ABSOLUTELY AND IRREVOCABLY AND UNCONDITIONALLY FULLY AND FOREVER RELEASES, ACQUITS AND DISCHARGES Employer together with its respective governing boards and bodies, and each of their respective past and present direct and indirect directors, elected officials, members, officers, employees, attorneys, insurers, agents and representatives, and their respective heirs, executors, administrators, personal representatives, successors and assigns (collectively, the "Releasees"), from any and all claims, demands, suits, causes of action, liabilities, obligations, judgments, orders, debts, liens, contracts, agreements, covenants and causes of action of every kind and nature, whether known or unknown, suspected or unsuspected, concealed or hidden, vested or contingent, in law or equity, existing by statute, common law, contract or otherwise ("Claims"), which have existed, may exist or do exist, through and including the execution and delivery by Employee of this Agreement (but not including the Parties' performance

under this Agreement), including, without limitation, any of the foregoing arising out of or in any way related to or based upon:

i. Employee's application for and employment with Employer;

ii. Employee's separation from Employer and any related proceedings;

iii. Claims in tort or contract, including but not limited to claims alleging breach of an express or implied, or oral or written, contract, policy manual or employee handbook;

iv. Claims for wages, overtime pay and benefits, including any claims arising under the Fair Labor Standards Act (FLSA) or the North Carolina Wage and Hour Act (WHA);

v. Any alleged misrepresentation, defamation, interference with contract, intentional or negligent infliction of emotional distress, sexual harassment, negligence, whistle-blower protection, wrongful discharge, or retaliation;

vi. Any federal, state or local law, statute, ordinance or regulation, including but not limited to all labor and employment discrimination laws, and including specifically but not limited to the North Carolina Equal Employment Practices Act, the North Carolina Persons with Disabilities Protection Act, the North Carolina Retaliatory Employment Discrimination Act, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Americans with Disabilities Act of 1990, the Pregnant Workers Fairness Act (PWFA), and the Providing Urgent Maternal Protections for Nursing Mothers Act; or

vii. Any state or federal Constitutional claim for violation of due process, denial of the fruits of one's own labor, violation of property right, right to a name clearing hearing, or any other claim for violation of a right protected by the state or federal Constitution.

b. Acknowledgment of Waiver; Disclaimer of Benefits. Nothing in this Agreement is intended to waive claims (i) for vested rights under ERISA-covered employee benefit plans as applicable on the date Employee signs this Agreement, (ii) that may arise after Employee signs this Agreement, or (iii) which cannot be released by private agreement. Employee further agrees that she will not in the future maintain or prosecute any lawsuit, complaint, administrative charge, action or proceeding of any kind against Employer with respect to any act, omission or other matter occurring on or before the date of her execution of this Agreement.

However, this Agreement shall not act to prevent Employee from filing a charge of discrimination with the Equal Employment Opportunity Commission, although by signing this Agreement, Employee waives the right to recover any damages or other relief in any claim or suit brought by or through the Equal Employment Opportunity Commission or any other state or local agency on her behalf under any federal, state, or local anti-discrimination law against Employee for any event which occurred as of the date of this Agreement, except where prohibited by law. Employee further understands that the representations, and understandings set forth in this section have been specifically relied upon by the Releasees and constitute consideration for Employer's execution of this Agreement, and without which Releasees would not have entered into this Agreement.

c. Effect of Release and Waiver. Employee understands and intends that this Section and all sub-sections thereto constitutes a general release of all Claims except as otherwise provided in Section 4(b) above, and that no reference therein to a specific form of Claim, statute or type of relief is intended to limit the scope of such general release and waiver.

d. Waiver of Unknown Claims. Employee expressly waives all rights afforded by any statute which limits the effect of a release with respect to unknown Claims and understands the significance of her release of unknown Claims and her waiver of statutory protection against a release of unknown Claims. Employee acknowledges that if she later discovers facts different from, or in addition to, those which she now knows or believes to be true concerning the subject matter of her employment with Employer and separation thereof, that nevertheless this Agreement shall be and remain effective in all respects. "Claims" shall be interpreted liberally to preclude any further disputes, litigation, or controversies between Employee and Employer or any of the Releasees based on events that occurred on or before the effective date of this Agreement.

e. **Waiver of Federal Age Rights. By this section of the Agreement, Employee expressly agrees to waive any right or claim she may have relating to the Age Discrimination of Employment Act of 1967 ("ADEA"), as amended (29 U.S.C. § 626), as defined in the Older Workers Benefit Protection Act and amendments to ADEA, 29 U.S.C. § 626(f).**

i. **Specifically, Employee represents and acknowledges that she is aware that she is waiving any and all federal age discrimination claims that may be currently in existence against Employer, or that may arise on or before her execution of this Agreement; and that she makes said waiver knowingly and voluntarily.**

ii. **Employee represents and acknowledges that she has been informed of her right to consult with an attorney relative to any federal**

age discrimination claim which may or may not exist prior to his execution of this Agreement and the waiver of said claim, and that she has in fact consulted with an attorney prior to entering this Agreement.

iii. **This release and waiver is requested by Employer in connection with the fact that the consideration defined herein is offered to Employee as an incentive and is designed expressly for the circumstances surrounding her individual service or employment to Employer and the end of that service or employment with Employer.**

iv. ***Employee further acknowledges that while she has been advised in writing that she is entitled to at least twenty-one (21) days to consider the terms of this agreement, she has knowingly elected not to avail herself of the full twenty-one (21) day period before entering into and executing this agreement. Employee acknowledges that she has voluntarily and knowingly signed this agreement in exchange for valuable consideration that she would not have otherwise received. Employee further understands that for a period of seven (7) days following the execution of this agreement upon written notice to Employer she may revoke this agreement, and the agreement will not become effective or enforceable until the time for revocation has expired.***

v. To the extent that Ms. Crosby wishes to revoke this Agreement in accordance with the revocation period referred in this section of this Agreement, Ms. Crosby must provide notice, in writing, addressed to the attention of the Town Attorney, Laurie Hohe, by email to Laurie.Hohe@apexnc.org or by delivery to Apex Town Hall, Attn: Laurie Hohe, 73 Hunter Street, Apex, NC 27502, by a delivery method that causes such notice to arrive no later than the end of the business day on the last day of the revocation period.

5. **Mutual Non-Disparagement.** Ms. Crosby promises and agrees that she shall not at any time make, publish, or communicate to any person or entity or in any public forum any defamatory or disparaging remarks, comments, or statements concerning the Town, or any of its employees, elected officials, or officers. This section does not, in any way, restrict or impede Ms. Crosby from exercising protected rights to the extent that such rights cannot be waived by agreement, or from complying with any applicable law or regulation or a valid order of a court of competent jurisdiction or an authorized government agency. The Town promises and agrees that it shall not at any time make, publish, or communicate to any person or entity or in any public forum any defamatory or disparaging remarks, comments, or statements concerning Ms. Crosby.

6. **Joint Statement.** The Parties will agree upon a statement concerning Ms. Crosby's service as Town Manager (the "Joint Statement"), which the Town will release

upon request. Except for provision of information and records that the Town is required to disclose pursuant to the Public Records Act, N.C.G.S. § 160A-168, or any other statement or disclosure required from either Party to comply with any applicable provision of federal or state law, the Joint Statement is the only statement that the Town or Ms. Crosby will make or release publicly concerning Ms. Crosby's service as Town Manager.

7. **Return of Property**. No later than ten (10) days after execution of this Agreement, Ms. Crosby must return all the Town's property in her possession or control, including identification cards or badges, access codes or devices, keys, laptops, computers, telephones, mobile phones, hand-held electronic devices, credit cards, electronically stored documents or files, physical files and any other Town property and information in Ms. Crosby's possession or control, any other materials of any nature pertaining to Ms. Crosby's work for the Town, and any documents or data of any description (or any reproduction of any documents or data). Within the same 10-day period, Ms. Crosby may contact the Town to coordinate a time to retrieve any of Ms. Crosby's personal property located in or on Town property.

8. **Non-Admission of Liability or Wrongful Conduct.** This Agreement is in compromise of disputed claims. This Agreement shall not in any way be construed as an admission by the Town or any of the Releasees that they acted wrongfully with respect to Employee or any other person, or that Employee has any rights whatsoever against the Town or any of the Releasees. The Town and the Releasees specifically disclaim and deny any liability to, or wrongful acts against Employee, or any other person, on the part of themselves, their employees, or their agents.

9. **Administrative Proceedings.** This Release does not bar Employee from filing an administrative charge with, participating in an administrative proceeding conducted by, communicating with, or cooperating with any governmental agency (including the Equal Employment Opportunity Commission) concerning Employee's employment, but Employee agrees that in no event shall Employee seek, accept, or receive any personal or financial benefit with respect to Employee's hiring, retention, transfer, demotion, compensation, separation treatment or any and all other elements of employment by Employer, which are fully released and resolved by this Release.

10. **Employee's Representations and Covenants Regarding Actions.** Employee represents, warrants and covenants to each of the Releasees that at no time prior to or contemporaneous with her execution of this Agreement has she filed or caused or knowingly permitted the filing or maintenance, in any state, federal or foreign court, or before any local, state, federal or foreign administrative agency or other tribunal, any Claim, which she may now have or has ever had against the Releasees which is based in whole or in part on any matter referred to above.

11. **Indemnification.** Ms. Crosby does by execution of the present document expressly acknowledge receipt and sufficiency of this consideration. Ms. Crosby warrants

and represents that, to the extent that the payments referenced above or any part or portion of the payments constitute income for tax purposes, she will report such amount on her federal and state tax returns and on any other returns or reports which may be required by law. Ms. Crosby further agrees to be solely responsible for all taxes, interest, penalties, and other charges which may be owed to any and all governmental agencies as a result of the payments made to her pursuant to this Agreement, and further agrees to indemnify and hold harmless the Releasees from any costs, obligations, interest, expenses, penalties or fees incurred by the Releasees for him failure to do so.

12. **Governing Law.** All issues and questions concerning the construction, validity, enforcement and interpretation of this Agreement will be governed by, and construed in accordance with, the laws of the State of North Carolina, without giving effect to any choice of law or conflict of law rules or provisions that would cause the application hereto of the laws of any jurisdiction other than the State of North Carolina. In furtherance of the foregoing, the laws of the State of North Carolina will control the interpretation and construction of this Agreement, even though under any other jurisdiction's choice of law or conflict of law analysis the substantive law of some other jurisdiction may ordinarily apply.

13. **Severability.** If any provision(s) or portion(s) of this Agreement are or become invalid, illegal, or unenforceable, such provision(s) or portion(s) shall be deemed stricken and the remainder of this Agreement shall remain in full force and effect.

14. **Modification and Waiver.** This Agreement may be amended, changed, or modified only by a writing executed by all of the Parties. No waiver of any provision of this Agreement will be valid unless set forth in writing and signed by the Party against whom such waiver is charged, and no waiver of a right or condition by a Party shall be construed to be a total waiver of any other right or condition set forth herein.

15. **Counterparts.** This Agreement may be executed in separate counterparts, each of which will be deemed to be an original and all of which taken together will constitute one and the same agreement.

16. **Complete Agreement.** This Agreement constitutes the full and complete understanding and agreement of the parties with respect to all subjects addressed herein and supersedes and replaces any and all prior negotiations and agreements, proposed or otherwise, whether written or oral. There are no other agreements other than those set forth herein, and no amendment, deletion, addition, modification, or waiver of any provision of this Agreement shall be binding or enforceable unless in writing and signed by all parties.

17. **Employee Acknowledgment.** EMPLOYEE IS ADVISED TO CONSULT WITH AN ATTORNEY PRIOR TO SIGNING THIS AGREEMENT. EMPLOYEE ACKNOWLEDGES AND AGREES THAT EMPLOYEE HAS FULLY READ AND UNDERSTANDS THE AGREEMENT'S BINDING LEGAL EFFECT. EMPLOYEE

FURTHER ACKNOWLEDGES AND AGREES THAT EMPLOYEE HAS HAD A REASONABLE PERIOD OF TIME TO CONSIDER ALL OF THE TERMS AND PROVISIONS AND HAS HAD AN OPPORTUNITY TO ASK QUESTIONS AND CONSULT WITH AN ATTORNEY OF EMPLOYEE'S CHOICE BEFORE SIGNING THIS AGREEMENT. EMPLOYEE FURTHER ACKNOWLEDGES THAT EMPLOYEE IS SIGNING THIS AGREEMENT FREELY AND VOLUNTARILY AND THAT EMPLOYEE'S SIGNATURE BELOW IS AN AGREEMENT TO WAIVE, SETTLE, AND RELEASE ALL CLAIMS EMPLOYEE HAS OR MIGHT HAVE AGAINST EMPLOYER AND THE RELEASEES, EXCEPT AS OTHERWISE SPECIFICALLY PROVIDED IN THE AGREEMENT. EMPLOYEE UNDERSTANDS THAT EMPLOYEE MAKE TAKE UP TO TWENTY-ONE (21) CALENDAR DAYS TO CONSIDER THIS AGREEMENT. EMPLOYEE MAY REVOKE THIS AGREEMENT FOR A PERIOD OF SEVEN (7) CALENDAR DAYS FOLLOWING THE DAY EMPLOYEE SIGNS THIS AGREEMENT. ANY REVOCATION WITHIN THIS PERIOD MUST BE SUBMITTED PURSUANT TO SECTION 4(e)(5) OF THIS AGREEMENT. EMPLOYEE AGREES THAT ANY MODIFICATIONS, MATERIAL OR OTHERWISE, MADE TO THIS AGREEMENT, DO NOT RESTART OR AFFECT IN ANY MANNER THE ORIGINIAL UP TO TWENTY-ONE (21) CALENDAR DAY CONSIDERATION PERIOD.

[Signature pages follow.]

I, CATHERINE CROSBY, ACKNOWLEDGE THAT: I HAVE CAREFULLY READ AND REVIEWED THIS AGREEMENT; CONSULTED WITH MY ATTORNEY REGARDING ITS TERMS; UNDERSTAND, AND AM SATISFIED WITH THE TERMS AND CONTENTS OF THIS AGREEMENT; AND HAVE VOLUNTARILY SIGNED MY NAME TO THE SAME AS A FREE ACT AND DEED.

CATHERINE CROSBY

Sworn to and subscribed before me the 24th day of August, 2023.

Notary Public

Commission Expires: 8/23/2025

SHANNON HOWELL
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 8/23/2025

TOWN OF APEX, NORTH CAROLINA

By: _____
Shawn Purvis
Interim Town Manager

Sworn to and subscribed before me the 29 day of August, 2023.

Sandra S Burke
Notary Public

Commission Expires: 9/9/2025

SANDRA S BURKE
NOTARY
PUBLIC
WAKE COUNTY, NC

PRE-AUDIT CERTIFICATE

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.

_____
Antwan Morrison, Finance Director

APPROVED AS TO FORM:

_____
Laurie Hohe, Town Attorney

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: NEW BUSINESS

Meeting Date: September 26, 2023

Item Details

Presenter(s): Amanda Bunce, Current Planning Manager

Department(s): Planning

Requested Motion

Discussion about possible amendments to certain sections of the Unified Development Ordinance (UDO) in order to increase the amount of Resource Conservation Area (RCA) required for single-family and townhome developments south and west of NC 540 and to provide an automatic reduction in RCA with installation of solar panels. The proposal would exempt projects that provide a minimum amount of affordable housing.

Approval Recommended?

N/A

Item Details

The Planning Committee reviewed this at their March 2, 2023 meeting at the request of Council Member Mahaffey and were not unanimous in the decision to bring forward the amendment as requested. Staff was asked to request direction from the Town Council on whether to proceed with the proposed amendment through Planning Board and a public hearing at Town Council.

Attachments

- NB1-A1: Staff Report - Unified Development Ordinance (UDO) Possible Amendments - Increase Resource Conversation Area (RCA) requirement and Solar Panels

Requested by Council Member Mahaffey:

Possible amendments to certain sections of the Unified Development Ordinance (UDO) in order to increase the amount of Resource Conservation Area (RCA) required for single-family and townhome developments south and west of NC 540 and to provide an automatic reduction in RCA with installation of solar panels. The proposal would exempt projects that provide a minimum amount of affordable housing.

Background:
Currently, the UDO requires single-family and townhome developments located south and west of NC 540 to provide buffers and RCA equal to or greater than 30% of the gross site acreage. Sec. 2.3.4 *Planned Development Districts* provides that Town Council may reduce the amount of RCA required up to 10% in exchange for the installation of solar photovoltaic systems or geothermal systems on a certain percentage of the lots or energy efficiency standards that exceed minimum Building Code requirements. For reference, that RCA reduction option was added to the UDO in July 2020 at the same time that the RCA requirement south and west of NC 540 was increased from 25% to 30%. A comparison of RCA requirements (or comparable ordinance provisions) from other towns in the Triangle is attached to this report.

Proposed amendments:
- For single-family and townhome developments located south and west of NC 540, increase the required amount of buffers and RCA from 30% to 50%;
- Provide for an automatic 1% reduction in required RCA for every 1% of homes built with a solar photovoltaic system installed with a maximum reduction of 20%; and
- Provide an automatic exemption from the increase with the provision of a certain amount of affordable housing. The number of affordable units and affordability level will need to be determined. Discussion focused on using the same requirements from the Affordable Housing Policy that qualifies a development to get reduced fees which is at least 20% of the housing units being affordable to households earning no more than 60% of the Area Median Income (AMI) for the Raleigh, NC Metropolitan Statistical Area (MSA).

March 2023 Planning Committee meeting discussion summary:
The Planning Committee reviewed this at their March 2, 2023 meeting at the request of Council Member Mahaffey and were not unanimous in the decision to bring forward the amendment as requested. Staff was asked to request direction from the Town Council on whether to proceed with the proposed amendments through Planning Board and a public hearing at Town Council.

The discussion at the March 2, 2023 Planning Committee meeting included the following points about the proposal:
- Potential to increase cost of housing both by requiring the installation of solar and possibly reducing the lot yield for new development.
- Does not reduce demand for housing and may lead to the desire to develop more land or a shift to apartments/condos.
- May trigger further changes to state law.

Existing Ordinances and Policies:

- Staff research has found other incentives/exemptions based on affordability include the following:
  - In order to utilize the Affordable Housing Zoning Incentive Policy to reduce RCA by up to 10%, a development must provide at least 5% of the units as affordable with the AMI being 100% for rental and up to 135% for ownership. The affordability period varies for rental, but must be at least 20 years for ownership.
  - The UDO exempts multi-family developments with rents that are affordable to a household with an annual income that is not greater than 80% of the AMI for the Raleigh, NC MSA from the requirement to provide EV-Ready and EV Charing Spaces.

Resource Conservation Area Requirement Comparison - March 2023

RCA/OPEN SPACE CRITERIA	Apex	Durham	Morrisville	Wake Forest	Wake County	Rolesville	Garner	Raleigh	Holly Springs	Knightdale	Wendell
RCA or equivalent required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Conservation subdivision special %		50%						50%			
Residential RCA %	10-30%	3-18%	5-10%	5-15%		10-15%	10%*	20%	15-30%		
Non-residential/ mixed use RCA %	10-25%	3-18%	5-10%	25%**		5-15%			1-15%		
Watershed %					25%						
Non-watershed %					10%						
Tree preservation in addition to RCA			15-20%***				18-20%*				
Recreation as open space	Public- Separate req.; Private- 50% counts	1/3 of %		Separate req.			1/4 of %	1/3 of %	0-5% of %	Public - 100%	Public - 100%

* 25-27% average for RCA + tree preservation in residential districts

** Institutional Campus District only

*** Per local legislation, tree preservation is not required for single-family detached; there is some ability to swap common open space for tree preservation

No response from Cary, Fuquay-Varina, or Zebulon

Most exempt downtown areas and rural density areas. Apex exempts developments with a density of 2 units/acre and less from RCA requirements. Apex also exempts the Small Town Character Overlay District from RCA and landscape buffer requirements; riparian buffers still apply.

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CLOSED SESSION

Meeting Date: September 26, 2023

Item Details

Presenter(s): Jacques K. Gilbert, Mayor

Department(s): Governing Body

Requested Motion

Possible motion to enter into closed session pursuant to NCGS § 143-318.11(a)(6) to consider a personnel matter.

Approval Recommended?

N/A

Item Details

NCGS § 143-318.11(a)(6)

"To consider the qualifications, competence, performance, character, fitness, conditions of appointment, or conditions of initial employment of an individual public officer or employee or prospective public officer or employee; or to hear or investigate a complaint, charge, or grievance by or against an individual public officer or employee"

Attachments

- N/A

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CLOSED SESSION

Meeting Date: September 12, 2023

Item Details

Presenter(s): Allen Coleman, Town Clerk

Department(s): Town Clerk's Office

Requested Motion

Possible motion to enter into closed session pursuant to NCGS § 143-318.11(a)(6) to consider a personnel matter.

Approval Recommended?

N/A

Item Details

NCGS § 143-318.11(a)(6)

"To consider the qualifications, competence, performance, character, fitness, conditions of appointment, or conditions of initial employment of an individual public officer or employee or prospective public officer or employee; or to hear or investigate a complaint, charge, or grievance by or against an individual public officer or employee"

Attachments

- N/A