STATEMENT OF TOWN COUNCIL AND ORDINANCE AMENDING THE OFFICIAL ZONING DISTRICT MAP OF THE TOWN OF APEX TO CHANGE THE ZONING OF APPROXIMATELY 23.09 ACRES LOCATED AT 0 PRINCE DEAD END RD; 0 TECHNOLOGY DR; 3125 & 3137 VERIDEA PKWY; 0, 1714, & 1860 E. WILLIAMS ST. FROM RURAL RESIDENTIAL (RR), LIGHT INDUSTRIAL (LI), AND RESIDENTIAL AGRICULTURAL (RA) TO SUSTAINABLE DEVELOPMENT-CONDITIONAL ZONING (SD-CZ) FOR VERIDEA

#26CZ10

WHEREAS, RXR LEN Apex Owner, LLC/ Edward Ritenour owner/applicant (the "Applicant"), submitted a completed application for a conditional zoning on the 3rd day of August 2026 (the "Application"). The proposed conditional zoning is designated #26CZ10;

WHEREAS, the Planning Director for the Town of Apex, Dianne Khin, caused proper notice to be given (by publication and posting) of a public hearing on #26CZ10 before the Planning Board on the 12th day of October 2026;

WHEREAS, the Apex Planning Board held a public hearing on the 12th day of October 2026, gathered facts, received public comments and formulated a recommendation regarding the application for conditional zoning #26CZ10. A motion was made by the Apex Planning Board to recommend approval; the motion passed unanimously for the application for #26CZ10;

WHEREAS, pursuant to N.C.G.S. §160D-601 and Sec. 2.2.11.E of the Unified Development Ordinance, the Planning Director caused proper notice to be given (by publication and posting), of a public hearing on #26CZ10 before the Apex Town Council on the 27th day of October 2026;

WHEREAS, the Apex Town Council held a public hearing on the 27th day of October 2026. Bruce Venable, Planner III, presented the Planning Board's recommendation at the public hearing;

WHEREAS, all persons who desired to present information relevant to the application for #26CZ10 were allowed to present evidence at the public hearing before the Apex Town Council. No one who wanted to speak was turned away;

WHEREAS, the Apex Town Council finds that the approval of the rezoning is consistent with the 2045 Land Use Plan and other adopted plans in that: The 2045 Land Use Map designates this area as Regional Mixed Use: Medium Density Residential/High Density Residential/Office Employment/Commercial Services/Industrial Employment. This designation on the 2045 Land Use Map includes the zoning district Sustainable Development-Conditional Zoning (SD-CZ) and the Apex Town Council has further considered that the proposed rezoning to Sustainable Development-Conditional Zoning (SD-CZ) will maintain the character and appearance of the area and provide the flexibility to accommodate the growth in population, economy, and infrastructure consistent with that contemplated by the 2045 Land Use Map;

WHEREAS the Apex Town Council finds that approval of the rezoning is reasonable and in the public interest because it will encourage more efficient and compatible development of the property, provide for the same development standards as applicable to the undeveloped adjacent properties, and allow for uses that will generate jobs and increase the tax base.

WHEREAS, the Apex Town Council by a vote of 5 to 0 approved Application #26CZ10 rezoning the subject tract located at at 0 Prince Dead End Rd; 0 Technology Dr; 3125 & 3137 Veridea Pkwy; 0, 1714, & 1860 E. Williams St. from Rural Residential (RR), Light Industrial (LI), and Residential Agricultural (RA) to Sustainable Development-Conditional Zoning (SD-CZ) for Veridea.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF APEX

Section 1: The lands that are the subject of the Ordinance are those certain lands described in Attachment "A" – Legal Description which is incorporated herein by reference, and said lands are hereafter referred to as the "Rezoned Lands."

Ordinance Amending the Official Zoning District Map #26CZ03

Section 2: The Town of Apex Unified Development Ordinance, including the Town of Apex North Carolina Official Zoning District Map which is a part of said Ordinance, is hereby amended by changing the zoning classification of the "Rezoned Lands" from Rural Residential (RR), Light Industrial (LI), and Residential Agricultural (RA) to Sustainable Development-Conditional Zoning (SD-CZ) for Veridea, subject to the conditions stated herein.

Section 3: The Planning Director is hereby authorized and directed to cause the said Official Zoning District Map for the Town of Apex, North Carolina, to be physically revised and amended to reflect the zoning changes ordained by this Ordinance.

Section 4: The "Rezoned Lands" are subject to the conditions in Attachment "B" Veridea SD Plan which are imposed as part of this rezoning, Attachment "C" Veridea Environmental Enhancement Plan, and Attachment "D" Veridea Pattern Book.

Section 5: The "Rezoned Lands" shall be perpetually bound to the conditions imposed including the uses authorized, unless subsequently changed or amended as provided for in the Unified Development Ordinance. Site plans for any development to be made pursuant to this amendment to the Official Zoning District Map shall be submitted for site plan approval as provided for in the Unified Development Ordinance.

Section 6: This Ordinance shall be in full force and effect from and after its adoption.

Motion by Council Member_____

Seconded by Council Member_____

With ____ Council Member(s) voting "aye."

With ____ Council Member(s) voting "no."

This the _____ day of _____ 2026.

TOWN OF APEX

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Allen Coleman, CMC, NCCCC
Town Clerk

APPROVED AS TO FORM:

_____
Interim Town Attorney

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by Roger W. and Glenda K. Bushee, as described in Deed Book 4691, page 197 less and except that land described in Deed Book 16358, page 754, being further shown on Book of Maps 1989, page 252 in the Wake County Register of Deeds, being more particularly described as:

Beginning at an existing concrete monument on the eastern right of way line of Veridea Parkway, a variable width public right of way, as described in Deed Book 16358, page 74, being also on the southern line of lands now or formerly owned by William Junior Fields and wife, Catherine Adams Fields as described in Deed Book 1876, page 667 and Deed Book 3138, page 93 and further shown on Book of Maps 1983, page 625, the point of beginning; thence from the beginning and with said common line, South 80°03'12" East a distance of 262.84 feet to a point being referenced by an existing iron pipe 0.80 feet east of the corner, being a southwest corner of lands now or formerly owned by RXR Len Apex Owner LLC, as described in Deed Book 19263, page 2335 and further shown on Book of Maps 2025, page 2368; thence with said common line, South 80°09'19" East a distance of 185.05 feet to an existing iron pipe, being a western corner of lands now or formerly owned by RXR Len Apex Owner LLC, as described in Deed Book 19737, page 1859 and further shown on Book of Maps 1998, page 1052; thence with said common line, South 09°39'36" West a distance of 270.00 feet to an existing iron pipe; thence North 80°06'44" West a distance of 60.00 feet to an existing iron pipe, being a northeast corner of lands now or formerly owned by RXR Len Apex Owner LLC, as described in Deed Book 19263, page 2335 and further shown on Book of Maps 2025, page 2368; thence with said common line, North 80°05'31" West a distance of 386.35 feet to a set iron pipe on the eastern right of way line of Veridea Parkway, a variable width public right of way as described in Deed Book 16358, page 754; thence with the eastern right of way line of Veridea Parkway, North 09°19'59" East a distance of 8.02 feet to a set iron pipe; thence North 09°19'59" East a distance of 10.18 feet to a point; thence North 09°19'59" East a distance of 1.17 feet to a point, passing through an existing rebar with cap 0.41 feet before the end of the line; thence North 09°19'59" East a distance of 250.63 feet to the point and place of beginning; containing an area of 120,679 square feet or 2.77 acres.

The property constitutes the same property described in that deed dated and recorded in the Office of the Register of Deeds Wake County, North Carolina, in Deed Book 4691, page 197 less and except that property conveyed in Deed Book 16358, page 754.

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by William Junior Fields and wife, Catherine Adams Fields, as described in Deed Book 1876, page 667 and Deed Book 3138, page 93, being further shown on Book of Maps 1983, page 625 in the Wake County Register of Deeds, being more particularly described as:

Beginning at a point on the eastern right of way line of Veridea Parkway, a 60 foot public right of way as shown on Book of Maps 2003, page 1756, being the southwest corner of lands now or formerly owned by Whitehouse Assets Management, LLC, as described in Deed Book 17143, page 2248, the point of beginning; thence from the beginning and with said common line, South 80°04'37" East a distance of 299.95 feet to a point on the western line of lands now or formerly owned by RXR Len Apex Owner LLC, as described in Deed Book 19263, page 2335 and further shown on Book of Maps 2025, page 2368, being referenced by an existing iron pipe 1.08 feet east of the corner, passing through an existing iron pipe 299.28 feet before the end of the line; thence with said common line, South 09°58'01" West a distance of 200.11 feet to a point on the northern line of lands now or formerly owned by Roger W. and Glenda K. Bushee, as described in Deed Book 4691, page 197 and Deed Book 16358, page 754, being further shown on Book of Maps 1989, page 252, being referenced by an existing iron pipe 0.80 feet east of the corner; thence with said common line, North 80°03'12" West a distance of 299.92 feet to a point on the eastern right of way line of Veridea Parkway, a 60 foot public right of way as shown on Book of Maps 2003, page 1756, being referenced by an existing concrete monument 0.89 feet southeast of the corner, passing through an existing concrete monument 37.08 feet before the end of the line; thence with the eastern right of way line of Veridea Parkway, North 09°57'22" East a distance of 199.98 feet to the point and place of beginning, containing an area of 60,000 square feet or 1.38 acres.

The property constitutes the same property described in those deeds recorded in the Office of the Register of Deeds Wake County, North Carolina, in Deed Book 1876, page 667 and in Deed Book 3138, page 93.

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 20009, page 1511 in the Wake County Register of Deeds, and also being described as:

Beginning at an existing iron pipe at the northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, being on the southern right of way line of Technology Drive, a variable width public right of way as shown on Highway Map 3, page 174, being referenced by an existing concrete monument 2.11' northeast of the corner, the point of beginning; thence from the beginning and with the southern right of way line of Technology Drive, North 88°53'52" East a distance of 168.81 feet to an existing iron pipe; thence with a curve to the left a radius of 411.98 feet, an arc length of 314.04 feet, a chord bearing of North 67°03'44" East, a chord length of 306.49 feet to an existing iron pipe; thence North 44°56'53" East a distance of 463.60 feet to an existing concrete monument; thence North 45°12'15" East a distance of 156.84 feet to an existing iron pipe; thence South 45°56'03" East a distance of 35.56 feet to an existing concrete monument; thence with a curve to the left a radius of 5971.12 feet, an arc length of 405.86 feet, a chord bearing of North 43°02'27" East, a chord length of 405.79 feet to an existing iron pipe, being the southwest corner of lands now or formerly owned by Apex-Williams Street Holdings, LLC, as described in Deed Book 20180, page 763; thence leaving the southern right of way line of Technology Drive and with said common line, with a curve to the right a radius of 372.69 feet, an arc length of 59.94 feet, a chord bearing of North 67°34'41" East, a chord length of 59.88 feet to an existing iron pipe, being the northwest corner of lands now or formerly owned by Apex-Williams Street Holdings, LLC, as described in Deed Book 16421, page 1964; thence with said common line, South 02°45'29" West a distance of 234.46 feet to an existing iron pipe with a pinched top, being the northwest corner of a 12-foot roadway easement, as shown on Book of Maps 1989, page 1393, being referenced by a bent existing iron pipe 0.22' west of the corner; thence with the western line of said easement, South 01°26'47" West a distance of 12.22 feet to an existing iron pipe with a pinched top, being the northwest corner of lands now or formerly owned by Lee Chu Yang, as described in Deed Book 19413, page 367; thence with said common line, South 05°19'02" West a distance of 193.34 feet to an existing iron pipe on the western right of way line of N.C. Highway 55, a variable width controlled access right of way, as described in Deed Book 19794, page 1125 and shown on Highway Map 3, page 174; thence with the western right of way line of N.C. Highway 55, South 31°41'56" West a distance of 230.95 feet to an existing iron pipe; thence South 58°18'04" East a distance of 23.82 feet to an existing iron pipe; thence South 31°17'46" West a distance of 469.83 feet to an existing right of way disk; thence South 53°46'53" West a distance of 156.49 feet to an existing right of way disk at the intersection of the western right of way line of N.C. Highway 55 and the northern right of

way line of N.C. Highway 540, a variable width controlled access right of way as shown on Highway Map 4, page 241; thence with the northern right of way line of N.C. Highway 540, North 80°00'41" West a distance of 90.23 feet to an existing right of way disk; thence with a curve to the left a radius of 865.00 feet, an arc length of 475.17 feet, a chord bearing of South 84°16'29" West, a chord length of 469.21 feet to an existing right of way disk; thence South 61°42'52" West a distance of 236.34 feet to an existing iron pipe, being the southeast corner of lands now or formerly owned by Greenway Waste Solutions of Apex, LLC, as described in Deed Book 9099, page 1045; thence leaving the northern right of way line of N.C. Highway 540 and with said common line, North 02°16'38" East a distance of 429.35 feet to the point and place of beginning, containing an area of 613,741 square feet or 14.09 acres.

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by Edward C. Ritenour, Jr., as described in Deed Book 6453, page 736 (less and except land conveyed to the North Carolina Department of Transportation recorded in Deed Book 20006, page 1415), being more particularly described as:

Beginning at a set iron pipe on the western right of way of line of N.C. Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630, being a southern corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403 and further shown as New Tract 5 on Book of Maps 2024, page 630, the point of beginning; thence from the beginning, leaving the western right of way of N.C. Highway 55 and with said common line, North 86°24'46" West a distance of 46.54 feet to an existing iron pipe; thence North 01°23'44" East a distance of 198.75 feet to a point being referenced by an existing iron pipe 0.34 feet west of the corner, being the southwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 20197, page 275; thence with said common line, South 87°39'31" East a distance of 89.79 feet to a point on the western right of way line of N.C. Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630; thence with the western right of way line of N.C. Highway 55, South 36°36'03" West a distance of 7.37 feet to a point; thence South 84°36'46" West a distance of 25.00 feet to a point; thence South 35°34'06" West a distance of 35.09 feet to a point; thence South 58°31'02" East a distance of 85.50 feet to a point; thence South 31°28'58" West a distance of 136.58 feet to the point and place of beginning, containing an area of 15,130 square feet or 0.35 acres.

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 20197, page 275 and further shown on Book of Maps 1948, page 18 in the Wake County Register of Deeds, being more particularly described as:

Commencing from an existing rebar with cap, having local site coordinates, Northing: 707,827.75 feet and Easting: 2,048,980.82 feet; thence North 20°17'43" West a distance of 172.11 feet to an existing iron pipe; thence North 01°23'44" East a distance of 198.75 feet to a point, being referenced by an existing iron pipe 0.34 feet west of the corner, the point of beginning; thence from the beginning, North 01°23'44" East a distance of 100.12 feet to a point, being referenced by an existing iron pipe 1.09 feet west of the corner; thence South 87°27'13" East a distance of 159.24 feet to a point; thence South 36°36'03" West a distance of 120.43 feet to a point; thence North 87°39'31" West a distance of 89.79 feet to the point and place of beginning; containing an area of 12,438 square feet or 0.28 acres.

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 20197, page 275 and further shown on Book of Maps 1948, page 18 in the Wake County Register of Deeds, being more particularly described as:

Commencing from an existing rebar with cap, having local site coordinates, Northing: 707,827.75 feet and Easting: 2,048,980.82 feet; thence North 20°17'43" West a distance of 172.11 feet to an existing iron pipe; thence North 01°23'44" East a distance of 198.75 feet to a point, being referenced by an existing iron pipe 0.34 feet west of the corner; thence North 01°23'44" East a distance of 100.12 feet to a point, being referenced by an existing iron pipe 1.09 feet west of the corner, the point of beginning; thence from the beginning, North 01°23'44" East a distance of 48.92 feet to an existing iron pipe; thence South 87°21'16" East a distance of 193.06 feet to a point; thence South 36°36'03" West a distance of 58.63 feet to a point; thence North 87°27'13" West a distance of 159.24 feet to the point and place of beginning; containing an area of 8,589 square feet or 0.20 acres.

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by David E. Page, Heirs, as described in Deed Book 1107, page 549 in the Wake County Register of Deeds, being more particularly described as:

Commencing from a set iron pipe on the western right of way line of N.C. Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630, being the northeast corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19821, page 1026; thence leaving the western right of way line of N.C. Highway 55 and with said common line, South 89°36'58" West a distance of 166.91 feet to an existing iron pipe, the point of beginning; thence from the beginning and continuing with said common line, South 02°22'35" East a distance of 99.98 feet to a set iron pipe on the northern line of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19789, page 32; thence with said common line, South 89°41'49" West a distance of 235.12 feet to a set iron pipe, being an eastern corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403 and further shown as New Tract 4 on Book of Maps 2024, page 630; thence with said common line, North 05°37'02" West a distance of 100.00 feet to a set iron pipe; thence North 89°36'58" East a distance of 240.77 feet to the point and place of beginning, containing an area of 23,734 square feet or 0.54 acres.

26CZ10 Legal Descriptions Attachment "A"

Being all of the land now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 20095, page 1779 and further shown as Tract 3 on Book of Maps 2015, page 14 in the Wake County Register of Deeds; being more particularly described as:

Beginning at an existing iron pipe, being the northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19947, page 487 and further shown as Tract 2 on Book of Maps 1978, page 731 in the Wake County Register of Deeds, being also on the southern right of way line of U.S. Highway 1, a variable width controlled access right of way as shown on Book of Maps 2010, page 282, the point of beginning; thence from the beginning and with the southern right of way line of U.S. Highway 1, North 58°38'27" East a distance of 637.23 feet to a point in the centerline of a creek, being referenced by an existing iron pipe 15.00 feet before the end of the line; thence leaving the southern right of way line of U.S. Highway 1 and with the centerline of the creek, South 62°56'30" East a distance of 7.57 feet to a point; thence South 51°14'55" East a distance of 3.81 feet to a point; thence South 41°45'21" East a distance of 20.08 feet to a point; thence South 45°39'44" East a distance of 19.48 feet to a point; thence South 21°07'42" East a distance of 15.79 feet to a point; thence South 35°28'59" East a distance of 4.60 feet to a point; thence South 53°54'09" East a distance of 13.56 feet to a point; thence South 54°15'40" East a distance of 12.15 feet to a point; thence South 46°16'38" East a distance of 3.99 feet to a point; thence South 34°32'07" East a distance of 23.63 feet to a point; thence South 33°00'12" East a distance of 10.57 feet to a point; thence South 68°34'25" East a distance of 14.16 feet to a point; thence South 46°51'32" East a distance of 46.39 feet to a point; thence South 42°45'23" East a distance of 21.99 feet to a point; thence South 45°05'03" East a distance of 30.70 feet to a point; thence South 44°29'49" East a distance of 26.49 feet to a point; thence South 48°46'53" East a distance of 32.44 feet to a point; thence South 33°44'54" East a distance of 28.72 feet to a point; thence South 49°58'16" East a distance of 42.31 feet to a point; thence South 47°29'35" East a distance of 50.03 feet to a point; thence South 48°30'55" East a distance of 39.38 feet to a point; thence South 33°54'17" East a distance of 27.24 feet to a point, being the northeast corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19947, page 487 and further shown as a portion of Tract 3 on Book of Maps 1978, page 731; thence leaving the centerline of the creek and with said common line, North 88°58'01" West a distance of 584.55 feet to an existing iron pipe in the center of Prince Dead End Road, a 60 foot public right of way as shown on Book of Maps 1988, page 283, being referenced by an existing iron pipe 3.69 feet northeast of the corner, passing through an existing iron pipe 570.12 feet before the end of the line; thence leaving the center of Prince Dead End Road and continuing with said common line, North 88°58'01" West a

distance of 304.56 feet to the point and place of beginning; containing an area of 151,718 square feet or 3.48 acres.

Attachment "B"

Ordinance Amending the Official Zoning District Map #25CZ18

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF APEX

Section 1: The lands that are the subject of the Ordinance are those certain lands described in Attachment "A" – Legal Description which is incorporated herein by reference, and said lands are hereafter referred to as the "Rezoned Lands."

Section 2: The Town of Apex Unified Development Ordinance, including the Town of Apex North Carolina Official Zoning District Map which is a part of said Ordinance, is hereby amended by changing the zoning classification of the "Rezoned Lands" from Sustainable Development-Conditional Zoning (SD-CZ #09CZ07, #23CZ01, #24CZ01, #25CZ08, #25CZ15) to Sustainable Development-Conditional Zoning (SD-CZ) for Veridea, subject to the conditions stated herein.

Section 3: The Planning Director is hereby authorized and directed to cause the said Official Zoning District Map for the Town of Apex, North Carolina, to be physically revised and amended to reflect the zoning changes ordained by this Ordinance.

Section 4: The "Rezoned Lands" are subject to the conditions in Attachment "B" Veridea SD Plan which are imposed as part of this rezoning, Attachment "C" Veridea Environmental Enhancement Plan, and Attachment "D" Veridea Pattern Book.

Section 5: The "Rezoned Lands" shall be perpetually bound to the conditions imposed including the uses authorized, unless subsequently changed or amended as provided for in the Unified Development Ordinance. Site plans for any development to be made pursuant to this amendment to the Official Zoning District Map shall be submitted for site plan approval as provided for in the Unified Development Ordinance.

Section 6: This Ordinance shall be in full force and effect from and after its adoption.

Motion by Council Member McCaffrey

Seconded by Council Member Gray

With 5 Council Member(s) voting "aye."

With 0 Council Member(s) voting "no."

This the 13th day of January 2026.

TOWN OF APEX

Jacques K. Gilbert
Mayor

APEX 1873 NORTH CAROLINA

ATTEST:

Allen Coleman, CMC, NCCCC
Town Clerk

APPROVED AS TO FORM:

Town Attorney

Attachment A

PIN: 0740191376, 0741207566, 0730977087, 0730996270, 0740180091, 0740180331, 0740287376, 0740293940, 0740360895, 0740289979, 0740389302, 0740586619, 0740783479, 0740888498, 0740992174, 0741614057, 0740489140, 0741203157

Being a portion of the lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, Page 2403; RXR Len Apex Owner, LLC, as described in Deed Book 19297, Page 1692; RXR Len Apex Owner LLC, as described in Deed Book 19947, Page 487; RXR Len Apex Owner, LLC, as described in Deed Book 19263, Page 2335 in the Wake County Register of Deeds; being more particularly described as:

Beginning at a rebar with cap on the northern right of way line of N.C. Highway 540, a variable width controlled access right of way as described in Deed Book 15539, page 1855, being also the southeast corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403, the point of beginning; thence from the beginning and leaving the northern right of way line of NC Highway 540 and with said common line, North 00°14'49" West a distance of 667.80 feet to a point; thence South 87°37'02" West a distance of 180.32 feet to a point; thence North 01°55'47" West a distance of 1400.56 feet to a point; thence South 84°14'41" West a distance of 440.42 feet to a point on the eastern right of way line of Veridea Parkway, a variable width public right of way, as described in Deed Book 16421, page 2112 and Deed Book 16326, page 2125; thence with the eastern right of way line of Veridea Parkway, North 09°16'52" East a distance of 6.98 feet to a point; thence North 09°16'52" East a distance of 31.69 feet to a point; thence North 09°28'48" East a distance of 166.90 feet to a point; thence North 09°28'48" East a distance of 13.32 feet to a point; thence North 09°28'48" East a distance of 17.71 feet to a point; thence North 09°28'48" East a distance of 55.05 feet to a point on the southern line of lands now or formerly owned by Roger W. and Glenda K. Bushee, as described in Deed Book 4691, page 197; thence with said common line, South 80° 05'31" East a distance of 386.35 feet to an existing iron pipe, being a southwestern corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19737, page 1859; thence with said common line, South 09°53'16" West a distance of 120.00 feet to an existing iron pipe; thence North 89°42'24" East a distance of 427.65 feet to an existing iron pipe; thence North 28°17'19" East a distance of 258.03 feet to a point; thence North 25°29'27" West a distance of 398.53 feet to a point; thence South 85°22'14" West a distance of 220.54 feet to a point; thence South 09°39'36" West a distance of 200.09 feet to a point, being the northeast corner of lands now or formerly owned by Roger W. and Glenda K. Bushee, as described in Deed Book 4691, page 197; thence with said common line, North 80°09'19" West a distance of 185.05 feet to a point, being the southeast corner of lands now or formerly owned by W J and Catherin A Fields, as described in Deed Book 3138, page 93; thence with said common line and the common line of others, North 09°58'01" East a distance of 550.14 feet to a point, being the southeast corner

of lands now or formerly owned by Whitehouse Assets Management, LLC, as described in Deed Book 17143, page 2248; thence with said common line, North 24°25'22" East a distance of 442.30 feet to a point; thence South 69°45'18" West a distance of 509.98 feet to an existing rebar in the center of Veridea Parkway, a 60’ public right of way as shown on Book of Maps 2003, page 1756, passing through an existing iron pipe on the eastern right of way line of Veridea Parkway 34.45 feet before the end of the line; thence with the center of Veridea Parkway, South 09°52'33" West a distance of 171.70 feet to a point; thence South 09°57'23" West a distance of 550.24 feet to a point; thence South 09°26'46" West a distance of 21.55 feet to a point; thence leaving the center of Veridea Parkway, North 89°10'45" West a distance of 68.12 feet to a point on the western right of way line of Veridea Parkway, a variable width public right of way as described in Deed Book 16421, page 2112 and Deed Book 16326, page 2125, passing through an existing iron pipe 38.57 feet before the end of the line; thence with the western right of way line of Veridea Parkway, South 09°28'47" West a distance of 60.77 feet to a point; thence South 09°28'45" West a distance of 430.91 feet to an existing concrete monument; thence South 09°46'52" West a distance of 74.87 feet to an existing concrete monument, being the northeast corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence leaving the western right of way line of Veridea Parkway, and with said common line, North 89°09'45" West a distance of 1110.26 feet to an existing iron pipe; thence South 02°26'42" West a distance of 1505.96 feet to a point on the northern right of way line of NC Highway 540, a variable width controlled access right of way as described in Deed Book 15539, page 1837; thence with the northern right of way line of NC Highway 540, with a curve to the right a radius of 4035.00 feet, an arc length of 857.09 feet, a chord bearing of North 53°42'27" West, a chord length of 855.48 feet to an existing rebar; thence with a curve to the right a radius of 4054.26 feet, an arc length of 326.65 feet, a chord bearing of North 45°18'10" West, a chord length of 326.56 feet to an existing rebar with cap; thence North 36°43'15" West a distance of 102.76 feet to an existing rebar with cap; thence North 35°20'20" West a distance of 237.13 feet to an existing rebar with cap; thence North 07°47'12" West a distance of 131.08 feet to an existing rebar with cap; thence North 00°34'29" West a distance of 436.11 feet to an existing rebar with cap; thence North 12°52'53" East a distance of 565.14 feet to an existing rebar with cap; thence North 05°57'15" East a distance of 356.74 feet to an existing rebar with cap; thence North 15°26'08" East a distance of 134.33 feet to a point; thence North 15°26'08" East a distance of 200.01 feet to an existing rebar with cap; thence North 28°28'53" East a distance of 237.21 feet to an existing rebar with cap; thence North 45°14'54" East a distance of 75.20 feet to an existing rebar with cap; thence North 42°51'55" East a distance of 241.20 feet to an existing rebar with cap, transitioning to the southern right of way line of US Highway 1, a variable width controlled access right of way, as described in Deed Book 14140, page 979; thence with the southern right of way line of US Highway 1, North 50°43'55" East a distance of 160.95 feet to an existing rebar with cap; thence

North 58°37'05" East a distance of 364.36 feet to a point, being the southwest corner of lands now or formerly owned by The Young Men's Christian Association of the Triangle Area, Inc, as described in Deed Book 17017, page 2427, passing through an existing concrete monument 86.12 feet before the end of the line and an existing iron pipe 3.87 feet before the end of the line; thence leaving the southern right of way line of US Highway 1 and with said common line, North 87°38'44" East a distance of 265.82 feet to a point, passing through an existing iron pipe 259.41 feet before the end of the line; thence North 00°27'33" West a distance of 149.91 feet to a point on the southern right of way line of US Highway 1, a variable width controlled access right of way, as described in Deed Book 14140, page 979; thence with the southern right of way line of U.S. Highway 1, North 58°41'20" East a distance of 1668.68 feet to a point in the center of Veridea Parkway, a 60 foot public right of way as shown on Book of Maps 2003, page 1756; thence continuing with the southern right of way line of US Hihgway 1, North 58°41'20" East a distance of 31.03 feet to an existing concrete monument on the eastern right of way line of Veridea Parkway; thence continuing with the southern right of way line of US Highway 1, North 58°39'55" East a distance of 576.45 feet to a point, being a western corner of lands now or formerly owned by EBT Farms, LLC, as shown on Book of Maps 2015, page 14, passing through an existing iron pipe 3.61 feet before the end of the line; thence with said common line, South 88°58'01" East a distance of 304.56 feet to a point in the center of Prince Dead End Road, a 60 foot public right of way as shown on Book of Maps 1988, page 283, being referenced by an existing iron pipe 3.69 feet northeast of the corner; thence leaving the center of Prince Dead End Road and continuing with said common line, South 88°58'01" East a distance of 584.55 feet to a point, being a western corner of lands now or formerly owned by the Town of Apex, as shown on Book of Maps 1989, page 59, passing through an existing iron pipe 14.43 feet before the end of the line; thence with said common line, South 23°14'08" East a distance of 315.07 feet to an existing bent iron pipe on a northern line of lands now or formerly owned by Wildbird LLC, as shown on Book of Maps 1985, page 64; thence with said common line, North 89°17'57" West a distance of 82.50 feet to an existing iron pipe; thence South 00°32'06" West a distance of 760.78 feet to an existing iron pipe, passing through an existing iron pipe 546.06 feet before the end of the line; thence South 00°33'48" West a distance of 1301.27 feet to an existing iron stake, passing through existing iron pipes 776.99 feet and 741.67 feet before the end of the line; thence South 88°56'50" East a distance of 1524.31 feet to an existing iron pipe; thence North 42°37'27" East a distance of 84.50 feet to a point; thence South 87°51'02" East a distance of 208.48 feet to an existing iron pipe, passing through an existing iron pipe 155.64 feet before the end of the line; thence North 00°58'38" East a distance of 734.06 feet to an existing iron pipe, passing through an existing iron pipe 31.40 feet before the end of the line; thence North 00°58'38" East a distance of 2549.03 feet to an existing iron pipe, passing through an existing iron pipe 2465.38 feet before the end of the line; thence South 89°46'05" West a distance of 25.90 feet to an existing iron pipe, being a southeast corner of lands now or formerly owned by

Town of Apex, as shown on Book of Maps 1989, page 59; thence with said common line, North 01°31'12" East a distance of 572.91 feet to an existing iron pipe; thence North 01°28'31" East a distance of 119.73 feet to an existing iron pipe; thence North 01°30'44" East a distance of 41.12 feet to an existing iron pipe on the southern right of way line of US Highway 1, a variable width controlled access right of way as shown on Book of Maps 2024, page 630; thence with said common line, North 58°51'35" East a distance of 406.60 feet to an existing concrete monument; thence North 58°00'23" East a distance of 434.93 feet to an existing iron pipe; thence with a curve to the left a radius of 5860.99 feet, an arc length of 1031.97 feet, a chord bearing of North 51°39'15" East, a chord length of 1030.63 feet to an existing iron pipe; thence South 41°41'54" East a distance of 29.56 feet to an existing iron pipe; thence North 46°57'49" East a distance of 79.93 feet to a point in the centerline of the creek, passing through an existing iron pipe 10.00 feet before the end of the line; thence with the centerline of the creek, South 08°18'39" West a distance of 74.71 feet to a point; thence South 03°57'01" East a distance of 106.42 feet to a point on the northern line of lands now or formerly owned by Justin Stanley, as described in Deed Book 17473, page 2663; thence leaving the centerline of the creek and with said common line, South 58°19'32" West a distance of 25.09 feet to an existing concrete monument, passing through an existing iron pipe 15.09 feet before the end of the line; thence South 31°28'08" East a distance of 99.98 feet to an existing iron pipe on a northern line of lands now or formerly owned by Madison Apex Owner, LLC, as described in Deed Book 18329, page 2014; thence with said common line, South 58°37'43" West a distance of 311.61 feet to an existing iron pipe; thence South 05°32'28" West a distance of 311.05 feet to an existing iron pipe; thence South 18°18'17" East a distance of 266.26 feet to an existing iron pipe; thence South 58°02'56" East a distance of 253.73 feet to an existing iron pipe; thence South 24°13'34" East a distance of 1064.47 feet to an existing iron pipe; thence North 51°40'44" East a distance of 610.52 feet to an existing iron pipe, being a western corner of lands now or formerly owned by FTPA Storage Apex, LLC, as described in Deed Book 16283, page 140; thence with said common line, South 29°10'43" East a distance of 276.67 feet to an existing iron pipe, being the southwest corner of lands now or formerly owned by Sunil and Sudarshini Shelke, as described in Deed Book 14964, page 1295; thence with said common line, North 89°42'08" East a distance of 414.38 feet to an existing iron pipe, being the northwest corner of lands now or formerly owned by Apex Rent Account, LLC, as described in Deed Book 16018, page 896; thence South 02°52'31" West a distance of 576.07 feet to an existing iron pipe, being a northwest corner of lands now or formerly owned by PPTapex, LLC, as described in Deed Book 16247, page 277; thence with said common line, South 03°02'31" West a distance of 260.47 feet to an existing iron pipe, being the northwest corner of lands now or formerly owned by James Irvin Rigsbee, as described in Deed Book 2176, page 224; thence with said common line, South 03°08'36" West a distance of 288.05 feet to an existing iron pipe; thence South 02°21'58" West a distance of 72.79 feet to an existing axle, being the northwest corner of lands now or formerly owned by Kenan Transport Co., as

described in Deed Book 2003, page 233; thence with said common line, South 02°22'52" West a distance of 365.20 feet to an existing iron pipe, passing through an existing iron pipe 53.41 feet before the end of the line; thence South 89°54'31" East a distance of 270.03 feet to an existing iron pipe; thence South 89°55'44" East a distance of 403.93 feet to an existing iron pipe, being the northwest corner of lands now or formerly owned by David F. and Sharon L Raymer, as described in Deed Book 8712, page 265; thence with said common line, South 04°23'01" East a distance of 445.52 feet to an existing iron pipe, being the northwest corner of lands now or formerly owned by Thompson Gas – Smokies, LLC, as described in Deed Book 15976, page 1140; thence with said common line, South 05°37'02" East a distance of 199.93 feet to an existing iron pipe; thence North 89°21'15" East a distance of 417.22 feet to an existing iron pipe on the western right of way line of NC Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630; thence with the western right of way line of NC Highway 55, with a curve to the right a radius of 5633.75 feet, an arc length of 101.71 feet, a chord bearing of South 04°07'50" East, a chord length of 101.71 feet to an existing iron pipe; thence leaving the western right of way line of NC Highway 55 and with the common line of RXR Len Apex Owner, LLC and others, South 89°36'58" West a distance of 414.74 feet to an existing iron pipe, passing through the western right of way line of NC Highway 55 407.68 feet before the end of the line and an existing iron pipe 240.77 feet before the end of the line; thence South 05°37'02" East a distance of 100.00 feet to an existing iron pipe, being the northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19789, page 32; thence South 17°12'56" East a distance of 140.08 feet to an existing iron pipe; thence South 87°06'10" East a distance of 374.27 feet to an existing iron pipe on the western right of way line of NC Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630, passing through the western right of way line NC Highway 55 9.29 feet before the end of the line; thence with the western right of way line of NC Highway 55, with a curve to the right a radius of 5633.75 feet, an arc length of 100.26 feet, a chord bearing of South 00°30'27" East, a chord length of 100.26 feet to an existing iron pipe; thence South 01°41'54" East a distance of 100.29 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.94 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.94 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.94 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.94 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.94 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.94 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.94 feet to an existing iron pipe; thence South 01°45'44" West a distance of 49.79 feet to an existing iron pipe; thence South 01°45'44" West a distance of 50.00 feet to an existing iron pipe; thence South 01°45'44" West a distance of 50.00 feet to an existing iron pipe; thence South 01°45'44" West a distance of 3.89 feet to a point; thence North 80°39'17" West a distance of 39.57 feet to a point; thence with a curve to the right a radius of 1515.50 feet, an arc length of 73.75 feet, a chord bearing of

South 10°44'22" West, a chord length of 73.75 feet to a point; thence South 50°25'39" West a distance of 72.79 feet to a point; thence South 03°20'53" West a distance of 77.92 feet to a point, being the northeast corner of lands now or formerly owned by NC Department of Transportation, as described in Deed Book 8235, page 1160; thence with said common line, North 86°43'05" West a distance of 16.98 feet to an existing iron pipe; thence South 01°28'00" West a distance of 100.88 feet to an existing iron pipe; thence South 87°17'00" East a distance of 10.63 feet to a point on the western right of way line of NC Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630; thence with the western right of way line of NC Highway 55, South 02°47'00" West a distance of 30.24 feet to a point; thence with a curve to the right a radius of 1525.00 feet, an arc length of 20.91 feet, a chord bearing of South 21°53'09" West, a chord length of 20.91 feet to a point; thence North 87°17'00" West a distance of 2.64 feet to an existing iron pipe; thence South 01°28'00" West a distance of 16.53 feet to a point; thence with a curve to the right a radius of 1525.00 feet, an arc length of 34.27 feet, a chord bearing of South 23°40'23" West, a chord length of 34.27 feet to a point; thence continuing with the northern right of way line of NC Highway 55 and the common line of lands now or formerly owned by NC Department of Transportation, as described in Deed Book 8138, page 1625, North 87°21'16" West a distance of 246.10 feet to an existing iron pipe; thence continuing with said common line and the common line of others, South 01°23'44" West a distance of 347.79 feet to an existing iron pipe; thence South 86°24'46" East a distance of 46.54 feet to a point on the western right of way line of NC Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630; thence with the western right of way line of NC Highway 55, South 31°28'58" West a distance of 41.58 feet to a point on the northern right of way line of Technology Drive, a variable width public right of way as shown on Book of Maps 2008, page 448; thence with the northern right of way line of Technology Drive, South 81°05'32" West a distance of 325.98 feet to an existing iron pipe, passing through an existing iron pipe 125.44 feet before the end of the line; thence South 60°43'09" West a distance of 132.34 feet to an existing iron pipe; thence with a curve to the left a radius of 426.43 feet, an arc length of 181.19 feet, a chord bearing of South 49°06'58" West, a chord length of 179.83 feet to an existing iron pipe; thence South 36°56'38" West a distance of 162.54 feet to an existing iron pipe; thence South 37°44'51" West a distance of 163.20 feet to an existing iron pipe, being the southeast corner of lands now or formerly owned by Margaret Evans Heirs, as shown on Book of Maps 2002, page 165; thence leaving the northern right of way line of Technology Drive and with said common line, North 02°38'53" East a distance of 477.63 feet to an existing iron pipe; thence North 86°17'11" West a distance of 191.04 feet to an existing iron pipe; thence South 02°37'54" West a distance of 192.78 feet to an existing iron pipe; thence South 87°21'03" East a distance of 144.87 feet to an existing iron pipe; thence South 02°38'53" West a distance of 351.16 feet to an existing iron pipe on the northern right of way line of Technology Drive, a variable width public right of way as shown on Book of Maps 2008, page

448; thence with the northern right of way line of Technology Drive, with a curve to the right a radius of 5840.02 feet, an arc length of 578.81 feet, a chord bearing of South 42°11'18" West, a chord length of 578.57 feet to an existing iron pipe; thence South 45°24'35" East a distance of 26.85 feet to an existing iron pipe; thence South 44°12'36" West a distance of 620.76 feet to an existing iron pipe; thence with a curve to the right a radius of 351.98 feet, an arc length of 268.88 feet, a chord bearing of South 67°02'07" West, a chord length of 262.39 feet to an existing iron pipe; thence South 88°52'01" West a distance of 164.86 feet to an existing iron pipe on the eastern line of EMC Corporation, as described in Deed Book 8681, page 1014; thence with said common line, North 02°16'22" East a distance of 50.18 feet to an existing iron pipe; thence North 02°17'00" East a distance of 1402.38 feet to an existing iron pipe; thence North 02°17'00" East a distance of 163.32 feet to an existing iron pipe; thence North 02°11'42" East a distance of 120.99 feet to a point in the centerline of the creek, passing through an existing iron pipe 10.00 feet before the end of the line; thence with the centerline of the creek, North 82°46'29" West a distance of 59.32 feet to a point; thence North 38°01'48" West a distance of 154.60 feet to a point; thence North 84°02'09" West a distance of 86.70 feet to a point; thence South 20°44'56" West a distance of 18.43 feet to a point; thence South 79°18'34" West a distance of 39.77 feet to a point; thence South 13°19'46" East a distance of 38.31 feet to a point; thence South 76°35'49" West a distance of 53.23 feet to a point; thence South 26°54'51" West a distance of 42.90 feet to a point; thence South 33°19'02" East a distance of 29.87 feet to a point; thence South 51°46'22" West a distance of 61.75 feet to a point; thence North 64°34'50" West a distance of 58.31 feet to a point; thence South 29°34'47" West a distance of 47.94 feet to a point; thence South 71°40'28" West a distance of 23.79 feet to a point; thence North 39°32'53" West a distance of 102.73 feet to a point; thence North 69°26'41" West a distance of 124.25 feet to a point; thence South 57°24'05" West a distance of 82.87 feet to a point; thence South 07°43'11" West a distance of 131.15 feet to a point; thence South 83°27'25" West a distance of 147.78 feet to a point; thence South 00°36'20" East a distance of 95.70 feet to a point; thence South 80°37'14" West a distance of 210.03 feet to a point; thence South 21°46'20" West a distance of 110.71 feet to a point; thence South 78°48'03" East a distance of 41.76 feet to a point; thence South 32°29'11" West a distance of 93.04 feet to a point; thence North 66°26'02" West a distance of 45.02 feet to a point; thence South 47°52'32" West a distance of 34.12 feet to a point; thence South 00°28'52" West a distance of 71.12 feet to a point; thence South 79°33'24" West a distance of 96.46 feet to a point; thence North 52°02'42" West a distance of 30.57 feet to a point; thence South 81°23'08" West a distance of 60.05 feet to a point; thence South 41°39'40" West a distance of 186.48 feet to a point; thence South 44°48'01" East a distance of 60.58 feet to a point; thence South 20°16'03" West a distance of 35.02 feet to a point; thence North 76°32'52" West a distance of 126.07 feet to a point; thence South 34°49'57" West a distance of 90.84 feet to a point; thence North 41°34'57" West a distance of 26.79 feet to a point; thence South 44°48'57" West a

distance of 69.31 feet to a point; thence South 28°17'36" East a distance of 74.29 feet to a point; thence South 47°29'27" West a distance of 92.11 feet to a point; thence North 49°33'56" West a distance of 78.37 feet to a point; thence South 87°17'25" West a distance of 290.72 feet to a point; thence South 11°44'33" West a distance of 20.66 feet to a point; thence South 64°16'17" West a distance of 220.45 feet to a point; thence South 82°21'19" West a distance of 72.19 feet to a point; thence North 36°16'44" West a distance of 42.40 feet to a point; thence South 69°36'51" West a distance of 126.77 feet to a point; thence South 62°06'56" West a distance of 316.17 feet to a point; thence South 17°45'27" West a distance of 29.26 feet to a point; thence South 26°24'46" West a distance of 31.72 feet to a point; thence South 40°05'18" West a distance of 78.74 feet to a point; thence South 07°45'39" West a distance of 35.25 feet to a point; thence South 42°06'24" West a distance of 57.16 feet to a point, being a northwest corner of lands now or formerly owned by EMC Corporation, as described in Deed Book 8681, page 1014; thence with said common line, South 01°06'28" West a distance of 351.89 feet to an existing iron pipe on the northern line of lands now of formerly owned by Greenway Waste Solutions of Apex, LLC, as described in Deed Book 9099, page 1045; thence with said common line, South 88°51'48" West a distance of 28.47 feet to a point in the centerline of the creek; thence with the centerline of the creek, South 03°52'45" West a distance of 158.77 feet to a point; thence South 23°38'07" East a distance of 210.79 feet to a point; thence South 30°01'31" West a distance of 156.29 feet to a point; thence South 11°48'54" East a distance of 104.71 feet to a point; thence South 19°26'04" West a distance of 147.77 feet to a point on the northern right of way line of NC Highway 540, a variable width public right of way as described in Deed Book 15539, page 1850; thence with the northern right of way line of NC Highway 540, North 87°35'38" West a distance of 1273.34 feet to an existing rebar with cap; thence North 75°03'53" West a distance of 276.59 feet to an existing rebar with cap; thence South 36°13'41" West a distance of 120.37 feet to a point; thence North 49°31'49" West a distance of 105.40 feet to the point and place of beginning, having an area of 36,092,685 square feet, 828.57 acres

Less and Except the Following:

PIN: 0730977967; 0740081019; 0740082199; 0740070950; 0740082327

Being all of the lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 20025, page 1418, and Yifei Wang and wife, Hua Mei, as described in Deed Book 18896, page 1725 in the Wake County Register of Deeds; being more particularly described as:

Beginning at an existing iron pipe, being a western corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19297, page 1692, the point of beginning; thence from the beginning and with said common line, South 02°19'40" West a distance of 199.14 feet to a point, being a northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence with said common line, South 02°19'40" West a distance of 64.13 feet to an existing iron pipe, being a northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence with said common line, South 02°13'53" West a distance of 189.40 feet to an existing iron pipe; thence South 02°17'48" West a distance of 67.39 feet to an existing iron pipe, being a northeast corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence with said common line, South 65°19'45" West a distance of 538.99 feet to a point; thence South 01°27'55" West a distance of 148.65 feet to a point; thence South 77°54'05" West a distance of 389.22 feet to an existing iron pipe; thence North 00°01'19" West a distance of 967.73 feet to a point; thence North 89°58'41" East a distance of 616.26 feet to an existing rebar; thence North 89°58'41" East a distance of 133.87 feet to an existing iron pipe, being a southwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19297, page 1692; thence with said common line, North 87°19'22" East a distance of 145.34 feet to the point and place of beginning, containing an area of 668,038 square feet or 15.34 acres.

PIN: 0740992565

Being a portion of the lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403 in the Wake County Register of Deeds; being more particularly described as: Beginning at an existing iron pipe on the western right of way line of NC Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630, being also the southeast corner of the subject parcel, the point of beginning; thence from the beginning and with the western right of way line of NC Highway 55 and the common line of RXR Len Apex Owner, LLC, as described in Deed Book 19789, page 32, South 89°40'44" West a distance of 123.48 feet to an existing iron pipe, passing through the western right of way line of NC Highway 55 116.17 feet before the end of the line; thence North 02°18'46" West a distance of 50.01 feet to an existing iron pipe, being a southern corner lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19821, page 1026; thence with said common line, North 89°43'19" East a distance of 123.46 feet to an existing iron pipe on the western right of way line of NC Highway 55, passing through the western right of way line of NC Highway 55 7.22 feet before the end of the line; thence with the western right of way line of NC Highway 55, with a curve to the right a radius of 5633.75 feet, an arc length of 49.92 feet, a chord bearing of South 02°20'20" East, a chord length of 49.92 feet to the point and place of beginning, containing an area of 6,168 square feet or 0.14 acres.

PIN 0740992632; 0740990489

Being two tracts of land now or formerly owned by RXR Len Apex Owner LLC, as described in Deed Book 19821, page 1026 and Deed Book 19789, page 32 in the Wake County Register of Deeds; being more particularly described as:

Beginning at a point, being the northeast corner of lands now or formerly owned by RXR Len Apex Owner LLC, as described in Deed Book 19821, page 1026 in the Wake County Register of Deeds, being also a corner on the western right of way line of N.C. Highway 55, a variable width public right of way as shown on Book of Maps 2024, page 630, the point of beginning; thence from the beginning and with the western right of way line of N.C. Highway 55, with a curve to the right a radius of 5412.50 feet, an arc length of 100.31 feet, a chord bearing of South 03°00'35" East, a chord length of 100.31 feet to a point on the northern line of lands now or formerly owned by RXR Len Apex Owner LLC, as described in Deed Book 19263, page 2403; thence leaving the western right of way line of N.C. Highway 55 and with said common line, South 89°43'19" West a distance of 116.24 feet to an existing iron pipe; thence South 02°18'46" East a distance of 50.01 feet to an existing iron pipe; thence North 89°40'44" East a distance of 116.17 feet to a point on the western right of way line of N.C. Highway 55; thence with the western right of way line of N.C. Highway 55, with a curve to the right a radius of 2791.21 feet, an arc length of 91.54 feet, a chord bearing of South 00°35'17" East, a chord length of 91.54 feet to a point; thence with a curve to the right a radius of 5411.27 feet, an arc length of 12.91 feet, a chord bearing of South 00°14'58" West, a chord length of 12.91 feet to a point on a northern line of lands now or formerly owned by RXR Len Apex Owner LLC, as shown as New Tract 4 on Book of Maps 2024, page 630; thence leaving the western right of way line of N.C. Highway 55 and with said common line, North 87°06'10" West a distance of 364.98 feet to an existing iron pipe; thence North 17°12'56" West a distance of 140.08 feet to an existing iron pipe, being the southwest corner of lands now or formerly owned by David E. Page, Heirs, as described in Deed Book 1107, page 549; thence with said common line, North 89°41'49" East a distance of 235.12 feet to a point; thence North 02°22'35" West a distance of 99.98 feet to an existing iron pipe on a southern line of lands now or formerly owned by RXR Len Apex Owner LLC, as shown as New Tract 4 on Book of Maps 2024, page 630; thence with said common line, North 89°36'58" East a distance of 166.91 feet to the point and place of beginning, containing an area of 66,202 square feet or 1.52 acres.

PIN: 0740283126 (6300 King David Court)

Being all of the land now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19737, page 1859 in the Wake County Register of Deeds; being more particularly described as:

Beginning at a point, being the northeast corner of lands now or formerly owned by Roger W. and Glenda K. Bushee, as described in Deed Book 4691, page 197, being also a corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2335, the point of beginning; thence from the beginning, and with the common line of RXR Len Apex Owner, LLC, North 09°39'36" East a distance of 200.09 feet to a point; thence North 85°22'14" East a distance of 220.54 feet to a point; thence South 25°29'27" East a distance of 398.53 feet to a point; thence South 28°17'19" West a distance of 258.03 feet to an existing iron pipe; thence South 89°42'24" West a distance of 427.65 feet to an existing iron pipe; thence North 09°53'16" East a distance of 120.00 feet to an existing iron pipe, being a southern corner of lands now or formerly owned by Roger W. and Glenda K. Bushee, as described in Deed Book 4691, page 197; thence with said common line, South 80°06'44" East a distance of 60.00 feet to a point; thence North 09°39'36" East a distance of 270.00 feet to the point and place of beginning, containing an area of 217,807 square feet or 5.00 acres.

PIN: 0730977967; 0740081019; 0740082199; 0740082327; 0740070950

Being all of the lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 20025, page 1418, and Yifei Wang and wife, Hua Mei, as described in Deed Book 18896, page 1725 in the Wake County Register of Deeds; being more particularly described as: Beginning at an existing iron pipe, being a western corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19297, page 1692, the point of beginning; thence from the beginning and with said common line, South 02°19'40" West a distance of 199.14 feet to a point, being a northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence with said common line, South 02°19'40" West a distance of 64.13 feet to an existing iron pipe, being a northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence with said common line, South 02°13'53" West a distance of 189.40 feet to an existing iron pipe; thence South 02°17'48" West a distance of 67.39 feet to an existing iron pipe, being a northeast corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence with said common line, South 65°19'45" West a distance of 538.99 feet to a point; thence South 01°27'55" West a distance of 148.65 feet to a point; thence South 77°54'05" West a distance of 389.22 feet to an existing iron pipe; thence North 00°01'19" West a distance of 967.73 feet to a point; thence North 89°58'41" East a distance of 616.26 feet to an existing rebar; thence North 89°58'41" East a distance of 133.87 feet to an existing iron pipe, being a southwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19297, page 1692; thence with said common line, North 87°19'22" East a distance of 145.34 feet to the point and place of beginning, containing an area of 668,038 square feet or 15.34 acres.

Zoning line that runs across the subject parcels taken from legal description signed and sealed by Joe H. Patterson, III, L-3717, and dated 9/23/25, as included on pages 40-42 in rezoning report #24CZ23. Document accessed by Google on October 23, 2025 at the following weblink:

https://mccmeetingspublic.blob.core.usgovcloudapi.net/apexnc-meet-03a58966ba85431aa8fe86ef0da28897/ITEM-Attachment-001-2d34773ae54546f69e3816c213718a14.pdf

Zoning line in said description was aligned and merged with boundary performed by the John R. McAdams Company.

PIN: 0740240814, 0740241461, 0740241030

Being a portion of the lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403 in the Wake County Register of Deeds; being more particularly described as:

Beginning at an existing concrete monument at a northwest corner of the subject lands, being on the eastern right of way line of Old Holly Springs Apex Road, a variable width public right of way as shown on Book of Maps 2022, page 2, and the southern right of way line of the NC Highway 540 ramp, a variable width controlled access right of way as described in Deed Book 15539, page 1855, the point of beginning; thence from the beginning and with the southern right of way line of the NC Highway 540 ramp, North 48°17'55" East a distance of 64.35 feet to a point; thence North 48°17'55" East a distance of 3.48 feet to a point; thence South 76°02'09" East a distance of 316.69 feet to an existing concrete monument, passing through an existing concrete monument 312.72 feet before the end of the line; thence South 77°42'22" East a distance of 224.13 feet to an existing concrete monument; thence North 74°21'52" East a distance of 75.00 feet to a point; thence leaving the southern right of way line of the NC Highway 540 ramp and across the subject lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403, South 17°16'29" East a distance of 276.68 feet to a point; thence South 49°13'21" East a distance of 207.69 feet to a point; thence South 08°25'14" East a distance of 269.34 feet to a point; thence South 24°55'35" East a distance of 469.85 feet to a point on the northern line of lands now or formerly owned by Wake County, as described in Deed Book 2272, page 678; thence with said common line, North 88°36'32" West a distance of 1161.37 feet to an existing iron pipe, being an eastern corner of lands now or

formerly owned by Wake County, as described in Deed Book 4803, page 67; thence with said common line, North 04°58'10" East a distance of 362.56 feet to a point; thence South 89°45'44" West a distance of 59.47 feet to a point on the eastern right of way line of Old Holly Springs Apex Road, a variable width public right of way as shown on Book of Maps 2022, page 2; thence with the eastern right of way line of Old Holly Springs Apex Road, North 13°15'47" East a distance of 53.04 feet to an existing concrete monument; thence with a curve to the left a radius of 1700.00 feet, an arc length of 338.32 feet, a chord bearing of North 07°33'43" East, a chord length of 337.77 feet to an existing concrete monument, passing through an existing concrete monument 305.65 feet before the end of the line; thence with a curve to the left a radius of 1900.00 feet, an arc length of 76.93 feet, a chord bearing of North 01°06'08" West, a chord length of 76.92 feet to an existing concrete monument; thence with a curve to the left a radius of 1900.00 feet, an arc length of 63.33 feet, a chord bearing of North 01°01'01" West, a chord length of 63.33 feet to an existing concrete monument; thence with a curve to the left a radius of 1900.00 feet, an arc length of 31.67 feet, a chord bearing of North 02°26'58" West, a chord length of 31.67 feet to an existing concrete monument; thence North 02°54'23" East a distance of 203.97 feet to the point and place of beginning, containing an area of 1,000,850 square feet or 22.98 acres.

PIN: 0740558687 “0” Technology Drive

Beginning at an existing Rebar having an NC Grid NAD 83 Coordinate of N: 706447.20 E: 2046758.62. Thence South 01°08'38" East a distance of 80.10 feet to a point; thence North 88°51'22" East a distance of 155.80 feet to a point; thence South 02°16'41" West a distance of 461.59 feet to a point along the Northern Right of Way of NC Highway 540; thence along Right of way South 61°27'09" West a distance of 26.84 feet to a point; thence South 59°58'25" West a distance of 237.08 feet to a point; thence North 28°22'04" West a distance of 10.00 feet to a point; thence with a curve turning to the right with an arc length of 786.41 feet, with a radius of 1650.00 feet, with a chord bearing of South 75°17'10" West, with a chord length of 778.99 feet to a point; thence North 88°45'04" West a distance of 203.97 feet to a point; thence North 87°37'46" West a distance of 718.10 feet to a point; thence North 87°36'50" West a distance of 643.60 feet to a point; thence North 87°37'20" West a distance of 356.63 feet to a point; thence leaving said Right of way North 19°26'04" East a distance of 147.77 feet to a point; thence North 11°48'54" West a distance of 104.71 feet to a point; thence North 30°01'31" East a distance of 156.29 feet to a point; thence North 23°38'07" West a distance of 210.79 feet to a point; thence North 03°52'45" East a distance of 158.77 feet to a point; thence North 88°51'48" East a distance of 28.47 feet to an Iron Pipe; thence North 88°51'48" East a distance of 1457.31 feet to a point; thence North 88°51'48" East a distance of 1251.38 feet to the Point of Beginning,

Having an area of 2202540 square feet, 50.56 acres

Tract PIN: 0740-07-8021 (REID: 0407983)

Being a portion of the land now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403 in the Wake County Register of Deeds; being more particularly described as: Beginning at an existing concrete monument at the northeast corner of the subject parcel, being on the western right of way line of Veridea Parkway, a variable width controlled access and public right of way as described in Deed Book 15539, page 1885, the point of beginning; thence from the beginning and with the western right of way line of Veridea Parkway, with a curve to the right a radius of 1933.03 feet, an arc length of 173.41 feet, a chord bearing of South 14°22'33" West, a chord length of 173.35 feet to a point; thence South 16°56'46" West a distance of 296.14 feet to a point; thence South 36°46'38" West a distance of 128.94 feet to a point; thence South 21°28'31" West a distance of 304.38 feet to a point; thence South 20°42'10" West a distance of 61.19 feet to a point; thence with a curve to the left a radius of 6150.50 feet, an arc length of 428.45 feet, a chord bearing of South 18°25'23" West, a chord length of 428.36 feet to an existing concrete monument; thence with a curve to the left a radius of 6150.50 feet, an arc length of 203.98 feet, a chord bearing of South 15°28'40" West, a chord length of 203.97 feet to an existing concrete monument; thence with a curve to the left a radius of 6150.50 feet, an arc length of 244.84 feet, a chord bearing of South 13°23'14" West, a chord length of 244.82 feet to an existing concrete monument on the northern right of way line of N.C. Highway 540, a variable width controlled access right of way, as described in Deed Book 15539, page 1837; thence with the northern right of way line of N.C. Highway 540, South 82°34'50" West a distance of 63.94 feet to an existing concrete monument; thence with a curve to the right a radius of 4035.00 feet, an arc length of 584.49 feet, a chord bearing of North 63°59'55" West, a chord length of 583.98 feet to a point, being the southeast corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence leaving the northern right of way line of N.C. Highway 540 and with said common line, North 02°26'42" East a distance of 1505.96 feet to an existing iron pipe, being the southwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403; thence with said common line, South 89°09'45" East a distance of 1110.26 feet to the point and place of beginning, containing an area of 1,405,383 square feet or 32.26 acres.

Tract PIN: 0740-16-7653 (REID: 0407980)

Being a portion of the land now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2403 in the Wake County Register of Deeds; being more particularly described as: Beginning at an existing rebar with cap at the southeast corner of the subject parcel, being on the northern right of way line of the N.C. Highway 540 Ramp, a variable width controlled access right of way, as described in Deed Book 15539, page 1855, the point of beginning; thence from the beginning and with the northern right of way line of the N.C. Highway 540 Ramp, North 65°24'12" West a distance of 112.48 feet to an existing concrete monument; thence with a curve to the right a radius of 865.00 feet, an arc length of 261.30 feet, a chord bearing of North 54°43'51" West, a chord length of 260.31 feet to an existing concrete monument; thence North 42°11'22" West a distance of 182.87 feet to an existing concrete monument; thence North 40° 19'02" West a distance of 35.61 feet to a point; thence North 44°05'45" West a distance of 184.73 feet to an existing concrete monument; thence with a curve to the left a radius of 534.00 feet, an arc length of 249.50 feet, a chord bearing of North 64°32'31" West, a chord length of 247.24 feet to an existing concrete monument; thence North 77°55'37" West a distance of 220.93 feet to an existing concrete monument; thence North 25° 05'55" West a distance of 60.93 feet to an existing concrete monument on the eastern right of way line of Veridea Parkway, a variable width controlled access and public right of way, as described in Deed Book 15539, page 1885; thence with the eastern right of way line of Veridea Parkway, with a curve to the right a radius of 5930.50 feet, an arc length of 363.87 feet, a chord bearing of North 18°48'19" East, a chord length of 363.81 feet to a point; thence North 20°49'17" East a distance of 59.37 feet to a point; thence North 17°36'52" East a distance of 299.95 feet to a point; thence North 07°20'42" East a distance of 127.17 feet to a point; thence North 16°56'54" East a distance of 296.14 feet to a point; thence with a curve to the left a radius of 2067.50 feet, an arc length of 227.29 feet, a chord bearing of North 13°47'56" East, a chord length of 227.18 feet to a point, being a southwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2335; thence leaving the eastern right of way line of Veridea Parkway and with said common line, North 84°14'41" East a distance of 440.42 feet to a point, being the northwest corner of lands now or formerly owned by RXR Len Apex Owner, LLC, as described in Deed Book 19263, page 2335; thence with said common line, South 01°55'47" East a distance of 1400.56 feet to a point; thence North 87°37'02" East a distance of 180.32 feet to a point; thence South 00°14'49" East a distance of 667.80 feet to the point and place of beginning, containing an area of 1,187,508 square feet or 27.26 acres.

PIN: 0730865572, 0730852539, 0740052449

BEING A PORTION OF THE LANDS NOW OR FORMERLY OWNED BY RXR LEN APEX OWNER, LLC, AS DESCRIBED IN DEED BOOK 19263, PAGE 2403, IN THE WAKE COUNTY REGISTER OF DEEDS; BEING MORE PARTICULARLY DESCRIBED AS: BEGINNING AT A CONCRETE MONUMENT ON THE WESTERN RIGHT OF WAY OF VERIDEA PARKWAY, SAID MONUMENT BEING ON THE NORTHERN LINE OF THE TRACT SHOWN ON BOOK OF MAPS 1986, PAGE 1865, THE POINT OF BEGINNING; THENCE NORTH 71°59'15" WEST A DISTANCE OF 337.68 FEET TO AN IRON PIPE; THENCE NORTH 86°29'50" WEST A DISTANCE OF 829.07 FEET TO AN IRON PIPE, THE NORTHEAST CORNER OF TRACT 3 AS SHOWN ON BOOK OF MAPS 2022, PAGE 3; THENCE WITH SAID COMMON LINE SOUTH 87°43'51" WEST A DISTANCE OF 2,965.86 FEET TO AN IRON PIPE ON THE EASTERN LINE OF TRACT F, AS SHOWN ON BOOK OF MAPS 1974, PAGE 228; THENCE WITH SAID COMMON LINE NORTH 00°24'36" EAST A DISTANCE OF 1,161.04 FEET TO A POINT ON THE SOUTHERN LINE OF TRACT B, AS SHOWN ON BOOK OF MAPS 1979, PAGE 686; THENCE WITH SAID COMMON LINE SOUTH 78°13'36" EAST A DISTANCE OF 73.65 FEET TO A POINT; THENCE SOUTH 70°13'09" EAST A DISTANCE OF 113.59 FEET TO A POINT; THENCE SOUTH 71°57'54" EAST A DISTANCE OF 121.73 FEET TO A POINT; THENCE SOUTH 70°58'13" EAST A DISTANCE OF 114.09 FEET TO A POINT; THENCE SOUTH 72°14'11" EAST A DISTANCE OF 343.92 FEET TO A POINT; THENCE SOUTH 74°17'38" EAST A DISTANCE OF 315.81 FEET TO A POINT; THENCE SOUTH 65°13'58" EAST A DISTANCE OF 138.23 FEET TO A POINT; THENCE SOUTH 65°10'08" EAST A DISTANCE OF 10.00 FEET TO A POINT IN BIG BRANCH; THENCE WITH SAID BRANCH NORTH 19°49'58" EAST A DISTANCE OF 52.46 FEET TO A POINT; THENCE NORTH 27°34'56" EAST A DISTANCE OF 25.74 FEET TO A POINT; THENCE NORTH 62°53'48" EAST A DISTANCE OF 26.76 FEET TO A POINT; THENCE NORTH 29°01'04" WEST A DISTANCE OF 21.84 FEET TO A POINT; THENCE NORTH 05°59'14" WEST A DISTANCE OF 34.25 FEET TO A POINT; THENCE NORTH 49°53'01" EAST A DISTANCE OF 15.65 FEET TO A POINT; THENCE NORTH 35°50'22" EAST A DISTANCE OF 26.00 FEET TO A POINT; THENCE NORTH 57°56'55" WEST A DISTANCE OF 27.74 FEET TO A POINT; THENCE SOUTH 77°56'49" WEST A DISTANCE OF 70.86 FEET TO A POINT; THENCE NORTH 69°25'39" WEST A DISTANCE OF 55.42 FEET TO A POINT; THENCE NORTH 16°13'12" WEST A DISTANCE OF 54.07 FEET TO A POINT; THENCE NORTH 47°24'29" EAST A DISTANCE OF 30.81 FEET TO A POINT; THENCE SOUTH 76°52'37" EAST A DISTANCE OF 46.52 FEET TO A POINT; THENCE NORTH 23°54'47" EAST A DISTANCE OF 15.13 FEET TO A POINT; THENCE NORTH 10°53'04" EAST A DISTANCE OF 79.33 FEET TO A POINT; THENCE NORTH 70°48'08" WEST A DISTANCE OF 21.80 FEET TO A POINT; THENCE NORTH 13°57'57" WEST A DISTANCE OF 44.13 FEET TO A POINT; THENCE NORTH 54°45'55" WEST A DISTANCE OF 48.38 FEET TO A POINT; THENCE SOUTH 57°21'14" WEST A DISTANCE OF 58.90 FEET TO A POINT; THENCE SOUTH 44°33'39" WEST A DISTANCE OF 46.68 FEET TO A POINT; THENCE NORTH 46°24'21" WEST A DISTANCE OF 39.79 FEET TO A POINT; THENCE NORTH 72°29'35" WEST A DISTANCE OF 36.60 FEET TO A POINT; THENCE SOUTH 47°15'35" WEST A DISTANCE OF 18.92 FEET TO A POINT; THENCE NORTH 74°35'59" WEST A DISTANCE OF 21.22 FEET TO A POINT; THENCE NORTH 28°54'22" WEST A DISTANCE OF 20.74 FEET TO A POINT; THENCE NORTH 42°54'07" WEST A

DISTANCE OF 46.75 FEET TO A POINT; THENCE NORTH 06°55'02" EAST A DISTANCE OF 26.65 FEET TO A POINT; THENCE NORTH 88°27'17" EAST A DISTANCE OF 37.67 FEET TO A POINT; THENCE NORTH 27°00'55" EAST A DISTANCE OF 19.39 FEET TO A POINT; THENCE NORTH 01°16'06" EAST A DISTANCE OF 31.60 FEET TO A POINT; THENCE NORTH 45°55'37" EAST A DISTANCE OF 50.02 FEET TO A POINT; THENCE NORTH 01°23'54" EAST A DISTANCE OF 14.01 FEET TO A POINT; THENCE NORTH 65°17'04" WEST A DISTANCE OF 42.02 FEET TO A POINT; THENCE NORTH 01°21'12" EAST A DISTANCE OF 32.19 FEET TO A POINT; THENCE NORTH 46°19'10" WEST A DISTANCE OF 51.21 FEET TO A POINT; THENCE NORTH 06°48'02" EAST A DISTANCE OF 35.97 FEET TO A POINT; THENCE NORTH 69°34'03" EAST A DISTANCE OF 41.13 FEET TO A POINT; THENCE NORTH 39°27'36" EAST A DISTANCE OF 39.13 FEET TO A POINT; THENCE NORTH 15°04'34" WEST A DISTANCE OF 20.63 FEET TO A POINT; THENCE NORTH 51°45'25" WEST A DISTANCE OF 25.88 FEET TO A POINT; THENCE NORTH 30°03'26" EAST A DISTANCE OF 27.95 FEET TO A POINT; THENCE SOUTH 60°17'18" EAST A DISTANCE OF 30.79 FEET TO A POINT; THENCE SOUTH 36°34'38" EAST A DISTANCE OF 34.28 FEET TO A POINT; THENCE SOUTH 78°45'43" EAST A DISTANCE OF 52.43 FEET TO A POINT; THENCE NORTH 41°36'19" EAST A DISTANCE OF 15.36 FEET TO A POINT; THENCE NORTH 04°43'43" EAST A DISTANCE OF 44.44 FEET TO A POINT; THENCE NORTH 30°37'30" EAST A DISTANCE OF 51.77 FEET TO A POINT; THENCE NORTH 05°00'41" EAST A DISTANCE OF 35.48 FEET TO A POINT; THENCE SOUTH 62°04'45" WEST A DISTANCE OF 33.82 FEET TO A POINT; THENCE NORTH 44°58'03" WEST A DISTANCE OF 39.84 FEET TO A POINT; THENCE NORTH 44°37'02" EAST A DISTANCE OF 21.58 FEET TO A POINT; THENCE NORTH 53°05'19" EAST A DISTANCE OF 60.88 FEET TO A POINT; THENCE NORTH 61°15'57" WEST A DISTANCE OF 39.17 FEET TO A POINT; THENCE NORTH 50°49'25" WEST A DISTANCE OF 23.78 FEET TO A POINT; THENCE NORTH 10°03'59" WEST A DISTANCE OF 28.54 FEET TO A POINT; THENCE NORTH 38°48'29" EAST A DISTANCE OF 55.95 FEET TO A POINT; THENCE NORTH 43°08'07" WEST A DISTANCE OF 60.59 FEET TO A POINT; THENCE NORTH 42°28'11" EAST A DISTANCE OF 31.74 FEET TO A POINT; THENCE NORTH 70°54'18" WEST A DISTANCE OF 69.18 FEET TO A POINT; THENCE NORTH 86°35'18" WEST A DISTANCE OF 111.94 FEET TO A POINT; THENCE NORTH 47°58'54" WEST A DISTANCE OF 68.58 FEET TO A POINT; THENCE NORTH 30°52'49" EAST A DISTANCE OF 32.56 FEET TO A POINT; THENCE NORTH 21°24'56" WEST A DISTANCE OF 54.07 FEET TO A POINT; THENCE NORTH 55°25'47" EAST A DISTANCE OF 39.27 FEET TO A POINT; THENCE NORTH 03°25'23" WEST A DISTANCE OF 46.46 FEET TO A POINT; THENCE NORTH 31°42'04" EAST A DISTANCE OF 54.96 FEET TO A POINT; THENCE NORTH 18°30'38" EAST A DISTANCE OF 44.10 FEET TO A POINT; THENCE NORTH 01°10'29" WEST A DISTANCE OF 65.77 FEET TO A POINT; THENCE NORTH 22°17'56" WEST A DISTANCE OF 29.93 FEET TO A POINT; THENCE NORTH 19°15'09" EAST A DISTANCE OF 2.52 FEET TO A POINT ON THE SOUTH LINE OF ROBERT BEREMAN; THENCE WITH SAID COMMON LINE NORTH 87°19'40" EAST A DISTANCE OF 837.86 FEET TO A POINT ON THE SOUTHERN RIGHT OF WAY OF NORTH CAROLINA HIGHWAY 540; THENCE WITH SAID RIGHT OF WAY SOUTH 48°51'19" EAST A DISTANCE OF 616.60 FEET TO A REBAR WITH CAP; THENCE NORTH 44°43'56" EAST A DISTANCE OF 25.00 FEET TO A REBAR WITH CAP; THENCE SOUTH 50°09'33" EAST A DISTANCE OF 205.32 FEET TO A REBAR WITH CAP;

THENCE SOUTH 39°54'37" EAST A DISTANCE OF 212.61 FEET TO A REBAR WITH CAP; THENCE A CURVE TO THE LEFT A RADIUS OF 4,375.00 FEET, AN ARC LENGTH OF 311.61 FEET, A CHORD BEARING OF SOUTH 45°34'54" EAST, A CHORD LENGTH OF 311.54 FEET TO A REBAR WITH CAP; THENCE A CURVE TO THE LEFT, A RADIUS OF 4,375.00 FEET, AN ARC LENGTH OF 1,106.45 FEET, A CHORD BEARING OF SOUTH 54°52'03" EAST, A CHORD LENGTH OF 1,103.50 FEET TO A POINT; THENCE A CURVE TO THE LEFT, A RADIUS OF 4,375.00 FEET, AN ARC LENGTH OF 456.34 FEET, A CHORD BEARING OF SOUTH 65°10'37" EAST, A CHORD LENGTH OF 456.13 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 49°00'55" EAST A DISTANCE OF 133.17 FEET TO A POINT ON THE WESTERN RIGHT OF WAY OF VERIDEA PARKWAY; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE LEFT, A RADIUS OF 1,680.00 FEET, AN ARC LENGTH OF 355.38 FEET, A CHORD BEARING OF SOUTH 05°50'57" WEST, A CHORD LENGTH OF 354.72 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT A RADIUS OF 1,680.00 FEET, AN ARC LENGTH OF 205.93 FEET, A CHORD BEARING OF SOUTH 03°43'21" EAST, A CHORD LENGTH OF 205.80 FEET TO THE POINT OF BEGINNING; CONTAINING 5,629,803 SQUARE FEET OR 129.24 ACRES.

PIN: 0741117192

Being all of the land now or formerly owned by RXR Len Apex Owner, LLC, as described as “PIN: 0741-11-7192 (Tract 1)” in Deed Book 19947, page 487 in the Wake County Register of Deeds; being more particularly described as: Beginning at an existing concrete monument on the eastern right of way line of Veridea Parkway, a 60 foot public right of way as shown on Book of Maps 2003, page 1756, being also a corner on the northern right of way line of U.S. Highway 1, a variable width controlled access right of way as shown on Book of Maps 2010, page 282, the point of beginning; thence from the beginning and with the eastern right of way line of Veridea Parkway, North 35°53'59" West a distance of 81.82 feet to an existing iron pipe, being a southern corner of lands now or formerly owned by Greater Raleigh Area Christian Education, Inc., as shown on Book of Maps 2015, page 14; thence leaving the eastern right of way line of Veridea Parkway and with said common line, North 00°44'04" East a distance of 32.54 feet to an existing iron pipe; thence South 89°07'32" East a distance of 204.62 feet to an existing iron pipe on the northern right of way line of U.S. Highway 1; thence with the northern right of way line of U.S. Highway 1, South 58°38'37" West a distance of 183.90 feet to the point and place of beginning, containing an area of 10,829 square feet or 0.25 acres.

Attachment B

December 3, 2025

Town of Apex
Planning Department
322 N. Mason Street
Apex, NC 27502

RE: Veridea Sustainable Development Plan Amendment for parcels south of US 1, east of I-540, and west and east of Veridea Parkway

To Whom It May Concern,

This letter is to inform you of a proposed amendment to the Veridea Sustainable Development Plan Conditional Zoning (SD-CZ) to (i) facilitate the development of the North Carolina Children's Hospital and campus, and (ii) revise certain conditions for the remainder of Veridea.

The Veridea Sustainable Development Plan was approved by the Town of Apex on May 9, 2011 (Rezoning #09CZ07).

In the summer of 2025, North Carolina Children's announced their intention to develop a new, state-of-the-art children's hospital within Veridea, bringing North Carolina's first freestanding children's hospital to the Triangle. The North Carolina Children's health care campus and its supporting uses (including but not limited to medical, research, academic, administrative, transport, patient and family respite and accommodations) have a specific set of needs for automobile and pedestrian circulation, massing, scale, and materials. These unique considerations require the enclosed technical exemptions to the SD-CZ Plan (Exhibit A).

Exhibit A proposes exemptions from technical standards found within the SD-CZ Plan. The exemptions would apply to the Hospital Site and surrounding supporting uses which will make up the campus. The exemptions that apply to the health care campus and surrounding supporting uses (including but not limited to medical, research, academic, administrative, transport, patient and family respite and accommodations, central utility plant, and adequate parking facilities) which will make up the campus are found in Part 1 of Exhibit A. These uses and parcels are approximately equivalent to +/- 193 acres of the Urban Core (UC) sustainable zone and +/- 29 acres of the Village Center (VC) sustainable zone within the Veridea development. Exemptions for the overall SD-CZ Zoned area are contained within Part 2 of Exhibit A.

Exemptions or modifications requested herein for the hospital campus relate to standards for glazing, lot width, block perimeter, build-to/maximum setbacks, rear loading, and location of parking and entrances. Exemptions or modifications requested herein for the remainder of Veridea relate to recreation land dedication, land reservation for future rail, and development thresholds. Where exemptions from text are requested, the full text is provided. Where exemptions from a table are requested, the full table is included as an attachment.

Where an exemption is granted from the SD-CZ plan, the development will default to the current UDO standards effective at the date of approval of this amendment.

A corresponding SD-CZ rezoning application has been filed in the Town's development portal.

Sincerely,

Veridea Development Team

Veridea SD Plan Amendment

Proposed Rezoning Changes

December 3, 2025

PART 1 North Carolina Children's (NCC) Campus Property

The Sustainable Development Plan south of US 1, east of I-540, and west of Veridea Parkway (PINs 0740191376, 0730996270, 0730977087, 0730977967, 0740081019, 0740070950, 0740082327, 0740082199, 0740078021, 0740180091, 0740180331, 0731902142 (portion of)) and a portion of the Sustainable Development Plan south of US 1 and east of Veridea Parkway (PINs 0741207566, 0741203157, 0740293940) (collectively, the "NCC Campus Property") will retain all of the conditions from rezoning #09CZ07 except:

Section 3.3.3 Written Statement from Responsible Person Required; Noncompliance

Modification to Section 3.3.3

Any site plan or Subdivision Plan submitted to the Town for approval for a project to be undertaken by a party other than the Responsible Person must be accompanied by a written statement from the Responsible Person indicating its approval of the Project. Such written statement shall also state the authorized development allocated to the Project (i.e., number of dwelling units and/or square feet of non-residential Retail, Office and/or Industrial Uses) as well as the development fee credits, if any, other credits, and/or liabilities and responsibilities assigned to or assumed by the Project. Provided however, any site plan or Subdivision Plan submitted to the Town for approval for a project to be undertaken on the NCC Campus Property shall not be required to be accompanied by a written statement from the Responsible Person indicating its approval of the Project. Such site plans or Subdivision Plans shall be subject to the terms of the SD Plan, as amended, and the Unified Development Ordinance where not inconsistent with the SD Plan.

Any event of non-compliance with any requirement of this SD Plan or the UDO that relates solely to a Project or Projects within Veridea shall not be attributed to Veridea as a whole, but rather shall be attributed only to that Project or Projects, such that any enforcement action taken by the Town shall be limited to the Project or Projects at issue.

In addition to any other remedy that may be available to the Town, if a violation of this SD Plan, Town Standards, Sustainability Standards applicable to Veridea or the UDO remains in existence with respect to a Project or Projects or a distinct area within Veridea after the Town complies with the procedures of UDO 11.5, the Town may withhold the issuing, approving or granting of grading permits, building permits, certificates of compliance or occupancy, site plans, subdivision plans or plats and other permits or approvals for the Project or Projects or distinct area in issue until the non-compliance is corrected and cured.

In addition to any other remedy that may be available to the Town, if a violation of this SD Plan, Town Standards, Sustainability Standards applicable to Veridea or the UDO which applies to Veridea as a whole remains in existence after the Town complies with the procedures of UDO 11.5, the Town may withhold the issuing, approving or granting of grading permits, site plans and subdivision plans or plats throughout Veridea until the non-compliance is corrected and cured.

Section 3.7: Energy Standards

Exemption from the energy efficiency goal of Section 3.7.2.v.

v. The improvement of energy performance by 20% compared to baseline building performance ratings per ASHRAE/ IESNA Standard 90.1-2004.

Section 4: Community Design Standards

Exemption from 4.2.3.a. (i. – ii.)

a. Buildings and frontages along the A-Grids shall reflect multi-modal and pedestrian standards of the SD Plan supporting pedestrian activity.
   Thoroughfares within an A-Grid Zone may be developed according to B-Grid standards subject to the following special and limiting conditions:
   i. Transition conditions within A-Grid Zones to adjacent B- Grid Zones; and
   ii. Small internal Thoroughfares of limited length to respond to a specific condition of the site or a use. Notwithstanding these special and limiting conditions, no more than 15% of the aggregate length of Thoroughfares within an A-Grid Zone may be designated as a B-Grid and follow B-Grid standards. Location and other specifics of such B-Grid Thoroughfares shall be addressed within site plans.

Exemption from 4.2.3.b (i. – iii.)

b. Buildings and frontages along the B-Grids may reflect automobile- oriented standards. B-Grids may be developed in whole or in part to A-Grid standards. It is the goal that B-Grid zones eventually become redeveloped as A-Grids. Therefore, site plans for B-Grids shall reflect in their planning and site engineering this goal by:
   i. Establishing a B-Grid Thoroughfare grid and therefore a block layout that can be redeveloped into smaller blocks exhibiting the characteristics of an A-Grid;
   ii. Establishing the B-Grid Thoroughfares in such a manner that they can be redeveloped into A-Grid Thoroughfares and frontages; and
   iii. Locating utilities and site features so that they will not prohibit the establishment of an A-Grid development pattern, and do so without significant redesign or cost impacts. Site plans for B- Grid zones shall depict both the B-Grid configuration, and conceptually reflect how the B-Grid configuration may be redeveloped into an A-Grid.

Exemption from 4.3.5 – 4.3.7

4.3.5 Village Center – A-Grid (VC A-Grid) consists of higher Density Mixed Use buildings that accommodate retail, Office, rowhouses and apartments. It has a tight network of Thoroughfares, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.

4.3.6 Village Center – B-Grid (VC B-Grid) consists of larger block sizes, and larger format uses supporting regional users. It has a coarse network of Thoroughfares, with sidewalks and steady street tree planting.

4.3.7 Urban Core – A-Grid (UC A-Grid) consists of the highest Density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; Thoroughfares have steady street tree planting and buildings are set close to wide sidewalks.

4.3.8 Urban Core – B-Grid (UC B-Grid) consists of the highest Density and height, with predominantly Office, lab, and research uses. It may have larger blocks; streets have steady street tree planting and buildings may be set back from the sidewalks.

Exemption from 4.5.1.e. & h.

e. The Thoroughfare network shall be designed to define Blocks not exceeding the size indicated in Table 14. The perimeter shall be measured as the sum of Lot Frontage Lines.
h. Each Lot shall be bounded by a vehicular Thoroughfare, except that 20% of the Lots within each Sustainable Zone may be bounded by a Passage, so long as the Thoroughfare assembly behind such Lots is constructed to Rear Alley standards, will meet emergency vehicle access requirements and is public.

Note: If subdivided, lot dimensions and minimum public frontage standards will default to UDO standards.

Exemption from 4.5.3.a. (i. -iii.)

a. General to all zones OS, NG, NM, VC, UC
    i. The Public Frontage contributes to the character of the Sustainable Zone, and includes the requisite types of Sidewalk, Curb, Planter, bicycle parking, and street trees.
    ii. Public Frontages shall be designed as shown in Table 4A and Table 4B and allocated within Sustainable Zones as specified in Table 14d.
    iii. Within the Public Frontages, the types of Public Planting and Public Lighting shall be as shown in Table 4A, Table 4B, Table 5 and Table 6.

Note: Public frontage standards will default to the Town of Apex UDO Section 7.5.

Section 5: Building Standards

Exemption from 5.4.1.a. – g.

a. Newly platted Lots shall be dimensioned according to Table 14f and Table 15.
b. Building Disposition shall be as shown in Table 9 and Table 14i.
c. Buildings shall be disposed in relation to the boundaries of their Lots according to Table 14g, Table 14h, and Table 15.
d. One Principal Building at the Frontage and one Outbuilding to the rear of the Principal Building may be built on each Lot as shown in Table 17c.
e. Lot coverage by buildings shall not exceed that specified in Table 14f and Table 15.
f. Facades shall be built parallel to a rectilinear Principal Frontage Line or to the tangent of a curved Principal Frontage Line, and along a minimum percentage of the Frontage width at the Setback, as specified as Frontage Buildout on Table 14g and Table 15.
g. Setbacks for Principal Buildings shall be as shown in Table 14g and Table 15.

Exemption from 5.4.2.a

a. The Principal Entrance shall be on a Frontage Line.

Exemption from 5.5.1 (a., b., d., g.)

a. The Private Frontage of buildings shall conform to and be allocated in accordance with Table 7 and Table 14j.
b. Buildings on corner Lots shall have two Private Frontages as shown in Table 17. Prescriptions for the second and third Layers pertain only to the Principal Frontage. Prescriptions for the first Layer pertain to both Frontages.
d. Building stories, Stepbacks, and Expression Lines shall conform to Table 8 and Table 14j.
g. Prescriptions for the parking Layers pertain only to the Principal Frontage. Prescriptions for the first Layer pertain to both Frontages of a corner Lot.

Modification to 5.5.1. c.

c. All Facades shall be glazed with clear glass no less than 30% of the first Story, however glazing shall be no less than 50% <u>of the first Story</u> in the VC Zone A-Grid and UC Zone A-Grid areas. <u>Within the NCC Campus Property, this requirement shall only apply to buildings within 200 feet of the Veridea Parkway right-of-way with the exception of any inpatient, outpatient, or supporting medical use.</u>

Exemption from 5.5.5.e.

e. In the absence of a building Facade along any part of a Frontage Line, a Streetscreen may be built co-planar with the Facade or adjacent Facades.

Exemption from 5.8.1 (a. - c.)

a. Parking shall be accessed by Rear Alleys or Rear Lanes, when available.

b. Open parking areas and Parking Structures shall be masked from the Frontage by a Building or Streetscreen.
c. For buildings on B-Grids, open parking areas and Parking Structures are allowed unmasked on the Frontage in the front Layer, except for corner Lots at intersections with the A-Grid.

Exemption from 5.8.4 (a. & c.)

a. All parking lots, garages, and Parking Structures shall be located at the second or third Layer except along B-Grids where parking may be located in the first layer. (Table 17d)
c. Parking Structures on the A-Grid shall have Liner Buildings lining the first and second Stories.

Modification to 5.8.4.b:

1. Vehicular entrances to parking lots, garages, and Parking Structures shall ~~be no wider than 24 feet at the Frontage for A-Grid Thoroughfares. Driveways at Frontages for B-Grid Thoroughfares shall be no wider than necessary to accommodate the straight and turn lanes in the first Layer. (Table 3B.f)~~ meet the requirements found in the *Town of Apex Standard Specifications and Standard Details or be designed to accommodate the use subject to TRC approval*.

Section 6: Tables

Note: Exempted tables are included as attachments to this letter, labeled as described below.

Table 1 – Sustainable Zone Descriptions

The NCC Campus Property shall be exempt from Table 1.

Tables 3B – Vehicular Lane and Parking Assemblies

The NCC Campus Property shall be exempt from Table 3B c., d., and e. streetside parking requirements.

Tables 4A & 4B – Public Frontages

The NCC Campus Property shall be exempt from Tables 4A & 4B.

Tables 4C – Thoroughfare Assemblies

The NCC Campus Property shall be exempt from Tables 4C.

Tables 4D – Thoroughfare Cross Sections

The NCC Campus Property shall be exempt from Tables 4D.

Table 6 – Public Planting

The NCC Campus Property shall be exempt from Table 6.

Table 7 – Private Frontages

The NCC Campus Property shall be exempt from Table 7.

Table 8 – Building Configuration

The NCC Campus Property shall be exempt from Table 8.

Table 9 – Building Disposition

The NCC Campus Property shall be exempt from Table 9.

Table 13 – Civic Space

The NCC Campus Property shall be exempt from Table 13.

Table 14 – Form-Based Code Summary

The NCC Campus Property shall be exempt from the struck through standards of Table 14 as shown below relating to block perimeter, rear-loading, lot width, and building disposition for the VC and UC sustainable zones. Other applicable standards shall be amended as indicated with the callout black boxes below.

c. Block Size

c. BLOCK SIZE	OS OPEN SPACE ZONE	NG NEIGHBORHOOD GENERAL ZONE	NM NEIGHBORHOOD MIXED-USE ZONE	VC VILLAGE CENTER ZONE	UC URBAN CORE ZONE
Block Perimeter: A-Grids	no maximum	3000 ft. max	2400 ft. max	~~2000 ft. max *~~	~~2000 ft. max *~~
Block Perimeter: B-Grids	not applicable	not applicable	not applicable	~~* 3500 ft max with parking structures~~	

d. Thoroughfare

d. THOROUGHFARES (see Table 3 and Table 4)	OS OPEN SPACE ZONE	NG NEIGHBORHOOD GENERAL ZONE	NM NEIGHBORHOOD MIXED-USE ZONE	VC VILLAGE CENTER ZONE	UC URBAN CORE ZONE
Highway (HW)	permitted	permitted	not permitted	not permitted	not permitted
Boulevard (BV)	not permitted	not permitted	not permitted	permitted	permitted
Avenue (AV)	not permitted	permitted	permitted	permitted	permitted
Commercial Street (CS)	not permitted	not permitted	not permitted	permitted	permitted
Drive (DR)	not permitted	permitted	permitted	permitted	permitted
Street (ST)	permitted	permitted	permitted	permitted	not permitted
Road (RD)	permitted	permitted	not permitted	not permitted	not permitted
Rear Lane (RL)	permitted	permitted	permitted	not permitted	not permitted
Rear Alley (RA)	not permitted	permitted	required	~~required~~	~~required~~
Path (PT)	permitted	permitted	permitted	not permitted	not permitted
Passage (PS)	not permitted	permitted	permitted	permitted	permitted
Bicycle Trail (BT)	permitted	permitted	not permitted *	~~not permitted *~~	~~not permitted *~~
Bicycle Lane (BL)	permitted	permitted	permitted	permitted	permitted
Bicycle Route (BR)	permitted	permitted	permitted	permitted	permitted

Amend to "permitted"

Amend to "permitted"

f. Lot Occupation

f. LOT OCCUPATION	OS OPEN SPACE ZONE	NG NEIGHBORHOOD GENERAL ZONE	NM NEIGHBORHOOD MIXED-USE ZONE	VC VILLAGE CENTER ZONE	UC URBAN CORE ZONE
Lot Width: A-Grids	variable	25 ft. min 120 ft. max	18 ft. min 400 ft. max	~~18 ft. min 600 ft. max~~	~~18 ft. min 700 ft. max~~
Lot Width: B-Grids	not applicable	not applicable	not applicable	no max	no max

Amend to "no max"

i. Setbacks – Outbuilding

h. SETBACKS - OUTBUILDING (see Table 15)	OS OPEN SPACE ZONE	NG NEIGHBORHOOD GENERAL ZONE	NM NEIGHBORHOOD MIXED-USE ZONE	VC VILLAGE CENTER ZONE	UC URBAN CORE ZONE
(h.1) Front Setback	not applicable	20 ft. min +bldg setback	20 ft. min +bldg setback	~~40 ft. max from real prop~~	not applicable
(h.2) Side Setback	not applicable	0 ft. or 3 ft. min	0 ft. or 3 ft. min	0 ft. min	not applicable
(h.3) Rear Setback	not applicable	3 ft. min	3 ft. min	~~3 ft. min~~	not applicable

Amend to "not applicable"

j. Building Disposition

i. BUILDING DISPOSITION (see Table 9)	OS OPEN SPACE ZONE	NG NEIGHBORHOOD GENERAL ZONE	NM NEIGHBORHOOD MIXED-USE ZONE	VC VILLAGE CENTER ZONE	UC URBAN CORE ZONE
Edgeyard	permitted	permitted	permitted	permitted	permitted
Sideyard	not permitted	permitted	permitted	permitted	~~not permitted~~
Rearyard	not permitted	permitted	permitted	permitted	permitted
Courtyard	not permitted	not permitted	permitted	permitted	permitted

Amend to "permitted"

Table 15D – Form-Based Code Graphics – VC – Village Center

The NCC Campus Property shall be exempt from the Form-based code standards in Table 15 D.

Table 15E - Form-Based Code Graphics - UC - Urban Core

The NCC Campus Property shall be exempt from the Form-based code standards in Table 15 E.

In addition to the standards and conditions of the Sustainable Development Plan for Veridea (#09CZ07), as amended, the NCC Campus Property shall comply with the following:

1. All lots shall front on a public street.
2. Hospital, behavioral health, and accessory/supportive uses including but not limited to central utility plants, shared services (i.e. laboratory, sterile processing, security, network support, logistics, housekeeping, maintenance, laundry, supply chain, dietary and food preparation), parking structures, ambulatory surgery centers (with or without Emergency Department), and physician office buildings shall be considered a Civic Use for SD Zoning and UDO regulatory requirements including calculations related to maximum development of respective uses within the SD Zoning boundary.
3. For the area west of Veridea Parkway only, four (4) bus stops shall be constructed. The location of the stops will be finalized and shown on the first Major Site Plan within the NCC Campus Property. All bus stops shall be within ¼ -mile radius of a healthcare building. Bus stops shall

meet Town of Apex Standard Specifications including landing pad, amenity pad, and pedestrian circulation path. Each bus stop (at a minimum) will include the following, pending Planning Director or designee approval:

- 1 bus shelter
- 1 trash receptacle
- 1 bench
- 2 bicycle racks
- Pedestrian connections to surrounding street network to ADA and PROWAG guidelines.

PART 2 Veridea Properties Zoned SD-CZ

The Sustainable Development Plan for Veridea (#09CZ07), is amended as follows, with additions underlined and deletions being shown by stricken-through text:

Elimination of Rail

The rail requirements of the SD Plan no longer apply. Any references within the SD Plan to rail shall not be applicable.

Modification to 3.4.2.2 Specific Recreation Requirements

Section 3.4.2.2 is deleted in its entirety and replaced as follows:

3.4.2.2 Specific Recreation Requirements

(i) Developer shall grant to the Town a public access easement over the stormwater and linear parks areas shown generally on the attached **Exhibit A-1**. Developer shall work collaboratively with the Town to program the space within this easement. The Town, in its sole discretion, shall approve all uses of the space within the easement and Developer and Town shall execute an agreement detailing scheduled uses of the easement space prior to approval of the Master Subdivision Final Plat that contains said easement;

(ii) Developer shall construct a 25,000sf programmable recreation center at its sole cost and expense to be designed with interior finishes consistent with other Town of Apex recreation center facilities. This recreation center shall be located south of Adesso Way and north of Forest Light Way as shown generally on the attached **Exhibit A-1.** The programmable recreational facility may include but is not limited to gymnasium, adaptive classroom/ program/ camp spaces, and associated support spaces such as restrooms, offices and storage to be determined in agreement with PRCR staff and as part of the developer agreement. Prior to construction of the recreation center, Town must approve the design, construction schedule, construction cost, and location of the recreation center. Construction will not

begin until Town and the Developer have executed a Development Agreement outlining the roles and obligations associated with the design and construction of the recreation center;

(iii) A site plan for this recreation center shall be submitted to the Town of Apex prior to issuance of a building permit for the 1,000th dwelling unit or platting of the 4,000th lot within Veridea, whichever comes first. Construction of this recreation center shall be completed within three (3) years of Developer's receipt of building permit approval. In the event construction has not been completed within this time, including the issuance of a Certificate of Occupancy, no building permits will be issued for any additional dwelling units within the Veridea Development until construction of the recreation center is complete.

(iv) The costs and expenses incurred by Developer in construction of the recreation facility required by subsection (iii) hereof shall be credited against parks and recreation fees due for residential development within Veridea and shall be outlined in the Development Agreement. This credit shall be in favor of Developer exclusively and may be applied by Developer from time-to-time for the permitting of residential dwellings constructed by third parties. Further, any parks and recreation fees paid for any development within Veridea prior to construction of the recreation center shall be paid over to Developer on an agreed upon schedule as construction of the recreation center progresses. In the event that parks and recreation fees-in-lieu received by the Town prior to commencement of the recreation center exceed the cost of the recreation center, such excess amounts shall be retained by the Town and all residential development within Veridea thereafter shall be required to pay applicable Parks and Recreation fees-in-lieu in accordance with Town and state requirements for the same.

(v) Subject to the foregoing, all development within Veridea shall be subject to all applicable Parks and Recreation fees-in-lieu in accordance with Town and state requirements for the same.

(vi) These Developer commitments related to the construction of the recreation center shall be reduced to a development agreement between the Town and Developer which shall be executed prior to the issuance of the 750th building permit. In addition to the foregoing terms, the Development Agreement shall include an agreed upon construction schedule for the recreation center and shall provide the Town a remedy to take over construction in the event that Developer fails to comply with said construction schedule beyond any applicable cure periods.

Modification to 3.5.3.d Land Reservation for Future Rail

~~d. Land Reservation: Land shall be reserved for the future Regional Public Transit System within Veridea. With regard to the Regional Public Transit System alignment and associated rights of way ("ROW") outside of Veridea, the location along Veridea's perimeter where the Regional Public Transit System will enter and exit Veridea in the vicinity of the interchange of US 1 with the Triangle Expressway will be determined by Triangle Transit, and/or other regional transit organization, and/or the Town. As Veridea is developed, site plans and Subdivision Plans will be shared with Triangle Transit, and/or other relevant regional transit organization, to assist such entities in the planning for and selection of the final alignment of the Regional Public Transit System.~~

~~The reservation of land to accommodate the Regional Public Transit System will be made as follows:~~

~~i. Land shall be reserved in a manner consistent with the development pattern of the Sustainability Zone in which it resides, and may overlap dedications made for other public uses such as Thoroughfares and utilities as long as the overlap is not contrary to sound planning and engineering practice that ensures that the reservation and dedication are sufficient for all planned infrastructure;~~

~~ii. Reservation shall include an area for transit station functions which shall be located within a UC zone, and shall be reserved in a manner that is in keeping with an urban development pattern of that zone as defined by the SD Plan, and may overlap reservations and, dedications made for other public uses such as Thoroughfares and utilities as long as the overlap is not contrary to sound planning and engineering practice that ensures that the reservation and dedication are sufficient for all planned infrastructure;~~

~~iii. Determination of the form, character, location, and relationship to adjacent development, relationship to other reservations and/or dedications and dimensions shall occur during site planning jointly by the Responsible Person, the TRC or Town Council, as appropriate.~~

~~iv. The reservation of land will prohibit permanent development within the designated reserve area until 2035 at which time, if there are no plans that financially commit the Triangle Transit, and/or other regional transit organization, and/or the Town to implement a regional rail plan that includes the Development, the Responsible Person may consider the reservation null and void.~~

~~v. Land reserved hereunder will be dedicated to Triangle Transit, and/or other regional transit organization, and/or the Town once the applicable entity secures funding and commits to construct the Regional Public Transit System within the Development.~~

~~vi. Buildout of any of single land use of the three (3) uses identified in Article 4.2.2.b.i-iii shall not exceed 85% of the total authorized development for the respective use, unless Town Council otherwise approves in accordance with UDO 2.3.16 F) 3) a), until the commencement of a Regional Public Transit System that will serve Veridea.~~

With the removal of regional rail from the Town's Transportation Plan, the reference to regional rail in this section shall no longer apply and shall be replaced with a requirement that a bus transit center site shall be identified within Veridea (but not within the NCC Campus Property) with the first site plan submittal that includes the area identified as the location of the Bus Transit Center on the Transit Plan Map. The site plan for the transit center shall be submitted to the Town prior to approval of the site plan or subdivision plan containing the 2,000th dwelling unit within Veridea.

Prior to approval of the site plan or subdivision plan for the 3,000th dwelling unit within Veridea, Developer shall construct and install the following Bus Transit Center Improvements:

- Restroom accessible to bus operators. In the event the recreation center required by Section 3.4.2.2 is not located within 500 feet of the Bus Transit Center, the restrooms required herein shall be constructed and installed independent of the recreation center;
- Bus layover area including at least two (2) bus layover parking spaces;

- Park and ride area including at least ten (10) standard vehicle parking spaces (inclusive of ADA space where required);
- Two bus stops (one for each direction of travel) with dimensions per the Town of Apex Standard Specification, including a thirty foot (30') landing pad between the curb and pedestrian circulation, and a six foot (6') by thirty foot (30') amenity pad behind the pedestrian circulation path. The bus stops shall include the following amenities:
    i. One (1) bus shelter (two (2) total)
    ii. One (1) trash receptacle (two (2) total)
    iii. One (1) bench (two (2) total)
    iv. Two (2) bicycle racks (four (4) total)
    v. Direct pedestrian connections to surrounding street network to ADA and PROWAG guidelines
    vi. Final location to be approved by Planning Director

The Town, in its sole discretion, will approve the design and construction of Bus Transit Center Improvements before this condition is considered satisfied. In the event that the Town provides Developer with notice that a fully funded bus route has been approved that will provide service within Veridea prior to the schedule outlined above, then the site plan for the transit center shall be submitted within six (6) months of receipt of said notice and the center shall be constructed and completed within two (2) years of receipt of permit approval for the same.

Modification to 3.5.5.g.ii Perry Road improvements

Veridea shall not exceed 50% build-out of any single land use until ~~both the interchange of Perry Road at US 1 and the interchange of Old Holly Springs Apex Road at Triangle Expressway are open to traffic~~ an overpass for Perry Road is constructed across US HWY 1 in accordance with the Apex Transportation Plan.

Exemption from 4.2.2.b maximum authorized development intensities for Hospital and Behavior Health Center Components of NCC Campus Property

Hospital, behavioral health, and accessory/supportive uses including but not limited to central utility plants, shared services (i.e. laboratory, sterile processing, security, network support, logistics, housekeeping, maintenance, laundry, supply chain, dietary and food preparation), parking structures, ambulatory surgery centers (with or without Emergency Department), and physician office buildings shall be considered a Civic Use for SD Zoning and UDO regulatory requirements including calculations related to maximum development of respective uses within the SD Zoning boundary.

Exemption from 4.2.4 Development Thresholds

Upon commencement of development work on the North Carolina Children's Hospital Campus development thresholds 1-5 contained within Section 4.2.4 shall be deemed satisfied.

Modification to Various Sections

With the exception of references within Section 3.4.2.2, all other references to "building permit" or "certificate of occupancy" as a development threshold shall be replaced with "Site Plan Final Plat or Master Subdivision Final Plat", as determined by staff.

EXHIBIT A-1

McADAMS

PREPARED FOR:
RXR Realty



VERIDEA RECREATION FACILITY & BUS TRANSIT

APEX, NORTH CAROLINA

SCALE: 1" = 100'

RXR22005

© 3..2025

01

ORDINANCE AMENDING THE OFFICIAL ZONING DISTRICT MAP
#09CZ07

WHEREAS, the application of Lookout Ventures, Inc., petitioner, for the rezoning of lands hereinafter described was duly filed with the office of the Planning Director and thereafter public hearings were held hereon on the 13th day of December, 2010 and the 13th day of January, 2011 before the Planning Board and the 18th day of January, 2011, the 1st day and 15th of February, 2011, the 15th day of March, 2011 and the 10th day of May, 2011, before the Town Council, respectively, pursuant to due notice mailed and published pursuant to G.S. § 160A-384. Thereafter, the Planning Board submitted its final report to the Town Council recommending approval of said application for the rezoning of the lands hereinafter described, all in accordance with the requirements of the Town of Apex Unified Development Ordinance and the provisions of Chapter 160A, Article 19, of the North Carolina General Statutes; **NOW, THEREFORE,**

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF APEX

Section 1: The Town of Apex Unified Development Ordinance, including the Town of Apex North Carolina Official Zoning District Map which is a part of said Ordinance, is hereby amended by changing the zoning classification of the lands hereinafter described from Planned Unit Development Conditional Zoning (PUD-CZ), Light Industrial (LI), Rural Residential (RR) and Residential Agricultural (RA) to SD-CZ (Sustainable Development Conditional Zoning) District, said lands so rezoned being described as follows:

See Attachement "A" (Legal Description)

Section 2: The Planning Director is hereby authorized and directed to cause the said Official Zoning District Map for the Town of Apex, North Carolina, to be physically revised and amended to reflect the zoning changes directed by this Ordinance.

Section 3: A request to amend the Official Zoning District Map is granted whereby the previously described property and the subject of the previously mentioned change in zoning classification is subject to the following limitations:

See Attachment "B" (SD Plan and UDO Amendments)

Section 4: This property shall be perpetually bound to the uses authorized, unless subsequently changed or amended as provided for in the Unified Development Ordinance. Site plans for any development to be made pursuant to this amendment to the Official Zoning District Map shall be submitted for site plan approval as provided for in the Unified Development Ordinance.

Section 5: This ordinance shall be in full force and effect from and after its adoption.

Motion by Council Member Jones

Seconded by Council Member Jensen

With 4 Council Member(s) voting "aye."
With 0 Council Member(s) voting "no."

This the 2nd day of August, 2011.

TOWN OF APEX, NORTH CAROLINA

Mayor

ATTEST:

Town Clerk

APPROVED AS TO FORM:

Town Attorney

STATEMENT OF THE APEX TOWN COUNCIL PURSUANT TO G.S. 160A-383 ADDRESSING ACTION ON ZONING PETITION #09CZ09

Lookout Ventures, Inc., owners/applicants (the "Applicant"), submitted a completed application for a conditional zoning on the 1st day of June, 2009 (the "Application"). The proposed conditional zoning is designated #09CZ07.

The Planning Director for the Town of Apex, Dianne Khin, caused proper notice to be given (by publication and posting) of a public hearing on #09CZ07 before the Planning Board held on the 13th day of December, 2010 and the 13th day of January, 2011.

Pursuant to G.S. §160A-384 and Sec. 2.2.11(E) of the Unified Development Ordinance, the Planning Director caused proper notice to be given (by publication and posting), of a public hearing on #09CZ07 before the Town Council on the 18th day of January, 2011, the 1st day and 15th of February, 2011, the 15th day of March, 2011 and the 10th day of May, 2011.

The Apex Planning Board held a public hearing on the 13th day of December, 2010 and the 13th day of January, 2011, gathered facts, received public comments and formulated a recommendation regarding the application for conditional zoning #09CZ07. A motion was made at the Apex Planning Board to recommend approval; the motion passed unanimously for the application for #09CZ07.

The Apex Town Council held a public hearing on the 18th day of January, 2011, the 1st day and 15th of February, 2011, the 15th day of March, 2011 and the 10th day of May, 2011. Dianne Khin presented the Planning Board's recommendation at the public hearing.

All persons who desired to present information relevant to the application for #09CZ07 and who were residents of Apex or its extraterritorial jurisdiction, or who owned property adjoining the property for which the conditional zoning is sought, were allowed to present evidence at the public hearing before the Apex Town Council. No one who wanted to speak was turned away.

The Town Council by a vote of 5 and 0 approved Application #09CZ07.

In zoning Application #09CZ07, Applicant seeks to rezone the subject tract located west of NC 55, south of US#1, north and adjacent to proposed 540 from Planned Unit Development Conditional Zoning (PUD-CZ), Light Industrial (LI), Rural Residential (RR) and Residential Agricultural (RA) to SD-CZ (Sustainable Development Conditional Zoning). After public hearing, Town Council approved the rezoning. This Statement will address consistency with the Town's comprehensive and other applicable plans, reasonableness and affect on public interest.

Approval of the rezoning is in line with the mixed use development proposed on the 2025 Land Use Plan. The rezoning request includes amendments to the Unified Development Ordinance, the 2025 Land Use Plan, and the Official Zoning District Map. The changes being made are consistent with the long range vision to create a unified sustainable development in the requested area. The rezoning is compatible with the surrounding area, and should be of no detriment to immediate neighbors and the surrounding community.

Property Description

Tract 1 (Poe):

BEGINNING at a point which is the northeast corner of the 54.650 acre tract shown on Boundary Survey Prepared for Apex Land Assemblage, LLC by Riley Surveying, PA dated February 23, 2006 and recorded in Book of Maps 2006, Page 416, Wake County Registry; thence along the line of said 54.650 acre tract N 89° 54' 34" W 1794.53 feet to a point in the centerline of Big Branch; thence along the centerline of Big Branch, the following courses and distances denoted L87 through L156 on the following table:

CENTERLINE BIG BRANCH

LINE TABLE		
LINE	*BEARING*	*LENGTH*
L87	*N20° 48' 14" E*	*52.19*
L88	*N27° 36' 15" E*	*25.74*
L89	*N62° 55' 07" E*	*26.76*
L90	*N28° 59' 45" W*	*21.84*
L91	*N05° 57' 55" W*	*34.25*
L92	*N49° 54' 20" E*	*15.65*
L93	*N35° 51' 41" E*	*26.00*
L94	*N57° 55' 36" W*	*27.74*
L95	*S77° 58' 08" W*	*70.86*
L96	*N69° 24' 20" W*	*55.42*
L97	*N16° 11' 53" W*	*54.07*
L98	*N47° 25' 48" E*	*30.81*
L99	*S76° 51' 18" E*	*46.52*
L100	*N23° 56' 06" E*	*15.13*
L101	*N10° 54' 23" E*	*79.33*
L102	*N70° 46' 49" W*	*21.80*
L103	*N13° 56' 38" W*	*44.13*
L104	*N54° 44' 36" W*	*48.38*
L105	*S57° 22' 33" W*	*58.59*
L106	*S44° 34' 58" W*	*46.68*
L107	*N46° 23' 02" W*	*39.79*
L108	*N72° 28' 16" W*	*36.60*
L109	*S47° 16' 54" W*	*18.92*
L110	*N74° 34' 40" W*	*21.22*
L111	*N28° 53' 03" W*	*20.74*
L112	*N42° 52' 48" W*	*46.75*
L113	*N06° 56' 21" E*	*26.65*
L114	*N88° 28' 36" E*	*43.87*
L115	*N27° 02' 14" E*	*18.93*
L116	*N01° 17' 25" E*	*31.60*
L117	*N45° 56' 56" E*	*50.02*
L124	*N39° 28' 55" E*	*39.13*
L125	*N15° 03' 15" W*	*20.63*
L126	*N51° 44' 06" W*	*25.88*
L127	*N30° 05' 45" E*	*27.95*
L128	*S60° 15' 59" E*	*30.79*
L129	*S36° 33' 19" E*	*34.28*
L130	*S78° 44' 24" E*	*52.43*
L131	*N41° 37' 38" E*	*15.36*
L132	*N04° 45' 02" E*	*44.44*
L133	*N30° 38' 49" E*	*51.77*
L134	*N05° 02' 00" W*	*35.48*
L135	*S62° 06' 04" W*	*33.82*
L136	*N44° 56' 44" W*	*39.84*
L137	*N44° 38' 21" E*	*21.58*
L138	*N53° 06' 38 E*	*60.88*
L139	*N61° 14' 38" W*	*39.17*
L140	*N50° 48' 06" W*	*23.78*
L141	*N10° 02' 40" W*	*28.54*
L142	*N38° 49' 48" E*	*55.95*
L143	*N43° 06' 48" W*	*60.59*
L144	*N42° 29' 30" E*	*31.74*
L145	*N70° 52' 59" W*	*69.18*
L146	*N86° 33' 59" W*	*111.94*
L147	*N47° 57' 35" W*	*68.58*
L148	*N30° 54' 08" E*	*32.56*
L149	*N21° 23' 37" W*	*54.07*
L150	*N55° 27' 06" E*	*39.27*
L151	*N03° 24' 04" W*	*46.46*
L152	*N31° 43' 23" E*	*54.96*
L153	*N18° 31' 57" E*	*44.10*
L154	*N01° 09' 10" W*	*65.77*
L155	*N22° 16' 37" W*	*29.93*
L156	*N19° 16' 28" E*	*2.52*

L118	*N01° 25' 13" E*	*14.01*
L119	*N65° 15' 45" W*	*42.02*
L120	*N01° 22' 31" E*	*32.19*
L121	*N46° 17' 51" W*	*51.21*
L122	*N06° 49' 21" E*	*35.97*
L123	*N69° 35' 22" E*	*41.13*

Thence leaving the course of Big Branch, N 87° 20' 59" E 1317.72 feet to a point; thence N 00° 20' 59" E 1411.74 feet to a point; thence N 87° 17' 47" E 1396.96 feet to a point; thence S 02° 19' 40" W 527.05 feet to a point; thence S 90° 00' 00" W 750.13 feet to a point; thence S 00° 00' 00" W 967.73 feet to a point; thence N 77° 55' 24" E 389.22 feet to a point; thence N 01° 29' 14" E 148.65 feet to a point; thence N 65° 20' 41" E 538.98 feet to a point; thence S 02° 20' 59" W 179.73 feet to a point; thence S 02° 28' 41" W 1915.88 feet to a point; thence N 89° 11' 33" W 648.01 feet to the point and place of beginning and being all of Tract 3 containing 128.439 acres shown on a survey entitled "Exempt Division Survey – Property of Bobby and Elizabeth Poe" prepared by Riley Surveying, PA dated November 9, 2006.

Tract 2 (Poe):

BEING all of the 1.710 acre tract and the 0.042 acre tract shown as area in the right of way of Old Holly Springs – Apex Road shown on a map entitled "Property of Bobby W. and Elizabeth A. Poe, F.D. Prince, Sr, Trustee" recorded in Book of Maps 2002, Page 109, Wake County Registry, reference to which is hereby made for greater certainty of description and also being more particularly described as follows: Beginning at an existing nail in the northwest corner of the property of E.K. Huang, et. al. as described in Deed Book 6650, Page 866, Wake County Registry, and the southwest corner of the property of F.D. Prince, Sr. as described in Deed Book 8291, page 540, Wake County Registry, runs thence North 05 degrees 23 minutes 24 seconds East 64.21 feet to an iron pipe; thence North 74 degrees 31 minutes 24 seconds East 381.93 feet to an iron pipe; thence South 86 degrees 04 minutes 18 seconds East 863.27 feet to an iron pipe in the west right of way of SR 1153 (Old Holly Springs – Apex Road). Thence South 86 degrees 04 minutes 18 seconds East 30.32 feet to the centerline of SR 1153; thence along the centerline of SR 1153, South 12 degrees, 45 minutes 03 seconds West 60.72 feet to a point; thence with the north line of Huang, et. al., North 86 degrees 04 minutes 18 seconds West 30.32 feet to an existing iron pipe; thence North 86 degrees 04 minutes 18 seconds West 843.70 feet to an existing iron pipe; thence South 74 degrees 31 minutes 24 seconds West 394.54 feet to an existing iron pipe, the point and place of Beginning, and also being Tract 1 containing 1.754 acres shown on a survey entitled "Exempt Division Survey – Property of Bobby and Elizabeth Poe" prepared by Riley Surveying, PA dated November 9, 2006.

Tract 3 (Lyna):

BEGINNING at a point in the centerline of Old Holly Springs Apex Road, said point being calculated as follows: Beginning at a point in the line of Tract A shown on a map entitled "Proposed Subdivision and Recombination of Properties of Wake County" which is recorded in Book of Maps 1998, Page 782, Wake County Registry, said point also being North 45° 03' 47" East 1591.01 feet from the centerline of the intersection of Old Holly Springs Apex Road and

Woods Creek Road; thence North 09° 24' 42" East 362.56 feet to a point; thence North 85° 47' 44" West 162.21 feet to an iron pin in the centerline of Old Holly Springs Apex Road; thence along the centerline of Old Holly Springs Apex Road in an northerly direction along a left hand curve having a radius of 1963.49 feet an arc distance of 423.08 feet and chord bearing and distance of North 12° 12' 26" East 422.26 feet to the POINT AND PLACE OF BEGINNING: thence continuing along the centerline of said Old Holly Springs Apex Road in a northerly direction along a left hand curve having a radius of 1963.49 feet, an arc distance of 259.39 feet and a chord bearing and distance of North 02° 14' 59" East 259.20 feet; thence North 00° 00' 56" East 187.39 feet to a point; thence South 67° 20' 57" East 925.18 feet to a point; thence South 61° 30' 00" East 301.10 feet to a point; thence South 73° 33' 19" East 346.87 feet to a point; thence South 74° 36' 50" East 217.48 feet to a point; thence South 70° 39" 03" East 219.39 feet to a point; thence South 66° 06' 14" East 183.83 feet to a point; thence South 51° 10' 55" East 327.09 feet to a point in the centerline of White Oak Creek a/k/a Falls Branch Creek; thence along the centerline of said creek as follows: South 03° 23' 35" East 31.18 feet to a point; thence South 19° 58' 50" East 138.13 feet to a point; thence South 09° 01' 05" West 63.94 feet to a point; thence South 22° 49' 37" West 94.25 feet to a point; thence South 05° 19' 49" West 65.12 feet to a point; thence leaving the center line of said creek N 67° 48' 05" W 2481.26 feet to the point and place of BEGINNING and being all of Tract 1 containing 23.62 acres as shown on a survey entitled "Exempt Subdivision prepared for Apex Land Assemblage, LLC" by Riley Surveying, P.A. dated May 13, 2005.

Tract 4 (Reeves):

BEGINNING at a point in the line of Tract A shown on a map entitled "Proposed Subdivision and Recombination of Properties of Wake County" which is recorded in Book of Maps 1998, Page 782, Wake County Registry, said point also being North 45° 03' 47" East 1591.01 feet from the centerline of the intersection of Old Holly Springs Apex Road and Woods Creek Road, being the point and place of BEGINNING, thence North 09° 24' 42" East 362.56 feet to a point; thence North 85° 47' 44" West 162.21 feet to a point; thence North 85° 47' 44" West 30.48 feet to an iron pin in the centerline of Old Holly Springs Apex Road; thence along the centerline of Old Holly Springs Apex Road in an northerly direction along a left hand curve having a radius of 1963.49 feet, an arc distance of 423.08 feet and chord bearing and distance of North 12° 12' 26" East 422.26 feet to a point; thence leaving the centerline of said road South 67° 48' 05" East 2481.26 feet to a point in the centerline of White Oak Creek a/k/a Falls Branch Creek; thence along the centerline of said creek as follows South 05° 19' 49" West 39.71 feet to a point; thence South 17° 13' 42" West 52.16 feet to a point; thence South 63° 16' 26" West 25.88 feet to a point; thence South 17° 55' 39" West 68.74 feet to a point; thence leaving the line of said creek North 78° 00' 00" West 876.99 feet to a point; thence North 84° 10' 00" West 1370.01 feet to the point and place of BEGINNING, and being all of Tract 2 containing 23.62 acres as shown on a survey entitled "Exempt Subdivision prepared for Apex Land Assemblage, LLC" by Riley Surveying, P.A. dated May 13, 2005.

Tract 5 (Goodwin/ALAN):

BEING all that certain tract or parcel of land containing 54.650 acres, more or less, as shown on plat of survey entitled "Boundary Survey Prepared for Apex Land Assemblage, LLC" dated February 16, 2006 and revised February 23, 2006, prepared by Phillip W. Riley, professional Land Surveyor, of Riley Surveying, P.A. and recorded in Book of Maps 2006, Page 416, Wake County Registry, which plat is referenced for a more particular description.

Tract 6 (Adams):

BEING all that certain tract or parcel of land containing 86.334 acres as shown on plat of survey entitled "Boundary Survey, Prepared for HH Trinity Apex Investments, LLC, Holly Springs Township, Wake County, NC" dated September 17, 2007, prepared by Phillip W. Riley, Professional Land Surveyor, of Riley Survey, P.A. and recorded in Book of Maps 2007, Page 2469, Wake County Registry, which plat is referenced for a more particular description.

Tract 7 (Cox):

BEING all that certain tract or parcel of land containing 65.210 acres as shown on plat of survey entitled "Boundary Survey, Prepared for HH Trinity Apex Investments, LLC, Holly Springs Township, Wake County, NC" dated September 19, 2007, prepared by Phillip W. Riley, Professional Land Surveyor, of Riley Survey, P.A. and recorded in Book of Maps 2007, Page 2467, Wake County Registry, which plat is referenced for a more particular description.

Tracts 8 - 11 (Raymer):

BEING all those certain tracts or parcels of land designated as Tract I-A, containing 278.521 acres; Tract II, containing 2.134 acres; Tract III, containing 4.333 acres; and Tract 840' x 40', containing 0.626 acres, as shown on plat of survey entitled "Boundary Survey, Prepared for HH Trinity Apex Investments, LLC, Holly Springs Township, Wake County, NC" dated September 20, 2007, prepared by Phillip W. Riley, Professional Land Surveyor, of Riley Surveying, P.A. and recorded in Book of Maps 2007, Page 2468, Wake County Registry, which plat is referenced for a more particular description.

Tract 12 (Apex Town Square):

Being all of that certain tract of land lying in the Town of Apex, Holly Springs Township, Wake County, North Carolina, and being more particularly described as follows:

BEGINNING at an existing iron pipe at the northeastern corner of the now or formerly EMC Corporation property described in Deed recorded Book 2791, Page 428, Wake County Registry, said pipe also being located in the western line of the now or formerly Cash and Maynard Tract 1-A as shown on plat of survey recorded in Book of Maps 2003, Page 398, Wake County Registry (the "Plat"), said pipe being located North 02° 14' 00" East 271.08 feet from a common corner with said Cash and Maynard Tract 1-A and the now or formerly Cor Bregman property in said EMC Corporation's eastern property line as shown on the Plat; thence with said EMC Corporation's northern property line, South 89° 33' 33" West 1,910.66 feet to an existing iron pipe; thence with EMC Corporation's interior eastern property line, North 02° 07' 56" East

543.28 feet to an existing iron pipe, the southeastern corner of the now or formerly Colon Hobby property; thence with the eastern property line of said Colon Hobby property, North 00° 59' 41" East 734.53 feet to a set iron pipe marking the southwest corner of the said Cash and Maynard Tract 1-A; thence with said Cash and Maynard's Tract 1-A's southern property line and passing over an existing iron pipe at a distance of 15.08 feet, South 87° 48' 34" East 1,905.24 feet (total) to an existing iron pipe; thence continuing with said Cash and Maynard's Tract 1-A's interior western property line, South 01° 15' 42" West 1,190.09 feet to the point or place of BEGINNING, containing 53.939 acres, more or less, including any deed/survey gaps that may exist along the western line of the property herein described, as shown on the Plat, which Plat is referenced for a more particular description and being all of the property conveyed to Apex Town Square, LLC, by deed dated January 6, 2006, and recorded in Book 11766, Page 242, Wake County Registry.

Tract 13 (Bregman):

Lying and being in Town of Apex, Holly Springs Township, Wake County, North Carolina, and being more particularly described as follows:

BEGINNING at an existing iron pipe at a corner of the property now or formerly owned by Heartland Raleigh Apex U.S. 1 Limited Partnership (Book 4454, Page 666, Wake County Registry ["WCR"]), said pipe being located at NC Grid Coordinates: N=707,936.09; E2,048,195.68, and also being located South 31° 57' 19" West a distance of 2,292.37 feet (Grid) from NCGS Monument "TANK" (N=709,881.08; E2,049,408.93); from said POINT OF BEGINNING, running thence along and with the western line of the aforesaid Heartland Raleigh property the following courses and distances:

- South 02° 41' 34" West a distance of 537.74 feet to an existing iron pipe;
- South 02° 41' 34" West a distance of 100.28 feet to an existing iron pipe;
- South 02° 41' 34" West a distance of 2.08 feet to an existing iron pipe;
- South 02° 39' 56" West a distance of 37.18 feet to an existing iron pipe in the northern right-of-way of Technology Drive;

running thence along and with the northern right-of-way of Technology Drive the following courses and distances:

- along and with the arc of a curve to the left having a radius of 411.97 feet (Chord Bearing: South 60° 59' 56" West; Chord Distance: 224.57 feet) a distance of 227.45 feet to an existing iron pipe;
- South 45° 37' 55" West a distance of 288.89 feet to an existing iron pipe;
- South 44° 59' 17" West a distance of 549.68 feet to an existing iron pipe;
- South 44° 59' 17" West a distance of 70.66 feet to an existing iron pipe;
- along and with the arc of a curve to the right having a radius of 351.97 feet (Chord Bearing: South 57° 36' 33" West; Chord Distance: 151.96 feet) a distance of 153.17 feet to an existing iron pipe;
- along and with the arc of a curve to the right having a radius of 351.97 feet (Chord Bearing: South 79° 30' 30" West; Chord Distance: 115.27 feet) a distance of 115.79 feet to an existing iron pipe;
- South 88° 51' 29" West a distance of 164.77 feet to a point in the eastern line of property

now or formerly owned by Data General (Book 2791, Page 428, WCR);

leaving the northern right-of-way of Technology Drive and running thence along and with the eastern line of the aforesaid Data General property, North 02° 16' 29" East a distance of 1,200.00 feet to an existing iron pipe; continuing with the eastern line of the Data General property and running thence North 02° 17' 20" East a distance of 416.31 feet to an existing iron pipe in the southern line of the aforesaid Heartland Raleigh property; running thence along and with the southern line of the Heartland Raleigh property, South 86° 16' 48" East a distance of 1,218.14 feet to the POINT AND PLACE OF BEGINNING, containing 34.0763 acres, more or less, and being all of Tract 4 north of the right-of-way of Technology Drive, as shown on that certain survey entitled "Recombination And Minor Subdivision of Technology Drive Property For Thomas H. Byrd, III", dated December 11, 1996, and prepared by Niall W. Gillespie, R.L.S. (No. L-2629) (File Name: BYRDTOPO), to which survey reference is hereby made for a more particular description, and being the same property conveyed to Cor S. Bregman by deed recorded in Book 7409, Page 255, Wake County Registry, and being the same property conveyed to Cornelius S. Bregman and Kandes K. Bregman, as Trustees of the Cornelius and Kandes Bregman Trust, under Agreement dated September 20, 1999 by deed recorded in Book 10856, Page 2786, Wake County Registry, LESS AND EXCEPT (i) the property conveyed to Thomas H. Byrd, IV, and wife Lisa W. Byrd, by deed recorded in Book 10129, Page 491, Wake County Registry, and (ii) the property conveyed to the Department of Transportation by deed recorded in Book 8128, Page 153, Wake County Registry.

Tracts 14 - 15 (EMC):

Being all those certain tracts or parcels of land containing approximately 47.419 acres and identified as portions of parcel identification numbers 0740672147 (containing approximately 46.61 acres) and 0740570471 (containing approximately 77.66 acres), and as generally shown as Tract 2 on the map attached hereto as Schedule 1.

Tract 16 (Whitehouse):

Being all that certain tract or parcel of land containing approximately 27.47 acres and identified as parcel identification number 0740287376 and being the same property conveyed to Brenda P. Whitehouse, individually, a 55% undivided interest, and Brenda P. Whitehouse as Trustee of the Irene F. Prince Family Trust dated February 19, 2004, a 45% undivided interest, by deed recorded in Book 10680, Page 477, Wake County Registry.

Tract 17 (F. Prince):

Being all that certain tract or parcel of land containing approximately 75.63 acres and identified as parcel identification number 0740191376 and being the same property conveyed to F.D. Prince, Sr., sole Trustee, or his successors in trust, under the Frank Dixon Prince, Sr. Living Trust, dated October 20, 1988, and any amendments thereto, by deed recorded in Book 8291, Page 540, Wake County Registry.

Tract 18 (F. Prince):

Being all that certain tract or parcel of land containing approximately 21.36 acres and identified as parcel identification number 0730996270 and being the same property conveyed to F.D. Prince, Sr., sole Trustee, or his successors in trust, under the Frank Dixon Prince, Sr. Living Trust, dated October 20, 1988, and any amendments thereto, by deed recorded in Book 8291, Page 540, Wake County Registry.

Tract 19 (B. Prince):

Being all that certain tract or parcel of land containing approximately 32.06 acres and identified as parcel identification number 0741207566 and being the same property conveyed to William Ira Prince, III, by deed recorded in Book 2673, Page 652, Wake County Registry.

Tract 20 (J. Prince):

Being all that certain tract or parcel of land containing approximately 1.80 acres and identified as parcel identification number 0740293940 and being the same property conveyed to William I. Prince and Jean P. Prince, by deed recorded in Book 6217, Page 146, Wake County Registry.

Tracts 21-38 (Stephens):

Being all of those certain tracts or parcels of land identified as parcel identification numbers 0740886966, 0740991702, 0740992565, 0740991337, 0740991237, 0740990140, 0740980647, 0740982309, 0740982534, 0740982635, 0740982769, 0740982866, 0740982964, 0740982929, 0740992024, 0740992069, 0740992169 and 0740982764.

Tract 39 (Tew):

Being all that certain tract or parcel of land containing approximately 1.84 acres and identified as parcel identification number 0741203157 and being the same property conveyed to Kim Prince Tew, and husband, David Wayne Tew, by deed recorded in Book 10633, Page 1741, Wake County Registry.

Tract 40 (Huang):

Being all that certain tract or parcel of land containing approximately 13.33 acres and identified as parcel identification number 0740180091 and being the same property conveyed to Ruey Shiue Huang, Co-Trustee, and Edward K. Huang, Co-Trustee, of The Huang Family Trust, dated September 30, 2005, by deed recorded in Book 10656, Page 33, Wake County Registry.

Sustainable Development Plan

for

VERIDEA

A Sustainable Mixed-Use Community
Apex, North Carolina

10 MAY 2011

Responsible Person:

Lookout Ventures, Inc.
P. O. Box 1166
Zebulon NC

SUSTAINABLE DEVELOPMENT PLAN

DEVELOPER AND RESPONSIBLE PERSON

Lookout Ventures, Inc.
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Contact: Tom Hendrickson
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EQUITY PARTNER

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MASTER PLANNING • PLACEMAKING

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CIVIL ENGINEERING

WSP Sells
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Cary NC 27513

BBM Associates, Inc.
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TRANSPORTATION

Kimley-Horn and Associates, Inc.
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Cary NC 27513

ENERGY PLANNING

Sanford Law Office, P.L.L.C
530 North Person Street
Raleigh NC 27604

SUSTAINABILITY AGENDA
BASED ON
PRINCIPLES AND GOALS
DEVELOPED BY

William McDonough + Partners
700 East Jefferson Street
Charlottesville VA 22902

LANDSCAPE ARCHITECTURE

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ENVIRONMENTAL STRATEGY

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ARTICLE 1.0 DEFINITIONS OF CAPITALIZED TERMS USED IN THE SUSTAINABLE DEVELOPMENT (SD) PLAN

A-Grid: cumulatively, those Thoroughfares that by virtue of their pedestrian-supportive qualities, and their importance to pedestrian connectivity, are part of multi-modal transportation network that is vehicle tolerant and is linked to the contextual nature of the place. *See B-Grid.*

A-Grid Zones: areas of the Concept Map where A-Grids are required.

Accessory Structures: structures or buildings incidental to and appropriate to support a Function or use (i.e., ticket booths and storage for outdoor amphitheaters, and dugouts and storage for baseball and softball.)

Accessory Unit or Building: a dwelling not greater than 800 square feet sharing ownership and shared or separate utility connections with a Principal Building. *See Table 10 and Table 17.* (Syn: ancillary unit)

Advanced Materials: a broad technology category based on a rapidly evolving area of science, with applications ranging from aircraft to computer chips. Advanced structural materials can make products strong, lighter, and more effective as well as enable the development of totally new products. The materials can increasingly be designed and tailored to specific applications. A material is said to be "advanced" if it is a new material for the application. *See Table 12.*

Agricultural Plot: a parcel of land used for small-scale agricultural purposes such as the raising of agricultural products or poultry. *See Table 12 and Table 19.*

Alleé: a regularly spaced and aligned row or rows of trees usually planted along a Thoroughfare or Path.

Anticipatory Design: a development approach intended to predict and facilitate the use of innovative technology and other best development practices as they evolve and become practically and economically feasible over time.

Arcade: a Private Frontage conventional for Retail use wherein the Facade is a colonnade supporting habitable space that overlaps the Sidewalk, while the Facade at Sidewalk level remains at the Frontage Line.

Avenue ("**AV**"): a Thoroughfare designed for high vehicular capacity and low to moderate speed, acting as a short distance connector between Village Centers, and usually equipped with a landscaped median.

B-Grid: cumulatively, those Thoroughfares that by virtue of their use or location are vehicle supportive and pedestrian tolerant. *See A-Grid.*

B-Grid Zones: areas of the Concept Map where B-Grids are permitted.

Backbuilding: a single-Story structure connecting a Principal Building to an Outbuilding. *See Table 17.*

Bed and Breakfast: an owner or manager controlled Lodging type, permitted to serve breakfast in the mornings to guests in the Neighborhood General (NG) zone and at all times in other Sustainable Zones.

Bicycle Lane ("**BL**"): a dedicated lane for cycling within a moderate-speed vehicular Thoroughfare.

Bicycle Route ("**BR**"): a Thoroughfare suitable for the shared use of bicycles and automobiles moving at low speeds. These routes are signed as "bike route."

Bicycle Trail ("**BT**"): a bicycle and pedestrian way running independently of a vehicular Thoroughfare.

Biotechnology: the science of using living things and components of living things to produce goods and services. It involves manipulating and modifying organisms, often at the molecular level, to create new and practical applications for agriculture, medicine and industry. *See Table 12.*

Block: the aggregate of private Lots, Passages, Rear Alleys and Rear Lanes, circumscribed by Thoroughfares.

Boulevard ("**BV**"): a Thoroughfare designed for high vehicular capacity and moderate speed, traversing an urbanized area. Boulevards are usually equipped with Slip Streets buffering Sidewalks and buildings.

By Right: characterizing a proposal or component of a proposal for the Development that is allowed by the SD Plan.

Civic Building: a building primarily dedicated to public functions such as arts, culture, education, recreation, government, transit, and parking, or for other public purposes. Civic Buildings are primarily operated by public or not-for-profit entities.

Civic Space: land containing a Civic Building and/or an outdoor area dedicated for public use including Parks but not including street rights of way. Civic Space types are defined by the combination of certain physical constants including the relationships among their intended use, their size, their landscaping and their enfronting buildings. *See Table 13.*

Civic Use: Open Space that is designated for Civic Buildings and Civic Space and Public Space.

Commercial: the term collectively defining workplace, Office, Retail, and Lodging Functions.

Common Destination: an area of focused community activity. It may include, without limitation, one or more of the following: a Civic Space, a Civic Building, a Commercial center, or a transit station or stop, and may act as the social center of a neighborhood.

Community Garden: a grouping of garden plots available for small scale cultivation, generally to the residents of apartments and other dwelling types without private gardens, permitting individual storage sheds, and providing a locus of recreation and sociability greater than that of a private yard, thus being a Common Destination.

Concept Map: *See* Veridea **Sustainable Development Concept Map**.

Concessions: a place where food, drinks and incidental retail items are sold or rented.

Conference Center: a facility that is constructed for and devoted to meetings and meeting space. *See Table 12.*

Configuration: the form of a building, based on its massing, Private Frontage, and height or the geographic characteristics of an area of land.

Convention Center: a Facility designed to accommodate multiple groups or large groups and consisting of exhibit halls, meeting rooms, ballrooms or banquet space but not sleeping accommodations. *See Table 12.*

Corridor: a lineal geographic system incorporating transportation and/or Greenway trajectories.

Curb: the edge of the vehicular pavement that may be raised or flush to a Swale. It usually incorporates the drainage system. *See Table 4A and Table 4B.*

Density: the amount of development measured on the basis of a Gross Acre of land area expressed in the number of Dwelling Units Per Acre ("DUA") for residential or Floor Area Ratio ("FAR") for non-residential.

Design Speed: the velocity at which a Thoroughfare tends to be driven without the constraints of signage or enforcement. There are four ranges of speed: Very Low: (below 20 MPH); Low: (20-25 MPH); Moderate: (25-35 MPH); High: (above 35 MPH). Lane width is determined by desired Design Speed. *See Table 3A.*

Design Standards: all of the provisions of the SD Plan, other than authorized Density, related to the development of Veridea, including but not limited to standards, designs, criteria, illustrations and other elements and materials of both a descriptive and proscriptive nature.

Developable Areas: lands other than those in the OS Open Space Zone.

Development: refers to Veridea and the land encompassed by the Veridea Sustainable Development Plan as a whole.

Disposition: the placement of a building on its Lot. *See Table 9 and Table 17.*

Drive ("**DR**"): a Thoroughfare along the boundary between an urbanized and a natural condition, usually along a waterfront or Park. One side has the urban character of a Thoroughfare, with Sidewalk and building, while the other has the qualities of a Road or parkway, with naturalistic planting and rural details.

Dwelling Units Per Acre ("**DUA**"): the number of dwelling units per Gross Acre.

Driveway: a vehicular lane within a Lot, often leading to a garage. *See Article 5.8 and Table 3B.f.*

Effective Parking: the amount of parking required for Mixed Use after adjustment by the Shared Parking Factor. *See Table 11.*

Effective Turning Radius: the measurement of the inside Turning Radius taking parked cars into account. *See Table 17.*

Elevation: an exterior wall of a building not along a Frontage Line. *See Table 17.* See: **Facade.**

Encroach: to break the plane of a vertical or horizontal regulatory limit with a structural element so that it extends into a Setback, into an easement, into the Public Frontage, or above a height limit.

Encroachment: any structural element that breaks the plane of a vertical or horizontal regulatory limit, extending into a Setback, into an easement, into the Public Frontage, or above a height limit.

Environmental Enhancement Plan: additional Sustainability Standards related to environmental enhancement required to be submitted to the Town Council for approval in accordance with UDO 2.3.16 F) 3) b).

Existing Communication Towers: towers that are currently in place within Veridea, including any and all guy wires, anchors, supporting cables, tower assembly, and ancillary buildings.

Expression Line: a line prescribed at a certain level of a building for the major part of the width of a Facade, expressed by a variation in material or by a limited projection such as a molding or balcony. *See Table 8.* (Syn: transition line.)

Facade: the exterior wall of a building that is set along a Frontage Line. *See* **Elevation.**

Farm: an active, usually commercial, agricultural operation, such as the raising of agricultural products, livestock, poultry and dairying at a scale requiring industrial sized machinery and farm buildings, consistent with the requirements and limitations of the UDO. *See Table 12 and Table 19.*

Floor Area Ratio ("**FAR**"): the ratio of total building floor area per Gross Acre.

Forecourt: a Private Frontage wherein a portion of the Facade is close to the Frontage Line and the central portion is set back. *See Table 7.*

Frontage: the area between a building Facade and the vehicular lanes, inclusive of its built and planted components. Frontage is divided into **Private Frontage** and **Public Frontage.** *See Table 4A and Table 7.*

Frontage Line: a Lot Line bordering a Public Frontage. Facades facing

Frontage Lines define the public realm and are therefore more regulated than the Elevations facing other Lot Lines. *See Table 17.*

Function: the use or uses accommodated by a building and its Lot, categorized as *Restricted, Limited,* or *Open*, according to the intensity of the use. *See Table 10 and Table 12.*

Gallery: a Private Frontage conventional for Retail use wherein the Facade is aligned close to the Frontage Line with an attached cantilevered shed or lightweight colonnade overlapping the Sidewalk. *See Table 7.*

Goal(s): the desired result of Veridea's effort to achieve sustainability.

Green: a Civic Space type for unstructured recreation, spatially defined by landscaping rather than building Frontages. *See Table 13.*

Green Roof: a building roof partially or completely covered with vegetation and soil, or some other living medium, over a waterproofing membrane.

Green Technology: a continuously evolving group of methods and materials, including—but not limited to—environmentally-sound techniques for: generating energy, energy efficiency, chemistry, nanotechnology and construction. *See Table 12.*

Greenway: a Corridor in largely natural conditions, which shall include trails for bicycles or pedestrians.

Gross Acre: an acre of land within the Veridea Sustainable Development District used for the purpose of Density calculation.

Guiding Principles: the Principles used to develop Veridea.

High Performance Computing: the use of supercomputers and computer clusters to solve advanced computation problems. *See Table 12.*

Highway ("**HW**"): a rural and suburban Thoroughfare of high vehicular speed and capacity. This type is allocated to the more rural Sustainable Zones (OS and NG).

Home Occupation: non-Retail Commercial enterprises within or closely associated with a dwelling.

Impermeable Surface: surfaces constructed using materials that allow no infiltration of water into the soil. Impermeable surfaces include, but are not limited to, public and private Thoroughfares, sidewalks, driveways, rooftops, parking lots and patios constructed with asphalt, concrete, compacted aggregate base course or other impervious materials. The surface area of bodies of water (natural or man-made) and wooden decks shall be considered permeable and shall not be included in the calculation of built-upon area. Green Roofs, permeable pavements, and other surfaces constructed with uniformly graded gravel, porous materials or pervious materials and designed in accordance with the NC Division of Water Quality Stormwater Best Management Practices Manual to accommodate the infiltration of water shall not be considered impermeable surfaces and shall not be included in the

calculation of the built-upon area.

Independent Living: a Project, or a portion of a Project, consisting of residences of any type or various types primarily accommodating age targeted residents maintaining an independent lifestyle.

Industrial: the term collectively defining Manufacturing, warehousing and storage uses.

Information Technology: the application of computer, communications and software technology to the management, processing and dissemination of information. *See Table 12.*

Internal Trip Capture: a concept used in transportation modeling to define an automobile trip between different land uses within Veridea that would have required an automobile trip external to the site.

Layer: a range of depth of a Lot, measured from the Frontage Line, within which certain elements are permitted. *See Table 17.*

Lightwell: a Private Frontage type that is a below-grade entrance or recess designed to allow light into basements. *See Table 7.* (Syn: light court.)

Liner Building: a building specifically designed to mask a blank building wall, a service area, a parking lot, or a Parking Structure from a Frontage.

Live-Work: a Mixed Use unit consisting of a Commercial and Residential Function. *See Table 10.*

Lodging: premises available for daily and weekly renting of bedrooms. *See Table 10 and Table 12.*

Lot: a parcel of land accommodating a building or buildings of unified design. The size of a Lot is controlled by its width in order to determine the grain (i.e., fine grain, as characterized by a tight-knit Thoroughfare grid, or coarse grain, as characterized by a loose-knit street grid) of the urban fabric.

Lot Line: the boundary that legally and geometrically demarcates a Lot.

Lot Width: the length of the Principal Frontage Line of a Lot.

Manufacturing: all areas of manufacturing, including design, control, fabrication, and assembly for uses where activities are conducted and confined within a building or structure including, but are not limited to: electronics, computers/IT, instrumentation, industrial equipment, medical, pharmaceutical, telecom, aerospace, defense, government, appliances, food, beverage and consumer products.

Medical Devices: products used for medical purposes for patients, in diagnosis, therapy or surgery. *See Table 12.*

Mixed Use: multiple Functions within the same building through vertical integration or adjacency, or in multiple buildings by adjacency.

Mixed Use Block: See Mixed Use and Block. *See Table 12.*

Modular Construction: single-family, multi-family or mixed use building constructed on-site and composed of components substantially assembled in a manufacturing plant and transported to the building site for final assembly that complies with the requirements of the North Carolina State Building Code.

Nanotechnology: is an advanced technology involving the fabrication and use of devices so small that the convenient unit of measurement is the nanometer (one thousand-millionth of a meter); or, is the art of manipulating and exploiting the properties of matter at a molecular level. *See Table 12.*

Natatorium: a building containing a swimming pool. *See Table 12.*

NCDENR: The North Carolina Department of the Environment and Natural Resources, or any successor executive agency or agencies having the powers and authority of such department.

Neighborhood General: A Sustainable Zone. *See* Table 1.

Neighborhood Mixed-Use: A Sustainable Zone. *See* Table 1.

Non-residential Uses: uses and building functions other than residential. Vertically integrated residential and Non-residential uses will be considered non-residential for the purposes of the SD Plan and the UDO. *See Article 4.2.2 and Table 12.*

Office: premises available for the transaction of general business, lab and research uses but excluding Retail uses. *See Table 10.*

Open Space ("**OS**"): A Sustainable Zone. *See* Table 1.

Outbuilding: an Accessory Building, usually located toward the rear of the same Lot as a Principal Building, and sometimes connected to the Principal Building by a Backbuilding. *See Table 17.*

Park: a Civic Space type or type of Open Space used for active and/or passive recreation purposes or natural preserve available for unstructured recreation, including all examples in Table 13.

Parking Garage (deck): See Parking Structure.

Parking Management Plan: a plan setting forth various policies and programs intended to optimize the efficient use of parking resources.

Parking Structure: a building containing one or more Stories of parking at, above and/or below grade. A Parking Structure may be stand alone or may be connected to or integrated with other uses. *See Table 12.*

Passage ("**PS**"): a pedestrian connector, open or roofed, that passes between buildings to provide shortcuts through long Blocks and connect rear parking areas to Frontages.

Path ("**PT**"): a pedestrian and/or bicycle way traversing a Park or rural area, with landscape matching the contiguous Neighborhood General (NG) Zone, ideally connecting directly with the urban sidewalk network.

Pattern Book(s): a book or books of text, diagrams and illustrations setting forth the principles of design for Veridea or some portion thereof in order to provide consistencies in characteristic form, massing, composition, style, method, materials, lighting and signage while simultaneously allowing for architectural and aesthetic diversity.

Planter: the element of the Public Frontage, which accommodates street trees and other vegetation, whether continuous or individual.

Plaza: a Civic Space type designed for Civic purposes and Commercial activities in the more urban Sustainable Zones, generally paved and spatially defined by building Frontages.

Power Facility: A facility for the generation of electric or thermal power. *See Table 12.*

Principal Building: the main building on a Lot, usually located toward the Frontage. *See Table 17.*

Principal Entrance: the main point of access for pedestrians into a building.

Principal Frontage: on corner Lots, the Private Frontage designated to bear the address and Principal Entrance to the building, and the measure of minimum Lot width. *See* **Frontage.**

Principle(s): fundamental positions that serve as the foundation for the creation of Veridea.

Private Frontage: the privately held Layer between the Frontage Line and the Principal Building Facade. *See Table 7 and Table 17.*

Project: individual developments within the Veridea Sustainable Development District to which the Sustainable Development Plan applies.

Public Frontage: the area between the Curb of the vehicular lanes and the Frontage Line, possibly containing utility easements, for walkways. *See Table 4A and Table 4B.*

Public Parking Facility: a parking facility that may include decks, structures or lots that may be publicly or privately owned and contain shared spaces available for public use that are not allocated to other residential or non-residential uses within Veridea.

Public School: A school operated by the Wake County Public Schools System, a charter school, or other type of school sanctioned by the State of North Carolina for public instruction and wholly or partially funded by the State and/or Wake County.

Public Space: land accessible to the general public through dedication or easement, but not including street rights of way.

Rear Alley ("**RA**"): a vehicular way, either public or private, located to the rear of Lots providing access to service areas, parking, and Outbuildings and possibly containing utility easements. *See Table 4A and Table 4C.*

Rear Lane ("**RL**"): a vehicular way, either public or private, located to the rear of Lots providing access to service areas, parking, and Outbuildings and containing utility easements. *See Table 4A and Table 4C.*

Rearyard: a building that occupies the full Frontage Line, leaving the rear of the Lot as the sole yard. *See Table 9.* (Var: Townhouse, Apartment House)

Regional Public Transit System: a transit system operated by a public agency that serves a geographic area that extends beyond the jurisdictional limits of the Town of Apex that includes, as one of its elements, a fixed guideway or comparable transit technology.

Renewable Energy Facility: a facility that either: i) generates thermal and/or electric power primarily by the use of a Renewable Energy Resource; ii) uses heat derived primarily from a Renewable Energy Resource to produce electricity or useful, measurable thermal or mechanical energy; iii) is a solar thermal energy facility; iv) specifically allows for co-firing with non-renewable energy resources as long as non-renewable energy resources are not the primary energy source; or v) provides energy storage capacity.

Renewable Energy Resource: a solar electric, solar thermal, wind, hydropower, geothermal, or ocean current or wave energy resource; a biomass resource, including agricultural waste, animal waste, wood waste, spent pulping liquors, combustible residues, combustible liquids, combustible gases, energy crops, or landfill methane; waste heat derived from a renewable energy resource and used to produce electricity or useful, measurable thermal energy; or hydrogen derived from a renewable energy resource. Renewable Energy Resource does not include peat, a fossil fuel, or nuclear energy resource.

Responsible Person: that person identified in the SD Plan and appointed pursuant to UDO 2.3.16 D), or his successors or assigns, to make certain decisions with respect to the SD Plan and the zoning of Veridea. The Responsible Person is sometimes referred to in this SD Plan as the "Developer."

Retail: the sale, (other than wholesale), rental or repair of goods, merchandise and services and food and beverage service and sales.

Retail Kiosk: a place where merchandise and food and drink may be sold or rented. *See Table 12.*

Retail Storage within Retail Spaces: stock rooms and storage areas located within retail spaces. *See Table 12.*

Road ("**RD**"): a local, rural and suburban Thoroughfare of low-to-moderate vehicular speed and capacity. This type is allocated to the more rural, less dense Sustainable Zones (OS-NG). *See Table 3A and Table 4C.*

School Authority: The Wake County Public Schools System or other entity having state-sanctioned authority for public education.

School Dormitory: an educational building or a group of rooms in a building

used for institutional living and sleeping purposes for students. *See Table 12.*

Secondary Frontage: on corner Lots, the Private Frontage that is not the Principal Frontage. As it affects the public realm, its First Layer is regulated. *See Table 17.*

Setback: the area of a Lot measured from the Lot line to a building Facade or Elevation that is maintained clear of permanent structures, with the exception of Encroachments listed in *Article 5.5. See Table 14.g.* (Var: build-to-line.)

Shared Parking Factor: an accounting for parking spaces that are available to more than one Function. *See Table 11.*

Shopfront: a Private Frontage conventional for Retail use, with substantial glazing and sometimes an awning, wherein the Facade is aligned close to the Frontage Line with the building entrance at Sidewalk grade. *See Table 7.*

Shopping Center: a building or multiple buildings consisting of a complex of shops, with interconnecting walkways along with associated parking. *See Table 12.*

Slip Street: an outer vehicular lane or lanes of a Thoroughfare, designed for slow speeds while inner lanes carry higher speed traffic, and that may be separated from them by a planted median. (Syn: access lane, service lane)

Smart Power: the system of generation, transmission, distribution and use of energy through means that both increase efficiency throughout the system and reduce the environmental impact of the cycle of production, delivery and use. The referenced means include development, manufacture and deployment of information technology, engineering, manufacturing, construction techniques, building science, controls, and HVAC and lighting systems. *See Table 12.*

Square: a Civic Space type designed for unstructured recreation and Civic purposes, spatially defined by building Frontages and consisting of Paths, lawns and trees, formally disposed. S*ee Table 13.*

Stoop: a Private Frontage wherein the Facade is aligned close to the Frontage Line with the first Story elevated from the Sidewalk for privacy, with an exterior stair and landing at the entrance. *See Table 7.*

Story: a habitable level within a building, excluding an attic, mezzanine, or raised basement. *See Table 8.* Regardless of the number of stories, maximum height of a multi-story building shall not exceed 400 feet.

Strategy: general approach to achieve desired goals for Veridea.

Street ("**ST**"): a local urban Thoroughfare of low speed and capacity. *See Table 3B and Table 4B*.

Streetscreen: a freestanding wall or a free standing or attached trellis system for supporting plants along the Frontage Line, or coplanar with the Facade. It may mask a parking lot from the Thoroughfare, provide privacy to a side yard, and/or strengthen the spatial definition of the public realm. (Syn:

streetwall.) *See Article 5.5.5f.*

Sustainability: the process and ultimately the benefits of implementing a sustainable development program.

Sustainable: as used within the context of "sustainable development," and as derived from the 1987 Brundtland report: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". In practice, to develop sustainably is to integrate the economic, social and environmental dimensions to create human habitats that contribute to a quality life now, and in the future based upon an evolution of society, knowledge and technology.

Sustainable Zone: one of several areas described in the SD Plan and shown on the Sustainable Development Concept Map (and thereafter more clearly delineated in subdivision and site plans) analogous to Zoning Districts established under the UDO. Allowable land uses and development regulations applicable to such zones shall be as provided in the SD Plan.

Swale: a low or slightly depressed natural area for drainage.

Thoroughfare: a way for use, including a street, by vehicular and pedestrian traffic and to provide access to Lots and Open Space, consisting of vehicular lanes and the Public Frontage. *See Table 3A, Table 3B, Table 4C and Table 17a.*

Town Standards: any statement, codification or other document setting forth standards, designs, directives or plans for the construction of roads, utilities, parks, public facilities or infrastructure of any nature adopted by the Town of Apex and regulating the development of property and the construction of improvements and infrastructure within the jurisdiction of the Town. Town Standards shall include, but shall not be limited to, the Town of Apex Code of Ordinances, the Apex Unified Development Ordinance, Apex Comprehensive Plan, Apex Watershed Overlay District, Apex 2025 Land Use Plan, Apex Transportation Plans, NC 540 Land Use Plan, the Apex Standard Specifications and Standard Details, Wastewater Master Plan, Water Distribution Master Plan, and the Apex Parks and Recreation Master Plan.

Townhouse: a building that occupies the full Frontage Line, leaving the rear of the Lot as the sole yard. *See* **Rearyard Building.**

Transit Oriented Development ("**TOD**"): those areas within an average 1/2 mile radius or 2640 feet of a transit stop (bus or rail) present or proposed as a Common Destination, as set forth in *Article 5.7.2d.*

Transportation Demand Management ("**TDM**"): is a general term for strategies that result in more efficient use of transportation resources. The strategies include developing comprehensive plans for bus and rail transit, bike/transit integration, car sharing, flex cars, and park and ride resources.

Turning Radius: the curved edge of a Thoroughfare at an intersection, measured at the inside edge of the vehicular tracking. The smaller the Turning

Radius, the shorter the pedestrian crossing distance and the more slowly the vehicle is forced to make the turn. *See Table 3B and Table 17.*

Unified Development Ordinance ("**UDO**"): The Apex Unified Development Ordinance.

Urban Farm: agricultural land used for the production of fruits and vegetables, livestock, poultry or other agricultural products, or some combination thereof, consistent with the requirements and limitations of the UDO**.** *See Table 12 and Table 19.*

Urbanism: collective term for the condition of a compact, Mixed Use settlement, including the physical form of its development and its environmental, functional, economic, and socio-cultural aspects.

Urban Core ("**UC**"): A Sustainable Zone. *See Table 1.*

Vegetable Garden: private agricultural land dedicated to food production to be locally consumed, restricted to back yards. *See Table 12 and Table 19.*

Veridea Sustainable Development Concept Map: the map or set of maps that depicts a concept for the development of a community and the conceptual location of Sustainable Zones and Thoroughfares within it. *See Table 2.*

Veridea Sustainable Development District: the zoning district as depicted by the Veridea Sustainable Development Concept Map and developed in accordance with this SD Plan.

Vertical Farm: agricultural production in buildings not primarily within yards, but as a part of or incidental to inhabited buildings, or as a stand alone feature, utilizing container gardens or boxes, which may be associated with windows, balconies and terraces, or roof gardens.

Village Center ("**VC**"): A Sustainable Zone. *See Table 1.*

Yield: characterizing a Thoroughfare that has two-way traffic but only one effective travel lane because of parked cars, necessitating slow movement and driver negotiation. Also, characterizing parking on such a Thoroughfare.

ARTICLE 2.0 THE DISTRICT

2.1 INTRODUCTION

This Sustainable Development Plan (the "SD Plan") is submitted by the Responsible Person and approved by the Town Council pursuant to UDO 2.3.16 of the Town of Apex (the "Town" or "Apex") with respect to the proposed rezoning of property within the Town for the Sustainable, mixed-use development to be known as "Veridea." The SD Plan and its standards and applicable provisions of the UDO and other Town Ordinances and Town Standards shall authorize, regulate, and control the development of land within Veridea and shall establish the design and form for such development. To the extent that the SD Plan varies from the provisions of the UDO, other Town Ordinances, Town Standards or any document or policy referenced or incorporated therein as they exist on the date of approval of the SD Plan and as they may be amended from time to time by the Town Council, the SD Plan shall control.

2.2 CHANGE OF THE RESPONSIBLE PERSON

Pursuant to UDO 2.3.16 D), the Petition to Amend the Official Zoning District Map requesting the rezoning of Veridea to Sustainable Development Conditional Zoning District SD-CZ identified and appointed Lookout Ventures, Inc. as the Responsible Person for the district. Any successor corporation to Lookout Ventures, Inc. by way of merger or other reorganization shall become Responsible Person for the district, and written notice of such succession shall be provided to the Planning Director. At any time following the rezoning of Veridea as requested, Lookout Ventures, Inc. (or its successor corporation) may appoint another person as the Responsible Person for the district by providing notice of such change in writing to the Planning Director of the Town. In the event of the death, incapacity or dissolution of the Responsible Person without its appointment of a new Responsible Person, a new Responsible Person shall be appointed by the owners of fifty-one percent (51%) of the land comprising Veridea at the time of such appointment and written notice of such appointment shall be provided to the Planning Director.

2.3 AUTHORIZED DEVELOPMENT

No development shall occur within Veridea, or any parcel added to Veridea, except as is specifically authorized by this SD Plan with reference, when appropriate, to the UDO.

2.4 MASTER PROPERTY OWNERS' ASSOCIATION

Prior to the Developer's conveyance of any of the Properties within Veridea by the Developer or its assigns, a Master Property Owners' Association ("MPOA") will be established. Membership in the MPOA will be mandatory for any property owner. The MPOA will be funded by dues to be established in the Declaration or other duly recorded document. The MPOA will be responsible for the enforcement of recorded restrictive covenants and for the maintenance of certain common areas within Veridea, including private Thoroughfares. Subassociations of property owners may be established for individual development tracts within Veridea, which will be responsible for the maintenance of the common area within that specific tract, unless otherwise provided in documents relating to the respective subassociation. Should any subassociation fail to perform its maintenance obligations, the MPOA shall be responsible for such performance within a commercially reasonable timeframe. The Town will maintain all Thoroughfares and any other real property that is properly dedicated to and accepted by the Town.

2.5 DECLARATION OF RESTRICTIVE COVENANTS

Prior to the Developer's conveyance of any property within Veridea subsequent to its rezoning, the Developer shall record in the Wake County Registry with respect to the Development a Declaration of Restrictive Covenants (the "Declaration"), duly executed by the record owner or owners of each parcel included within the Development, stating that the Development is within the zoning jurisdiction of the Town of Apex and is zoned Sustainable Development Conditional Zoning ("SDCZ") District and that (i) the Development and the use of property therein are therefore subject to regulations applicable to the SDCZ District described in Section 2.3.16 of the UDO and other provisions of such Ordinance, a copy of which is available in the Planning Department of the Town of Apex (the "Planning Department") at the Apex Town Hall, 73 Hunter Street, Apex, North Carolina 27502; (ii) the Development and the use of land within the Development are also subject to the terms and provisions of a Sustainable Development Plan approved upon the rezoning of the Development to SDCZ District, a copy of which is available in the Planning Department; (iii) under applicable provisions of the UDO and the aforementioned SD Plan, the Developer, its successors and assigns, as Responsible Person, has the sole authority to make certain decisions with regard to property comprising the Development; and (iv) upon acceptance and recordation of any deed conveying property within Veridea, the grantee or grantees of such deed shall become a member of the Master Property Owners' Association for Veridea established pursuant to Section 2.4 of this Plan and any subassociation established pursuant to such section that relates to the property conveyed in the respective deed. The Declaration shall further provide that (i) each deed conveying land within Veridea recorded subsequent to the recordation of the Declaration shall state that the respective conveyance is subject to the Declaration, but that the failure to include such statement in a deed shall not affect the enforceability of the Declaration with respect to the property conveyed or invalidate the respective conveyance; and (ii) no rezoning petition shall be submitted or proposed with regard to the Development, or any portion thereof, without the written consent of the Developer.

ARTICLE 3.0 GENERAL SUSTAINABILITY STANDARDS AND FURTHER DEVELOPMENT APPROVALS

3.1 PURPOSE OF THE PLAN

3.1.1 The SD Plan has been adopted to facilitate the development of Veridea as a community of safe, healthy, resource efficient and transit-oriented mixed-use Projects planned and developed in accordance with Principles promoting Sustainability. Accordingly, Veridea will be developed in view of the following Guiding Principles:

a. Create economic value
b. Eliminate the concept of waste
c. Insist on a renewable future
d. Create delightful urban places
e. Integrate nature throughout the community

The Guiding Principles for Veridea have been developed in accordance with The Hannover Principles, Design for Sustainability, which was authored by William McDonough and Michael Braungart. The Hannover Principles are as follows:

1. **Insist on rights of humanity and nature to co-exist** in a healthy, supportive, diverse and Sustainable condition.

2. **Recognize interdependence**. The elements of human design interact with and depend upon the natural world, with broad and diverse implications at every scale. Expand design considerations to recognizing even distant effects.

3. **Respect relationships between spirit and matter**. Consider all aspects of human settlement including community, dwelling, industry and trade in terms of existing and evolving connections between spiritual and material consciousness.

4. **Accept responsibility for the consequences of design** decisions upon human well-being, the viability of natural systems and their right to co-exist.

5. **Create safe objects of long-term value**. Do not burden future generations with requirements for maintenance or vigilant administration of potential danger due to the careless creation of products, processes or standards.

6. **Eliminate the concept of waste**. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems, in which there is no waste.

7. **Rely on natural energy flows**. Human designs should, like the living world, derive their creative forces from perpetual solar income. Incorporate this energy efficiently and safely for responsible use.

8. **Understand the limitations of design**. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and mentor, not as an inconvenience to be evaded or controlled.

9. **Seek constant improvement by the sharing of knowledge**. Encourage direct and open communication between colleagues, patrons, manufacturers and users to link long term Sustainable considerations with ethical responsibility, and re-establish the integral relationship between natural processes and human activity.

In addition, the Guiding Principles are grounded in the belief that they can only be achieved through a flexible development plan which recognizes the reality of the time in which elements of the plan are developed. The Guiding Principles will be pursued in an anticipatory manner, one which acknowledges that Veridea will be developed over a sustained period of time and according to evolving criteria that define accepted and attainable Sustainable development practices. The SD Plan establishes a flexible framework of development standards (collectively, the "Sustainability Standards") that, by its very nature, seeks to anticipate future trends and technologies and acknowledges that future technologies and practices are, by definition, evolutionary. Accordingly, an Anticipatory Design process shall be used in the planning and design of Veridea and in the design of specific Projects within Veridea.

3.1.2 In order to achieve these Guiding Principles, Veridea shall be developed as Sustainable Zones, as described in Table 1, in accordance with the SD Plan and the Sustainability Standards. In accordance with UDO 2.3.16 F) 2), Sustainability Standards include natural and cultural resource standards, transportation infrastructure standards, utility infrastructure standards, energy standards, community design standards, and building standards. Additional, modified or elective Sustainability Standards shall be adopted in accordance with UDO 2.3.16 F) 3). Sustainability Standards contemplated for Veridea shall include an Environmental Enhancement Plan and may include additional plans as follows:

Sustainability Standards	Authority	When Adopted
SD Plan	UDO 2.3.16	Rezoning
Environmental Enhancement Plan	UDO 2.3.16 F) 3) b)	Prior to first site plan or subdivision plan
Pattern Book	UDO 2.3.16 F) 3) a)	With first site plan
Transportation Demand Management Plan	UDO 2.3.16 F) 3) a)	With first site plan that deviates from UDO standards related to parking
Parking Management Plan	UDO 2.3.16 F) 3) a)	With first site plan that deviates from UDO standards related to parking

Additional Sustainability Standards	UDO 2.3.16 F) 3) a)	As appropriate, subsequent to rezoning
Elective Sustainability Standards	UDO 2.3.16 F) 3) c)	

Figure 1. Sustainability Standards in Veridea

3.1.3 In addition to the total authorized development authorized by this SD Plan, a minimum of 250 acres of land, in varying locations and varying scales and forms, shall be designated by the Responsible Person during the site plan and subdivision approval process as follows:

a. 100 acres shall be designated for Resource Conservation Area.
b. Sufficient acreage shall be designated to accommodate the recreation requirements specifically set forth in Article 3.4.2.2; and
c. 150 acres less the acreage sufficient to accommodate the recreation requirements of Article 3.4.2.2 shall be designated for Open Space, Public Space, and Civic Space. Civic Buildings dedicated to government, transit or parking and any portion of the respective lot not routinely accessible to the public shall not be included in the acreage designated pursuant to this subsection. Civic Buildings dedicated to arts, culture, education and social activity and any portion of the respective lot routinely accessible to the public shall be included in the acreage designated pursuant to this subsection. Any privately-owned or operated buildings located in an Open Space zone and any portion of the respective lot not routinely accessible to the public shall not be included in the acreage designated pursuant to this subsection.

3.2 SUSTAINABLE FRAMEWORK

3.2.1 The Veridea Sustainable Development District is utilized for Veridea to create a framework for compact and connected Sustainable Urbanism. In view of its scale and the Guiding Principles, the Veridea Sustainable Development District is distinguished from the other districts within the UDO and offers an additional lifestyle choice to Apex for current and future residents. Because technology and the laws and regulations affecting sustainability are evolutionary, the SD Plan recognizes the need to enable Anticipatory Design and to maintain flexibility in order to incorporate and adapt to future best practices.

3.2.2 In view of the Guiding Principles, the Goals of Veridea are intended to capture the spirit and intent of sustainability in order to achieve the following desired results:

a. Economic Value
    i. Create a model community of Sustainable design.

ii. Create a framework for the next generation version of the Research Triangle Park that is a vibrant, urban, mixed-use transit-oriented community.

b. Energy
   i. Pursue renewably sourced energy supplies.
   ii. Maximize energy efficiency.
   iii. Pursue energy opportunities presented by the evolving regulatory landscape and emerging renewable energy technologies.

c. Water
   i. Release to the ecosystem only water that is clean and healthy.
   ii. Treat water as a precious resource by conserving and reusing it to the maximum extent practicable.

d. Community
   i. Create a world class model of a safe, healthy, delightful, Sustainable mixed-use urban environment that enables the community to live, work and play.
   ii. Facilitate a mix of housing types, sizes and tenure options that allow all members of society to remain part of the community throughout the human life cycle.
   iii. Establish a full-service pedestrian-friendly transit-oriented community that respects and encourages wellness and safety.
   iv. Establish a community that respects the history of Apex and compliments and expands its existing community infrastructure.
   v. Set aside Open Space and Civic Space throughout the community.
   vi. Reduce, re-use and recycle construction and demolition materials whenever practicable.

3.3 DEVELOPMENT APPROVALS

3.3.1 Site Plans

a. The approval of site plans within the Development shall comply with the procedures and standards of UDO 2.3.6 except as modified in the SD Plan.

b. Within the Development, notwithstanding any provision of UDO 2.3.6 D) 2), only those individual site plans that propose 100,000 square feet or more of nonresidential floor area or 200 residential units or more shall be considered Major Site Plans and shall be processed and reviewed in accordance with UDO 2.3.6 D) 3). Notwithstanding UDO 2.3.6 D) 2) a), multiple site plan applications within any three year period for one property, or portions of the same property, or neighboring properties if owned by the same entity, shall be considered as individual site plans for the determination of the existence of a Major Site Plan and shall not be considered cumulatively for any purpose. All other site plans within the Development, shall be considered Minor Site Plans and shall be processed and reviewed in accordance with UDO 2.3.6 D) 1).

3.3.2 Subdivision Plans

The approval of subdivision plans shall comply with the procedures and standards of UDO 2.3.7 except as modified in the SD Plan. A minor Subdivision Plan, for the purposes of UDO 2.3.7 G), shall be defined as a division of a tract or parcel into fewer than 200 lots. In approving a major Subdivision Plan, the Town Council shall find that the area of the proposed subdivision will be adequately served by public fire and law enforcement personnel.

3.3.3 Written Statement from Responsible Person Required; Noncompliance

Any site plan or Subdivision Plan submitted to the Town for approval for a Project to be undertaken by a party other than the Responsible Person must be accompanied by a written statement from the Responsible Person indicating its approval of the Project. Such written statement shall also state the authorized development allocated to the Project (i.e., number of dwelling units and/or square feet of non-residential Retail, Office and/or Industrial Uses) as well as the development fee credits, if any, other credits, and/or liabilities and responsibilities assigned to or assumed by the Project.

Any event of non-compliance with any requirement of this SD Plan or the UDO that relates solely to a Project or Projects within Veridea shall not be attributed to Veridea as a whole, but rather shall be attributed only to that Project or Projects, such that any enforcement action taken by the Town shall be limited to the Project or Projects at issue.

In addition to any other remedy that may be available to the Town, if a violation of this SD Plan, Town Standards, Sustainability Standards applicable to Veridea or the UDO remains in existence with respect to a Project or Projects or a distinct area within Veridea after the Town complies with the procedures of UDO 11.5, the Town may withhold the issuing, approving or granting of grading permits, building permits, certificates of compliance or occupancy, site plans, subdivision plans or plats and other permits or approvals for the Project or Projects or distinct area in issue until the non-compliance is corrected and cured.

In addition to any other remedy that may be available to the Town, if a violation of this SD Plan, Town Standards, Sustainability Standards applicable to Veridea or the UDO which applies to Veridea as a whole remains in existence after the Town complies with the procedures of UDO 11.5, the Town may withhold the issuing, approving or granting of grading permits, site plans and subdivision plans or plats throughout Veridea until the non-compliance is corrected and cured.

3.3.4. Additional, Modified and Elective Sustainability Standards

All of the provisions of the SD Plan, including those related to development approvals, may be affected by any standards applicable to SD-CZ districts that may be adopted at any time or from time to time by the Town Council in accordance with UDO 2.3.16 F) 3). Upon the consent of the Responsible Person, any Sustainability Standards adopted or modified by the Town

Council in accordance with the provisions of UDO 2.3.16 F) 3) a), b) or c) shall apply to subsequent site plans and Subdivision Plans and be incorporated into the SD Plan. The Environmental Enhancement Plan shall be the sole required additional Sustainability Standard under this SD Plan and shall be adopted pursuant to UDO 2.3.16 F) 3) b).

3.3.5. Encroachment Agreements

Notwithstanding any other provision in this SD Plan, any encroachment into a Town of Apex right-of-way or easement requires an encroachment and maintenance agreement with the Town before such encroachment is made.

3.4 RESOURCE CONSERVATION – NATURAL AND CULTURAL RESOURCE STANDARDS

3.4.1 General

The natural and cultural resource standards set forth herein, as a component of the Sustainability Standards, provide certain community resources and conserve and protect natural and cultural resources and the quality of the water, land, and air within Veridea.

As set forth in Article 3.1.1 of the SD Plan, Veridea will be developed in view of the Guiding Principles over time according to evolving criteria that will define accepted and attainable sustainable development practices at the time of site plan or Subdivision Plan submission. As set forth in Article 3.1.2 and elsewhere within the SD Plan, Veridea shall include both Open Space, as an independent zone, and Developable Areas, generally identified as Sustainable Development Zones. Accordingly, Environmental and Natural Resource Protection Standards and Community Resource Standards shall vary as to those that apply within the Open Space zones, and those that apply within the Sustainable Development Zones. Further, due to the different levels of development within each Sustainable Development Zone, the Environmental and Natural Resource Protection Standards and Community Resource Standards shall vary with the level of development intensity within each zone. Also as set forth in Article 3.1.1 of the SD Plan, development standards are intended to be flexible in order to anticipate future trends and technologies, and yet acknowledge that future technologies and practices are unknown.

The provisions of Section 9 (d) of Session Law 2006-246, which provide a landward setback of 30 feet for built upon areas adjacent to certain surface waters, shall be applicable to Veridea except to the extent exceptions are granted by the Town Council in accordance with Section 11 (a) of such Session Law. Otherwise, UDO 6.1 shall apply until the Environmental Enhancement Plan is adopted by Town Council in accordance with UDO 2.3.16. F) 3) b).

3.4.2 Community Resource Standards

Veridea will achieve intensity of development within an environment of Sustainability.

3.4.2.1. Parks, Recreation and Open Space

All of the landscape that comprises Veridea will be purposefully designed to achieve a wide range of Goals to achieve Sustainability. The scale of Veridea's Parks will vary from small urban greens and squares, to active recreation areas with playfields, to natural preserve areas conducive to passive recreation. Within each Park, recreation, and open space site setting, appropriate human activity, from the passive to the most active, will be accommodated. Parks may be publicly or privately owned as determined at the time of site plan or Subdivision Plan approval, however only public parks will count toward recreation requirements. As Veridea is developed, land shall be dedicated for parks, recreation, and open space or fees in-lieu paid with respect thereto as contemplated by UDO 7.3.1 and 7.5.9 B). At any time, the Town Council and the Responsible Person may agree upon a plan or plans that deal with parks, recreation and open space for all or any portion of Veridea.

3.4.2.2. Specific Recreation Requirements

In accordance with the above and consistent with other requirements of the SD Plan, the Developer shall, at a minimum, dedicate land parcels to accommodate the following: i) four (4) lighted regulation softball fields in keeping with the standards of the American Softball Association (ASA) Men's Slow-Pitch Open Division; ii) six (6) lighted tennis courts in keeping with the standards of the United States Tennis Association (USTA); iii) a 22,500 square foot community center consistent with phase 1 of the existing community center at 53 Hunter Street, Apex, North Carolina; and iv) a dog park of at least one (1) acre. The Responsible Person shall have the discretion to disperse items i – iv and any part of items i or ii. No later than at the time 1000 residential units have received building permits, the Responsible Person shall submit to the Town Council for approval a Master Parks Plan depicting the location of the land parcels associated with items i, ii, iii and iv. The land parcels for items i, ii, iii, and iv shall be dedicated to the Town no later than at the time 2000 residential units have received building permits. Once the Master Parks Plan has been approved, any portion of the remaining obligation under Article 3.4.2.1. may be satisfied, at the election of the Responsible Person, by the payment of fees in lieu pursuant to UDO 7.3.1, which shall be utilized by the Town as soon as practicable for the foregoing construction of items i, ii, iii and iv.

The Responsible Person shall receive credits from the Town Council against fees in lieu payable under UDO 7.3.1 for the value of any historic or

cultural resource sites or facilities dedicated to and accepted by the Town and for amounts which it expends in developing and improving land for parks, recreation and open space pursuant to the recommendation of the Parks, Recreation and Cultural Resources Advisory Commission and approval by Town Council. Notwithstanding the foregoing sentence, any dedicated historic or cultural resource sites or facilities for which the Responsible Person receives credits against fees in lieu cannot be credited toward the RCA requirement set forth in Article 3.4.3 hereof.

3.4.2.3. Greenways

The Development will provide easements for Town of Apex greenways generally consistent with the current Parks and Recreation Master Plan. To the extent practicable, greenways will be constructed to Town Standards and located along stream corridors and within Open Space and easements. In cases where greenways generally follow public rights-of-way, greenways may be either constructed as a multi-use trail in lieu of a sidewalk, or when located within more urban areas, as pedestrian-oriented streetscapes containing both hardscape elements (including but not limited to sidewalks, decorative lighting, street furniture, and fountains) and street tree plantings which do not have to meet typical island widths or sizes. Greenways may be located within existing and future utility easements. Greenways may be publicly or privately owned as determined at the time of site plan or Subdivision Plan approval. Greenways may be dedicated to the Town as linear Parks, subject to the Town's approval.

3.4.2.4 Public Schools

The Development shall make available for purchase or lease by a School Authority three (3) Public School sites within Veridea, each having a minimum size of five (5) acres. Unless earlier purchased or leased by a School Authority, one (1) of such school sites shall be reserved by the Responsible Person upon the issuance of the 2,000th residential building permit within Veridea, and a similar reservation shall occur on the issuance of each of the 4,000th and 6,000th residential building permit within Veridea. Each area reserved should meet site design standards of a School Authority. Each such reservation shall exist for a period of ten (10) years, and during such period no permanent construction shall occur within the area reserved. The Public Schools constructed upon the areas so reserved shall be of a compact urban form and design appropriate for Veridea and meeting the standards of the State or the School Authority. There may be arrangements with the Town for the shared use of recreational facilities.

3.4.3 Resource Conservation – Environmental and Natural Resource Protection Standards

3.4.3.1 Resource Conservation Area ("RCA")

UDO 8.1, Resource Conservation, and other provisions of the UDO dealing with RCA not otherwise specifically dealt with in this SD Plan shall apply to the Development until the Environmental Enhancement Plan is adopted by Town Council in accordance with UDO 2.3.16.F) 3) b), except as follows:

a. UDO 8.1.2 A) shall apply to the Development as a whole as opposed to individual site plans or Subdivision Plans.

b. UDO 8.1.2 B) 2) f) shall not apply.

c. The maximum impermeable surface area shall be as listed in Table 14.

d. Notwithstanding UDO 8.1.3, Tree and Vegetation Conservation, the requirements for conservation of existing trees and vegetation and new landscaping requirements are set forth in Article 5.9 of the SD Plan.

e. Not including the land parcels to be dedicated to the Town pursuant to SD Plan 3.4.2.2, both: i) Open Space, excluding Civic Buildings and all associated parking, municipal parking lots, and parking associated with Open Space that exceeds the direct needs of such Open Space; and ii) recreation area provided in Public Space or Civic Space within the Development including, but not limited to, open space, pools, tennis courts, tot lots, ball fields, and village greens shall be allowed to be counted as partial credit toward the RCA requirement. The credit for such area shall be 50% of the area provided. (For example, 1 acre of area shall count as 0.5 acres of RCA) In order to qualify as RCA, the area must be located on a lot 0.5 acre or larger in size.

f. Notwithstanding UDO 8.1.2 A) 1) d), the provision of off-site RCA shall be provided at the same rate as the on-site RCA, and off-site RCA may be provided in lieu of on-site RCA.

3.4.3.2 Water

a. Stormwater Management

The Goals of Stormwater Management within Veridea are as follows:

i. Reducing pollutants to protect surface water bodies;
ii. Promoting recharge of ground water resources;
iii. Eliminating flooding within the Development and downstream;
iv. Enhancing safety and aesthetics for the public; and
v. Creating wildlife habitats and educational opportunities.

Specific stormwater management standards, technologies, devices and control structures for the Development shall work interdependently and holistically with the built and natural environment both on-site and off-site. The standards for Veridea's stormwater management shall be in

accordance with Town Standards. Further, to the extent practicable, low impact development ("LID") techniques such as bio-swales, vegetated channels, pervious pavement where appropriate, rainwater harvesting and "green" roofs to convey and treat runoff, may be used within the Development to the maximum extent practicable, based on the best available technology and research at the time of site plan and/or Subdivision Plan submission.

b. Water Conservation

The Goals of water conservation within Veridea are as follows:

i. Reducing per capita water use while retaining attractive landscapes;
ii. Protecting ground and surface water supplies from unsustainable depletion;
iii. Eliminating unnecessary waste in water use practices;
iv. Reducing wastewater treatment volume and associated municipal expenditures; and
v. Promoting the increased use of re-use water for irrigation.

Water conservation standards within the Development shall be in accordance with the Town of Apex Water Conservation Ordinance. Landscape plant materials shall be in accordance with NCDENR or North Carolina Cooperative Extension standards for drought tolerant, native species. Only re-use water, where practicably available, shall be used for landscape irrigation; however, where re-use water is not available, potable water use for landscape irrigation shall be used in accordance with the Town of Apex Water Conservation Ordinance.

c. Surface Water Enhancement

Encroachment on streams and associated riparian buffers will be unavoidable in some places in order to accomplish the Goals in light of the Guiding Principles. However, the Environmental Enhancement Plan, in accordance with 3.4.1 of the SD Plan, will be developed to provide for the protection and enhancement of the aquatic function of the surface water resources within the Development.

The Environmental Enhancement Plan will address surface water enhancement with the following objectives:

i. Maintaining water quality by capturing or controlling sediment, nutrients, and other pollutants to an extent that is equal to or better than would be the case if the encroachments did not occur;
ii. Maintaining the hydraulic conditions downstream to ensure that post-development peak flows do not exceed pre-development flows for the 1-year, 24-hour and 10-year, 24-hour storms, stream

channel stability is maintained or improved, increased sedimentation of the stream bed is avoided, and no increase in downstream flooding occurs;

iii. Maintaining or enhancing the aquatic ecosystem in order to restore or improve biodiversity;
iv. Augmenting low flow in order to improve downstream aquatic habitat;
v. Providing space and ecological conditions that maintain or enhance wildlife habitat and travel corridors;
vi. Constructing wetlands or enhancing naturally occurring wetlands; and
vii. Enhancing public use and enjoyment of the natural systems will be considered during the planning process.

3.4.3.3 Land

a. Sedimentation and Erosion Control

The Goals for sedimentation and erosion control are as follows:

i. Minimize disturbance to vegetation and soils;
ii. Minimize runoff and diversion;
iii. Minimize the need for additional storm drainage facilities;
iv. Reduce sedimentation; and
v. Prompt restoration after land clearing and grading.

Land disturbing activity within the Development shall comply with the Town of Apex Soil Erosion and Sedimentation Control Ordinance, as amended from time to time. The Town's standards related to the design of erosion and sedimentation collection devices for the 25-year storm and for the provision for 3,600 cubic feet per disturbed acre in sediment basins shall be implemented in the Development unless alternative design standards that are the functional equivalent or better are proposed by the Developer and approved by the TRC.

b. Waste Minimization

The Goals of waste minimization within Veridea are as follows:

i. Minimize the volume of demolition and construction waste generated in the Development;
ii. Distinguish between useful or reusable resources in demolition materials and waste materials from demolished buildings; and
iii. Expand the market for recycled construction and demolition materials.

The waste minimization standards shall support the following solid waste goals identified in the Wake County Environmental Stewardship Agenda, adopted by the Wake County Board of Commissioners February 21, 2005

and as may be amended from time to time:

i. Ensuring a solid waste management system for waste reduction, reuse and recycling to the maximum extent practicable;
ii. Providing convenient opportunities for residents, institutions, and businesses to recycle a full range of marketable materials (including yard debris), and to properly dispose of waste requiring special handling (e.g., used motor oil, household hazardous wastes, pesticide containers, automobile batteries, electronic waste, and others);
iii. Offering incentives, disincentives, and policies that motivate residents, businesses, and institutions to reduce and recycle waste, including institution of a countywide construction and demolition debris mandatory recycling ordinance;
iv. Devising an efficient recovery and processing infrastructure with the capacity to collect and divert from disposal all recyclable materials that have reliable market outlets;
v. Supplying accessible, user-friendly information to all citizens on how to reduce and recycle waste in their homes, places of work, and places of learning;
vi. Devising an expanded recycled products purchasing program with formal policies on procurement of products with recycled content and other "green" products by participating Wake local governments; and
vii. Working with Environmental Education and Environmental Information Providers to develop effective programs and services for a variety of County audiences on the importance of reducing, reusing, and recycling solid waste; buying recycled products and creating new and local markets; and reducing personal consumption and/or disposal of material goods and/or packaging.

Specifications of building and site work material may include recycled content requirements consistent with industry standards, including but not limited to, aggregate base and sub-base materials, asphalt, concrete, and finishes.

3.4.3.4 Air

The SD Plan for Veridea is grounded in the belief that the most effective planning Strategy to reduce greenhouse gas emissions is the pursuit of a dense, mixed-use, walkable and ultimately transit-oriented development. Greenhouse gas emissions are associated with both transportation and the total energy demands of the built environment. By targeting the expected growth within an area that can be served best by the municipality's ability to provide and afford municipal services, by balancing the land uses within the community, and by designing the community in conjunction with multi-modal transportation, a walkable, livable community such as Veridea can be created as a model of Sustainability.

Further, the creation of such a community concentrates development and attracts development that otherwise would occur outside of Veridea in a

sprawl-like manner that is inherently less Sustainable.

The SD Plan recognizes that the technologies and practices associated with the reduction of greenhouse gas emissions are evolving. Accordingly, in recognition of the impacts of greenhouse gas emissions and in an effort to minimize such emissions, transportation planning at all scales shall be approached and implemented in a manner that encourages the pattern of development defined within the Sustainable Development Plan.

The Goals for Air Quality within Veridea are as follows:

a. Establish a connected circulation plan that uses an integrated network of Thoroughfares, sidewalks, and paths linked to land uses with convenient access to alternative modes of travel including rail, bus, and walking to increase community internal trip capture and reduce vehicular trip generation and vehicle miles traveled in order to lower overall emissions and traffic congestion in otherwise heavily traveled areas.

b. Incorporate Transit Oriented Development in conjunction with a parking management Strategy within a mixed-use community, linked to a growth area to increase pedestrian and bicycle traffic, and transit share while reducing vehicle miles traveled.

c. Provide open space and landscaping within the Development to maintain a significant carbon absorbing medium.

d. To the extent practicable, comply with applicable EPA emission goals for the operation of non-road diesel engines.

3.5 TRANSPORTATION INFRASTRUCTURE STANDARDS

3.5.1 General

The transportation infrastructure standards set forth herein, a component of the Sustainability Standards, shall adhere to the Principles described and depicted throughout this Sustainable Development Plan.

Transit Oriented Development in conjunction with a parking management Strategy within a mixed-use community, linked to a growth area, has been proven to be very effective in increasing pedestrian and bicycle traffic and transit share while reducing vehicle trips and vehicle miles traveled. By establishing a connected circulation plan that uses an integrated network of Thoroughfares, sidewalks, and paths linked to land uses with convenient access to alternative modes of travel including rail, bus, and walking, community internal trip capture is significantly increased. One significant advantage of Sustainable Urbanism is that it reduces sprawl and the need to drive. Reduction in vehicular trip

generation and vehicle miles traveled lowers overall emissions and limits traffic congestion in otherwise heavily traveled areas. A second significant advantage of a connected circulation plan is that public safety is enhanced when the plan is based upon an integrated network of Thoroughfares that provides alternative routes from one destination to another, and that is designed to industry recognized criteria to reduce the performance speed of Thoroughfares and provides enhanced pedestrian safety.

a. Transportation Demand Management Plan

The SD Plan incorporates TDM strategies into the plan. The SD Plan provides for a compact mixed-use development with an efficient, connected multi-modal transportation network, key components of any TDM plan. The integration of land use and transportation decisions increases travel efficiencies and change travel behavior. This results in less auto dependence and an increase in use of other modes of transportation. TDM strategies will be applied to all levels of the land development process including long-range actions implemented after the land is developed. The Responsible Person shall prepare a Transportation Demand Management Plan outlining transportation options and incentives to be reviewed and, if feasible, developed, and setting the strategic framework for implementation. The options to be reviewed include:

i) Ridesharing;

ii) Telecommuting/flex time;

iii) Bicycle and pedestrian planning;

iv) Park and ride facilities;

v) Parking management;

vi) Shuttle bus;

vii) Bus/bus rapid transit;

viii) Car sharing; and

ix) Regional public transit.

The TDM Plan shall be submitted by the Responsible Person for approval by the Town, in accordance with UDO 2.3.16 F) 3) a) prior to or concurrent with the submittal of the first site plan that varies any standards related to parking set forth in the UDO. In accordance with UDO 2.3.16 F) 3) a) and the provisions of UDO 2.3.2 applicable to amendment to text, the TDM Plan may be updated or modified as the build-out of the Development occurs. Because preparation of the TDM Plan is triggered by the occurrence of development within Veridea, the TDM Plan is not required for the purposes of UDO 2.3.16 F) 3) b).

Parking planning and management refers to various policies and programs that result in more efficient use of parking resources. It recognizes that too much parking supply can be as damaging as too little and seeks to provide an optimal parking supply. A Parking Management Plan will be utilized in the B-Grid and

NG Zones. The plan shall address spillover parking for Commercial uses when located near single family development. The plan shall be submitted or updated as needed for site plans in the B-Grid and NG Zones.

3.5.2 Alternative Thoroughfare Standards

a. Thoroughfares shall conform to the *Apex Transportation Plan* to provide for the appropriate projection of principal streets in surrounding areas to permit reasonable access for surrounding properties. The exact placement of the streets and Thoroughfares within the plan may be adjusted. In areas within the Development, Thoroughfares shall be designed and located in proper relation to existing and proposed streets, to the topography of the area, and to natural features.
b. Thoroughfares in their construction shall conform to Town Standards except as noted within the SD Plan. Exceptions to Town Standards set forth in the SD Plan may be used by right, as an alternative to the Town Standards available. Exceptions are as listed hereafter or as provided elsewhere in this SD Plan:

    i. Section 3 *Streets of the Standard Specifications* shall apply except for the dimensional and other standards of 3.02b *Pavement & Right-of-Way Widths*, 3.02d *Radii of Curvature* and 3.02e Tangents, all of which shall be modified by the SD Plan, including but not limited to Tables 3A, 3B, 4A, 4B, and 4C, subject to TRC review and approval as to their application within the site plans or Subdivision Plans.
    ii. The dimensional standards of Standard Detail Number 3.01 *Street Typical Sections*, Sheets 1 through 4 shall be modified by this Sustainable Development Plan and Tables 3A, subject to TRC review and approval as to their application within the site plans or Subdivision Plans.
    iii. The location of utilities as shown on Standard Detail Number 3.10 *Standard Street Cross Section Showing Utility Locations* may be adjusted to permit street trees and utility locations in the Rear Alleys and Rear Lanes. Due to the anticipatory nature of the design of the Development, additional utilities, both public and private, may be incorporated into the right-of-way as the technology becomes available. Regulated utilities shall be permitted within the Thoroughfare right-of-way to include the District Utility Zone as illustrated in Table 4D.
c. In the event that Thoroughfares as identified in Table 4C do not meet the approval of the North Carolina Department of Transportation (“NCDOT”) for the design of thoroughfares under NCDOT’s jurisdiction, an alternative acceptable to the Responsible Person, the TRC and NCDOT may be utilized.
d. Thoroughfares shall be included as part of each Sustainable Zone.

e. Thoroughfares should be laid out in such manner as to encourage the flow of vehicle traffic at very low to low design speed, except upon major Thoroughfares, and to encourage pedestrian circulation. Public Sidewalks shall be required along all public streets except when the TRC approves an alternative plan during the site plan and construction plan review process upon its determination that the alternative plan, viewed in the context of surrounding development, adequately accommodates pedestrian connectivity. The street classifications shown on Tables 4B and 4C shall be used as guidance for sidewalk placement when possible. If determined by the TRC to provide an equal or better pedestrian system, Bicycle Trails may be allowed in lieu of some sidewalks within the Development. In addition to the requirements of Articles 3.5.1 and 3.5.2.b, the layout of thoroughfares and intersections will reasonably allow for emergency vehicle access. This may require an evaluation of emergency routes and turning radii during the site and construction plan review process. The TRC may consider alternative design elements and refer to third party published sources of information in order to minimize impacts to the intended character of the Development while accommodating emergency vehicles.

f. Private Thoroughfares and sidewalks may be allowed for Commercial, Manufacturing, and multi-family residential uses that conform to widths shown in Tables 4B and 4C, provided however that a five (5) foot public access easement will be provided on all private sidewalks fronting public Thoroughfares.

g. Rear Alleys and Rear Lanes shall be allowed that conform to widths shown in Tables 4B and 4C. Where required for public access and public utilities, continuous and/or crossing easements shall be provided for private Thoroughfares and/or sidewalks.

h. Right-of-way widths may be adjusted to the back of curbs during the site plan and construction plan review process. If the right-of-way does not extend beyond the back of curbs, public access and utility easements shall be provided to cover areas along the public street and Thoroughfare that allow for safe and adequate pedestrian flow and maintenance areas.

i. Design Standards for thoroughfare assemblies with reverse curves shall comply with the AASHTO Policy on Geometric Design of Highways and Streets, latest edition.

j. Thoroughfare standards may, at the election of the Responsible Person, include additional or elective regulations and standards, if any, adopted at any time and from time to time by Town Council in accordance with UDO 2.3.16 F) 3) a) or 2.3.16 F) 3) c).

3.5.3 Traffic

a. The Development and each Project will be designed to:
    i. Reduce vehicle miles traveled;
    ii. Increase share of alternative modes of transportation;
    iii. Reduce external trips; and

iv. Facilitate and encourage pedestrian and bicycle traffic.

b. Master Traffic Impact Analysis: A Master Traffic Impact Analysis ("Master TIA") will be prepared for Veridea. The Master TIA will address the maximum densities and allowable building square footage of various uses in the SD Plan along with recommended off-site thoroughfare improvements at the build-out of Veridea. Thoroughfare and associated improvements beyond those recommended in the Master TIA that are outside of the study area will be the responsibility of other developers or entities. Thoroughfare and associated improvements required as a direct result of other developments or background growth outside the scope of the Master TIA shall not be the responsibility of the Developer. However, internal improvements needed to serve site plans within Veridea will be identified when additional analyses are conducted.

The Developer shall provide Thoroughfare and associated improvements as recommended in the Master TIA. Additional traffic impact analyses ("TIAs") will be conducted for each major site plan or major Subdivision Plan required to serve Veridea, and Section 13.19 of the UDO shall be used as a guide for preparing the TIAs. TIAs shall be performed only for projects meeting the major site or subdivision plan threshold set forth in Article 3.3.1.b hereof. The study area of each TIA shall encompass all necessary street intersections internal to the Development but shall rely on the Master TIA for improvements along NC 55 and the proposed interchanges on the Triangle Expressway and US 1 external to the Development.

The Town shall have no obligation to provide financial assistance for the planning, design, permitting, acquisition of right of way, or construction of the following roadway improvements: i) those identified in the Master TIA; ii) those identified in the Article 3.5.5.a-g hereof; and iii) those identified in subsequent TIAs for each major site plan or major Subdivision Plan. Notwithstanding the foregoing, it is acknowledged that the Town may provide right of way that it currently owns for the new US 1 Interchange identified in the Master TIA and shown on the Town's Thoroughfare Plan.

c. Public Transit: A Regional Public Transit System may be accommodated and encouraged within the Development. Bus circulation shall be accommodated and encouraged within the Development. Optimally, the pedestrian network will provide direct pedestrian links from the proposed residential units, Offices and other commercial buildings to designated transit stops. Triangle Transit standards for bus stop amenities shall serve as a guideline. Access to the Regional Public Transit System by the adjacent pedestrian and bicycle network and park and ride facilities is an important component of the transit system. As noted in SD Plan 3.5.1.a, the TDM Plan will address bicycle and pedestrian planning as well as park and ride facilities.

d. Land Reservation: Land shall be reserved for the future Regional Public Transit System within Veridea. With regard to the Regional Public Transit System alignment and associated rights of way ("ROW") outside of Veridea, the location along Veridea's perimeter where the Regional Public Transit System will enter and exit Veridea in the vicinity of the interchange of US 1 with the Triangle Expressway will be determined by Triangle Transit, and/or other regional transit organization, and/or the Town. As Veridea is developed, site plans and Subdivision Plans will be shared with Triangle Transit, and/or other relevant regional transit organization, to assist such entities in the planning for and selection of the final alignment of the Regional Public Transit System.

The reservation of land to accommodate the Regional Public Transit System will be made as follows:

i. Land shall be reserved in a manner consistent with the development pattern of the Sustainability Zone in which it resides, and may overlap dedications made for other public uses such as Thoroughfares and utilities as long as the overlap is not contrary to sound planning and engineering practice that ensures that the reservation and dedication are sufficient for all planned infrastructure;
ii. Reservation shall include an area for transit station functions which shall be located within a UC zone, and shall be reserved in a manner that is in keeping with an urban development pattern of that zone as defined by the SD Plan, and may overlap reservations and, dedications made for other public uses such as Thoroughfares and utilities as long as the overlap is not contrary to sound planning and engineering practice that ensures that the reservation and dedication are sufficient for all planned infrastructure;
iii. Determination of the form, character, location, and relationship to adjacent development, relationship to other reservations and/or dedications and dimensions shall occur during site planning jointly by the Responsible Person, the TRC or Town Council, as appropriate.
iv. The reservation of land will prohibit permanent development within the designated reserve area until 2035 at which time, if there are no plans that financially commit the Triangle Transit, and/or other regional transit organization, and/or the Town to implement a regional rail plan that includes the Development, the Responsible Person may consider the reservation null and void.
v. Land reserved hereunder will be dedicated to Triangle Transit, and/or other regional transit organization, and/or the Town once the applicable entity secures funding and commits to construct the Regional Public Transit System within the Development.

vi. Buildout of any of single land use of the three (3) uses identified in Article 4.2.2.b.i-iii shall not exceed 85% of the total authorized development for the respective use, unless Town Council otherwise approves in accordance with UDO 2.3.16 F) 3) a), until the commencement of a Regional Public Transit System that will serve Veridea.

3.5.4 Schedule of Installation

Transportation infrastructure shall be completed in accordance with UDO 7.5.9. For the purposes of UDO 7.5.9, vertically-integrated residential and non-residential uses will be considered non-residential.

3.5.5 Phasing of Traffic Infrastructure

Traffic infrastructure shall be developed as build-out of Veridea occurs, as set forth herein. Percent build-out of "any single land use" refers to a percentage of building permits for residential dwelling units or certificates of occupancy for non-residential uses for the three (3) different uses identified in Article 4.2.2.b.i– iii hereof.

a. NC 55 at US 1 Northbound Ramps

Veridea shall not exceed 10% build-out of any single land use until the northbound inside right turn lane on NC 55 at US 1 is extended back to the intersection with Lufkin Road.

b. NC 55 at Lufkin Road

Veridea shall not exceed 10% build-out of any single land use until the third (3rd) northbound through lane on NC 55, starting at least 500 feet in advance of Lufkin Road, is constructed.

c. NC 55 at Lufkin Road Connector (Pristine Water Drive)/Site Access 1

Access shall not be granted to NC 55 through the fourth leg of the intersection across from the Lufkin Road Connector/Pristine Water Drive (Site Access 1) until the Lufkin Road Connector and Pristine Water Drive are complete and open to traffic. The Lufkin Road Connector includes a new location extension to Lufkin Rd and paving of Pristine Water Dr with improvements according to the Master Traffic Impact Analysis (Master TIA) including a landscaped median-divided cross section on NC 55 with a traffic signal.

d. Site Access 2, 3, 4, 5, 6, and 7

Access shall not be granted to NC 55 through Site Access 2, 3, 4, 5, 6, or 7 until improvements according to the Master TIA at the corresponding access are constructed including a landscaped median-divided cross section on NC 55.

e. NC 55 at Jessie Drive Extension

Access shall not be granted to NC 55 through Jessie Drive extension until improvements for Veridea according to the Master TIA are constructed including a landscaped median-divided cross section on NC 55 and a traffic signal.

f. NC 55 at Technology Drive

Access shall not be granted to NC 55 through Technology Drive until Technology Drive is widened to four-lane divided roadway and the departing second (2^{nd}) eastbound through lane along NC 55 Business is constructed for a minimum of 1000 feet prior to the lane drop. In addition, access shall not be granted to NC 55 through Technology Drive until a second (2^{nd}) northbound left turn lane and second (2^{nd}) southbound left turn lane on NC 55 is open to traffic.

g. Perry Road at US 1 Interchange and Old Holly Springs Apex Road at Triangle Expressway Interchange

i. Veridea shall not exceed 15% build-out of any single land use until either the interchange of Perry Road at US 1 or the interchange of Old Holly Springs Apex Road at Triangle Expressway is open to traffic.

ii. Veridea shall not exceed 50% build-out of any single land use until both the interchange of Perry Road at US 1 and the interchange of Old Holly Springs Apex Road at Triangle Expressway are open to traffic.

iii. The Responsible Person shall coordinate with the NC Department of Transportation (NCDOT) and the Town of Apex to determine the appropriate phasing of completion of the ultimate lane geometry and signalization at the ramp termini as recommended in the Master TIA. The phasing plan for the ultimate build-out of improvements shall be determined through subsequent site plan and subdivision plan TIAs referenced by 3.5.3.b.

3.6 UTILITY INFRASTRUCTURE STANDARDS

3.6.1 General

Water and sanitary sewer lines with connections to municipal systems, adequate drainage system for the proper drainage of all surface water, and dry utilities, including but not limited to, electrical distribution, natural gas, and telecommunication lines shall be provided in accordance with the Town Standards, unless otherwise noted in Article 3.6.2. Dry utilities, wherever practicable, shall be installed underground.

3.6.2 Alternative Utility Standards

a. At the election of the Responsible Person, standards and requirements applicable to utilities in the Development may include any additional Sustainability Standards adopted by the Town Council in accordance with UDO 2.3.16 F) 3) a) or 2.3.16 F) 3) c).
b. Easement encroachments and shared use easements shall be allowed with the approval of the Town Council to minimize land disturbance and Thoroughfare sections, to encourage joint trenching agreements, and to maximize the beneficial use of easements for greenway trails at the time of site plan and Subdivision Plan submittal.

3.6.3 Schedule of Installation

Utility infrastructure shall be completed in accordance UDO 7.5.9. For the purposes of UDO 7.5.9, vertically-integrated residential and non-residential uses will be considered non-residential.

3.6.4 Regional Utility Standards

a. Potable Water
It is anticipated that off-site extension of existing potable water mains will be required. Within the Development, a network of potable water mains will be required. Potable water infrastructure for the Development shall be in accordance with the Town's Water Distribution System Master Plan and Cross Connection Control Ordinance (Sec. 12-156 through 166), as amended from time to time.
b. Reclaimed Water
The Developer may request that the Town apply to NCDENR for conjunctive systems permit in order to modify the Middle Creek Water Reclamation Facility ("WRF") to provide a source of reclaimed water for use within the Development. If such permit is issued, then water re-use distribution infrastructure may be provided within the Development to provide a circulation network of water for non-potable uses, including fire suppression. Standards and specifications related to reclaimed water shall comply with rules and regulations as promulgated, established and interpreted by NCDENR and Town Standards, if any. It is anticipated that any reclaimed water that is not consumed in the reuse options available will be discharged within the Development in accordance with applicable law and regulation.

If and when the Town adopts standards for the permitting, construction, modification and operation of reclaimed water distribution lines, the Town shall work cooperatively with Veridea to ensure that the standards allow for all actual or planned for uses within the Development. Should public reuse water become available to the Development through the Town of Apex, the Town specifications and details will be the authority for design, ownership and maintenance issues within Town right-of-way.

c. Sanitary Sewer
In all cases, Veridea shall follow the Town's Wastewater Master Plan, as may be amended from time to time. If a conjunctive systems permit is issued for the Middle Creek WRF as set forth in 3.6.4.b hereof, then the Town's Wastewater Master Plan may be amended to allow for wastewater generated within the Development to discharge to the Middle Creek WRF. If a conjunctive systems permit is not issued for the Middle Creek WRF, then wastewater generated within the Development shall be treated in accordance with the Town's Wastewater Master Plan.

d. Electric and Thermal
If a Renewable Energy Facility is available, distribution lines may be provided to provide an alternate source to meet power and thermal demands within the Development.

3.7 ENERGY STANDARDS

3.7.1 Renewable Energy

The Goals for the use of Renewable Energy Facilities and Renewable Energy Resources within Veridea are as follows:

i. Removing regulatory obstacles and adopting streamlined processes for the installation and safe interconnection of renewable energy technologies;
ii. Creating a receptive environment for innovative uses of Renewable Energy Facilities;
iii. Providing for use of shared non-polluting Renewable Energy Resources to reduce climate change and greenhouse gas emissions; and,
iv. Enhancing the opportunity for increased development of Renewable Energy Facilities and Renewable Energy Resources in the future to increase energy independence;

The use of Renewable Energy Facilities shall be allowed. Renewable energy standards, a component of the Sustainability Standards, shall be consistent with generally accepted industry standards and best practices, recognizing that relevant technology and standards are evolving. Such standards include, but are not limited to, priorities, standards, and practices developed by entities such as the American Society of Heating, Refrigerating and Air-Conditioning Engineers ("ASHRAE"), Environmental Protection Agency ("EPA"), and the Department of Energy ("DOE"), and requirements for interconnection and other associated safety metrics.

3.7.2 Energy Efficiency

The goals for energy efficiency within Veridea are as follows:

i. Encourage the use of energy efficient technologies and design to fully maximize the use of existing generation capacity;
ii. Encourage environmental stewardship through reduction in energy use;
iii. Encourage local investment in efficiency as a substitute for out-of-state resources;
iv. Promote an overall reduction in energy demand to ensure reliability of supply in the face of increased population and to preserve affordability in the face of rising costs imposed by carbon constraints; and
v. The improvement of energy performance by 20% compared to baseline building performance ratings per ASHRAE/ IESNA Standard 90.1-2004.

The use of technologies and designs intended to maximize energy efficiency shall be consistent with generally accepted industry standards and best practices, recognizing that relevant technology and standards are evolving. Such standards include, but are not limited to guidelines developed by the US Green Building Council (USGBC), ASHRAE, EPA, and DOE.

3.8 NO OBLIGATION

3.8.1 No Obligation

Nothing in this SD Plan obligates the Town to provide any financial assistance with respect to any infrastructure or improvements referenced herein, nor shall it prohibit the Town from doing so.

ARTICLE 4.0 COMMUNITY DESIGN STANDARDS

4.1 GENERAL

4.1.1 Development shall comply with the community design standards, a component of the Sustainability Standards, set forth in this Article.

4.1.2 Subdivision Plans and site plans shall be prepared in accordance with the SD Plan.

4.1.3 Site plans and Subdivision Plans shall designate areas and elements as follows:

a. Sustainable Zones:
   i. **OS** Open Space
   ii. **NG** Neighborhood General
   iii. **NM** Neighborhood Mixed-Use
   iv. **VC** Village Center
   v. **UC** Urban Core
b. Civic Uses; and
c. Thoroughfares.

The respective Sustainable Zones are described in Table 1.

4.1.4 It is possible that as the build out of the Development occurs, the Town Council may adopt elective regulations and standards applicable to SD-CZ districts pursuant to UDO 2.3.16 F) 3) c).

4.1.5 Open Space is one of the Sustainable Zones, and will exist both as an independent Zone as well as being integrated into and completely surrounded by other Sustainable Zones.

4.2 VERIDEA SUSTAINABLE DEVELOPMENT CONCEPT MAP

4.2.1 Veridea Sustainable Development Concept Map

Table 2 contains the Veridea Sustainable Development Concept Map (Concept Map), which depicts a concept for the development of Veridea and the conceptual location of its Sustainable Zones. The Concept Map depicts the configuration of land uses believed to be appropriate for Veridea. However, based on future planning, market and demographic conditions, the Sustainable Zones may be located anywhere within the Development as determined by the Responsible Person. The Responsible Person may revise the Concept Map from time to time and shall provide the TRC with a copy of each revision. The development of Veridea shall include the following minimum acreages with respect to the Sustainable Zones noted:

NG	Neighborhood General	75 acres
NM	Neighborhood Mixed-Use	50 acres
VC	Village Center	215 acres
UC	Urban Core	135 acres

The VC and UC Zones shall contain a minimum of 150 acres allocated as A-Grid Zones. Further, a minimum of 250 acres within Veridea shall be designated as provided in Article 3.1.3 hereof.

4.2.2 Land Use Locations and Densities

a. Land uses and Densities allowed in each Sustainable Zone are set forth in Article 7 Tables. Such land uses can be located anywhere within the respective Sustainable Zones.
b. For purposes of the SD Plan, Density is expressed in terms of housing units per acre for residential uses and as FAR for other uses as specified for the area of each respective Sustainable Zone in Table 14. The FAR for each Sustainable Zone is set as an average Density for the zone. Areas designated for Open Space, utilities infrastructure, Thoroughfares and other transportation infrastructure, such as a Regional Public Transit System, may be allocated from time to time by the Responsible Person to any other area or areas for the purpose of calculating authorized Density for the area or areas receiving the allocation. The Responsible Person shall have the authority to reallocate the authorized square footage numbers of the Non-residential Uses within Article 4.2.2.b.ii and iii on a square foot-for-square foot basis; provided, however, that the Responsible Person may only increase or decrease the Retail square footage by up to 20% subject to the limitation that the reallocation shall not result in a total daily vehicular trip generation for Veridea that exceeds the maximum daily vehicular trip generation that served as the basis for the Master TIA. Any further increase related to retail must be approved by Town Council in accordance with UDO 2.3.16 F) 3) a. In addition to the total authorized development provided below, Public, Civic, Utilities, Recreational and Lodging Uses are authorized to support the total authorized development set forth in Article 4.2.2.b.i, ii, and iii. In the event that additional parcels are incorporated into the Veridea Sustainable Development District, the total authorized development hereinafter provided shall be adjusted in accordance with UDO 2.3.16 D).

The total authorized development for the Development shall be as follows:

i.	Authorized Number of Dwelling Units (all types)	8,000
ii.	Authorized Retail Uses (gross leasable area)	3,500,000 Square Feet
iii.	Authorized Office and Industrial Uses (gross floor area)	12,000,000 Square Feet

4.2.3 The Sustainable Development Concept Map designates VC and UC zones as being either A-Grid or B-Grid. Subsequent approved site plans and Subdivision Plans shall confirm or modify such zones as called for in the SD Plan, and shall designate Thoroughfares within the VC and UC zones as being either A-Grid or B-Grid.

a. Buildings and frontages along the A-Grids shall reflect multi-modal and pedestrian standards of the SD Plan supporting pedestrian activity.

Thoroughfares within an A-Grid Zone may be developed according to B-Grid standards subject to the following special and limiting conditions:

i. Transition conditions within A-Grid Zones to adjacent B- Grid Zones; and

ii. Small internal Thoroughfares of limited length to respond to a specific condition of the site or a use. Notwithstanding these special and limiting conditions, no more than 15% of the aggregate length of Thoroughfares within an A-Grid Zone may be designated as a B-Grid and follow B-Grid standards. Location and other specifics of such B-Grid Thoroughfares shall be addressed within site plans.

b. Buildings and frontages along the B-Grids may reflect automobile- oriented standards. B-Grids may be developed in whole or in part to A-Grid standards. It is the goal that B-Grid zones eventually become redeveloped as A-Grids. Therefore, site plans for B-Grids shall reflect in their planning and site engineering this goal by:

i. Establishing a B-Grid Thoroughfare grid and therefore a block layout that can be redeveloped into smaller blocks exhibiting the characteristics of an A-Grid;
ii. Establishing the B-Grid Thoroughfares in such a manner that they can be redeveloped into A-Grid Thoroughfares and frontages; and
iii. Locating utilities and site features so that they will not prohibit the establishment of an A-Grid development pattern, and do so without significant redesign or cost impacts. Site plans for B- Grid zones shall depict both the B-Grid configuration, and conceptually reflect how the B-Grid configuration may be redeveloped into an A-Grid.

4.2.4. Development Thresholds

In order to create and maintain a mix of uses as the buildout of Veridea occurs, the following requirements shall be applicable to development within Veridea, unless otherwise provided by the Town Council at the request of the Responsible Person:

Threshold 1: Certificates of Occupancy shall not be issued for more than 10% (1,200,000 sf) of the total authorized Office and/or Industrial square footage or more than 20% (700,000 sf) of the total authorized Retail square footage unless and until building permits have been issued for dwelling units. Similarly, building permits for no more than 20% (1,600 units) of the total authorized dwelling units can be issued until Certificates of Occupancy have been issued for at least 2% (70,000 sf) of the total authorized retail square footage and 2% (240,000 sf) of the total authorized Office and/or Industrial square footage.

Threshold 2: Certificates of Occupancy shall not be issued for more than 25% (3,000,000 sf) of the total authorized Office and/or Industrial square footage or more than 50% (1,750,000 sf) of the total authorized Retail square footage until building permits have been issued for at least 5% (400 units) of the total authorized dwelling units. Similarly, building permits for no more than 37.5%(3,000 units) of the total authorized dwelling units can be issued until Certificates of Occupancy have been issued for at least 10% (350,000 sf) of the total authorized Retail square footage and 5% (600,000 sf) of the total authorized Office and/or Industrial square footage.

Threshold 3: Certificates of Occupancy shall not be issued for more than 50% (6,000,000 sf) of the total authorized Office and/or Industrial square footage or more than 60% (2,100,000 sf) of the total authorized Retail square footage until building permits have been issued for at least 15% (1,200 units) of the total authorized dwelling units. Similarly, building permits for no more than 60% (4,800 units) of the total authorized dwelling units can be issued until Certificates of Occupancy have been issued for at least 25% (875,000 sf) of the total authorized Retail square footage and 10% (1,200,000 sf) of the total authorized Office and/or Industrial square footage.

Threshold 4: Certificates of Occupancy shall not be issued for more than 70% (8,400,000 sf) of the total authorized Office and/or Industrial square footage or more than 80% (2,800,000 sf) of the total authorized Retail square footage until building permits have been issued for at least 40% (3,200 units) of the total authorized dwelling units. Similarly, building permits for no more than 80% (6,400 units) of the total authorized dwelling units can be issued until Certificates of Occupancy have been issued for at least 40% (1,400,000 sf) of the total authorized Retail square footage and 25% (3,000,000 sf) of the total authorized Office and/or Industrial square footage.

Threshold 5: Certificates of Occupancy shall not be issued for more than 85% (10,200,000 sf) of the total authorized Office and/or Industrial square footage (or more than 85% (2,975,000 sf) of the total authorized Retail square footage until building permits have been issued for at least 50% (4,000 units) of the total authorized dwelling units. Similarly, building permits for no more than 85% (6,800 units) of the total authorized dwelling units can be issued until Certificates of Occupancy have been issued for at least 50% (1,750,000 sf) of the total authorized Retail square footage and 40% (4,800,000 sf) of the total authorized Office and/or Industrial square footage.

Threshold 6: See the requirements set forth in SD Plan 3.5.3.d.vi and 4.2.2.b.

The foregoing requirements are illustrated by the tables below:

RESIDENTIAL CONTROL

	Minimum Required	
DU BP's	**Retail SF C/O's**	**O&I SF C/O's**
1 - 1,600	0	0
1,601 - 3,000	70,000	240,000
3,001 - 4,800	350,000	600,000
4,801 - 6,400	875,000	1,200,000
6,401 - 6,800	1,400,000	3,000,000
6,801 - 8,000	1,750,000	4,800,000

RETAIL CONTROL

	Minimum Required	
Retail SF C/O's	**DU BP's**	**O&I SF C/O's**
0 - 700,000	0	0
700,001 - 1,750,000	1	0
1,750,001 - 2,100,000	400	0
2,100,001 - 2,800,000	1,200	0
2,800,001 - 2,975,000	3,200	240,000
2,975,001 - 3,500,000	4,000	240,000

O&I CONTROL

	Minimum Required	
O&I SF C/O's	**DU BP's**	**Retail SF C/O's**
0 - 1,200,000	0	0
1,200,001 - 3,000,000	1	0
3,000,001 - 6,000,000	400	0
6,000,001 - 8,400,000	1,200	0
8,400,001 - 10,200,000	3,200	70,000
10,200,001 - 12,000,000	4,000	70,000

Although the foregoing tables are intended to illustrate the preceding text, the text shall control the construction of this Article 4.2.4.

4.3 SUSTAINABLE ZONES

4.3.1 Sustainable Zones, as shown on the Sustainable Development Concept Map shall have the character described in Table 1.

4.3.2 Open Space (OS) consists of lands approximating or reverting to a natural condition and farmland, parks, greenways, Civic Uses, utility corridors and easements, and waterways or water bodies, including lands unsuitable for development due to topography, hydrology and/or vegetation.

a. Open Space includes areas protected by law or regulation, as well as land designated for conservation.
b. Open Space shall be identified in site and Subdivision Plans approved for the Development. Upon the approval of a subdivision or site plan designating an area Open Space, such area may be conveyed in fee or by easement to (i) an entity created by law to hold interests in property designated for conservation purposes, or (ii) to a property owners association formed, in part, for such purpose, or (iii) to a public entity.
c. Land area within Open Space may be used in calculating the Density of a Project.
d. Open Space is an independent Sustainable Zone and will also be integrated into other Sustainable Zones.

4.3.3 Neighborhood General (NG) consists of low Density residential areas, adjacent to higher Density zones that consist of some Mixed Use. Home occupations and Outbuildings are allowed. Planting is naturalistic and Setbacks are relatively deep. Blocks may be large and the Thoroughfares irregular to accommodate natural conditions.

4.3.4 Neighborhood Mixed-Use (NM) consists of Mixed Uses within a medium to high Density residential urban fabric. It may have a wide range of building types: single, sideyard, rowhouses, and apartments. Setbacks and landscaping are variable. Thoroughfares with curbs and sidewalks define medium-sized blocks.

4.3.5 Village Center – A-Grid (VC A-Grid) consists of higher Density Mixed Use buildings that accommodate retail, Office, rowhouses and apartments. It has a tight network of Thoroughfares, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.

4.3.6 Village Center – B-Grid (VC B-Grid) consists of larger block sizes, and larger format uses supporting regional users. It has a coarse network of Thoroughfares, with sidewalks and steady street tree planting.

4.3.7 Urban Core – A-Grid (UC A-Grid) consists of the highest Density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; Thoroughfares have steady street tree planting and buildings are set close to wide sidewalks.

4.3.8 Urban Core – B-Grid (UC B-Grid) consists of the highest Density and height, with predominantly Office, lab, and research uses. It may have larger blocks; streets have steady street tree planting and buildings may be set back from the sidewalks.

4.4 CIVIC USES

4.4.1 General

a. Space for Civic Uses shall be designated on the Sustainable Development Concept Map as Civic Space (CS) and Civic Building (CB) as Subdivision Plans and site plans are approved for the Development.
b. Civic Space (CS) shall denote public sites supportive of or ancillary to Civic Buildings or sites permanently dedicated to Open Space.
c. Civic Building (CB) shall denote sites for buildings primarily operated by governmental or not-for-profit organizations dedicated to Functions such as culture, education, religion, government, transit and municipal parking.

4.4.2 Civic Space (CS) Specific to NG, NM, VC, and UC Zones

a. Civic Spaces shall be designed as generally described in Table 13 and distributed throughout Sustainable Zones as described in Table 14e.

4.5 THOROUGHFARE STANDARDS

4.5.1 General

a. Thoroughfares are intended for use by vehicular and pedestrian traffic and to provide access throughout the Development.
b. Thoroughfares shall consist of vehicular lanes and Public Frontages. Walkways shall be in accordance with Table 4B.
c. Thoroughfares shall be designed in context with the desired vehicular design speed of the Sustainable Zones through which they pass. The Public Frontages of Thoroughfares that pass from one Sustainable Zone to another shall be adjusted accordingly or, alternatively, the Sustainable Zone may follow the alignment of the Thoroughfare to the depth of one Lot, retaining a single Public Frontage throughout its course.
d. Within areas designated as B-Grid Zones, pedestrian use shall be a secondary consideration of the Thoroughfare. Design conflict(s) between vehicular and pedestrian traffic generally shall be decided in favor of the vehicle. Within the more urban A-Grid Zones, pedestrian use shall be a primary consideration of the Thoroughfare. Design conflict(s) between vehicular and pedestrian movement generally shall be decided in favor of the pedestrian.
e. The Thoroughfare network shall be designed to define Blocks not exceeding the size indicated in Table 14. The perimeter shall be measured as the sum of Lot Frontage Lines.

f. Street trees shall satisfy traffic calming measures required within the Development.
g. Thoroughfares shall terminate at other Thoroughfares, forming a network. Internal Thoroughfares shall connect wherever practicable to those on adjacent sites. Cul-de-sacs may be permitted to accommodate unusual site conditions subject to UDO 7.2.1 G).
h. Each Lot shall be bounded by a vehicular Thoroughfare, except that 20% of the Lots within each Sustainable Zone may be bounded by a Passage, so long as the Thoroughfare assembly behind such Lots is constructed to Rear Alley standards, will meet emergency vehicle access requirements and is public.
i. Thoroughfares within designated B-Grid Zones and designated as B-Grid Thoroughfares may follow the specified B-Grid Public Frontage and Private Frontage requirements in Tables 4A and 4B, and Table 7.
j. B-Grid Thoroughfares are permitted within A-Grid Zones for Thoroughfares necessary to support vehicular traffic and that enhance the pedestrian network per Article 4.2.3. These Thoroughfares shall be addressed on the individual site plans and may follow the standards for B-Grid.
k. The B-Grid Zones may abut freeways and conventional commercial arteries that are pedestrian intolerant. B-Grid Zones are used to transition into the more multi-modal and pedestrian supportive environments. B-Grid Zones may be developed in whole or in part to A-Grid standards and may evolve into A-Grid Zones over time.

4.5.2 Vehicular lanes

a. The standards for vehicular lanes shall follow the guidance in Table 3A or the Town Standards, or may follow other additional or elective regulations and standards adopted by the Town Council in accordance with UDO 2.3.16 F) 3) a) or 2.3.16 F) 3) c).
b. A bicycle network consisting of Bicycle Trails, Bicycle Routes and Bicycle Lanes shall be permitted as set forth in Table 14d.

4.5.3 Public Frontages

a. General to all zones OS, NG, NM, VC, UC
    i. The Public Frontage contributes to the character of the Sustainable Zone, and includes the requisite types of Sidewalk, Curb, Planter, bicycle parking, and street trees.
    ii. Public Frontages shall be designed as shown in Table 4A and Table 4B and allocated within Sustainable Zones as specified in Table 14d.
    iii. Within the Public Frontages, the types of Public Planting and Public Lighting shall be as shown in Table 4A, Table 4B, Table 5 and Table 6.
b. Specific to OS and NG Zones
    i. The Public Frontage may include trees of various species, naturalistically clustered, as well as understory.
    ii. The landscape may consist primarily of native species requiring minimal irrigation, fertilization and maintenance.

c. Specific to NM, VC and UC Zone
    i. The landscape shall consist primarily of durable species tolerant of soil compaction.
d. Specific to NM Zone
    i. The Public Frontage shall include trees planted in a regularly-spaced and aligned pattern of single or alternated species with shade canopies of a height that, at maturity, clears at least one Story. Various street tree species shall be used within the NM Zone.
e. Specific to VC and UC Zone
    i. The Public Frontage shall include trees planted in a regularly-spaced and aligned pattern of single species with shade canopies of a height that, at maturity, clears at least one Story. Various street tree species shall be used within the VC and UC Zones. At Retail Frontages, the spacing of the trees may be irregular, to avoid visually obscuring the Shopfronts.
    ii. Streetscape solar panels as shown in Table 18 may be used in the place of street trees where required. This section shall provide design flexibility in the creation of a public statement in the form of either art or symbolic statements of sustainability, but shall not allow the wholesale replacement of mandatory street trees with solar-powered streetlights or prohibit the installation of larger solar panel assemblages elsewhere within the Development.
    iii. Thoroughfares with Galleries, Arcades, or a right-of-way width of 40 feet or less shall be exempt from the tree planting requirement.

ARTICLE 5.0 BUILDING STANDARDS

5.1 TABLES AND PLAN

5.1.1 It is possible that the evolution of technology, building materials and lifestyle may result in the future in the Town Council's adoption of elective Sustainability Standards for SD-CZ districts pursuant to UDO 2.3.16 F) 3) c).

5.1.2 B-Grid Zones within the Development shall comply with UDO 9.2 and 9.3, except that the requirements of UDO 9.2 and 9.3 may be varied, in accordance with UDO 2.3.16 F) 3) a), by the standards set forth in the Pattern Book.

5.2 CIVIC BUILDINGS

5.2.1 Civic Buildings ("CB")

a. Civic Buildings shall be subject to the requirements of this Article.

5.3 OPEN SPACE ("OS") ZONES

5.3.1 Buildings shall not be allowed in an OS Zone, except as listed in Table 12 and for accessory structures incidental to and necessary to support the permitted Functions and uses.

5.4 BUILDING DISPOSITION

5.4.1 Specific to OS, NG, NM, VC and UC Zones

a. Newly platted Lots shall be dimensioned according to Table 14f and Table 15.
b. Building Disposition shall be as shown in Table 9 and Table 14i.
c. Buildings shall be disposed in relation to the boundaries of their Lots according to Table 14g, Table 14h, and Table 15.
d. One Principal Building at the Frontage and one Outbuilding to the rear of the Principal Building may be built on each Lot as shown in Table 17c.
e. Lot coverage by buildings shall not exceed that specified in Table 14f and Table 15.
f. Facades shall be built parallel to a rectilinear Principal Frontage Line or to the tangent of a curved Principal Frontage Line, and along a minimum percentage of the Frontage width at the Setback, as specified as Frontage Buildout on Table 14g and Table 15.
g. Setbacks for Principal Buildings shall be as shown in Table 14g and Table 15.
h. Adequate access to and clearance around utilities and HVAC units shall be provided.

5.4.2 Specific to UC Zone

a. The Principal Entrance shall be on a Frontage Line.

5.4.3 Specific to NM, VC and UC Zones

a. Farmers Markets may be located on unbuffered Lots of any size.
b. Diagonal parking on commercial streets shall be as set forth in the SD Plan.

5.5 BUILDING CONFIGURATION

5.5.1 General to OS, NG, NM, VC and UC Zones
a. The Private Frontage of buildings shall conform to and be allocated in accordance with Table 7 and Table 14j.
b. Buildings on corner Lots shall have two Private Frontages as shown in Table 17. Prescriptions for the second and third Layers pertain only to the Principal Frontage. Prescriptions for the first Layer pertain to both Frontages.
c. All Facades shall be glazed with clear glass no less than 30% of the first Story, however glazing shall be no less than 50% in the VC Zone A-Grid and UC Zone A-Grid areas.
d. Building stories, Stepbacks, and Expression Lines shall conform to Table 8 and Table 14j.
e. In a Parking Structure or garage, each above-ground level counts as a single Story regardless of its relationship to habitable Stories.
f. Story limits do not apply to attics or raised basements, masts, belfries, clock towers, chimney flues, water tanks, cupolas or elevator bulkheads.
g. Prescriptions for the parking Layers pertain only to the Principal Frontage. Prescriptions for the first Layer pertain to both Frontages of a corner Lot.
h. Public access requirements shall comply with UDO 7.5.4 E) except that the requirements of UDO 7.5.4 E) may be varied in accordance with UDO 2.3.16 F) 3) a), by the standards set forth in the Pattern Book.

5.5.2 Specific to NG, NM and VC Zones
a. The habitable area of an Accessory Unit within a Principal Building or an Outbuilding shall not exceed 800 square feet, excluding any enclosed parking area.

5.5.3 Specific to NG Zone
a. No portion of the Private Frontage may Encroach into the Sidewalk.
b. Open porches may Encroach into the first Layer 50% of its depth. (Table 17d)
c. Balconies, cantilevers, and bay windows may Encroach into the first Layer up to 25% of the depth defined for the first Layer. In addition, porches including balconies on porch roofs may Encroach into the first Layer up to 50% of the depth defined for the first Layer.
d. A first level Residential or Lodging Function shall be raised a minimum of three steps from average Sidewalk grade, except as required for accessibility under applicable federal and state laws or to accommodate single-family senior housing units.

5.5.4 Specific to NM Zone
a. Balconies, open porches, cantilevers and bay windows may Encroach into the first Layer 50% of its depth. (Table 17d)

5.5.5 Specific to OS, VC and UC Zones

a. Arcades, awnings, and Galleries may Encroach into the Sidewalk to within 2 feet of the Curb but must clear the Sidewalk vertically by at least 9 feet. Arcades and Galleries within public rights-of-way require encroachment and maintenance agreements with the Town.
b. Maximum Encroachments for Arcades shall be as shown on Table 8.
c. Stoops, Lightwells, balconies, bay windows, cantilevers and terraces may Encroach into the first Layer for 100% of its depth. (Table 17d)
d. Loading docks and service areas shall be permitted along/within Frontages.
e. In the absence of a building Facade along any part of a Frontage Line, a Streetscreen may be built co-planar with the Facade or adjacent Facades.
f. Streetscreens shall be between 3.5 and 8 feet in height. The Streetscreen may be in the form of a hedge, fence or wall. Walls may be constructed of masonry, stone, stucco, EIFS or may match the building materials of the adjacent buildings. Fences shall be constructed of wood or wrought iron (or products created to resemble these materials) and shall be finished on the side facing the public right-of way. Streetscreens shall have openings no larger than reasonably necessary to allow vehicular and pedestrian access.
g. Arena, auditorium or stadium uses shall be located a minimum of 500 feet from any NG or NM Zone and may be located in Mixed Use Blocks, in Mixed Use buildings or on Lots of sufficient size and with sufficient Frontage to support the use and comply with the egress requirements of the North Carolina State Building Code.
h. Outdoor entertainment areas such as small amphitheaters may be incorporated without enclosure into Open Space, Public Space, or Civic Space or on an individual Lot as long as there is sufficient Frontage to support the use and comply with the egress requirements of the North Carolina State Building Code.
i. Drive-through facilities associated with financial institutions and pharmacies may be integrated into multi-story buildings.

5.5.6 Specific to NM, VC and UC Zones

a. Lodging Functions may be located in Mixed Use Blocks, in Mixed Use buildings or on Lots of any size to support the use and comply with the egress requirements of the North Carolina State Building Code when the use is located 100 feet or more from NG Zones.

5.6 BUILDING FUNCTION

5.6.1 General to OS, NG, NM, VC and UC Zones

a. Buildings in each Sustainable Zone shall comply with Article 7 Tables.
b. Historic Sites may be used for residential, lodging, food and beverage, Office or retail sales and service use.

5.6.2 Specific to NG Zone

a. Accessory Functions of Lodging or Office shall be permitted within an Accessory Building. See Table 10.

5.6.3 Specific to NM Zones

a. Commercial Functions shall be permitted.

5.6.4 Specific to VC and UC Zones

a. Commercial Functions shall be permitted.
b. Manufacturing Functions may be permitted.
c. Utilities such as communication towers and water towers may be integrated into building structures without the need for screening. See Article 5.5.2 for existing cell towers.
d. Electrical Power Facilities shall be set back a minimum of 20 feet from property lines or easement lines and may be screened or buffered by architectural means or located internally within a block to permit integration into an urban fabric.

5.7 PARKING AND DENSITY STANDARDS

5.7.1 Specific to NG Zone

a. Buildable Density on a Lot shall be determined by the actual parking provided as applied to the Functions permitted in Table 10 and Table 11.

5.7.2 Specific to OS, NM, NG, VC and UC Zones

a. As provided in Tables 10 and 11, buildable Density on a Lot shall be determined by the sum of the actual parking calculated as that provided (1) within the Lot (2) along the parking lane corresponding to the Lot Frontage, and (3) by purchase, lease, allocation, dedication, reservation or assignment from a public or private parking structure or lot within 1,200 feet of any entrance for customer, patron, or resident parking and within 1,200 feet of any entrance of the principal use for employee parking, if available.
b. The actual parking may be adjusted downward according to the Shared Parking Factor of Table 11 to determine the Effective Parking. The Shared Parking Factor is available for any two Functions within any block, any pair of adjacent Blocks or within any area contained within a single site plan submittal. Further adjustment is permitted for areas controlled by a comprehensive parking plan in accordance with Article 5.7.3.
c. Based on the Effective Parking available, the Density of the projected Function may be determined according to Table 10.
d. Within the area of a Transit Oriented Development (“TOD”) the Effective Parking may be further adjusted downward by 30% and the distances listed in 5.7.2.a are permitted to be increased by 20%.
e. Accessory Units do not factor into Density calculations.
f. Liner Buildings less than 30 feet deep and up to the first two Stories shall be exempt from parking requirements.
g. Retail spaces of 1,500 square feet or less of net floor area shall be exempt from the parking requirements.
h. In accordance with SD Plan 3.1.2, a Parking Management Plan, subject to review and approval by the Town Council in accordance with UDO 2.3.16 F) 3) a), shall be submitted with the first site plan that deviates from applicable UDO standards related to parking and shall be updated as necessary for subsequent site plans.

5.7.3 Off-Street Parking: Further reduction in off-street parking beyond those otherwise allowed by the SD Plan is permitted for the Veridea Sustainable Development District or portions thereof within the area of a TOD in conjunction with a TDM plan.

5.7.4 Off-Street and On-Street Loading: The Veridea Sustainable Development District or portions thereof are permitted to have comprehensive loading plans to include on-street loading in Thoroughfares during non-peak hours, on side streets and/or in non-dedicated parking areas of parking lots for all or portions of the site.

5.7.5 A portion of the parking spaces provided in any public or private parking lots or parking deck may be compact spaces if such spaces are: a) assigned and/or private spaces; b) assigned to a car-share program; c) specifically designated for electric cars; or d) approved by the TRC upon its determination that then current market data support the use by compact vehicles of the number of compact spaces proposed. A compact space will be a space of at least 8.5 feet by 14 feet, and a compact vehicle shall be a vehicle that can safely park in the area of the compact space proposed.

5.8 PARKING LOCATION STANDARDS

5.8.1 General to OS, NG, NM, VC and UC Zones

a. Parking shall be accessed by Rear Alleys or Rear Lanes, when available.
b. Open parking areas and Parking Structures shall be masked from the Frontage by a Building or Streetscreen.
c. For buildings on B-Grids, open parking areas and Parking Structures are allowed unmasked on the Frontage in the front Layer, except for corner Lots at intersections with the A-Grid.
d. Bicycle parking locations at Common Destinations shall be determined at the time of site plan approval for all Sustainable Zones including OS Zones.
e. Commercial Parking Garages may be incorporated into Mixed Use Blocks or in Mixed Use buildings on the same Lot to allow for internal block parking.

5.8.2 Specific to NG Zone

a. Open parking areas shall be located at the second and third Lot Layers, except that Driveways, drop-offs and unpaved parking areas may be located at the first Lot Layer. (Table 17d)
b. Garages shall be located at the second or third Layer except that side- or rear-entry types may be allowed in the first Layer by the TRC.
c. Driveways at Frontages shall be no wider than 24 feet in the first Layer. (Table 3B.f)

5.8.3 Specific to NM Zone

a. All parking areas and garages shall be located at the second or third Layer except for lots located on designated B-Grids. (Table 17d)
b. Driveways at Frontages shall be no wider than 24 feet in the first Layer. (Table 3B.f)

5.8.4 Specific to VC and UC Zones

a. All parking lots, garages, and Parking Structures shall be located at the second or third Layer except along B-Grids where parking may be located in the first layer. (Table 17d)
b. Vehicular entrances to parking lots, garages, and Parking Structures shall be no wider than 24 feet at the Frontage for A-Grid Thoroughfares. Driveways at Frontages for B-Grid Thoroughfares shall be no wider than necessary to accommodate the straight and turn lanes in the first Layer. (Table 3B.f)
c. Parking Structures on the A-Grid shall have Liner Buildings lining the first and second Stories.

5.9 LANDSCAPE STANDARDS

5.9.1 General to OS, NG, NM, VC and UC Zones

a. The landscape plantings shall consist of native or naturalized species requiring minimal irrigation, fertilization and maintenance as shown on Table 6.
b. Street trees and landscape planted in public rights-of-way shall require maintenance agreements with the Town.
c. Public utility locations, placement and accessibility shall be laid out and engineered so that trees and landscaping and utility conflicts are eliminated or substantially minimized.
d. Trees shall not be required in the first Layer where Setbacks are less than 12 feet.
e. Planting selection in the first Layer shall be appropriate for the scale of the space and located so as to avoid conflicts with buildings, walls and utilities.
f. Street trees shall be planted within the Public Frontage as illustrated in Table 7 and listed in Table 4C. Street trees may be shifted or eliminated along any Thoroughfares as long as the average number of trees based upon the Public Frontage is met for the site plan or Subdivision Plan. Tree preservation areas located in Open Space Zones shall be exempt from the street tree planting requirements. Public Frontages on Thoroughfares that are exempt from the tree planting requirement and Thoroughfare Assemblies for Rear Lanes, Rear Alleys, or where the landscape type is listed as trees clustered shall not be used in the calculation of the average number of trees.
g. In order to accommodate the intended density, connectivity and integration of uses, the landscape requirements set forth in UDO 7.2.5 C) 9) and UDO 7.2.5 C) 12) through UDO 7.2.5. C) 14) shall not apply within the Development.
h. Screening shall comply with UDO 8.2.8. Notwithstanding the foregoing, HVAC and other mechanical units shall not be required to be screened from adjacent properties when not visible from the public street.
i. Veridea shall comply with UDO 8.2.1, 8.2.2 and 8.2.3, except that, in order to accommodate the intended density, connectivity and integration of uses, the landscape buffer requirements of UDO 8.2 shall not apply.

j. Fences, walls and berms shall comply with UDO 8.2.7, except to the extent modified by Articles 5.5.5.e, 5.5.5.f. and 5.8.1.b. hereof.

5.9.2 Specific to NG and NM Zones

a. The first Layer may not be paved, with the exception of Driveways as specified in Article 5.8. (Table 17d)

5.9.3 Specific to NG Zone

a. One appropriately sized tree at maturity per Lot shall be planted within the first Layer. (Table 17d)
b. Trees shall be of single or multiple native or naturalized species as shown on Table 6.
c. Trees shall be naturalistically clustered.
d. Lawn shall be permitted upon site plan approval. Only re-use water, where available, may be used for Lawn irrigation.

5.9.4 Specific to NM Zone

a. One appropriately sized tree at maturity per Lot shall be planted within the first Layer. (Table 17d)
b. Trees should not be of a single species throughout large areas. Tree species selected are permitted to alternate along blocks. Selection of plant material shall be appropriate for the scale of the space.
c. Lawn shall be permitted. Only re-use water, where available, may be used for Lawn irrigation.

5.9.5 Specific to VC and UC Zones

a. Trees shall not be required in the first Layer.
b. The first Layer may be paved to match the pavement of the Public Frontage.
c. A minimum of one shade tree is required for every two thousand (2,000) square feet of vehicular surface area located within or adjacent to the parking area. Parking Structures are excluded from this requirement.
d. A minimum of 1 shrub is required for every five hundred (500) square feet of vehicular surface area. Selection of the plant material shall be appropriate for the scale of the space. Parking Structures are excluded from this requirement.
e. All vehicular surface areas within fifty (50) feet of any right-of-way that are visible from a Thoroughfare (street) are required to be screened from off-site view to a minimum height of thirty-six (36) inches. Plants, closed fences, walls, earthen berms or a combination thereof may be used to satisfy this requirement. Plants must be a minimum of thirty-six (36) inches at maturity or used in combination with earthen berms to satisfy this requirement. Screening material other than plants and earthen berms shall be harmonious with surrounding architecture and shall accommodate pedestrian and vehicular ingress and egress where applicable.
f. No vehicular parking space shall be located farther than fifty (50) feet from the back of curb in a planting area with one shade tree, or seventy five (75) feet from the back of curb in a planting area with two or more shade trees. Parking Structures are excluded from this requirement.

5.10 SIGNAGE

5.10.1 General to All Sustainable Zones

Signage shall comply with UDO 8.6, Signs, except that the requirements of UDO 8.6 may be varied by the standards set forth in the Pattern Book(s).

5.11 COMMUNICATION TOWERS

5.11.1 General to All Sustainable Zones

a. Communication Towers are exempt from the standards set forth in UDO 4.4.3 B).
b. Existing Communication Towers will be contained on a Lot.
c. Existing Communication Towers may be located a Lot that contains other uses.
d. Existing Communication Towers, or a portion thereof, may occupy a leased parcel on the Lot in which it is located.
e. New or relocated Communication Towers shall be located in accordance with Table 12.
f. New rooftop communication towers and devices may be allowed within UC and VC Zones.

5.12 EXTERIOR LIGHTING

5.12.1 General to All Sustainable Zones

Exterior lighting shall comply with UDO 8.7, Exterior Lighting, except that the requirements of UDO 8.7 may be varied by the standards set forth in the Pattern Book(s).

5.13 PATTERN BOOK(S)

A Pattern Book(s) may be submitted for approval from time to time in accordance with UDO 2.3.16 F) 3) a). Each site plan submitted with respect to Veridea shall designate the existing Pattern Book, or portion thereof, which shall be applicable to the site plan, or a Pattern Book applicable thereto shall be submitted with the site plan for approval pursuant to UDO 2.3.16 F) 3) a).

ARTICLE 6.0 TABLES

6.1 TABLES

6.1.1. The Tables which follow shall establish, together with the foregoing provisions of the SD Plan and applicable provisions of the UDO, other Town Ordinances and Town Standards, the standards and regulations which shall govern all development and land use within the Development.

6.1.2. If the Responsible Person so determines, as with the other provisions of the SD Plan, specific portions of the Tables may be affected by additional or elective regulations and standards hereafter adopted by the Town Council in accordance with UDO 2.3.16 F) 3) a) or 2.3.16 F) 3) c).

6.1.3. Design Standards contained in one or more of the Articles, Sections, or Tables of the Plan that pertain to the same aspect of development may be implemented independently or in conjunction with one another.

6.1.4. The text and numerical descriptions in the Tables are an integral part of this SD Plan. However, the graphics that accompany them represent guidelines. Where in conflict, the text and numerical descriptions shall take precedence over graphics.

6.2 TOWN STANDARDS

6.2.1 The Town and the Responsible Person may enter into a Development Agreement providing that the Town Standards applicable to the Development shall be those in existence as of the date of the adoption of this SD Plan. However, notwithstanding the foregoing, the Apex Standard Specifications and Standard Details, as modified and amended from time to time, shall be applicable to the Development, except to the extent otherwise specifically provided in this SD Plan or where the modified Apex Standard Specifications and Standard Details are specifically inapplicable to Veridea.

TABLE 1. SUSTAINABLE ZONE DESCRIPTIONS

TABLE 1A: Sustainable Zone Descriptions. This table provides descriptions of the character of each Sustainable Zone.

OS



OS - OPEN SPACE

OS Open Space Zone consists of lands approximating or reverting to a natural condition and farmland, parks, Civic Uses, RCA, utility corridors, non-street easements, greenways, waterways or water bodies, including lands unsuitable for settlement due to topography, hydrology or vegetation.

General Character:	Natural landscape and parkland (active and passive parks) with some civic and agricultural use
Building Placement:	Variable front and side setbacks for park structures, civic structures, agricultural and maintenance buildings
Frontage Types:	Variable
Building Height:	1- to 2-Story
Type of Civic Space:	Parks, Greenways, Civic Buildings

NG



NG - NEIGHBORHOOD GENERAL

NG Neighborhood General Zone consists of low density residential areas, adjacent to higher zones that consists of some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the Thoroughfares irregular to accommodate natural conditions.

General Character:	Lawns, and landscaped yards surrounding predominantly detached single-family houses with some mix of Townhouses; pedestrians occasionally
Building Placement:	Medium and variable front and side yard Setbacks
Frontage Types:	Porches, fences, naturalistic tree planting
Building Height:	1- to 3-Story with some 4-Story
Type of Civic Space:	Parks, Greenways

NM

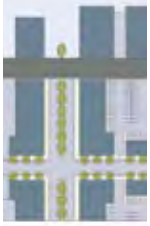


NM - NEIGHBORHOOD MIXED-USE

NM Neighborhood Mixed-Use Zone consists of mixed uses within a medium to high density residential urban fabric. It may have a wide range of building types: single, sideyard, rowhouses, and apartments. Setbacks and landscaping are variable. Thoroughfares with curbs and sidewalks define medium-sized blocks.

General Character:	Mix of Houses, Townhouses & Apartment buildings, with moderate Commercial activity; balance between landscape and buildings; presence of pedestrians
Building Placement:	Shallow to medium front and side yard Setbacks
Frontage Types:	Porches, fences, Dooryards
Building Height:	1- to 4-Story with a few taller Mixed Use buildings up to 7 stories adjacent to Village Center Zones and major transportation corridors
Type of Civic Space:	Squares, Greens

VC A-GRID



VC - VILLAGE CENTER - A-GRID

VC Village Center Zone consists of higher density mixed use buildings that accommodate retail, offices, rowhouses and apartments. It has a tight network of Thoroughfares, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.

General Character:	Shops mixed with Townhouses, larger Apartment houses, Offices, workplace, and Civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activity
Building Placement:	Shallow Setbacks or none; buildings oriented to the street defining a street wall. See the Concept Map for locations
Frontage Types:	Stoops, Shopfronts, Galleries
Building Height:	1- to 10-Story with some variation up to 15 stories adjacent to Urban Center Zones,
Type of Civic Space:	Parks, Plazas and Squares, median landscaping

UC A-GRID



UC - URBAN CORE - A-GRID

UC Urban Core Zone consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; Thoroughfares have steady street tree planting and buildings are set close to wide sidewalks.

General Character:	Medium-high to high-Density Mixed Use buildings, entertainment, Civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity
Building Placement:	Shallow Setbacks or none; buildings oriented to street, defining a street wall.
Frontage Types:	Stoops, Dooryards, Forecourts, Shopfronts, Galleries, and Arcades
Building Height:	4- to 20-Story with a few shorter buildings including some 1 story uses
Type of Civic Space:	Parks, Plazas and Squares; median landscaping

TABLE 1. SUSTAINABLE ZONE DESCRIPTIONS



VC - VILLAGE CENTER - B-GRID

VC Village Center Zone consisting of larger block sizes, and larger format uses supporting regional users. It has a coarse network of Thoroughfares, with sidewalks, regular street tree planting.

General Character:	Larger single-use retail, office, and manufacturing formats with out-parcels permitted, transitioning to shops mixed with Townhouses, and larger Apartment houses towards A-Grid Zones; trees within the public right-of-way; substantial automobile activity
Building Placement:	Larger setbacks with parking permitted in the setback for any Layer except along adjacent A-Grids
Frontage Types:	Common Yard, Shopfronts,
Building Height:	Predominantly 1- to 4-Story with some increased variation up to 7 stories
Type of Civic Space:	Not required



UC - URBAN CORE - B-GRID

UC Urban Core Zone consists of the highest density and height, with predominantly office, lab, and research uses. It may have larger blocks; a coarse network of Thoroughfares, regular street tree planting and may have buildings set back from the sidewalks.

General Character:	High-density single and Mixed Use buildings. Attached and detached buildings forming a continuous street wall or set-back from the street; trees within the public right-of-way; highest pedestrian activity near the building and substantial automobile activity at the parking
Building Placement:	Shallow setbacks or none along A-Grid Thoroughfares with buildings oriented to streets transitioning to larger setbacks with parking permitted in the setback for any Layer
Frontage Types:	Common Yards, Stoops, Dooryards, Forecourts, Shopfronts, Galleries, and Arcades
Building Height:	1- to 20-Story with a few shorter buildings including some 1 story uses
Type of Civic Space:	None required

TABLE 2. VERIDEA SUSTAINABLE DEVELOPMENT CONCEPT MAP

Sustainable Zones

OS	Open Space and Civic Use
NG	Neighborhood General
NM	Neighborhood Mixed Use
VC-A	Village Center - A Grid
VC-B	Village Center - B Grid
UC-A	Urban Core - A Grid
UC-B	Urban Core - B Grid

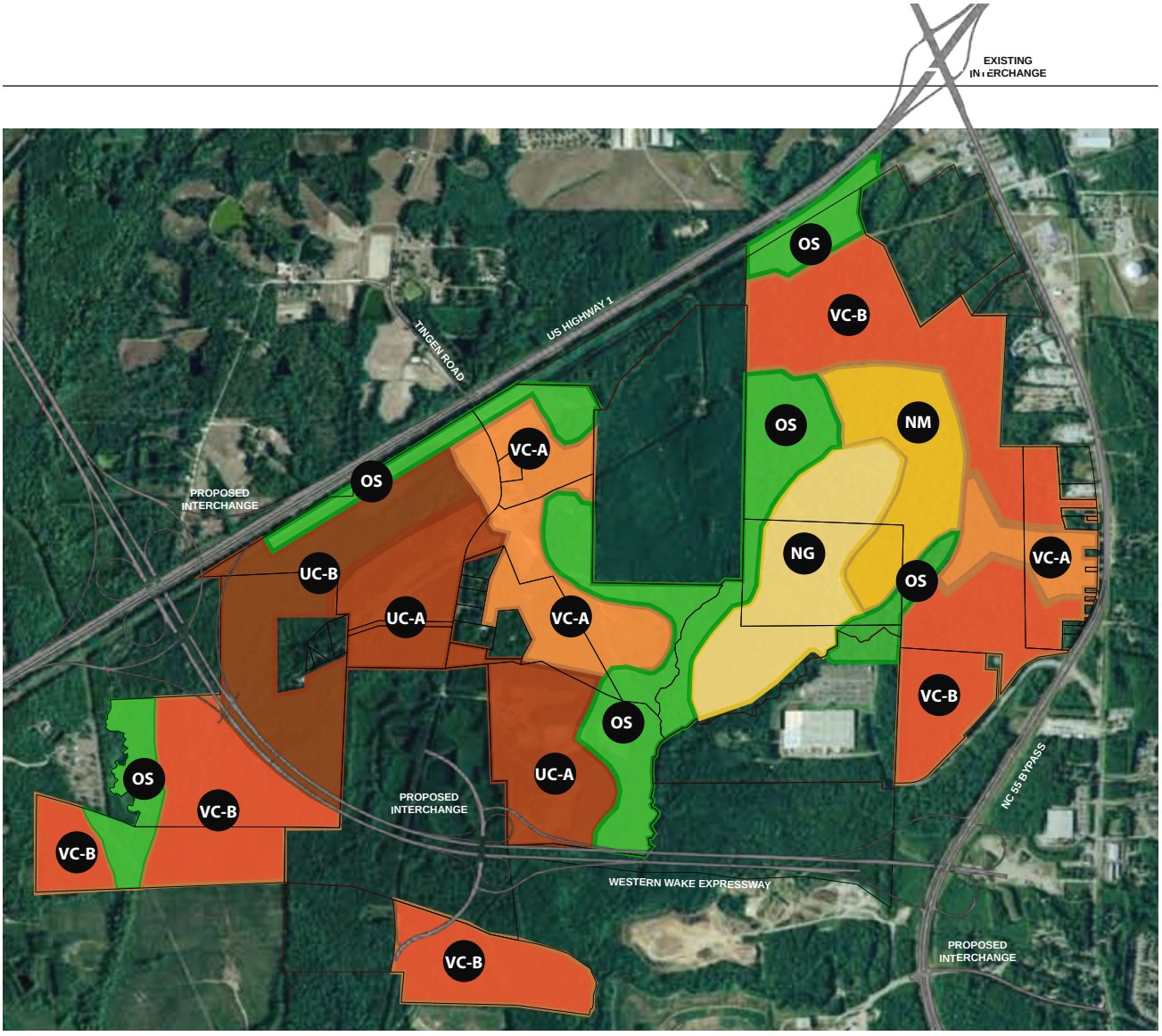


TABLE 3A. VEHICULAR LANE DIMENSIONS

TABLE 3A: Vehicular Lane Dimensions. This table assigns lane widths to Sustainable Zones. The Design ADT (Average Daily Traffic) is the determinant for each of these sections. The assemblies are shown in Table 3B. Design Speeds shown in these Tables represent desired speeds for traffic flow based on typical sections. Thoroughfare alignments (excluding Rear Lanes and Rear Alleys) shall be based on a minimum 25 mile per hour design speed. Design exceptions to otherwise posted regulatory speed, if approved by the TRC will require warning signs.

DESIGN SPEED	TRAVEL LANE WIDTH	OS	NG	NM	VC	UC
Below 20 mph	10 feet	■	■	▫		
20-25 mph	10 feet	■	■	■	▫	▫
25-35 mph	10 feet	■	■	■	■	■
25-35 mph	11 feet	■			■	■
Above 35 mph	12 feet	■			■	■

DESIGN SPEED	PARKING LANE WIDTH					
20-25 mph	(Angle) 16 to18 feet				■	■
20-25 mph	(Parallel) 7 to 8 feet		■	■	■	
25-35 mph	(Parallel) 8 feet		■	■	■	■
Above 35 mph	(Parallel) 9 feet				■	■

DESIGN SPEED	EFFECTIVE TURNING RADIUS					(See Table 17b)
Below 20 mph	5-10 feet		■	■	■	■
20-25 mph	10-15 feet	■	■	■	■	■
25-35 mph	15-20 feet	■	■	■	■	■
Above 35 mph	20-30 feet	■			▫	▫

■ BY RIGHT

▫ BY THE TRC

TABLE 3B. VEHICULAR LANE & PARKING ASSEMBLIES

TABLE 3B: Vehicular Lane/Parking Assemblies. The projected design speeds determine the dimensions of the vehicular lanes and Turning Radii assembled for Thoroughfares. All dimensions listed are minimums. Design Speeds shown in these Tables represent desired speeds for traffic flow based on typical sections. Thoroughfare alignments (excluding Rear Lanes and Rear Alleys) shall be based on a minimum 25 mile per hour design speed. Design exceptions to otherwise posted regulatory speed, if approved by the TRC will require warning signs.

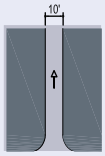
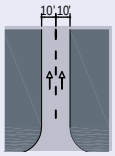
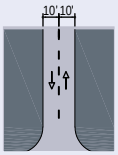
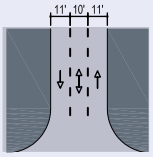
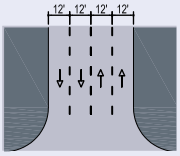
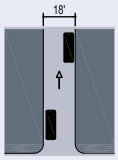
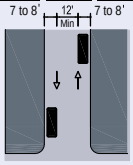
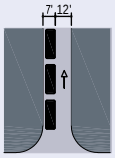
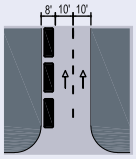
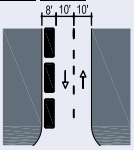
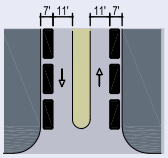
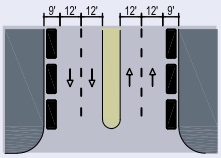
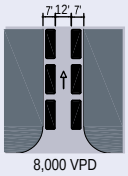
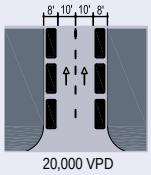
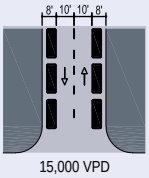
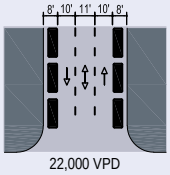
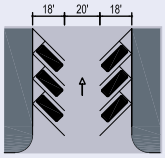
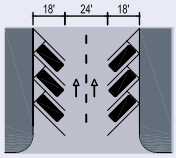
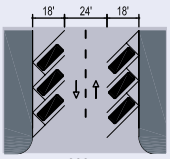
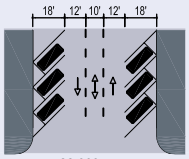
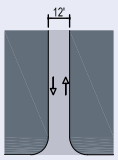
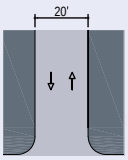
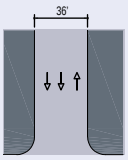
	ONE WAY MOVEMENT →		TWO WAY MOVEMENT →		
a. NO PARKING	OS NG	OS	OS NG	OS	OS
					
Design ADT	300 VPD	600 VPD	2,500 VPD	22,000 VPD	36,000 VPD
Pedestrian Crossing	3 Seconds	5 Seconds	5 Seconds	9 Seconds	13 Seconds
Design Speed	20 - 30 MPH	Below 20 MPH	20-25 MPH		35 MPH and above
b. YIELD PARKING	OS NM		NG NM VC UC		
					
Design ADT	1,000 VPD		1,000 VPD		
Pedestrian Crossing	5 Seconds		7 Seconds		
Design Speed					
c. PARKING ONE SIDE PARALLEL	OS NG NM VC	NG NM VC	NG NM VC	NG NM VC UC	NG NM VC UC
					
Design ADT	5,000 VPD	18,000 VPD	16,000 VPD	15,000 VPD	32,000 VPD
Pedestrian Crossing	5 Seconds	8 Seconds	8 Seconds	11 Seconds	13 Seconds
Design Speed	20-30 MPH		25-30 MPH	25-30 MPH	
d. PARKING BOTH SIDES PARALLEL	NG NM VC UC	NM VC UC	NM VC UC	VC UC	
					
Design ADT	8,000 VPD	20,000 VPD	15,000 VPD	22,000 VPD	
Pedestrian Crossing	7 Seconds	10 Seconds	10 Seconds	13 Seconds	
Design Speed	Below 20 MPH	25-30 MPH	25-30 MPH	25-30 MPH	
e. PARKING BOTH SIDES DIAGONAL	VC UC	VC UC	VC UC	VC UC	
					
Design ADT	18,000 VPD	20,000 VPD	15,000 VPD	22,000 VPD	
Pedestrian Crossing	15 Seconds	17 Seconds	17 Seconds	20 Seconds	
Design Speed	Below 20 MPH	20-25 MPH	20-25 MPH	25-30 MPH	
f. PARKING ACCESS			NG NM	NG NM VC UC	NM VC UC
					
Design ADT					
Pedestrian Crossing			3 Seconds	6 Seconds	10 Seconds
Design Speed					

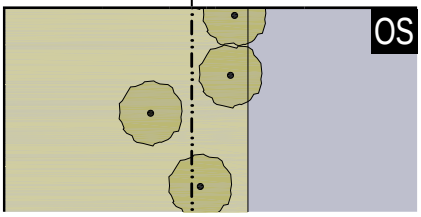
TABLE 4A. PUBLIC FRONTAGES - GENERAL

TABLE 4A: Public Frontages - General. The Public Frontage is the area between the private Lot line and the edge of the vehicular lanes. Dimensions are given in Table 4B. Note:

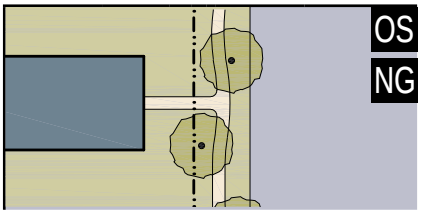
PLAN

LOT ▶ ◀ R.O.W.
PRIVATE FRONTAGE ▶ ◀ PUBLIC FRONTAGE

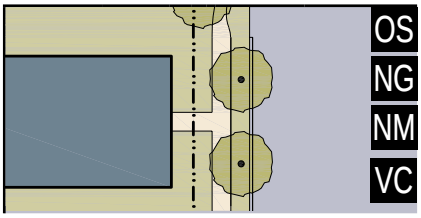
a. (HW) Highway: This Frontage has open Swales, Bicycle Trails and no parking. The landscaping consists of the natural condition or multiple species arrayed in naturalistic clusters. Buildings are buffered by distance or berms.



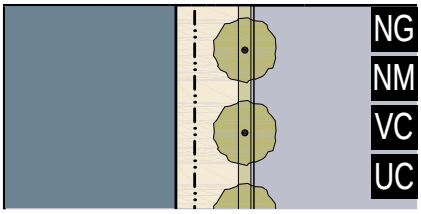
b. (RD) Road: This Frontage has open Swales and a Sidewalk walking Path or Bicycle Trail and Yield parking. The landscaping consists of multiple species arrayed in naturalistic clusters.



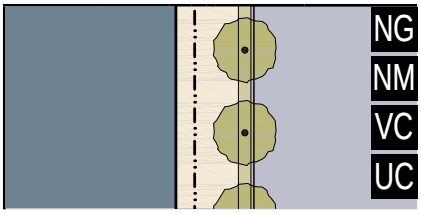
c. (ST) Street: This Frontage has raised Curbs drained by inlets and Sidewalks separated from the vehicular lanes by individual or continuous Planters, with parking on one or both sides. The landscaping consists of street trees of a single or alternating species aligned in a regularly spaced Allee, with the exception that Streets with a right-of-way (R.O.W.) width of 40 feet or less are exempt from tree requirements.



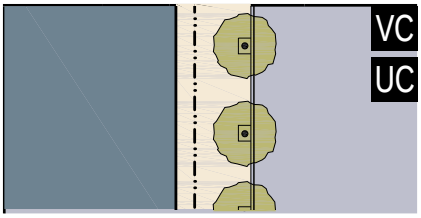
d. (DR) Drive: This Frontage has raised Curbs drained by inlets and a wide Sidewalk or paved Path along one side, related to a Greenway or waterfront. It is separated from the vehicular lanes by individual or continuous Planters. The landscaping consists of street trees of a single or alternating species aligned in a regularly spaced Allee.



e. (AV) Avenue: This Frontage has raised Curbs drained by inlets and wide Sidewalks separated from the vehicular lanes by a narrow continuous Planter with parking on both sides. The landscaping consists of a single tree species aligned in a regularly spaced Allee.



f. (CS) (AV) Commercial Street or Avenue: This Frontage has raised Curbs drained by inlets and very wide Sidewalks along both sides separated from the vehicular lanes by separate tree wells and parking on both sides. The landscaping consists of a single tree species aligned with regular spacing where possible, but clears the storefront entrances.



g. (BV) Boulevard: This Frontage may have Slip Streets on both sides. It consists of raised Curbs drained by inlets and Sidewalks along both sides, separated from the vehicular lanes by Planters. The landscaping consists of double rows of a single tree species aligned in a regularly spaced Allee.

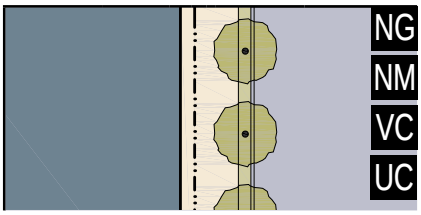


TABLE 4B. PUBLIC FRONTAGES - SPECIFIC

Table 4B: Public Frontages - Specific. This table assembles prescriptions and dimensions for the Public Frontage elements - Curbs, walkways and Planters – relative to specific Thoroughfare types within Sustainable Zones. Table 4B-a assembles all of the elements for the various street types. Public Frontages also include bicycle parking where applicable.

R U R A L I I I I I I I I I I I I I I I I I Z O N E S I I I I I I I I I I I I I I I I I U R B A N

B - G R I D I I I I I I I I I I I I A - G R I D

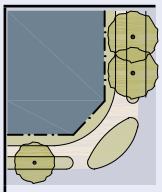
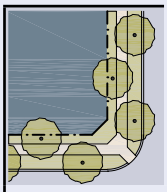
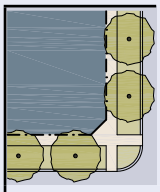
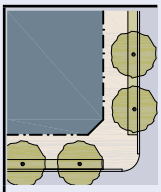
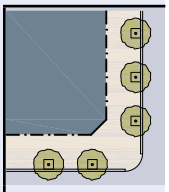
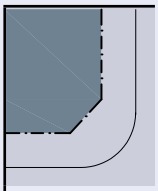
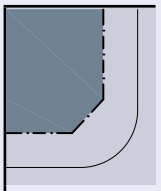
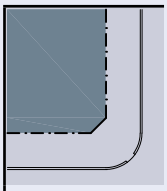
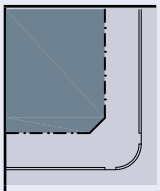
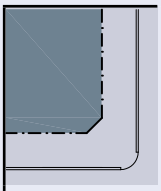
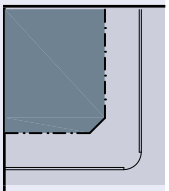
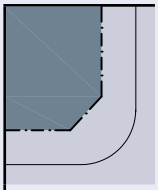
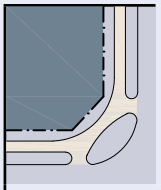
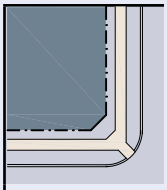
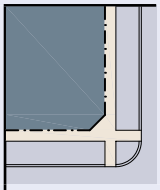
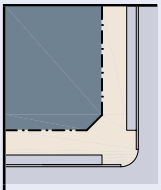
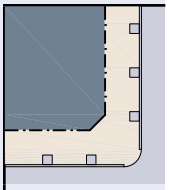
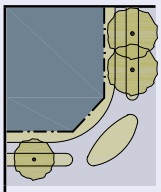
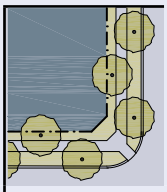
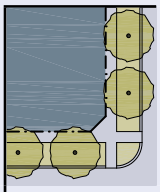
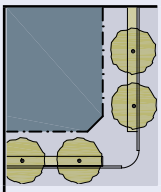
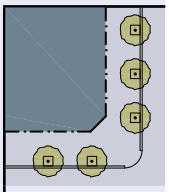
SUSTAINABLE ZONE Public Frontage Type	OS HW	OS NG RD & ST	NG NM VC ST-DR-AV	NM VC UC ST-DR-AV-BV	VC UC CS-DR-AV-BV	VC UC CS-DR-AV-BV
a. **Assembly:** The principal variables are the type and dimension of Curbs, walkways, Planters and landscape. Total Width	 16-24 feet	 12-24 feet	 12-18 feet	 12-18 feet	 18-24 feet	 18-30 feet
b. **Curb:** The detailing of the edge of the vehicular pavement, incorporating drainage. Type Radius	 Open Swale 10-30 feet	 Open Swale or Curb 10-30 feet	 Raised Curb 5-20 feet	 Raised Curb 5-20 feet	 Raised Curb 5-20 feet	 Raised Curb 5-20 feet
c. **Walkway:** The pavement dedicated exclusively to pedestrian activity. Type Width	 Path Optional n/a	 Path, Sidewalk, or BT 5-8 feet	 Sidewalk 5-8 feet	 Sidewalk 5-8 feet	 Sidewalk 12-20 feet	 Sidewalk 12-30 feet
d. **Planter:** The layer which accommodates street trees and other landscape. Arrangement Species Planter Type Planter Width	 Clustered Multiple Continuous Swale 8 feet-16 feet	 Clustered Multiple Continuous Swale 8 feet-16 feet	 Regular Alternating Continuous Planter 8 feet-12 feet	 Regular Single Continuous Planter 8 feet-12 feet	 Regular Single Continuous Planter 4 feet-6 feet	 Opportunistic Single Tree Well 4 feet-6 feet
e. **Landscape:** The recommended plant species. (See Table 6)						
f. **Lighting:** The recommended Public Lighting. (See Table 5)						

TABLE 4C. THOROUGHFARE ASSEMBLIES

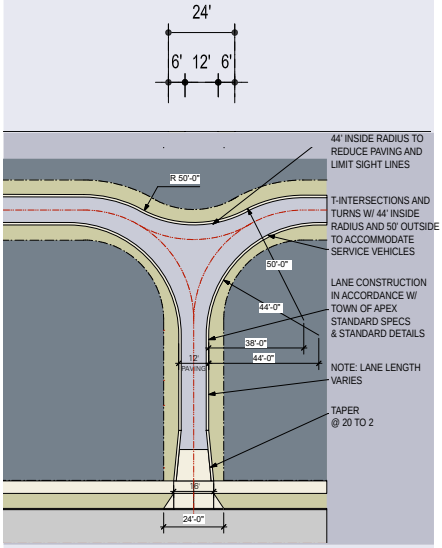
TABLE 4C: Thoroughfare Assemblies. These Thoroughfares are assembled from the elements that appear in Tables 3A and 3B and incorporate the Public Frontages of Table 4A. The key gives the Thoroughfare type followed by the right-of-way width, followed by the pavement width, and in some instances followed by specialized transportation capability. All dimensions listed are minimums. Design Speeds shown in these Tables represent desired speeds for traffic flow based on typical sections. Thoroughfare alignments (excluding Rear Lanes and Rear Alleys) shall be based on a minimum 25 mile per hour design speed. Design exceptions to otherwise posted regulatory speed, if approved by the TRC will require warning signs.

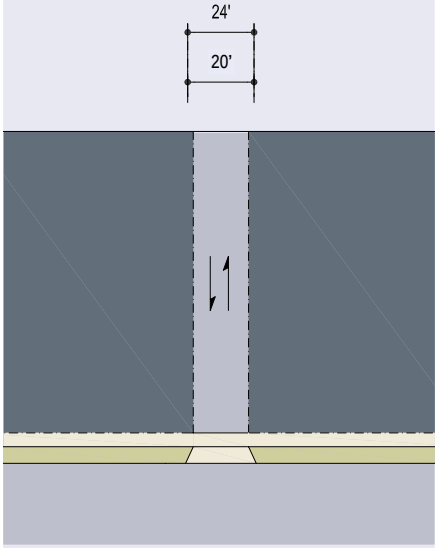
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	RL-24-12	RA-24-20
Thoroughfare Type	Rear Lane	Rear Alley
Sustainable Zone Assignment	OS, NG, NM	NG, NM, VC, UC
Right-of-Way Width	24 feet	24 feet min
Pavement Width	12 feet	20 feet min
Movement	Yield Movement	Slow Movement
Design Speed	10 MPH	10 MPH
Pedestrian Crossing Time	3.5 seconds	7 seconds
Traffic Lanes	n/a	n/a
Parking Lanes	None	None
Curb Radius	Flared section with driveway apron	Driveway apron
Walkway Type	None	None
Planter Type	None	None
Curb Type		
Landscape Type	None	None
Transportation Provision	None	None

Note: Rear Lanes may be public or private. If Rear Lanes are public, the minimum pavement width shall be 16 feet. Private maintenance shall be required for private Rear Lanes and the maintenance shall be adequately funded by a Veridea property owners' association.

Note: Rear Alleys may be public or private. If Rear Alleys are private, then private maintenance shall be required and the maintenance shall be adequately funded by a Veridea property owners' association.

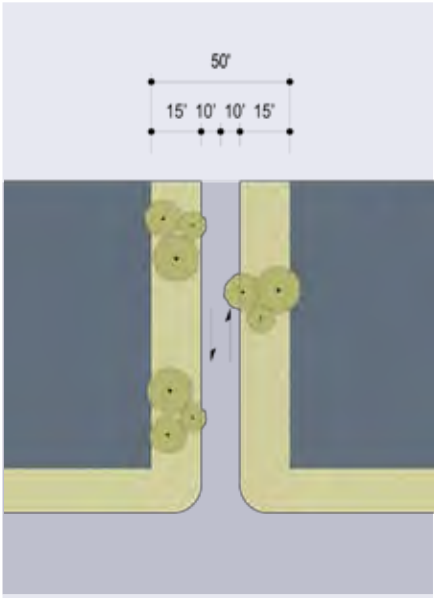
TABLE 4C THOROUGHFARE ASSEMBLIES

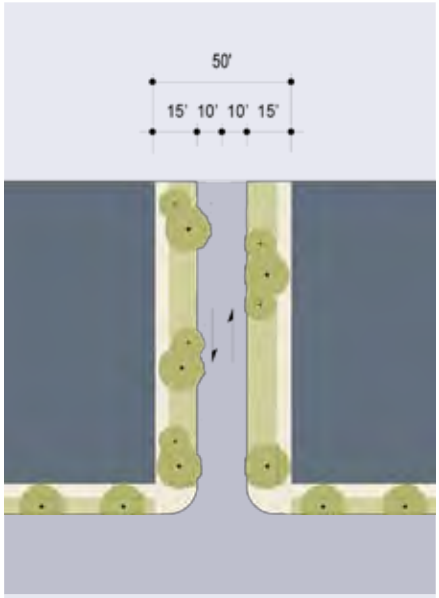
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	RDOS-50-20	RD-50-20
Thoroughfare Type	Road	Road
Sustainable Zone Assignment	OS	OS, NG
Right-of-Way Width	50 feet	50 feet
Pavement Width	16 feet	18 feet
Movement	Slow Movement	Slow Movement
Design Speed	15 MPH	15 MPH
Pedestrian Crossing Time	5.1 seconds	5.1 seconds
Traffic Lanes	2 lanes	2 lanes
Parking Lanes	None	None
Curb Radius	25 feet	25 feet
Walkway Type	Path, Sidewalk or BT	Path, Sidewalk or BT
Planter Type	Continuous Swale	Continuous Swale
Curb Type	Swale or Curb	Swale or Curb
Landscape Type	Trees clustered	Trees clustered
Transportation Provision	BT	BT

Note: Requires approval of TRC

Note: Curb radius to be high-strength / reinforced

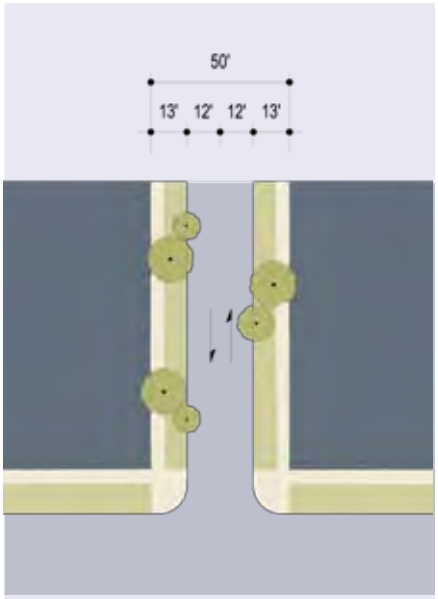
TABLE 4C THOROUGHFARE ASSEMBLIES

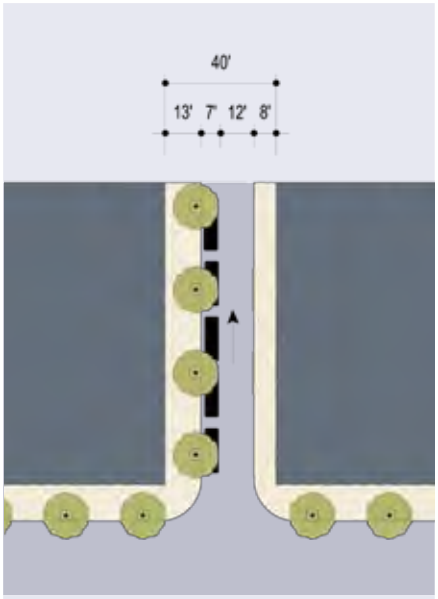
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	RD-50-24	ST-40-19
Thoroughfare Type	Road	Street
Sustainable Zone Assignment	OS, NG	OS, NG, NM, VC
Right-of-Way Width	50 feet	40 feet
Pavement Width	24 feet	19 feet
Movement	Slow Movement	Slow Movement
Design Speed	20 MPH	20 MPH
Pedestrian Crossing Time	6.8 seconds	5.4 seconds
Traffic Lanes	2 lanes	1 lane
Parking Lanes	None	One side @ 7 feet marked
Curb Radius	25 feet	15 feet
Walkway Type	Path, Sidewalk or BT	13/8 foot Sidewalk
Planter Type	Continuous Swale	Tree well (Permitted but not required per 4.5.3 e. ii.)
Curb Type	Swale or Curb	Curb
Landscape Type	Trees clustered	Trees at 50' o.c. Avg. (Permitted but not required per 4.5.3 e. ii.)
Transportation Provision	BL optional, BT optional	

Note: Requires approval of TRC
Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

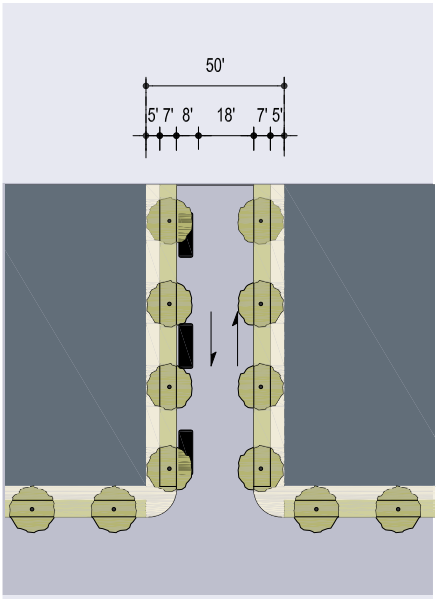
TABLE 4C THOROUGHFARE ASSEMBLIES

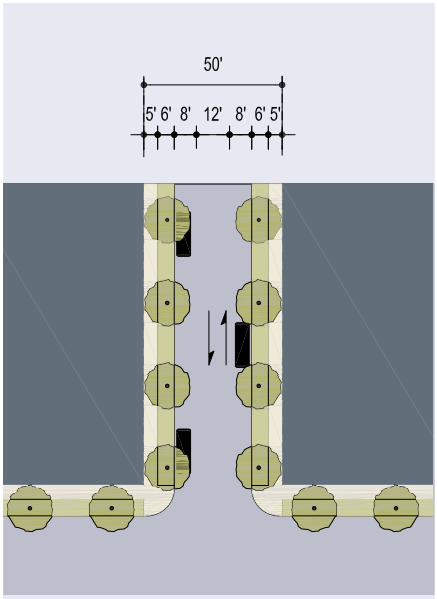
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	ST-50-26	ST-50-28
Thoroughfare Type	Street	Street
Sustainable Zone Assignment	NG, NM, VC, UC	NG, NM, VC, UC
Right-of-Way Width	50 feet	50 feet
Pavement Width	26 feet	28 feet
Movement	Free Movement	Yield Movement
Design Speed	20 MPH	20 MPH
Pedestrian Crossing Time	7.4 seconds	7.6 seconds
Traffic Lanes	2 lanes	2 lane
Parking Lanes	One side @ 8 feet marked	Both sides @ 8 feet unmarked
Curb Radius	10 feet	10 feet
Walkway Type	5 foot Sidewalk	5 foot Sidewalk
Planter Type	7 foot continuous Planter	6 foot continuous Planter
Curb Type	Curb	Curb
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision	BL optional	BL optional

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

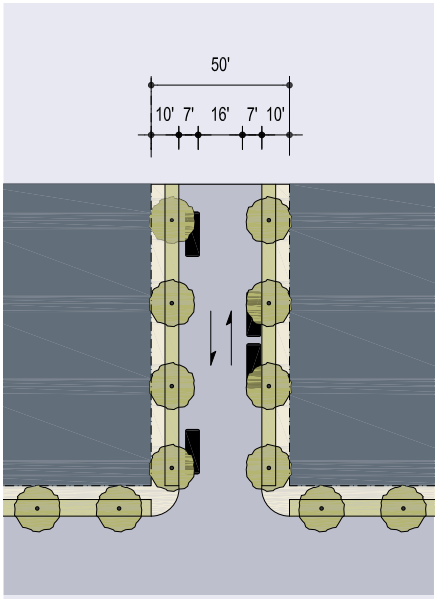
TABLE 4C THOROUGHFARE ASSEMBLIES

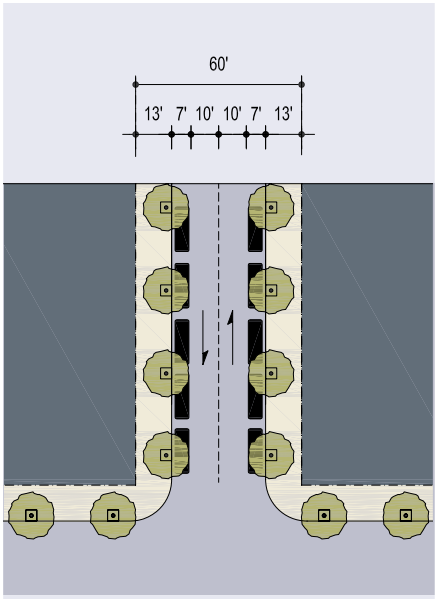
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	ST-50-30	ST-60-34
Thoroughfare Type	Street	Street
Sustainable Zone Assignment	NG, NM, VC	NG, NM, VC, UC
Right-of-Way Width	50 feet	60 feet
Pavement Width	30 feet	34 feet
Movement	Slow Movement	Slow Movement
Design Speed	20 MPH	20 MPH
Pedestrian Crossing Time	8.5 seconds	9.7 seconds
Traffic Lanes	2 lanes	2 lanes
Parking Lanes	Both sides @ 7 feet unmarked	Both Sides @ 7 feet marked
Curb Radius	10 feet	15 feet
Walkway Type	5 foot Sidewalk	6 foot Sidewalk
Planter Type	5 foot continuous Planter	Tree well or 7 foot continuous Planter
Curb Type	Curb	Curb
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision	BL optional	BR

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

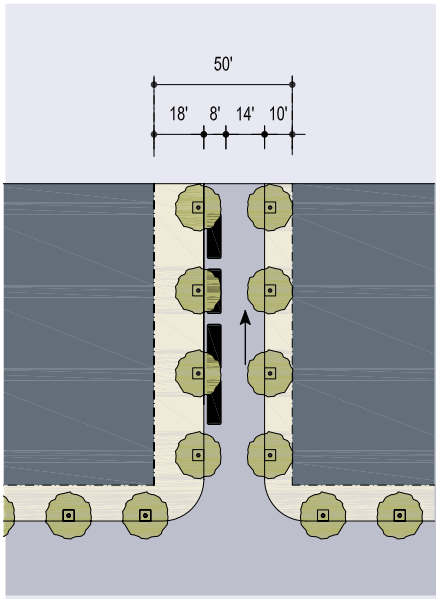
TABLE 4C THOROUGHFARE ASSEMBLIES

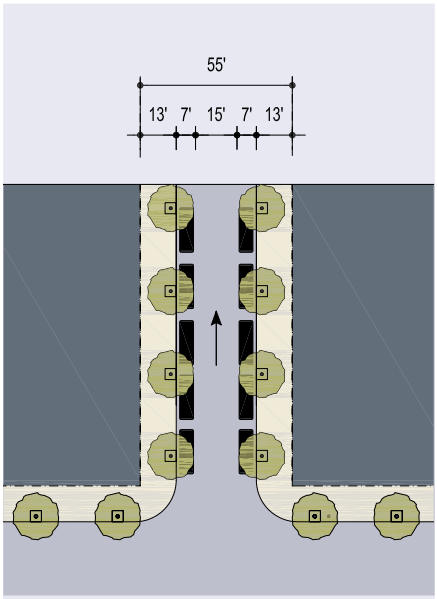
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	CS-50-22	CS-55-29
Thoroughfare Type	Commercial Street	Commercial Street
Sustainable Zone Assignment	NG, NM, VC, UC	NG, NM, VC, UC
Right-of-Way Width	50 feet	55 feet
Pavement Width	22 feet	29 feet
Movement	Slow Movement	Slow Movement
Design Speed	20 MPH	20 MPH
Pedestrian Crossing Time	6.2 seconds	8.2 seconds
Traffic Lanes	1 lane	1 lane
Parking Lanes	One side @ 8 feet marked	Both sides @ 7 feet marked
Curb Radius	15 feet	15 feet
Walkway Type	18/10 foot Sidewalk	13 foot Sidewalk
Planter Type	Tree well	Tree well
Curb Type	Curb	Curb
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision		

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

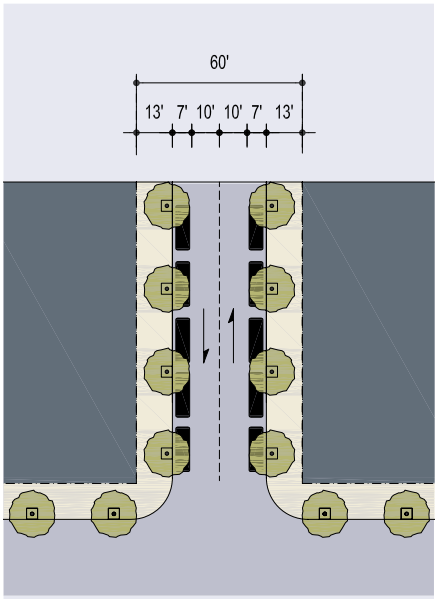
TABLE 4C THOROUGHFARE ASSEMBLIES

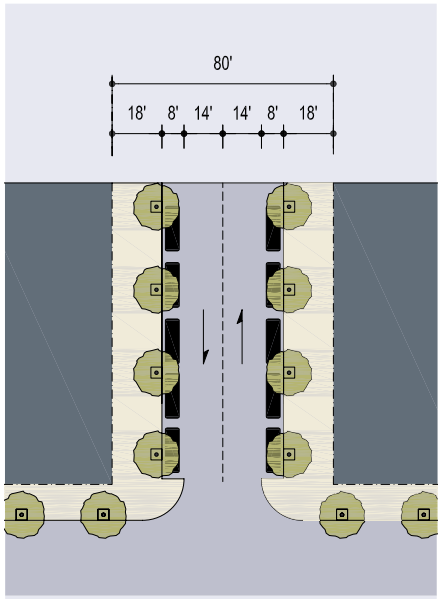
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	CS-60-34	CS-80-44
Thoroughfare Type	Commercial Street	Commercial Street
Sustainable Zone Assignment	NM, VC, UC	VC, UC
Right-of-Way Width	60 feet	80 feet
Pavement Width	34 feet	44 feet
Movement	Slow Movement	Free Movement
Design Speed	20 MPH	25 MPH
Pedestrian Crossing Time	9.7 seconds	8 seconds at corners
Traffic Lanes	2 lanes	2 lanes
Parking Lanes	Both sides @ 7 feet marked	Both sides @ 8 feet marked
Curb Radius	10 feet	10 feet
Walkway Type	13 foot Sidewalk	18 foot Sidewalk
Planter Type	Tree well	Tree well
Curb Type	Curb	Curb
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision		

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

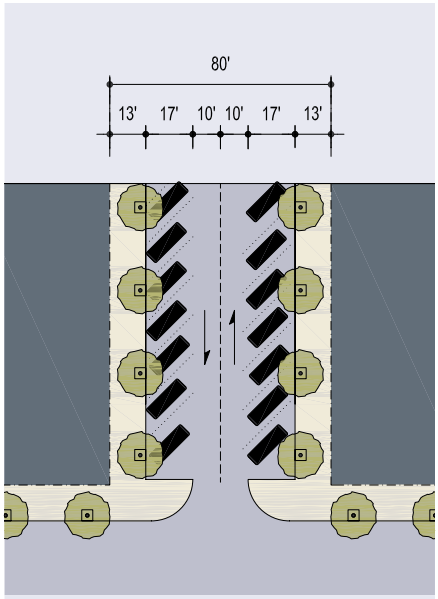
TABLE 4C THOROUGHFARE ASSEMBLIES

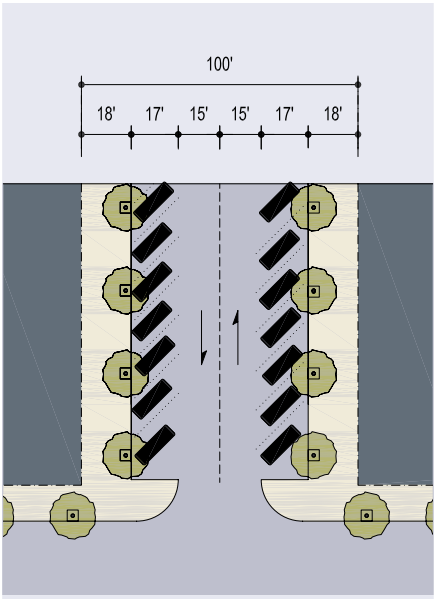
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	CS-80-54	CS-100-64
Thoroughfare Type	Commercial Street	Commercial Street
Sustainable Zone Assignment	VC, UC	VC, UC
Right-of-Way Width	80 feet	100 feet
Pavement Width	54 feet	64 feet
Movement	Slow Movement	Slow Movement
Design Speed	25 MPH	25 MPH
Pedestrian Crossing Time	5.7 seconds at corners	8.5 seconds at corners
Traffic Lanes	2 lanes	2 lanes
Parking Lanes	Both sides angled @ 17 feet marked	Both sides angled @ 17 feet marked
Curb Radius	10 feet	10 feet
Walkway Type	13 foot Sidewalk	18 foot Sidewalk
Planter Type	Tree well	Tree well
Curb Type	Curb	Curb
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision		

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

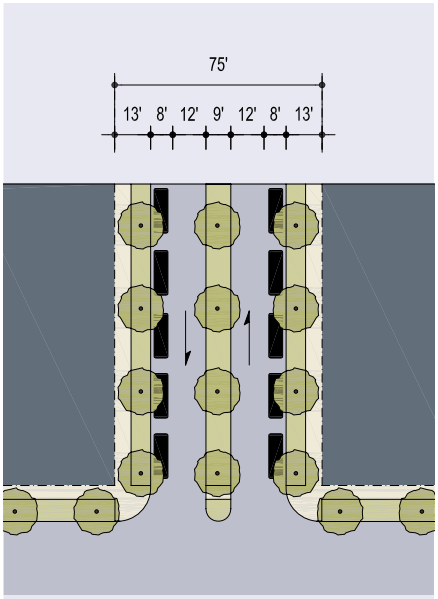
TABLE 4C THOROUGHFARE ASSEMBLIES

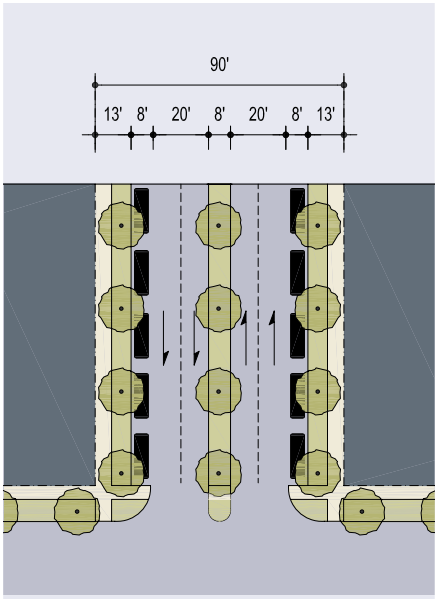
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	AV-75-40	AV-90-56
Thoroughfare Type	Avenue	Avenue
Sustainable Zone Assignment	NG, NM, VC, UC	NG, NM, VC, UC
Right-of-Way Width	75 feet	90 feet
Pavement Width	40 feet total	56 feet total
Movement	Slow Movement	Slow Movement
Design Speed	25 MPH	25 MPH
Pedestrian Crossing Time	5.7 seconds - 5.7 seconds	5.7 seconds - 5.7 seconds at corners
Traffic Lanes	2 lanes	4 lanes
Parking Lanes	Both sides @ 8 feet marked	Both sides @ 8 feet marked
Curb Radius	10 feet	10 feet
Walkway Type	6 foot Sidewalk	6 foot Sidewalk
Planter Type	7 foot continuous Planter	7 foot continuous Planter
Curb Type	Curb or Swale	Curb or Swale
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision	BR, TR	BR, TR

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

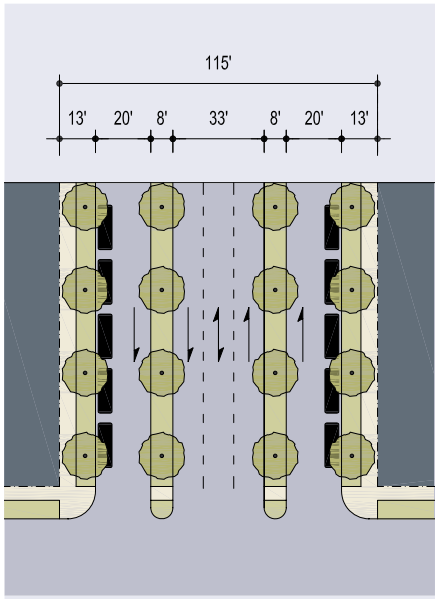
TABLE 4C THOROUGHFARE ASSEMBLIES

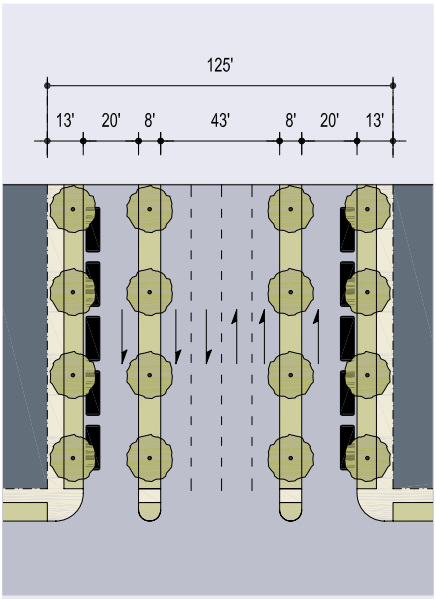
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





KEY	BV-115-33	BV-125-43
Thoroughfare Type	Boulevard	Boulevard
Sustainable Zone Assignment	VC, UC	VC, UC
Right-of-Way Width	115 feet	125 feet
Pavement Width	20 feet - 33 feet - 20 feet	20 feet - 43 feet - 20 feet
Movement	Free Movement (inner lanes)	Free Movement (inner lanes)
Design Speed	35 MPH	35 MPH
Pedestrian Crossing Time	5.7 seconds - 9.4 seconds - 5.7 seconds	5.7 seconds - 12.2 seconds - 5.7 seconds
Traffic Lanes	3 lanes, one turning lane & two one-way slip roads	4 lanes & two one-way slip roads
Parking Lanes	8 feet	8 feet
Curb Radius	10 feet	10 feet
Walkway Type	6 foot Sidewalk	6 foot Sidewalk
Planter Type	7 foot continuous Planter	7 foot continuous Planter
Curb Type	Curb	Curb
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision	BR, TR	BR, TR

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

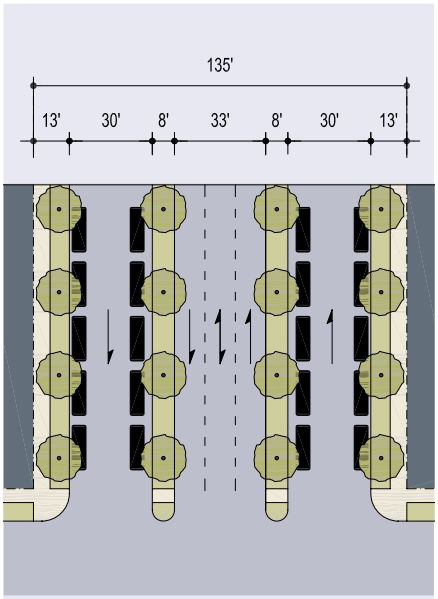
TABLE 4C THOROUGHFARE ASSEMBLIES

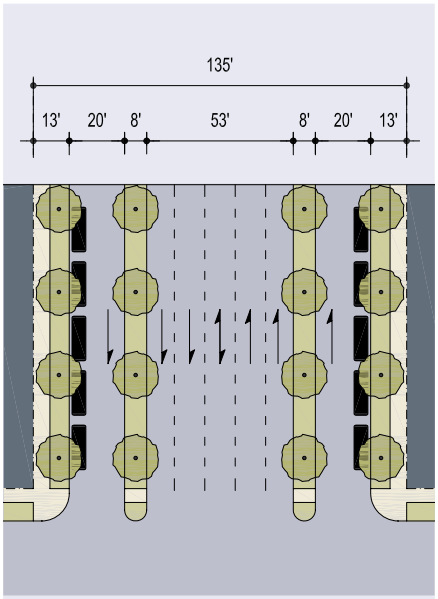
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation Provisions

THOROUGHFARE TYPES

Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR





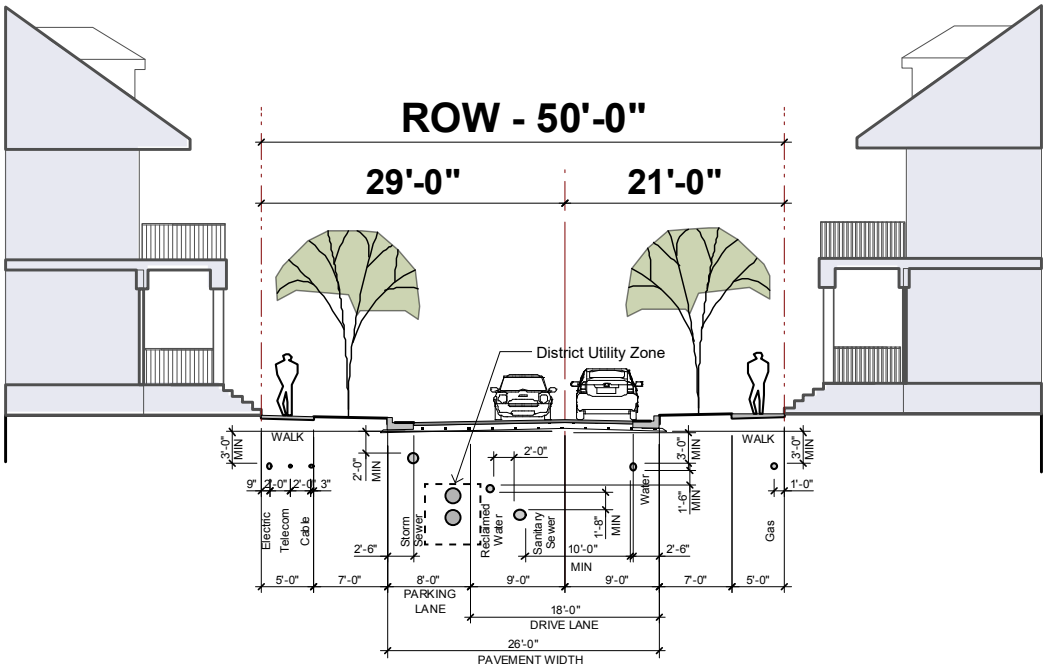
KEY	BV-135-33	BV-135-53
Thoroughfare Type	Boulevard	Boulevard
Sustainable Zone Assignment	VC, UC	VC, UC
Right-of-Way Width	135 feet	135 feet
Pavement Width	30 feet - 33 feet - 30 feet	20 feet - 53 feet - 20 feet
Movement	Free Movement	Free Movement
Design Speed	35 MPH	35 MPH
Pedestrian Crossing Time	8.5 seconds - 9.4 seconds - 8.5 seconds	5.7 seconds - 15.1 seconds - 5.7 seconds
Traffic Lanes	3 lanes, one turning lane & two one-way slip roads	5 Lanes, one turning lane & two one-way slip roads
Parking Lanes	8 feet	8 feet
Curb Radius	10 feet	10 feet
Walkway Type	6 foot Sidewalk	6 foot Sidewalk
Planter Type	7 foot continuous Planter	7 foot continuous Planter
Curb Type	Curb	Curb
Landscape Type	Trees at 50' o.c. Avg.	Trees at 50' o.c. Avg.
Transportation Provision	BR, TR	BR, TR

Note: Curb radius to be high-strength / reinforced

Note: Curb radius to be high-strength / reinforced

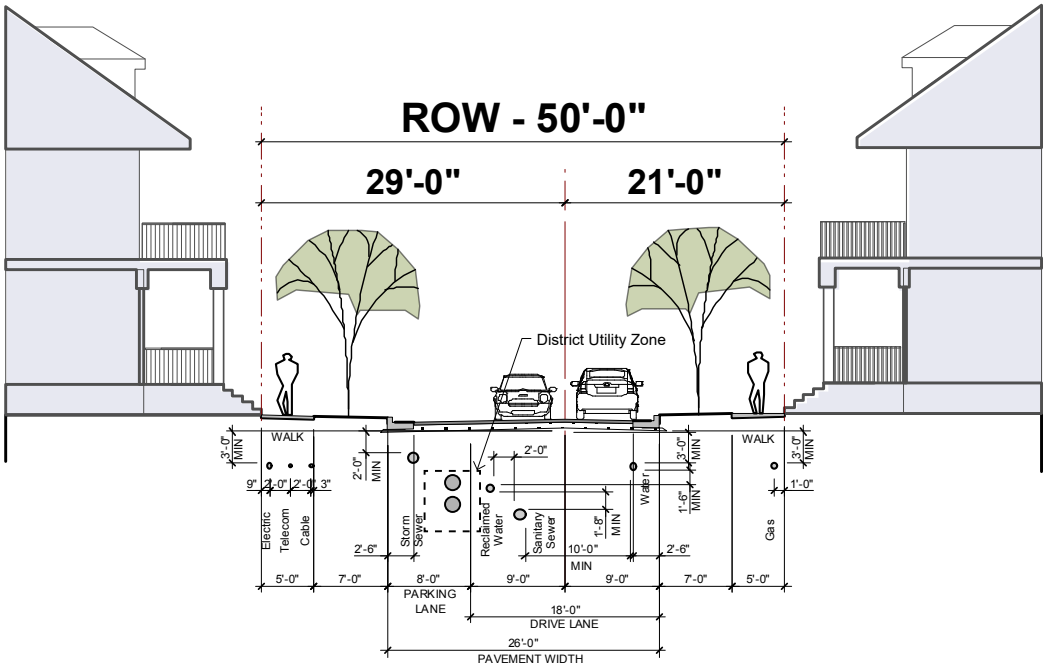
TABLE 4D. THOROUGHFARE CROSS SECTIONS

TABLE 4D: Thoroughfare Cross Sections. These Thoroughfares Cross Sections are assembled from the some of the typical Thoroughfares that appear in Table 4C and represent Standard Street Cross Sections Showing Utilities.



ST-50-26 without Rear Lane

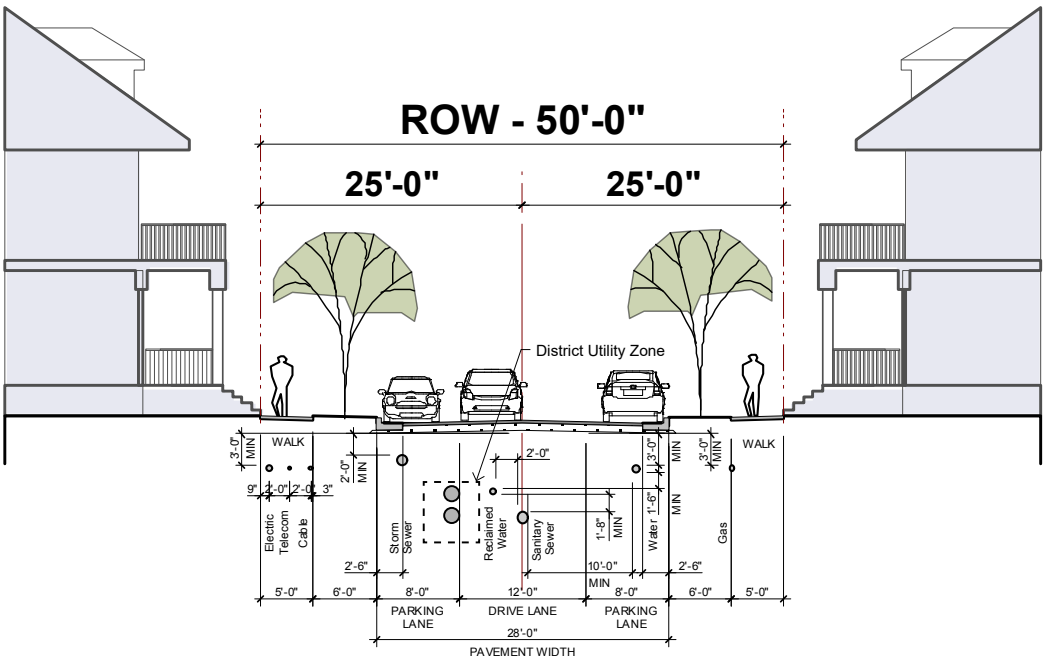
Thoroughfare Sections with Utilities



ST-50-26 with Rear Lane

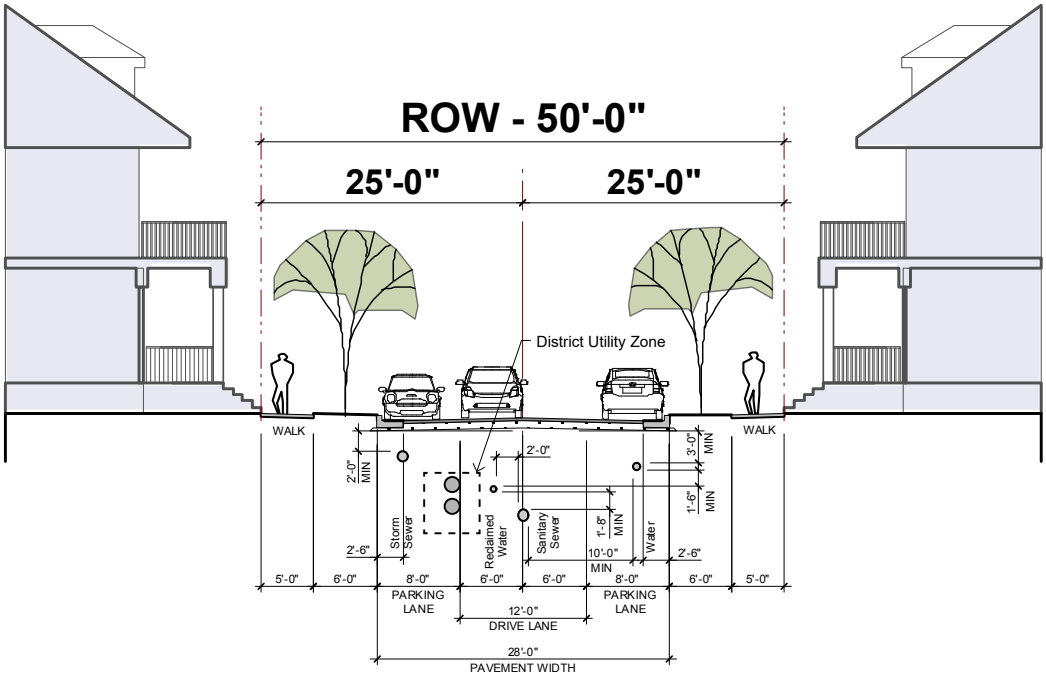
Thoroughfare Sections with Utilities

TABLE 4D. THOROUGHFARE CROSS SECTIONS



ST-50-28 without Rear Lane

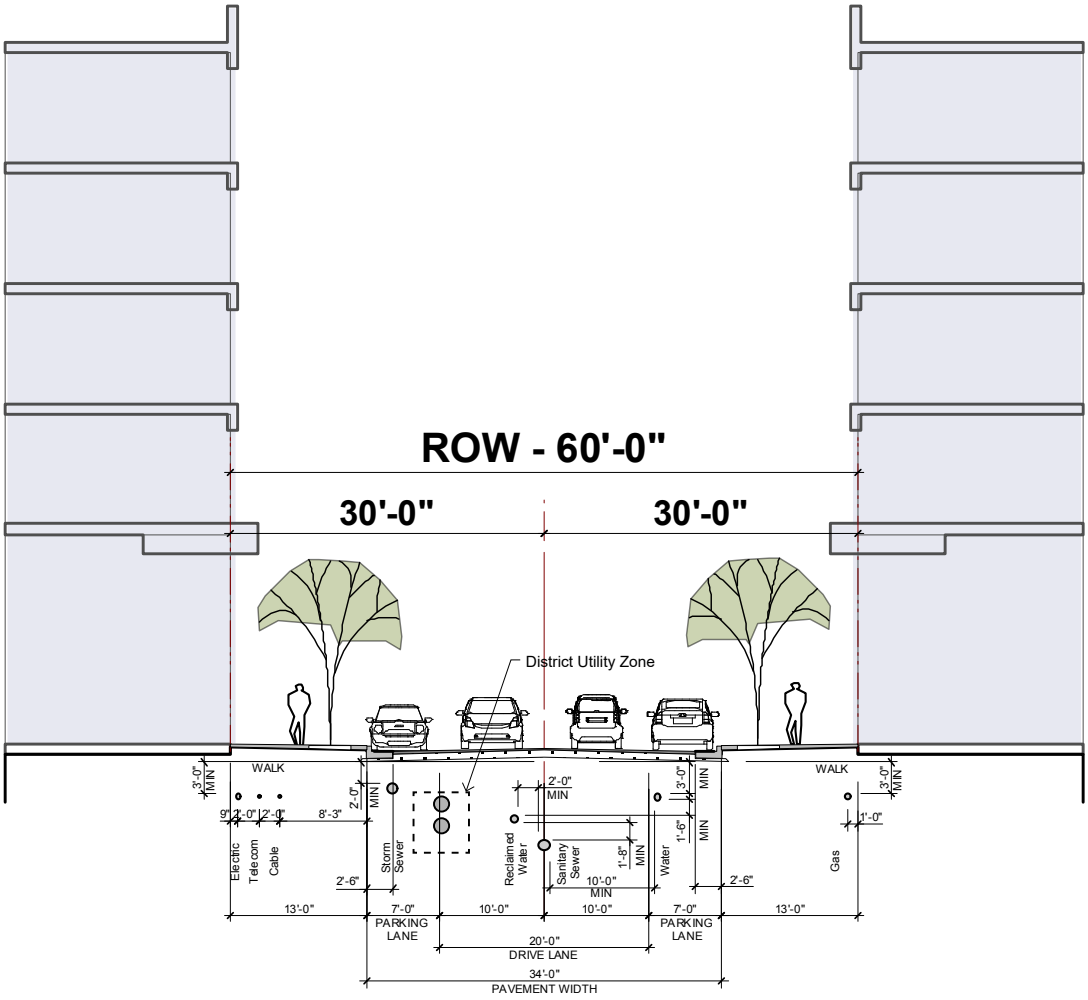
Thoroughfare Sections with Utilities



ST-50-28 with Rear Lane

Thoroughfare Sections with Utilities

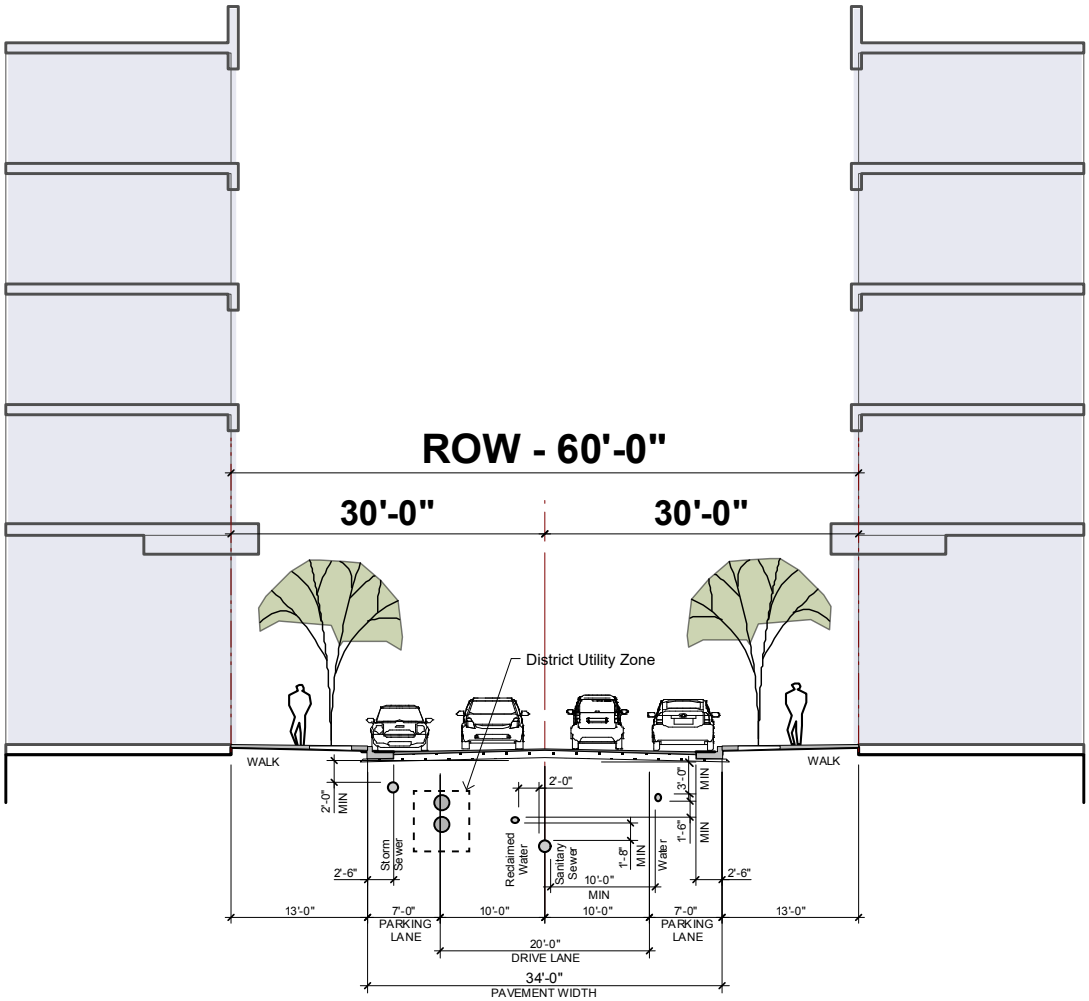
TABLE 4D. THOROUGHFARE CROSS SECTIONS



CS-60-34 without Rear Alley

Thoroughfare Sections with Utilities

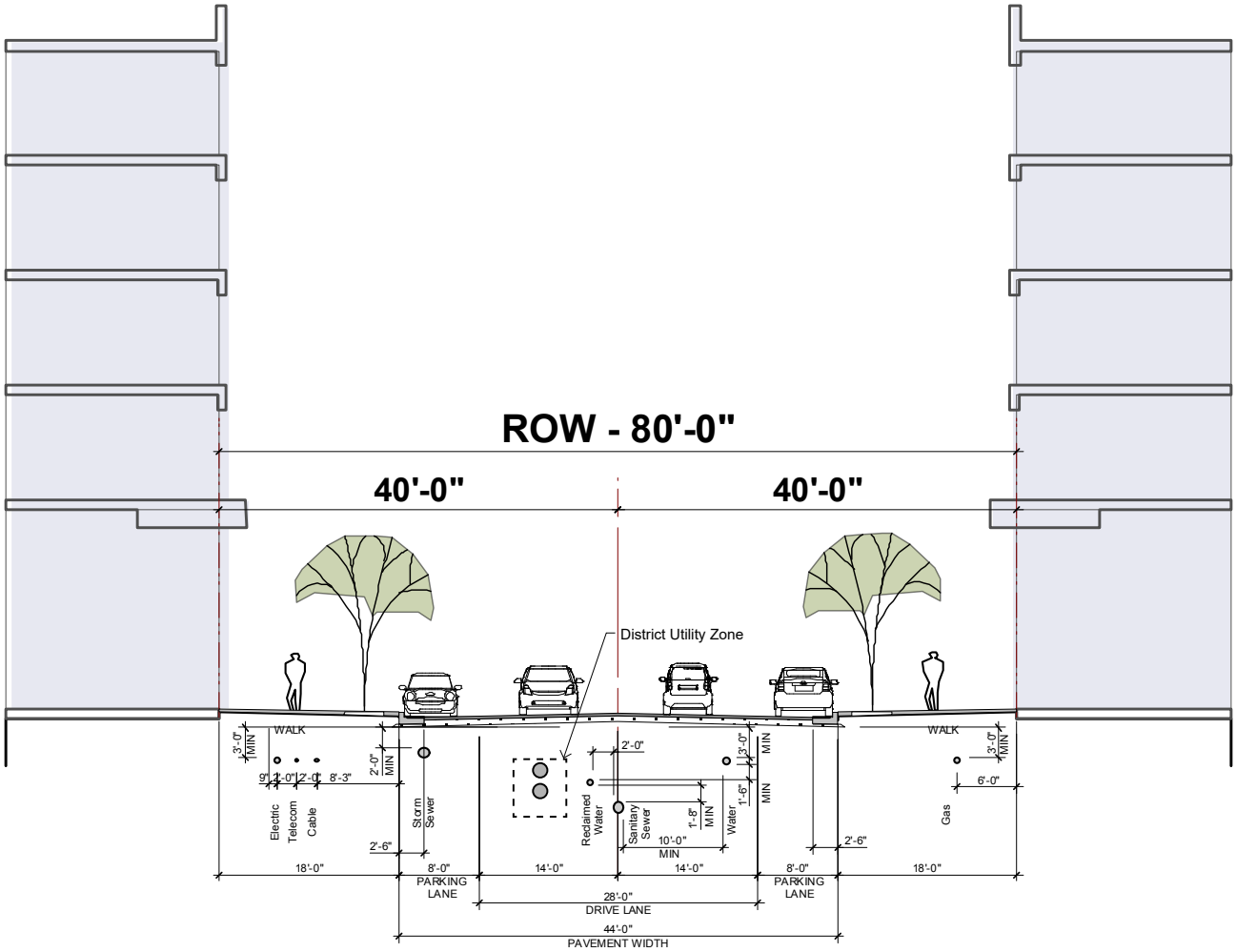
TABLE 4D. THOROUGHFARE CROSS SECTIONS



CS-60-34 with Rear Alley

Thoroughfare Sections with Utilities

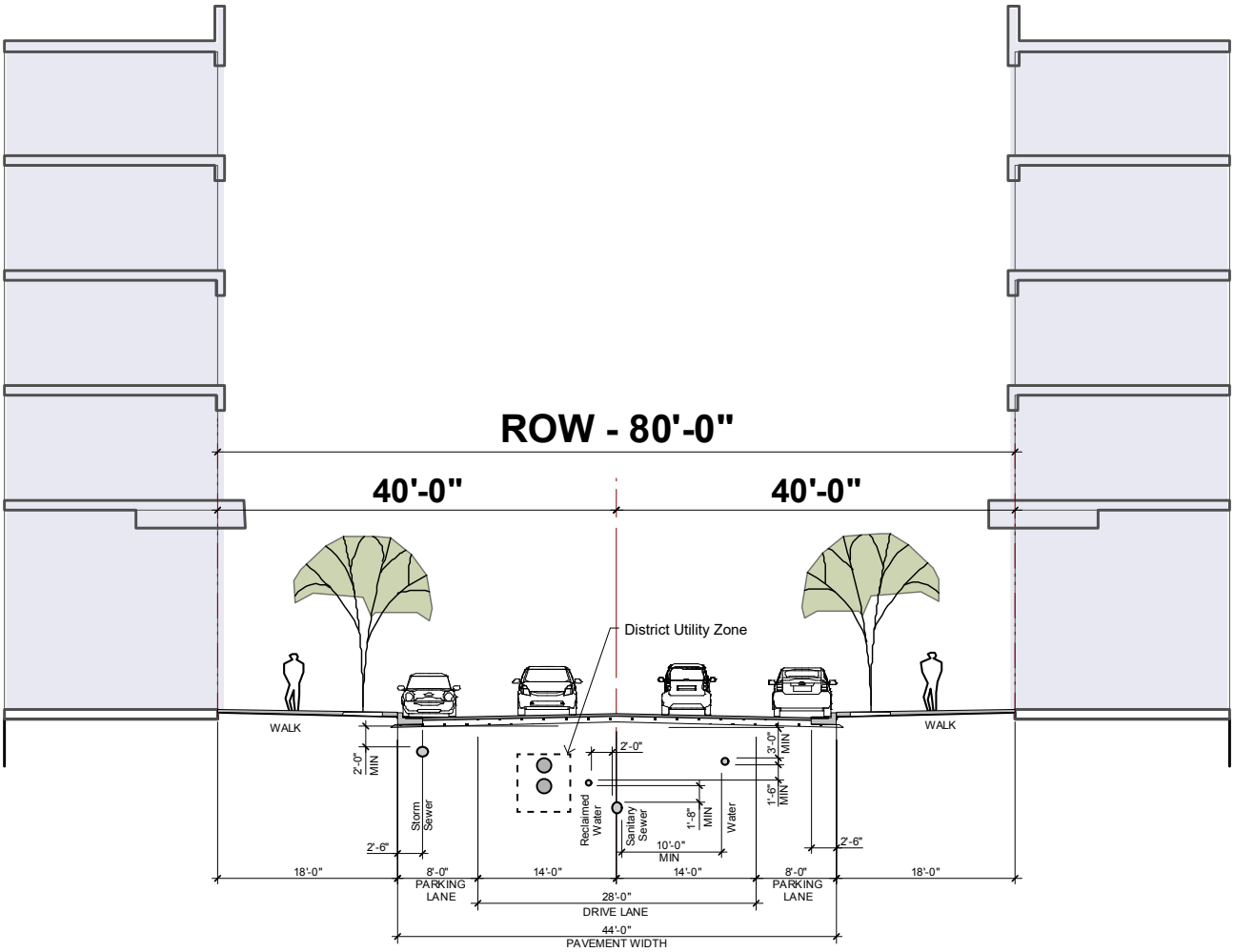
TABLE 4D. THOROUGHFARE CROSS SECTIONS



CS-80-44 without Rear Alley

Thoroughfare Sections with Utilities

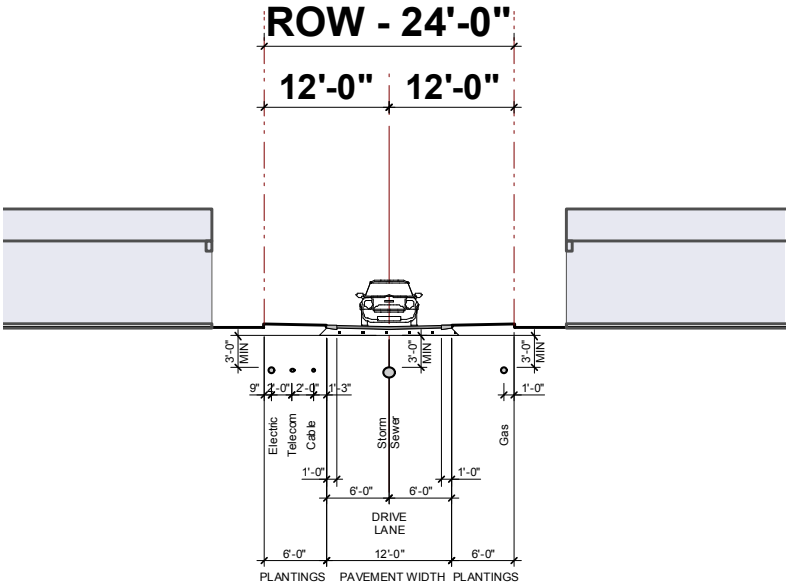
TABLE 4D. THOROUGHFARE CROSS SECTIONS



CS-80-44 with Rear Alley

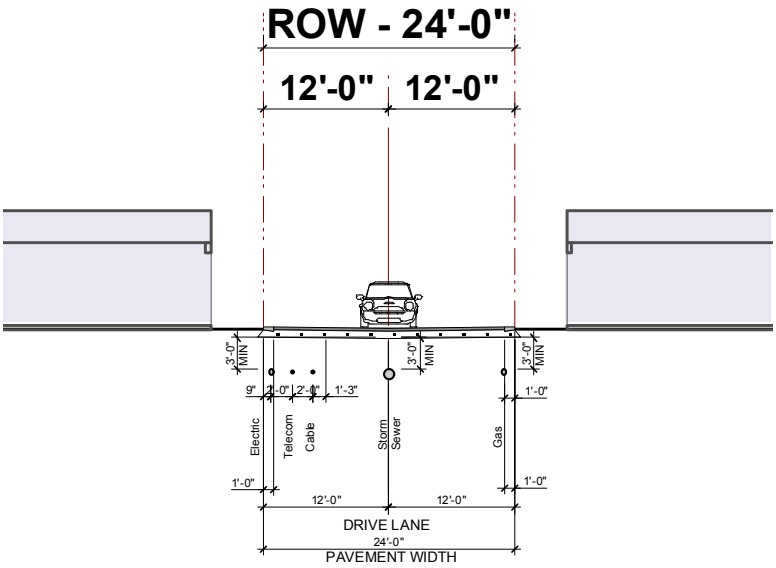
Thoroughfare Sections with Utilities

TABLE 4D. THOROUGHFARE CROSS SECTIONS



RL-12-24 Rear Lane

Thoroughfare Sections with Utilities



RA-24-24 Rear Alley

Thoroughfare Sections with Utilities

TABLE 6. PUBLIC PLANTING

TABLE 6: Public Planting. This table shows five common types of street tree shapes and their appropriateness within the Sustainable Zones. Provide adequate soil volumes for street trees set within hardscape. A registered professional shall prepare a landscape plan and provide planting details to ensure adequate soil preparation for the size and species proposed on the plan.

	OS	NG	NM	VC	UC	Native and Naturalized Plant List Table Page 27
Oval 	▪	▪	▪	▪	▪	
Ball 	▪	▪	▪	▪	▪	
Pyramid 	▪	▪	▪	▪	▪	
Umbrella 	▪	▪	▪	▪	▪	
Vase 	▪	▪	▪	▪	▪	

TABLE 6. PUBLIC PLANTING

TABLE 6: Public Planting. This table shows a list of native and naturalized trees divided in five common types of street tree shapes and their appropriateness within the Sustainable Zones. Other types of hardy plant material are allowed with TRC approval.

Oval Shape (OS, NG, NM, VC, UC)		Tree Size*
Acer campestre	Hedge Maple	L
Acer truncatum	Purpleblow Maple	M
Carpinus caroliniana	American Hornbeam	M
Pistacia chinensis cultivar “Keith Davey”	Chinese Pistache	M
Tilia americana	American Linden	L
Tilia cordata	Littleleaf Linden	M
Ball Shape (OS, NG, NM, VC, UC)		
Acer barbatum	Southern Sugar Maple	M
Acer buergeranum	Trident Maple	S
Acer ginnala	Amur Maple	M
Amelanchier arborea	Downy Serviceberry	M
Platanus X acerifolia	London Planetree	L
Quercus coccinea	Scarlet Oak	L
Quercus lyrata	Overcup Oak	L
Quercus phellos	Willow Oak	L
Qurcus shumardii	Shumard Oak	L
Quercus virginiana	Live Oak	L
Pyramid Shape (OS, NG, NM)		
Carpinus betulus	European Hornbeam	M
Cryptomeria japonica	Japanese Cryptomeria	M
Ginkgo biloba (Male only)	Ginkgo	L
Ilex opaca	American Holly	L
Juniperus virginiana	Eastern Redcedar	L
Magnolia grandifolia	Southern Magnolia	L
Metasequoia glyptostroboides	Dawn Redwood	L
Nyssa sylvatica	Black Gum	L
Umbrella Shape (OS, NG, NM)		
Celtis laevigata	Sugar Hackberry	L
Cornus florida	Flowering Dogwood	S
Gleditsia triacanthos var.inermis	Thornless Honey Locust	M
Koelreuteria paniculata	Golden Rain Tree	M
Ostrya virginiana	Ironwood	L
Ulmus parvifolia	Lacebark Elm	L
Vitex agnus-castus	Chaste Tree	S
Zelkova serrata	Japanese Zelkova	L
Vase Shape (OS, NG, NM)		
Acer ginnala	Amur Maple	M
Cercis canadensis	Eastern Redbud	S
Chionanthus virginicus	Fringetree	S
Lagerstroemia indica	Crape Myrtle	S/M
Styrax japonica	Japanese Snowbell	S

* Tree Size

Small Tree (S): Trees with a mature height of less than 20 feet tall. Small trees shall be planted in permeable areas no less than 6’ x 8’ and 3’ minimum depth of soil preparation per Town of Apex standards.

Medium Tree (M): Trees with mature height between 20 and 30 feet tall. Medium trees shall be planted in permeable areas no less than 6’ x 8’ and 3’ minimum depth of soil preparation per Town of Apex standards

Large Trees (L): Trees with mature height above 30 feet tall. Large trees shall be planted in permeable areas no less than 10’ x 12’ and 3’ minimum depth of soil preparation per Town of Apex standards

TABLE 7. PRIVATE FRONTAGES

TABLE 7: Private Frontages. The Private Frontage is the area between the building Facade and the Lot line. Note that buildings in B-Grid Zones reflect automobile-oriented standards with parking permitted in front and larger building setbacks.

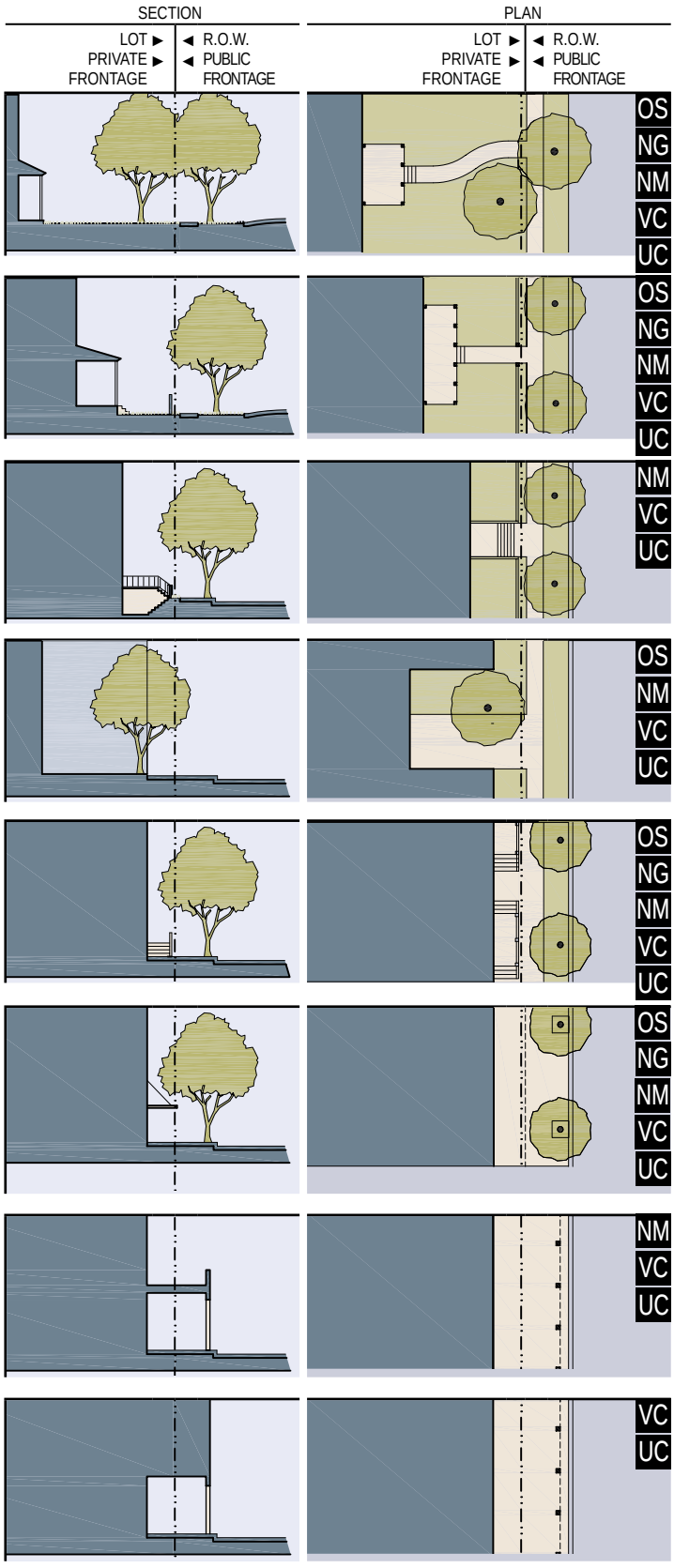
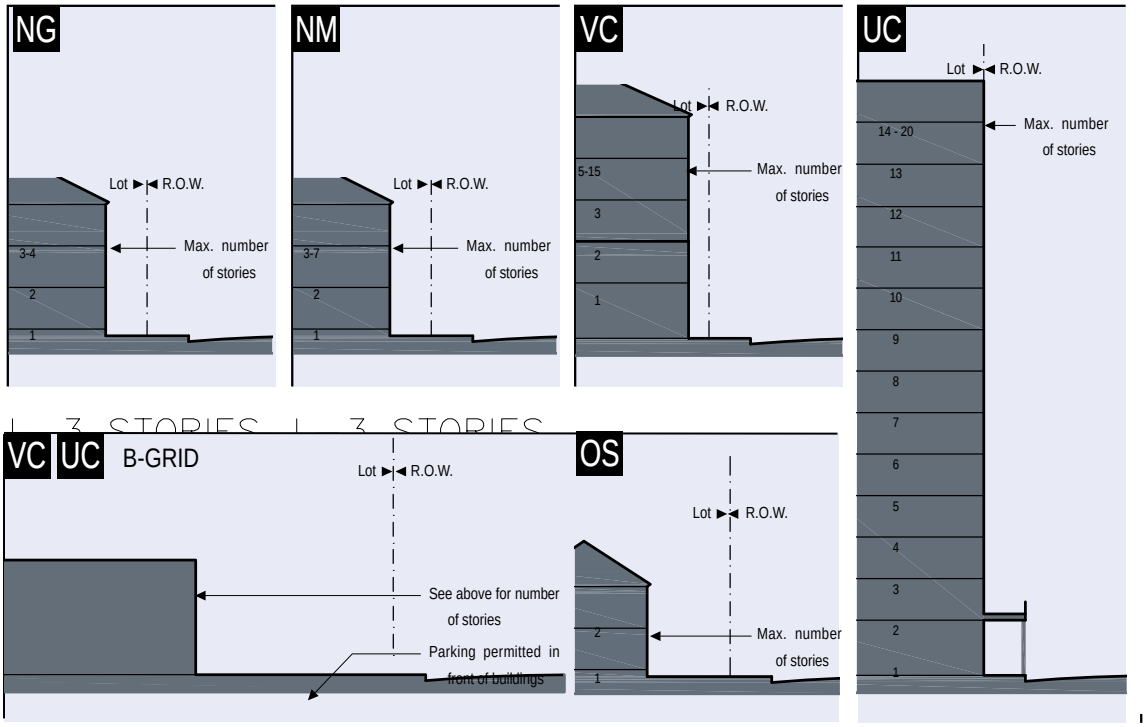


TABLE 8. BUILDING CONFIGURATION

TABLE 8: Building Configuration. This table shows the Configurations for different building heights for each Sustainable Zone. Maximum number of stories specified in Table 14k. Regardless of the number of stories, maximum height of a multi-story building shall not exceed 400 feet.



* UC not in excess of 20 stories without specific site plan review and approval by Council.

Stepbacks/Arcade/Gallery Heights. The diagrams below show Arcade and Gallery Frontages. Diagrams above apply to all other Frontages.

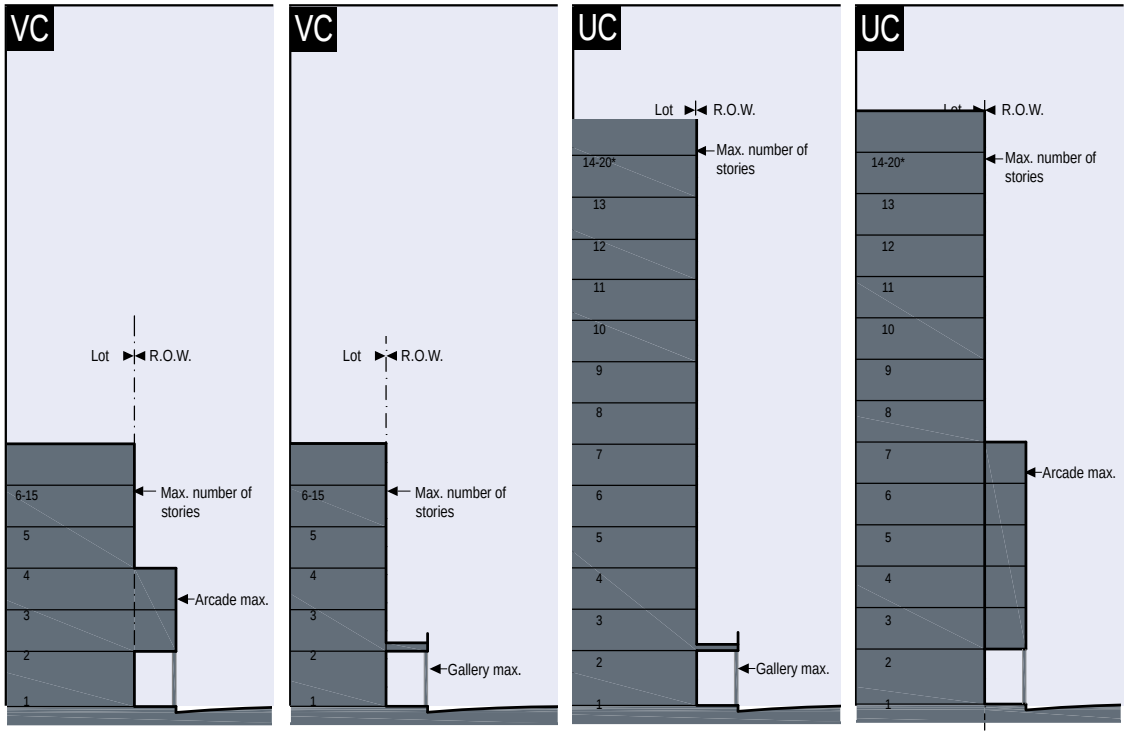
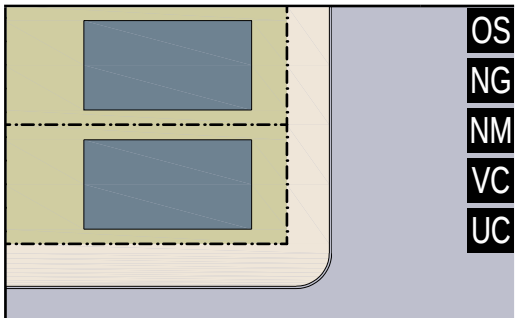


TABLE 9. BUILDING DISPOSITION

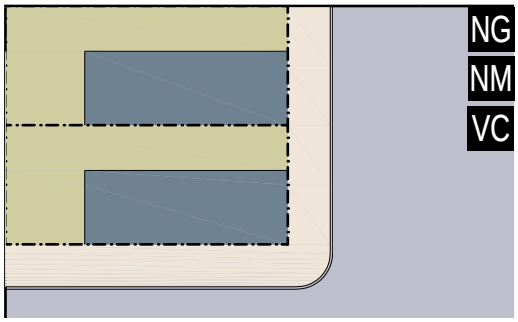
TABLE 9: Building Disposition. This table depicts the location of the structure relative to the boundaries of each individual Lot, establishing suitable basic building types for each Sustainable Zone.

a. Edgeyard - A-Grid: A building that occupies the center of its Lot with Setbacks on all sides. The front yard is visually continuous with the yards of adjacent buildings. The rear yard can be secured for privacy by fences and a well-placed Backbuilding and/or Outbuilding.

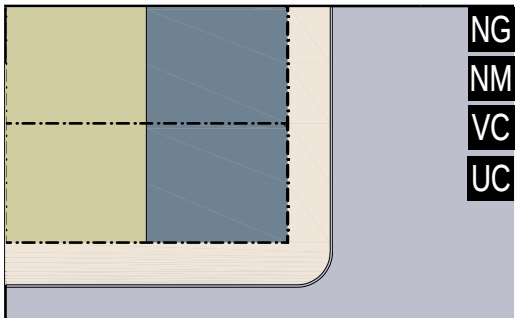
Edgeyard - B-Grid (VC & UC Zones): A building that occupies the center of its Lot with Setbacks on all sides. The front Layer side and rear yards may be used for parking. This is the least urban of types as the building Facade sets back from the Frontage. The rear yard can be used for truck access and may secured for privacy by fences.



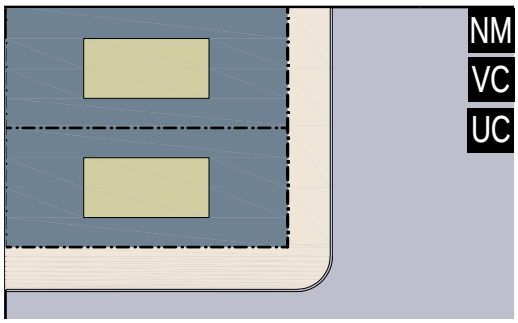
b. Sideyard: A building that occupies one side of the Lot with the Setback to the other side. A shallow Frontage Setback defines a more urban condition. If the adjacent building is similar with a blank side wall, the yard can be quite private. This type permits systematic climatic orientation in response to the sun or the breeze.



c. Rearyard: A building that occupies the full Frontage, leaving the rear of the Lot as the sole yard for residential and as building, sole yard or structured parking for other uses. This is a very urban type as the continuous Facade steadily defines the public Thoroughfare. The rear Elevations may be articulated for functional purposes. In its Residential form, this type is the Townhouse. For its Commercial form, the rear yard can accommodate substantial parking.



d. Courtyard: A building that occupies the boundaries of its Lot while internally defining one or more private spaces. This is the most urban of types, as it is able to shield the private realm from all sides while strongly defining the public Thoroughfare. Because of its ability to accommodate incompatible activities, masking them from all sides.



TABLES 10 & 11. BUILDING FUNCTION & PARKING CALCULATIONS

TABLE 10: Building Function. This table categorizes Building Functions within Sustainable Zones. Parking requirements are correlated to functional intensity. For Specific Function and Use permitted By Right or by Administrative Approval, see Table 12. The Commercial Function of a Live-Work unit may be anywhere in the unit. It may be occupied by a business operator who lives in the same structure that contains the Commercial activity or industry.

	OS NG	NM	VC UC
a. RESIDENTIAL	Residential: The number of single family dwellings on each Lot is restricted to one within a Principal Building and one within an Accessory Building. Both dwellings shall be under single ownership. The habitable area of the Accessory Unit shall not exceed 800 sf, excluding the enclosed parking area. See Table 11A for required parking.	Residential: The number of dwellings on each Lot is calculated by the minimum requirement of parking places for each dwelling, a ratio which may be reduced according to the shared parking standards (See Table 11). See Table 11A for required parking.	Residential: The number of dwellings on each Lot is calculated by the minimum requirement of 1.0 parking places per dwelling, a ratio which may be reduced according to the shared parking standards (See Table 11). Parking requirements may be satisfied off-site per Section 5.7. Parking is calculated by the minimum requirement of 0.75 parking places per dwelling for Independent Living.
b. LODGING	Lodging: The number of bedrooms available on each Lot for lodging is calculated by the requirement of 1.0 assigned parking place for each bedroom, up to five, in addition to the parking requirement for the dwelling. Food service may be provided in the a.m. Not applicable for OS.	Lodging: The number of bedrooms available on each Lot for lodging is calculated by the minimum requirement of 1.0 assigned parking places for each bedroom, up to twelve, in addition to the parking requirement for the dwelling. Food service may be provided at all times.	Lodging: The number of bedrooms available on each Lot for lodging is calculated by the minimum requirement of 0.5 assigned parking places for each bedroom. Food service may be provided at all times. The area allocated for food service shall be calculated and provided with parking according to Retail Function. Parking requirements may be satisfied off-site per Section 5.7.
c. OFFICE / MANUFACTURING	**Office/Manufacturing:** The building area available for office use on each Lot is restricted to the first Story of the Principal or the Accessory Building and by the minimum requirement of 3.0 assigned parking places per 1000 square feet of gross office space in addition to the parking requirement for any dwellings. The specific use shall be further limited to 8,000 SF for any single tenant use. Not applicable for OS.	Office/Manufacturing: The building area available for office may include the Accessory building, and by the minimum requirement of 3.0 assigned parking places per 1000 square feet of gross office space in addition to any parking requirement for other uses.	**Office/Manufacturing:** The building area available for office use on each Lot is calculated by the minimum requirement of 1.6 assigned parking places per 1000 square feet of gross office space. Parking requirements may be satisfied off-site per Section 5.7.
d. RETAIL	Retail: The building area available for Retail use is calculated by the minimum requirement of 3.0 assigned parking places per 1000 square feet of gross Retail space in addition to the parking requirement of any dwellings. The specific use shall be further limited to 8,000 SF for any single tenant use, or food service seating no more than 100.	Retail: The building area available for Retail use is calculated by the minimum requirement of 3.0 assigned parking places per 1000 square feet of gross Retail space in addition to any parking requirement for other uses. The specific use shall be further limited by Table 12 to include, but not be limited to neighborhood stores, or food service seating no more than 120.	Retail: The building area available for Retail use is calculated by the minimum requirement of 2.5 assigned parking places per 1000 square feet of gross Retail space. Retail spaces under 1500 square feet are exempt from parking requirements. Parking requirements may be satisfied off-site per Section 5.7.
e. CIVIC	See Table 12	See Table 12	See Table 12
f. OTHER	See Table 12	See Table 12	See Table 12

TABLE 11: Parking Calculations. The Shared Parking Factor for two Functions, when divided into the sum of the two amounts as listed on the Required Parking table below, produces the Effective Parking needed for each site involved in sharing. Conversely, if the Sharing Factor is used as a multiplier, it indicates the amount of building allowed on each site given the parking available. Within the overlay area of a Transit Oriented Development (TOD) the Effective Parking may be further adjusted downward by 30%.

REQUIRED PARKING (See Table 10)

	OS NG	NM	VC UC
RESIDENTIAL	See Table 11A	See Table 11A	1.0 / dwelling
LODGING	1.0 / bedroom	1.0 / bedroom	0.5 / bedroom
OFFICE	3.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.	1.6 / 1000 sq. ft.
RETAIL	3.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.	2.5 / 1000 sq. ft.
CIVIC	Determined by the Planning Director or Planning Director's designee		
OTHER	Determined by the Planning Director or Planning Director's designee		

SHARED PARKING FACTOR

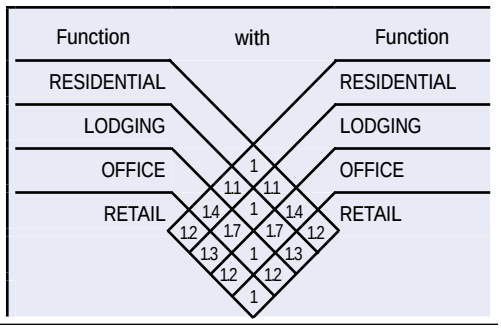


TABLE 11A. PARKING

Single Family Residential Building Types. This parking diagram illustrates the parking locations for on and off street parking for the various residential building types within the Neighborhood General and Neighborhood Mixed-Use Zones. Parking is calculated by the minimum requirement of 0.75 parking places per dwelling for Independent Living.

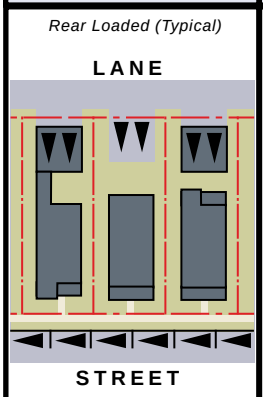
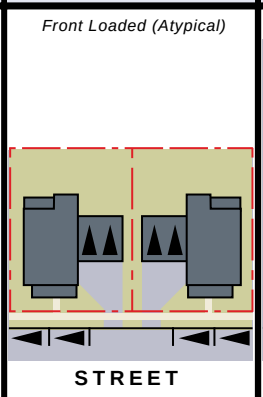
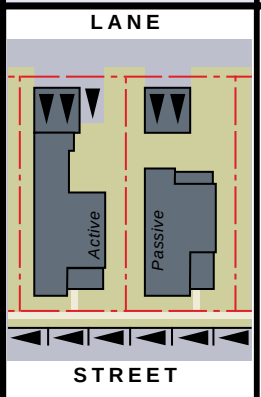
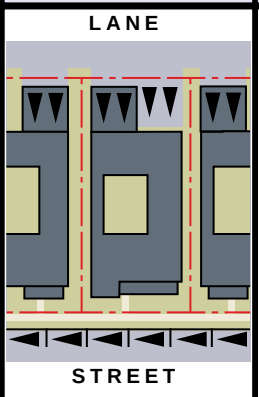
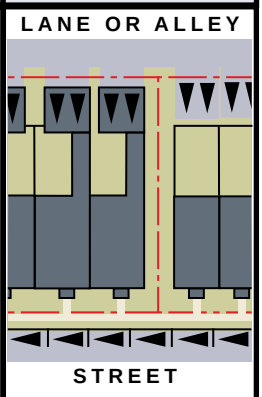
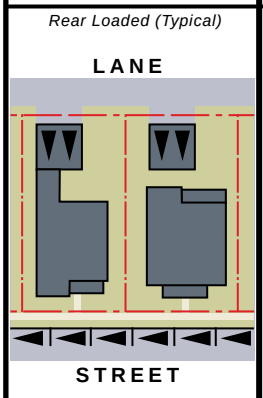
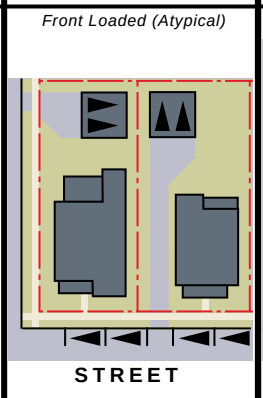
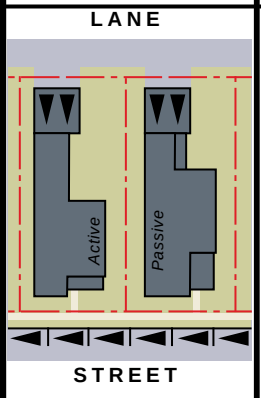
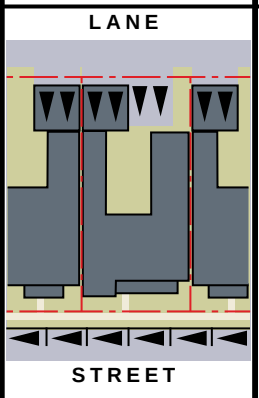
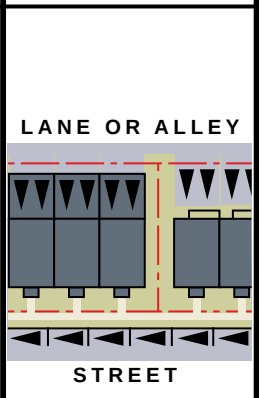
NG NM	NG NM	NG NM	NM	NG NM
Detached House	Detached House	Sideyard House	Courtyard House	Townhouse
				
				
Detached House: an edge yard building type. A single-family dwelling on small to large lots, shared with an accessory building in the rear yard.	**Detached House:** an edge yard building type. A single-family dwelling on medium to large lots, shared with an accessory building in the rear yard and front or side driveway where alley is not available (atypical condition).	**Sideyard House:** a sideyard building type. A single-family dwelling which occupies one side of the lot, with the primary yard to the other side, shared with ancillary building in the rear yard.	**Courtyard House:** a courtyard building type which surrounds one or more private yards. This is a functionally flexible type as it is able to shield the private open space from a public realm of great intensity.	**Townhouse:** a rear yard building type. A single family dwelling with common walls on the side lot lines, the facades forming a continuous frontage line. Rowhouses are the highest density type able to provide private yards..
NG **Required Parking:** 2 Off-Street	NG **Required Parking:** 2 Off-Street	NG **Required Parking:** 2 Off-Street	NM **Required Parking:** 2 Off-Street	NG **Required Parking:** 2 Off-Street
NM **Required Parking:** 2 Off-Street Table 11 Shared Parking Factor does not apply to this use.	NM **Required Parking:** 2 Off-Street Table 11 Shared Parking Factor does not apply to this use.	NM **Required Parking:** 2 Off-Street Table 11 Shared Parking Factor does not apply to this use.	NM **Required Parking:** 2 Off-Street Table 11 Shared Parking Factor does not apply to this use.	NM **Required Parking:** 2 Off-Street Table 11 Shared Parking Factor does not apply to this use.

TABLE 11A. PARKING

Townhome and Multi-Family Residential Building Types. This parking diagram illustrates the parking locations for on and off street parking for the various residential building types within the Neighborhood General and Neighborhood Mixed-Use Zones. Parking is calculated by the minimum requirement of 0.75 parking places per dwelling for Independent Living.

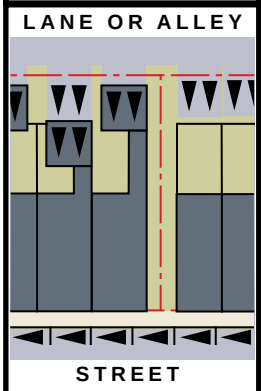
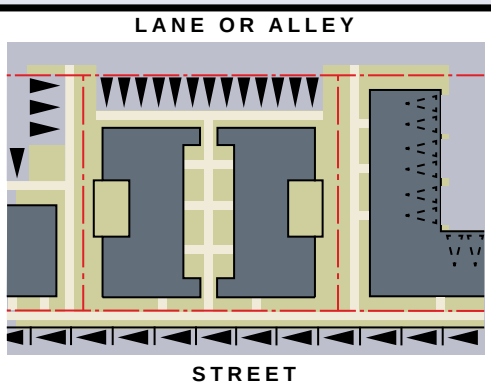
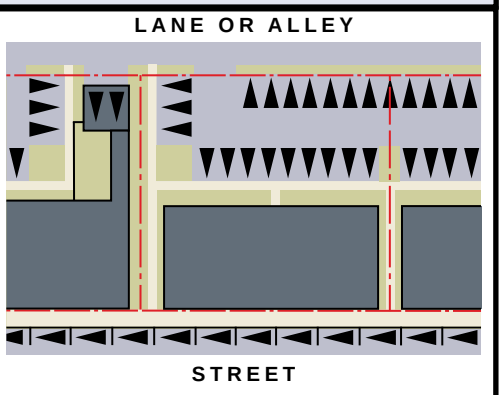
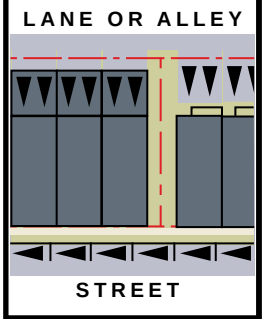
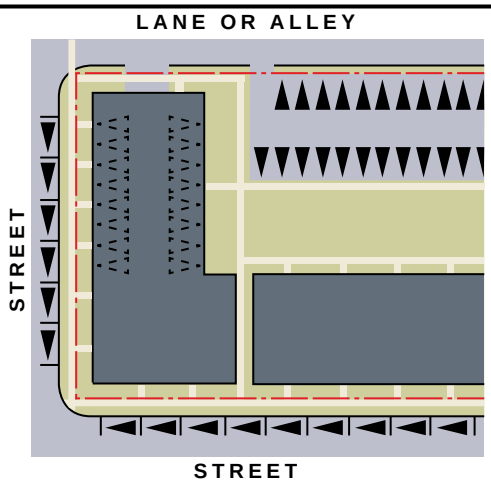
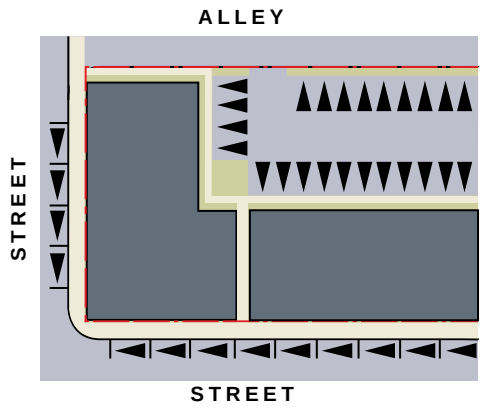
NG NM	NM	NG NM
Live-Work	Multi-Family or Apartment	Mixed Use
		
		
Live-Work: a rear yard, fully mixed use building type with one dwelling above or behind a commercial space. NG **Required Parking:** 2 Off-Street 1 On-Street NM **Required Parking:** 2 Off-Street 1 On-Street Table 11 Shared Parking Factor does not apply to this use.	**Multi-Family or Apartment:** a rear yard residential building type accommodating multiple dwellings disposed above and beside each other, with individual or sharing entries. Parking may be on the surface, structured or underground. NM **Required Parking:** 1.25 Parking Spaces per Unit	**Mixed Use Building or Mixed Use Block:** a rear yard, flexible commercial building type with residential uses above. Commercial buildings may have floor plates deeper than residential ones. NG **Required Parking (Residential):** 1.50 Off-Street Spaces per Unit NM **Required Parking (Residential):** 1.25 Off-Street Spaces per Unit

TABLE 12. SPECIFIC FUNCTION & USE

TABLE 12: Specific Function & Use. This table expands the categories of Table 10 to delegate specific Functions and uses within Sustainable Zones. Table 12 has been customized for local character and requirements. The Sustainable Development District provides for the following uses to be permitted within the Sustainable Zones.

Permitted (P): The permitted uses for the District

Permitted (b): The permitted uses for the District on B-Grid Thoroughfares and within B-Grid Zones only

SUSTAINABLE ZONE	OS	NG	NM	VC	UC
a. RESIDENTIAL					
Accessory Unit or Building		P	P	P	
Condominium			P	P	P
Congregate living facility *			P	P	P
Duplex		P	P		
Family care home *		P	P		
Farm residence	P	P	P		
Historic Site, Adaptive Use	P	P	P	P	P
Independent living		P	P	P	P
Multi-family or apartment			P	P	P
Nursing or convalescent facility *			P	P	P
Single-family		P	P	P	
Townhouse		P	P	P	P
Townhouse, detached		P			
Triplexes or quadplexes			P	P	
Live-Work		P	P	P	P
Modular Construction		P	P	P	P
Mixed Use Block		P	P	P	P
b. PUBLIC/CIVIC USES					
Ambulatory healthcare facility				P	P
Amphitheater **	P	P	P	P	P
Assembly hall, nonprofit			P	P	P
Church, or place of worship		P	P	P	P
Cemetery	P	P	P	P	P
Day care facility		P	P	P	P
Government service		P	P	P	P
Heliport or helipad	P		P	P	P
Hospital				P	P
Natatorium **	P		P	P	P
Restrooms	P	P	P	P	P
Picnic Shelter **	P	P	P	P	P
School, public or private **		P	P	P	P
Transportation facility				P	P
Veterinary clinic or hospital			P	P	P
c. UTILITIES					
Communication tower, (Commercial; Stealth)	P	P	P	P	P
Communication or water tower Integrated Into building or structure (Camouflage Stealth)	P	P	P	P	P
Utility, Minor	P			P	P
Power facility	P			P	P
Renewable Energy Facilities	P	P	P	P	P
d. RECREATIONAL USES					
Arena, auditorium, or stadium **	P			P	P
Entertainment, indoor **				P	P
Entertainment, outdoor **	P		P	P	P
Greenway	P	P	P	P	P
Horse boarding and riding stable **	P				
Park, active	P	P	P	P	P
Park, passive	P	P	P	P	P
Recreation facility, private	P	P	P	P	P
e. COMMUNICATIONS					
Broadcast station (radio and television)				b	P
Radio and television recording studio				b	P

TABLE 12. SPECIFIC FUNCTION & USE

SUSTAINABLE ZONE	OS	NG	NM	VC	UC
f. FOOD AND BEVERAGE SERVICE					
Concessions	P		P	P	P
Restaurant, drive-through				P	b
Restaurant, general	P		P	P	P
Bar or nightclub			P	P	P
g. OFFICE LAB AND RESEARCH					
Dispatching office				P	P
Historic site – adaptive use	P	P	P	P	P
Medical or dental clinic or office			P	P	P
Medical or dental laboratory				P	P
Office, business or professional			P	P	P
Publishing office			P	P	P
Research facility				P	P
h. PARKING, COMMERCIAL					
Parking Garage (deck), commercial			P	P	P
Parking Garage (deck) private			P	P	P
Parking lot, commercial				P	P
Parking lot, surface	P	P	P	P	P
i. LODGING					
Bed and breakfast (up to 5 rooms)		P	P	P	P
Bed and breakfast (up to 12 rooms)			P	P	P
Hotel or motel			P	P	P
Conference Center				P	P
Convention Center					P
School Dormitory				P	P
j. RETAIL SALES AND SERVICE					
Barber and beauty shop		P	P	P	P
Bookstore		P	P	P	P
Building Supplies, Retail				b	b
Convenience store			P	P	P
Convenience store with gas sales			P	P	P
Dry cleaners and laundry service		P	P	P	P
Farmer's market	P	P	P	P	P
Financial institution			P	P	P
Floral shop		P	P	P	P
Funeral home			P	P	P
Gas and fuel, retail				P	P
Greenhouse or nursery, retail			P	P	P
Grocery, general				P	P
Grocery, specialty		P	P	P	P
Health/fitness center or spa			P	P	P
Kennel, indoor				P	P
Laundromat			P	P	P
Newsstand or gift shop		P	P	P	P
Personal service			P	P	P
Pharmacy			P	P	P
Printing and copying service			P	P	P
Real estate sales		P	P	P	P
Retail Kiosk	P		P	P	P
Retail sales, bulky goods				b	b
Retail sales, general		P	P	P	P
Studio for art		P	P	P	P
Tailor shop		P	P	P	P
Theater				P	P
Shopping Center				P	P
k. VEHICLE REPAIR AND SERVICE					
Automotive paint or body shop					
Automotive parts				P	P
Automotive service station				P	P
Car wash or auto detailing				P	P
Repair services limited				P	P
Vehicle inspection center				P	P

TABLE 12. SPECIFIC FUNCTION & USE

SUSTAINABLE ZONE	OS	NG	NM	VC	UC
l. INDUSTRY, MANUFACTURING, STORAGE					
Biotechnology and Medical Devices				P	P
Information Technology and High					
Performance Computing				P	P
Manufacturing				P	P
Nanotechnology and Advanced Materials				P	P
Retail Storage within Retail spaces		P	P	P	P
Smart Power and Green Technology	P			P	P
Self-service storage			P	P	P
Warehousing				b	b
m. FOOD PRODUCTION (SEE TABLE 19)					
Farm	P				
Agricultural plots	P	P			
Vegetable gardens		P	P	P	P
Urban farms	P	P	P	P	
Community gardens	P	P	P	P	P
Green roofs		P	P	P	P
Vertical farms			P	P	P

If an application is submitted for a use type that is not permitted by Table 12 in one or more of the Sustainable Zones and the use type is not one prohibited by the UDO, the Planning Director shall be authorized to make a similar use interpretation based on the use categories Listed in Table 12. If the Planning Director determines that the proposed use does not fit any of the use categories, no similar use interpretation shall be made and the use shall not be permitted.

Any land uses not specially dealt with in this Table but otherwise permitted by the UDO and not excluded by any provision of this SD Plan are subject to a similar use interpretation by the Planning Director and if found to be similar to a use permitted by this Table shall be allowed within all sustainable zones in which the similar use is allowed.

* For the purposes of density and parking, dwelling rooms shall be treated as 0.2 dwelling units with parking per the multi-family requirements.

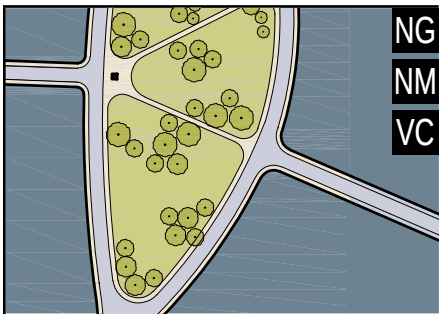
** The building and any portion of the lot routinely accessible to the public shall be included in the acreage designated pursuant to SD Plan 3.1.3.c.

TABLE 13. CIVIC SPACE

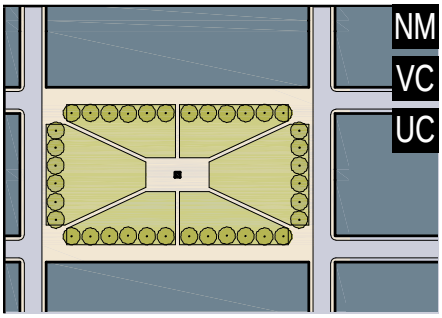
a. Park: A natural preserve available for unstructured recreation or a park for active recreation. A park may be independent of surrounding building Frontages. Its landscape shall consist of Paths and trails, meadows, waterbodies, woodland and open shelters, all naturalistically disposed. Parks may be lineal, following the trajectories of natural corridors.



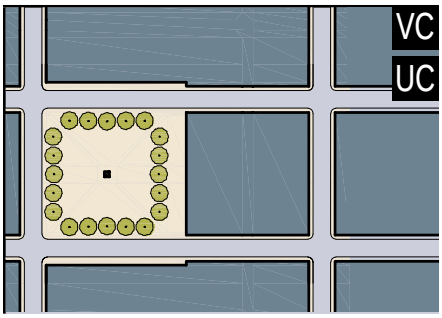
b. Green: An Open Space, available for unstructured recreation. A Green may be spatially defined by landscaping rather than building Frontages. Its landscape shall consist of lawn and trees, naturalistically disposed. The minimum size shall be 1/4 acre and the maximum shall be 8 acres.



c. Square: An Open Space available for unstructured recreation and Civic purposes. A Square is spatially defined by building Frontages. Its landscape shall consist of paths, lawns and trees, formally disposed. Squares shall be located at the intersection of important Thoroughfares. The minimum size shall be 1/2 acre and the maximum shall be 5 acres.



d. Plaza: A public or private Open Space available for Civic purposes and Commercial activities. A Plaza shall be spatially defined by building Frontages. Its landscape shall consist primarily of pavement. Trees are optional. Plazas should be located at the intersection of important streets. The minimum size shall be 1/8 acre and the maximum shall be 2 acres.



e. Playground: An Open Space designed and equipped for the recreation of children. A playground may be fenced and may include an open shelter. Playgrounds shall be interspersed within Residential areas and may be placed within a Block. Playgrounds may be included within Parks and Greens. There shall be no minimum or maximum size.

Dog Parks: An Open Space designed as a safe place where dogs may play and get exercise while not on a leash. Dog Parks shall be fenced and may be interspersed within Residential areas. They may be placed within a Block or included within Parks and Greens. There shall be no minimum or maximum size.

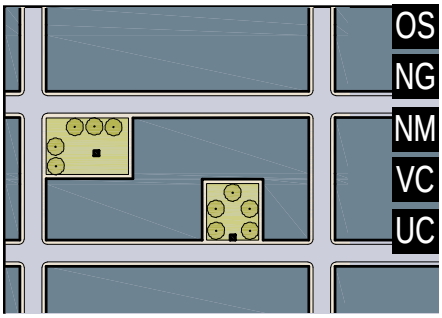
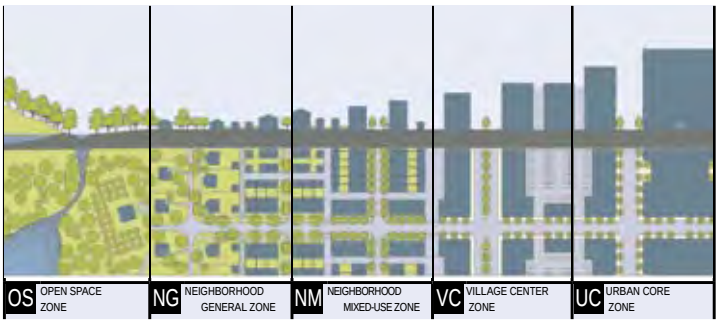


TABLE 14. FORM-BASED CODE SUMMARY



OS OPEN SPACE ZONE	NG NEIGHBORHOOD GENERAL ZONE	NM NEIGHBORHOOD MIXED-USE ZONE	VC VILLAGE CENTER ZONE	UC URBAN CORE ZONE
a. ALLOCATION OF ZONES				
Minimum Acres	not applicable	75 acres	50 acres	215 acres	135 acres
Min Acres for Non-Residential	variable	3 acres	7 acres	120 acres	75 acres
b. DENSITY (see Sustainable Development Concept Map)					
By Right - DUA	not applicable	20 units / ac. gross	40 units / ac. gross	80 units / ac. gross	100 units / ac. gross
By Right - Other Uses - FAR	permitted	2.00 / ac. gross	4.00 / ac. gross	6.00 / ac. gross	12.00 / ac. gross
Maximum Impermeable Surface	30%	65%	75%	90%	100%
c. BLOCK SIZE					
Block Perimeter: A-Grids	no maximum	3000 ft. max	2400 ft. max	2000 ft. max *	2000 ft. max *
Block Perimeter: B-Grids	not applicable	not applicable	not applicable	* 3500 ft max with parking structures	
d. THOROUGHFARES (see Table 3 and Table 4)					
Highway (HW)	permitted	permitted	not permitted	not permitted	not permitted
Boulevard (BV)	not permitted	not permitted	not permitted	permitted	permitted
Avenue (AV)	not permitted	permitted	permitted	permitted	permitted
Commercial Street (CS)	not permitted	not permitted	not permitted	permitted	permitted
Drive (DR)	not permitted	permitted	permitted	permitted	permitted
Street (ST)	permitted	permitted	permitted	permitted	not permitted
Road (RD)	permitted	permitted	not permitted	not permitted	not permitted
Rear Lane (RL)	permitted	permitted	permitted	not permitted	not permitted
Rear Alley (RA)	not permitted	permitted	required	required	required
Path (PT)	permitted	permitted	permitted	not permitted	not permitted
Passage (PS)	not permitted	permitted	permitted	permitted	permitted
Bicycle Trail (BT)	permitted	permitted	not permitted *	not permitted *	not permitted *
Bicycle Lane (BL)	permitted	permitted	permitted	permitted	permitted
Bicycle Route (BR)	permitted	permitted	permitted	permitted	permitted
e. CIVIC SPACES (see Table 13)					* permitted within Open Spaces
Park	permitted	permitted	permitted	permitted	permitted
Green	not permitted	permitted	permitted	permitted	permitted
Square	not permitted	not permitted	permitted	permitted	permitted
Plaza	not permitted	not permitted	not permitted	permitted	permitted
Playground	permitted	permitted	permitted	permitted	permitted
f. LOT OCCUPATION					
Lot Width: A-Grids	variable	25 ft. min 120 ft. max	18 ft. min 400 ft. max	18 ft. min 600 ft. max	18 ft. min 700 ft. max
Lot Width: B-Grids	not applicable	not applicable	not applicable	no max	no max
g. SETBACKS - PRINCIPAL BUILDING (see Table 15)					
(g.1) Front Setback (Principal)	10 ft. min	15 ft. min	6 ft. min	0 ft. min	0 ft. min
(g.2) Front Setback (Secondary)	5 ft. min	12 ft. min	6 ft. min	0 ft. min	0 ft. min
(g.3) Side Setback	5 ft. min	0 ft. min.	0 ft. min	0 ft. min	0 ft. min
(g.4) Rear Setback	5 ft. min	12 ft. min	3 ft. min	3 ft. min	0 ft. min
h. SETBACKS - OUTBUILDING (see Table 15)					
(h.1) Front Setback	not applicable	20 ft. min +bldg setback	20 ft. min +bldg setback	40 ft. max from rear prop	not applicable
(h.2) Side Setback	not applicable	0 ft. or 3 ft. min	0 ft. or 3 ft. min	0 ft. min	not applicable
(h.3) Rear Setback	not applicable	3 ft. min	3 ft. min	3 ft. min	not applicable
i. BUILDING DISPOSITION (see Table 9)					
Edgeyard	permitted	permitted	permitted	permitted	permitted
Sideyard	not permitted	permitted	permitted	permitted	not permitted
Rearyard	not permitted	permitted	permitted	permitted	permitted
Courtyard	not permitted	not permitted	permitted	permitted	permitted
j. PRIVATE FRONTAGES (see Table 7)					
Common Yard	permitted	permitted	permitted	permitted	permitted
Porch & Fence	permitted	permitted	permitted	permitted	permitted
Terrace or Lightwell	not permitted	not permitted	permitted	permitted	permitted
Forecourt	permitted	not permitted	permitted	permitted	permitted
Stoop	permitted	permitted	permitted	permitted	permitted
Shopfront	permitted	permitted	permitted	permitted	permitted
Gallery	not permitted	permitted	permitted	permitted	permitted
Arcade	not permitted	not permitted	permitted	permitted	permitted
k. BUILDING CONFIGURATION (see Table 8)					
Principal Building	1 to 2 Stories	4 Stories max	7 Stories max, 1 min	15 Stories, Note 2, 1 min	20 Stories, Note 1, 1 min
Outbuilding	not applicable	2 Stories max	2 Stories max	2 Stories max	not applicable

ZONE

LOT

DISPOSITION

CONFIGURATION

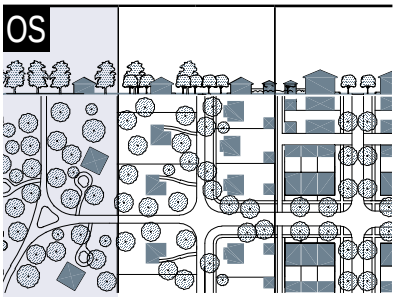
ARTICLE 5

ARTICLE 2, 3, 4

Note 1: Not in excess of 20 stories without specific site plan review and approval by Town Council.
Note 2: Not in excess of 15 stories without specific site plan review and approval by Town Council.
Note 3: Accessory Structures shall be treated as Principal Buildings.

TABLE 15A. FORM-BASED CODE GRAPHICS - OS - OPEN SPACE

OS



(see Table 1)

k. BUILDING CONFIGURATION (see Table 8)	
Principal Building	2 stories max.
Outbuilding	not applicable.
f. LOT OCCUPATION (see Table 14f)	
Lot Width	variable
i. BUILDING DISPOSITION (see Table 9)	
Edgeyard	permitted
Sideyard	not permitted
Rearyard	not permitted
Courtyard	not permitted
g. SETBACKS - PRINCIPAL BUILDING (see Table 14g)	
(g.1) Front Setback Principal	10 ft. min
(g.2) Front Setback Secondary	5 ft. min
(g.3) Side Setback	5 ft. min
(g.4) Rear Setback	5 ft. min
h. SETBACKS - OUTBUILDING (see Table 14h)	
(h.1) Front Setback	not applicable
(h.2) Side Setback	not applicable
(h.3) Rear Setback	not applicable
j. PRIVATE FRONTAGES (see Table 7)	
Common Lawn	permitted
Porch	permitted
Terrace or Lightwell.	not permitted
Forecourt	permitted
Stoop	permitted
Shopfront	permitted
Gallery	not permitted
Arcade	not permitted

Refer to Summary Table 14

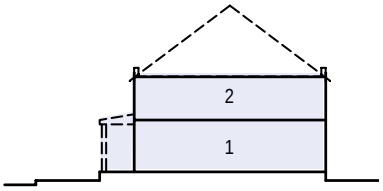
PARKING PROVISIONS
See Table 10 & Table 11

*or 15 ft. from center line of alley

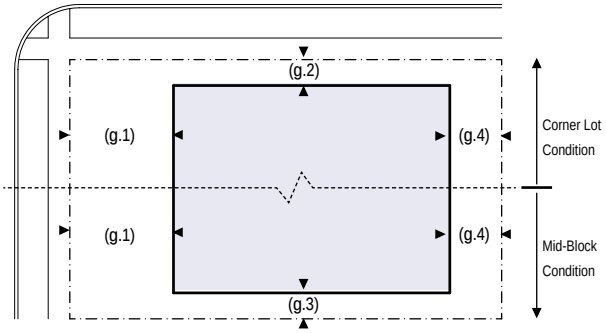
"N" stands for any Stories above those shown, up to the maximum. Refer to metrics for exact minimums and maximums

Vinyl Siding Notes:
1. Vinyl exterior material may be used in areas not in view of the public, such as service areas.
2. Elements such as vinyl trim, vinyl windows, decorative vents, and the like are permitted.

BUILDING CONFIGURATION
1. Stories exclude Attics and raised basements.



SETBACKS - PRINCIPAL BLDG
1. The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.
2. Facades shall be built along the Principal Frontage.
3. Accessory Structures shall be treated as Principal Buildings.



SETBACKS - OUTBUILDING
1. Not applicable

PARKING PLACEMENT
1. Uncovered parking spaces may be provided within the second and third Layer as shown in the diagram (see Table 17d).
2. Covered parking shall be provided within the second or third Layer as shown in the diagram (see Table 17d). .
3. Trash containers shall be stored within the third Layer.

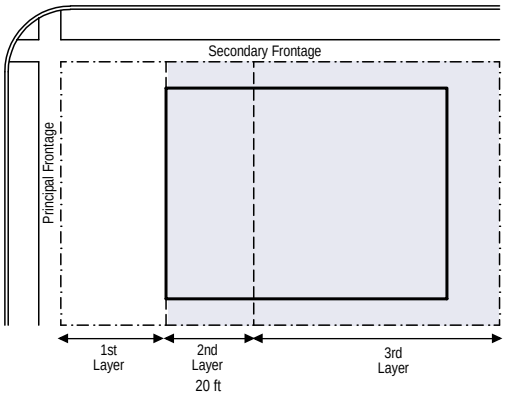
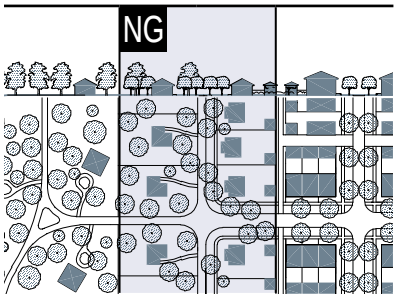


TABLE 15B. FORM-BASED CODE GRAPHICS - NG - NEIGHBORHOOD GENERAL



(see Table 1)

k. BUILDING CONFIGURATION (see Table 8)	
Principal Building	4 stories max.
Outbuilding	2 stories max.
f. LOT OCCUPATION (see Table 14f)	
Lot Width (Note 1)	25 ft. min 120 ft. max
i. BUILDING DISPOSITION (see Table 9)	
Edgeyard	permitted
Sideyard	permitted
Rearyard	permitted
Courtyard	not permitted
g. SETBACKS - PRINCIPAL BUILDING (see Table 14g)	
(g.1) Front Setback Principal	15 ft. min
(g.2) Front Setback Secondary	12 ft min.
(g.3) Side Setback	0 ft min.
(g.4) Rear Setback	12 ft min.
h. SETBACKS - OUTBUILDING (see Table 14h)	
(h.1) Front Setback	20 ft. min. + bldg setback
(h.2) Side Setback	0 ft. or 3 ft at corner
(h.3) Rear Setback	3 ft. min
j. PRIVATE FRONTAGES (see Table 7)	
Common Lawn	permitted
Porch	permitted
Terrace or Lightwell.	not permitted
Forecourt	not permitted
Stoop	permitted
Shopfront	permitted
Gallery	permitted
Arcade	not permitted

Refer to Summary Table 14

PARKING PROVISIONS
See Table 10 & Table 11

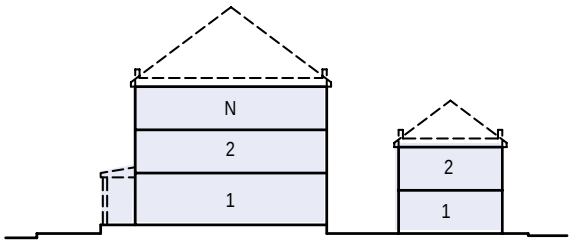
*or 15 ft. from center line of alley

"N" stands for any Stories above those shown, up to the maximum. Refer to metrics for exact minimums and maximums

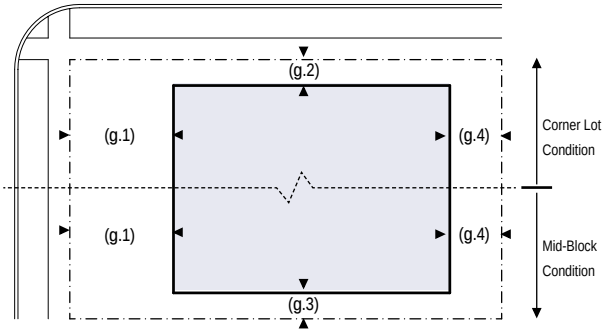
Note 1: Lot width reductions to 20' for single family and 18' for townhomes require specific site plan review and approval by Town Council.

Vinyl Siding Notes:
1. Vinyl siding is not permitted on single family homes and Townhouses except as permitted in vinyl siding note 3 below.
2. Vinyl exterior material may be used above the second story of an apartment, condominium or Mixed Use buildings and in areas not in view of the public, such as service areas.
3. Elements such as vinyl trim, vinyl windows, decorative vents, and the like are permitted.

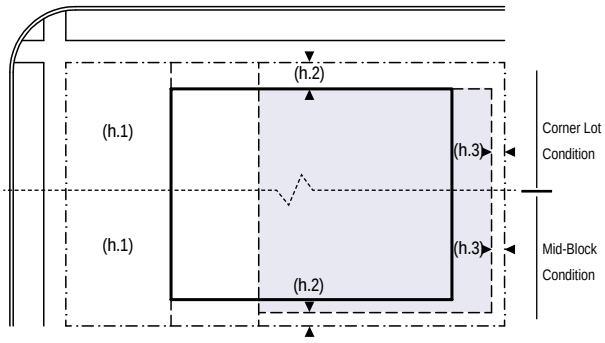
BUILDING CONFIGURATION
1. Stories exclude Attics and raised basements.



SETBACKS - PRINCIPAL BLDG
1. The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.
2. Facades shall be built along the Principal Frontage



SETBACKS - OUTBUILDING
1. The Elevation of the Outbuilding shall be distanced from the Lot lines as shown.



PARKING PLACEMENT
1. Uncovered parking spaces may be provided within the second and third Layer as shown in the diagram (see Table 17d).
2. Covered parking shall be provided within the second or third Layer as shown in the diagram (see Table 17d). Side-entry garages are permitted on corner lots and front-entry garages may be allowed.
3. Trash containers shall be stored within the third Layer.

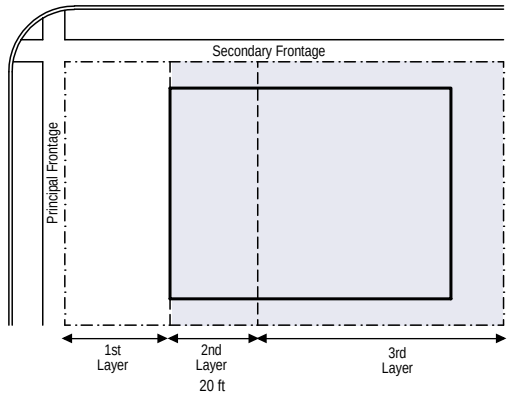
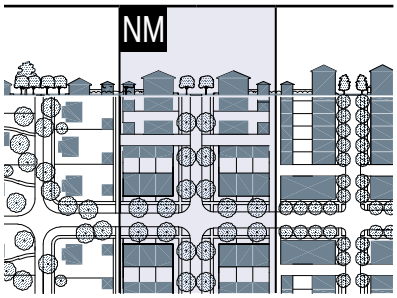


TABLE 15C. FORM-BASED CODE GRAPHICS - NM - NEIGHBORHOOD MIXED-USE



(see Table 1)

k. BUILDING CONFIGURATION (see Table 8)	
Principal Building	7 stories max, 1 min
Outbuilding	2 stories max.
f. LOT OCCUPATION (see Table 14f)	
Lot Width	18 ft min 400 ft max
i. BUILDING DISPOSITION (see Table 9)	
Edgeyard	permitted
Sideyard	permitted
Rearyard	permitted
Courtyard	permitted
g. SETBACKS - PRINCIPAL BUILDING (see Table 14g)	
(g.1) Front Setback Principal	6 ft. min.
(g.2) Front Setback Secondary	6 ft. min.
(g.3) Side Setback	0 ft. min.
(g.4) Rear Setback	3 ft. min.*
h. SETBACKS - OUTBUILDING (see Table 14h)	
(h.1) Front Setback	20 ft. min. + bldg. setback
(h.2) Side Setback	0 ft. min. or 3 ft at corner
(h.3) Rear Setback	3 ft. min
j. PRIVATE FRONTAGES (see Table 7)	
Common Lawn	permitted
Porch & Fence	permitted
Terrace or Lightwell.	permitted
Forecourt	permitted
Stoop	permitted
Shopfront	permitted
Gallery	permitted
Arcade	permitted
	Refer to Summary Table 14
PARKING PROVISIONS	
See Table 10 & Table 11	

*or 15 ft. from center line of alley

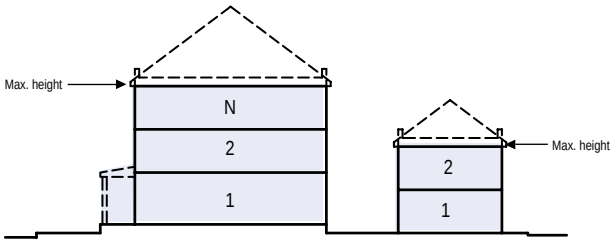
"N" stands for any Stories above those shown, up to the maximum. Refer to metrics for exact minimums and maximums

Vinyl Siding Notes:

1. Vinyl siding is not permitted on single family homes and Townhouses except as permitted in vinyl siding note 3 below.
2. Vinyl exterior material may be used above the second story of an apartment, condominium or Mixed Use buildings and in areas not in view of the public, such as service areas.
3. Elements such as vinyl trim, vinyl windows, decorative vents, and the like are permitted.

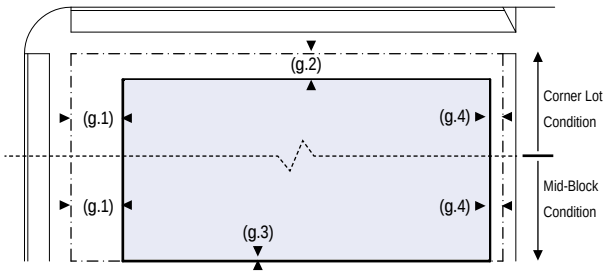
BUILDING CONFIGURATION

1. Stories exclude Attics and raised basements.



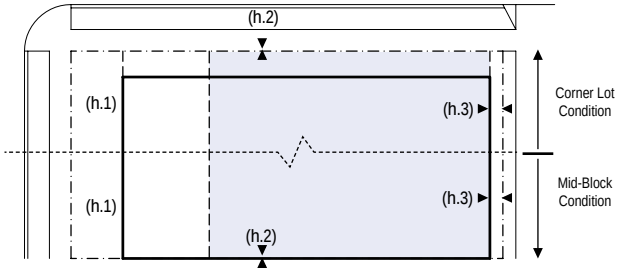
SETBACKS - PRINCIPAL BLDG

1. The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.
2. Facades shall be built along the Principal Frontage.



SETBACKS - OUTBUILDING

1. The Elevations of the Outbuilding shall be distanced from the Lot lines as shown.



PARKING PLACEMENT

1. Uncovered parking spaces may be provided within the third Layer as shown in the diagram (see Table 17d).
2. Covered parking shall be provided within the third Layer as shown in the diagram (see Table 17d).
3. Trash containers shall be stored within the third Layer.

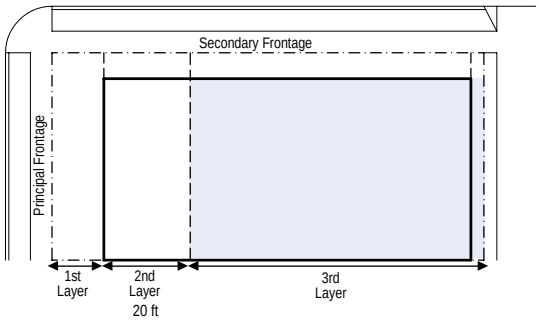
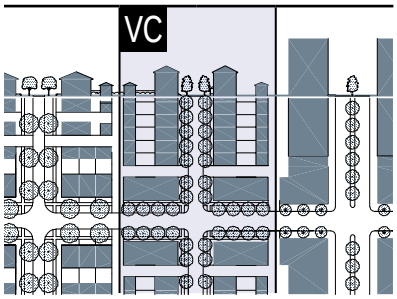


TABLE 15D. FORM-BASED CODE GRAPHICS - VC - VILLAGE CENTER



(see Table 1)

k. BUILDING CONFIGURATION (see Table 8)	
Principal Building	15 stories, Note 2, 1 min.
Outbuilding	2 stories max.
f. LOT OCCUPATION (see Table 14f)	
Lot Width: A-Grids	18 ft min 700 ft max
Lot Width: B-Grids	no max
i. BUILDING DISPOSITION (see Table 9)	
Edgeyard	permitted
Sideyard	permitted
Rearyard	permitted
Courtyard	permitted
g. SETBACKS - PRINCIPAL BUILDING (see Table 14g)	
(g.1) Front Setback Principal	0 ft. min.
(g.2) Front Setback Secondary	0 ft. min.
(g.3) Side Setback	0 ft. min.
(g.4) Rear Setback	3 ft. min.*
h. SETBACKS - OUTBUILDING (see Table 14h)	
(h.1) Front Setback	40 ft. max. from rear prop.
(h.1) Front Setback	40 ft. max. from rear prop.
(h.2) Side Setback	0 ft. min. or 2 ft at corner
(h.3) Rear Setback	3 ft. max.
j. PRIVATE FRONTAGES (see Table 7)	
Common Lawn	permitted
Porch	permitted
Terrace or Lightwell	permitted
Forecourt	permitted
Stoop	permitted
Shopfront	permitted
Gallery	permitted
Arcade	permitted
	Refer to Summary Table 14
PARKING PROVISIONS	
See Table 10 & Table 11	

*or 15 ft. from center line of alley

"N" stands for any Stories above those shown, up to the maximum. Refer to metrics for exact minimums and maximums.

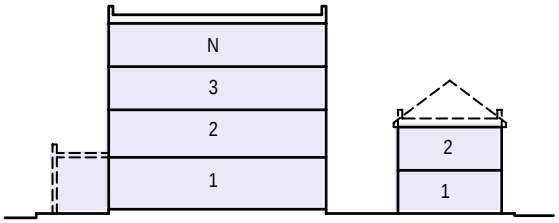
Note 2: Not in excess of 15 stories without specific site plan review and approval by Town Council.

Vinyl Siding Notes:

1. Vinyl siding is not permitted on single family homes and Townhouses except as permitted in vinyl siding note 3 below.
2. Vinyl exterior material may be used above the second story of an apartment, condominium or Mixed Use buildings and in areas not in view of the public, such as service areas.
3. Elements such as vinyl trim, vinyl windows, decorative vents, and the like are permitted.

BUILDING CONFIGURATION

1. Stories, exclude Attics mezzanines and basements.



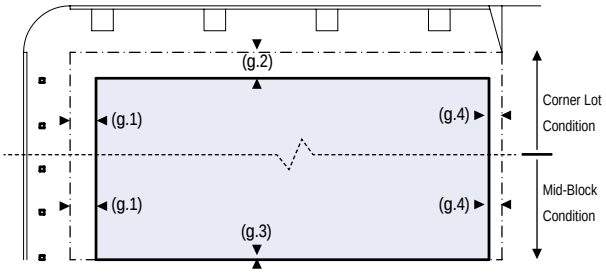
SETBACKS - PRINCIPAL BLDG

A-GRIDS

1. The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.
2. Facades shall be built along the Principal Frontage.

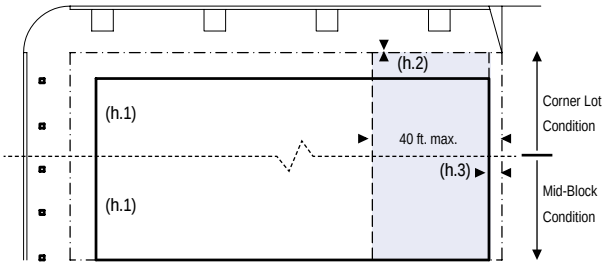
B-GRIDS

1. Multiple Buildings may be located on the same Lot.



SETBACKS - OUTBUILDING

1. The Elevations of the Outbuilding shall be distanced from the Lot lines as shown.



PARKING PLACEMENT

A-GRIDS

1. Uncovered parking spaces may be provided within the third Layer as shown in the diagram (see Table 17d).
2. Covered parking shall be provided within the third Layer as shown in the diagram (see Table 17d) except as noted above.
3. Trash containers shall be stored within the third Layer.

B-GRIDS

1. Uncovered parking spaces may be provided within any Layer as shown in the diagram (see Table 17d).
2. Trash containers shall be stored within the third Layer.

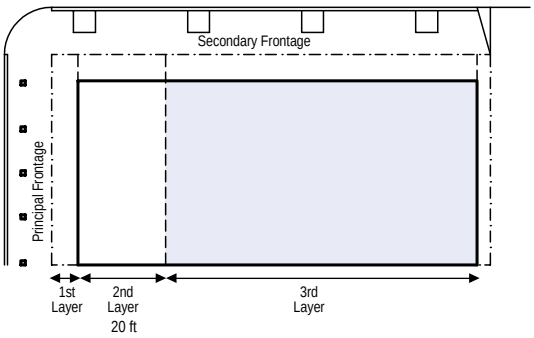
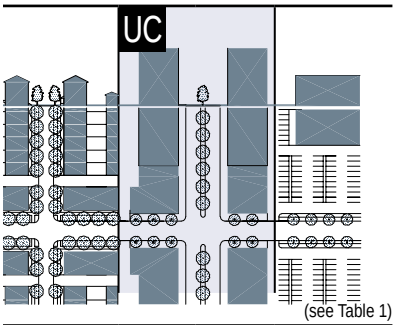


TABLE 15E. FORM-BASED CODE GRAPHICS - UC - URBAN CORE



k. BUILDING CONFIGURATION (see Table 8)	
Principal Building	20 stories, Note 1, 1 min.
Outbuilding	N/A
f. LOT OCCUPATION (see Table 14f)	
Lot Width: A-Grids	18 ft. min 700 ft. max
Lot Width: B-Grids	no max
i. BUILDING DISPOSITION (see Table 9)	
Edgeyard	permitted
Sideyard	not permitted
Rearyard	permitted
Courtyard	permitted
g. SETBACKS - PRINCIPAL BUILDING (see Table 14g)	
(g.1) Front Setback Principal	0 ft. min.
(g.2) Front Setback Secondary	0 ft. min.
(g.3) Side Setback	0 ft. min.
(g.4) Rear Setback	0 ft. min.
h. SETBACKS - OUTBUILDING (see Table 14h)	
Front Setback	N/A
Side Setback	N/A
Rear Setback	N/A
j. PRIVATE FRONTAGES (see Table 7)	
Common Lawn	permitted
Porch	permitted
Terrace or Lightwell	permitted
Forecourt	permitted
Stoop	permitted
Shopfront	permitted
Gallery	permitted
Arcade	permitted
	Refer to Summary Table 14
PARKING PROVISIONS	
See Table 10 & Table 11	

*or 15 ft. from center line of alley

"N" stands for any Stories above those shown, up to the maximum. Refer to metrics for exact minimums and maximums

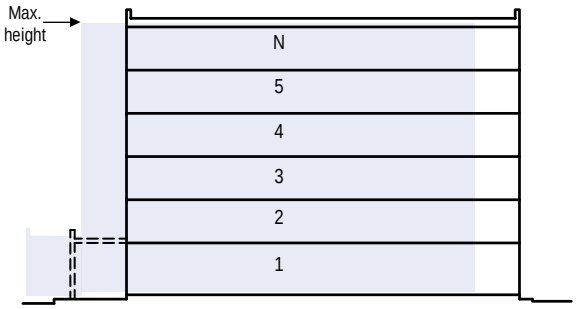
Note 1: Not in excess of 20 stories without specific site plan review and approval by Town Council.

Vinyl Siding Notes:

1. Vinyl siding is not permitted on single family homes and Townhouses except as permitted in vinyl siding note 3 below.
2. Vinyl exterior material may be used above the second story of an apartment, condominium or Mixed Use buildings and in areas not in view of the public, such as service areas.
3. Elements such as vinyl trim, vinyl windows, decorative vents, and the like are permitted.

BUILDING CONFIGURATION

1. Stories, exclude Attics mezzanines and basements.



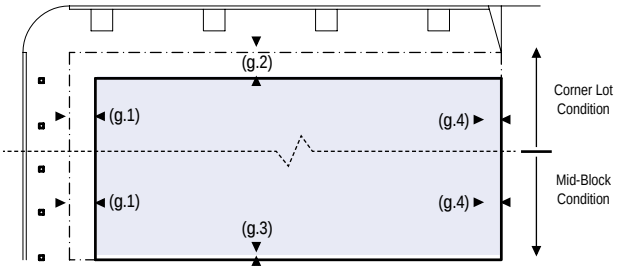
SETBACKS - PRINCIPAL BLDG

A-GRIDS

1. The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.
2. Facades shall be built along the Principal Frontage.

B-GRIDS

1. Multiple Buildings may be located on the same Lot



PARKING PLACEMENT

A-GRIDS

1. Uncovered parking spaces may be provided within the third Layer as shown in the diagram (see Table 17d).
2. Covered parking shall be provided within the third Layer as shown in the diagram (see Table 17d) except as noted above.
3. Trash containers shall be stored within the third Layer.

B-GRIDS

1. Uncovered parking spaces may be provided within any Layer as shown in the diagram (see Table 17d).
2. Trash containers shall be stored within the third Layer.

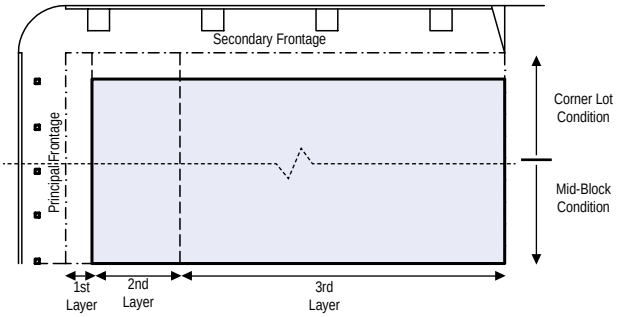
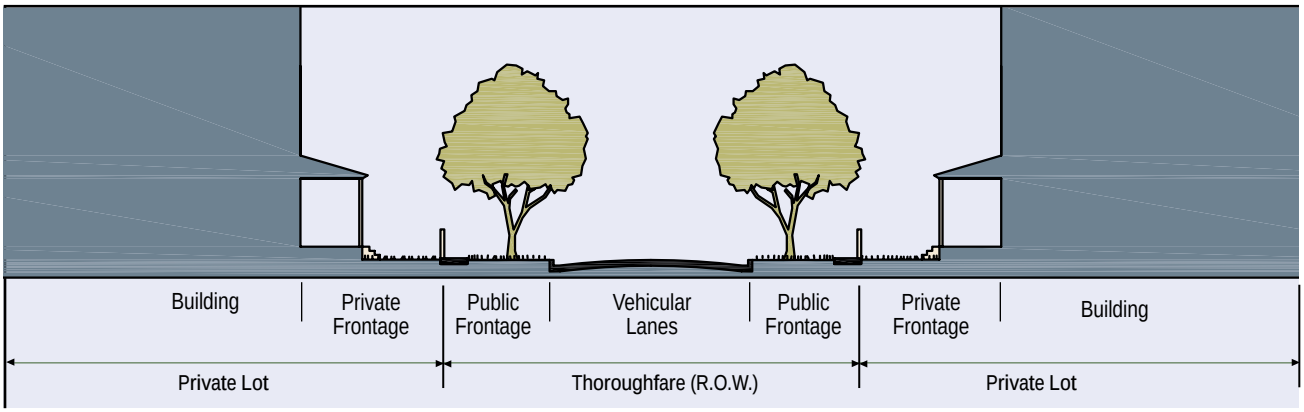
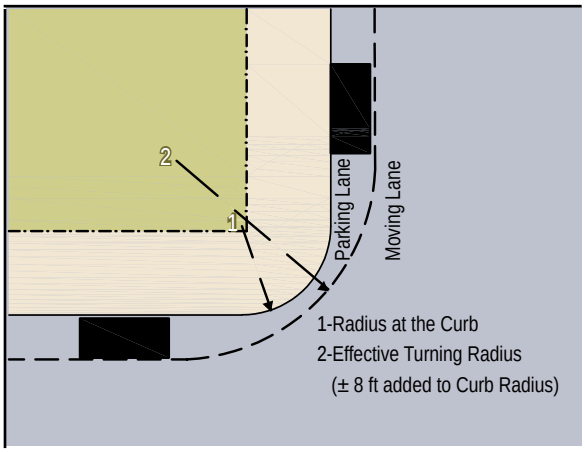


TABLE 17. DEFINITIONS ILLUSTRATED

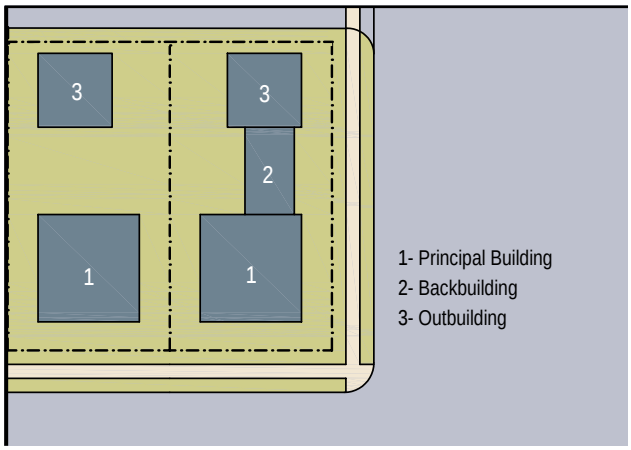
a. THOROUGHFARE & FRONTAGES



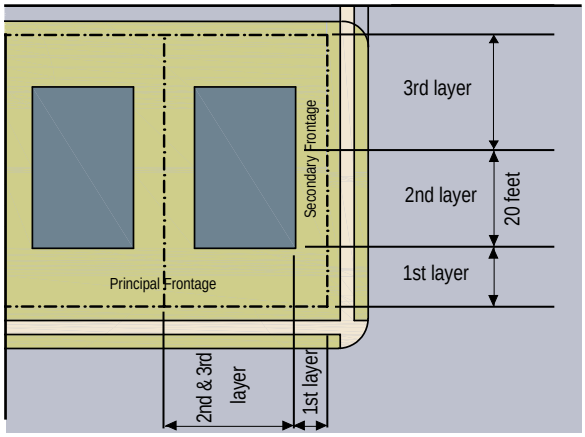
b. TURNING RADIUS



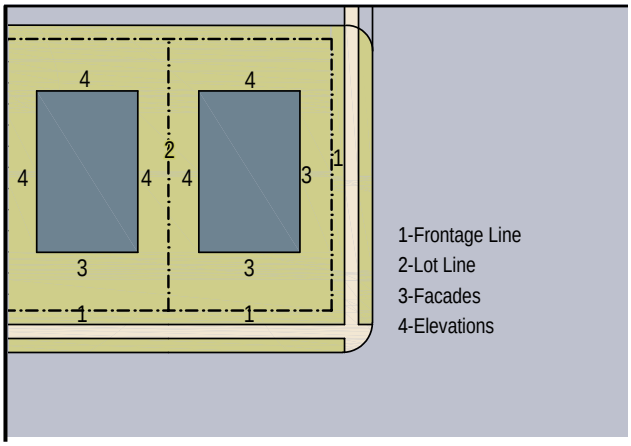
c. BUILDING DISPOSITION



d. LOT LAYERS



e. FRONTAGE & LOT LINES



f. SETBACK DESIGNATIONS

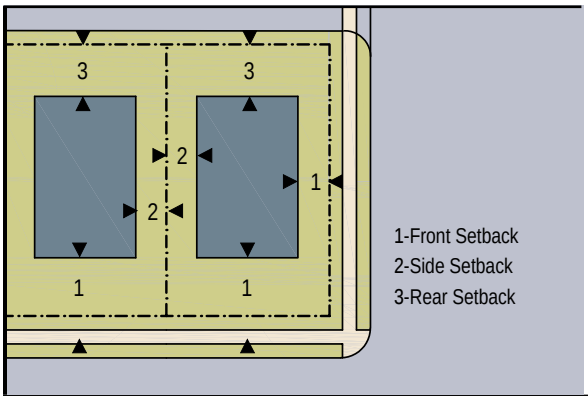


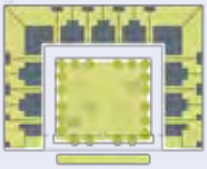
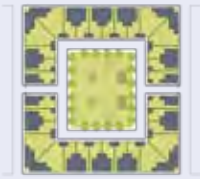
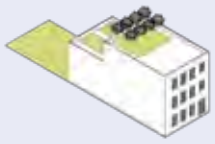
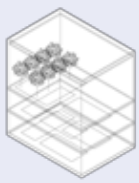
TABLE 18. SUSTAINABILITY - SOLAR ENERGY

Sustainability - Solar Energy. This table shows opportunities for the placement of types of solar-powered devices within the Sustainable Zones.

	OS	NG	NM	VC	UC	Specifics
Solar Farm 	▪		▪	▪	▪	
Roof Mounted Solar Panels 	▪	▪	▪	▪	▪	
Streetscape Solar Panels 	▪	▪	▪	▪	▪	Streetscape solar panels may be used in place of street trees

TABLE 19. SUSTAINABILITY - FOOD PRODUCTION

Sustainability - Food Production. This table shows ways of incorporating types of food production along the Sustainable Zones.

	OS	NG	NM	VC	UC	Specific
Farm 	▪					
Agricultural Plots 	▪	▪				
Vegetable Garden 		▪	▪	▪	▪	
Urban Farm 	▪	▪	▪	▪		
Community Garden 	▪	▪	▪	▪	▪	
Green Roof 		▪	▪	▪	▪	
Vertical Farm 			▪	▪	▪	

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TABLE 20. SUSTAINABILITY - COMPOSTING AND RECYCLING

	OS	NG	NM	VC	UC
On-Site Organics Processing	▪	▪			
Self-Drop Collection Systems					
Optional/Competitive Collection		▪			
Mandatory Curbside Collection			▪	▪	▪
Centralized Composting Systems	▪				
Smaller Regional Composting	▪	▪			
On-Site Processing		▪			
Re-Use Centers		▪	▪	▪	▪
Recycling Processing Centers		▪	▪	▪	▪
Once-Used Materials Storage		▪			
Transfer Stations		▪	▪	▪	▪
Disposal Facilities	Prohibited				

I. Article 2 / Administration
Sec. 2.3 / DEVELOPMENT APPROVALS

2.3.16 Sustainable Development Conditional Zoning District

A) ***General***

This Section establishes the procedures and standards applicable to the Town's Sustainable Development Conditional Zoning District SD-CZ.

B) ***General Applicability***

Before any development shall be designated as a Sustainable Development Conditional Zoning District SD-CZ on the Official Zoning District Map, it shall receive approval pursuant to the terms of this Section and Section 2.3.3 of this Ordinance.

C) ***Location***

A Sustainable Development Conditional Zoning District SD-CZ designation may be established on any land located in the Town and its ETJ that complies with all of the applicable standards of this Section and Section 3.3.4B), including the requirement that a Sustainable Development Conditional Zoning District SD-CZ include a minimum of 500 contiguous acres. An SD-CZ District may include other parcels of any size within 2000 feet of such parcel of at least 500 contiguous acres.

D) ***Unified Ownership or Control***

One person shall have all the responsibility and authority to make all the developer land use planning decisions for all land that is part of a Sustainable Development Conditional Zoning District SD-CZ. A person shall be considered to have such responsibility and authority for all lands in the Sustainable Development Conditional Zoning District SD-CZ either through ownership or by written agreement by and between such person and each owner of parcels comprising said lands agreeing to the conditions and standards of the adopting ordinance and the Sustainable Development Conditional Zoning District SD-CZ and granting the person such responsibility and authority. This one person, who shall be identified in the Sustainable Development Conditional Zoning District SD-CZ Re-Zoning Application as the "Responsible Person," will be the sole person from whom the Town will accept decisions regarding the Sustainable Development (SD) Plan and Sustainable Development Conditional Zoning District SD-CZ, including amendments, modifications or supplements thereof or the addition of lands thereto. The SD Plan shall provide the process for effecting a change or succession of Responsible Person for the purposes of a specific district. A parcel or parcels (the "Parcel") of any size may be added to an existing Sustainable Development Conditional Zoning District if (i) any portion of the Parcel is within two thousand (2000) feet of such existing district, (ii) the

Responsible Person of the existing district consents in writing and (iii) the Town Council approves a rezoning of the Parcel to Sustainable Development Conditional Zoning District SD-CZ in accordance with Sections 2.3.3 and 2.3.16. In such event the SD Plan approved for the existing SD-CZ District shall be applicable to the Parcel(s) added to such existing district, and the development densities authorized in the existing SD Plan (including number of residential units and authorized square footage of other land uses) shall be increased on a pro-rata basis based on the size of the Parcel(s) added to the district, unless the Town Council provides otherwise with the consent of the Responsible Person.

E) ***Procedures***

1) *Overview.* Approval of a Sustainable Development Conditional Zoning District SD-CZ shall constitute an amendment to the Official Zoning District Map. It shall be controlled by an SD Plan that is approved as part of the Sustainable Development Conditional Zoning District SD-CZ designation and that designates the appropriate form and scale of development within the Sustainable Development Conditional Zoning District SD-CZ. The procedure requires review and recommendation of approval or disapproval by the Planning Board and approval, approval with conditions, or disapproval by the Town Council.

2) *General.* The procedures for initiation of the application, the application contents, fees, submission and review by Town staff and/or consulting firms on retainer, public notification, review by the Planning Board and then approval, approval with conditions, or disapproval by the Town Council at a public hearing(s) shall comply with the requirements of Sec. 2.2 *Common Review Procedures,* Sec 2.2.7 *Neighborhood Meeting* and Sec. 2.3.16 (F) *Sustainability Standards*.

F) ***Standards***

1) In return for greater flexibility in site design requirements, the Sustainable Development Conditional Zoning District SD-CZ is expected to deliver exceptional quality designs on a large-scale basis that:

a) facilitate the integration of a broad array of uses;

b) preserve and enhance critical environmental and natural resources, including water resources and ecosystem services in the stream network flowing through the district;

c) incorporate creativity in the design and configuration of buildings, roads, public space and infrastructure; and

d) employ innovative techniques and practices aimed at maximizing efficiency in the use of energy and materials.

In short, the Sustainable Development Conditional Zoning District SD-CZ is expected to provide a high quality of life through the creation of a healthy, living landscape within a high-intensity mixed-used community.

2) The purpose, intent and scale of the Sustainable Development Conditional Zoning District SD-CZ are unique from the other districts established in Sec. 3.2. Thus, the unique nature of the Sustainable Development Conditional Zoning District SD-CZ necessitates alternative standards, regulations, specifications, details, designs, and criteria (the "Sustainability Standards") to meet the spirit and intent of this Ordinance. These Sustainability Standards, which shall be set forth in the SD Plan and may be established pursuant to paragraph 3) hereafter, may:

a) specify the nature, density, maximums on development, minimums on development, development thresholds, and design characteristics proposed for the Sustainable Development Conditional Zoning District SD-CZ;

b) address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks;

c) facilitate a full diversity of building types, thoroughfare types, and public space types with appropriate characteristics for their respective locations;

d) facilitate the restoration and enhancement of the environment and natural resources through both accepted practice and innovative practices; and

e) modify and supersede the provisions of this Ordinance or any land development document referenced or incorporated therein, or other land development ordinances or policies of the Town. However, an SD Plan and development pursuant thereto shall conform to all applicable Town ordinances and policies, including the UDO, except to the extent that ordinances or policies, including the UDO, are varied in the approved SD Plan or in Sustainability Standards adopted pursuant to paragraph 3) hereafter. An SD Plan and the Sustainability Standards may not modify the requirements that an SD-CZ District include a minimum of 500 contiguous acres.

3) The Sustainability Standards and other provisions of the SD Plan, as well as Sustainability Standards established pursuant to this paragraph F) 3), shall form the basis for a development of exceptional quality and innovation that is an

enhancement to the welfare of the Town's citizens. At any time, and from time to time:

a) with the consent of the Responsible Person, the Town Council may adopt additional or modified Sustainability Standards for an approved SD-CZ District following review and recommendation by the Planning Board;

b) where an SD Plan requires additional or modified Sustainability Standards for an approved SD-CZ District, site plan approval, subdivision approval, construction or grading shall not commence within such SD-CZ District unless and until the required Sustainability Standards are adopted as provided in the SD Plan; with the consent of the Responsible Person, the Town Council shall review and consider and may adopt such additional and modified Sustainability Standards following review and recommendation by the Planning Board;

c) as an amendment to this Ordinance, the Town Council may adopt elective Sustainability Standards for SD-CZ districts, which may, at the election of a Responsible Person, (i) be incorporated, in whole or in part, into an approved SD Plan for an existing SD-CZ district or (ii) be included within an SD Plan for a proposed SD-CZ district. In the case of an approved SD Plan, the elective Sustainability Standards so incorporated may provide that they serve as a supplement to the provisions of the SD Plan and serve as an alternative to the application of any inconsistent provisions of the Plan;

d) actions by the Town Council under the foregoing subsections 2.3.16 F) 3) a), b) and c) shall be taken in accordance with the provisions of Sec. 2.3.2 applicable to Amendments to the Text of this Ordinance. It is provided, however, that such actions may be proposed only by the Town Council, the Planning Director, or the Responsible Person; and

e) this Subsection 2.3.16 does not reduce any authority that the Town otherwise has to amend its UDO or an approved SD-CZ rezoning and SD Plan; the vested rights applicable to a SD-CZ rezoning and SD Plan shall be determined by other applicable law and by the provisions of a developer agreement if any.

G) ***SD Plan***

To the degree necessary and appropriate, the SD Plan and the Sustainability Standards shall include, but shall not be limited to, requirements related to:

1) standards a) through d) set forth in the foregoing Section 2.3.16 F) 1);

2) design guidelines;

3) parks, open space and greenways;

4) water resources and ecosystem services;

5) comprehensive signage;

6) landscaping conditions;

7) parking requirements; and

8) public infrastructure improvements and public facilities.

The SD Plan shall also include a map depicting the concept for the development of the property. To the extent that provisions of the SD Plan or Sustainability Standards vary the provisions of this Ordinance, or other ordinances or policies of the Town, the provisions of the SD Plan or Sustainability Standards shall be applicable.

H) ***Placement of Sustainable Development Conditional Zoning District SD-CZ Designation on Official Zoning District Map***

After final approval of the adopting ordinance for the Sustainable Development Conditional Zoning District SD-CZ designation and the SD Plan, the Planning Director shall amend the Official Zoning District Map to show a Sustainable Development Conditional Zoning District SD-CZ designation.

I) ***Effect***

Approval of an adopting ordinance for Sustainable Development Conditional Zoning District SD-CZ designation and the SD Plan shall constitute an Official Zoning District Map designation and recognition by the Town that the landowner may proceed, consistent with the SD Plan, to develop the land. The next appropriate development approval for the land is a site plan or subdivision plan.

J) ***Deviation to SD Plan***

When appropriate to further the goals of an approved SD-CZ District and its SD Plan, the Planning Director may approve deviations of up to ten percent (10%) with respect to any standard, design, configuration, disposition, or matter established or quantified in an SD Plan or the Sustainability Standards, except that this authority shall not apply to density, maximums on development minimums on development or thresholds. Any other modification, revision or supplementation of an SD Plan or the Sustainability Standards shall require the approval of the Town Council following review by the Planning Board.

K) ***Amendment to Sustainable Development Conditional Zoning District SD-CZ***

An amendment to the Official Zoning District Map for a Sustainable Development Conditional Zoning District SD-CZ may be made only pursuant to the procedures and standards for its original approval, and specifically Sec. 2.3.16 (D) *Unified Ownership or Control*.

II. Article 3 / Zoning Districts
Sec. 3.2 / ZONING DISTRICTS ESTABLISHED

3.2.8 Conditional Zoning Other Districts

A) *CB-CZ Conservation Buffer District; and*

B) *SD-CZ Sustainable Development Conditional Zoning District.*

III. Article 3 / Zoning Districts
Sec. 3.3 / DISTRICT PURPOSES

3.3.4 Other Districts

B) ***Sustainable Development Conditional Zoning District***
The purpose and intent of the Sustainable Development Conditional Zoning District SD-CZ is to encourage the design of a sustainable community through the application of design approaches that allow and encourage flexibility, an intensity of uses, integration among uses, restoration and enhancement of the environment and natural resources, transit-oriented development, pedestrian-oriented development and the efficient use of resources, energy and materials. This shall be accomplished by allowing design flexibility and innovative approaches to environmental stewardship incorporated in a plan for development that:

1) addresses the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks;

2) facilitates a full diversity of building types, thoroughfare types, and public space types with appropriate characteristics for their respective locations; and

3) facilitates the restoration and enhancement of the environment and natural resources.

Further, because the aforementioned design standards are best implemented on a large-scale basis, a purpose and intent of the Sustainable Development Conditional Zoning District SD-CZ is to provide sufficient lands for such implementation. To this end, the Sustainable Development Conditional Zoning District SD-CZ must include a minimum of 500 contiguous acres. An SD-CZ

District may include other parcels of any size within 2000 feet of such parcel of at least 500 contiguous acres.

The unique purpose and intent, and the scale and standards to which the development plan must adhere, distinguish the Sustainable Development Conditional Zoning District SD-CZ from the other districts established in Sec. 3.2. Therefore, the specific procedures and standards for the review of the Sustainable Development Conditional Zoning District SD-CZ are found in Sec. 2.3.16, *Sustainable Development Conditional Zoning District SD-CZ.*

IV. Article 4 / Use Regulations
Sec.4.2 / USE TABLE
Sec.4.2.2 / Use Table

The Use Table in Section 4.2.2 shall be amended to include among the Zoning Districts shown at the top of the table "SD" to denote the **Sustainable Development Conditional Zoning District** as a Zoning District in the "Other" category and to place a double asterisk (**) in the block under SD for each use listed within all of the Use Types, with the exception of the following uses: Adult Establishment; Airplane Landing Strip; Airport; Sanitary Landfill; Land Clearing and Inert Debris Landfill; Mobile Homes; and Asphalt or Concrete Plant. Further, the following shall be inserted below the table:

"**Uses allowed as a matter-of-right in a Sustainable Development Conditional Zoning District shall be those uses authorized in the Sustainable Development Plan approved for such district. Standards applicable to each such use shall be as provided in this Use Table unless modified by the respective Sustainable Development Plan."

V. Article 4 / Use Regulations
Sec.4.3 / Use Classifications
Sec.4.3.1 / Residential Uses

A) ***Accessory Apartment***

A secondary dwelling unit either (1) inside of or added to an existing single-family dwelling, (2) in an accessory structure on the same lot as the principal single-family dwelling, (3) on any floor except for the ground floor of a commercial use in the B1 Neighborhood Business District, B2 Downtown Business District, MEC-CZ Major Employment Center District, TND-CZ Traditional Neighborhood District, PUD-CZ Planned Unit Development District, or (4) on any floor of a commercial use in the SD-CZ Sustainable Development Conditional Zoning District. An accessory apartment is a complete, independent living facility equipped with a kitchen and with provisions for sanitation and sleeping. An accessory structure may include a loft.

VI. Article 5 / Measurements

Sec.5.1 / TABLE OF INTENSITY AND DIMENSIONAL STANDARDS
Sec.5.1.4 / Other Development Districts

The table for "Other Development Districts" in Section 5.1.4 shall be amended to include "SD" to denote the **Sustainable Development Conditional Zoning District** under "Use" and below "*See Sec. 6.1, Watershed Protection Overlay Districts." "All uses" shall be inserted below "SD" and to the right thereof shall be inserted "All Intensity and Dimensional Standards shall be as set forth in the Sustainable Development Plan approved for the respective Sustainable Development Conditional Zoning District."

VII. TECHNICAL AMENDMENTS

A) Each of the following Sections shall be amended to insert "SD-CZ" immediately after "PUD-CZ" at each place in the respective Section at which "PUD-CZ" appears:

2.1.1 A) 2) b)
2.1.2 A) 2) b)
2.1.7 A) 2)
2.2.11 E)
2.3.15 B)
4.1.2 A)
4.5.6
4.5.6 A)
4.5.6 D)
4.5.6 F)
4.6.1 C) 1) a)
5.2.2 A) 2)
8.2.6
8.3.6 B) 5)
8.4.2
9.1.2

B) Section 2.3.1 shall be amended to insert within the Table under "Development Permit" and following "Traditional Neighborhood District (TND-CZ) (Sec. 2.3.4)" the words "Sustainable Development Conditional Zoning District (SD-CZ) (Sec. 2.3.16)"; to place the letter "R" under each of "Planning Director/Technical Review Committee" and "Planning Board"; and to place the letter "D" under "Town Council."

C) Section 2.3.3 J) 2) shall be amended to insert "or Section 2.3.16 J) *Minor Deviation to a SD Plan* or Section 2.3.16 K) *Modification of SD Plan*" following "2.3.4(M) *Minor Deviations*".

D) Section 2.3.16, **Site Work Prior to Development Approvals**, shall be re-numbered to "Section 2.3.17".

E) Section 2.3.17, **Utility Service**, shall be re-numbered to "Section 2.3.18".

F) Sections 4.3.1 A), 4.4.5 F), and 4.6.1 C) 3) shall each be amended to insert ", SD-CZ Sustainable Development Conditional Zoning District," immediately following "TND-CZ Traditional Neighborhood District" at each place where "TND-CZ Traditional Neighborhood District" appears.

G) Section 5.2.2 F) shall be amended to insert at the beginning of the paragraph "Except in Sustainable Development Conditional Zoning District (SD-CZ)," and to replace "I" with "i" in "internal."

H) Section 8.3.6 B) 5) shall be amended to substitute "Section 8.4.4" for "Section 8.5.3."

I. Article 2 / Administration
Sec. 2.3 / DEVELOPMENT APPROVALS

2.3.16 Sustainable Development Conditional Zoning District

A) ***General***

This Section establishes the procedures and standards applicable to the Town's Sustainable Development Conditional Zoning District SD-CZ.

B) ***General Applicability***

Before any development shall be designated as a Sustainable Development Conditional Zoning District SD-CZ on the Official Zoning District Map, it shall receive approval pursuant to the terms of this Section and Section 2.3.3 of this Ordinance.

C) ***Location***

A Sustainable Development Conditional Zoning District SD-CZ designation may be established on any land located in the Town and its ETJ that complies with all of the applicable standards of this Section and Section 3.3.4B), including the requirement that a Sustainable Development Conditional Zoning District SD-CZ include a minimum of 500 contiguous acres. An SD-CZ District may include other parcels of any size within 2000 feet of such parcel of at least 500 contiguous acres.

D) ***Unified Ownership or Control***

One person shall have all the responsibility and authority to make all the developer land use planning decisions for all land that is part of a Sustainable Development Conditional Zoning District SD-CZ. A person shall be considered to have such responsibility and authority for all lands in the Sustainable Development Conditional Zoning District SD-CZ either through ownership or by written agreement by and between such person and each owner of parcels comprising said lands agreeing to the conditions and standards of the adopting ordinance and the Sustainable Development Conditional Zoning District SD-CZ and granting the person such responsibility and authority. This one person, who shall be identified in the Sustainable Development Conditional Zoning District SD-CZ Re-Zoning Application as the "Responsible Person," will be the sole person from whom the Town will accept decisions regarding the Sustainable Development (SD) Plan and Sustainable Development Conditional Zoning District SD-CZ, including amendments, modifications or supplements thereof or the addition of lands thereto. The SD Plan shall provide the process for effecting a change or succession of Responsible Person for the purposes of a specific district. A parcel or parcels (the "Parcel") of any size may be added to an existing Sustainable Development Conditional Zoning District if (i) any portion of the Parcel is within two thousand (2000) feet of such existing district, (ii) the

Responsible Person of the existing district consents in writing and (iii) the Town Council approves a rezoning of the Parcel to Sustainable Development Conditional Zoning District SD-CZ in accordance with Sections 2.3.3 and 2.3.16. In such event the SD Plan approved for the existing SD-CZ District shall be applicable to the Parcel(s) added to such existing district, and the development densities authorized in the existing SD Plan (including number of residential units and authorized square footage of other land uses) shall be increased on a pro-rata basis based on the size of the Parcel(s) added to the district, unless the Town Council provides otherwise with the consent of the Responsible Person.

E) ***Procedures***

1) *Overview.* Approval of a Sustainable Development Conditional Zoning District SD-CZ shall constitute an amendment to the Official Zoning District Map. It shall be controlled by an SD Plan that is approved as part of the Sustainable Development Conditional Zoning District SD-CZ designation and that designates the appropriate form and scale of development within the Sustainable Development Conditional Zoning District SD-CZ. The procedure requires review and recommendation of approval or disapproval by the Planning Board and approval, approval with conditions, or disapproval by the Town Council.

2) *General.* The procedures for initiation of the application, the application contents, fees, submission and review by Town staff and/or consulting firms on retainer, public notification, review by the Planning Board and then approval, approval with conditions, or disapproval by the Town Council at a public hearing(s) shall comply with the requirements of Sec. 2.2 *Common Review Procedures,* Sec 2.2.7 *Neighborhood Meeting* and Sec. 2.3.16 (F) *Sustainability Standards*.

F) ***Standards***

1) In return for greater flexibility in site design requirements, the Sustainable Development Conditional Zoning District SD-CZ is expected to deliver exceptional quality designs on a large-scale basis that:

a) facilitate the integration of a broad array of uses;

b) preserve and enhance critical environmental and natural resources, including water resources and ecosystem services in the stream network flowing through the district;

c) incorporate creativity in the design and configuration of buildings, roads, public space and infrastructure; and

d) employ innovative techniques and practices aimed at maximizing efficiency in the use of energy and materials.

In short, the Sustainable Development Conditional Zoning District SD-CZ is expected to provide a high quality of life through the creation of a healthy, living landscape within a high-intensity mixed-used community.

2) The purpose, intent and scale of the Sustainable Development Conditional Zoning District SD-CZ are unique from the other districts established in Sec. 3.2. Thus, the unique nature of the Sustainable Development Conditional Zoning District SD-CZ necessitates alternative standards, regulations, specifications, details, designs, and criteria (the "Sustainability Standards") to meet the spirit and intent of this Ordinance. These Sustainability Standards, which shall be set forth in the SD Plan and may be established pursuant to paragraph 3) hereafter, may:

a) specify the nature, density, maximums on development, minimums on development, development thresholds, and design characteristics proposed for the Sustainable Development Conditional Zoning District SD-CZ;

b) address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks;

c) facilitate a full diversity of building types, thoroughfare types, and public space types with appropriate characteristics for their respective locations;

d) facilitate the restoration and enhancement of the environment and natural resources through both accepted practice and innovative practices; and

e) modify and supersede the provisions of this Ordinance or any land development document referenced or incorporated therein, or other land development ordinances or policies of the Town. However, an SD Plan and development pursuant thereto shall conform to all applicable Town ordinances and policies, including the UDO, except to the extent that ordinances or policies, including the UDO, are varied in the approved SD Plan or in Sustainability Standards adopted pursuant to paragraph 3) hereafter. An SD Plan and the Sustainability Standards may not modify the requirements that an SD-CZ District include a minimum of 500 contiguous acres.

3) The Sustainability Standards and other provisions of the SD Plan, as well as Sustainability Standards established pursuant to this paragraph F) 3), shall form the basis for a development of exceptional quality and innovation that is an

enhancement to the welfare of the Town's citizens. At any time, and from time to time:

a) with the consent of the Responsible Person, the Town Council may adopt additional or modified Sustainability Standards for an approved SD-CZ District following review and recommendation by the Planning Board;

b) where an SD Plan requires additional or modified Sustainability Standards for an approved SD-CZ District, site plan approval, subdivision approval, construction or grading shall not commence within such SD-CZ District unless and until the required Sustainability Standards are adopted as provided in the SD Plan; with the consent of the Responsible Person, the Town Council shall review and consider and may adopt such additional and modified Sustainability Standards following review and recommendation by the Planning Board;

c) as an amendment to this Ordinance, the Town Council may adopt elective Sustainability Standards for SD-CZ districts, which may, at the election of a Responsible Person, (i) be incorporated, in whole or in part, into an approved SD Plan for an existing SD-CZ district or (ii) be included within an SD Plan for a proposed SD-CZ district. In the case of an approved SD Plan, the elective Sustainability Standards so incorporated may provide that they serve as a supplement to the provisions of the SD Plan and serve as an alternative to the application of any inconsistent provisions of the Plan;

d) actions by the Town Council under the foregoing subsections 2.3.16 F) 3) a), b) and c) shall be taken in accordance with the provisions of Sec. 2.3.2 applicable to Amendments to the Text of this Ordinance. It is provided, however, that such actions may be proposed only by the Town Council, the Planning Director, or the Responsible Person; and

e) this Subsection 2.3.16 does not reduce any authority that the Town otherwise has to amend its UDO or an approved SD-CZ rezoning and SD Plan; the vested rights applicable to a SD-CZ rezoning and SD Plan shall be determined by other applicable law and by the provisions of a developer agreement if any.

G) ***SD Plan***

To the degree necessary and appropriate, the SD Plan and the Sustainability Standards shall include, but shall not be limited to, requirements related to:

1) standards a) through d) set forth in the foregoing Section 2.3.16 F) 1);

2) design guidelines;

3) parks, open space and greenways;

4) water resources and ecosystem services;

5) comprehensive signage;

6) landscaping conditions;

7) parking requirements; and

8) public infrastructure improvements and public facilities.

The SD Plan shall also include a map depicting the concept for the development of the property. To the extent that provisions of the SD Plan or Sustainability Standards vary the provisions of this Ordinance, or other ordinances or policies of the Town, the provisions of the SD Plan or Sustainability Standards shall be applicable.

H) ***Placement of Sustainable Development Conditional Zoning District SD-CZ Designation on Official Zoning District Map***

After final approval of the adopting ordinance for the Sustainable Development Conditional Zoning District SD-CZ designation and the SD Plan, the Planning Director shall amend the Official Zoning District Map to show a Sustainable Development Conditional Zoning District SD-CZ designation.

I) ***Effect***

Approval of an adopting ordinance for Sustainable Development Conditional Zoning District SD-CZ designation and the SD Plan shall constitute an Official Zoning District Map designation and recognition by the Town that the landowner may proceed, consistent with the SD Plan, to develop the land. The next appropriate development approval for the land is a site plan or subdivision plan.

J) ***Deviation to SD Plan***

When appropriate to further the goals of an approved SD-CZ District and its SD Plan, the Planning Director may approve deviations of up to ten percent (10%) with respect to any standard, design, configuration, disposition, or matter established or quantified in an SD Plan or the Sustainability Standards, except that this authority shall not apply to density, maximums on development minimums on development or thresholds. Any other modification, revision or supplementation of an SD Plan or the Sustainability Standards shall require the approval of the Town Council following review by the Planning Board.

K) ***Amendment to Sustainable Development Conditional Zoning District SD-CZ***

An amendment to the Official Zoning District Map for a Sustainable Development Conditional Zoning District SD-CZ may be made only pursuant to the procedures and standards for its original approval, and specifically Sec. 2.3.16 (D) *Unified Ownership or Control*.

II. Article 3 / Zoning Districts
Sec. 3.2 / ZONING DISTRICTS ESTABLISHED

3.2.8 Conditional Zoning Other Districts

A) *CB-CZ Conservation Buffer District; and*

B) *SD-CZ Sustainable Development Conditional Zoning District.*

III. Article 3 / Zoning Districts
Sec. 3.3 / DISTRICT PURPOSES

3.3.4 Other Districts

B) ***Sustainable Development Conditional Zoning District***
The purpose and intent of the Sustainable Development Conditional Zoning District SD-CZ is to encourage the design of a sustainable community through the application of design approaches that allow and encourage flexibility, an intensity of uses, integration among uses, restoration and enhancement of the environment and natural resources, transit-oriented development, pedestrian-oriented development and the efficient use of resources, energy and materials. This shall be accomplished by allowing design flexibility and innovative approaches to environmental stewardship incorporated in a plan for development that:

1) addresses the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks;

2) facilitates a full diversity of building types, thoroughfare types, and public space types with appropriate characteristics for their respective locations; and

3) facilitates the restoration and enhancement of the environment and natural resources.

Further, because the aforementioned design standards are best implemented on a large-scale basis, a purpose and intent of the Sustainable Development Conditional Zoning District SD-CZ is to provide sufficient lands for such implementation. To this end, the Sustainable Development Conditional Zoning District SD-CZ must include a minimum of 500 contiguous acres. An SD-CZ

District may include other parcels of any size within 2000 feet of such parcel of at least 500 contiguous acres.

The unique purpose and intent, and the scale and standards to which the development plan must adhere, distinguish the Sustainable Development Conditional Zoning District SD-CZ from the other districts established in Sec. 3.2. Therefore, the specific procedures and standards for the review of the Sustainable Development Conditional Zoning District SD-CZ are found in Sec. 2.3.16, *Sustainable Development Conditional Zoning District SD-CZ.*

IV. Article 4 / Use Regulations
Sec.4.2 / USE TABLE
Sec.4.2.2 / Use Table

The Use Table in Section 4.2.2 shall be amended to include among the Zoning Districts shown at the top of the table "SD" to denote the **Sustainable Development Conditional Zoning District** as a Zoning District in the "Other" category and to place a double asterisk (**) in the block under SD for each use listed within all of the Use Types, with the exception of the following uses: Adult Establishment; Airplane Landing Strip; Airport; Sanitary Landfill; Land Clearing and Inert Debris Landfill; Mobile Homes; and Asphalt or Concrete Plant. Further, the following shall be inserted below the table:

"**Uses allowed as a matter-of-right in a Sustainable Development Conditional Zoning District shall be those uses authorized in the Sustainable Development Plan approved for such district. Standards applicable to each such use shall be as provided in this Use Table unless modified by the respective Sustainable Development Plan."

V. Article 4 / Use Regulations
Sec.4.3 / Use Classifications
Sec.4.3.1 / Residential Uses

A) ***Accessory Apartment***

A secondary dwelling unit either (1) inside of or added to an existing single-family dwelling, (2) in an accessory structure on the same lot as the principal single-family dwelling, (3) on any floor except for the ground floor of a commercial use in the B1 Neighborhood Business District, B2 Downtown Business District, MEC-CZ Major Employment Center District, TND-CZ Traditional Neighborhood District, PUD-CZ Planned Unit Development District, or (4) on any floor of a commercial use in the SD-CZ Sustainable Development Conditional Zoning District. An accessory apartment is a complete, independent living facility equipped with a kitchen and with provisions for sanitation and sleeping. An accessory structure may include a loft.

VI. Article 5 / Measurements

Sec.5.1 / TABLE OF INTENSITY AND DIMENSIONAL STANDARDS
Sec.5.1.4 / Other Development Districts

The table for "Other Development Districts" in Section 5.1.4 shall be amended to include "SD" to denote the **Sustainable Development Conditional Zoning District** under "Use" and below "*See Sec. 6.1, Watershed Protection Overlay Districts." "All uses" shall be inserted below "SD" and to the right thereof shall be inserted "All Intensity and Dimensional Standards shall be as set forth in the Sustainable Development Plan approved for the respective Sustainable Development Conditional Zoning District."

VII. TECHNICAL AMENDMENTS

A) Each of the following Sections shall be amended to insert "SD-CZ" immediately after "PUD-CZ" at each place in the respective Section at which "PUD-CZ" appears:

2.1.1 A) 2) b)
2.1.2 A) 2) b)
2.1.7 A) 2)
2.2.11 E)
2.3.15 B)
4.1.2 A)
4.5.6
4.5.6 A)
4.5.6 D)
4.5.6 F)
4.6.1 C) 1) a)
5.2.2 A) 2)
8.2.6
8.3.6 B) 5)
8.4.2
9.1.2

B) Section 2.3.1 shall be amended to insert within the Table under "Development Permit" and following "Traditional Neighborhood District (TND-CZ) (Sec. 2.3.4)" the words "Sustainable Development Conditional Zoning District (SD-CZ) (Sec. 2.3.16)"; to place the letter "R" under each of "Planning Director/Technical Review Committee" and "Planning Board"; and to place the letter "D" under "Town Council."

C) Section 2.3.3 J) 2) shall be amended to insert "or Section 2.3.16 J) *Minor Deviation to a SD Plan* or Section 2.3.16 K) *Modification of SD Plan*" following "2.3.4(M) *Minor Deviations*".

D) Section 2.3.16, **Site Work Prior to Development Approvals**, shall be re-numbered to "Section 2.3.17".

E) Section 2.3.17, **Utility Service**, shall be re-numbered to "Section 2.3.18".

F) Sections 4.3.1 A), 4.4.5 F), and 4.6.1 C) 3) shall each be amended to insert ", SD-CZ Sustainable Development Conditional Zoning District," immediately following "TND-CZ Traditional Neighborhood District" at each place where "TND-CZ Traditional Neighborhood District" appears.

G) Section 5.2.2 F) shall be amended to insert at the beginning of the paragraph "Except in Sustainable Development Conditional Zoning District (SD-CZ)," and to replace "I" with "i" in "internal."

H) Section 8.3.6 B) 5) shall be amended to substitute "Section 8.4.4" for "Section 8.5.3."

Attachment C

November 26, 2025

Town of Apex

Planning Department

322 N. Mason Street

Apex, NC 27502

RE: Veridea Environmental Enhancement Plan (EEP) Amendment

To Whom It May Concern,

This letter is to inform you of a proposed amendment to the Veridea Environmental Enhancement Plan (EEP) to facilitate the development of the North Carolina Children's Hospital and campus.

The Veridea Environmental Enhancement Plan was approved by the Town of Apex on February 28th, 2023 (Ordinance #2023-023).

In the summer of 2025, North Carolina Children's announced their intention to develop a new, state-of-the-art children's hospital within Veridea, bringing North Carolina's first freestanding children's hospital to the Triangle. The hospital and its supporting uses (including but not limited to medical, research, academic, administrative, transport, patient and family respite and accommodations) have a specific set of needs for sustainable building and site design. These unique considerations require the enclosed technical exemptions to the Environmental Enhancement Plan (Exhibit A).

Exhibit A includes the proposed exemptions from technical standards found in the EEP. The exemptions that apply to the health care campus and surrounding supporting uses (including but not limited to medical, research, academic, administrative, transport, patient and family respite and accommodations, central utility plant, and adequate parking facilities) which will make up the campus are found in Part 1 of Exhibit A. Exemptions for the overall SD-CZ Zoned area are contained within Part 2 of Exhibit A.

Exemptions requested herein include standards which relate to specific energy performance ratings, specific fixtures, and EV parking. Where exemptions from text are requested, the full text is provided.

A corresponding UDO Amendment application has been filed in the Town's development portal.

Sincerely,

Veridea Development Team

Exhibit A.

Veridea EEP Plan Amendment

Proposed Text Changes

November 26, 2025

PART 1 NCC Campus Property

The Environmental Enhancement Plan south of US 1, east of I-540, and west of Veridea Parkway (PINs 0740191376, 0730996270, 0730977087, 0730977967, 0740081019, 0740070950, 0740082327, 0740082199, 0740078021, 0740180091, 0740180331, 0731902142 (portion of)) and a portion of the Sustainable Development Plan south of US 1 and east of Veridea Parkway (PINs 0741207566, 0741203157, 0740293940) will retain all of the standards from Ordinance # ORD-2023-023 except:

Section I: Building Standards

Exemption from I.A.1.a., b. & e.

a. In furtherance of the goals set forth in SD Plan 3.7.2, all non-residential and mixed-use buildings in Veridea shall provide plan analysis demonstrating improvement of energy performance by 20% compared to baseline building performance ratings per ASHRAE/ IESNA Standard 90.1-2010 Appendix G. (Note: 2010 ASHREA is being referenced here, consistent with current LEED Rating System benchmark standard).

b. At build-out of Veridea, a minimum of 50% of non-residential buildings within Veridea shall be certified under one of these 3rd Party Certification Program options:

    a. LEED Rating System
    b. Green Globes
    c. Fitwel
    d. Similar alternative standard as determined by the Responsible Party

    Responsible Party will ensure the ability to meet this 50% commitment at the time of each non-residential building permit application to the Town of Apex.

e. Documentation

    i. For all buildings, a letter of compliance shall be provided to the Town with the submittal of building permits for that building by a Professional Engineer (PE) licensed to practice in North Carolina, an architect licensed in North Carolina, OR a qualified third-party certifier stating that, in his or her opinion, the building

design demonstrates improvement of energy performance by 20% compared to baseline building performance ratings per ASHRAE/ IESNA Standard 90.1-2010 Appendix G.

ii. For each building that is developed to meet the standards for certification under one of the 3rd Party Certification Options, a letter of building certification from the selected program shall be provided to the Town at building completion.

Exemption from I.B.1. & 2.

1. Bathroom Fixtures

    a. 100% of showerheads, lavatory faucets and toilets/urinals shall be WaterSense rated fixtures.

2. Water Using Appliances

    a. Dishwashers and clothes washers installed by builder must be Energy Star qualified.

PART 2 Veridea Properties Zoned SD-CZ

With respect to the entirety of the Development, the following exceptions and amendments to the Environmental Enhancement Plan shall apply:

Section V. Air Quality Protection

Modification to V. h.

h. ~~Parking for electric vehicles and bicycles will be provided as required by the Town of Apex UDO~~. Parking requirements:

i. Bicycle parking shall be provided as required by the Town of Apex UDO.

ii. For all uses on the NC Children's health care campus, EV charging spaces shall be provided for 0.3% of the required parking spaces and EV-Ready spaces shall be provided for 1.5% of the required parking spaces.

iii. Multi-family development and hotels shall be required to provide 10% of the required parking as EV charging spaces and 35% of the required parking as EV-Ready spaces.

iv. Higher Education uses shall provide 1% of the required parking as EV Charging spaces and 1.5% of the required parking as EV-Ready spaces.

v. Elementary, junior, and high schools (public or private) are required to meet UDO requirements for EV parking.

vi. All other uses shall be required to provide the UDO required amount of electric vehicle charging spaces and 10% of the required parking as EV-Ready spaces.

vii. For all uses with the Veridea SD-CZ zoning, in-lieu of EV-Ready spaces as defined in Article 12 of the Unified Development Ordinance, EV-Capable spaces shall be allowed. EV-Capable shall mean the installation of "raceway" (the enclosed conduit that forms the physical pathway for electrical wiring to protect it from damage) from the parking space to the nearest electrical distribution room for structured parking or the nearest manhole or hand hole for surface parking. Wire, circuitry, receptacles, chargers, electrical panels, distribution equipment, and/or any other supporting equipment are not required.

ORD · 2023 (5)

023

AN ORDINANCE TO ADOPT ADDITIONAL SUSTAINABILITY STANDARDS FOR VERIDEA

BE IT ORDAINED by the Town Council of the Town of Apex as follows:

Section 1. The Environmental Enhancement Plan for Veridea is hereby adopted in accordance with Section 2.3.16.F.3.b of the Unified Development Ordinance and Section 3.1.2 of the Sustainable Development Plan adopted for Veridea by Rezoning #09CZ07 ("Veridea SD Plan").

Section 2. The lands that are the subject of the Ordinance are those certain lands described in Attachment "A" – Legal Description which is incorporated herein by reference.

Section 3. Pursuant to Section 3.3.4 of the Veridea SD Plan, the Environmental Enhancement Plan in Attachment "B" is hereby incorporated into the Veridea SD Plan and is applicable to the land described in Attachment "A" and to any lands subsequently rezoned to be included in the Veridea SD Plan.

Section 4. The ordinance shall be effective upon enactment on the 28th day of February 2023.

Introduced by Council Member Gantt

Seconded by Council Member Gray

Attest:

Allen Coleman, CMC, NCCCC
Town Clerk

TOWN OF APEX

Jacques K. Gilbert
Mayor

Approved As To Form:

Laurie L. Hohe
Town Attorney

APEX 1873 NORTH CAROLINA

Attachment A

Property Description

Tract 1 (Poe):

BEGINNING at a point which is the northeast corner of the 54.650 acre tract shown on Boundary Survey Prepared for Apex Land Assemblage, LLC by Riley Surveying, PA dated February 23, 2006 and recorded in Book of Maps 2006, Page 416, Wake County Registry; thence along the line of said 54.650 acre tract N 89° 54' 34" W 1794.53 feet to a point in the centerline of Big Branch; thence along the centerline of Big Branch, the following courses and distances denoted L87 through L156 on the following table:

CENTERLINE BIG BRANCH

LINE TABLE		
LINE	*BEARING*	*LENGTH*
L87	*N20° 48' 14" E*	*52.19*
L88	*N27° 36' 15" E*	*25.74*
L89	*N62° 55' 07" E*	*26.76*
L90	*N28° 59' 45" W*	*21.84*
L91	*N05° 57' 55" W*	*34.25*
L92	*N49° 54' 20" E*	*15.65*
L93	*N35° 51' 41" E*	*26.00*
L94	*N57° 55' 36" W*	*27.74*
L95	*S77° 58' 08" W*	*70.86*
L96	*N69° 24' 20" W*	*55.42*
L97	*N16° 11' 53" W*	*54.07*
L98	*N47° 25' 48" E*	*30.81*
L99	*S76° 51' 18" E*	*46.52*
L100	*N23° 56' 06" E*	*15.13*
L101	*N10° 54' 23" E*	*79.33*
L102	*N70° 46' 49" W*	*21.80*
L103	*N13° 56' 38" W*	*44.13*
L104	*N54° 44' 36" W*	*48.38*
L105	*S57° 22' 33" W*	*58.59*
L106	*S44° 34' 58" W*	*46.68*
L107	*N46° 23' 02" W*	*39.79*
L108	*N72° 28' 16" W*	*36.60*
L109	*S47° 16' 54" W*	*18.92*
L110	*N74° 34' 40" W*	*21.22*
L111	*N28° 53' 03" W*	*20.74*
L112	*N42° 52' 48" W*	*46.75*
L113	*N06° 56' 21" E*	*26.65*
L114	*N88° 28' 36" E*	*43.87*
L115	*N27° 02' 14" E*	*18.93*
L116	*N01° 17' 25" E*	*31.60*
L117	*N45° 56' 56" E*	*50.02*
L124	*N39° 28' 55" E*	*39.13*
L125	*N15° 03' 15" W*	*20.63*
L126	*N51° 44' 06" W*	*25.88*
L127	*N30° 05' 45" E*	*27.95*
L128	*S60° 15' 59" E*	*30.79*
L129	*S36° 33' 19" E*	*34.28*
L130	*S78° 44' 24" E*	*52.43*
L131	*N41° 37' 38" E*	*15.36*
L132	*N04° 45' 02" E*	*44.44*
L133	*N30° 38' 49" E*	*51.77*
L134	*N05° 02' 00" W*	*35.48*
L135	*S62° 06' 04" W*	*33.82*
L136	*N44° 56' 44" W*	*39.84*
L137	*N44° 38' 21" E*	*21.58*
L138	*N53° 06' 38 E*	*60.88*
L139	*N61° 14' 38" W*	*39.17*
L140	*N50° 48' 06" W*	*23.78*
L141	*N10° 02' 40" W*	*28.54*
L142	*N38° 49' 48" E*	*55.95*
L143	*N43° 06' 48" W*	*60.59*
L144	*N42° 29' 30" E*	*31.74*
L145	*N70° 52' 59" W*	*69.18*
L146	*N86° 33' 59" W*	*111.94*
L147	*N47° 57' 35" W*	*68.58*
L148	*N30° 54' 08" E*	*32.56*
L149	*N21° 23' 37" W*	*54.07*
L150	*N55° 27' 06" E*	*39.27*
L151	*N03° 24' 04" W*	*46.46*
L152	*N31° 43' 23" E*	*54.96*
L153	*N18° 31' 57" E*	*44.10*
L154	*N01° 09' 10" W*	*65.77*
L155	*N22° 16' 37" W*	*29.93*
L156	*N19° 16' 28" E*	*2.52*

L118	*N01° 25' 13" E*	*14.01*
L119	*N65° 15' 45" W*	*42.02*
L120	*N01° 22' 31" E*	*32.19*
L121	*N46° 17' 51" W*	*51.21*
L122	*N06° 49' 21" E*	*35.97*
L123	*N69° 35' 22" E*	*41.13*

Thence leaving the course of Big Branch, N 87° 20' 59" E 1317.72 feet to a point; thence N 00° 20' 59" E 1411.74 feet to a point; thence N 87° 17' 47" E 1396.96 feet to a point; thence S 02° 19' 40" W 527.05 feet to a point; thence S 90° 00' 00" W 750.13 feet to a point; thence S 00° 00' 00" W 967.73 feet to a point; thence N 77° 55' 24" E 389.22 feet to a point; thence N 01° 29' 14" E 148.65 feet to a point; thence N 65° 20' 41" E 538.98 feet to a point; thence S 02° 20' 59" W 179.73 feet to a point; thence S 02° 28' 41" W 1915.88 feet to a point; thence N 89° 11' 33" W 648.01 feet to the point and place of beginning and being all of Tract 3 containing 128.439 acres shown on a survey entitled "Exempt Division Survey – Property of Bobby and Elizabeth Poe" prepared by Riley Surveying, PA dated November 9, 2006.

Tract 2 (Poe):

BEING all of the 1.710 acre tract and the 0.042 acre tract shown as area in the right of way of Old Holly Springs – Apex Road shown on a map entitled "Property of Bobby W. and Elizabeth A. Poe, F.D. Prince, Sr, Trustee" recorded in Book of Maps 2002, Page 109, Wake County Registry, reference to which is hereby made for greater certainty of description and also being more particularly described as follows: Beginning at an existing nail in the northwest corner of the property of E.K. Huang, et. al. as described in Deed Book 6650, Page 866, Wake County Registry, and the southwest corner of the property of F.D. Prince, Sr. as described in Deed Book 8291, page 540, Wake County Registry, runs thence North 05 degrees 23 minutes 24 seconds East 64.21 feet to an iron pipe; thence North 74 degrees 31 minutes 24 seconds East 381.93 feet to an iron pipe; thence South 86 degrees 04 minutes 18 seconds East 863.27 feet to an iron pipe in the west right of way of SR 1153 (Old Holly Springs – Apex Road). Thence South 86 degrees 04 minutes 18 seconds East 30.32 feet to the centerline of SR 1153; thence along the centerline of SR 1153, South 12 degrees, 45 minutes 03 seconds West 60.72 feet to a point; thence with the north line of Huang, et. al., North 86 degrees 04 minutes 18 seconds West 30.32 feet to an existing iron pipe; thence North 86 degrees 04 minutes 18 seconds West 843.70 feet to an existing iron pipe; thence South 74 degrees 31 minutes 24 seconds West 394.54 feet to an existing iron pipe, the point and place of Beginning, and also being Tract 1 containing 1.754 acres shown on a survey entitled "Exempt Division Survey – Property of Bobby and Elizabeth Poe" prepared by Riley Surveying, PA dated November 9, 2006.

Tract 3 (Lyna):

BEGINNING at a point in the centerline of Old Holly Springs Apex Road, said point being calculated as follows: Beginning at a point in the line of Tract A shown on a map entitled "Proposed Subdivision and Recombination of Properties of Wake County" which is recorded in Book of Maps 1998, Page 782, Wake County Registry, said point also being North 45° 03' 47" East 1591.01 feet from the centerline of the intersection of Old Holly Springs Apex Road and

Woods Creek Road; thence North 09° 24' 42" East 362.56 feet to a point; thence North 85° 47' 44" West 162.21 feet to an iron pin in the centerline of Old Holly Springs Apex Road; thence along the centerline of Old Holly Springs Apex Road in an northerly direction along a left hand curve having a radius of 1963.49 feet an arc distance of 423.08 feet and chord bearing and distance of North 12° 12' 26" East 422.26 feet to the POINT AND PLACE OF BEGINNING: thence continuing along the centerline of said Old Holly Springs Apex Road in a northerly direction along a left hand curve having a radius of 1963.49 feet, an arc distance of 259.39 feet and a chord bearing and distance of North 02° 14' 59" East 259.20 feet; thence North 00° 00' 56" East 187.39 feet to a point; thence South 67° 20' 57" East 925.18 feet to a point; thence South 61° 30' 00" East 301.10 feet to a point; thence South 73° 33' 19" East 346.87 feet to a point; thence South 74° 36' 50" East 217.48 feet to a point; thence South 70° 39" 03" East 219.39 feet to a point; thence South 66° 06' 14" East 183.83 feet to a point; thence South 51° 10' 55" East 327.09 feet to a point in the centerline of White Oak Creek a/k/a Falls Branch Creek; thence along the centerline of said creek as follows: South 03° 23' 35" East 31.18 feet to a point; thence South 19° 58' 50" East 138.13 feet to a point; thence South 09° 01' 05" West 63.94 feet to a point; thence South 22° 49' 37" West 94.25 feet to a point; thence South 05° 19' 49" West 65.12 feet to a point; thence leaving the center line of said creek N 67° 48' 05" W 2481.26 feet to the point and place of BEGINNING and being all of Tract 1 containing 23.62 acres as shown on a survey entitled "Exempt Subdivision prepared for Apex Land Assemblage, LLC" by Riley Surveying, P.A. dated May 13, 2005.

Tract 4 (Reeves):

BEGINNING at a point in the line of Tract A shown on a map entitled "Proposed Subdivision and Recombination of Properties of Wake County" which is recorded in Book of Maps 1998, Page 782, Wake County Registry, said point also being North 45° 03' 47" East 1591.01 feet from the centerline of the intersection of Old Holly Springs Apex Road and Woods Creek Road, being the point and place of BEGINNING, thence North 09° 24' 42" East 362.56 feet to a point; thence North 85° 47' 44" West 162.21 feet to a point; thence North 85° 47' 44" West 30.48 feet to an iron pin in the centerline of Old Holly Springs Apex Road; thence along the centerline of Old Holly Springs Apex Road in an northerly direction along a left hand curve having a radius of 1963.49 feet, an arc distance of 423.08 feet and chord bearing and distance of North 12° 12' 26" East 422.26 feet to a point; thence leaving the centerline of said road South 67° 48' 05" East 2481.26 feet to a point in the centerline of White Oak Creek a/k/a Falls Branch Creek; thence along the centerline of said creek as follows South 05° 19' 49" West 39.71 feet to a point; thence South 17° 13' 42" West 52.16 feet to a point; thence South 63° 16' 26" West 25.88 feet to a point; thence South 17° 55' 39" West 68.74 feet to a point; thence leaving the line of said creek North 78° 00' 00" West 876.99 feet to a point; thence North 84° 10' 00" West 1370.01 feet to the point and place of BEGINNING, and being all of Tract 2 containing 23.62 acres as shown on a survey entitled "Exempt Subdivision prepared for Apex Land Assemblage, LLC" by Riley Surveying, P.A. dated May 13, 2005.

Tract 5 (Goodwin/ALAN):

BEING all that certain tract or parcel of land containing 54.650 acres, more or less, as shown on plat of survey entitled "Boundary Survey Prepared for Apex Land Assemblage, LLC" dated February 16, 2006 and revised February 23, 2006, prepared by Phillip W. Riley, professional Land Surveyor, of Riley Surveying, P.A. and recorded in Book of Maps 2006, Page 416, Wake County Registry, which plat is referenced for a more particular description.

Tract 6 (Adams):

BEING all that certain tract or parcel of land containing 86.334 acres as shown on plat of survey entitled "Boundary Survey, Prepared for HH Trinity Apex Investments, LLC, Holly Springs Township, Wake County, NC" dated September 17, 2007, prepared by Phillip W. Riley, Professional Land Surveyor, of Riley Survey, P.A. and recorded in Book of Maps 2007, Page 2469, Wake County Registry, which plat is referenced for a more particular description.

Tract 7 (Cox):

BEING all that certain tract or parcel of land containing 65.210 acres as shown on plat of survey entitled "Boundary Survey, Prepared for HH Trinity Apex Investments, LLC, Holly Springs Township, Wake County, NC" dated September 19, 2007, prepared by Phillip W. Riley, Professional Land Surveyor, of Riley Survey, P.A. and recorded in Book of Maps 2007, Page 2467, Wake County Registry, which plat is referenced for a more particular description.

Tracts 8 - 11 (Raymer):

BEING all those certain tracts or parcels of land designated as Tract I-A, containing 278.521 acres; Tract II, containing 2.134 acres; Tract III, containing 4.333 acres; and Tract 840' x 40', containing 0.626 acres, as shown on plat of survey entitled "Boundary Survey, Prepared for HH Trinity Apex Investments, LLC, Holly Springs Township, Wake County, NC" dated September 20, 2007, prepared by Phillip W. Riley, Professional Land Surveyor, of Riley Surveying, P.A. and recorded in Book of Maps 2007, Page 2468, Wake County Registry, which plat is referenced for a more particular description.

Tract 12 (Apex Town Square):

Being all of that certain tract of land lying in the Town of Apex, Holly Springs Township, Wake County, North Carolina, and being more particularly described as follows:

BEGINNING at an existing iron pipe at the northeastern corner of the now or formerly EMC Corporation property described in Deed recorded Book 2791, Page 428, Wake County Registry, said pipe also being located in the western line of the now or formerly Cash and Maynard Tract 1-A as shown on plat of survey recorded in Book of Maps 2003, Page 398, Wake County Registry (the "Plat"), said pipe being located North 02° 14' 00" East 271.08 feet from a common corner with said Cash and Maynard Tract 1-A and the now or formerly Cor Bregman property in said EMC Corporation's eastern property line as shown on the Plat; thence with said EMC Corporation's northern property line, South 89° 33' 33" West 1,910.66 feet to an existing iron pipe; thence with EMC Corporation's interior eastern property line, North 02° 07' 56" East

543.28 feet to an existing iron pipe, the southeastern corner of the now or formerly Colon Hobby property; thence with the eastern property line of said Colon Hobby property, North 00° 59' 41" East 734.53 feet to a set iron pipe marking the southwest corner of the said Cash and Maynard Tract 1-A; thence with said Cash and Maynard's Tract 1-A's southern property line and passing over an existing iron pipe at a distance of 15.08 feet, South 87° 48' 34" East 1,905.24 feet (total) to an existing iron pipe; thence continuing with said Cash and Maynard's Tract 1-A's interior western property line, South 01° 15' 42" West 1,190.09 feet to the point or place of BEGINNING, containing 53.939 acres, more or less, including any deed/survey gaps that may exist along the western line of the property herein described, as shown on the Plat, which Plat is referenced for a more particular description and being all of the property conveyed to Apex Town Square, LLC, by deed dated January 6, 2006, and recorded in Book 11766, Page 242, Wake County Registry.

Tract 13 (Bregman):

Lying and being in Town of Apex, Holly Springs Township, Wake County, North Carolina, and being more particularly described as follows:

BEGINNING at an existing iron pipe at a corner of the property now or formerly owned by Heartland Raleigh Apex U.S. 1 Limited Partnership (Book 4454, Page 666, Wake County Registry ["WCR"]), said pipe being located at NC Grid Coordinates: N=707,936.09; E2,048,195.68, and also being located South 31° 57' 19" West a distance of 2,292.37 feet (Grid) from NCGS Monument "TANK" (N=709,881.08; E2,049,408.93); from said POINT OF BEGINNING, running thence along and with the western line of the aforesaid Heartland Raleigh property the following courses and distances:

- South 02° 41' 34" West a distance of 537.74 feet to an existing iron pipe;
- South 02° 41' 34" West a distance of 100.28 feet to an existing iron pipe;
- South 02° 41' 34" West a distance of 2.08 feet to an existing iron pipe;
- South 02° 39' 56" West a distance of 37.18 feet to an existing iron pipe in the northern right-of-way of Technology Drive;

running thence along and with the northern right-of-way of Technology Drive the following courses and distances:

- along and with the arc of a curve to the left having a radius of 411.97 feet (Chord Bearing: South 60° 59' 56" West; Chord Distance: 224.57 feet) a distance of 227.45 feet to an existing iron pipe;
- South 45° 37' 55" West a distance of 288.89 feet to an existing iron pipe;
- South 44° 59' 17" West a distance of 549.68 feet to an existing iron pipe;
- South 44° 59' 17" West a distance of 70.66 feet to an existing iron pipe;
- along and with the arc of a curve to the right having a radius of 351.97 feet (Chord Bearing: South 57° 36' 33" West; Chord Distance: 151.96 feet) a distance of 153.17 feet to an existing iron pipe;
- along and with the arc of a curve to the right having a radius of 351.97 feet (Chord Bearing: South 79° 30' 30" West; Chord Distance: 115.27 feet) a distance of 115.79 feet to an existing iron pipe;
- South 88° 51' 29" West a distance of 164.77 feet to a point in the eastern line of property

now or formerly owned by Data General (Book 2791, Page 428, WCR);

leaving the northern right-of-way of Technology Drive and running thence along and with the eastern line of the aforesaid Data General property, North 02° 16' 29" East a distance of 1,200.00 feet to an existing iron pipe; continuing with the eastern line of the Data General property and running thence North 02° 17' 20" East a distance of 416.31 feet to an existing iron pipe in the southern line of the aforesaid Heartland Raleigh property; running thence along and with the southern line of the Heartland Raleigh property, South 86° 16' 48" East a distance of 1,218.14 feet to the POINT AND PLACE OF BEGINNING, containing 34.0763 acres, more or less, and being all of Tract 4 north of the right-of-way of Technology Drive, as shown on that certain survey entitled "Recombination And Minor Subdivision of Technology Drive Property For Thomas H. Byrd, III", dated December 11, 1996, and prepared by Niall W. Gillespie, R.L.S. (No. L-2629) (File Name: BYRDTOPO), to which survey reference is hereby made for a more particular description, and being the same property conveyed to Cor S. Bregman by deed recorded in Book 7409, Page 255, Wake County Registry, and being the same property conveyed to Cornelius S. Bregman and Kandes K. Bregman, as Trustees of the Cornelius and Kandes Bregman Trust, under Agreement dated September 20, 1999 by deed recorded in Book 10856, Page 2786, Wake County Registry, LESS AND EXCEPT (i) the property conveyed to Thomas H. Byrd, IV, and wife Lisa W. Byrd, by deed recorded in Book 10129, Page 491, Wake County Registry, and (ii) the property conveyed to the Department of Transportation by deed recorded in Book 8128, Page 153, Wake County Registry.

Tracts 14 - 15 (EMC):

Being all those certain tracts or parcels of land containing approximately 47.419 acres and identified as portions of parcel identification numbers 0740672147 (containing approximately 46.61 acres) and 0740570471 (containing approximately 77.66 acres), and as generally shown as Tract 2 on the map attached hereto as Schedule 1.

Tract 16 (Whitehouse):

Being all that certain tract or parcel of land containing approximately 27.47 acres and identified as parcel identification number 0740287376 and being the same property conveyed to Brenda P. Whitehouse, individually, a 55% undivided interest, and Brenda P. Whitehouse as Trustee of the Irene F. Prince Family Trust dated February 19, 2004, a 45% undivided interest, by deed recorded in Book 10680, Page 477, Wake County Registry.

Tract 17 (F. Prince):

Being all that certain tract or parcel of land containing approximately 75.63 acres and identified as parcel identification number 0740191376 and being the same property conveyed to F.D. Prince, Sr., sole Trustee, or his successors in trust, under the Frank Dixon Prince, Sr. Living Trust, dated October 20, 1988, and any amendments thereto, by deed recorded in Book 8291, Page 540, Wake County Registry.

Tract 18 (F. Prince):

Being all that certain tract or parcel of land containing approximately 21.36 acres and identified as parcel identification number 0730996270 and being the same property conveyed to F.D. Prince, Sr., sole Trustee, or his successors in trust, under the Frank Dixon Prince, Sr. Living Trust, dated October 20, 1988, and any amendments thereto, by deed recorded in Book 8291, Page 540, Wake County Registry.

Tract 19 (B. Prince):

Being all that certain tract or parcel of land containing approximately 32.06 acres and identified as parcel identification number 0741207566 and being the same property conveyed to William Ira Prince, III, by deed recorded in Book 2673, Page 652, Wake County Registry.

Tract 20 (J. Prince):

Being all that certain tract or parcel of land containing approximately 1.80 acres and identified as parcel identification number 0740293940 and being the same property conveyed to William I. Prince and Jean P. Prince, by deed recorded in Book 6217, Page 146, Wake County Registry.

Tracts 21-38 (Stephens):

Being all of those certain tracts or parcels of land identified as parcel identification numbers 0740886966, 0740991702, 0740992565, 0740991337, 0740991237, 0740990140, 0740980647, 0740982309, 0740982534, 0740982635, 0740982769, 0740982866, 0740982964, 0740982929, 0740992024, 0740992069, 0740992169 and 0740982764.

Tract 39 (Tew):

Being all that certain tract or parcel of land containing approximately 1.84 acres and identified as parcel identification number 0741203157 and being the same property conveyed to Kim Prince Tew, and husband, David Wayne Tew, by deed recorded in Book 10633, Page 1741, Wake County Registry.

Tract 40 (Huang):

Being all that certain tract or parcel of land containing approximately 13.33 acres and identified as parcel identification number 0740180091 and being the same property conveyed to Ruey Shiue Huang, Co-Trustee, and Edward K. Huang, Co-Trustee, of The Huang Family Trust, dated September 30, 2005, by deed recorded in Book 10656, Page 33, Wake County Registry.

Attachment B

Environmental Enhancement Plan

Veridea

Apex, NC

November 1, 2022

Revised: December 1, 2022

2nd Revision: January 31, 2023

3rd Revision: February 3, 2023

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INTRODUCTION

On May 10, 2011, the Town of Apex adopted the Veridea Sustainable Development Plan ("SD Plan"). As set forth in the SD Plan, Veridea will be planned and developed as a safe, healthy, resource efficient, pedestrian and transit-oriented mixed-use community in accordance with these Guiding Principles:

- Create economic value;
- Eliminate the concept of waste;
- Insist on a renewable future;
- Create delightful urban places; and
- Integrate nature throughout the community.

The SD Plan is intended to encourage a pattern of high density, pedestrian-friendly development in some areas of Veridea and the conservation or enhancement of natural space in other areas. This Environmental Enhancement Plan ("EEP"), required by SD Plan Article 3.1.2, sets forth specific environmental Sustainability Standards applicable to Veridea to guide the development of Veridea in accordance with the SD Plan pursuant to Article 2.3.16 F) 3) b) of the Apex Unified Development Ordinance ("UDO"). The Sustainability Standards set forth in this EEP are intended to protect natural resources and the environment in light of this development pattern and to address secondary and cumulative impacts associated with the infrastructure required for Veridea. Unless otherwise defined herein, capitalized terms used in this EEP have the same meaning assigned to them in the UDO and in the SD Plan.

A. Purpose of the Environmental Enhancement Plan (EPP)

Taken as a whole, the Sustainability Standards set forth in the SD Plan and the EEP will provide a level of environmental protection that equals or exceeds the traditional metrics set forth in the Apex UDO, State and federal laws. A development project of Veridea's scale affords a rare opportunity to meaningfully plan for a more resilient future, by implement best practices in diversifying land use, building design, waste avoidance, energy optimization, water conservation and protection, transportation and open space. The EEP provides a framework for sustainable development principles over the lifespan of this multi-phase project.

B. Balancing Growth and Environmental Protection

In an effort to provide a holistic review of the Town's growth projections and infrastructure planned to support that growth, the Town of Apex has prepared a Secondary and Cumulative Impact Master Mitigation Plan (the "SCIMMP"), which examines the potential secondary and cumulative impacts throughout the Town's Planning Area associated with planned infrastructure. The SCIMMP acknowledges that sprawling development—the secondary and cumulative impacts associated with water, sewer and transportation infrastructure—will result in adverse environmental impacts and points out that Apex has taken progressive steps to balance the competing goals of growth and environmental protection. As noted in the SCIMPP, Apex has implemented mitigation measures that limit sprawl by encouraging areas of higher density development, such as is represented by Veridea.

While the SCIMMP served as a point of reference, this EEP sets forth alternative standards as an enhancement and mitigation strategy to address the potential secondary and cumulative impacts noted in the SCIMMP that may occur within Veridea. Specifically, the EEP, like the measures noted in the SCIMPP, is intended to balance the goals of growth and environmental protection, by facilitating

compact, dense, development that, in certain respects, is inherently less impactful than automobile-oriented low density residential development and that also lends itself to innovative environmental protection measures. The compact urban spaces in Veridea will allow for the use of both structural and non-structural SCMs, including innovative techniques for urban areas, for water quality protection that meets or exceeds that required by the measures noted in the SCIMPP. Similarly, the compact urban spaces in Veridea will be pedestrian- bicycle- and transit-oriented and, for this reason, will result in decreased automobile use and vehicle miles traveled. The decreased dependence on automobiles within Veridea will, in turn, improve air quality through the reduction of vehicular traffic and mobile energy consumption. In combination, the SD Plan and the EEP will result in the creation of compact, walkable, vibrant, and interconnected community that balances the goals of development and environmental protection and offers residents and visitors a high quality of life.

C. Organization of the Environmental Enhancement Plan

The EEP is organized into the following sections:

1. Building Standards
2. Environmental and Natural Resource Protection
3. Stormwater & Surface Water Management
4. Land Management
5. Air Quality Protections

I. BUILDING STANDARDS

A. Energy

1. Non-Residential and Mixed-Use Buildings Energy Efficiency

a. In furtherance of the goals set forth in SD Plan 3.7.2, all non-residential and mixed-use buildings in Veridea shall provide plan analysis demonstrating improvement of energy performance by 20% compared to baseline building performance ratings per ASHRAE/ IESNA Standard 90.1-2010 Appendix G. (Note: 2010 ASHREA is being referenced here, consistent with current LEED Rating System benchmark standard)

b. At build-out of Veridea, a minimum of 50% of non-residential buildings within Veridea shall be certified under one of these 3rd Party Certification Program options:
   i. LEED Rating System
   ii. Green Globes
   iii. Fitwel
   iv. Similar alternative standard as determined by the Responsible Party

   Responsible Party will ensure the ability to meet this 50% commitment at the time of each non-residential building permit application to the Town of Apex.

c. Solar facilities may be installed on the roofs of building occupied by industrial uses. Installation of solar facilities will be subject to a Return of Investment Analysis consistent with industry practices.

d. Solar facilities will be installed in the open space required to be dedicated per the SD Plan.

e. Documentation
   i. For all buildings, a letter of compliance shall be provided to the Town with the submittal of building permits for that building by a Professional Engineer (PE) licensed to practice in North Carolina, an architect licensed in North Carolina, OR a qualified third-party certifier stating that, in his or her opinion, the building design demonstrates improvement of energy performance by 20% compared to baseline building performance ratings per ASHRAE/ IESNA Standard 90.1-2010 Appendix G.

   ii. For each building that is developed to meet the standards for certification under one of the 3rd Party Certification Options, a letter of building certification from the selected program shall be provided to the Town at building completion.

2. Residential Buildings Energy Efficiency

a. All single-family, townhomes, multi-family, and condominium residential dwelling units to be constructed in Veridea must meet at least one of the following options (or similar alternative standard as determined by the Responsible Party).
   i. Energy Star Program Certification
   ii. ecoSelect Program Certification
   iii. Clear Program Certification
   iv. Passive House Institute US Certification
   v. DOE Zero Energy Ready Home (ZERH) Program

vi. National Green Building Standards (NGBS Program) Certification
vii. LEED for Homes Program Certification
viii. Similar alternative standard as determined by the Responsible Party

b. Certification Program Approval – Prior to the recordation of any final plat for single-family, townhome, or condo lots Town of Apex staff shall review and approve the selected residential energy efficiency program for compliance with this Plan.

3. Renewable Energy

a. Veridea will create a receptive environment for solar energy technologies. Panels will be allowed on any roof orientation while also maintaining compliance with architectural design guidelines
b. Conduit for wiring of solar panels shall be provided in all single-family and townhome residential units.

B. Water Efficiency

All water fixtures and appliances shall be rated, and design of buildings shall incorporate water-saving measures. Proof of compliance with the provisions below will be per I.A.1.c hereof.

1. Bathroom Fixtures
   a. 100% of showerheads, lavatory faucets and toilets/urinals shall be WaterSense rated fixtures.

2. Water Using Appliances
   a. Dishwashers and clothes washers installed by builder must be Energy Star qualified.

3. Water Efficient Design for Residential Plumbing Systems
   a. To reduce water wasted while waiting for hot water to be delivered to a fixture, the hot water pipe length shall be no more than 50 feet when measured from the water heater to the furthest fixture for all residential units, where practicable. For units with recirculation systems installed, demand-initiated controls should be encouraged.

4. Landscape Practices
   a. Landscape plantings shall be drought tolerant, native, and locally adaptive species (including turf); at minimum 80% of plantings. Such plantings shall be presented on plans submitted to the Town of Apex for review.

   b. When installed, irrigation systems shall be equipped with weather-based or soil moisture sensor-based controllers. Spray heads shall be limited to turf areas only. Reclaimed water should be used if available.

C. Indoor Air Quality

Residential (single-family, townhome, multi-family, and condominium) designs and construction within Veridea shall include practices that enhance indoor air quality. Proof of compliance with provisions below will be provided per I.A.1.c and I.A.2.b hereof.

1. Building Envelope
    a. Smoking restrictions implemented AND ETS transfer pathways minimized for commercial and multi-unit residential buildings.

2. Mechanicals
    a. Equipment designed and selected to keep relative humidity < 60% for conditioned space.
    b. Minimum MERV 8 filter on forced air HVAC systems
    c. All fireplaces within conditioned space are direct vented with gasketed doors. NO UNVENTED/VENT FREE FIREPLACES allowed within conditioned space.

3. Materials
    a. Interior paints and finishes certified low emission (Zero or less than 50g/l VOC content).
    b. Carpet, carpet adhesives, and carpet cushion certified low emission per the Carpet and Rug Institute (CRI) Indoor Air Quality Program (CRI Green Label Plus).

D. Material Management

Proof of compliance with provisions below will be provided per I.A.1.c and I.A.2.b hereof.

1. Storage and Collection of Recyclables
    a. Within every mixed-use or nonresidential project, recycling containers adjacent to other waste receptacles or recycling containers integrated into the design of the receptacle shall be provided.

2. Recycled Content
    a. To increase demand for building products that incorporate recycled content materials, special consideration must be given to contractors proposing to use materials with recycled content.

3. Regional Materials
    a. To increase demand for building materials and products that are extracted and manufactured locally, and in doing so supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation, special consideration must be given to contractors proposing to use building materials or products which have been extracted, harvested or recovered, as well as manufactured, within 500 miles of Veridea.

II. ENVIRONMENTAL AND NATURAL RESOURCE PROTECTION

A. Resource Conservation Area – SD Plan Article 3.4.3.1.

From its inception, Veridea has been conceived of and planned as a place in harmony with its natural surroundings. The standards contained herein and in the SD Zoning Plan encourage and require site design techniques that preserve the natural and cultural environment, thereby enhancing the developed environment.

1. Standards

a. Resource Conservation Area (RCA) - Apex has recognized that compliance with the Town's existing RCA requirements set forth in the UDO would prevent certain highly desirable development characteristics, such as density and connectivity, and has exempted areas intended for dense activity centers from the requirement of RCA. In keeping with this precedent, and to achieve the vision of Veridea, as set forth in SD Plan Article 3.1.3, notwithstanding UDO Article 8.1.2.C), 100-acres of land within Veridea shall be established as RCA.

b. Establishment of RCA - Notwithstanding UDO Article 8.1.2.A), RCA shall be established in Veridea according to the criteria set forth in III.A.2 hereof. RCA shall be shown on Master Subdivision Plans and Site Plans where applicable.

2. Criteria for Establishing Resource Conservation Area in Veridea

A. Categories of RCA

1. UDO 8.1.2.B.1 shall apply within Veridea.

2. Restoration Areas – restored, repaired and/or stabilized degraded stream channels, restored or re-vegetated stream buffers, constructed wetlands areas that are restored using innovative techniques authorized in accordance with IV.A.1 hereof, and SCMs that are amenities in accordance with IV.A.2.d hereof may be established as RCA.

3. In addition, any land within the Veridea SD zoned area placed in a conservation easement and deeded to the Master Property Owners' Association, or sub-associations within Veridea, or a qualified land management agency, such as but not limited to the Triangle Land Conservancy, may qualify as RCA.

4. In addition, as set forth in SD Plan 3.4.3.1.e, both:
   a. Open Space, excluding Civic Buildings and all associated parking, municipal parking lots, and parking associated with Open Space that exceeds the direct needs of such Open Space; and
   b. Recreation area provided in Public Space or Civic Space within the Development including, but not limited to, open space, pools, tennis courts, tot lots, ball fields, and village greens shall be allowed to be counted as partial credit toward the RCA requirement. The credit for such area shall be 50% of the area provided. (For example, 1 acre of area shall count as 0.5 acres of RCA.) In order to qualify as RCA, the area must be located on a lot 0.5 acre or larger in size.

5. Land utilized for renewable energy generating facilities qualifies as RCA.

6. Existing or proposed private easements that are also utilized for a trail, for a pedestrian walkway, as a passive recreational amenity, through environmentally sensitive areas, or as community gardens for public educational, recreational, or shared community use shall qualify as RCA.

B. Site and Tree Survey Required
   1. UDO 8.1.2.B.2 shall apply within Veridea.

   2. Notwithstanding the foregoing, consistent with IV.C.1 hereof and Section 3.4.3.1 of the Veridea SD Plan, UDO 8.1.2.B.2.f shall not apply within Veridea.

C. Ownership of RCA in Subdivisions
   The RCA within a subdivision shall be designated so that the RCA may not be removed, modified, or damaged. The RCA shall be a separate Lot(s) and be owned in common by the Lot owners or owned by a separate entity or entities (e.g. property owner's association, development corporation, building lot owner or owners, land management agency or non-profit such as a land trust or conservancy, etc.) In no case shall the RCA for one subdivision be owned by more than 3 entities.

D. Designation of RCA
   Though RCA shall be calculated for Veridea cumulatively, approved RCA shall be shown on the Site Plan or Subdivision Plan for each development site. The RCA shall be shown on the final plat with metes and bounds, to be preserved in perpetuity.

F. Standards for Protection During Construction
   The standards set forth in UDO 8.1.2.G shall apply within Veridea except to the extent that such standard is inconsistent with the provisions of this EEP or SD Plan.

G. Development Restrictions on Steep Slopes
   UDO 8.1.4 shall apply within Veridea.

III. STORMWATER & SURFACE WATER MANAGEMENT

A. Stormwater Management – SD Plan 3.4.3.2.a.

As set forth in SD Plan 3.4.3.2.a, the objectives for stormwater management within Veridea are:

i. Reducing pollutants to protect surface water bodies;
ii. Promoting recharge of ground water resources;
iii. Reduce / minimize flooding within the Development and downstream;
iv. Enhancing safety and aesthetics for the public; and
v. Creating wildlife habitats and educational opportunities.

All SCMs implemented within Veridea shall comply with the NC Department of Environmental Quality (NC DEQ) Stormwater Design Manual Considerations for selecting and using SCMs within Veridea will include, but are not limited to: site applicability, public safety, spatial requirements, soil characteristics, hydrologic benefits, slope, existing land use conditions, and maintenance requirements. In addition to the items listed above, it is the goal to make stormwater features amenities within Veridea and assets to the overall aesthetics of Veridea and the Town.

1. Approved SCMs

The following SCMs are approved for implementation in Veridea.

a. Detention systems that capture a volume of runoff and temporarily detain that volume for release over several days.

b. Constructed wetland systems that are similar to retention and detention systems, except that a major portion of the SCM water surface area (in pond systems) or bottom (in meadow-type systems) contains wetland vegetation.

c. Filtration systems that use some combination of a granular filtration media such as sand, soil, organic material, carbon or a membrane to remove typical pollutants found in runoff.

d. Vegetated systems (biofilters) such as green roofs, green walls, swales, filter strips that are designed to convey and treat either shallow flow or sheet flow runoff.

e. Innovative systems, as defined by 15A NCAC 02H.1003(6), or proprietary systems, may be approved by the Town on a case-by-case basis.

f. Regional stormwater management facilities, to augment, and/or in lieu of, on-site treatment and detention for stormwater management that is implemented on a Lot by Lot or Project by Project basis, to the extent allowed by applicable Federal and North Carolina law and regulation.

2. SCM Standards

a. SCM's will be designed to provide a minimum of 85% TSS removal from stormwater runoff from their contributory drainage area.

b. Downstream of Veridea: post-development peak flows shall not exceed pre-development peak flows for the 25-, 10-, and 1-year storms. Roadway projects shown on the Thoroughfare and Collector Street Plan of the Town of Apex and undertaken in public rights-of-way within Veridea shall be deemed exempt from these requirements.

c. Storage volumes shall be provided such that the runoff from the required water quality storm event (1.0-inch of rainfall) does not draw down in less than two days and that the volume is drawn down completely within five days.

d. To enhance the overall aesthetics of Veridea and the Town, SCMs that are amenities within Veridea may receive credit toward the Open Space requirement per SD Plan 3.1.3 or Resource Conservation Area per SD Plan 3.4.3. For a SCM to receive credit toward the Open Space requirement, it shall be designed to provide at least five (5) of the following features:
   i. Pedestrian access by way of an installed soft or hard surface path from the nearest pedestrian pathway;
   ii. Use of similar plant materials as those used in adjacent and surrounding planting beds;
   iii. Limit rip rap to 15% of the total surface area of the stormwater facility used for stabilization;
   iv. Plant pallet comprised of native and adaptive plant material that provides for visual interest and diversity, while attracting wildlife;
   v. Curvilinear forms that define the limits of the facility to avoid simple shapes that are incongruent with the natural topography of the site;
   vi. Active water feature;
   vii. Elements that provide opportunities for passive recreation including site furnishings, overhead shelter, and pleasant views;
   viii. Educational opportunities in the form of educational signage;
   ix. Fitness opportunities added along a pathway; and

e. SCM's meeting the standards of III.A.2.a.2 hereof, exclusive of riprap areas, may receive credit as Resource Conservation Area.

f. Structural SCMs shall be designed in accordance with UDO 6.1.12 and other applicable Town standards.

g. Described area containing each structural SCM shall be depicted on the site plan or Subdivision Plan and on the final plat in accordance with UDO 6.1.12.C.

h. For all structural SCMs approved, the owner of such SCM shall have an operation and maintenance agreement in accordance with UDO 6.1.12.D. An operation and maintenance agreement shall not be required for non-structural SCMs. For the purposes of this EEP, non-structural SCMs shall be defined as practices implemented in single family residential or commercial applications that are less than one-acre of disturbed area and generally include but are not limited to: disconnecting downspouts and other runoff features, limiting impervious surface and land disturbance, and other non-structural practices as approved by the Town.

i. Performance guarantees, maintenance and maintenance guarantees and inspection requirements for SCMs shall comply with UDO 6.1.12.G), H), and I).

j. SCMs located in a public right-of-way or easement require an encroachment and maintenance agreement with the Town before such encroachment is made, in accordance with SD Plan 3.3.5.

k. Storm drainage easements shall be recorded to identify the locations of SCMs on a Lot(s). The owner of the Lot shall not remove or structurally alter such SCM without prior written approval from the Town.

3. Floodplain

a. FEMA regulated floodplain is located in the southwestern portion of the parcel. Local floodplain will be determined through the definition of a base flood elevation by means of a detailed hydraulic report for streams with a drainage area greater than 100-acres. Per allowances in the UDO 6.2.16.B, non-residential buildings shall be allowed in the floodplain, and there shall be no over-riding requirement to preserve floodplain as RCA.

b. Notwithstanding UDO 6.2.3, stormwater management, detention and retention facilities may encroach within potential on-site flood hazard areas where a base flood elevation has been established pursuant to UDO 6.2.17.B. Where proposed, the detailed hydraulic analysis revising the base flood elevation will be provided at the time of site plan or subdivision submittal.

c. Revisions / modifications to the base flood elevation, including but not limited to fill and grading, may be submitted at the time of site plan or subdivision plan submittal in the event that the flow within a stream is changed and will impact the base flood elevation. Any modifications to FEMA regulated floodplain will be permitted in accordance with local and federal regulations.

B. Water Conservation – SD Plan 3.4.3.2.b.

The careful stewardship of the use of water within Veridea is set forth in the SD Plan goals for water conservation are:

- Reducing per capita water use while retaining attractive landscapes;
- Protection of ground and surface water supplies from unsustainable depletion;
- Eliminating unnecessary waste in water use practices;
- Reducing wastewater treatment volume and associated municipal expenditures;
- Promoting the increased use of re-use water for irrigation.

To achieve these goals water conservation standards in Veridea will include:

1. Water Efficient Landscape Practices

a. Planting
   i. The planting of landscape materials shall be in accordance with the Town of Apex, NCDEQ, or North Carolina Cooperative Extension standards for drought tolerant, native, and locally adaptive species.
   ii. Plant materials shall be chosen to thrive based on their exposure to sun, wind, and soil conditions.
   iii. Landscape beds shall provide a 3" layer of mulching material.
   iv. Plants shall be grouped according to water needs, or "hydrozones," to limit overwatering.

b. Irrigation
   i. Irrigation systems shall be equipped with weather-based or soil moisture sensor-based controllers.
   ii. Installation of spray heads shall be limited to turf areas only.

2. Storm Water Re-use

a. Re-use of stormwater for non-potable applications such as irrigation, vehicle washing, cooling tower make-up water, etc. will be encouraged, for both commercial and residential applications. Stormwater reuse will be utilized in the portions of Veridea approved for multi-family uses. Installation of stormwater reuse facilities will be subject to the design teams review of the viability on each building. Landscaped areas within the multifamily residential development will be irrigated with stormwater reuse where practicable. Where re-use water is not available, potable water may be used for irrigation in accordance with the Town of Apex Water Conservation Ordinance.

b. Re-use water may be used for irrigation in areas of public or private lawns, landscaping or recreation area.

c. Where a centralized chiller plant is utilized, and where practical, re-use water may provide cooling tower make-up water.

C. Surface Water Enhancement – SD Plan 3.4.3.2.c.

As set forth in SD Plan 3.4.3.2.c, the objectives for surface water enhancement within Veridea are:

- Maintaining water quality by capturing or controlling sediment, nutrients, and other pollutants per the minimum requirements of the Town of Apex;
- Ensure that post-development peak flows do not exceed pre-development flows for the 25-year storm event;
- Augmenting low flow from SCM's to improve downstream aquatic habitat;
- Enhancing public use and enjoyment of the natural system; and
- Install signage prohibiting pet waste and use of fertilizers near environmentally sensitive areas.

1. Stream Protection Buffers -

Veridea is located in the Secondary Watershed Protection District per the Town of Apex Watershed Protection Overlay District dated May 2022 and will utilize the High-Density Development Option. All perennial and intermittent streams have been field verified by the Town of Apex; verification is included as Appendix A to this Plan. Stream buffers will be maintained pursuant to 6.1.7.B of the Town of Apex UDO.

As provided in 6.1.7.b.2 of the Town of Apex UDO, a vegetative buffer an average width of not less than 100' shall be maintained along each side of a perennial stream and at no point shall the buffer width be less than 50'. While buffer widths may vary from the map included as Appendix B of this Plan, final buffer area provided within Veridea shall not be less than 166.87 acres.

The Town of Apex verification of the perennial and intermittent streams shall be valid for the period of the validity of any Army Corps of Engineers Individual / Nationwide Permit.

a. Future buffer authorizations within Veridea shall be in accordance with process in Section 6.1.11 of the Town of Apex UDO.

b. Impacts to the established stream protection areas established herein shall be mitigated per Section 6.1.13 of the Town of Apex UDO.

c. For the purposes of this EEP, "stream protection areas" shall refer to protected areas including floodways and floodplains Buffer widths shall be as described in Appendix B.

2. Mitigation

With a project the size and density of Veridea some unavoidable impacts are necessary to accommodate the required vehicular and pedestrian transportation improvements and utility infrastructure. The EEP proposes specific mitigation options to address these impacts. These impacts will be limited, yet necessary to address:

- Vehicular and pedestrian transportation improvements and interconnectivity

- Utility infrastructure that will serve Veridea as well as adjacent lands which are yet to be developed.

- Non-erosive outlets for stormwater management facilities

- Intermittent streams and isolated wetland pockets as needed to create developable land areas to support the proposed densities.

    a. Mitigation for impacts to wetlands will be accomplished per the regulations of the United States Army Corps of Engineers and North Carolina Division of Environmental Quality.

    b. Mitigation for impacts to streams will be performed, as required by any applicable federal or state law or regulation. The appropriate parameter to use in establishing the required mitigation, length or area, will be selected based on the type of stream area impacted and the proposed mitigation measure selected.

    c. In all cases where mitigation is required for impacts to the buffer, a Plan shall be submitted with each site plan or subdivision plan depicting the proposed mitigation for those impacts. The mitigation requirement may be met through one of the following options, which are consistent with mitigation alternatives set forth in UDO 6.1.14.C:
        i. Construction of an alternative measure or combination of measures that reduce nutrient loading equal to or better than the setback that is lost and that is approved by the Town. Such measures may include stormwater SCMs, including LID applications, and other means of capturing and controlling nutrients and other pollutants and shall be located on the site of the riparian buffer that is lost, if practicable, or as close to that location as is practicable;
        ii. Payment of compensatory mitigation fee to a private mitigation bank that complies with banking requirements of the US Army Corps of Engineers, currently set out at http://www.saw.usace.army.mil/WETLANDS/Mitigation/mitbanks.html or from the US Army Corps of Engineers, P.O. Box 1890, Wilmington, NC, 28402-1890;
        iii. Donation of real property or of an interest in real property pursuant to Sec. 6.1.14.F; or
        iv. Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Sec. 6.1.14.G.

    d. Any and all mitigation performed pursuant to this EEP shall be available for use as mitigation credit against a federal or North Carolina mitigation requirement.

    e. The following two documents, along with the Veridea Guiding Principles, will be used as guidance in the preparation of the mitigation measures:
        i. "Stream Mitigation Guidelines, April 2003", published by the US Army Corps of Engineers, as may be amended or updated from time to time, attached as Appendix 8, in particular Section 10.A Flexible Stream Mitigation, Urban Watershed Management; and
        ii. "EEP Mitigation Plan Template, Version 2.0 03-27-08", prepared by the North Carolina Ecosystem Enhancement Program, as may be amended from time to

time.

f. The TRC or Town Council, as applicable, in the event of an exception granted in as contemplated by SD Plan 3.4.1, shall approve the mitigation measures upon finding that the plan provides for:
   i. The option chosen for meeting the mitigation requirement and the required area of mitigation;
   ii. Consistency with the standards set forth in IV.C.2.c hereof;
   iii. Engineering feasibility;
   iv. Operation and maintenance, if any is required hereunder; and
   v. The offset payment amount, as applicable.

IV. LAND MANAGEMENT

A. Sedimentation & Erosion Control Standards

The goals for sedimentation and erosion control set forth in the SD Plan 3.4.3.3.a are:

i. Minimize disturbance to vegetation and soils
ii. Minimize runoff and diversion;
iii. Minimize the need for additional storm drainage facilities;
iv. Reduce sedimentation; and
v. Prompt stabilization after land clearing and grading

The most effective sedimentation and erosion control prevention is born from careful planning of grading activities, continuous inspection of the installed erosion control devices and ongoing maintenance of the devices to insure optimal performance.

a. Design - The Town's standards for design for the 25-year storm event and 3,600 cubic feet of volume per disturbed acres shall be implemented in Veridea.

b. Shared facilities – To minimize grading, where stormwater management devices are proposed those devices may first serve as erosion control sediment basins or traps and be converted to permanent stormwater management devices as soon as the contributing drainage area is sufficiently stabilized.

c. Stabilization – All land disturbing activity is to be planned and coordinated, to the extent practical, to minimize the disturbed areas exposed at any one time. Disturbed areas must be seeded after 7-working days of completion of grading. All remaining areas must be seeded and mulched, or otherwise stabilized within 14 calendar days after completion of grading of any phase of the project.

d. Outlet structures shall be designed to only draw down the cleanest water from the surface of the erosion control device.

e. Along with the required inspections after each storm event, weekly inspections will be performed to ensure that the installed devices have not been altered by construction activities. A log will be maintained by the contractor on each project demonstrating the vigilant monitoring and maintenance of the erosion control facilities.

f. Due to the mixed-use nature of the Veridea, residential development of single-family lots, townhomes, and condominiums within Veridea, net of public rights-of-way, RCA, and public and private easements, shall be exempt from the requirements of Section 7.2.5 of the Town of Apex UDO. Site Plans for single-family only developments in Veridea shall not be exempt from the requirements of 7.2.5.

B. Waste Minimization – SD Plan 3.4.3.3.b.

The waste minimization standards shall support the solid waste goals identified in the Wake County Environmental Stewardship Agenda, adopted by the Wake County Board of Commissioners February 21, 2005 and as may be amended from time to time.

a. Land-clearing Debris - Excavated soil and rock and land-clearing debris shall be re-used, to the extent allowed by applicable federal, state and local law, within Veridea to the maximum extent practicable. To this end, land-clearing debris may be mulched and used for landscaping and/or site stabilization purposes within Veridea.

b. Soil Stockpiles – Soil stockpiles 30' or less in height shall be permitted within the boundaries of Veridea. Stockpiles over 30' in height, but not exceeding 50', shall be permitted provided they are setback from property lines and thoroughfares a minimum of 100'. The maximum slope permitted for soil stockpiles is 3:1.

c. Mulch Stockpiles – Mulch stockpiles shall not exceed 15 feet in height and shall be stored no longer than 45 days.

C. Perimeter Buffers

a. A 10' Type B buffer is required where the SD zoning abuts property zoned or used primarily for residential purposes. This buffer is intended to remain undisturbed. If disturbance is necessary due to site constraints or other limiting factors, the areas disturbed will be replanted per the Type A Buffer standards in the Town of Apex UDO.

b. A 10' Type B Buffer is required when the SD zoning abuts property zoned or used primarily for retail, industrial, or other similar uses. This buffer is intended to remain undisturbed. If disturbance is necessary due to site constraints or other limiting factors, the areas disturbed will be replanted per the Type A Buffer standards in the Town of Apex UDO.

c. A 50' Type B Buffer is required where the residential uses in the SD zoning abut the rights-of-way of US-1 and NC-540. This buffer is intended to remain undisturbed. If disturbance is necessary due to site constraints or other limiting factors, the areas disturbed will be replanted per the Type A Buffer standards in the Town of Apex UDO.

d. A 20' Type B Buffer is required where non-residential and vertical mixed uses abut the rights-of-way of US-1 and NC-540. This buffer is intended to remain undisturbed. If disturbance is necessary due to site constraints or other limiting factors, the areas disturbed will be replanted per the Type A Buffer standards in the Town of Apex UDO.

e. When a building is constructed within 25' of the right-of-way of NC HWY 55, a planted 10' Type D buffer is required adjacent to NC HWY 55. No building shall be closer than 10' to the required buffer. This buffer is intended to remain undisturbed. If disturbance is necessary due to site constraints or other limiting factors, the areas disturbed will be replanted per the Type A Buffer standards in the Town of Apex UDO.

f. When a building is constructed more than 25' from the right-of-way of NC HWY 55, a planted 15' Type A buffer is required adjacent to NC HWY 55. This buffer is intended to remain undisturbed. If disturbance is necessary due to site constraints or other limiting factors, the areas disturbed will be replanted per the Type A Buffer standards in the Town of Apex UDO.

g. If additional property is added to the SD zoning, buffers on existing and newly added property shall meet the preceding buffer requirements or be removed, as applicable.

h. Greenways and side paths are permitted to traverse perimeter buffers.

D. Landscaping

a. Where feasible, deciduous shade trees shall be planted on the south sides of buildings; evergreens shall be planted on the north side.

b. Pollinator friendly landscaping will be planted in landscaped areas where feasible.

c. All landscaping planted within Veridea shall be listed in the Town of Apex's Design and Development Manual.

V. AIR QUALITY PROTECTION

In recognition of the impacts of greenhouse gas emissions that a development the size of Veridea could have the SD Plan 3.4.3.4. establishes air quality goals. The following standards aim to achieve these goals.

a. Multiple land uses that will provide the services and facilities to increase the internal trip capture of the community and reduce vehicular trip generation and vehicle miles traveled both within and outside Veridea.

b. Interconnected development that will provide sidewalks, greenways and walking paths to link land uses through-out the development to be accessible by means other than motorized vehicles.

c. Linear parks will be constructed along Jessie Drive to encourage walking and biking, preserve and highlight environmental features, and provide active greens spaces for future residents and employees.

d. Coordination with and, where appropriate, provide accommodations for alternative modes of travel including rail, bus, ride sharing, charging stations for moving both within Veridea and to connect to the rest of the region. In coordination with Town staff around Apex's Comprehensive Transportation plan, mobility hubs and curb areas planned for quick and safe pick -up and drop offs in high-density, nixed use areas of the Project.

e. Significant open space, conservation area, landscape areas and street trees in high density areas to maintain a significant carbon absorbing medium.

f. Where practicable, buildings will be oriented toward pedestrian facilities or transit routes to promote modes of travel other than the single automobile.

g. To promote walkability, two grade-separated pedestrian crossings will be constructed. The crossings will be constructed as required per the Town of Apex's Comprehensive Transportation Plan, as amended.

h. Parking for electric vehicles and bicycles will be provided as required per the Town of Apex UDO.

i. Single-family homes will include a 240A/50V electrical outlet in garages for electric vehicle charging.

APPENDIX A

WATER RESOURCES DEPARTMENT

December 09, 2022

Steven Ball, RF, PWS
Soil & Environmental Consultants, PA
8412 Falls of Neuse Road, Suite 104
Raleigh, NC 27615

Subject: Stream Buffer Determination
Veridea
Apex, NC
Cape Fear River Basin

Apex 22-010

Dear Mr. Ball,

On December 07th, 2022, I met with you at the subject site to evaluate twenty-three (23) drainage features and determine if they are subject to the Town of Apex (Town) riparian buffer rules. Based on the information obtained during the evaluation and per the requirements set forth in Section 6.1.11 of the Town Unified Development Ordinance (UDO), I concur with the stream classifications as shown on the attached sketch dated 12-7-2022 and 11-22-2022 for SEV1.

Drainage Feature	Shown as on USGS	Shown as on Soil Survey	Determination made in the field	Determined Buffer Width
SEV1	Present	Perennial	Intermittent	50 feet
Feature 1 Upstream	Not Present	Intermittent	Ephemeral	0 feet
Feature 1 Downstream	Not Present	Intermittent	Intermittent	50 feet
Feature 2 Upstream	Not Present	Intermittent	Ephemeral	0 feet
Feature 2 Downstream	Not Present	Intermittent	Intermittent	50 feet
Feature 3 SFA	Not Present	Intermittent	Ephemeral	0 feet
Feature 3 SFB	Not Present	Intermittent	Intermittent	50 feet
Feature 4 Upstream	Not Present	Intermittent	Ephemeral	0 feet
Feature 4 Downstream	Not Present	Intermittent	Intermittent	50 feet

Feature 5 Upstream	Not Present	Intermittent	Ephemeral	0 feet
Feature 5 Downstream	Not Present	Intermittent	Intermittent	50 feet
Feature 6 Upstream	Not Present	Intermittent	Ephemeral	0 feet
Feature 6 Downstream	Not Present	Intermittent	Intermittent	50 feet
Feature 8 W	Not Present	Intermittent	Intermittent	50 feet
Feature 8 X	Not Present	Intermittent	Ephemeral	0 feet
Feature 9 Z	Not Present	Intermittent	Ephemeral	0 feet
Feature 10 Y	Not Present	Intermittent	Ephemeral	0 feet
Feature 11- I	Present	Perennial	Intermittent	50 feet
Feature 11-P	Present	Perennial	Perennial	100 feet
Feature 12	Present	Intermittent	Ephemeral	0 feet
Feature 13-E	Present	Intermittent	Ephemeral	0 feet
Feature 13-I	Present	Intermittent	Intermittent	50 feet
Stream 14	Not Present	Intermittent	Ephemeral	0 feet

This on-site determination shall expire five (5) years from the date of this letter. Landowners or affected parties that dispute a determination made by the Division of Water Resources (DWR) or Delegated Local Authority in the Jordan Lake watershed may request a determination by the DWR Director.

An appeal request must be made within sixty (60) days of date of this letter or from the date the affected party (including downstream and/or adjacent owners) is notified of this letter. A request for a determination by the Director shall be referred to in writing c/o Paul Wojoski, DWR – 401 & Buffer Permitting Branch; 1617 Mail Service Center, Raleigh, NC 27699-1617. Otherwise the appeal procedure will be in accordance with UDO Section 6.1.11.

If you dispute the Director's determination, you may file a petition for an administrative hearing. You must file the petition with the Office of Administrative Hearings within sixty (60) days of receipt of this notice of decision. A petition is considered filed when it is received in the Office of Administrative Hearings

during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official State holidays.

To request a hearing, send the original and one (1) copy of the petition to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. A copy of the petition must also be served to the Department of Natural Resources, c/o Bill Lane, General Counsel, 1601 Mail Service Center, Raleigh, NC 27699-1601.

This determination is final and binding unless, as detailed above, you ask for a hearing or appeal within sixty (60) days. This project may require a Section 404/401 Permit for the proposed activity. Any inquiries should be directed to the US Army Corp of Engineers (Raleigh Regulator Field Office) at (919) 554-4884. If you have any questions, please do not hesitate to contact me at (919) 372-7470.

Sincerely,

James Misciagno, CES, CPESC
Environmental Field Services Supervisor

NORTH CAROLINA
WAKE COUNTY

RIGHT OF ENTRY

This Right of Entry is executed this 13 day of October, 2022 by HH Trinity Apex Investments LLC and Veridea Holdings LLC (the "Owners").

WHEREAS, the Town of Apex ("Town") is seeking to make a stream buffer determination across the property known as Veridea - South Village East in the Town of Apex, North Carolina and designated as PIN # 0740240514, 0740261491, 0740241020 by the Wake County Revenue Department (the "**Subject Property**");

WHEREAS, the Owners are agreeable to provide the Town with this Right of Entry under the terms and conditions stated herein so that the above referenced determination may proceed.

NOW THEREFORE in light of the above premises, the Owners do hereby grant and give freely and without coercion, the right of access and entry to the Subject Property on the terms and conditions as stated below:

1. The Town of Apex and its contractors may enter the Subject Property for the purpose of conducting on-site environmental investigations and issuing a determination based on those investigations as it relates to stream buffer determination.
2. This Right of Entry does not convey to the Town any title or ownership interest in the Subject Property.
3. The Town and its employees, contractors, agents and representatives enter upon the Subject Property at their own risk and assume all risks related to the property.
4. The undersigned agrees and warrants to hold harmless the Town of Apex, its agencies, departments, contractors, and subcontractors, and discharges and waives any action, either equitable or legal that arise from the activities described above on the property except in the case of negligence by the Town.

Witness Cynthia Hedgpeth By: _____

By: _____

Riparian Buffer Call
Application

This application is required to be fully completed and submitted to Town staff prior to conducting a buffer call. Please submit the application package electronically to james.miscione@apexnc.org.

PROPERTY INFORMATION

Owner(s): HH Trinity Apex Investments LLC / Veridea Holdings LLC

Site Address: Veridea Parkway - South of North Carolina Highway 540

CONSULTANT INFORMATION (If applicable)

Name: McAdams (William H. Derks)

Address: 621 Hillsborough Street, Raleigh, North Carolina 27603

Email: Derks@mcadamsco.com

Phone: 919- 361- 5000

CHECKLIST

Please place a checkmark in the spaces provided below to indicate that the required information has been provided with this submittal.

Right of Entry Form	X
NCDEQ Stream Identification Forms (v. 4.11)	X
Sketch Map*	X

Topo Map (most recent version)	X
1970 Wake County Soil Survey Map	X

*Sketch map should show all drainage features on the property with all applicable riparian buffers shown. Please clearly indicate or list which features are being called with this application.

NOTES

SIGNATURE (Consultant or Responsible Party)

By my signature below, I certify that the information provided with this application is accurate and truthful.

Date: October 21, 2022

East & South Village Delineation & Buffer Review.

The Preliminary Jurisdictional Determination (PJD) of streams and wetlands for the entirety of Veridea was reapproved by the USACOE and NCDENR on May 26, 2017. In discussions with the reviewers in preparation for the submittal of the Individual Permit (IP) application for Veridea it was agreed that that delineation would be utilized and would be extended by virtue of the IP approval for the duration of the IP.. There is precedent for a large IP to be approved for 25-years. The requested duration for the Veridea IP is 30-years.

It is understood that field conditions may change over time as development occurs in the watershed areas outside of the Veridea boundary. But the establishment of the buffers initially for East Village, and in the near future for the rest of Veridea, also need to have a longer commitment as well in order to have a reliable map for planning development that may occur 10-, 15, or 20-years from now.

To begin that confirmation field review of the streams in the East Village section of Veridea was completed by S&EC on September 29, 2022 and for South Village East on October 6, 2022. The scoring sheets are attached. The feature numbers below, from the recent review in the field, also have a reference to the Stream designation from the approved PJD. Discussion below references the inconsistencies of the PJD, Town's Watershed Protection Overlay Map, USGS, Wake County Soils Survey and field scoring sheets.

It is worth noting that all of the intermittent stream features shown on the East Village portion of Veridea are from designations on the Wake Co. Soils Survey. The Soils Survey was completed in 1970 and depicts the streams with intermittent buffers on the Town's map as either "Not crossable with tillage" or "Unclassified". None of the streams are shown on the online USGS Apex or New Hill Quad maps dated 2022.

Feature 1 (Stream LL) —This feature appears to extend upstream approx. 40-50' higher than the PJD. A new flag was hung (TOA 1) at the start point. Shown as a perennial stream on the PJD, intermittent on the Town's map, not identified on USGS and intermittent on the Soils Survey. Stream forms upstream and downstream were taken

Feature 2 (Stream II) – The start point stayed the same. A new flag was hung (TOA 2) start point. Stream forms were taken upstream and downstream

Feature 3 (Stream BB) - The pond is shown on USGS but not on the Soils Survey. Just the reverse for the stream. Not shown on USGS but indicated on the Soils Survey. Delineated as Intermittent Unimportant on the PJD. It appears that the buffer should start at the confluence of two minor draws from below the pond and the second running from the southeast. The feature begins at flag TOA 3, the buffer should not start until it reaches the drainage that runs north south from the pond as shown. There is also enough of a gap between the pond and this feature that the pond should not be buffered.

SEV1

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1 South Village East 1

Date: 10/06/2022	**Project/Site:** VERIDEA/11065	**Latitude:** 35.684766
Evaluator: SWEC - JOSHUA HARVEY	**County:** WAKE	**Longitude:** -78.855885
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 25.5	**Stream Determination (circle one)** Ephemeral (Intermittent) Perennial	**Other** *e.g. Quad Name:*

A. Geomorphology (Subtotal = 13.5)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = 0		Yes = 3	

*artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Per
USGS = Present

10/25/2022 JM

NC Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1 — TOA 1 – UPStream

Date: 9/29/22	Project/Site: Vereden - EU	Latitude: 35.695892
Evaluator: K. Murph.	County: Wake	Longitude: -78.63536
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 13	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other Apex *e.g. Quad Name*

A. Geomorphology (Subtotal = 6.5)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel (artificial ditches are not rated; see discussions in manual)	No = (0)		Yes = 3	

B. Hydrology (Subtotal = 4.5)				
12. Presence of Baseflow	(3)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = Int
USGS = NP

JM 10/31/2022

Down TOA-1 TOA1 - Down stream

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 9/24	Project/Site: Upside - EU	Latitude: 35.69571
Evaluator: BB/KM	County: Wake	Longitude: -78.83541
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 22.75	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other 1 pge *e.g. Quad Name:*

A. Geomorphology (Subtotal = 13)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	(2)	3
8. Headcuts	0	(0.5)	1	1.5
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	No = 0		Yes = 3	
11. Second or greater order channel *Artificial ditches are not rated; see discussions in manual*				

B. Hydrology (4.5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (1)	

C. Biology (Subtotal = 5.25)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	(0.5)	1	1.5
24. Amphibians	(0)	(0.5)	1	1.5
25. Algae	(0)	0.5	(1)	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Int

USGS = NP

JM 10/31/2022

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1 TOA2 - UPStream

Date: 9/29/22	Project/Site: Veridea - EU	Latitude: 35.697061
Evaluator: BB/KM	County: Wake	Longitude: -78.836777
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 11.5	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 7)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = (0)		Yes = 3	

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

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

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

Notes:

Sketch:

Soils = Int
USGS = NP

JM 10/31/2022

T to A 2 Below

NC Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 9/29/22	Project/Site: Vericle - EU	Latitude: 35.696705
Evaluator: SB/KBM	County: Wake	Longitude: -78.83283
Total Points: Stream is at least intermittent if ≥ 19 or perennial if ≥ 30* (19)	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other Apex e.g. Quad Name:

A. Geomorphology (Subtotal = (135))

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

ª artificial ditches are not rated; see discussions in manual

B. Hydrology (1.5)

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

C. Biology (Subtotal = 4)

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

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

Notes:

Sketch:

Soils = Int
USGS = NP

JM 10/31/2022

Feature 3-SFA

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 9/29/22	Project/Site: Verdera LV	Latitude: 35.701467
Evaluator: SB KM	County: Wake	Longitude: -78.852491
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** (7)	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Apex

A. Geomorphology (Subtotal = 3.5)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	(0)	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

*artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Int

USGS = NP

JM 11/16/2022

Feature 3 - SFB

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 9/29/22	Project/Site: Veridea EV	Latitude: 35.700 [illegible]
Evaluator: SB KM	County: Wake	Longitude: -78.[illegible]205
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** (19)	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: [illegible]

A. Geomorphology (Subtotal = 9.5)	Absent	Weak	Moderate	Strong
1ª. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

ª artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.5)				
18. Fibrous roots in streambed	3	(0)	1	0
19. Rooted upland plants in streambed	3	(0)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	0	(0.5)	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75 OBL = 1.5 Other = (0)			

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

Notes:

Sketch:

Soils = Int
USGS = NP

JM 11/21/2022

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

TOA 4_ upstream

Date: 9/29/22	Project/Site: Uwharrie - EU	Latitude: 35.701476
Evaluator: SM/KM	County: Uwharrie	Longitude: -79.83539
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 9.5	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other Apex *e.g. Quad Name:*

A. Geomorphology (Subtotal = 4.5)	Absent	Weak	Moderate	Strong
1a. Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Int
USGS = NP

SM 10/31/2022

TOA4 Downstream below

NC Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 9/29/22	Project/Site: Vericlea - UT	Latitude: 39.701532
Evaluator: SB3/KM	County: Wake	Longitude: 78.83550
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 19.5	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other Apex e.g. Quad Name:

A. Geomorphology (Subtotal = 10.5)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

*artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter 4	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

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

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

Notes:

Sketch:

Soils = Int

USGS = NP

JM 10/31/2022

NC Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1 TOA 5- upstream

Date: 9/29/22	Project/Site: Vereden - LV	Latitude: 35.69974
Evaluator: SB/KM	County: Wake	Longitude: -78.839869
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 17	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other e.g. Quad Name: Apex

A. Geomorphology (Subtotal = 8)	Absent	Weak	Moderate	Strong
1a. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel (artificial ditches are not rated; see discussions in manual)	No = 0		Yes = 3	

B. Hydrology (Subtotal = 4)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	(3)	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Int

USGS = NP

JM 10/31/2022

Below TOP & Downstream

NC Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 9/29/22	Project/Site: Vendue - EV	Latitude: 35.694426
Evaluator: SB/KM	County: Wake	Longitude: -78.83[illegible]23
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 21.75	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other Apex *e.g. Quad Name:*

A. Geomorphology (Subtotal = 12)	Absent	Weak	Moderate	Strong
1a. Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	(2)	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	(1.5)
11. Second or greater order channel *artificial ditches are not rated; see discussions in manual*	No = (0)		Yes = 3	

B. Hydrology (5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(0)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Int

USGS = NP

JM 10/31/2022

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

TOA 6 - upstream

Date: 9/29/22	Project/Site: Vanden - EV	Latitude: 35.648558
Evaluator: SB/KM	County: Wake	Longitude: -78.841210
Total Points: 14 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other RAPID e.g. Quad Name:

A. Geomorphology (Subtotal = 5.5)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	0.5	1	(1.5)
11. Second or greater order channel	No = (0)		Yes = 3	

*artificial ditches are not rated; see discussions in manual

B. Hydrology (3.5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	(0)	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = (0)			

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

Notes:

Sketch:

Soils = Int

USGS = NP

JM 10/31/2022

To A6* Below / Downstream

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 9/29/22	Project/Site: Veridea-LV	Latitude: 36.648274
Evaluator: SB/KM	County: Davie	Longitude: -80.842114
Total Points: (20) *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other Apex *e.g. Quad Name:*

A. Geomorphology (Subtotal = 12)	Absent	Weak	Moderate	Strong
1st Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	1	(1)	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	1	(1.5)
11. Second or greater order channel	No = 0		Yes = 3	

*artificial ditches are not rated; see discussions in manual

B. Hydrology (5.0)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.5)				
18. Fibrous roots in streambed	3	(2)	(1)	0
19. Rooted upland plants in streambed	3	(2)	(1)	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	0.5	1	1.5
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Int
USGS = NP

SM 10/31/2022

Stream Form. W
Feature - B ?

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 9/29/22	Project/Site: Meridian EV	Latitude: 35.701029
Evaluator: SB KM	County: Wake	Longitude: -78.843825
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 19	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other Apex *e.g. Quad Name:*

A. Geomorphology (Subtotal = 10.5)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

*artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4.5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = InT
USGS = NP

Jm 11/21/2022

8

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

Stream Form X-Feature 8

NC DWQ Stream Identification Form Version 4.1

Date: 9/30/22	Project/Site: Veridea - EV	Latitude: 35.70089
Evaluator: SB/KM	County: Wake	Longitude: -78.49436
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 13	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other *e.g. Quad Name:* Apex

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

*artificial ditches are not rated; see discussions in manual

B. Hydrology (5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	(0)	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = INT
USGS = NP

10/31/2022

~~Do not need to see~~
~~Fill~~ OM

9

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

Stream form Z-Feature 9

NC DWQ Stream Identification Form Version 4.1

Date: 9/29/22	Project/Site: Vanderlea -LEV	Latitude: 35.648238
Evaluator: SB/KM	County: Wake	Longitude: -78.84806
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 18	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Apex

A. Geomorphology (Subtotal = 8)	Absent	Weak	Moderate	Strong
1ª Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure; ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel (artificial ditches are not rated; see discussions in manual)	No = (0)		Yes = 3	

B. Hydrology (5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0*
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = (0)			

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

Notes:

Sketch:

Soils = Int

USGS = NP

JM 10/31/2022

10

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

Stream form Y-Feature 10

NC DWQ Stream Identification Form Version 4.1

Date: 9/29/22	Project/Site: Veitch Lake	Latitude: 35.6953
Evaluator: SB/VM	County: Wake	Longitude: -78.84584
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 15	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 5)	Absent	Weak	Moderate	Strong
1* Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	(0)	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = (0)		Yes = 3	

B. Hydrology (5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Int
USGS = NP

JM 10/31/2022

Stream Form [illegible]

11-II - Feature 11

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 12/7/22	Project/Site: Verida EV	Latitude: 35.70463
Evaluator: SBell	County: Wake	Longitude: -78.843506
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 26.5	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Apex

A. Geomorphology (Subtotal = 15)	Absent	Weak	Moderate	Strong
1ª Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = 0		Yes = (3)	

ª artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7.5)				
12. Presence of Baseflow	0	1	(2)	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = Perennial

USGS = Present

JM 12/8/2022

Stream Form [illegible]

11-P

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 12/7/22	Project/Site: Veridea LV	Latitude: 35.704339
Evaluator: SDgill	County: Wake	Longitude: -78.84395
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 32	Stream Determination (circle one) Ephemeral Intermittent (Perennial)	Other Apex *e.g. Quad Name:*

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

*artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Perennial
USGS = present

JM 12/8/2022

Veridea EAST FEATURE 12

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 12/5/2022	Project/Site: VERIDEA EAST	Latitude: 35.705299
Evaluator: SHEC - JOSHUA HARVEY	County: WAKE	Longitude: -78.847135
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 12.5	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other *e.g. Quad Name:*

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

a artificial ditches are not rated; see discussions in manual

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

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Int

USGS = Present

JM 12/8/2022

Veridea East FEATURE 13 E

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 12/5/2022	Project/Site: VERIDEA EAST	Latitude: 35.702822
Evaluator: SREC - JOSHUA HARVEY	County: WAKE	Longitude: -78.847666
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 15.5	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other *e.g. Quad Name:*

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

*artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Int

USGS = Present

12/8/2022

Veridea East FEATURE 13 I

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 12/5/2022	Project/Site: VERIDEA EAST	Latitude: 35.702124
Evaluator: SEE - JOSHUA HARVEY	County: WAKE	Longitude: -78.846123
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 21	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other *e.g. Quad Name:*

A. Geomorphology (Subtotal = 9.5)	Absent	Weak	Moderate	Strong
1[a] Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	(No = 0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5.5)				
12. Presence of Baseflow	0	(1)	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		(Yes = 3)	

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

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

Notes:

Sketch:

Soils = Int

USGS = Present JM 12/6/2022

Verdea EAST FEATURE 14

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

Date: 12/5/2022	Project/Site: VERIDEA EAST	Latitude: 35.700972
Evaluator: SCC. JOSHUA HARVEY	County: WAKE	Longitude: -78.748283
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** No Scoreable Feature	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other *e.g. Quad Name:*

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

ª artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

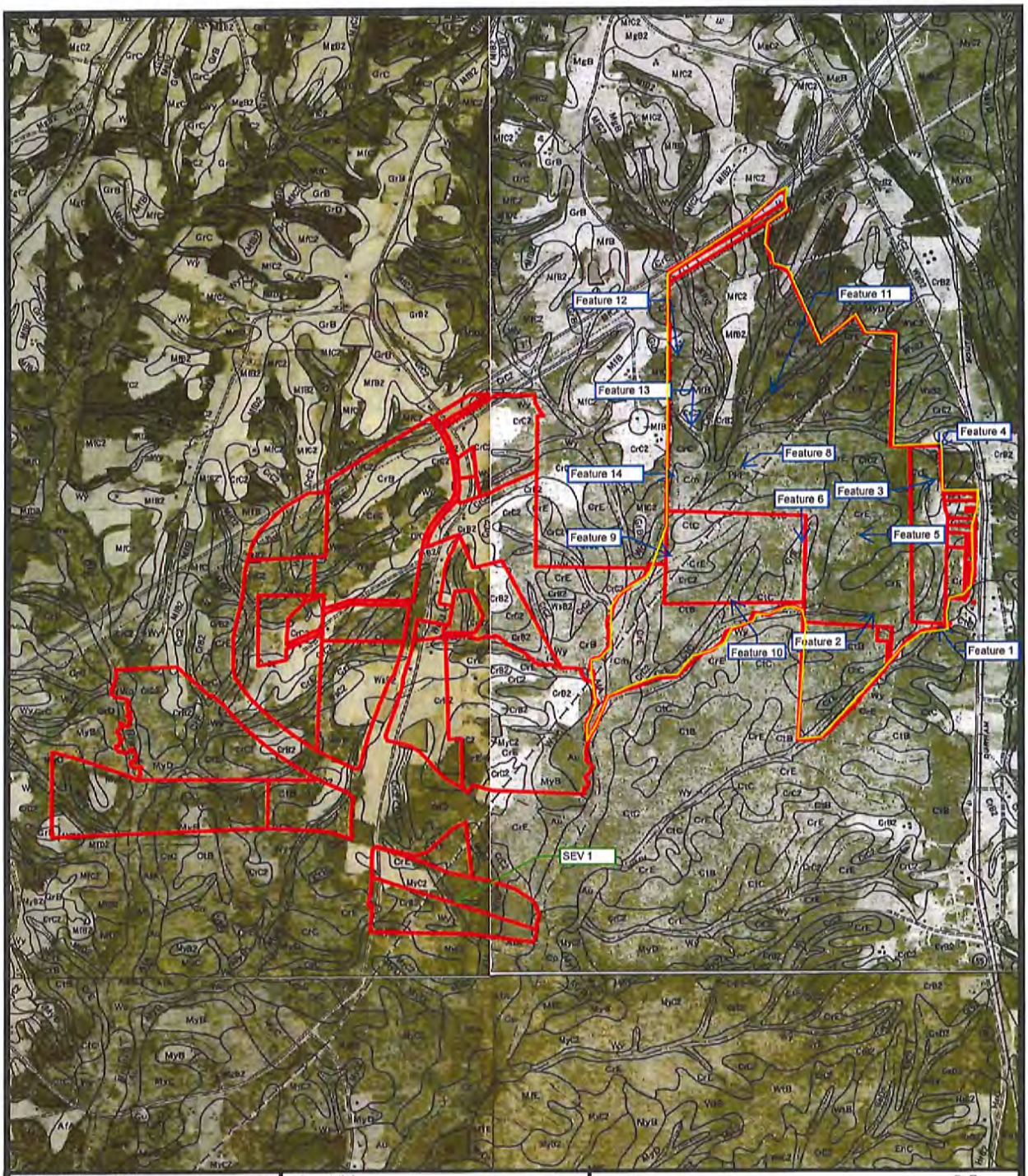
Sketch:

No Scoreable Feature JM

SOILS = Int

US62 = NP

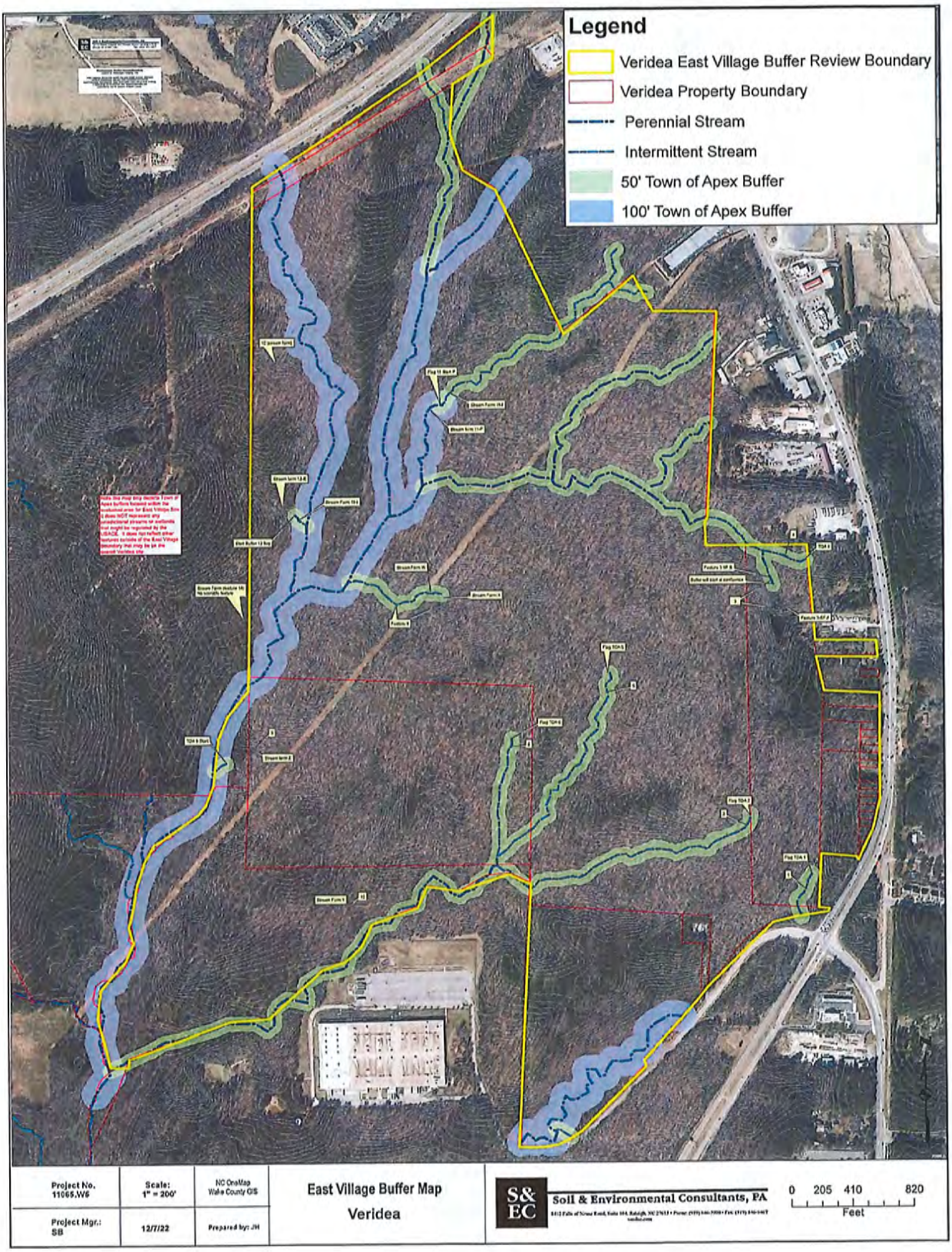
12/8/2022



Project Number: 11065.W4	**Map Title:** SS Map	0 1,750 3,500 Feet	N
Project Manager: DS	Veridea Wake County, NC		
Scale: 1" = 1750'			
Date: 09/10/2021	**Source:** Wake County Soil Survey Sheets 74, 75, 82 & 83	S&EC Soil & Environmental Consultants, PA	

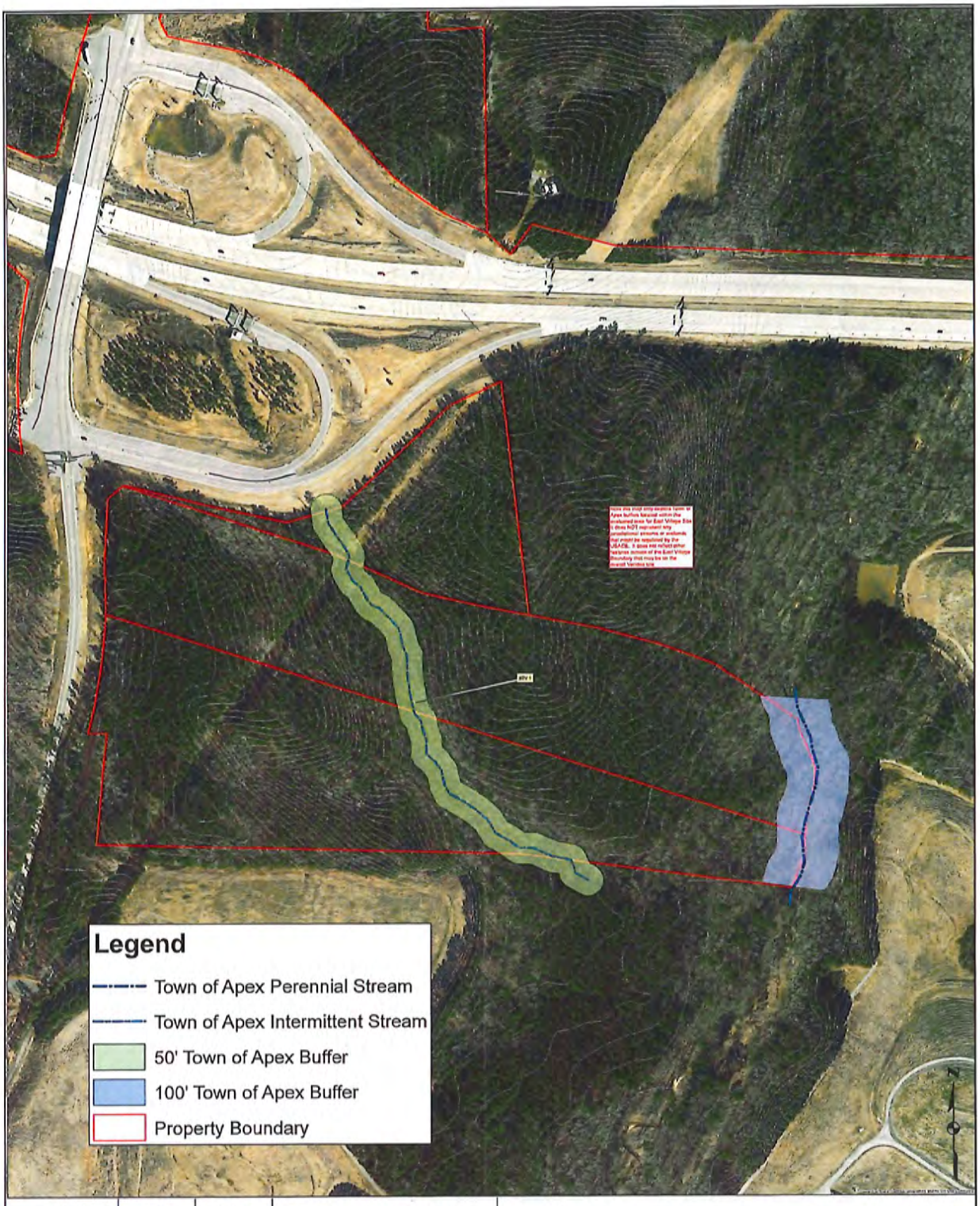
8412 Falls of Neuse Road, Suite 104, Raleigh, NC 27615 • Phone: (919) 846-5900 • Fax: (919) 846-5467
sandec.com

JM 12/8/2022



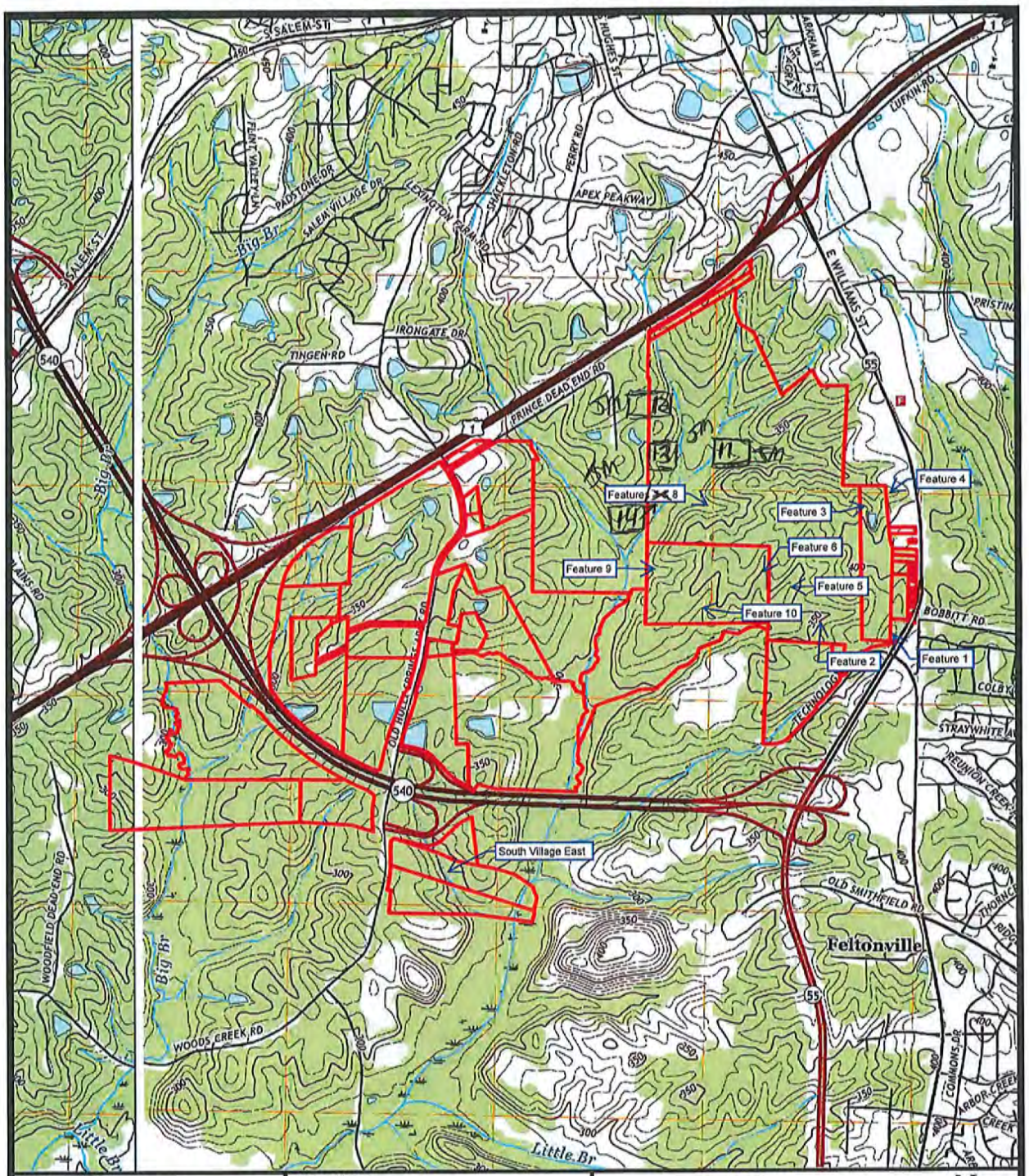
Project No. 11065.W6	Scale: 1" = 200'	NC OneMap Wake County GIS	East Village Buffer Map Veridea	S&EC Soil & Environmental Consultants, PA	0 205 410 820 Feet
Project Mgr.: SB	12/7/22	Prepared by: JH			

TM 12/8/2022



Project No. 11065.WS	Scale: 1" = 150'	NC OneMap Wake County GIS	Southeast Village Buffer Map Veridea	S&EC Soil & Environmental Consultants, PA 0 100 200 400 Feet
Project Mgr.: SB	11/22/22	Prepared by: JH		

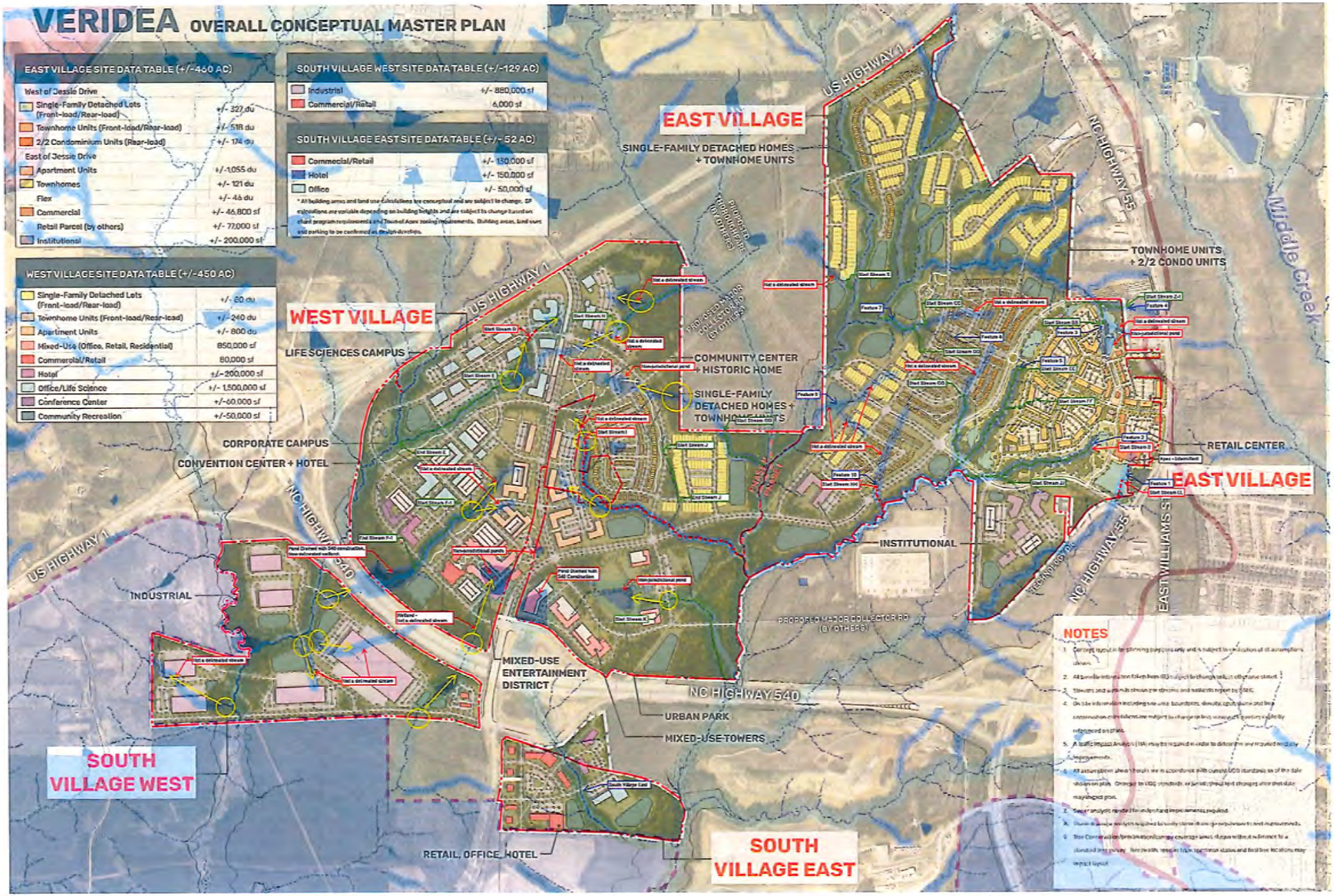
JM 11/22/2022

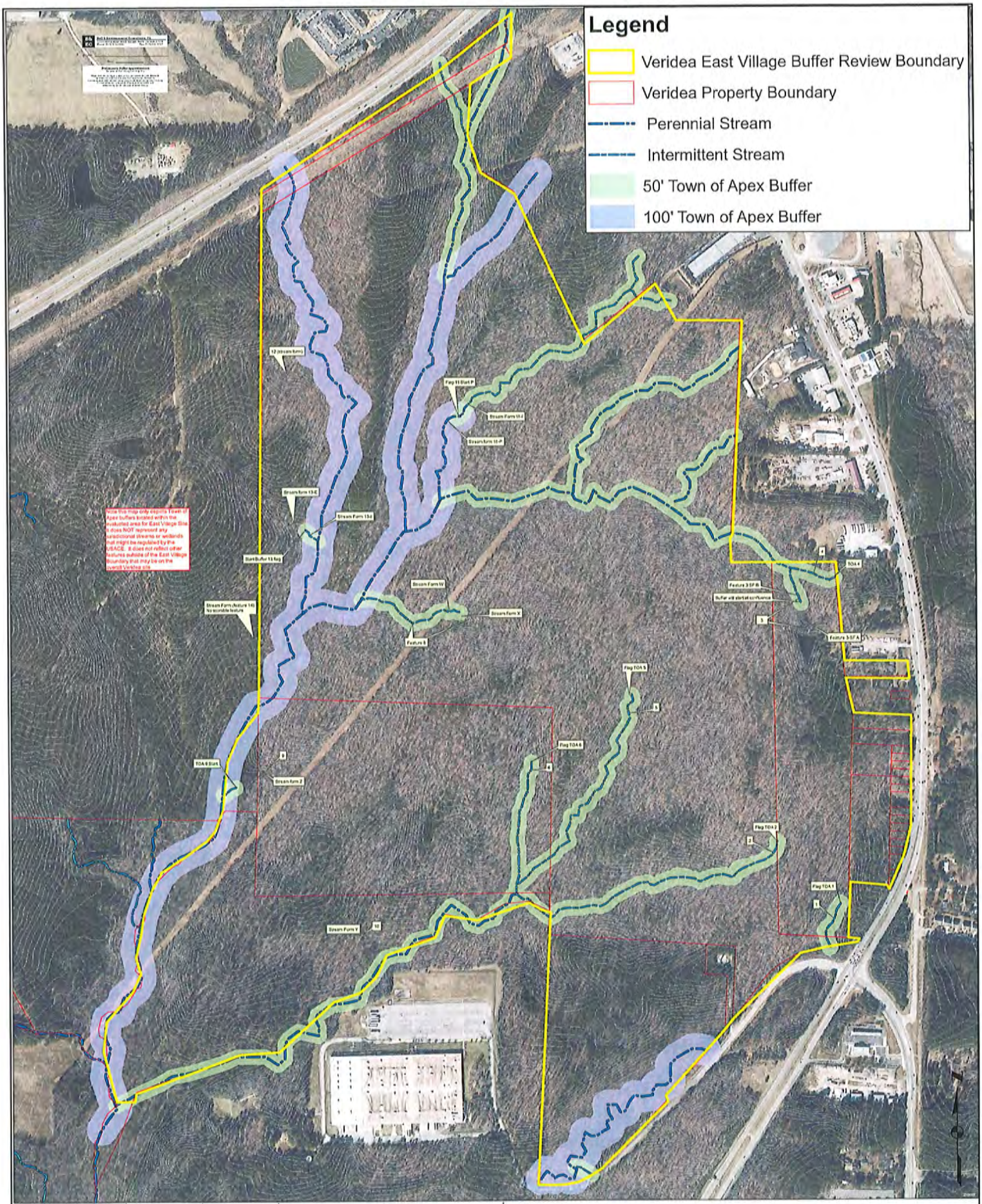


Project Number: 11065.W4	**Map Title:** USGS Map	0 2,000 4,000 Feet	N
Project Manager: DS	Veridea Wake County, NC		
Scale: 1" = 2000'			
Date: 09/10/2021	**Source:** USGS Wake County Apex & New Hill Quad	S&EC Soil & Environmental Consultants, PA	

JM 12/8/2022

JM 12/8/2022


VERIDEA OVERALL CONCEPTUAL MASTER PLAN
EAST VILLAGE SITE DATA TABLE (+/-460 AC)
West of Jessie Drive
Single-Family Detached Lots (Front-load/Rear-load) +/- 327 du
Townhome Units (Front-load/Rear-load) +/- 518 du
2/2 Condominium Units (Rear-load) +/- 174 du
East of Jessie Drive
Apartment Units +/-1,055 du
Townhomes +/- 121 du
Flex +/- 45 du
Commercial +/- 46,800 sf
Retail Parcel (by others) +/- 77,000 sf
Institutional +/- 200,000 sf
SOUTH VILLAGE WEST SITE DATA TABLE (+/-129 AC)
Industrial +/- 880,000 sf
Commercial/Retail 6,000 sf
SOUTH VILLAGE EAST SITE DATA TABLE (+/- 52 AC)
Commercial/Retail +/- 130,000 sf
Hotel +/- 150,000 sf
Office +/- 50,000 sf
* All building areas and land use calculations are conceptual and are subject to change. SF calculations are variable depending on building heights and are subject to change based on client program requirements and Town of Apex zoning requirements. Building areas, land uses and parking to be confirmed as design develops.
WEST VILLAGE SITE DATA TABLE (+/-450 AC)
Single-Family Detached Lots (Front-load/Rear-load) +/- 80 du
Townhome Units (Front-load/Rear-load) +/- 240 du
Apartment Units +/- 800 du
Mixed-Use (Office, Retail, Residential) 850,000 sf
Commercial/Retail 80,000 sf
Hotel +/- 200,000 sf
Office/Life Science +/- 1,500,000 sf
Conference Center +/-60,000 sf
Community Recreation +/-50,000 sf
EAST VILLAGE
SINGLE-FAMILY DETACHED HOMES + TOWNHOME UNITS
TOWNHOME UNITS + 2/2 CONDO UNITS
RETAIL CENTER
EAST VILLAGE
INSTITUTIONAL
WEST VILLAGE
LIFE SCIENCES CAMPUS
CORPORATE CAMPUS
CONVENTION CENTER + HOTEL
COMMUNITY CENTER + HISTORIC HOME
SINGLE-FAMILY DETACHED HOMES + TOWNHOME UNITS
INDUSTRIAL
MIXED-USE ENTERTAINMENT DISTRICT
URBAN PARK
MIXED-USE TOWERS
RETAIL, OFFICE, HOTEL
SOUTH VILLAGE WEST
SOUTH VILLAGE EAST
US HIGHWAY 1
NC HIGHWAY 55
NC HIGHWAY 540
EAST WILLIAMS ST
Middle Creek
PROPOSED MAJOR COLLECTOR RD (BY OTHERS)
NOTES



Project No. 11065.W5	Scale: 1" = 200'	NC OneMap Wake County GIS	East Village Buffer Map Veridea	S&EC Soil & Environmental Consultants, PA
Project Mgr.: SB	12/7/22	Prepared by: JH		0 205 410 820 Feet

January 27, 2023

Steven Ball, RF, PWS
Soil & Environmental Consultants, PA
8412 Falls of Neuse Road, Suite 104
Raleigh, NC 27615

Subject: Stream Buffer Determination
Veridea West Village Ph II
Apex, NC
Cape Fear River Basin

Apex 22-017

Dear Mr. Ball,

On January 20th and 27th, 2023, we met with your staff AJ and Kevin Murphrey at the subject sites to evaluate forty (40) drainage features and determine if they are subject to the Town of Apex (Town) riparian buffer rules. Based on the information obtained during the evaluations and per the requirements set forth in Section 6.1.11 of the Town Unified Development Ordinance (UDO), I concur with the stream classifications as shown on the attached sketch dated 12-02-2022.

Drainage Feature	Shown as on USGS	Shown as on Soil Survey	Determination made in the field	Determined Buffer Width
Feature B – West SF14	Not Present	Intermittent	Ephemeral	0 feet
Feature C – West SF1	Present	Perennial	Intermittent	50 feet
Feature C – West SF16	Not Present	Intermittent	Ephemeral	0 feet
Feature C – West SF5	Not Present	Perennial	Ephemeral	0 feet
Feature E – West SF4	Not Present	Intermittent	Ephemeral	0 feet
Feature G – West SF40	Not Present	Intermittent	Ephemeral	0 feet
Feature H – West SF3	Not Present	Intermittent	Ephemeral	0 feet
Feature J – West SF2	Not Present	Intermittent	Ephemeral	0 feet
Feature K – West SF28	Not Present	Intermittent	Ephemeral	0 feet

Feature K – West SF29	Not Present	Intermittent	Intermittent	50 feet
Feature K – West SF30	Not Present	Intermittent	Ephemeral	0 feet
Feature K – West SF31	Not Present	Intermittent	Ephemeral	0 feet
Feature K – West SF32	Not Present	Intermittent	Intermittent	50 feet
Feature L – West SF15	Not Present	Intermittent	Ephemeral	0 feet
Feature AA – West SF6	Present	Perennial	Ephemeral	0 feet
Feature O – West SF13	Present	Perennial	Intermittent	50 feet
Pond 6	Present	Present	Intermittent	50 feet
Feature O – West SF12	Present	Perennial	Ephemeral	0 feet
Feature O – West SF10	Present	Perennial	Ephemeral	0 feet
Feature O – West SF11	Present	Perennial	Intermittent	50 feet
Feature O – West SF9	Present	Perennial	Ephemeral	0 feet
Feature O – West SF8	Present	Perennial	Intermittent	50 feet
Feature P – West SF37	Not Present	Intermittent	Ephemeral	0 feet
Feature Q – West SF7	Not Present	Intermittent	Ephemeral	0 feet
Feature R – West SF27	Not Present	Intermittent	Ephemeral	0 feet
Feature R – West SF25	Not Present	Intermittent	Intermittent	50 feet
Feature S – West SF26	Not Present	Intermittent	Ephemeral	0 feet
Feature T – West SF24	Not Present	Perennial	Ephemeral	0 feet
Feature T – West SF20	Not Present	Perennial	Intermittent	50 feet
Feature U – West SF23	Not Present	Intermittent	Ephemeral	0 feet

Feature V – West SF35	Not Present	Intermittent	Ephemeral	0 feet
Feature V – West SF36	Not Present	Intermittent	Intermittent	50 feet
Feature V – West SF34	Not Present	Intermittent	Perennial *Intermittent on Soils	50 feet
Feature W – West SF17	Not Present	Intermittent	Ephemeral	0 feet
Feature X – West SF22	Not Present	Intermittent	Ephemeral	0 feet
Feature X – West SF21	Not Present	Intermittent	Intermittent	50 feet
Feature X – West SF41	Not Present	Intermittent	Ephemeral	0 feet
Feature Y – West SF18	Not Present	Perennial	Ephemeral	0 feet
Feature Y – West SF19	Not Present	Perennial	Intermittent	50 feet
Feature BB – West SF38	Not Present	Intermittent	Ephemeral	0 feet
Feature CC – West SF39	Not Present	Intermittent	Ephemeral	0 feet

This on-site determination shall expire five (5) years from the date of this letter. Landowners or affected parties that dispute a determination made by the Division of Water Resources (DWR) or Delegated Local Authority in the Jordan Lake watershed may request a determination by the DWR Director.

An appeal request must be made within sixty (60) days of date of this letter or from the date the affected party (including downstream and/or adjacent owners) is notified of this letter. A request for a determination by the Director shall be referred to in writing c/o Paul Wojoski, DWR – 401 & Buffer Permitting Branch; 1617 Mail Service Center, Raleigh, NC 27699-1617. Otherwise the appeal procedure will be in accordance with UDO Section 6.1.11.

If you dispute the Director's determination, you may file a petition for an administrative hearing. You must file the petition with the Office of Administrative Hearings within sixty (60) days of receipt of this notice of decision. A petition is considered filed when it is received in the Office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official State holidays.

To request a hearing, send the original and one (1) copy of the petition to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. A copy of the petition must also be served

to the Department of Natural Resources, c/o Bill Lane, General Counsel, 1601 Mail Service Center, Raleigh, NC 27699-1601.

This determination is final and binding unless, as detailed above, you ask for a hearing or appeal within sixty (60) days. This project may require a Section 404/401 Permit for the proposed activity. Any inquiries should be directed to the US Army Corp of Engineers (Raleigh Regulator Field Office) at (919) 554-4884. If you have any questions, please do not hesitate to contact me at (919) 372-7470.

Sincerely,

James Misciagno, CES, CPESC
Stormwater Field Services Supervisor

Riparian Buffer Call
Application

This application is required to be fully completed and submitted to Town staff prior to conducting a buffer call. Please submit the application package electronically to james.misciagno@apexnc.org.

PROPERTY INFORMATION

Owner(s): *See attached table

Site Address: 3012 Veridea Parkway, Apex, North Carolina 27539

CONSULTANT INFORMATION (If applicable)

Name: Joshua Harvey

Address: 8412 Falls of Neuse Road, Suite 104, Raleigh, NC 27615

Email: jharvey@sandec.com

Phone: 919.760.9622

CHECKLIST

Please place a checkmark in the spaces provided below to indicate that the required information has been provided with this submittal.

Right of Entry Form	X
NCDEQ Stream Identification Forms (v. 4.11)	X
Sketch Map*	X

Topo Map (most recent version)	X
1970 Wake County Soil Survey Map	X

*Sketch map should show all drainage features on the property with all applicable riparian buffers shown. Please clearly indicate or list which features are being called with this application.

NOTES

SIGNATURE (Consultant or Responsible Party)

By my signature below, I certify that the information provided with this application is accurate and truthful.

Joshua Harvey Digitally signed by Joshua Harvey Date: 2023.01.23 08:55:39 -05'00'

Date: 01/04/2023

NORTH CAROLINA
WAKE COUNTY

RIGHT OF ENTRY

This Right of Entry is executed this _____ day of _____, 20____ by Town of Apex and PRINCE, FRANK D SR TRUSTEE (the "owner").

WHEREAS, the Town of Apex ("Town") is seeking to make a stream buffer determination across the property known as Veridea - Phase 2 in the Town of Apex, North Carolina and designated as PIN # 0740191376, 0730896270 by the Wake County Revenue Department (the "**Subject Property**");

WHEREAS, the owner are agreeable to provide the Town with this Right of Entry under the terms and conditions stated herein so that the above referenced determination may proceed.

NOW THEREFORE in light of the above premises, the owner do hereby grant and give freely and without coercion, the right of access and entry to the Subject Property on the terms and conditions as stated below:

1. The Town of Apex and its contractors may enter the Subject Property for the purpose of conducting on-site environmental investigations and issuing a determination based on those investigations as it relates to stream buffer determination.
2. This Right of Entry does not convey to the Town any title or ownership interest in the Subject Property.
3. The Town and its employees, contractors, agents and representatives enter upon the Subject Property at their own risk and assume all risks related to the property.
4. The undersigned agrees and warrants to hold harmless the Town of Apex, its agencies, departments, contractors, and subcontractors, and discharges and waives any action, either equitable or legal that arise from the activities described above on the property except in the case of negligence by the Town.

Witness: _____ By: _____ POA
Joseph Spagnuolo

By: N/A

NORTH CAROLINA
WAKE COUNTY

RIGHT OF ENTRY

This Right of Entry is executed this _____ day of _____, 20____ by Town of Apex and WHITEHOUSE, BRENDA P (the "owner").

WHEREAS, the Town of Apex ("Town") is seeking to make a stream buffer determination across the property known as Veridea - Phase 2 in the Town of Apex, North Carolina and designated as PIN # 0740287376 by the Wake County Revenue Department (the "**Subject Property**");

WHEREAS, the owner are agreeable to provide the Town with this Right of Entry under the terms and conditions stated herein so that the above referenced determination may proceed.

NOW THEREFORE in light of the above premises, the owner do hereby grant and give freely and without coercion, the right of access and entry to the Subject Property on the terms and conditions as stated below:

1. The Town of Apex and its contractors may enter the Subject Property for the purpose of conducting on-site environmental investigations and issuing a determination based on those investigations as it relates to stream buffer determination.
2. This Right of Entry does not convey to the Town any title or ownership interest in the Subject Property.
3. The Town and its employees, contractors, agents and representatives enter upon the Subject Property at their own risk and assume all risks related to the property.
4. The undersigned agrees and warrants to hold harmless the Town of Apex, its agencies, departments, contractors, and subcontractors, and discharges and waives any action, either equitable or legal that arise from the activities described above on the property except in the case of negligence by the Town.

Witness: _____ By: Brenda P Whitehouse

By: Brenda P Whitehouse Trustee

NORTH CAROLINA
WAKE COUNTY

RIGHT OF ENTRY

This Right of Entry is executed this _____ day of _____, 20____ by Town of Apex and HH TRINITY APEX INVESTMENTS LLC (the "owner").

WHEREAS, the Town of Apex ("Town") is seeking to make a stream buffer determination across the property known as South Village East in the Town of Apex, North Carolina and designated as PIN # 0730971141,0730852539,0740052449 by the Wake County Revenue Department (the "**Subject Property**");

WHEREAS, the owner are agreeable to provide the Town with this Right of Entry under the terms and conditions stated herein so that the above referenced determination may proceed.

NOW THEREFORE in light of the above premises, the owner do hereby grant and give freely and without coercion, the right of access and entry to the Subject Property on the terms and conditions as stated below:

1. The Town of Apex and its contractors may enter the Subject Property for the purpose of conducting on-site environmental investigations and issuing a determination based on those investigations as it relates to stream buffer determination.
2. This Right of Entry does not convey to the Town any title or ownership interest in the Subject Property.
3. The Town and its employees, contractors, agents and representatives enter upon the Subject Property at their own risk and assume all risks related to the property.
4. The undersigned agrees and warrants to hold harmless the Town of Apex, its agencies, departments, contractors, and subcontractors, and discharges and waives any action, either equitable or legal that arise from the activities described above on the property except in the case of negligence by the Town.

Witness: _____

HH Trinity Apex Investments LLC
HRCF IV - Trinity Apex Investments LLC

By: _____

By: _____
Richard A. Ortiz
Authorized Signatory

NORTH CAROLINA
WAKE COUNTY

RIGHT OF ENTRY

This Right of Entry is executed this _____ day of _____, 20____ by Town of Apex and HH TRINITY APEX INVESTMENTS LLC (the "owner").

WHEREAS, the Town of Apex ("Town") is seeking to make a stream buffer determination across the property known as Veridea - Phase 2 in the Town of Apex, North Carolina and designated as PIN # See Attached by the Wake County Revenue Department (the "**Subject Property**");

WHEREAS, the owner are agreeable to provide the Town with this Right of Entry under the terms and conditions stated herein so that the above referenced determination may proceed.

NOW THEREFORE in light of the above premises, the owner do hereby grant and give freely and without coercion, the right of access and entry to the Subject Property on the terms and conditions as stated below:

1. The Town of Apex and its contractors may enter the Subject Property for the purpose of conducting on-site environmental investigations and issuing a determination based on those investigations as it relates to stream buffer determination.
2. This Right of Entry does not convey to the Town any title or ownership interest in the Subject Property.
3. The Town and its employees, contractors, agents and representatives enter upon the Subject Property at their own risk and assume all risks related to the property.
4. The undersigned agrees and warrants to hold harmless the Town of Apex, its agencies, departments, contractors, and subcontractors, and discharges and waives any action, either equitable or legal that arise from the activities described above on the property except in the case of negligence by the Town.

Witness: _____

HH Trinity Apex Investments LLC
By: HRCF IV - Trinity Apex Investments LLC

By: _____
Richard A. Ortiz
Authorized Signatory

Phase 2	Owner
0740180331	HH TRINITY APEX INVESTMENTS LLC
0740360895	HH TRINITY APEX INVESTMENTS LLC
0740386384	HH TRINITY APEX INVESTMENTS LLC
0740078021	HH TRINITY APEX INVESTMENTS LLC
0740167653	HH TRINITY APEX INVESTMENTS LLC

NORTH CAROLINA
WAKE COUNTY

RIGHT OF ENTRY

This Right of Entry is executed this _____ day of _____, 20____ by Town of Apex and VERIDEA HOLDINGS LLC (the "owner").

WHEREAS, the Town of Apex ("Town") is seeking to make a stream buffer determination across the property known as Veridea - Phase 2 in the Town of Apex, North Carolina and designated as PIN # 0740180091, 0741203157 by the Wake County Revenue Department (the "**Subject Property**");

WHEREAS, the owner are agreeable to provide the Town with this Right of Entry under the terms and conditions stated herein so that the above referenced determination may proceed.

NOW THEREFORE in light of the above premises, the owner do hereby grant and give freely and without coercion, the right of access and entry to the Subject Property on the terms and conditions as stated below:

1. The Town of Apex and its contractors may enter the Subject Property for the purpose of conducting on-site environmental investigations and issuing a determination based on those investigations as it relates to stream buffer determination.
2. This Right of Entry does not convey to the Town any title or ownership interest in the Subject Property.
3. The Town and its employees, contractors, agents and representatives enter upon the Subject Property at their own risk and assume all risks related to the property.
4. The undersigned agrees and warrants to hold harmless the Town of Apex, its agencies, departments, contractors, and subcontractors, and discharges and waives any action, either equitable or legal that arise from the activities described above on the property except in the case of negligence by the Town.

Witness: _____

Veridea Holdings LLC
HRCF IV - Trinity Apex Investments LLC

By: _____

By: _____
Richard A. Ortiz
Authorized Signatory

PIN_NUM	DEED_ACRES	OWNER	ADDR1	ADDR2	ADDR3	SITE_ADDRESS	FULL_STREET_NAME
740188440	1.38	FIELDS, W J FIELDS, CATHERINE A	3125 VERIDEA PKWY	APEX NC 27539-9202		3125 VERIDEA PKWY	VERIDEA PKWY
730852539	54.65	HH TRINITY APEX INVESTMENTS LLC	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837	0 OLD HOLLY SPRINGS APEX RD	OLD HOLLY SPRINGS APEX RD
730971141	98.72	HH TRINITY APEX INVESTMENTS LLC	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837	0 VERIDEA PKWY	VERIDEA PKWY
740287376	27.26	WHITEHOUSE, BRENDA P WHITEHOUSE, BRENDA P	3109 VERIDEA PKWY	APEX NC 27539-9202		0 VERIDEA PKWY	VERIDEA PKWY
740191376	75.63	PRINCE, FRANK D SR TRUSTEE	8405 AMANDA CASSIE LN	FUQUAY VARINA NC 27526-9635		3012 VERIDEA PKWY	VERIDEA PKWY
740180331	1.66	HH TRINITY APEX INVESTMENTS LLC	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837	0 VERIDEA PKWY	VERIDEA PKWY
740386384	64.67	HH TRINITY APEX INVESTMENTS LLC	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837	3009 VERIDEA PKWY	VERIDEA PKWY
741207566	32.06	WVPRINCE PROPERTIES LLC	444 AUGUSTA DR	ROCKPORT TX 78382-6945		2901 VERIDEA PKWY	VERIDEA PKWY
740167653	27.29	HH TRINITY APEX INVESTMENTS LLC	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837	0 VERIDEA PKWY	VERIDEA PKWY
740052449	17.36	HH TRINITY APEX INVESTMENTS LLC	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837	0 VERIDEA PKWY	VERIDEA PKWY
740078021	32.28	HH TRINITY APEX INVESTMENTS LLC	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837	0 VERIDEA PKWY	VERIDEA PKWY
730996270	16.42	PRINCE, F D SR TRUSTEE	FRANK PRINCE JR	8405 AMANDA CASSIE LN	FUQUAY VARINA NC 27526-9635	0 US 1 HWY	US 1 HWY
740360895	82.24	HH TRINITY APEX INVESTMENTS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837		3229 VERIDEA PKWY	VERIDEA PKWY
740180091	12.57	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837		3200 VERIDEA PKWY	VERIDEA PKWY
740188176	3	BUSHEE, ROGER W BUSHEE, GLENDA K	3137 VERIDEA PKWY	APEX NC 27539-9202		3137 VERIDEA PKWY	VERIDEA PKWY
740189737	1.03	WHITEHOUSE, GREGORY HENRY	3109 VERIDEA PKWY	APEX NC 27539-9202		3109 VERIDEA PKWY	VERIDEA PKWY
741203157	1.84	VERIDEA HOLDINGS LLC	570 LEXINGTON AVE STE 2200	NEW YORK NY 10022-6837		2937 VERIDEA PKWY	VERIDEA PKWY
740283126	5	LANGLEY, DAVID K LANGLEY, RENEE M	6300 KING DAVID CT	APEX NC 27539-6897		6300 KING DAVID CT	KING DAVID CT
740188680	1.3	WHITEHOUSE ASSETS MANAGEMENT LLC	3109 VERIDEA PKWY	APEX NC 27539-9202		3117 VERIDEA PKWY	VERIDEA PKWY
740189999	2.49	WHITEHOUSE ASSETS MANAGEMENT LLC	3109 VERIDEA PKWY	APEX NC 27539-9202		3105 VERIDEA PKWY	VERIDEA PKWY
740070950	0.52	HUDSON, KARL GRIER IV	824 BRYAN ST	RALEIGH NC 27605-1104		3134 VERIDEA PKWY	VERIDEA PKWY
740293940	1.8	WVPRINCE PROPERTIES LLC	444 AUGUSTA DR	ROCKPORT TX 78382-6945		2945 VERIDEA PKWY	VERIDEA PKWY
740081019	2.16	APA VERIDEA INVESTMENTS LLC	2000 BEAR CAT WAY STE 102	MORRISVILLE NC 27560-6620		3138 VERIDEA PKWY	VERIDEA PKWY
730977967	10.27	APA VERIDEA INVESTMENTS LLC	2000 BEAR CAT WAY STE 102	MORRISVILLE NC 27560-6620		3142 VERIDEA PKWY	VERIDEA PKWY
740082199	2.09	WANG, YIFEI MEI, HUA	111 BRIDGEGATE DR	CARY NC 27519-7184		3130 VERIDEA PKWY	VERIDEA PKWY

West CP4 West SF 14

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.704010
Evaluator: SREC – JH	County: Wake	Longitude: -78.886215
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 4	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other B *e.g. Quad Name:*

A. Geomorphology (Subtotal = 1)	Absent	Weak	Moderate	Strong
1a. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = 0		Yes = 3	

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

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

West SF 1

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.688108
Evaluator: S+EC – AJK + JA + KM	County: Wake	Longitude: -78.864747
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 22 23 JM	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other C *e.g. Quad Name:*

A. Geomorphology (Subtotal = 11)	Absent	Weak	Moderate	Strong
1a. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = 0		Yes = 3	

B. Hydrology (6.5)				
12. Presence of Baseflow	0	1	(2)	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

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

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

Notes:

Sketch:

Soils = Perennial

USGS = Present

JM 12/15/2022

West SF16

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.694123
Evaluator: SFEC - AJK + JH + KM	County: Wake	Longitude: -78.859020
Total Points: Non-Scoreable Feature *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other C e.g. Quad Name:

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

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch: Non-Scoreable Feature

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

West SF5

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35691656
Evaluator: S+EC – AJK+ KW	County: Wake	Longitude: -78.862456
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 12.25	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other C *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (3.5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	0.5	(0)
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	(0)	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 3.75)				
18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Perennial
USGS = Not Present

JM 12/15/2022

West SF4

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.688188
Evaluator: SEC - AJK, JH, KM	County: Wake	Longitude: -78.874638
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 11.5	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other E *e.g. Quad Name:*

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

*artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	0.5	(0)
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = (0)		Yes = 3	

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

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

Notes:

Sketch:

Soils = Intermittent

VSCS = Not Present

JM 12/15/2022

WEST SFHD (FEATURE G)

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/02/2022	Project/Site: Meridian	Latitude: 35.602574
Evaluator: SBEC - JOSHUA HARVEY	County: WAKE	Longitude: -78.789561
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** NO SIGNIFICANT FEATURE	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other G *e.g. Quad Name:*

A. Geomorphology (Subtotal = ✓)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = 0		Yes = 3	

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

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

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

Notes:

Sketch:

Soil = Intermittent

USGS = Not Present

JM 12/20/2022

West SF3

JM 1/20/2023

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.689827
Evaluator: SHEC-AJK + KM+JH	County: Wake	Longitude: -78.869936
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 9.5	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other H *e.g. Quad Name:*

A. Geomorphology (Subtotal = 3.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	(1)	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	(2) JM	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	(0)	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	0	(1) JM	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Intermittent
VSCS = Not Present

JM 12/15/2022

West SF2

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.689824
Evaluator: S+EC - AJK + JH + KM	County: Wake	Longitude: -78.868594
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 14	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other J *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes (= 3)	

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present JM 12/15/2022

West
SF28 JM 11/30/2022

NC Division of Water Quality --Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/22	Project/Site: Veridea	Latitude: 35.695273
Evaluator: S+EC-AJK	County: Wake	Longitude: -78.862219
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 15	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other *e.g. Quad Name:* K

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4)				
12. Presence of Baseflow	(0)	(1) JM	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	(0)	0.5	(1) JM	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/15/2022

West

SF29 NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/22	Project/Site: Veridea	Latitude: 35.694757
Evaluator: SEC - AJK	County: Wake	Longitude: -78.862695
Total Points: 22.5 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other K *e.g. Quad Name:*

A. Geomorphology (Subtotal = 14)	Absent	Weak	Moderate	Strong
1[a] Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (4.5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = Intermittent,
USGS = Not Present

JM 12/15/2022

West

SF30

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/22	Project/Site: Veridea	Latitude: 35.694807
Evaluator: S+EC – AJK	County: Wake	Longitude: -78.863007
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 10	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other R *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

JM 1/20/2023

West

SF31 NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/2022	Project/Site: Veridea	Latitude: 35.694541
Evaluator: S+EC-AJK	County: Wake	Longitude: -78.863163
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 12	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other *e g Quad Name:* K

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

[a] artificial ditches are not rated; see discussions in manual

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

C. Biology (Subtotal = 4)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0 75; OBL = 1,5 Other = (0)			

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

West

SF32 NC Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/22	Project/Site: Veridea	Latitude: 35.694109
Evaluator: SFEC – AJK	County: Wake	Longitude: -78.863801
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 24	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other e.g. Quad Name: R

A. Geomorphology (Subtotal = 14)	Absent	Weak	Moderate	Strong
1[a] Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = (0)			

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

Notes:

Sketch:

Soils = Intermittent

VSBS = Not Present

JM 12/20/2022

West SF 15

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.694785
Evaluator: SHEC - AJK + KM	County: Wake	Longitude: -78.861676
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 12	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other L *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	0.5	(0)
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

West SFB

NC DWQ Stream Identification Form Version 4.11

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.700631
Evaluator: StEC – JH	County: Wake	Longitude: -78.860357
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 13.5	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other AA *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Perennial

USGS = Present

JM 12/15/2022

West SF 13

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/02/2022	Project/Site: Vendeu	Latitude: 35.648832
Evaluator: JH	County: Wake	Longitude: -78.861887
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 19	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other ○ *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (5)				
12. Presence of Baseflow	0	(1)	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 10.5)				
18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	(0.5)	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Perennial

USGS = Present

JM 12/15/2022

WBT SP12

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/22/2022	Project/Site: Wayne	Latitude: 35.693448
Evaluator: JH	County: Wayne	Longitude: -78.362660
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 11.5	**Stream Determination (circle one)** Ephemeral **Intermittent** Perennial	Other ○ *e.g. Quad Name:*

A. Geomorphology (Subtotal = 4)	Absent	Weak	Moderate	Strong
1st. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = 0		Yes = 3	

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

C. Biology (Subtotal = 7)				
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Perennial

USGS = Present

JM 12/15/2022

West 5 10

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/02/2022	Project/Site: Lewellen	Latitude: 35.647567
Evaluator: JH	County: Lenoir	Longitude: -78.864050
Total Points: 16 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other 0 *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Perennial
USGS = Present

JM 12/15/2022

West SF11

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/02/2022	Project/Site: Weidon	Latitude: 35.697734
Evaluator: JH	County: Wake	Longitude: -78.86369
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 21	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other e.g. Quad Name: —

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (4)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	(0)	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 9)				
18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Perennial
USGS = Present

JM 12/15/2022

West SF#9

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/02/2020	Project/Site: Verdeen	Latitude: 35.697070
Evaluator: JH - SEC	County: Carteret	Longitude: -78.86535
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 12.5	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other 0 *e.g. Quad Name:* —

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (3.5)				
12. Presence of Baseflow	(0)	1	2	(3) SM
13. Iron oxidizing bacteria	(0)	1	2 SM	3
14. Leaf litter	1.5	SM 1	(0.5)	(0)
15. Sediment on plants or debris	(0)	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

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

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

Notes:

Sketch:

Soils = Perennial

USGS = Present

trest SF8

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/02/2022	Project/Site: Verdun	Latitude: 35.697098
Evaluator: JH ~ SEC	County: ~~Wake~~ Wake	Longitude: -78.865711
Total Points: 21.5 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other ○ *e.g. Quad Name:*

A. Geomorphology (Subtotal = 11)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel [a]artificial ditches are not rated; see discussions in manual	(No = 0)		Yes = 3	

B. Hydrology (4.5)				
12. Presence of Baseflow	0	(1)	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	0.5	(0)
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		(Yes = 3)	

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

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

Notes:

Sketch:

Soils = Perennial
USGS = Present

JM 12/19/2022

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NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/2022	Project/Site: Veridea	Latitude: 35.696[illegible]
Evaluator: SHEC - JOSINA HARVEY	County: WAKE	Longitude: -78.5[illegible]
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 8	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other P *e.g. Quad Name:*

A. Geomorphology (Subtotal = 3.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	(0)	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	(No = 0)		Yes = 3	

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

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/20/2022

Wetland SF7

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/07/2022	Project/Site: Verdae	Latitude: 35.699659
Evaluator: SM	County: Wake	Longitude: -78.864028
Total Points: 16 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other Q *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (5)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/15/2022

West SF27

NC DWQ Stream Identification Form Version 4.11

Date: 11/2/22	Project/Site: Verides	Latitude: 35.701121
Evaluator: S+EL-JH	County: Wake	Longitude: -78.856460
Total Points: 9 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other R *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/15/2022

West SF 25

NC DWQ Stream Identification Form Version 4.11

Date: 11/2/22	Project/Site: Verdea	Latitude: 35.702162
Evaluator: S+EC - JH	County: Wake	Longitude: -78.854496
Total Points: *Stream is at least Intermittent if ≥ 19 or perennial if ≥ 30** 21.75	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other R *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 6.75)				
18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

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NC DWQ Stream Identification Form Version 4.11

Date: 11/2/22	Project/Site: Verdea	Latitude: 35.701807
Evaluator: STEC-JH	County: Wake	Longitude: -78.855554
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 10.25	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other 5 *e.g. Quad Name:*

A. Geomorphology (Subtotal = 2.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	(0)	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	(0)	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	(No = 0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

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

C. Biology (Subtotal = 4.75)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	(FACW = 0.75); OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

West
SF 24

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.698569
Evaluator: SHEC - AJK + JH + KM	County: Wake	Longitude: -78.854833
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 18	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other T *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

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

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = (0)			

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

Notes:

Sketch:

Soils = Perennial
VSCS = Not Present

JM 12/15/2022

West SF20

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Verides	Latitude: 35.696709
Evaluator: SH-EC - AJK + JH + KM	County: Wake	Longitude: -78.852141
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 19.5	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other T *e.g. Quad Name:*

A. Geomorphology (Subtotal = 10.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2) →	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (4)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	0.5	(0)
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = (0)			

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

Notes:

Sketch:

Soils = Perennial
USGS = Not Present

JM 12/15/2022

West SF23

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Verideo	Latitude: 35.698339
Evaluator: SFEC – AJK & KM	County: Wake	Longitude: -78.855074
Total Points: Non-Scoreable Feature, *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other U *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Non-Scoreable Feature

Soils = Intermittent
USGS = Not Present

JM 12/15/2022

West SF 35

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/22	Project/Site: Veridea	Latitude: 35.697154
Evaluator: S+EC - AJK	County: Wake	Longitude: -78.858121
Total Points: 6 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other e.g. Quad Name: ✓

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

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/20/2022

West SF36

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/22	Project/Site: Veridea	Latitude: 35.696363
Evaluator: SFEC-AJK	County: Wake	Longitude: -78.858198
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 23	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other ✓ *e.g. Quad Name:*

A. Geomorphology (Subtotal = 11.5)	Absent	Weak	Moderate	Strong
1[a] Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = 0		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (6.5)				
12. Presence of Baseflow	0	(1)	2	3
13 Iron oxidizing bacteria	(0)	1	2	3
14 Leaf litter	1.5	(1)	0.5	0
15 Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17 Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22 Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/20/2022

West SF 34

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/3/2022	Project/Site: Veridea	Latitude: 35.694766
Evaluator: S+EC - AJK	County: Wake	Longitude: -78.856375
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 32	Stream Determination (circle one) Ephemeral Intermittent (Perennial)	Other *e.g. Quad Name:* ✓

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (8)				
12. Presence of Baseflow	0	1	(2)	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/20/2022

West
SF17

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.694829
Evaluator: StEC - AJK, JH, KM	County: Wake	Longitude: -78.859124
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 14	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other W *e.g. Quad Name:*

A. Geomorphology (Subtotal = 5.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	(0)	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (4)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	(0)	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	3	2	(1)	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = (1.5) Other = 0			

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

Notes:

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/15/2022

West SF22

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.696773
Evaluator: S+EC - AJK + JH + km	County: Wake	Longitude: -78.854816
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 7	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other X *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

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

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

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

Notes:

Sketch:

Soils = Intermittent

USGS = Not Present

JM 12/15/2022

West SF21

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.695789
Evaluator: S+EC - AJK + JH + KM	County: Wake	Longitude: -78.854435
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 19.75	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other X *e.g. Quad Name:*

A. Geomorphology (Subtotal = 11.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	0	1	(2)	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (3.5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	0.5	(0)
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	(0)	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.75)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	(FACW = 0.75) OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/15/2022

WEST SF41

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/02/2022	Project/Site: Verdea	Latitude: 35.6944611
Evaluator: SAEC - JOSHUA HARVEY	County: Wake	Longitude: -78.854206
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 15	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other X *e.g. Quad Name:*

A. Geomorphology (Subtotal = 4.5)	Absent	Weak	Moderate	Strong
1[a] Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	(0)	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	(0)	0.5	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel *artificial ditches are not rated; see discussions in manual	No = 0		Yes = 3	

B. Hydrology (Subtotal = 5.5)				
12. Presence of Baseflow	0	(1)	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		(Yes = 3)	

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes: Stream originates into wetland drainage

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/20/2022

West SF1B

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.691433
Evaluator: SJEC - AJK+JH + KM	County: Wake	Longitude: -78.855344
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 13.5	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other Y *e.g. Quad Name:*

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

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (4.5)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

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

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

Notes:

Sketch:

Soils = Perennial

VSCS = Not Present

JM 12/15/2022

West
SF 19

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/22	Project/Site: Veridea	Latitude: 35.690966
Evaluator: SHEC – AJK + KM	County: Wake	Longitude: -78.852807
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 21.5 23.5 JM	Stream Determination (circle one) Ephemeral (Intermittent) Perennial	Other Y *e.g. Quad Name:*

A. Geomorphology (Subtotal = 12.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

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

C. Biology (Subtotal = 5)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

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

Notes:

Sketch:

Soils = Perennial
USGS = Not Present

JM 12/15/2022

WFST SF38 (FEATURE BB)

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/2022	Project/Site: Veridea	Latitude: 35.688992
Evaluator: SEC - Joshua Harvey	County: WAKE	Longitude: -78.751202
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** No Scoreable Feature	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other BB *e.g. Quad Name:*

A. Geomorphology (Subtotal = /)	Absent	Weak	Moderate	Strong
1a. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = 0		Yes = 3	

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

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

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

Notes:

Sketch:

Soils = Intermittent
USGS = Not Present

JM 12/2022

WEST SF 39 ([redacted]) [illegible] Ditch

NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.1

NC DWQ Stream Identification Form Version 4.1

Date: 11/2/2022	Project/Site: Perkins	Latitude: 35.703025
Evaluator: SEC - JOSHUA HARVEY	County: WAKE	Longitude: -78.850370
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** No Scorable Feature	Stream Determination (circle one) (Ephemeral) Intermittent Perennial	Other CC *e.g. Quad Name:*

A. Geomorphology (Subtotal =)	Absent	Weak	Moderate	Strong
1st. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel artificial ditches are not rated; see discussions in manual	No = 0		Yes = 3	

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

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

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

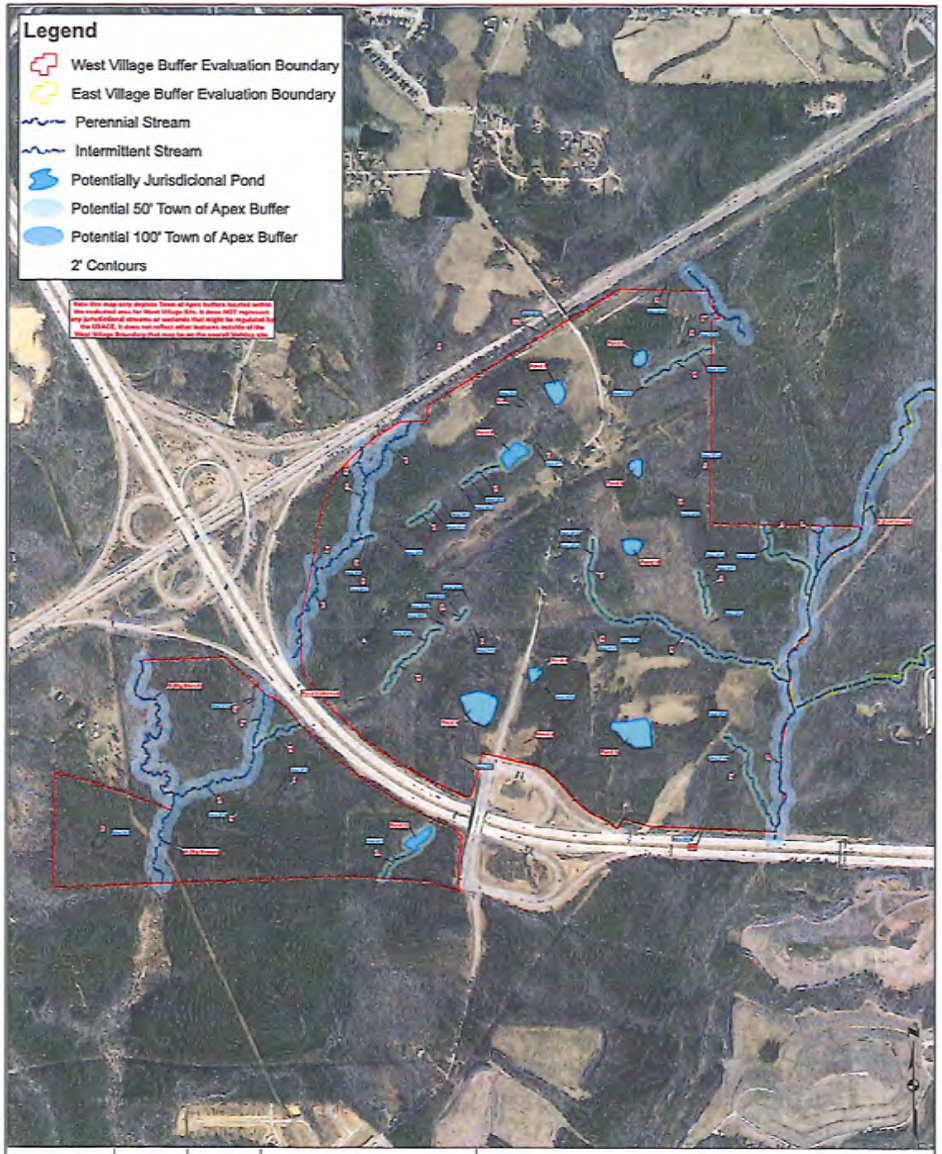
Notes:

Sketch:

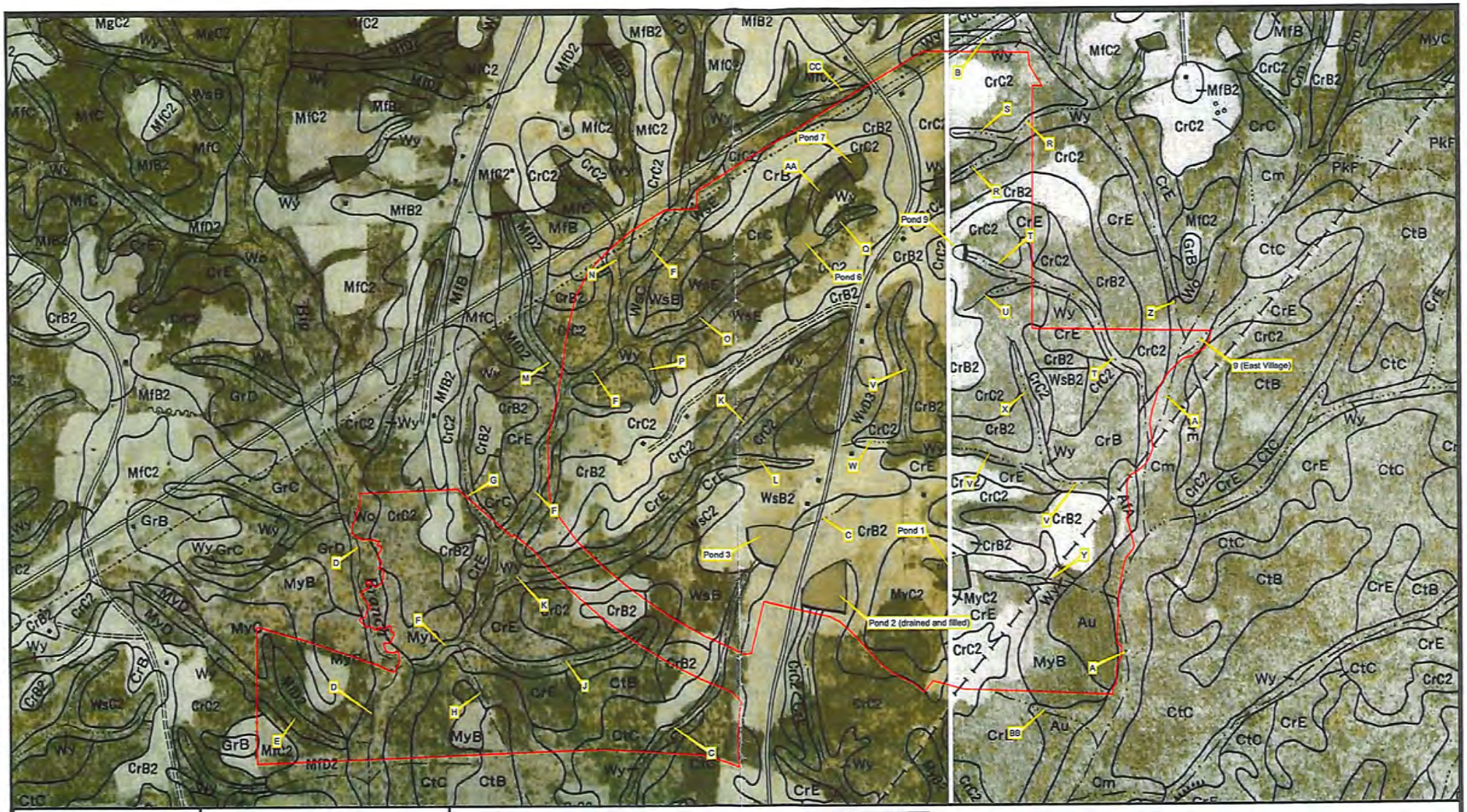
Soils = Intermittent

USGS = Not Present

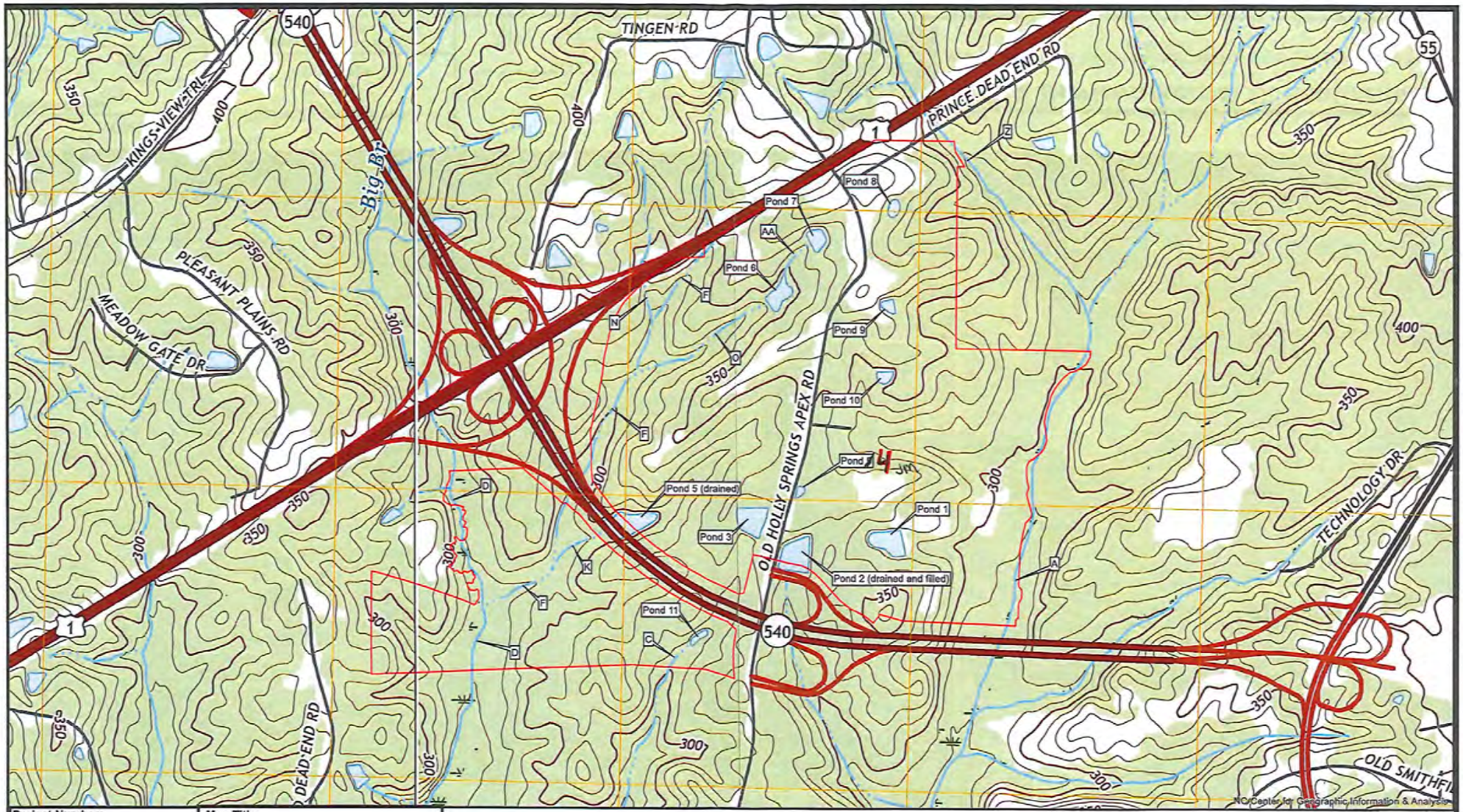
JM 12/20/2022


Legend
West Village Buffer Evaluation Boundary
East Village Buffer Evaluation Boundary
Perennial Stream
Intermittent Stream
Potentially Jurisdicional Pond
Potential 50' Town of Apex Buffer
Potential 100' Town of Apex Buffer
2' Contours
Project No.
Scale:
1" = 300'
Project Mgr:
SB
12/02/2022
West Village Buffer Map
Veridea
S&EC
Soil & Environmental Consultants, PA
0 300 600 1,200
Feet

JM 12/15/2022



Project Number: 11065.W28	**Map Title:** Figure 2 - Soil Survey Veridea West Village	0 750 1,500 Feet JM 12/15/2022	**S&EC** Soil & Environmental Consultants, PA 8412 Falls of Neuse Road, Suite 104, Raleigh, NC 27615 • Phone: (919) 846-5900 • Fax: (919) 846-9467 sandec.com
Project Manager: SB			
Scale: 1" = 750'			
Date: 12/02/2022	**Source:** Wake County Soil Survey Sheets 74 & 75		



Project Number:	11065.W28
Project Manager:	SB
Scale:	1" = 1000'
Date:	12/02/2022

Map Title: **Figure 1 - USGS Map**

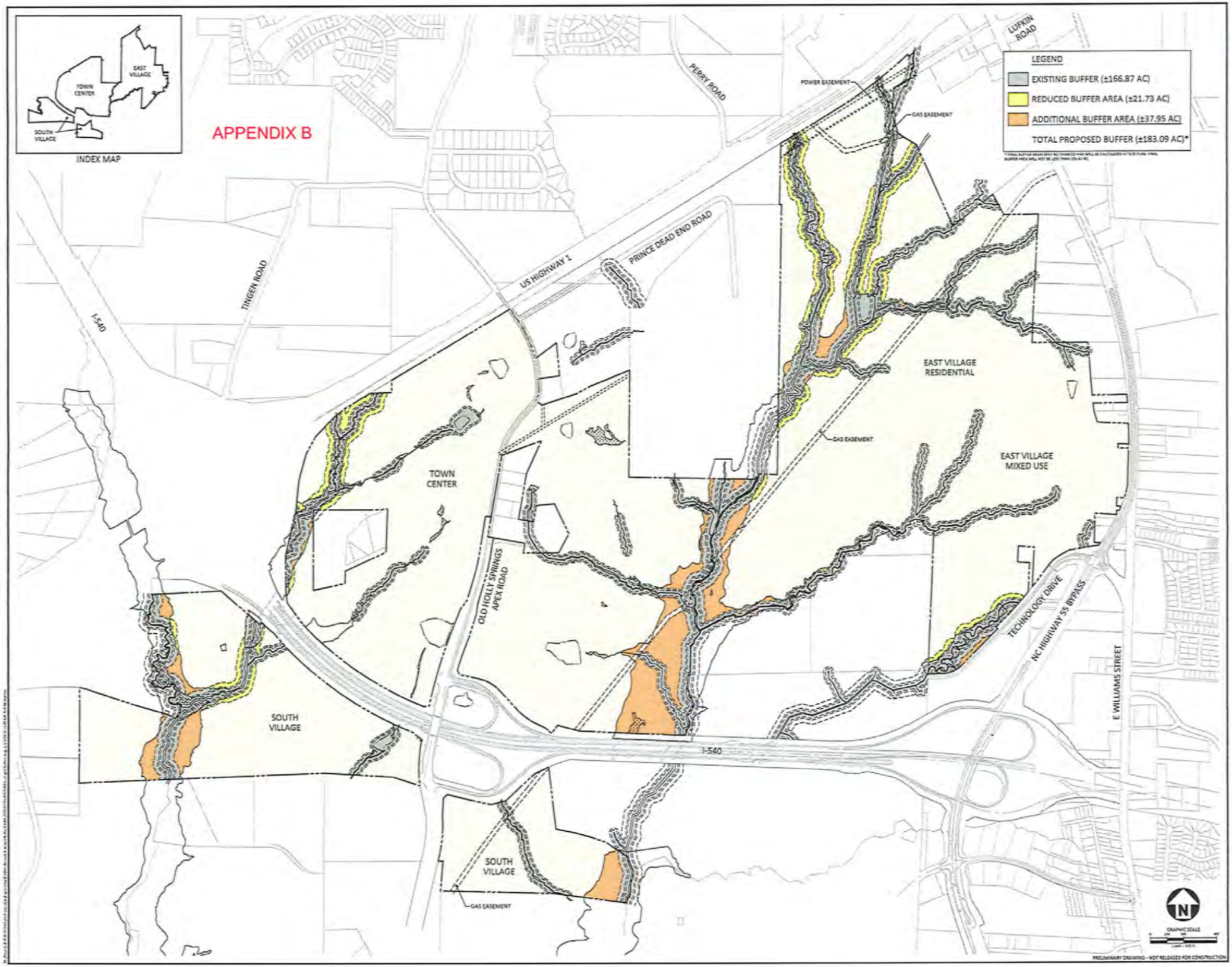
Veridea
West Village

Source: 2019 NC New Hill & Apex Quads

0 1,000 2,000
Feet

N

S&EC
Soil & Environmental Consultants, PA
8412 Falls of Neuse Road, Suite 104, Raleigh, NC 27615 • Phone: (919) 846-5900 • Fax: (919) 846-9467
sandec.com



McAdams
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fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

VERIDEA
AVERAGED STREAM BUFFER EXHIBIT
APEX, NORTH CAROLINA

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	RKR-22001
FILENAME	RKR22001-S1
CHECKED BY	WHD
DRAWN BY	RLH
SCALE	1"=400'
DATE	JUL 20, 2023

SHEET
AVERAGED STREAM BUFFER EXHIBIT
E1.00

Attachment D

ORD-2024-068

AN ORDINANCE TO ADOPT ADDITIONAL SUSTAINABILITY STANDARDS FOR VERIDEA

BE IT ORDAINED by the Town Council of the Town of Apex as follows:

Section 1. The Veridea Pattern Book for Veridea is hereby adopted in accordance with Section 2.3.16.F.3 of the Unified Development Ordinance and Section 5.13 of the Sustainable Development Plan adopted for Veridea by Rezoning #09CZ07 ("Veridea SD Plan").

Section 2. The lands that are the subject of the Ordinance are those certain lands described in Attachment "A" – Legal Description which is incorporated herein by reference.

Section 3. Pursuant to Section 3.3.4 of the Veridea SD Plan, the Veridea Pattern Book in Attachment "B" is hereby incorporated into the Veridea SD Plan and is applicable to the land described in Attachment "A" and to any lands subsequently rezoned to be included in the Veridea SD Plan.

Section 4. The ordinance shall be effective upon enactment on the 27th day of August 2024.

Introduced by Council Member Killingsworth

Seconded by Council Member Zegerman

Attest:

Allen Coleman, CMC, NCCCC
Town Clerk

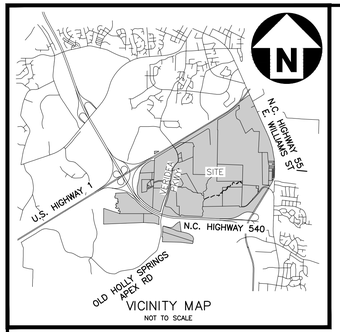
TOWN OF APEX

Edward Gray
Mayor Pro-Tempore

Approved As To Form:

Laurie L. Hohe
Town Attorney

APEX 1873 NORTH CAROLINA



VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1. THIS IS AN ALTA/NSPS LAND TITLE SURVEY.
2. BEARINGS FOR THIS SURVEY ARE BASED ON THE LOCAL SITE DATUM.
3. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
4. ZONING: VARIES ACCORDING TO TOWN OF APEX ZONING MAP AMENDED 2/22/2022, ZONING FOR EACH PARCEL SHOWN ON MAP. NO ZONING REPORT PROVIDED.
5. AREA BY COORDINATE GEOMETRY.
6. FLOOD NOTE: THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD ZONE. IT IS PARTIALLY LOCATED IN ZONES "X" AND "AE" AS DEFINED BY F.E.M.A F.I.R.M COMMUNITY PANELS 3720077410OJ DATED 5/2/2006, 3720074000K DATED 7/19/2022, AND 3720073000K DATED 7/19/2022.
7. REFERENCES: AS SHOWN
8. UTILITY STATEMENT
   THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
10. NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS, RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING FIELDWORK.
11. NO FIELD DELINEATION OF WETLANDS WAS PERFORMED AS A PART OF THIS SURVEY AND NO MARKERS FOR SUCH WERE OBSERVED
12. NO PARTY WALLS WERE LOCATED AS PART OF THIS SURVEY
13. THE SURVEYED PROPERTY SHOWN AND DESCRIBED IN THE COMMITMENT DESCRIPTION IS THE SAME PROPERTY DESCRIBED IN SCHEDULE A OF THE TITLE COMMITMENT.
14. PROPERTY HAS VEHICULAR ACCESS TO VERIDEA PARKWAY, OLD HOLLY SPRINGS APEX ROAD, AND E WILLIAMS STREET
15. BUFFERS AND STREAM TAKEN FROM B.M. 2008, PG. 436. NOT FIELD LOCATED
16. ARCHAEOLOGICAL EVIDENCE SHOWN PER "ARCHAEOLOGICAL ASSESSMENT OF THE PROPOSED VERIDEA DEVELOPMENT TRACT, BY LUAN CAO, DATED OCTOBER 2021
17. CEMETERIES SHOWN BASED ON PHYSICAL EVIDENCE. SURVEYOR DOES NOT CERTIFY THAT THE EXTENTS OF THE CEMETERY SHOWN ON THE SURVEY ARE THE FULL EXTENT OF BURIAL GROUND OR REPRESENTATIVE OF ALL RIGHTS TO USE OR ACCESS
18. PORTIONS OF EASTERN PROPERTIES SHOWN USING PLANIMETRIC FEATURES PROVIDED BY AVIOIMAGE AERIAL SURVEY.

NOT TO SCALE

TO RXR REALTY VERIDEA HOLDINGS LLC, A DELAWARE LIMITED LIABILITY COMPANY; LENNAR CAROLINAS, LLC; RXR LEN APEX OWNER LLC, A DELAWARE LIMITED LIABILITY COMPANY; PRIME X SETTLEMENT SERVICES LLC; AMTRUST TITLE INSURANCE COMPANY; AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(a)(b), 8, 9, 11(a), 13, 15, 16, 17, 18, AND 19 OF TABLE A THEREOF.

THE FIELD WORK WAS COMPLETED ON 3/25/2022
DATE OF PLAT OR MAP: 4/1/2022
LAST REVISED: 1/23/2023

DAVID J. MILLS, P.L.S. L-5477 — DATE 2/14/2023

PRELIMINARY

M:\Projects\RXR\RXR22001\02-Geomatics\Survey\ALTA\RXR22001-AT1.dwg, 7/16/2024 12:17:45 PM, Connor Stearns

McAdams
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

RXR REALTY
75 ROCKEFELLER PLAZA, SUITE 1300
NEW YORK, NY 10019

VERIDEA

ALTA/NSPS LAND TITLE SURVEY

VERIDEA PARKWAY

TOWN OF APEX, WAKE COUNTY, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL L-5477 PRELIMINARY SURVEY NOT FOR RECORDATION, CONVEYANCES OR SALES REGISTERED LAND SURVEYOR DAVID J. MILLS

2/14/2023

REVISIONS

NO.	DATE	
1	1/17/2023	ADDITIONAL SURVEY DESCRIPTIONS
2	1/31/2023	ADDITIONAL SURVEY DESCRIPTIONS
3	2/08/2023	ADDITIONAL SURVEY DESCRIPTIONS

PLAN INFORMATION

PROJECT NO.	RXR22001
FILENAME	RXR22001-AT1
CHECKED BY	JBT
DRAWN BY	DJM/CJS
SCALE	NOT TO SCALE
DATE	01/20/2023

SHEET

1-26

TRACTS 1, 2, 3, 4, 5, 6, 7 NORTH, 8-1, 8-4, 9-1, 9-2-1, 9-2-2, 9-2-3, 9-3-1, 9-3-2, 9-3-4, 10-1, 10-2, 10-3, 10-7A&C, 10-7B NORTH, 11, 13-1, 13-2, 14

BEGINNING AT A POINT ON THE SOUTHERN RIGHT OF WAY OF U.S. HIGHWAY 1, SAID POINT BEING THE NORTHWEST CORNER OF TRACT I-A, AS SHOWN ON BOOK OF MAPS 2003, PAGE 398 OF THE WAKE COUNTY REGISTRY; THENCE WITH SAID RIGHT OF WAY NORTH 58°51'35" EAST A DISTANCE OF 406.60 FEET TO A CONCRETE MONUMENT; THENCE NORTH 58°00'23" EAST A DISTANCE OF 434.93 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT A RADIUS OF 5,860.99 FEET, AN ARC LENGTH OF 1,031.97 FEET, A CHORD BEARING OF NORTH 51°39'15" EAST, A CHORD LENGTH OF 1,030.63 FEET TO A POINT; THENCE SOUTH 41°41'54" EAST A DISTANCE OF 29.56 FEET TO A POINT; THENCE NORTH 46°57'49" EAST A DISTANCE OF 79.93 FEET TO A POINT, THE COMMON CORNER OF LOT 2 A SHOWN ON BOOK OF MAPS 1996, PAGE 667; THENCE WITH SAID COMMON LINE SOUTH 08°18'39" WEST A DISTANCE OF 74.71 FEET TO A POINT; THENCE SOUTH 03°57'01" EAST A DISTANCE OF 106.42 FEET TO A POINT ON THE COMMON LINE OF JUSTIN STANLEY; THENCE WITH SAID COMMON LINE SOUTH 58°19'32" WEST A DISTANCE OF 25.09 FEET TO A POINT; THENCE SOUTH 31°28'08" EAST A DISTANCE OF 99.98 FEET TO A POINT IN THE NORTH LINE OF THE TRACT SHOWN ON BOOK OF MAPS 1999, PAGE 1145; THENCE WITH SAID COMMON LINE SOUTH 58°37'43" WEST A DISTANCE OF 311.61 FEET TO A POINT; THENCE SOUTH 05°32'28" WEST A DISTANCE OF 311.05 FEET TO A POINT; THENCE SOUTH 18°18'17" EAST A DISTANCE OF 266.26 FEET TO A POINT; THENCE SOUTH 58°02'56" EAST A DISTANCE OF 253.73 FEET TO AN IRON PIPE; THENCE SOUTH 24°13'34" EAST A DISTANCE OF 1064.47 FEET TO AN IRON PIPE; THENCE NORTH 51°40'44" EAST A DISTANCE OF 610.52 FEET TO A POINT, THE COMMON CORNER OF FTPA STORAGE APEX LLC; THENCE WITH SAID COMMON LINE SOUTH 29°10'43" EAST A DISTANCE OF 276.67 FEET TO A POINT, THE SOUTHWEST CORNER OF THE TRACT SHOWN ON BOOK OF MAPS 2004, PAGE 593; THENCE WITH SAID COMMON LINE NORTH 89°42'08" EAST A DISTANCE OF 414.38 FEET TO AN IRON PIPE, THE NORTHWEST CORNER OF TRACT B, AS SHOWN ON BOOK OF MAPS 1986, PAGE 855; THENCE WITH SAID COMMON LINE SOUTH 02°52'31" WEST A DISTANCE OF 576.07 FEET TO AN IRON PIPE, THE NORTHWEST CORNER OF PPTAPEX LLC; THENCE WITH SAID COMMON LINE SOUTH 03°02'31" WEST A DISTANCE OF 260.47 FEET TO AN IRON PIPE, THE NORTHWEST CORNER OF JAMES IRVIN RIGSBEE; THENCE WITH SAID COMMON LINE SOUTH 03°08'36" WEST A DISTANCE OF 288.05 FEET TO AN IRON PIPE; THENCE SOUTH 02°21'58" WEST A DISTANCE OF 72.79 FEET TO AN AXLE, THE NORTHWEST CORNER OF KENAN TRANSPORT CO; THENCE WITH SAID COMMON LINE SOUTH 02°22'52" WEST A DISTANCE OF 365.20 FEET TO AN IRON PIPE; THENCE SOUTH 89°54'31" EAST A DISTANCE OF 270.03 FEET TO A POINT; THENCE SOUTH 89°55'44" EAST A DISTANCE OF 403.93 FEET TO A POINT, THE NORTHWEST CORNER OF DAVID RAYMER; THENCE WITH SAID COMMON LINE SOUTH 04°23'01" EAST A DISTANCE OF 445.52 FEET TO AN IRON PIPE, THE NORTHWEST CORNER OF THOMPSON GAS-SMOKIES LLC; THENCE WITH SAID COMMON LINE SOUTH 05°37'02" EAST A DISTANCE OF 199.93 FEET TO AN IRON PIPE; THENCE NORTH 89°21'15" EAST A DISTANCE OF 417.22 FEET TO A POINT ON THE WESTERN RIGHT OF WAY OF NORTH CAROLINA HIGHWAY 55; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE RIGHT, A RADIUS OF 5,633.75 FEET, AN ARC LENGTH OF 101.71 FEET, A CHORD BEARING OF SOUTH 04°07'50" EAST, A CHORD LENGTH OF 101.71 FEET TO AN IRON PIPE, THE COMMON CORNER OF DEXTER RAY; THENCE WITH SAID COMMON LINE AND THE LINE OF DAVID PAGE HEIRS, SOUTH 89°36'58" WEST A DISTANCE OF 414.74 FEET TO A POINT; THENCE SOUTH 05°37'02" EAST A DISTANCE OF 100.00 FEET TO A POINT, THE NORTHWEST CORNER OF CROWN BUILDERS AND DEVELOPERS OF NC, LLC; THENCE WITH SAID COMMON LINE SOUTH 17°12'56" EAST A DISTANCE OF 140.08 FEET TO AN IRON PIPE; THENCE SOUTH 87°06'10" EAST A DISTANCE OF 374.27 FEET TO AN IRON PIPE ON THE WESTERN RIGHT OF WAY OF SAID

HIGHWAY 55; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE RIGHT A RADIUS OF 5,633.75 FEET, AN ARC LENGTH OF 100.26 FEET, A CHORD BEARING OF SOUTH 00°30'27" EAST, A CHORD LENGTH OF 100.26 FEET TO A POINT; THENCE SOUTH 01°41'54" EAST A DISTANCE OF 100.29 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 49.94 FEET TO A POINT ON THE NORTH LINE OF LOT 22 AS SHOWN ON BOOK OF MAPS 1948, PAGE 18; THENCE WITH SAID COMMON LINE NORTH 87°04'26" WEST A DISTANCE OF 127.90 FEET TO A POINT; THENCE SOUTH 01°28'23" WEST A DISTANCE OF 50.04 FEET TO A POINT; THENCE SOUTH 87°06'47" EAST A DISTANCE OF 127.65 FEET TO A POINT ON THE WEST RIGHT OF WAY OF SAID HIGHWAY 55; THENCE WITH SAID RIGHT OF WAY SOUTH 01°45'44" WEST A DISTANCE OF 49.94 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 49.94 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 49.94 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 49.94 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 49.94 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 49.79 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 50.00 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 50.00 FEET TO A POINT; THENCE SOUTH 01°45'44" WEST A DISTANCE OF 50.00 FEET TO A POINT; THENCE SOUTH 12°49'18" WEST A DISTANCE OF 50.78 FEET TO A POINT; THENCE SOUTH 14°56'39" WEST A DISTANCE OF 51.10 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 17°33'36" WEST A DISTANCE OF 51.76 FEET TO A CONCRETE MONUMENT ON THE NORTH LINE OF LOT 9, AS SHOWN ON BOOK OF MAPS 1948, PAGE 18; THENCE WITH SAID COMMON LINE NORTH 86°43'05" WEST A DISTANCE OF 89.07 FEET TO A POINT; THENCE SOUTH 01°28'00" WEST A DISTANCE OF 100.88 FEET TO A POINT; THENCE SOUTH 87°17'00" EAST A DISTANCE OF 51.62 FEET TO A POINT ON THE WESTERN RIGHT OF WAY OF SAID HIGHWAY 55; THENCE WITH SAID RIGHT OF WAY SOUTH 22°15'24" WEST A DISTANCE OF 53.04 FEET TO A POINT ON THE NORTHERN LINE OF LOT 6 AS SHOWN ON BOOK OF MAPS 1948, PAGE 18; THENCE WITH SAID COMMON LINE NORTH 87°17'00" WEST A DISTANCE OF 32.79 FEET TO A POINT; THENCE SOUTH 01°28'00" WEST A DISTANCE OF 48.52 FEET TO A POINT ON THE NORTHERN LINE OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION; THENCE WITH SAID COMMON LINE NORTH 87°21'16" WEST A DISTANCE OF 259.05 FEET TO A POINT; THENCE SOUTH 01°23'44" WEST A DISTANCE OF 347.79 FEET TO AN IRON PIPE; THENCE SOUTH 86°24'46" EAST A DISTANCE OF 74.06 FEET TO A POINT ON THE WESTERN RIGHT OF WAY OF SAID HIGHWAY 55; THENCE WITH SAID RIGHT OF WAY SOUTH 34°48'30" WEST A DISTANCE OF 35.57 FEET TO A CONCRETE MONUMENT ON THE NORTHERN RIGHT OF WAY OF TECHNOLOGY DRIVE, AS SHOWN ON BOOK OF MAPS 2003, PAGE 398; THENCE WITH SAID RIGHT OF WAY SOUTH 81°05'32" WEST A DISTANCE OF 355.21 FEET TO A POINT; THENCE SOUTH 60°43'09" WEST A DISTANCE OF 132.34 FEET TO A POINT; THENCE A CURVE TO THE LEFT, A RADIUS OF 426.43 FEET, AN ARC LENGTH OF 181.19 FEET, A CHORD BEARING OF SOUTH 49°06'58" WEST, A CHORD LENGTH OF 179.83 FEET TO A POINT; THENCE SOUTH 36°56'38" WEST A DISTANCE OF 162.54 FEET TO A POINT; THENCE SOUTH 37°44'51" WEST A DISTANCE OF 163.20 FEET TO A POINT ON THE EASTERN LINE OF THE BREGMAN TRACT SHOWN ON BOOK OF MAPS 2002, PAGE 165; THENCE WITH SAID COMMON LINE NORTH 02°38'53" EAST A DISTANCE OF 477.63 FEET TO AN IRON PIPE; THENCE NORTH 86°17'11" WEST A DISTANCE OF 191.04 FEET TO AN IRON PIPE; THENCE SOUTH 02°37'54" WEST A DISTANCE OF 192.78 FEET TO AN IRON PIPE; THENCE SOUTH 87°21'03" EAST A DISTANCE OF 144.87 FEET TO A POINT; THENCE SOUTH 02°38'53" WEST A DISTANCE OF 351.16 FEET TO A POINT ON THE NORTHER RIGHT OF WAY OF SAID TECHNOLOGY DRIVE; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE RIGHT, A RADIUS OF 5,840.02 FEET, AN ARC LENGTH OF 578.81 FEET, A CHORD BEARING OF SOUTH 42°11'18" WEST, A CHORD LENGTH OF 578.57 FEET TO A POINT; THENCE SOUTH 45°24'35" EAST A DISTANCE OF 26.85 FEET TO A POINT; THENCE

SOUTH 44°12'36" WEST A DISTANCE OF 620.76 FEET TO A POINT; THENCE A CURVE TO THE RIGHT, A RADIUS OF 351.98 FEET, AN ARC LENGTH OF 268.88 FEET, A CHORD BEARING OF SOUTH 67°02'07" WEST, A CHORD LENGTH OF 262.39 FEET TO A POINT; THENCE SOUTH 88°52'01" WEST A DISTANCE OF 164.86 FEET TO A POINT THE SOUTHEAST CORNER OF THE TRACT SHOWN ON BOOK OF MAPS 2000, PAGE 1920; THENCE WITH SAID COMMON LINE NORTH 02°16'22" EAST A DISTANCE OF 50.18 FEET TO AN IRON PIPE; THENCE NORTH 02°17'00" EAST A DISTANCE OF 1,402.38 FEET TO A POINT; THENCE NORTH 02°17'00" EAST A DISTANCE OF 163.32 FEET TO AN IRON PIPE ON THE EASTERN LINE OF TRACT 1, AS SHOWN ON BOOK OF MAPS 2009, PAGE 884; THENCE WITH SAID COMMON LINE NORTH 02°11'42" EAST A DISTANCE OF 120.99 FEET TO A POINT NEAR THE CREEK AS SHOWN ON THE AFORE SAID MAP; THENCE GENERALLY WITH THE COURSE OF SAID CREEK AS SHOWN ON THE AFORE SAID MAP, NORTH 82°46'29" WEST A DISTANCE OF 59.32 FEET TO A POINT; THENCE NORTH 38°01'48" WEST A DISTANCE OF 154.60 FEET TO A POINT; THENCE NORTH 84°02'09" WEST A DISTANCE OF 86.70 FEET TO A POINT; THENCE SOUTH 20°44'56" WEST A DISTANCE OF 18.43 FEET TO A POINT; THENCE SOUTH 79°18'34" WEST A DISTANCE OF 39.77 FEET TO A POINT; THENCE SOUTH 13°19'46" EAST A DISTANCE OF 38.31 FEET TO A POINT; THENCE SOUTH 76°35'49" WEST A DISTANCE OF 53.23 FEET TO A POINT; THENCE SOUTH 26°54'51" WEST A DISTANCE OF 42.90 FEET TO A POINT; THENCE SOUTH 33°19'02" EAST A DISTANCE OF 29.87 FEET TO A POINT; THENCE SOUTH 51°46'22" WEST A DISTANCE OF 61.75 FEET TO A POINT; THENCE NORTH 64°34'50" WEST A DISTANCE OF 58.31 FEET TO A POINT; THENCE SOUTH 29°34'47" WEST A DISTANCE OF 47.94 FEET TO A POINT; THENCE SOUTH 71°40'28" WEST A DISTANCE OF 23.79 FEET TO A POINT; THENCE NORTH 39°32'53" WEST A DISTANCE OF 102.73 FEET TO A POINT; THENCE NORTH 69°26'41" WEST A DISTANCE OF 124.25 FEET TO A POINT; THENCE SOUTH 57°24'05" WEST A DISTANCE OF 82.87 FEET TO A POINT; THENCE SOUTH 07°43'11" WEST A DISTANCE OF 131.15 FEET TO A POINT; THENCE SOUTH 83°27'25" WEST A DISTANCE OF 147.78 FEET TO A POINT; THENCE SOUTH 00°36'20" EAST A DISTANCE OF 95.70 FEET TO A POINT; THENCE SOUTH 80°37'14" WEST A DISTANCE OF 210.03 FEET TO A POINT; THENCE SOUTH 21°46'20" WEST A DISTANCE OF 110.71 FEET TO A POINT; THENCE SOUTH 78°48'03" EAST A DISTANCE OF 41.76 FEET TO A POINT; THENCE SOUTH 32°29'11" WEST A DISTANCE OF 93.04 FEET TO A POINT; THENCE NORTH 66°26'02" WEST A DISTANCE OF 45.02 FEET TO A POINT; THENCE SOUTH 47°52'32" WEST A DISTANCE OF 34.12 FEET TO A POINT; THENCE SOUTH 00°28'52" WEST A DISTANCE OF 71.12 FEET TO A POINT; THENCE SOUTH 79°33'24" WEST A DISTANCE OF 96.46 FEET TO A POINT; THENCE NORTH 52°02'42" WEST A DISTANCE OF 30.57 FEET TO A POINT; THENCE SOUTH 81°23'08" WEST A DISTANCE OF 60.05 FEET TO A POINT; THENCE SOUTH 41°39'40" WEST A DISTANCE OF 186.48 FEET TO A POINT; THENCE SOUTH 44°48'01" EAST A DISTANCE OF 60.58 FEET TO A POINT; THENCE SOUTH 20°16'03" WEST A DISTANCE OF 35.02 FEET TO A POINT; THENCE NORTH 76°32'52" WEST A DISTANCE OF 126.07 FEET TO A POINT; THENCE SOUTH 34°49'57" WEST A DISTANCE OF 90.84 FEET TO A POINT; THENCE NORTH 41°34'57" WEST A DISTANCE OF 26.79 FEET TO A POINT; THENCE SOUTH 44°48'57" WEST A DISTANCE OF 69.31 FEET TO A POINT; THENCE SOUTH 28°17'36" EAST A DISTANCE OF 74.29 FEET TO A POINT; THENCE SOUTH 47°29'27" WEST A DISTANCE OF 92.11 FEET TO A POINT; THENCE NORTH 49°33'56" WEST A DISTANCE OF 78.37 FEET TO A POINT; THENCE SOUTH 87°17'25" WEST A DISTANCE OF 290.72 FEET TO A POINT; THENCE SOUTH 11°44'33" WEST A DISTANCE OF 20.66 FEET TO A POINT; THENCE SOUTH 64°16'17" WEST A DISTANCE OF 220.45 FEET TO A POINT; THENCE SOUTH 82°21'19" WEST A DISTANCE OF 72.19 FEET TO A POINT; THENCE NORTH 36°16'44" WEST A DISTANCE OF 42.40 FEET TO A POINT; THENCE SOUTH 69°36'51" WEST A DISTANCE OF 126.77 FEET TO A POINT; THENCE SOUTH 62°06'56" WEST A DISTANCE OF 316.17 FEET TO A POINT IN THE CENTERLINE OF WHITE OAK CREEK; THENCE WITH SAID CREEK SOUTH

17°45'27" WEST A DISTANCE OF 29.26 FEET TO A POINT; THENCE SOUTH 26°24'46" WEST A DISTANCE OF 31.72 FEET TO A POINT; THENCE SOUTH 40°05'18" WEST A DISTANCE OF 78.74 FEET TO A POINT; THENCE SOUTH 07°45'39" WEST A DISTANCE OF 35.25 FEET TO A POINT; THENCE SOUTH 42°06'24" WEST A DISTANCE OF 57.16 FEET TO A POINT; THENCE SOUTH 01°06'28" WEST A DISTANCE OF 351.89 FEET TO AN IRON PIE ON THE NORTHERN LINE OF GREENWAY WASTE SOLUTIONS OF APEX LLC; THENCE WITH SAID COMMON LINE SOUTH 88°51'48" WEST A DISTANCE OF 28.47 FEET TO A POINT; THENCE SOUTH 03°52'45" WEST A DISTANCE OF 158.77 FEET TO A POINT; THENCE SOUTH 23°38'07" EAST A DISTANCE OF 210.79 FEET TO A POINT; THENCE SOUTH 30°01'31" WEST A DISTANCE OF 156.29 FEET TO A POINT; THENCE SOUTH 11°48'54" EAST A DISTANCE OF 104.71 FEET TO A POINT; THENCE SOUTH 19°26'04" WEST A DISTANCE OF 147.77 FEET TO A POINT ON THE NORTHERN RIGHT OF WAY OF NORTH CAROLINA HIGHWAY 540; THENCE WITH SAID RIGHT OF WAY NORTH 87°35'38" WEST A DISTANCE OF 1,273.34 FEET TO AN IRON PIPE; THENCE NORTH 75°03'53" WEST A DISTANCE OF 276.59 FEET TO AN IRON PIPE; THENCE SOUTH 36°13'41" WEST A DISTANCE OF 120.37 FEET TO AN IRON PIPE; THENCE NORTH 49°31'49" WEST A DISTANCE OF 105.40 FEET TO AN IRON PIPE; THENCE NORTH 65°24'12" WEST A DISTANCE OF 112.48 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE RIGHT, A RADIUS OF 865.00 FEET, AN ARC LENGTH OF 261.30 FEET, A CHORD BEARING OF NORTH 54°43'51" WEST, A CHORD LENGTH OF 260.31 FEET TO A CONCRETE MONUMENT; THENCE NORTH 42°11'22" WEST A DISTANCE OF 182.87 FEET TO A CONCRETE MONUMENT; THENCE NORTH 40°19'02" WEST A DISTANCE OF 35.61 FEET TO A POINT; THENCE NORTH 44°05'45" WEST A DISTANCE OF 184.73 FEET TO A CONCRETE MONUMENT; THENCE WITH A CURVE TO THE LEFT A RADIUS OF 534.00 FEET, AN ARC LENGTH OF 249.50 FEET, A CHORD BEARING OF NORTH 64°32'31" WEST, A CHORD LENGTH OF 247.24 FEET TO A CONCRETE MONUMENT; THENCE NORTH 77°55'37" WEST A DISTANCE OF 220.93 FEET TO A CONCRETE MONUMENT; THENCE NORTH 25°05'55" WEST A DISTANCE OF 60.93 FEET TO A CONCRETE MONUMENT ON THE RIGHT OF WAY OF VERIDEA PARKWAY; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE RIGHT, A RADIUS OF 5,930.50 FEET, AN ARC LENGTH OF 363.87 FEET, A CHORD BEARING OF NORTH 18°48'19" EAST, A CHORD LENGTH OF 363.81 FEET TO A POINT; THENCE NORTH 20°49'17" EAST A DISTANCE OF 59.37 FEET TO A POINT; THENCE NORTH 17°36'52" EAST A DISTANCE OF 299.95 FEET TO A POINT; THENCE NORTH 07°20'42" EAST A DISTANCE OF 127.17 FEET TO A POINT; THENCE NORTH 16°56'54" EAST A DISTANCE OF 296.14 FEET TO A POINT; THENCE A CURVE TO THE LEFT, A RADIUS OF 2,067.50 FEET, AN ARC LENGTH OF 227.29 FEET, A CHORD BEARING OF NORTH 13°47'56" EAST, A CHORD LENGTH OF 227.18 FEET TO A POINT; THENCE NORTH 09°16'52" EAST A DISTANCE OF 6.98 FEET TO A POINT; THENCE NORTH 09°16'52" EAST A DISTANCE OF 31.69 FEET TO A POINT; THENCE NORTH 09°28'48" EAST A DISTANCE OF 166.90 FEET TO A POINT; THENCE NORTH 09°28'48" EAST A DISTANCE OF 13.32 FEET TO A POINT; THENCE NORTH 09°28'48" EAST A DISTANCE OF 17.71 FEET TO A POINT; THENCE NORTH 09°28'48" EAST A DISTANCE OF 55.05 FEET TO A POINT ON THE SOUTHERN LINE OF ROGER BUSHEE; THENCE WITH SAID COMMON LINE SOUTH 80°05'31" EAST A DISTANCE OF 386.35 FEET TO AN IRON PIPE, AS SHOWN ON THE WESTERN LINE OF THE 5.00 ACRE TRACT SHOWN ON BOOK OF MAPS 1998, PAGE 1052; THENCE WITH SAID COMMON LINE SOUTH 09°53'16" WEST A DISTANCE OF 120.00 FEET TO AN IRON PIPE; THENCE NORTH 89°42'24" EAST A DISTANCE OF 427.65 FEET TO AN IRON PIPE; THENCE NORTH 28°17'19" EAST A DISTANCE OF 258.03 FEET TO A POINT; THENCE NORTH 25°29'27" WEST A DISTANCE OF 398.53 FEET TO A POINT; THENCE SOUTH 85°22'14" WEST A DISTANCE OF 220.54 FEET TO A POINT; THENCE SOUTH 09°39'36" WEST A DISTANCE OF 200.09 FEET TO A POINT, THE NORTHEAST CORNER OF ROGER BUSHEE; THENCE WITH SAID COMMON LINE NORTH 80°09'19" WEST A DISTANCE OF 185.05 FEET TO A POINT, THE SOUTHWEST CORNER OF WJ FIELDS; THENCE WITH

SAID COMMON LINE OF FIELDS AND OTHERS NORTH 09°58'01" EAST A DISTANCE OF 550.14 FEET TO A POINT, THE SOUTHEAST CORNER OF WHITEHOUSE ASSETS MANAGEMENT, LLC; THENCE WITH SAID COMMON LINE NORTH 24°25'22" EAST A DISTANCE OF 442.30 FEET TO A POINT; THENCE SOUTH 69°45'18" WEST A DISTANCE OF 509.98 FEET TO A REBAR IN THE CENTERLINE OF VERIDEA PARKWAY; THENCE WITH SAID LINE SOUTH 09°52'33" WEST A DISTANCE OF 171.70 FEET TO A POINT; THENCE SOUTH 09°57'23" WEST A DISTANCE OF 550.24 FEET TO A POINT; THENCE SOUTH 09°26'46" WEST A DISTANCE OF 21.55 FEET TO A POINT; THENCE NORTH 89°10'45" WEST A DISTANCE OF 68.12 FEET TO A POINT ON THE WESTERN RIGHT OF WAY OF VERIDEA PARKWAY; THENCE WITH SAID RIGHT OF WAY SOUTH 09°28'47" WEST A DISTANCE OF 60.77 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 09°28'45" WEST A DISTANCE OF 430.91 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 09°46'52" WEST A DISTANCE OF 74.87 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE RIGHT, A RADIUS OF 1,933.03 FEET, AN ARC LENGTH OF 173.41 FEET, A CHORD BEARING OF SOUTH 14°22'33" WEST, A CHORD LENGTH OF 173.35 FEET TO A POINT; THENCE SOUTH 16°56'46" WEST A DISTANCE OF 296.14 FEET TO A POINT; THENCE SOUTH 36°46'38" WEST A DISTANCE OF 128.94 FEET TO A POINT; THENCE SOUTH 21°28'31" WEST A DISTANCE OF 304.38 FEET TO A POINT; THENCE SOUTH 20°42'10" WEST A DISTANCE OF 61.19 FEET TO A POINT; THENCE A CURVE TO THE LEFT, A RADIUS OF 6,150.50 FEET, AN ARC LENGTH OF 428.45 FEET, A CHORD BEARING OF SOUTH 18°25'23" WEST, A CHORD LENGTH OF 428.36 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE LEFT, A RADIUS OF 6,150.50 FEET, AN ARC LENGTH OF 203.98 FEET, A CHORD BEARING OF SOUTH 15°28'40" WEST, A CHORD LENGTH OF 203.97 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE LEFT A RADIUS OF 6,150.50 FEET, AN ARC LENGTH OF 244.84 FEET, A CHORD BEARING OF SOUTH 13°23'14" WEST, A CHORD LENGTH OF 244.82 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 82°34'50" WEST A DISTANCE OF 63.94 FEET TO A CONCRETE MONUMENT ON THE NORTHERN RIGHT OF WAY OF NORTH CAROLINA HIGHWAY 540; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE RIGHT, A RADIUS OF 4,035.00 FEET, AN ARC LENGTH OF 584.49 FEET, A CHORD BEARING OF NORTH 63°59'55" WEST, A CHORD LENGTH OF 583.98 FEET TO A POINT; THENCE A CURVE TO THE RIGHT, A RADIUS OF 4,035.00 FEET, AN ARC LENGTH OF 857.09 FEET, A CHORD BEARING OF NORTH 53°42'27" WEST, A CHORD LENGTH OF 855.48 FEET TO AN IRON PIPE; THENCE A CURVE TO THE RIGHT, A RADIUS OF 4,054.26 FEET, AN ARC LENGTH OF 326.65 FEET, A CHORD BEARING OF NORTH 45°18'10" WEST, A CHORD LENGTH OF 326.56 FEET TO AN IRON PIPE; THENCE NORTH 36°43'15" WEST A DISTANCE OF 102.76 FEET TO AN IRON PIPE; THENCE NORTH 35°20'20" WEST A DISTANCE OF 237.13 FEET TO AN IRON PIPE; THENCE NORTH 07°47'12" WEST A DISTANCE OF 131.08 FEET TO AN IRON PIPE; THENCE NORTH 00°34'29" WEST A DISTANCE OF 436.11 FEET TO AN IRON PIPE; THENCE NORTH 12°52'53" EAST A DISTANCE OF 565.14 FEET TO AN IRON PIPE; THENCE NORTH 05°57'15" EAST A DISTANCE OF 356.74 FEET TO AN IRON PIPE; THENCE NORTH 15°26'08" EAST A DISTANCE OF 134.33 FEET TO A POINT; THENCE NORTH 15°26'08" EAST A DISTANCE OF 200.01 FEET TO AN IRON PIPE; THENCE NORTH 28°28'53" EAST A DISTANCE OF 237.21 FEET TO AN IRON PIPE; THENCE NORTH 45°14'54" EAST A DISTANCE OF 75.20 FEET TO AN IRON PIPE; THENCE NORTH 42°51'55" EAST A DISTANCE OF 241.20 FEET TO AN IRON PIPE; THENCE NORTH 50°43'55" EAST A DISTANCE OF 160.95 FEET TO AN IRON PIPE ON THE SOUTHERN RIGHT OF WAY US HIGHWAY 1; THENCE WITH SAID RIGHT OF WAY NORTH 58°37'05" EAST A DISTANCE OF 364.36 FEET TO A POINT ON THE SOUTHERN LINE OF YMCA OF THE TRIANGLE; THENCE WITH SAID COMMON LINE NORTH 87°38'44" EAST A DISTANCE OF 265.82 FEET TO A POINT; THENCE NORTH 00°27'33" WEST A DISTANCE OF 149.91 FEET TO A POINT ON THE SOUTHERN RIGHT OF WAY OF SAID US HIGHWAY 1; THENCE WITH SAID RIGHT OF WAY NORTH 58°41'20" EAST A DISTANCE OF 1,668.68 FEET TO A POINT IN

THE CENTERLINE OF VERIDEA PARKWAY, THE COMMON CORNER OF TRACT 2 AS SHOWN ON BOOK OF MAPS 1978, PAGE 731; THENCE WITH SAID CENTERLINE SOUTH 34°51'52" EAST A DISTANCE OF 160.69 FEET TO A POINT; THENCE SOUTH 34°51'52" EAST A DISTANCE OF 29.87 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT A RADIUS OF 1,153.78 FEET, AN ARC LENGTH OF 159.25 FEET, A CHORD BEARING OF SOUTH 29°56'17" EAST, A CHORD LENGTH OF 159.12 FEET TO A POINT; THENCE A CURVE TO THE RIGHT, A RADIUS OF 1,410.24 FEET, AN ARC LENGTH OF 237.39 FEET, A CHORD BEARING OF SOUTH 21°35'10" EAST, A CHORD LENGTH OF 237.11 FEET TO A POINT; THENCE A CURVE TO THE RIGHT, A RADIUS OF 1,412.80 FEET, AN ARC LENGTH OF 95.19 FEET, A CHORD BEARING OF SOUTH 15°10'37" EAST, A CHORD LENGTH OF 95.17 FEET TO A POINT, THE COMMON CORNER OF WVPRINCE PROPERTIES LLC; THENCE WITH SAID COMMON LINE NORTH 53°12'16" EAST A DISTANCE OF 324.19 FEET TO A POINT; THENCE SOUTH 05°04'58" EAST A DISTANCE OF 406.22 FEET TO A POINT; THENCE SOUTH 82°04'14" WEST A DISTANCE OF 262.30 FEET TO A POINT IN THE CENTERLINE OF VERIDEA PARKWAY; THENCE WITH SAID LINE SOUTH 04°53'25" EAST A DISTANCE OF 109.42 FEET TO A POINT; THENCE A CURVE TO THE RIGHT, A RADIUS OF 253.36 FEET, AN ARC LENGTH OF 164.05 FEET, A CHORD BEARING OF SOUTH 13°00'27" WEST, A CHORD LENGTH OF 161.20 FEET TO AN IRON PIPE ON THE EASTERN RIGHT OF WAY OF VERIDEA PARKWAY; THENCE SOUTH 53°16'50" EAST A DISTANCE OF 31.10 FEET TO AN IRON PIPE ON THE EASTERN RIGHT OF WAY OF VERIDEA PARKWAY; THENCE SOUTH 53°16'50" EAST A DISTANCE OF 60.76 FEET TO A POINT; THENCE NORTH 71°42'44" EAST A DISTANCE OF 274.98 FEET TO A POINT; THENCE NORTH 71°42'44" EAST A DISTANCE OF 170.75 FEET TO AN IRON PIPE; THENCE NORTH 61°11'36" EAST A DISTANCE OF 171.72 FEET TO AN IRON PIPE; THENCE NORTH 67°24'08" EAST A DISTANCE OF 526.30 FEET TO AN IRON PIPE ON THE WESTERN LINE OF THE TRACT SHOWN ON PLAT BOOK 1985, PAGE 64; THENCE WITH SAID COMMON LINE SOUTH 00°33'48" WEST A DISTANCE OF 1,301.27 FEET TO AN IRON PIPE; THENCE SOUTH 88°56'50" EAST A DISTANCE OF 1,524.31 FEET TO AN IRON PIPE; THENCE NORTH 42°37'27" EAST A DISTANCE OF 84.50 FEET TO A POINT; THENCE SOUTH 87°51'02" EAST A DISTANCE OF 208.48 FEET TO AN IRON PIPE; THENCE NORTH 00°58'38" EAST A DISTANCE OF 3,283.09 FEET TO AN IRON PIPE; THENCE SOUTH 89°46'05" WEST A DISTANCE OF 25.90 FEET TO A POINT, THE SOUTHEAST CORNER OF TRACT C-2, AS SHOWN ON BOOK OF MAPS 1989, PAGE 59; THENCE WITH SAID COMMON LINE NORTH 01°31'12" EAST A DISTANCE OF 572.91 FEET TO A POINT; THENCE NORTH 01°28'31" EAST A DISTANCE OF 119.73 FEET TO A POINT; THENCE NORTH 01°30'44" EAST A DISTANCE OF 41.12 FEET TO THE POINT OF BEGINNING; CONTAINING 37,222,488 SQUARE FEET OR 854.51 ACRES.

THIS INCLUDES THE RECOMBINED PARCELS SHOWN ON B.M. 2024, PG. 630 RECORDED IN THE WAKE COUNTY REGISTER OF DEEDS.

LESS AND EXCEPT THE FOLLOWING

BEING ALL OF THE JENKS, MILBY, AND POE TRACTS SHOWN ON BOOK OF MAPS 2014, PAGE 1223 OF THE WAKE COUNTY REGISTRY. MORE PARTICULARLY DESCRIBED AS:

COMMENCING AT A POINT ON THE SOUTHERN RIGHT OF WAY OF U.S. HIGHWAY 1, SAID POINT BEING THE NORTHWEST CORNER OF TRACT I-A, AS SHOWN ON BOOK OF MAPS 2003, PAGE 398 OF THE WAKE COUNTY REGISTRY, THE POINT OF COMMENCEMENT; THENCE SOUTH 47°02'19" WEST A DISTANCE OF 6,484.14 FEET TO AN IRON PIPE, THE NORTHEAST CORNER OF THE MILBY TRACT, AS SHOWN ON BOOK OF MAPS 2014, PAGE 1223, THE POINT OF BEGINNING; THENCE WITH THE EASTERN LINE OF THE MILBY

TRACT SOUTH 02°19'40" WEST A DISTANCE OF 199.14 FEET TO A POINT, THE NORTHWEST CORNER OF THE 1.710 ACRE TRACT SHOWN ON BOOK OF MAPS 2002, PAGE 109; THENCE WITH SAID COMMON LINE SOUTH 02°19'40" WEST A DISTANCE OF 64.13 FEET TO AN IRON PIPE; THENCE SOUTH 02°13'53" WEST A DISTANCE OF 189.40 FEET TO AN IRON PIPE; THENCE SOUTH 02°17'48" WEST A DISTANCE OF 67.39 FEET TO AN IRON PIPE; THENCE SOUTH 65°19'45" WEST A DISTANCE OF 538.99 FEET TO A POINT; THENCE SOUTH 01°27'55" WEST A DISTANCE OF 148.65 FEET TO A POINT; THENCE SOUTH 77°54'05" WEST A DISTANCE OF 389.22 FEET TO AN IRON PIPE; THENCE NORTH 00°01'19" WEST A DISTANCE OF 967.73 FEET TO A POINT; THENCE NORTH 89°58'41" EAST A DISTANCE OF 616.26 FEET TO AN IRON PIPE; THENCE NORTH 89°58'41" EAST A DISTANCE OF 133.87 FEET TO AN IRON PIPE; THENCE NORTH 87°19'22" EAST A DISTANCE OF 145.34 FEET TO THE POINT OF BEGINNING; CONTAINING 668,038 SQUARE FEET OR 15.34 ACRES.

SOUTH VILLAGE EAST

BEING A PORTION OF THE PROGRESS ENERGY, LYNA, AND REEVES TRACTS SHOWN ON BOOK OF MAPS 2007, PAGE 1132 OF THE WAKE COUNTY REGISTRY. MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT AN EXISTING IRON PIPE ON THE EAST LINE OF TRACT A, AS SHOWN ON BOOK OF MAPS 1998, PAGE 782 OF THE WAKE COUNTY REGISTRY, BEING ALSO THE NORTHWEST CORNER OF TRACT 2, AS SHOWN ON BOOK OF MAPS 2016, PAGE 1428; THENCE WITH SAID TRACT A, NORTH 04°58'10" EAST A DISTANCE OF 362.56 FEET TO A POINT; THENCE SOUTH 89°45'44" WEST A DISTANCE OF 59.47 FEET TO A POINT ON THE EASTERN RIGHT OF WAY OF VERIDEA PARKWAY, AS DESCRIBED IN DEED BOOK 15539, PAGE 1885; THENCE WITH SAID RIGHT OF WAY NORTH 13°15'47" EAST A DISTANCE OF 53.04 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE LEFT, A RADIUS OF 1,700.00 FEET, AN ARC LENGTH OF 338.32 FEET, A CHORD BEARING OF NORTH 07°33'43" EAST, A CHORD LENGTH OF 337.77 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE LEFT, A RADIUS OF 1,900.00 FEET, AN ARC LENGTH OF 76.93 FEET, A CHORD BEARING OF NORTH 01°06'08" WEST, A CHORD LENGTH OF 76.92 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE LEFT, A RADIUS OF 1,900.00 FEET, AN ARC LENGTH OF 63.33 FEET, A CHORD BEARING OF NORTH 01°01'01" WEST, A CHORD LENGTH OF 63.33 FEET TO A CONCRETE MONUMENT; THENCE A CURVE TO THE LEFT, A RADIUS OF 1,900.00 FEET, AN ARC LENGTH OF 31.67 FEET, A CHORD BEARING OF NORTH 02°26'58" WEST, A CHORD LENGTH OF 31.67 FEET TO A CONCRETE MONUMENT; THENCE NORTH 02°54'23" EAST A DISTANCE OF 203.97 FEET TO A CONCRETE MONUMENT ON THE SOUTHERN RIGHT OF WAY OF NORTH CAROLINA HIGHWAY 540; THENCE WITH SAID RIGHT OF WAY NORTH 48°17'55" EAST A DISTANCE OF 64.35 FEET TO A POINT; THENCE NORTH 48°17'55" EAST A DISTANCE OF 3.48 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 76°02'09" EAST A DISTANCE OF 316.69 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 77°42'22" EAST A DISTANCE OF 224.13 FEET TO A CONCRETE MONUMENT; THENCE NORTH 74°21'52" EAST A DISTANCE OF 186.60 FEET TO A CONCRETE MONUMENT; THENCE NORTH 46°45'41" EAST A DISTANCE OF 297.04 FEET TO A CONCRETE MONUMENT; THENCE NORTH 47°49'13" EAST A DISTANCE OF 182.30 FEET TO A CONCRETE MONUMENT; THENCE NORTH 64°40'03" EAST A DISTANCE OF 179.28 FEET TO A POINT, THE NORTHWEST CORNER OF GREENWAY WASTE SOLUTIONS AS DESCRIBED IN DEED BOOK 9099, PAGE 1039; THENCE WITH SAID COMMON LINE SOUTH 06°34'16" EAST A DISTANCE OF 760.63 FEET TO AN IRON PIPE; THENCE SOUTH 79°02'49" EAST A DISTANCE OF 220.90 FEET TO A POINT; THENCE SOUTH 75°06'07" EAST A DISTANCE OF 218.69 FEET TO AN IRON PIPE; THENCE SOUTH 70°32'46" EAST A DISTANCE OF 183.78 FEET TO AN IRON PIPE; THENCE SOUTH 55°38'24" EAST A DISTANCE OF 327.19 FEET TO A POINT IN WHITE OAK CREEK; THENCE WITH SAID CREEK SOUTH 07°50'07" EAST A DISTANCE OF 31.18 FEET TO A POINT; THENCE SOUTH 24°25'22" EAST A DISTANCE OF 138.13 FEET TO A POINT, THE COMMON CORNER OF WAKE COUNTY FELTONVILLE LANDFILL, AS SHOWN ON BOOK OF MAPS 2016, PAGE 1427; THENCE WITH SAID CREEK, THE COMMON LINE, SOUTH 04°34'33" WEST A DISTANCE OF 63.94 FEET TO A POINT; THENCE SOUTH 18°23'05" WEST A DISTANCE OF 94.25 FEET TO A POINT; THENCE SOUTH 00°53'17" WEST A DISTANCE OF 65.12 FEET TO A POINT; THENCE SOUTH 00°53'17" WEST A DISTANCE OF 39.71 FEET TO A POINT; THENCE SOUTH 12°47'10" WEST A DISTANCE OF 52.16 FEET TO A POINT; THENCE SOUTH 58°49'54" WEST A DISTANCE OF 25.88 FEET TO A POINT; THENCE SOUTH 13°29'07" WEST A DISTANCE OF 65.67 FEET TO A POINT, THE NORTHEAST CORNER OF TRACT 2 AS SHOWN ON BOOK OF MAPS 2016, PAGE 1428; THENCE WITH SAID COMMON LINE NORTH 82°38'31"

WEST A DISTANCE OF 877.31 FEET TO AN IRON PIPE; THENCE NORTH 88°36'32" WEST A DISTANCE OF 1370.01 FEET TO THE POINT OF BEGINNING; CONTAINING 2,282,096 SQUARE FEET OR 52.39 ACRES.

TRACTS 8-3, 10-6, 10-7B SOUTH

BEGINNING AT A CONCRETE MONUMENT ON THE WESTERN RIGHT OF WAY OF VERIDEA PARKWAY, SAID MONUMENT BEING ON THE NORTHERN LINE OF THE TRACT SHOWN ON BOOK OF MAPS 1986, PAGE 1865, THE POINT OF BEGINNING; THENCE NORTH 71°59'15" WEST A DISTANCE OF 337.68 FEET TO AN IRON PIPE; THENCE NORTH 86°29'50" WEST A DISTANCE OF 829.07 FEET TO AN IRON PIPE, THE NORTHEAST CORNER OF TRACT 3 AS SHOWN ON BOOK OF MAPS 2022, PAGE 3; THENCE WITH SAID COMMON LINE SOUTH 87°43'51" WEST A DISTANCE OF 2,965.86 FEET TO AN IRON PIPE ON THE EASTERN LINE OF TRACT F, AS SHOWN ON BOOK OF MAPS 1974, PAGE 228; THENCE WITH SAID COMMON LINE NORTH 00°24'36" EAST A DISTANCE OF 1,161.04 FEET TO A POINT ON THE SOUTHERN LINE OF TRACT B, AS SHOWN ON BOOK OF MAPS 1979, PAGE 686; THENCE WITH SAID COMMON LINE SOUTH 78°13'36" EAST A DISTANCE OF 73.65 FEET TO A POINT; THENCE SOUTH 70°13'09" EAST A DISTANCE OF 113.59 FEET TO A POINT; THENCE SOUTH 71°57'54" EAST A DISTANCE OF 121.73 FEET TO A POINT; THENCE SOUTH 70°58'13" EAST A DISTANCE OF 114.09 FEET TO A POINT; THENCE SOUTH 72°14'11" EAST A DISTANCE OF 343.92 FEET TO A POINT; THENCE SOUTH 74°17'38" EAST A DISTANCE OF 315.81 FEET TO A POINT; THENCE SOUTH 65°13'58" EAST A DISTANCE OF 138.23 FEET TO A POINT; THENCE SOUTH 65°10'08" EAST A DISTANCE OF 10.00 FEET TO A POINT IN BIG BRANCH; THENCE WITH SAID BRANCH NORTH 19°49'58" EAST A DISTANCE OF 52.46 FEET TO A POINT; THENCE NORTH 27°34'56" EAST A DISTANCE OF 25.74 FEET TO A POINT; THENCE NORTH 62°53'48" EAST A DISTANCE OF 26.76 FEET TO A POINT; THENCE NORTH 29°01'04" WEST A DISTANCE OF 21.84 FEET TO A POINT; THENCE NORTH 05°59'14" WEST A DISTANCE OF 34.25 FEET TO A POINT; THENCE NORTH 49°53'01" EAST A DISTANCE OF 15.65 FEET TO A POINT; THENCE NORTH 35°50'22" EAST A DISTANCE OF 26.00 FEET TO A POINT; THENCE NORTH 57°56'55" WEST A DISTANCE OF 27.74 FEET TO A POINT; THENCE SOUTH 77°56'49" WEST A DISTANCE OF 70.86 FEET TO A POINT; THENCE NORTH 69°25'39" WEST A DISTANCE OF 55.42 FEET TO A POINT; THENCE NORTH 16°13'12" WEST A DISTANCE OF 54.07 FEET TO A POINT; THENCE NORTH 47°24'29" EAST A DISTANCE OF 30.81 FEET TO A POINT; THENCE SOUTH 76°52'37" EAST A DISTANCE OF 46.52 FEET TO A POINT; THENCE NORTH 23°54'47" EAST A DISTANCE OF 15.13 FEET TO A POINT; THENCE NORTH 10°53'04" EAST A DISTANCE OF 79.33 FEET TO A POINT; THENCE NORTH 70°48'08" WEST A DISTANCE OF 21.80 FEET TO A POINT; THENCE NORTH 13°57'57" WEST A DISTANCE OF 44.13 FEET TO A POINT; THENCE NORTH 54°45'55" WEST A DISTANCE OF 48.38 FEET TO A POINT; THENCE SOUTH 57°21'14" WEST A DISTANCE OF 58.90 FEET TO A POINT; THENCE SOUTH 44°33'39" WEST A DISTANCE OF 46.68 FEET TO A POINT; THENCE NORTH 46°24'21" WEST A DISTANCE OF 39.79 FEET TO A POINT; THENCE NORTH 72°29'35" WEST A DISTANCE OF 36.60 FEET TO A POINT; THENCE SOUTH 47°15'35" WEST A DISTANCE OF 18.92 FEET TO A POINT; THENCE NORTH 74°35'59" WEST A DISTANCE OF 21.22 FEET TO A POINT; THENCE NORTH 28°54'22" WEST A DISTANCE OF 20.74 FEET TO A POINT; THENCE NORTH 42°54'07" WEST A DISTANCE OF 46.75 FEET TO A POINT; THENCE NORTH 06°55'02" EAST A DISTANCE OF 26.65 FEET TO A POINT; THENCE NORTH 88°27'17" EAST A DISTANCE OF 37.67 FEET TO A POINT; THENCE NORTH 27°00'55" EAST A DISTANCE OF 19.39 FEET TO A POINT; THENCE NORTH 01°16'06" EAST A DISTANCE OF 31.60 FEET TO A POINT; THENCE NORTH 45°55'37" EAST A DISTANCE OF 50.02 FEET TO A POINT; THENCE NORTH 01°23'54" EAST A DISTANCE OF 14.01 FEET TO A POINT; THENCE NORTH 65°17'04" WEST A DISTANCE OF 42.02 FEET TO A POINT; THENCE NORTH 01°21'12" EAST A DISTANCE OF 32.19 FEET TO A POINT; THENCE NORTH 46°19'10" WEST A DISTANCE OF 51.21 FEET TO A POINT; THENCE NORTH 06°48'02" EAST A DISTANCE OF 35.97 FEET TO A POINT; THENCE NORTH 69°34'03" EAST A DISTANCE OF 41.13 FEET TO A POINT; THENCE NORTH 39°27'36" EAST A DISTANCE OF 39.13 FEET TO A POINT; THENCE NORTH 15°04'34" WEST A DISTANCE OF 20.63 FEET TO

A POINT; THENCE NORTH 51°45'25" WEST A DISTANCE OF 25.88 FEET TO A POINT; THENCE NORTH 30°03'26" EAST A DISTANCE OF 27.95 FEET TO A POINT; THENCE SOUTH 60°17'18" EAST A DISTANCE OF 30.79 FEET TO A POINT; THENCE SOUTH 36°34'38" EAST A DISTANCE OF 34.28 FEET TO A POINT; THENCE SOUTH 78°45'43" EAST A DISTANCE OF 52.43 FEET TO A POINT; THENCE NORTH 41°36'19" EAST A DISTANCE OF 15.36 FEET TO A POINT; THENCE NORTH 04°43'43" EAST A DISTANCE OF 44.44 FEET TO A POINT; THENCE NORTH 30°37'30" EAST A DISTANCE OF 51.77 FEET TO A POINT; THENCE NORTH 05°00'41" EAST A DISTANCE OF 35.48 FEET TO A POINT; THENCE SOUTH 62°04'45" WEST A DISTANCE OF 33.82 FEET TO A POINT; THENCE NORTH 44°58'03" WEST A DISTANCE OF 39.84 FEET TO A POINT; THENCE NORTH 44°37'02" EAST A DISTANCE OF 21.58 FEET TO A POINT; THENCE NORTH 53°05'19" EAST A DISTANCE OF 60.88 FEET TO A POINT; THENCE NORTH 61°15'57" WEST A DISTANCE OF 39.17 FEET TO A POINT; THENCE NORTH 50°49'25" WEST A DISTANCE OF 23.78 FEET TO A POINT; THENCE NORTH 10°03'59" WEST A DISTANCE OF 28.54 FEET TO A POINT; THENCE NORTH 38°48'29" EAST A DISTANCE OF 55.95 FEET TO A POINT; THENCE NORTH 43°08'07" WEST A DISTANCE OF 60.59 FEET TO A POINT; THENCE NORTH 42°28'11" EAST A DISTANCE OF 31.74 FEET TO A POINT; THENCE NORTH 70°54'18" WEST A DISTANCE OF 69.18 FEET TO A POINT; THENCE NORTH 86°35'18" WEST A DISTANCE OF 111.94 FEET TO A POINT; THENCE NORTH 47°58'54" WEST A DISTANCE OF 68.58 FEET TO A POINT; THENCE NORTH 30°52'49" EAST A DISTANCE OF 32.56 FEET TO A POINT; THENCE NORTH 21°24'56" WEST A DISTANCE OF 54.07 FEET TO A POINT; THENCE NORTH 55°25'47" EAST A DISTANCE OF 39.27 FEET TO A POINT; THENCE NORTH 03°25'23" WEST A DISTANCE OF 46.46 FEET TO A POINT; THENCE NORTH 31°42'04" EAST A DISTANCE OF 54.96 FEET TO A POINT; THENCE NORTH 18°30'38" EAST A DISTANCE OF 44.10 FEET TO A POINT; THENCE NORTH 01°10'29" WEST A DISTANCE OF 65.77 FEET TO A POINT; THENCE NORTH 22°17'56" WEST A DISTANCE OF 29.93 FEET TO A POINT; THENCE NORTH 19°15'09" EAST A DISTANCE OF 2.52 FEET TO A POINT ON THE SOUTH LINE OF ROBERT BEREMAN; THENCE WITH SAID COMMON LINE NORTH 87°19'40" EAST A DISTANCE OF 837.86 FEET TO A POINT ON THE SOUTHERN RIGHT OF WAY OF NORTH CAROLINA HIGHWAY 540; THENCE WITH SAID RIGHT OF WAY SOUTH 48°51'19" EAST A DISTANCE OF 616.60 FEET TO AN IRON PIPE; THENCE NORTH 44°43'56" EAST A DISTANCE OF 25.00 FEET TO AN IRON PIPE; THENCE SOUTH 50°09'33" EAST A DISTANCE OF 205.32 FEET TO AN IRON PIPE; THENCE SOUTH 39°54'37" EAST A DISTANCE OF 212.61 FEET TO AN IRON PIPE; THENCE A CURVE TO THE LEFT A RADIUS OF 4,375.00 FEET, AN ARC LENGTH OF 311.61 FEET, A CHORD BEARING OF SOUTH 45°34'54" EAST, A CHORD LENGTH OF 311.54 FEET TO AN IRON PIPE; THENCE A CURVE TO THE LEFT, A RADIUS OF 4,375.00 FEET, AN ARC LENGTH OF 1,106.45 FEET, A CHORD BEARING OF SOUTH 54°52'03" EAST, A CHORD LENGTH OF 1,103.50 FEET TO A POINT; THENCE A CURVE TO THE LEFT, A RADIUS OF 4,375.00 FEET, AN ARC LENGTH OF 456.34 FEET, A CHORD BEARING OF SOUTH 65°10'37" EAST, A CHORD LENGTH OF 456.13 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 49°00'55" EAST A DISTANCE OF 133.17 FEET TO A POINT ON THE WESTERN RIGHT OF WAY OF VERIDEA PARKWAY; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE LEFT, A RADIUS OF 1,680.00 FEET, AN ARC LENGTH OF 355.38 FEET, A CHORD BEARING OF SOUTH 05°50'57" WEST, A CHORD LENGTH OF 354.72 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT A RADIUS OF 1,680.00 FEET, AN ARC LENGTH OF 205.93 FEET, A CHORD BEARING OF SOUTH 03°43'21" EAST, A CHORD LENGTH OF 205.80 FEET TO THE POINT OF BEGINNING; CONTAINING 5,629,803 SQUARE FEET OR 129.24 ACRES.

TRACT 9-3-3

COMMENCING AT A POINT ON THE SOUTHERN RIGHT OF WAY OF U.S. HIGHWAY 1, SAID POINT BEING THE NORTHWEST CORNER OF TRACT I-A, AS SHOWN ON BOOK OF MAPS 2003, PAGE 398 OF THE WAKE COUNTY REGISTRY, THE POINT OF COMMENCEMENT; THENCE SOUTH 51°39'05" EAST A DISTANCE OF 5331.68 FEET TO AN IRON PIPE ON THE WESTERN RIGHT OF WAY OF NORTH CAROLINA HIGHWAY 55, SAID PIPE BEING THE NORTHEAST CORNER OF CROWN BUILDERS AND DEVELOPERS OF NC, LLC, THE POINT OF BEGINNING; THENCE WITH SAID COMMON LINE SOUTH 89°40'44" WEST A DISTANCE OF 123.48 FEET TO AN IRON PIPE; THENCE NORTH 02°18'46" WEST A DISTANCE OF 50.01 FEET TO AN IRON PIPE ON THE SOUTH LINE OF DEXTER MONK; THENCE WITH SAID COMMON LINE NORTH 89°43'19" EAST A DISTANCE OF 123.46 FEET TO AN IRON PIPE ON THE WESTERN RIGHT OF WAY OF SAID HIGHWAY 55; THENCE WITH SAID RIGHT OF WAY, A CURVE TO THE RIGHT A RADIUS OF 5,633.75 FEET, AN ARC LENGTH OF 49.92 FEET, A CHORD BEARING OF SOUTH 02°20'20" EAST, A CHORD LENGTH OF 49.92 FEET TO THE POINT OF BEGINNING; CONTAINING 6,168 SQUARE FEET OR 0.14 ACRES.

TRACT 12

BEING A PORTION OF TRACT 8 AS SHOWN ON BOOK OF MAPS 1978, PAGE 731 OF THE WAKE COUNTY REGISTRY. MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT AN IRON PIPE, THE SOUTHWEST CORNER OF TRACT 1 AS SHOWN ON BOOK OF MAPS 2015, PAGE 14 OF THE WAKE COUNTY REGISTRY; THENCE WITH SAID COMMON LINE NORTH 89°09'31" EAST A DISTANCE OF 343.45 FEET TO AN IRON PIPE ON THE NORTHERN RIGHT OF WAY OF US HIGHWAY 1; THENCE WITH SAID RIGHT OF WAY SOUTH 61°02'59" WEST A DISTANCE OF 67.94 FEET TO AN IRON PIPE; THENCE SOUTH 58°43'55" WEST A DISTANCE OF 105.62 FEET TO AN IRON PIPE; THENCE SOUTH 58°47'35" WEST A DISTANCE OF 224.31 FEET TO AN IRON PIPE, THE SOUTHEAST CORNER OF TRACT 1 AS SHOWN ON BOOK OF MAPS 2016, PAGE 344; THENCE WITH SAID COMMON LINE NORTH 00°31'47" WEST A DISTANCE OF 198.89 FEET TO THE POINT OF BEGINNING; CONTAINING 33,722 SQUARE FEET OR 0.77 ACRES.

Veridea

SITE DESIGN PATTERN BOOK

Apex, North Carolina



"INSIST ON THE RIGHT OF HUMANITY AND NATURE TO COEXIST IN A HEALTHY SUPPORTIVE, DIVERSE, AND SUSTAINABLE CONDITION"

- The Hannover Principles, Principle No. 1

ACKNOWLEDGMENTS

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Last Updated: August 2024

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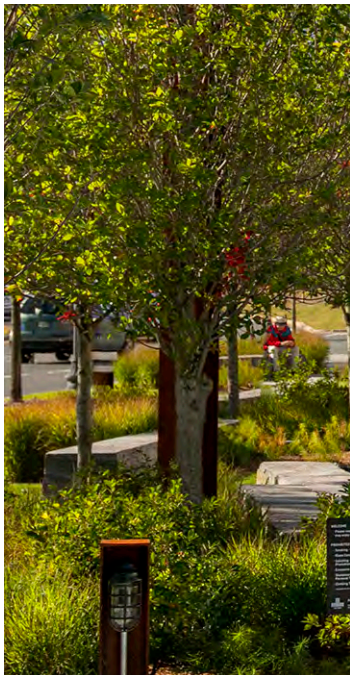
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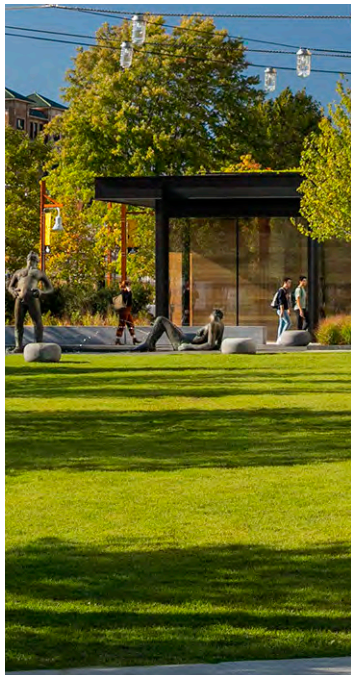
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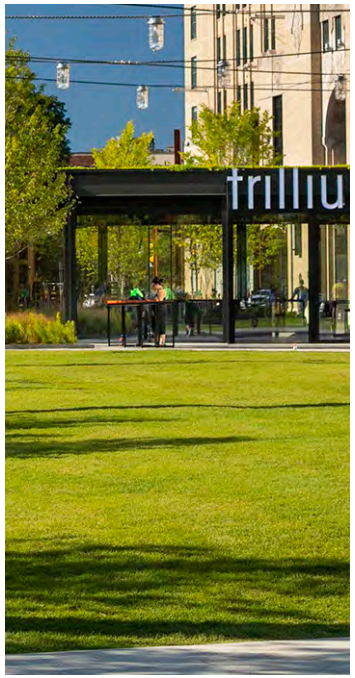




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SECTION 1

Purpose + Vision

Purpose + Application

Vision

Owner's Associations + ARC



SECTION 1.1

PURPOSE + APPLICATION

Veridea is a new, sustainable, mixed-use development in Apex, North Carolina. It is envisioned as a dynamic community where users can live, work, and play within a contemporary and ecologically-friendly context. Within the boundaries of the development there will be a variety of housing options, employment opportunities, entertainment, and recreation. This forward-thinking community will be an icon of sustainable design and construction that balances nature and development.





1.1: PURPOSE

This Pattern Book was developed by the project team for the Veridea Development, located at the conjunction of Claude E. Pope Memorial Highway (Route 1), East Williams Street (Highway 55), and Western Wake Freeway (Interstate 540) in Apex, North Carolina. The purpose of this Pattern Book is to ensure that the quality and character of development within the boundaries of Veridea is designed to a high caliber and centered around a cohesive and sustainably-focused design theme. The elements outlined within this document will provide a framework of the design intent, theme, and style of this mixed-use community. This will be used to assist property owners, developers, home builders, architects, engineers, landscape architects, planners, and other consultants in their decision-making as this project is designed and developed over time.





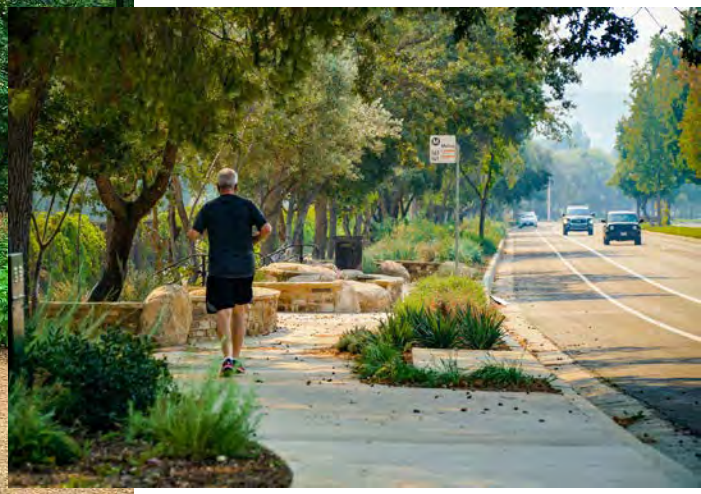
The vision of Veridea is to establish a contemporary, progressive, and healthy mixed-use community that balances innovative design with a conservation mindset.



1.1: APPLICATION

The Pattern Book is intended to be used in conjunction with the Town of Apex's Unified Development Ordinance, the Sustainable Development Plan, and the Environmental Enhancement Plan. The Pattern Book applies to the entirety of Veridea. It identifies design elements that represent a higher quality of design for Veridea than would otherwise be required. A combination of narratives and imagery are utilized to convey caliber of design, overall quality of materials, and the character and relationship of design elements. These design elements may be used and combined to create a unique and special sense of place. As a result of this Pattern Book, the actual design of Veridea will naturally vary from the Town of Apex architectural standards and will look and feel closer to the imagery found within this document.







Imagery is intended to convey high quality materials and design envisioned for Veridea.

As a part of fostering creative, unique, and innovative outcomes, the guidelines found within the Pattern Book are intended to provide a flexible framework that can respond to changing conditions as Veridea is developed over time. The pictures, illustrations, and descriptions are contextual examples of the high-quality materials and design standards envisioned for the project. Materials, architectural features, signage, hardscape, and landscape components depicted herein are not intended to be an exclusive or exhaustive list of elements to be included in design or construction. Instead, these elements are intended to convey acceptable design approaches that foster a unique sense of place through variety, high quality, and a focus on sustainably-focused development.

Unless specifically addressed in the Sustainable Development Plan and Environmental Enhancement Plan for Veridea, any materials and design-related aspects that are not addressed in this Pattern Book are subject to the requirements of the Town of Apex UDO, the Town of Apex Design and Development Manual, and other applicable laws, standards, policies, and guidelines.

SECTION 1.2

VISION

The vision of Veridea is to establish a contemporary, progressive, and healthy mixed-use community that balances innovative design with a conservation mindset. By leveraging natural features, crafting high-quality open spaces, and promoting a sustainable ethic, this development will offer community members a place to gather, work, connect, and engage with nature.







Veridea is envisioned to leverage a variety of natural elements to create unique and impactful placemaking.

1.2: GOALS

Veridea will accomplish this design vision by:

- Creating a diverse mix of uses within a cohesive framework
- Utilizing a variety of contemporary architectural and landscape styles to create an authentic, high-quality, and vibrant built environment that appears to have evolved over time
- Including a high level of sophistication in style and character in a manner that accentuates individual uses and spaces while weaving an overall fabric that speaks to the natural world, unique amenities, and beautiful architecture
- Leveraging natural amenities such as streams, forested areas, open spaces, trails, and parks to frame and enhance the built environment
- Providing opportunities to engage with the environment in both built and natural conditions
- Setting forth a vision for high-quality pedestrian-oriented streetscapes and trail networks that include a variety of public and civic spaces interspersed throughout the development
- Incorporating attractive and diverse hardscape and landscape materials to construct elements within the development - thoughtfully integrating the ground plane throughout well-designed community gathering areas
- Leveraging infrastructure as amenities, such as stormwater control measures, that complement the built environment while promoting ecological diversity and natural ecosystems
- Promoting a sustainable ethos by practicing techniques and methodologies that take into account issues of climate change, carbon emissions, water availability, renewable energies, and wildlife conservation









SECTION 1.3

OWNER'S ASSOCIATIONS + ARC

In order for Veridea to maintain a high caliber of design and sense of place, the development will establish a Master Association (MA). The MA will then establish the Veridea Homeowner's Association (HOA), the Veridea Commercial Owners Association (COA), the Veridea Residential Architectural Review Committee (RARC), and the Veridea Commercial Architectural Review Committee (CARC) - as required by the approved Sustainable Development Plan.





Owner's Associations and Architectural Review Committees assist in maintaining Veridea's vision over time.

1.3: OWNER'S ASSOCIATIONS

Veridea Master Association

As required by the approved Sustainable Development Plan, there shall be one mandatory Master Association (MA) for all residential and commercial areas within Veridea. The MA shall be responsible for the execution, performance, administration and enforcement of the recorded Declaration of Covenants, Conditions and Restrictions (Declaration), including managing and maintaining the common areas and common improvements within both residential and commercial areas. The MA shall be permitted to oversee the formation and management of sub-associations within Veridea - one for residential areas (HOA) and the other for commercial areas (COA) - as detailed below.





Owner's associations are responsible for maintaining common areas and common improvements.

Veridea Homeowner's Association

There shall be one mandatory Homeowner's Association (HOA) for all of the residential areas within Veridea, subject to the MA. The Veridea HOA will be responsible for managing and maintaining the common areas and common improvements within residential areas. The association's responsibility will be outlined in the filed Declaration of Covenants, Conditions, and Restrictions (Declaration) and shall at minimum include maintenance of entrance signs, screening walls, trails, landscaping, landscape buffers, and open spaces.

Veridea Commercial Owner's Association

There shall be one mandatory Commercial Owner's Association (COA) for the commercial and non-residential areas within Veridea. The Veridea COA shall be required to manage and maintain the common areas and common improvements within commercial and non-residential areas, subject to the MA. The association's responsibility will be outlined in the filed Declaration and shall at minimum include maintenance of ground signs, screening walls, landscaping, landscape buffers, trails, and open spaces.

1.3: ARCHITECTURAL REVIEW COMMITTEE

Veridea Architectural Review Committee

There shall be a mandatory Residential Architectural Review Committee (RARC) for all the residential areas within Veridea. The RARC is responsible for the oversight and review of residential development within residential areas. This committee shall be established by the HOA as described in the filed Declaration. The purpose, administration, and responsibilities of this committee will be described in detail in the Declaration.

The RARC is responsible for the following:

- To ensure the Pattern Book is being followed
- To encourage high-quality construction of residences
- To oversee, review, and approve the exterior elevations and building materials in a manner that is consistent with the Pattern Book
- To preserve the common community areas and features within the Residential Areas

Veridea Commercial Architectural Review Committee

There shall be a mandatory Commercial Architectural Review Committee (CARC) for all of the commercial and non-residential areas within Veridea. The CARC is responsible for the oversight and review of commercial and non-residential development within these areas. This committee shall be established by the COA as described in the filed Declaration, which outlines in detail the committee's purpose, administration, and responsibilities.

The CARC is responsible for the following:

- To ensure the Pattern Book is being followed as each commercial or non-residential development is being proposed
- To encourage the construction of high-quality improvements within commercial and non-commercial areas
- To oversee, review, and approve building elevations, building materials, and site improvements in a manner that is consistent with the Pattern Book
- To preserve the common areas and features within the commercial and non-commercial areas



SECTION 2

Sustainable Development Plan

Sustainable Development Plan

Pillars of Sustainable Thought

Application of Pillars



SECTION 2.1

SUSTAINABLE DEVELOPMENT PLAN

The Sustainable Development Plan ("SD Plan") is a document submitted by the Responsible Party and approved by the Town of Apex Town Council as part of the zoning conditions set forth for the property known as Veridea. The SD Plan establishes a flexible framework of development standards that seeks to anticipate the evolution of future technology, trends, and practices as they apply to the development of Veridea.



The SD Plan was adopted to facilitate Veridea's development in accordance with sustainable principals. The SD Plan identifies four guiding principles that are derived from ***The Hanover Principals: Design for Sustainability,*** authored by William McDonough and Michael Braungart. The guiding principles are as follows:

- Eliminate the concept of waste
- Insist on a renewable future
- Create delightful urban places
- Integrate nature throughout the community

This Pattern Book is intended to complement the SD Plan by further defining the principles of design that fulfill sustainability standards and goals. Unless specifically addressed in the Pattern Book for Veridea, any materials and design-related aspects that are not addressed shall be subject to the SD Plan, the Veridea Environmental Enhancement Plan (EEP), the Town of Apex UDO, the Town of Apex Design and Development Manual, and other applicable laws, standards, policies and guidelines. Refer to the approved map of Sustainable Development Zones on file with the Town of Apex Planning Department as needed. Development requirements, intensity, uses, and other design guidelines vary by zone and are defined in the SD Plan.

SECTION 2.2

PILLARS OF SUSTAINABLE THOUGHT

The Pillars of Sustainable Thought offer a flexible framework to define Veridea's site and program design. Unique, thoughtful, and authentic spaces can be fostered by applying a combination of programs and design elements found within each Pillar.





2.2: PILLARS OF SUSTAINABLE THOUGHT

Taking inspiration from The Hanover Principals and the Guiding Principles set forth in the Sustainable Development Plan, this Pattern Book provides guidelines to further define principles of design for Veridea, including characteristic form, massing, composition, style, method, and materials. Identified as the Pillars of Sustainable Thought, this expansion on the SD Plan's Guiding Principles can assist property owners, developers, home builders, architects, engineers, landscape architects, planners, and other consultants in their decision-making as Veridea is designed and developed over time.

There are four Pillars of Sustainable Thought:

- *Eliminate the concept of waste*
- *Insist on a renewable future*
- *Create delightful urban places*
- *Integrate nature throughout the community*

Together, the four pillars uphold Veridea's three values of sustainability: People, Planet, and Economy. Integrated together, these values are the framework of the next generation of sustainable development.



2.2: APPLICATION OF PILLARS

A suggestive list of design principals and applications associated with each Pillar of Sustainable Thought can be found in the chart below. The characteristics, features, or development approaches described are not intended to be an exclusive or exhaustive list to be implemented in every design or construction. Instead, these principals are intended to convey acceptable design approaches that promote sustainability and meet the intent of the Sustainable Development Plan and the Environmental Enhancement Plan of Veridea.

Eliminate the Concept of Waste

- Sustainable or reclaimed materials for site elements
- Site design approaches that compress programming to limit disturbed area and preserve existing open spaces
- Locally sourced materials and partnerships with local non-profits or businesses (mountain biking clubs, small scale nurseries, etc.)
- Mill lumber from trees taken down on-site
- Utilize found materials on site for placemaking through mediums such as art, nature play, or historical monumentation
- Incorporate recycled content into products and furnishings
- Use passive design elements such as natural ventilation, daylighting, and thermal mass
- Optimize efficiency in material use by minimizing offcuts, using standard sizes, and utilizing prefabricated components or modular construction

A Sustainable Future

- Native and adaptive plantings
- Solar energy and solar lighting
- Permaculture or permanent agriculture, community gardens or garden plots (orchards, fruit groves, nut trees, garden spaces for growing food)
- Pervious paving
- Green roof and green wall design
- Encourage micro-transit options (scooters, bicycles, e-bikes) with bicycle storage, repair stations, and charging
- Electrical charging stations for vehicles and bicycles

Integration of Nature

- Pollinator and wildlife gardens
- Community tree canopy goals
- Plant unprogrammed open space, such as landscape medians
- Preserve mature tree growth
- Naturalized, informal planting design in edge conditions
- Artful, organized planting design in urban spaces
- Easy access to natural areas
- Create wildlife corridors and connected natural areas
- Minimize turf and mulched areas with groundcover planting
- Protected Audubon Community
- Educational signage about environmentalism and natural systems being experienced
- Create a reforestation schedule for long-term canopy maturity
- Micro-groves of native ecosystems
- Low-impact trails, such as single track, mountain biking, and gravel with tact

Delightful Urban Places

- Strong visuals – physical and visual connections between spaces
- Create a sense of place with memorable structures and art
- Repetition of materials and planting design to create themes
- Connected open space through walkability
- Variety of scale in structures and visual openness of vistas
- Reflect the site's history through found site elements, preservation of structures, and active cultural programming
- Infrastructure becomes amenities that go beyond basic functions such as streetscapes and stormwater features
- Sense of discovery and creativity for users
- Designate an overall landscape theme
- Attractive play and recreational spaces including natural play areas

SECTION 3

Streetscapes

Streetscape Character

Streetscape Design Standards



SECTION 3.1

STREETSCAPE CHARACTER

Each development pod of Veridea is framed by major roadways. The overall intent of this section is to aid in creating a street network with variety in character through the use of dynamic hardscape materials, plantings, and furnishings. The character of each streetscape section will vary depending on site context and adjacent development programming as the landscape transitions from one development pod to another. The following streetscape character descriptions are to be applied to the major road network to provide dynamic user experience throughout the entirety of Veridea.



*This Section describes the design intent for hardscape and landscape treatment of major roadway streetscapes within the public right of way only. Refer to Sections 5-8 for specific design guidelines on site amenities, hardscape, and landscape guidelines for privately developed open spaces and streetscapes. Streetscapes internal to development pods do not have a designated streetscape character; however, internal streetscapes shall also follow the guidelines set forth in Sections 5-8. Streetscape character of major roadways may be applied to internal streetscapes as is fitting with adjacent development program and uses.

*All streetscape designs, layouts, dimensioning and landscape standards shall comply with the streetscape requirements set forth in the SD Plan and the Town of Apex UDO. Where enhanced hardscape and landscape is located in the public right of way, a developer's agreement regarding maintenance shall be defined between the Town of Apex and the developer/responsible party.

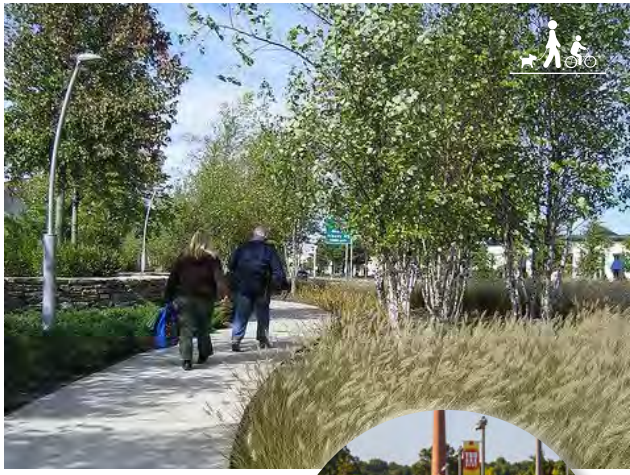


3.1: STREETSCAPE CHARACTER

The Contoured Streetscape

Applies to major thoroughfares with adjoining naturalized landscapes or designed open spaces

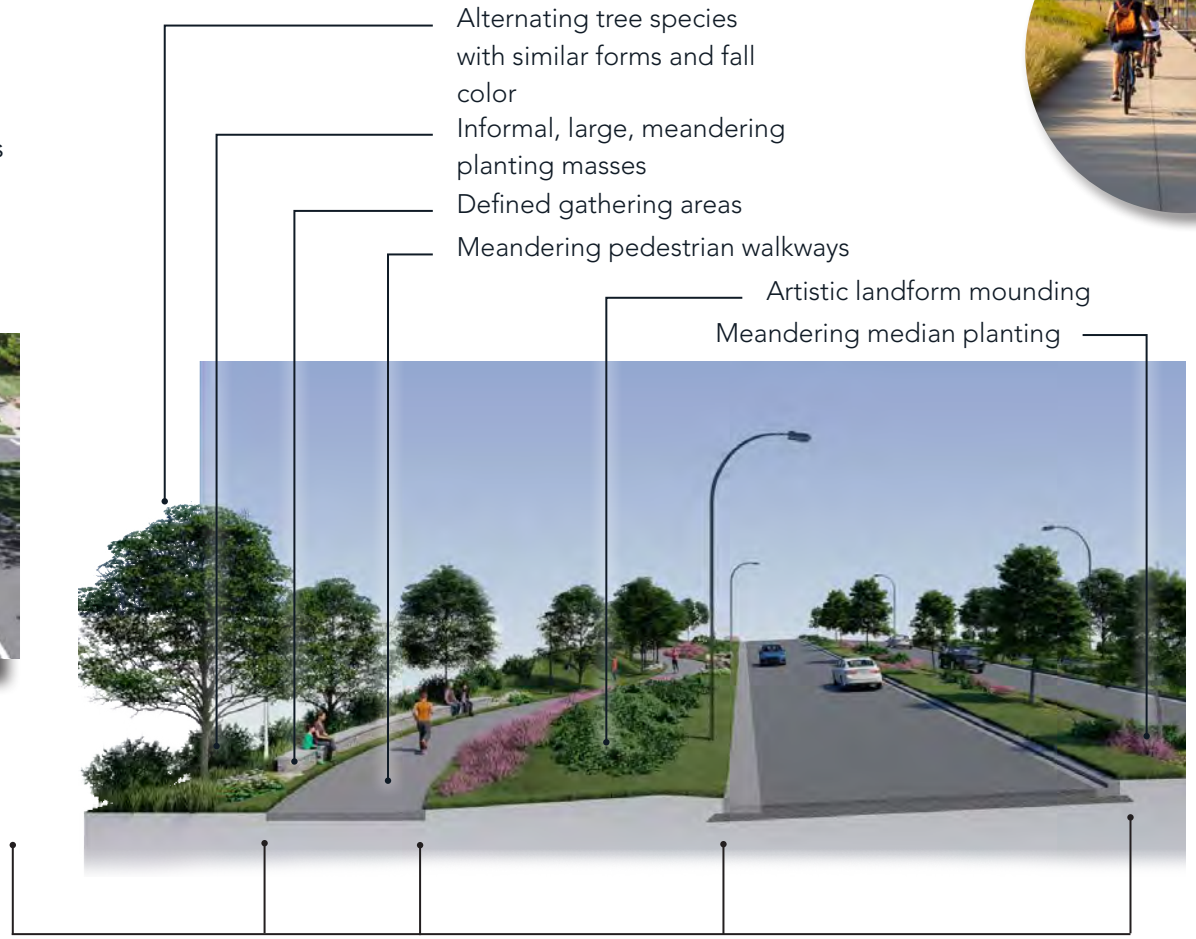
- Informal, large, meandering masses of individual focal species
- Ornamental grasses in mass planting
- Low-creeping or low-massing shrubs
- High percentage of native plants
- Defined open spaces and parks
- Mowed turf areas to define larger planting masses
- Landscape mounds as art form
- Meandering planting design in landscape medians
- Alternating street tree species
- A combination of pedestrian and roadway lighting may be used - refer to Section 8: Lighting











3.1: STREETSCAPE CHARACTER

The Residential Streetscape

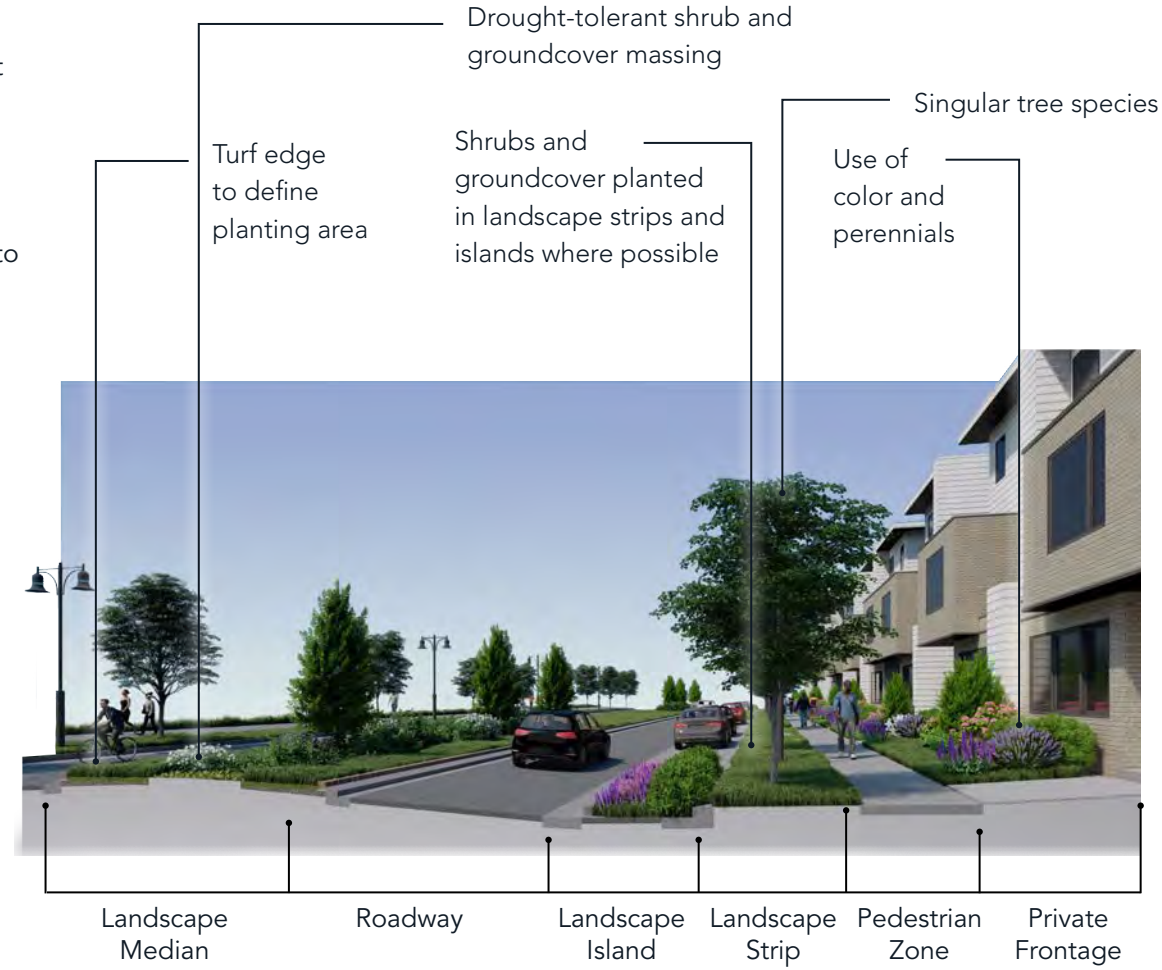
Applies to major collector roads in residential area

- Low-maintenance and drought-tolerant shrub and groundcover massing
- Encourage use of planting and groundcover in lieu of mulch or turf to cover ground
- Intentional use of lawn to provide clear sight lines and define planting areas
- Open viewsheds for vehicles and pedestrians
- Use of color and landscape to define high impact areas and amenities
- Planted landscape strips and medians where possible
- Meandering pedestrian zones where possible
- Pedestrian roadway lighting may be used - refer to Section 8: Lighting
- Singular street tree species with one species spanning no more than 30 trees









3.1: STREETSCAPE CHARACTER

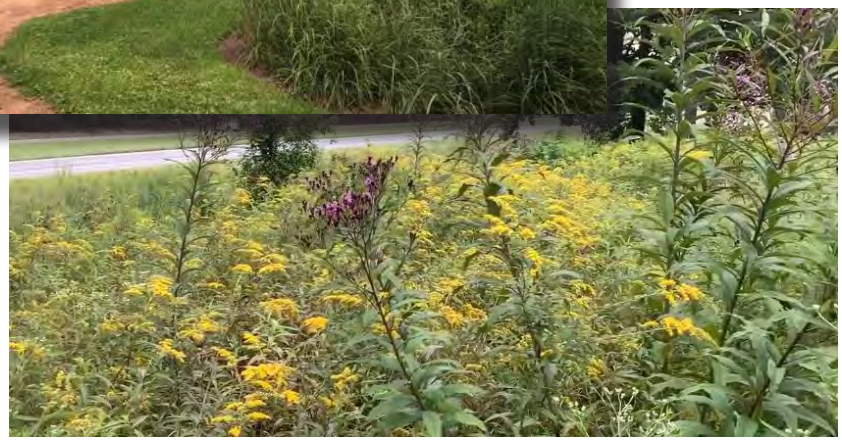


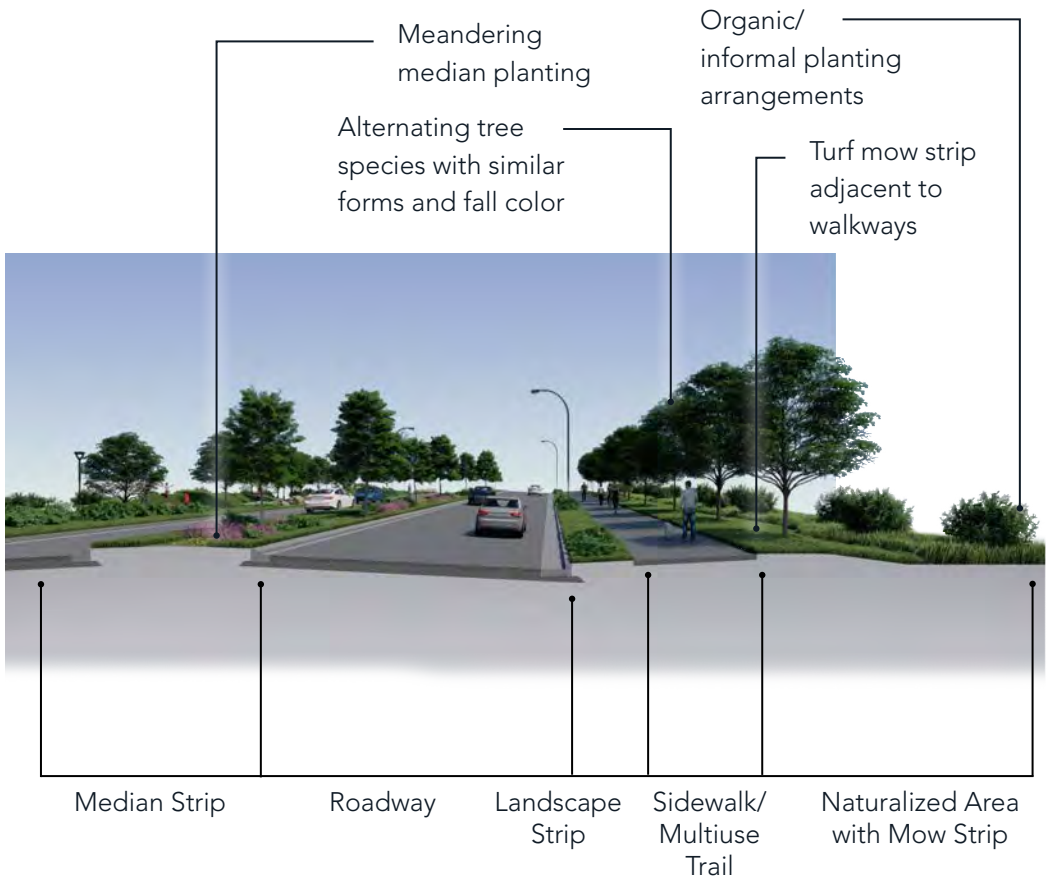
The Naturalized Landscape

Applies to major thoroughfare and collector roads in undeveloped and buffered zones

- Naturalized areas with meadow mixes and no-mow planted areas
- Organic forms
- Large planting masses that are undefined and sporadic
- Informal planting arrangements
- High percentage of native plants
- NCDOT Wildflower Program integration
- Perennial and native grass mixes
- Informal transitions between turf meadows, shrubland, and forest
- Meandering pedestrian zones permitted
- Utilize pedestrian and roadway lighting that minimizes light spillover into naturalized areas
- Alternating street tree species







3.1: STREETSCAPE CHARACTER



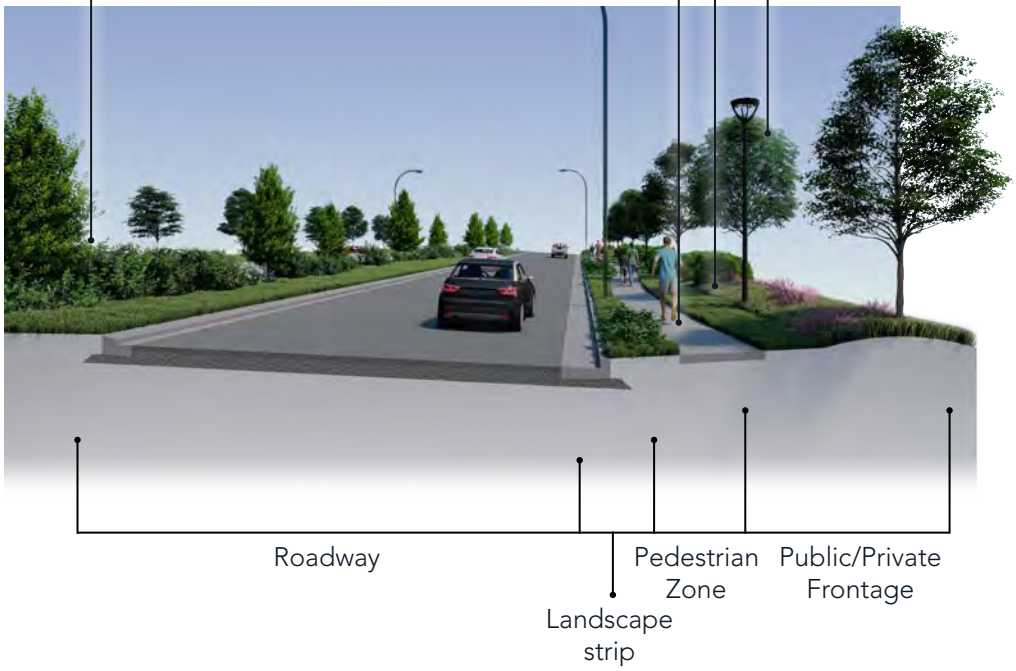
The Innovative Streetscape

Applies to major collector roads at campus- or technology-driven developments

- Large shrub and groundcover massing
- Open viewsheds for vehicles and pedestrians
- Landscape used to separate and define pedestrians from vehicles
- Intentional use of lawn
- Legibility from a wayfinding perspective
- Meandering pedestrian zones where possible
- Utilize a combination of pedestrian and roadway lighting - refer to Section 8: Lighting
- Singular street tree species with one species spanning no more than 30 trees







3.1: STREETSCAPE CHARACTER

The Urban Streetscape

Applies to major collector roads at urban and mixed-use developments

- Manicured and formal landscape arrangements with defined rhythms, colors, and textures
- Use of focal flowering plantings as a defining plant species
- Urban-tolerant species
- Contained landscape within defined planter zones with curbing and/or fencing
- Wayfinding legibility from a pedestrian and vehicular perspective
- Singular street tree species with one species spanning no more than 30 trees









SECTION 3.2

STREETSCAPE DESIGN STANDARDS

The streetscapes within Veridea are meant to be context-sensitive, inviting, and dynamic. Standards of design should be incorporated without losing sight of overall streetscape characters detailed in the previous section. Hardscape, landscape, and site furnishing selections will aid in differentiating each character zone while maintaining a thread of high-end design that runs throughout the entirety of Veridea. These standards should be viewed as a means to create seamless transitions between each streetscape character zone.







*This Section describes the intentions for material compatibility between hardscapes, landscapes, and furnishings found on major roadway streetscapes within the public right of way. Refer to Sections 5-8 for specific design guidelines on site amenities, hardscape, and landscape.

*All streetscape designs, layouts, dimensioning and landscape standards shall comply with the streetscape requirements set forth in the SD Plan and the Town of Apex UDO. Where enhanced hardscape and landscape is located in the public right of way, a developer's agreement regarding maintenance shall be defined between the Town of Apex and the developer/ responsible party.

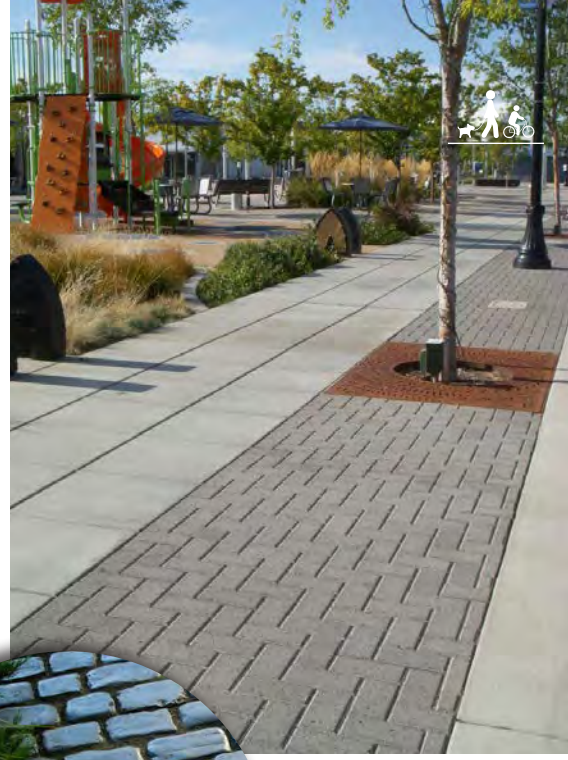
3.2: STREETSCAPE DESIGN STANDARDS

Hardscape

Hardscape materials within and adjacent to major streetscapes should include a variety of materials that create a unique visual character for Veridea. These hardscape materials should include a range of finishes that complement the streetscape character categories described in Section 3.1. Enhanced paving materials should be utilized to strategically complement standard finishes, reinforce the importance of certain pedestrian nodes, and amplify the overall design aesthetic of Veridea streetscapes.

- Applies to hardscapes within the landscape and pedestrian zones of the streetscape section only
- Standard hardscapes may include concrete and asphalt
- Enhanced hardscape may include pavers, decorative concrete, planter curbs, and seat walls
- Enhanced hardscapes within public the right-of-way must be included as part of a maintenance agreement between the Town and the developer/ responsible party



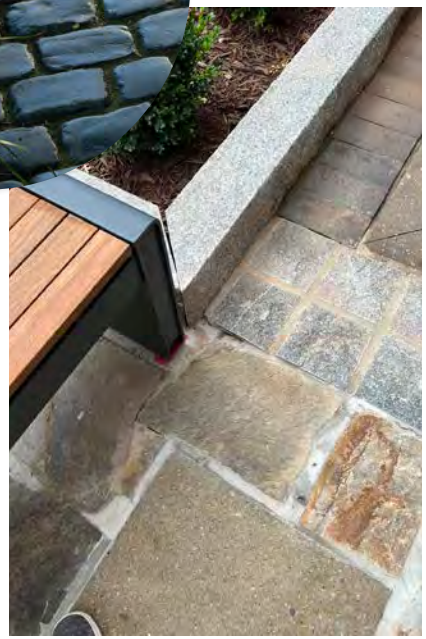




Grade-separated pedestrian crossings and decorative crosswalks may be utilized at major pedestrian intersections for safety. Crosswalks can be enhanced with high visibility thermoplastic applications that meet Town Transportation and NCDOT standards.







3.2: STREETSCAPE DESIGN STANDARDS

Furnishings

A variety of furnishings will be required within the public right-of-way for public use, safety, and comfort. These furnishings are meant to create a sense of place and provide a strong emphasis on the pedestrian experience. Furnishings are aimed at providing comfortable areas of rest, safe storage of alternative transportation modes, proper containment of waste, and visual stimulation for a wide range of users.

- Applies to furnishings within the landscape zones of the streetscape section only
- Furnishings may include trash and recycling receptacles, bicycle racks, seating, bollards, and decorative landscape features such as boulders, seat walls, and potted planters
- Furnishings within the public right-of-way that differ from the Town Standard must be included as part of a maintenance agreement between the Town and the developer/responsible party

















3.2: STREETSCAPE DESIGN STANDARDS

Landscapes

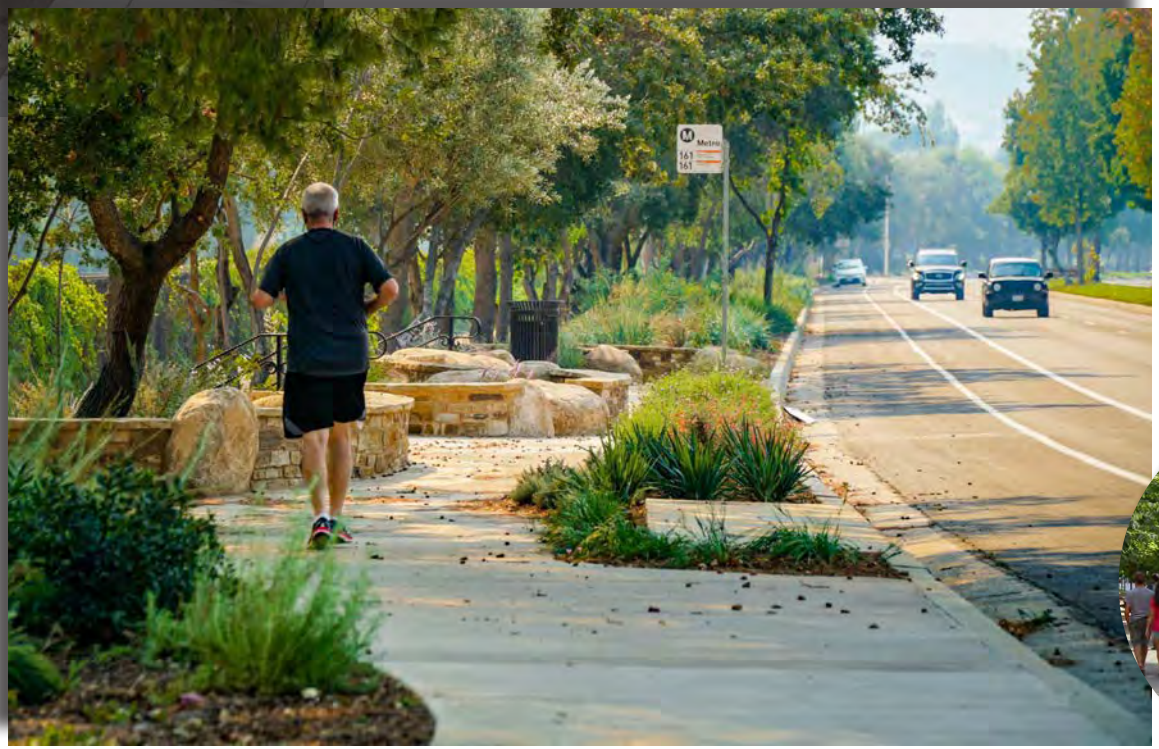
Landscaping of streetscape areas should correspond directly with the streetscape character categories described in Section 3.1. Each streetscape character category emphasizes landscaping as a critical component of successfully establishing a unique user experience while moving throughout Veridea. Dependent upon which streetscape character is being utilized, plant species will vary in form, shape, pattern, and distribution.

- Applies to landscape and planted areas within the landscape zone of the streetscape section only
- Planting within public the right-of-way that is elevated over the Town Standard must be included as part of a maintenance agreement between the Town and the developer/responsible party













SECTION 4

Open Spaces, Parks + Trails

Character + Intent

Passive Open Spaces

Active Open Spaces



SECTION 4.1

CHARACTER + INTENT

Veridea is committed to providing a variety of high-impact parks and open spaces. Passive landscapes and preserved natural ecosystems intertwined with active, programmed parks will provide a uniquely diverse landscape experience for users to explore and engage with. The nature of park spaces will range from small urban gardens to large recreational playfields to naturally preserved areas - each with individual sustainability goals.





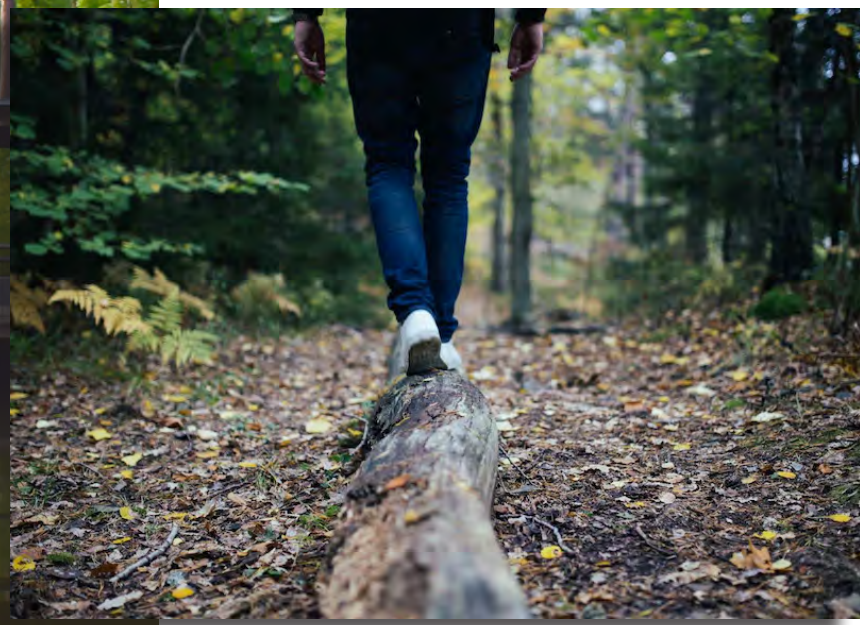
*Each park and open space shall comply with the design standards and requirements listed in the SD Plan and the Environmental Enhancement Plan. Park facilities that are owned and operated by the Town of Apex may follow Town standards but are encouraged to comply with the Pattern Book and Veridea branding.

SECTION 4.2

PASSIVE OPEN SPACES

Passive open spaces emphasize a low level of urban development with a focus on preservation, conservation, and natural habitat.





4.2: PASSIVE OPEN SPACES

Perimeter Buffers + Stormwater Infrastructure

Where perimeter buffers are disturbed and required to be re-vegetated, the design approach shall include stabilizing the boundaries of the site, enhancing appearance, and encouraging native plant communities and ecosystems. A high percentage of native plant species with a variety of color, texture, and visual interest is encouraged. Planting arrangement shall be an informal design with rhythm and repetition while still providing biodiversity and legibility. All landscape buffers must meet standards set forth by the Town of Apex, the SD Plan and the Environmental Enhancement Plan.



Informal buffers with a variety of texture, color, and visual interest reinforce naturalistic landscape character.





Infrastructure associated with stromwater, such as outfall structures and trash racks, shall be screened with vegetation and/or enhanced with decorative masonry applications.

Stormwater management is a critical component of responsible development. While stormwater control measures primarily function to collect stormwater runoff and remove sediment and pollutants, they can also become critical wildlife habitats and beautiful landscaped areas. Where possible, stormwater infrastructure should be designed with organic forms to mimic a more naturalistic condition. The use of stormwater control measures that mimic natural ecosystems, such as stormwater wetlands, is encouraged. Associated man-made infrastructure, such as concrete outfall structures, can be located in less visible areas, surrounded with taller plant material, and adorned with decorative masonry finishes. Where planting is required, provide a wide variety of plant species that are complementary in color, texture, and height. A mixture of native grasses, perennials, shrubs, and trees promotes a biodiverse ecosystem and establishes habitat.

SECTION 4.3

ACTIVE OPEN SPACES

Active open spaces encourage users to gather and engage within designed, developed, and landscaped park spaces. The emphasis is on placemaking that promotes health, happiness, and well-being.





4.3: ACTIVE OPEN SPACES



Linear Parks + Trails

Minimum requirements:

- One waste receptacle
- One bench at major trailheads

Linear parks are longer than they are wide - typically following roadways, streams, rivers, and utility corridors. Pocket parks, overlooks, gathering areas, and public art are examples of design opportunities that can be located along trails and within open spaces. Linear parks can also be dedicated to wildlife, such as a continuous pollinator corridors. Linear parks shall be designed to connect nodes of gathering and parks. Winding or meandering alignments of trails are preferred to create visual interest and provide areas of relief from vehicular traffic. Where possible, trails and greenways should follow previously disturbed areas, such as utility easements and roadways, to minimize removal or destruction of conserved landscape. Avoid steep slopes to natural conditions directly adjacent to trail systems. Where trails meander through wooded or natural conditions, adjust trail alignments as necessary to avoid impacting the critical root zones of large, mature vegetation. All greenways and trails shall be constructed to the standards set forth in the SD Plan, EEP, and Town standard.



Large, multi-use trails shall accommodate both pedestrians and bicycles. Provide changes in hardscape, texture and landscape to highlight nodes and trailheads.

Pedestrian-oriented amenities shall be located at intervals along the trail and at major trailheads. Such amenities include but are not limited to entry markers, educational signage, decorative lighting, street furnishings, outdoor fitness stations, bicycle repair stations and fountains. Art, entrance markers, monumentation, signage, waste receptacles and distance markers shall follow Veridea branding and signage standards set forth in Section 7. Pedestrian lighting may be provided and shall follow the Veridea lighting standards set forth in Section 8.



Major trailheads are defined as a main entry to a trail network that intersects with the public right-of-way.



Gathering areas and small plazas that contain a variety of seating and programming may be provided along trails at major nodes, at trailheads, and within linear parks.

4.3: ACTIVE OPEN SPACES

Stormwater Parks

Minimum requirements:

- One waste receptacle
- One seating opportunity

Stormwater and Green Stormwater Infrastructure parks can foster and enhance urban development by harmoniously combining infrastructure and recreation. Stormwater parks can be either natural or urban in nature and may contain both passive and active program elements. Stormwater facilities shall meet the requirements set forth by the North Carolina Stormwater Design Manual, but shall be designed to mimic natural environments with organic forms and a wide variety of plant species. Exploration and engagement can be encouraged with the use of walkways, gathering areas, a variety of seating options, overlooks, docks, and naturalistic planting strategies. Dedicated gathering areas shall be safely lit according to Town of Apex standards and comply with the standards set forth in Section 8. Public art or landform art can be incorporated to established nodes or points of interest and shall comply with the standards set forth in Section 7. Educational signage that highlights stormwater engineering or green stormwater infrastructure is encouraged.









Trails integrated within stormwater infrastructure are encouraged.

4.3: ACTIVE OPEN SPACES

Urban Parks

Minimum requirements:

- One waste receptacle
- One seating opportunity

Parks and open spaces located within urban development offer residents and visitors access to nature and green space. Urban parks can be a variety of sizes and are easily accessible, often nestled around and between urban structures and buildings. Urban parks should contain a variety of greenspaces, including lawn areas, planted areas, and garden spaces. Provide a variety of seating opportunities for large and small gatherings in both fixed and flexible conditions. Amenities such as fire pits, screens, and displays shall be oriented so as not to impact vehicular trafficways or produce light intrusion into buildings. Shade is a critical component and is encouraged to be provided via shelters, shade structures, vegetation or other methods.







Urban parks may contain a combination hardscape areas, open lawn, planted areas, shade and seating opportunities.

4.3: ACTIVE OPEN SPACES

Residential Parks

Minimum requirements:

- One waste receptacle
- One seating opportunity

Residential communities shall have a network of parks and open spaces that provide a variety of amenities to residents. Parks and open spaces should embrace a variety of passive and active components, with each community providing at least one common open space for active programming. Community centers, pools, playgrounds, play fields, dog parks, and community gardens are examples of active community amenities that offer opportunities to gather, play, and engage. All parks and open spaces shall be connected by a pedestrian and multi-modal transit network, such as sidewalks and trails, to allow access to open space areas without needing a vehicle. Furnishings, such as benches and waste receptacles, are required in each residential park.











Open turf lawns provide opportunities for flexible play.



Natural elements, such as boulders and logs, are sustainable elements found on-site that can be reused for play and increased landscape aesthetics.

4.3: ACTIVE OPEN SPACES



Athletic Parks

Athletic parks are open spaces that contain facilities for sports and team-oriented recreation. Community centers, multi-purpose fields, baseball or softball diamonds, sports courts or pitches, and related infrastructure where users can assemble to engage in physical exercise, participate in sports competitions, or witness sports are encouraged. The siting and orientation of sports facilities should thoughtfully consider intended use, environmental conditions such as wind and sun, and the site's topography in order to minimize large scale impacts to natural resources. Site furnishings, such as benches and waste receptacles, are required in large gathering or viewing areas. Providing easy access to water fountains, shade, and restrooms is important for users.

Minimum requirements:

- One waste receptacle
- One seating opportunity
- Access to public restrooms provided within the athletic park or at a public facility within a 0.25 mile distance from the athletic park



Tennis courts shall be in keeping with the standards of the United States Tennis Association (USTA).







Softball fields shall be in keeping with the standards of the American Softball Association (ASA) Men's Slow-Pitch Open Division.

4.3: ACTIVE OPEN SPACES

Dog Parks

Minimum requirements:

- One waste receptacle
- One bench

Dog parks offer dedicated open space areas for dogs to exercise and play in an off-leash, controlled, supervised environment. These park spaces can contain a variety of designed conditions including large unencumbered open spaces, naturalized forested areas, and/or urban spaces with artificial turf. Dog parks should be fully fenced and accessed via a double-gated entry and exit point. Additional controlled maintenance gates are also encouraged. Dog parks may have dedicated large and small dog areas or one large general use area. Avoid creating acute angles or spaces with fencing, landscape or structures. Shade structures and site furnishings, such as benches, agility furniture, pet waste stations, and fountains, are encouraged for the comfort of pets and their owners. At a minimum, dog parks shall have one bench and one pet waste station. Landscaped areas shall contain plant material that is low maintenance, durable, and does not pose health or safety risks to pets. Wherever possible, incorporate dog parks into the site's natural environment, such as gently sloped areas that contain high canopy trees with limited undergrowth.



Artificial turf and shade structures provide comfort for pets and owners.



Wooded areas provide opportunities for shade. Naturally sloped site conditions shall not exceed 5% for dog parks.







Dog parks shall have double entry gates with fencing a minimum of 5' in height Puppy panels provide additional security for smaller dogs.

SECTION 5

Landscape Standards

Introduction + Intent
Public Right-of-Way Landscaping
Private Development Landscaping



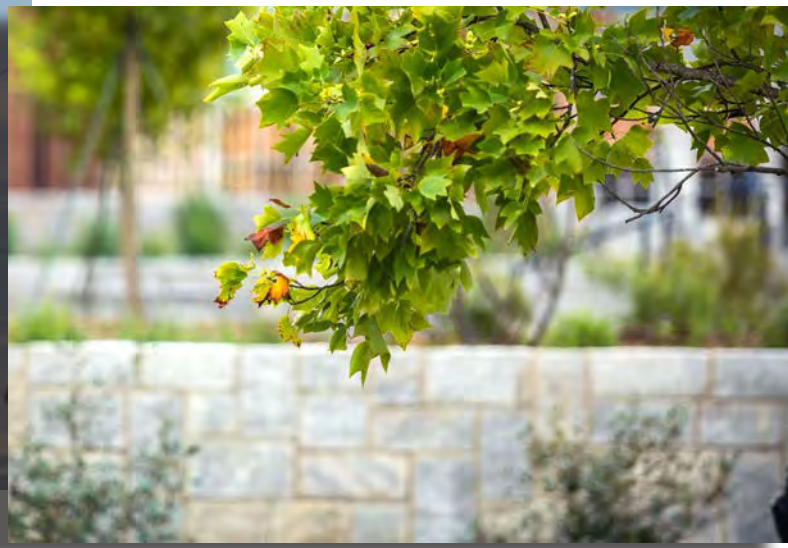
SECTION 5.1

INTRODUCTION +INTENT

Veridea is committed to providing a planting design strategy that provides unity between spaces and enhances its users' experience. Consistency, repetition, scale, and texture are important components that speak to the site's character by influencing how users interpret and navigate a landscape. This section will describe planting design guidelines for landscapes within the public right-of-way and private spaces to establish a cohesive and organic landscape approach.



*This Pattern Book does not overrule landscape standards otherwise required by the SD Plan, the Environmental Enhancement Plan, the UDO, or any other Town of Apex standard. The key elements listed within this Section are intended to complement and provide a framework for the design approach of landscaped areas. Landscape areas within the public right-of-way that are enhanced above Town Standards may be included as part of a maintenance agreement between the Town and the Responsible Party/Developer.



5.1: INTRODUCTION + INTENT

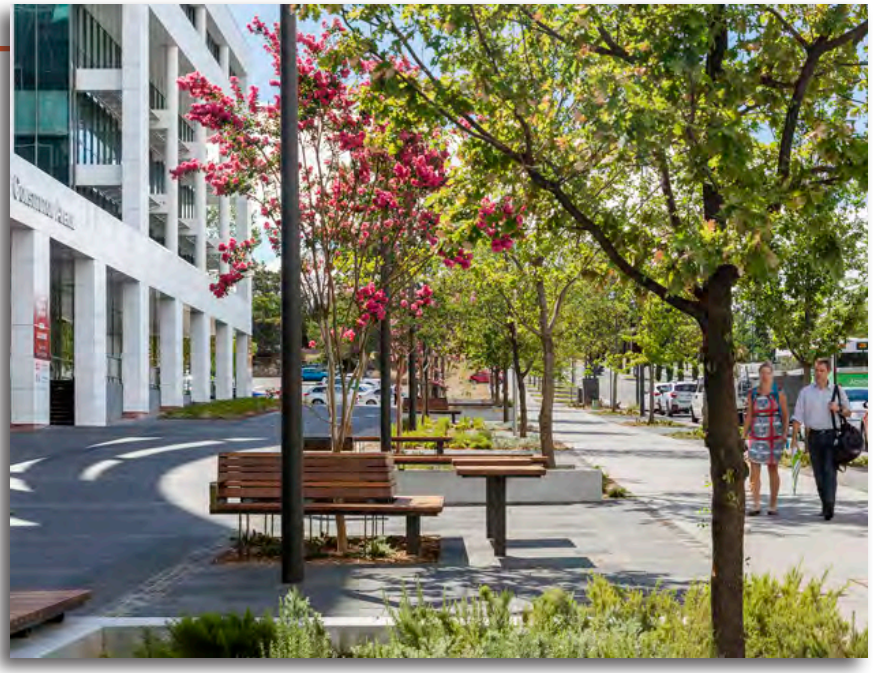
Key Elements



- Provide year-round presence and a variety of textures; seasonal color is encouraged
- For non-residential areas with a high pedestrian presence, or in areas where landscape may need additional protection, plantings to be bordered by a curb, low planter fence, and/or other type of border
- For residential areas, a combination of shrubs, grasses, groundcover, and perennials should be utilized for enhanced aesthetics
- A focal species, or highlight plant, may be utilized to define special areas or nodes
- Planter pots and living walls may be used as accents. For streetside non-residential areas, planters may be utilized as a form of foundation planting
- Native and adaptable plant species are required for assurance of landscape success. Per the Environmental Enhancement Plan and SD Plan, 80% of landscape shall be drought tolerant and consist of native or locally adaptive species. Invasive species are prohibited.
- Species diversity is encouraged, with the intention that a singular species shall account for no more than 20% of the overall plantings provided
- Minimum soil volume for trees to meet Town of Apex standards. Soil in landscape areas to be amended to provide healthy planting soils
- If turf grass is provided, it should be a locally adaptive and drought-tolerant species as defined by the Environmental Enhancement Plan to limit the need for extensive irrigation
- Practice Crime Prevention Through Environmental Design (CPTED) principles.
- Consider horticultural zones, microclimates, temperature, moisture, soils, and other physical contexts to create landscapes complementary to the southeastern United States
- The developer may enter into a maintenance agreement with the Town of Apex where right of way enhancements are proposed. All enhancements within the public right of way shall be privately maintained by the Veridea Owner's Associations.

5.2: PUBLIC RIGHT-OF-WAY

Street Trees



- Trees may be continuous species or alternating species, but should be grouped according to similar or complement street tree shapes as indicated in the public planting section in the SD plan. Refer to streetscape character for determining alternating or singular species and a naturalized or manicured planting arrangement.

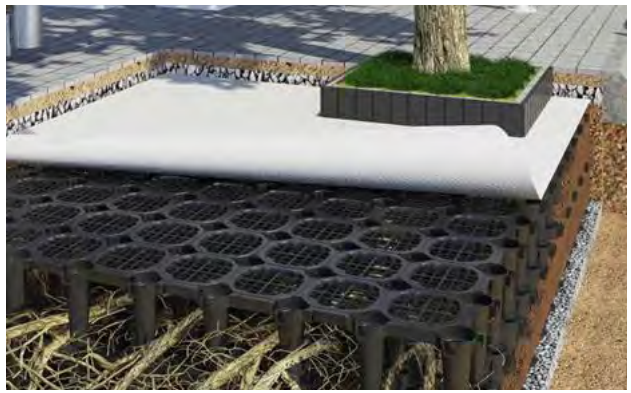
- Street trees to be planted in site conditions that allow for healthy, sustainable growth.

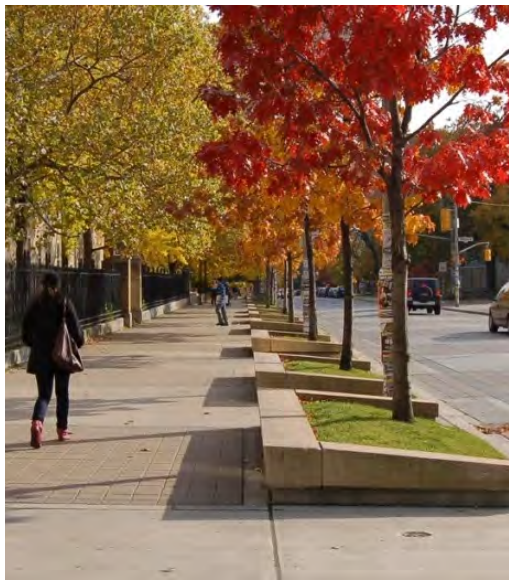
- Street trees shall be located outside of the AASHTO sight distance easement. If a conflict exists or there is a desire to maintain landscape uniformity, one single stem street tree with no foliage between 2′ and 6′ in height at the time of planting and remains that way through maturity will be permitted within the AASHTO sight distance easement.

- Street trees shall maintain a minimum of 10′ of separation from utility main lines and 5′ of separation from utility service laterals and storm lines. A root barrier shall be provided where minimum separation cannot be achieved.



Ensure street trees can maintain healthy, sustainable growth by providing optimal growing conditions, such as increasing rootable soil volume through structural soil or soil containment systems where softscape area is limited.





If alternating street tree species is proposed, species selection shall have similar or complementary forms and fall colors.

5.2: PUBLIC RIGHT-OF-WAY

Landscape Strip Planting

The landscape strip is the planted zone between the sidewalk or walking path and the curb and gutter. The landscape strip can be a combination of turf, shrubs, groundcover, ornamental grasses, perennials, and groundcovers - in addition to trees.

- In a commercial- or retail-oriented streetscapes, provide a variety of shrubs, ornamental grasses, groundcovers, and perennials - in addition to trees. Plantings may be protected with curbs, 18" height planter fencing, and/or other barriers
- Plantings shall mature to heights less than 36" to maintain visibility.
- Stepstones integrated into plantings, such as flagstone or brick pavers, may be provided where pedestrian crossing is anticipated but no pathway is provided
- Groundcover planting is encouraged in place of mulching
- Adding colorful planting to highlight important intersections, such as nodes or pedestrian crossings, is encouraged
- Turf may be utilized in residential, institutional, and campus locations. Groundcover and shrub planting is preferred in commercial and retail locations.



In commercial or retail streetscapes, utilize shrubs, grasses, groundcover, and perennials where possible.



Limit planting heights to 36" at maturity for clear visibility.





Hedgerows may be utilized where there is clear and necessary separation of vehicles and pedestrians.

5.2: PUBLIC RIGHT-OF-WAY

Landscape Medians

- All planting shall be in compliance with NCDOT and Town of Apex design standards
- Where space allows, planting shall be in a meandering style
- A consistent open viewshed between 24" and 7' in height shall be provided for vehicular and pedestrian safety with the exception of narrow, evergreen understory trees that reach a maximum caliper size of 4"
- Drought-tolerant species capable of withstanding hot, urban conditions shall be provided. A combination of understory trees, shrubs, ornamental grasses, groundcover, perennials, and turf provides visual interest
- Provide locations for annual seasonal color at high impact intersections
- Pavers may be utilized at median endcaps, pedestrian crossings, or other areas that require a hardscape application. Pavers shall be a vehicular-rated brick style in a herringbone pattern and shall be mortared to concrete
- If reinforced turf is required, a below-grade grass reinforcement grid shall be utilized





Planting form shall meander where space allows.



Utilize plant massing for legibility.



5.3: PRIVATE DEVELOPMENT

Private Frontages

Private frontages exist where edgeyards and sideyards are provided between building and rights-of-way, such as Common Yard, Porch, Terrace/Lightwell and Forecourts - as described in the SD plan.

- Provide a variety of understory trees, shrubs, ornamental grasses, and perennials for texture and enhanced aesthetics
- Evergreen plant material should be provided - particularly around foundations - for year-round presence and interest



Where buildings occupy the boundaries of the lot, green walls and vertical vegetation provide visual interest.





Provide a variety of trees, shrubs, perennials, and ornamental grasses for enhanced aesthetics.

Where buildings occupy the boundaries of a lot, such as Stoops, Shopfronts, Gallery facades, and Arcade facades (as described in the SD plan):

- A minimum of 25% of hardscape perimeters shall be planted
- Planter pots may be utilized where foundation planting cannot be achieved with in-grade landscape area, such as commercial or storefront retail
- Green walls are a unique vertical application of landscape where horizontal distance is limited



5.3: PRIVATE DEVELOPMENT

Parking Lots

- Supplemental planting, in addition to required tree canopy planting, in landscape islands is encouraged. Ornamental grasses, low creeping shrubs, and groundcovers that mature under 36" are preferred. Species selected must be tolerant of drought and urban pollution

- Curb cuts, overflow areas, or other green stormwater infrastructure solutions may be provided to capture and treat stormwater





Capturing and treating stormwater within landscape islands is encouraged.





Capturing and treating stormwater within landscape areas is encouraged.



Coverage of landscape islands with shrubs and groundcover is preferred.

5.3: PRIVATE DEVELOPMENT

Naturalized Areas + Meadows

Meadows and naturalized areas shall be primarily located adjacent to naturally-occurring landscapes, existing riparian buffers, or along easements. If meadows are located in an urban condition, they shall be designed to facilitate education.

- Where meadows are adjacent to pedestrian zones, provide a minimum 3' wide turf border between the pedestrian area and naturalized planting area
- Shrubs, posts, signs or other identifying features shall be provided at meadow edges to clearly indicate mowed and non-mown areas
- All educational or public-facing meadows shall follow a defined maintenance schedule.
- Non-landscape features, such as boulders, bird houses, and insect houses are encouraged for additional landscape diversity



A mowed edge shall be provided between meadows and pedestrian areas.





Meadows can be utilized for education and environmental healing in campus, educational, and residential uses. Avoid meadows in commercial and urban uses.



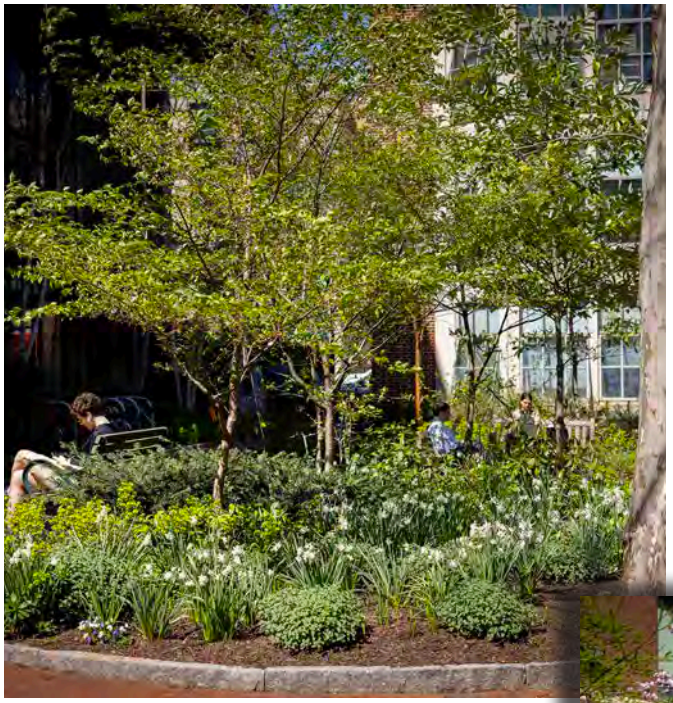
Boulders are complementary landscape elements.

5.3: PRIVATE DEVELOPMENT

Open Space, Parks + Trails

- Employ ecological planting techniques such as companion planting, analysis of microclimates, biodiversity, and native species selection
- Per the Environmental Enhancement Plan and SD Plan, 80% of landscape shall be drought-tolerant and consist of native and locally adaptive species. Invasive species are prohibited. Species diversity is encouraged with one species accounting for no more than 20% of the total number of plants.
- Provide intentional lawn space for recreation and active play. Separate play lawns from vehicular traffic with shrubs and other plantings
- Employ Crime Prevention Through Environmental Design (CPTED) principles, such as sight lines, natural access control, activity support, and maintenance
- Natural resources, such as boulders found on site and logs milled from felled trees, can enhance aesthetics in addition to providing natural play or art opportunities







Provide intentional lawn space for active recreation and play.





Boulders and other natural elements enhance landscape aesthetics and provide art opportunities.



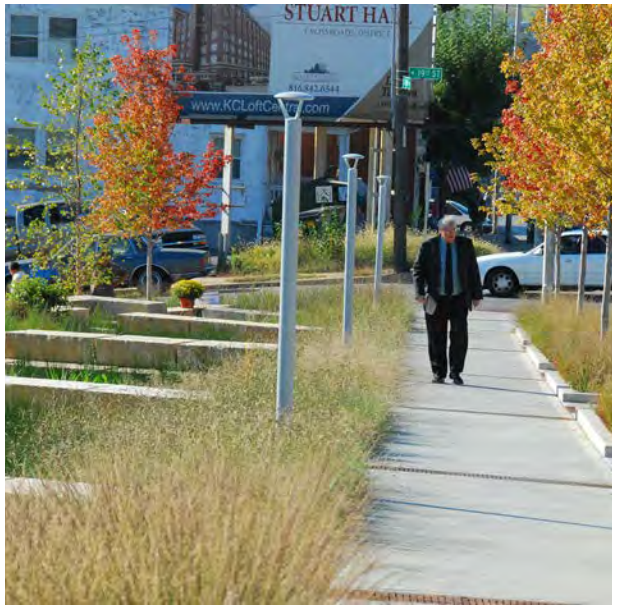
Separate intentional lawn gathering areas from vehicles with shrubs and pedestrian walking zones.

5.3: PRIVATE DEVELOPMENT

Green Stormwater Infrastructure + Pollinator Gardens

GSI is encouraged as an approach to amenitize stormwater infrastructure. Opportunities may include rain gardens, bioretention, vegetated swales or bioswales, infiltration basins, green roofs, and tree wells.

- Utilize planting species appropriate for stormwater conditions. Refer to the NCDEQ stormwater manual for species suggestions
- Where bioretention infrastructure is adjacent to pedestrian walking zones, ensure that the depth of bioretention does not exceed 24" to avoid fall concerns







GSI integrated into streetscapes and parking areas is encouraged.





Educational signage for pollinator gardens and stormwater infrastructure is encouraged.

Certified Pollinator Gardens should follow the National Wildlife Federation standards:

- Pollinator gardens shall meet the minimum requirements set by NWF
- Pollinator gardens can be certified and approved by NWF. Signage for certified gardens may be displayed

SECTION 6

Site Amenities

Introduction
Hardscapes
Site Furnishings
Program Amenities



SECTION 6.1

INTRODUCTION

The implementation of a wide range of site amenities will aid in creating an impactful user experience. Features detailed in this section, such as enhanced paving materials, seating, and shade structures, should be included in a thoughtful and purposeful manner. In order to distinguish the visual and functional aesthetic of Veridea, site furnishing selections can be unique to each designed space depending on program and intended use. However, when contemplating Veridea holistically, furnishing styles and colors should articulate a coherent design language that reverberates throughout the development.



Site amenities can be categorized as hardscapes, furnishings, architectural features, or amenity elements and may include:

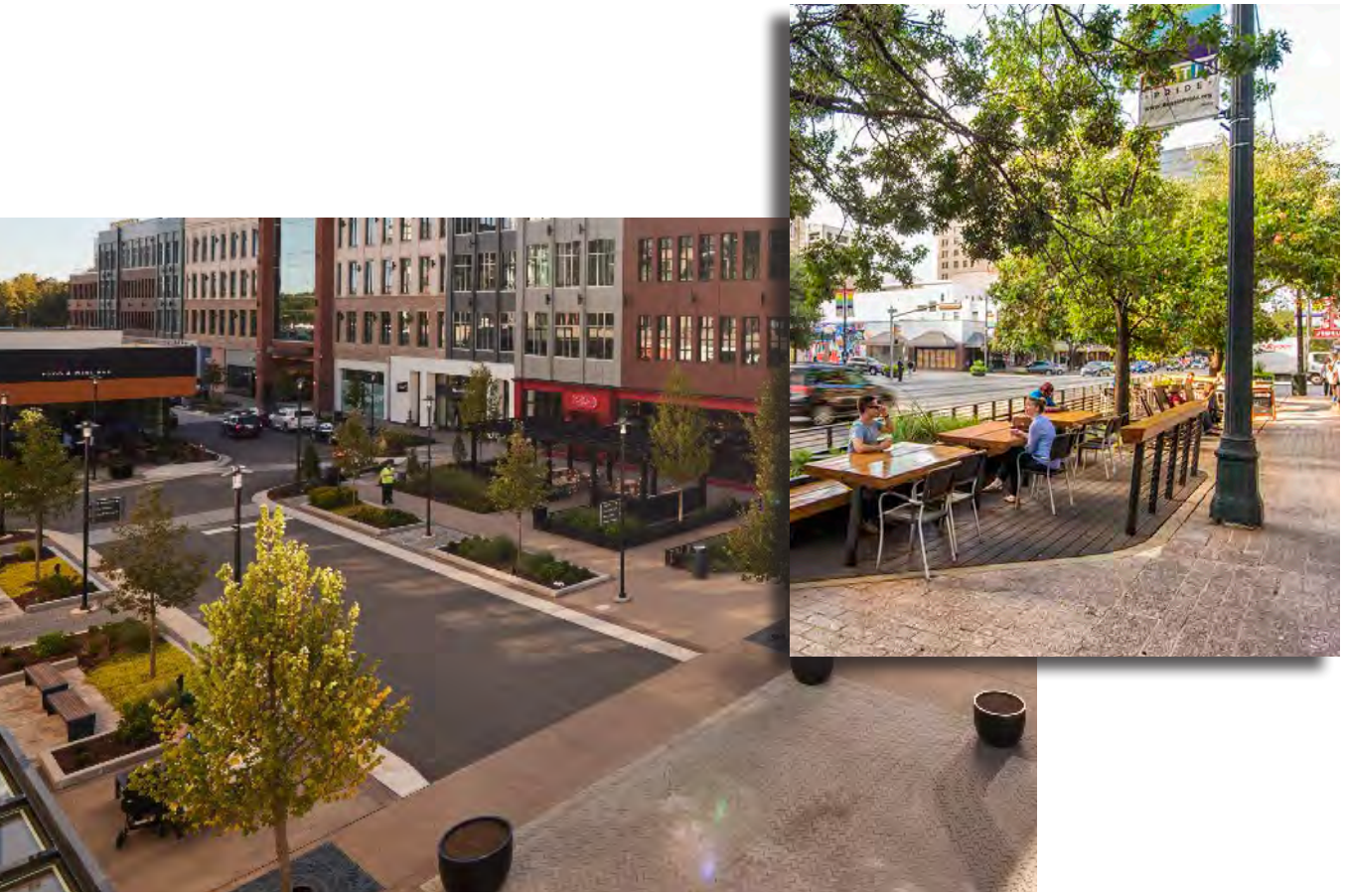
- Walking surfaces
- Walls
- Seating
- Bollards
- Planters
- Fencing
- Bike Racks
- Shade structures
- Program amenities

The pictures, illustrations, and descriptions included are contextual examples of the high quality materials and design envisioned for the project. Materials, hardscape, and landscape components depicted herein are not intended to be an exclusive or exhaustive list to be required in every design or construction. Instead, these elements are intended to convey acceptable design approaches that promote variability, high quality, and sustainably-focused development in order to foster a unique sense of place.

SECTION 6.2

HARDSCAPES

A wide variety of hardscape materials should be utilized to a create an aesthetic entirely unique to Veridea. These hardscape materials should include a range of finishes that are both manufactured and naturally occurring. Enhanced paving materials should be utilized strategically to complement standard finishes, reinforce the importance of certain pedestrian nodes, and amplify the overall design aesthetic Enhanced hardscape materials should be used where necessary to facilitate a safe and legible pedestrian experience.





Key elements include:

- Multiple materials colors, textures, and patterns to create a dynamic visual experience.
- Changes in material and color can be utilized to highlight and define spaces.
- Decorative crosswalks and pedestrian corridors
- Raised curbing around planters.
- A variety of site and retaining wall types.
- Use of locally-sourced materials.
- Use of recycled or sustainably-sourced materials.
- Use of standard sizes to limit construction waste, maximize efficiency and reduce offcuts.

Locally-sourced materials can embed sites with a strong sense of place and support local economies.

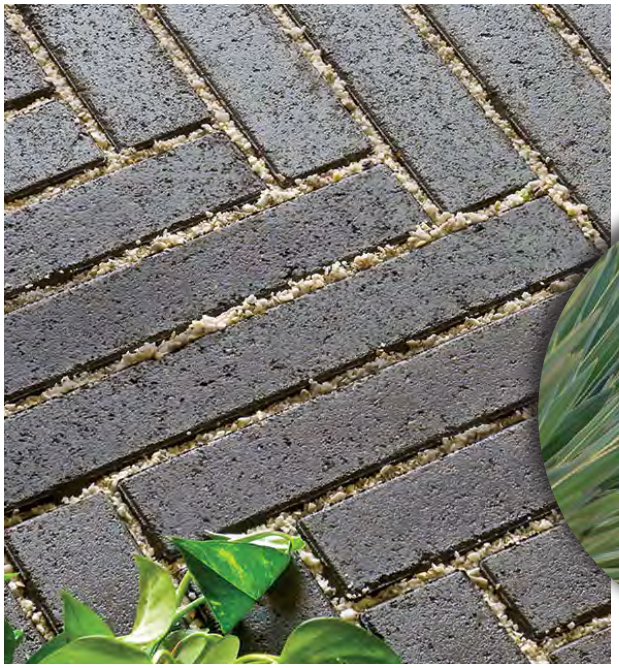
6.2: HARDSCAPES

Enhanced Paving + Surfaces

Hardscape enhancements may include, but are not limited to, the following:

- Concrete applications - decorative scoring patterns, broom finish, sandblasted, integral color, exposed aggregate, stamped
- Pavers - brick pavers, permeable pavers, precast pavers
- Natural Stone - flagstone, bluestone, granite cobble, granite screenings, stone mulch
- Tree grates - metal or iron with decorative designs
- Wood decking
- Decorative thermoplastic applications

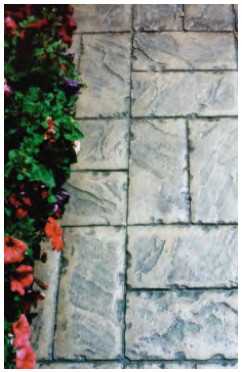




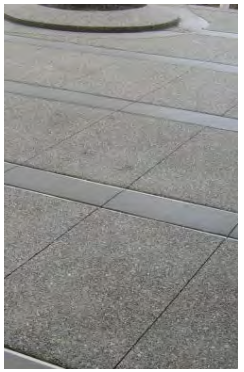
Permeable pavers in decorative herringbone pattern.



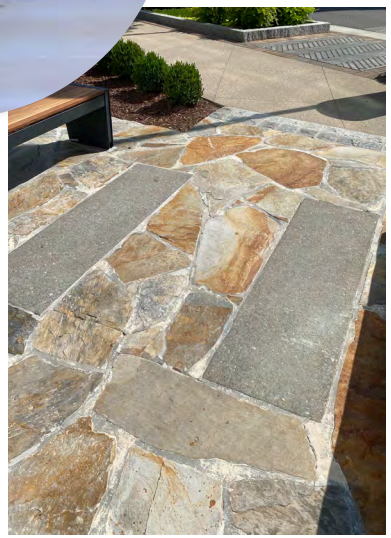
Natural wood decking allows for additional water infiltration for canopy trees. Wood shall be FSC certified.







Stamped concrete may contain integral color with a release agent for additional color depth. Exposed aggregate may contain integral color.



Natural pavers shall be sourced locally when possible.

6.2: HARDSCAPES

Walls + Curbs

Materials may include, but are not limited to, the following:

- Curbs - cast-in-place concrete, precast concrete, granite, upturned brick
- Freestanding site walls - precast concrete, masonry, granite block
- Retaining site walls - decorative segmental block, cast-in-place with precast veneer, masonry, gabion
- Elements that retain soil or are otherwise directly exposed to soil runoff shall contain brown and tan tones to reduce visual staining effect of the natural clay soils



Granite seat block with split face sides and smooth top. May include mounted seating.

Segmental retaining walls with lower visibility shall contain multiple sizes of block and a provide a natural variation in color.



Precast concrete planter curb.

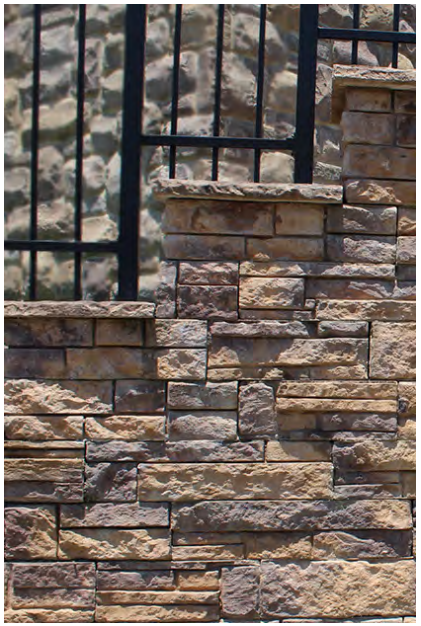


Granite planter curbs shall have split face sides.





Site and seat walls with a stone or wood veneer provide a more naturalistic appearance.



Segmental retaining walls with high visibility should have a decorative, natural stone appearance and coloring.



Gabion walls shall use large sized, brown and tan toned, smoothed aggregate. Use of gabion walls subject to the approval of the Town of Apex.

SECTION 6.3

SITE FURNISHINGS

Courtyards, park spaces, retail patios, linear parks, streetscapes and informal seating areas will utilize an array of site furnishings that meet Veridea's branding standard. The furnishings included in the design program will exemplify a modern and refined aesthetic while providing critical detail and functionality to the wide range of programmed spaces throughout the site. Furnishings that are locally-sourced and use recycled materials or sustainable wood products are encouraged to promote a sustainable future.



Furnishings shall have a modern aesthetic with clean lines.





Swings integrated into overhead structures is a furnishing that can be enjoyed by all age groups.

Furnishings may include:

- Seating
- Bollards
- Planters
- Fencing
- Screening elements
- Waste receptacles
- Bicycle racks
- Shade structures

The guidelines provided in this section are intended to encourage aesthetic and functional consistency as Veridea is developed over time. Park facilities that are owned and operated by the Town of Apex are encouraged to follow the guidelines provided in this Section but are permitted to follow standard Town furnishings.

Permitted colors for fixed elements:

Forms + Surfaces Standard Colors	Anova Furnishings Standard Colors
INK BLUE	CHARCOAL
DARK CORTEN	BRONZE
BLACK	BLACK
CUMARU	CEDAR

6.3: SITE FURNISHINGS

Fixed + Flexible Seating

Providing comfortable, convenient, and safe seating areas for pedestrians is crucial to the overall design of Veridea. By providing simple and refined areas of rest, users will naturally feel more comfortable exploring the many elements of the site. Seating fixtures and product selections should complement and work in harmony with the adjacent hardscape and landscape treatments. Seating that is locally-sourced and uses recycled materials or sustainable wood products is encouraged.

Fixed and flexible seating opportunities can include, but are not limited to, the following examples:

- Seat walls
- Benches
- Seating mounted to site walls
- Tree wrap or planter wrap benches
- Non-permanently mounted or movable furniture including tables and chairs, bar stools, and active seating





Seating should have modern aesthetics with clean lines. Veridea's standard bench is the Vector product family by Forms + Surfaces and the Madison Bench by Anova Furnishings. Alternative bench products that have modern aesthetics and clean lines may be approved.





Precast seat walls shall contain lipped edges for comfortable seating. Anti-skateboarding measures may be applied if appropriate.



Town owned and operated facilities are encouraged to comply with the Veridea standard but "... are permitted to utilize the Town standard site furnishing such as the Rendezvous Series bench by Anova.



Benches mounted to seat walls shall be backed.



Providing inclusive seating and adjacent space for ADA access is encouraged





Flexible seating, such as Adirondack chairs, provide opportunity for pops of color. Colors shall comply with Veridea standard branded colors.

6.3: SITE FURNISHINGS

Bollards, Planters, + Landscape Features

Bollards, structurally set boulders, or stand-alone planters should be utilized to create a visually appealing design aesthetic while providing safe separation between pedestrians, bicyclists, and vehicles. Bollards shall be vehicular-rated with modern aesthetics. Planters may be located strategically to facilitate vehicular and pedestrian movement. Planters should have seasonal plant selections to create year-round interest throughout the site. Boulders may be integrated into the hardscape to buffer, separate spaces, or provide an alternative vehicular barrier.



Bollards may incorporate lighting.





It is recommended that retail and restaurant dining patios are enclosed by a combination of planters and fencing.



Bollards may be wood or have a wood-like appearance. All wood shall be FSC certified.



Seating integrated within planters is encouraged.



Boulders can be used to buffer or separate spaces.

6.3: SITE FURNISHINGS

Fencing + Screening

A variety of unique and modern fencing and screening styles should be utilized to provide visual interest. Powdercoat aluminum, iron, and wood combined with masonry are complementary materials that can be sourced locally.

Planter fencing selections should be a modern style, visually appealing, provide safety for pedestrians, and prevent damage to planted areas where applicable. Planter fencing selections should include a variety of styles/products, but should work harmoniously together from a visual perspective.

Standard site fencing, such as fall protection fencing, should be commercial-grade aluminum picket or a similar design aesthetic. Panel inserts - used to make picket openings more narrow - is encouraged where an additional level of safety is required. Alternative decorative fencing, such as at dog parks, playgrounds or amenity spaces, may be split-rail fencing painted black.





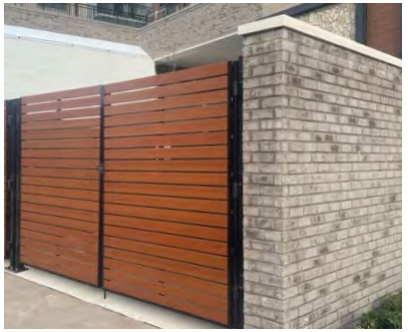
Planter fencing shall be decorative, black and a maximum of 18" in height.



Vegetated green walls shall contain integrated irrigation.



Veridea's standard planter fence is the Proto Fence by Ironage. Alternative products that have modern aesthetics and clean lines may be approved. Metal components shall be black.



Screen walls and enclosures shall be a decorative stone or brick masonry. Gates shall be wood or aluminum.

Utilitarian site elements, such as trash enclosures and mechanical equipment, should be screened with a combination of decorative screen walls, decorative gates, and landscaping. Per the SD Plan and Town UDO use of multiple materials provides visual interest.

Vegetated screens and walls are an innovative vertical application of landscape that can be used as a screening opportunity.

6.3: SITE FURNISHINGS

Waste Receptacles

Waste and recycling receptacles should be of a modern approach that is visually appealing and complementary to other furnishing selections throughout the site. Special care should be given to where and how these are located and how they function given programming and level of user activity. Waste receptacles should be conveniently located but should not present a visual, physical, or odor impediment.

A variety of waste receptacles should be provided throughout Veridea:

- Trash receptacles
- Recycling receptacles
- Pet waste receptacles
- Composting opportunities with applicable maintenance programs

Waste receptacles that include both trash and recycling containment are encouraged. Where appropriate, composting centers provide a unique and sustainable option for disposing of food waste. Large scale waste containers, such as dumpsters, shall be fully screened with masonry walls, gates, and landscape per the Town of Apex UDO and the SD Plan.





Town owned and operated facilities are encouraged to comply with the Veridea standard but are permitted to utilize the Town standard site furnishing such as the Rendezvous Series bench by Anova.

Waste receptacles shall contain both trash and recycling options and include a rain bonnet. Veridea's standard waste receptacle are the Tonyo family by Forms + Surfaces and the Madison series with visor hood by Anova Furnishings. Alternative products that have modern aesthetics and clean lines may be approved.





Pet waste stations shall contain bags and a trash receptacle and shall be in the color black.



Compost locations shall be located in communal areas or dedicated community garden spaces. Avoid compost stations near to residential homes.

6.3: SITE FURNISHINGS

Bicycle Racks

Bicycle racks are essential to all pedestrian and multi-modal focused developments. Bicycle rack selections should complement other furnishing selections and should be placed as needed throughout the site. Areas of heavy pedestrian activity, park and open space areas, pedestrian nodes, residential communities, and commercial nodes should be equipped with adequate bicycle parking to facilitate and encourage bicycle use throughout Veridea. Trailheads to large greenways dedicated to both pedestrians and cyclists are prime locations for bicycle stations that include repair stations with both short- and long-term bicycle storage.



Bike racks may be colored to match Veridea branding colors.







Bike racks shall have modern, aesthetic designs. Veridea's standard bicycle racks are the Bay City Bike Rack by Forms + Surfaces and the Tandem Bike Rack by Anova Furnishings Alternative products that have modern aesthetics and clean lines may be approved.





Bicycle storage lockers shall have modern aesthetic.

6.3: SITE FURNISHINGS

Shade Structures

A variety of shade-creating features should be implemented as needed throughout Veridea in order to facilitate a comfortable environment for various programmed spaces. Formal structures can be utilized where practicable, while less formal shade sails and umbrellas can be utilized in tandem with flexible tables and chairs to create more a desirable user experience. The design, shape, and materials of shade structures should be complementary to adjacent structures and may include metal, aluminum, or wood.









Shade structures may be trellises with open slats or fully roofs. Bioclimactic ceilings, ceiling fans, convenience outlets, and comfortable furnishings all contribute to the structure's aesthetic and utility.



Shelters provide a space for large-scale community gathering. Where shelters have the opportunity to be used as a stage - upfit with convenience outlets. Speakers, audio/visual connections, and integrated pull-down projector screens provide additional opportunities for use.



SECTION 6.4

PROGRAM AMENITIES

Additional miscellaneous components of site design can be included to enhance the overall aesthetic of Veridea. Products like fire pits and outdoor games will enrich the user experience through both active and passive means of interaction and community-building. Additionally, retail patio spaces with seating, planters, and enhanced hardscape elements will aid in creating both functionality and memorable experiences throughout Veridea. These program amenities shall be limited to private property and not included as part of the public right-of-way.

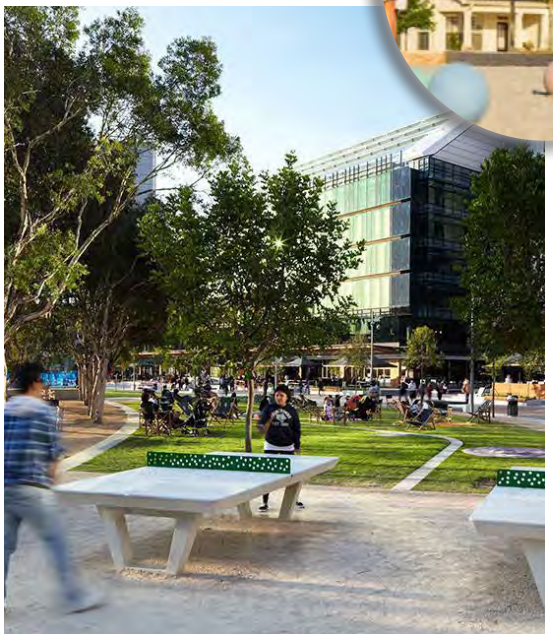


Programmed amenity elements may include:

- Fire pits, fire tables
- Outdoor televisions
- Retail patio spaces with seating, planters, and dedicated hardscapes
- Outdoor games such as chess tables, cornhole, ping pong, and shuffleboard
- Water bottle fillers
- Sculptures and public art



Dedicated outdoor dining spaces shall be enclosed with raised planters and fencing where possible.



Gaming tables shall be surface-mounted. Storage for gaming components is encouraged.



Sculptures, artwork, and murals are opportunities for placemaking. Geocaching, "find the sculpture," or other scavenger hunt games are encouraged throughout communities.



Where connected to natural gas or propane, fire pits shall contain timers and emergency shut-offs.



Outdoor televisions shall be located a minimum of 25' from the public right-of-way and screens shall be oriented away from vehicular traffic

SECTION 6.5

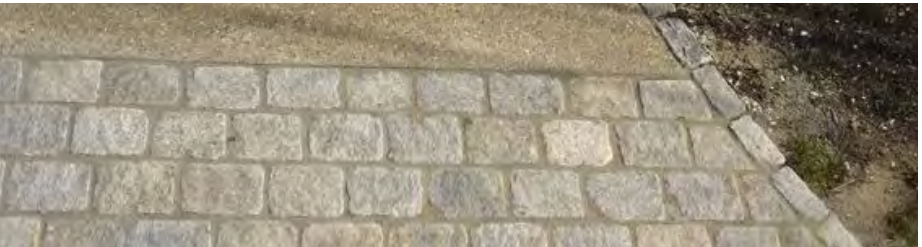
Bus Stops

Bus stops shall be provided throughout Veridea to connect residents and users to various locations within Veridea and also to adjoining communities and destinations. Bus stops and associated furnishings shall be installed by the developer prior to the 2,000th dwelling building permit. In the event the Town has not approved funding for a bus route to serve Veridea by the 2,000th dwelling building permit, the developer may provide a fee-in-leiu to the Town for the Town standard bus stop at that time.

Each bus stop shall include the following:

- A bus stop pad with a minimum size of 10'x30'
- Bus stop pads shall be a standard broom finish concrete bordered with a granite cobble or brick paver band
- One waste receptacle
- One bench or seating opportunity
- 2 bicycle racks
- 1 shade structure with a roof and sheltered on a minimum of 1 side

Seating opportunities may be integrated into the shade structure or installed as surface mounted fixtures. Furnishings provided are required to match the Veridea standard, see pages 54, 57, and 58. Furnishings within the public right of way or public transit easement that differ from the Town Standard must be included as part of a maintenance agreement between the Town and the Responsible Party.





The base shade structure is the 10' Signa Sunset-60 by Tolar Manufacturing. Features include a welded roof structure, rear and end wall panels, and integrated LED solar security lighting

Public art, provided by either the Town or the Responsible Party, may be incorporated into the bus stop or within 15' of the bus stop. Art may include, but is not limited to, three-dimensional art, sidewalk art or decorative shelter wraps.

Supplemental lighting in the form of pedestrian-scale area lights, bollard lights, or path lights may be provided. Lighting must meet standards set forth in Section 8.





COBALT BLUE BLACK

The standard colors are Cobalt Blue for the framework and Black for the roof.





Public art may be provided at bus stops as an opportunity to engage the public. All public art designs must be approved by the Town and the Responsible Party prior to installation.

SECTION 7

Signage

Introduction
Master Signage Plan
Modifications



SECTION 7.1

INTRODUCTION

Veridea aims to maintain a unique brand identity while staying compliant with local regulations and jurisdictional guidelines. This section of the Pattern Book identifies modifications to the Town of Apex signage requirements as outlined in Chapter 8 of the Town's UDO, carefully tailored to strike the perfect balance between adherence to Town requirements and commitment to exceptional design.





7.1: INTRODUCTION

Key Goals



Veridea's key goals for site signage include:

- ***Brand Integration:*** We propose incorporating the Veridea brand's unique visual elements into the signage. By infusing the brand colors, typography, and logo, Veridea will have a consistent and memorable brand experience, bolstering recognition and leaving a lasting impression.
- ***Signage Flexibility:*** Recognizing that different sites and locations may have varying requirements, introducing a degree of flexibility into signage design allows for adaptations that complement specific architectural nuances of each site, ensuring a harmonious blend with the surroundings while adhering to the essential guidelines.
- ***Sustainability Initiatives:*** Veridea advocates for sustainability initiatives into signage designs, aligning with commitment to eco-conscious practices. By utilizing environmentally friendly materials and energy-efficiency lighting options, Veridea will contribute positively to the community and bolster the development's reputation as an environmentally responsible entity.
- ***Digital and Interactive Elements:*** Incorporating digital and interactive elements into Veridea's site signage can enhance engagement and elevate the overall user experience. Introducing touch-screen displays or QR codes for more information can offer visitors valuable insights and foster a stronger connection to the site.
- ***Universal Accessibility:*** To ensure inclusivity, incorporating features that enhance accessibility for all individuals is encouraged. This may involve integrating Braille, clear pictograms, and ensuring appropriate font sizes to facilitate readability for those with visual impairments.
- ***Artistic Expression:*** The integration of artistic expression is encouraged. By collaborating with local artists or incorporating unique architecture features, signage can be captivating and culturally significant.
- ***Safety Considerations:*** Signage modifications will prioritize clear visibility, optimal placement for wayfinding and legible instructions to ensure the well-being of all visitors.

SECTION 7.2

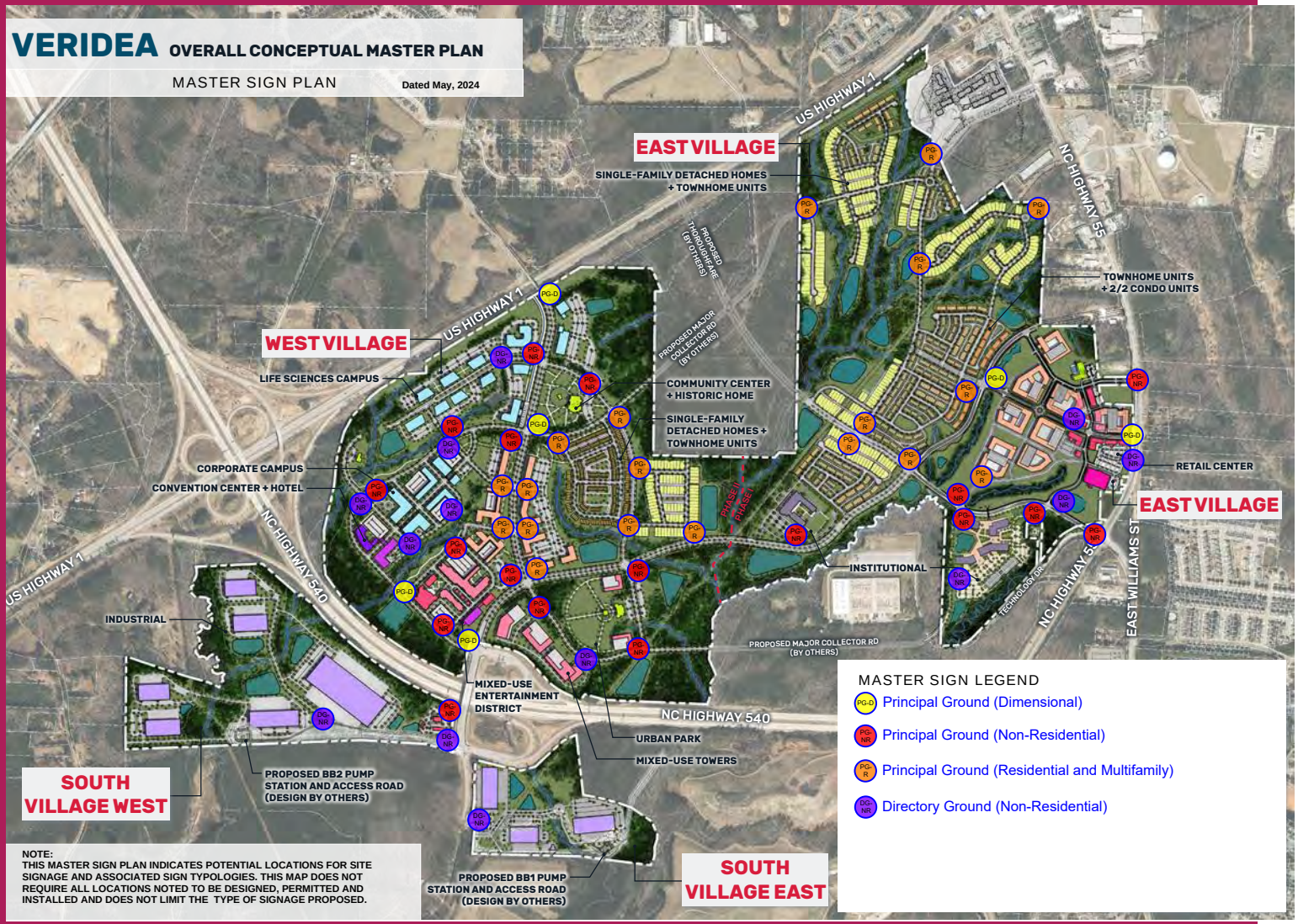
MASTER SIGNAGE PLAN

The Master Sign Plan is intended to provide a comprehensive and strategic blueprint for the effective and cohesive implementation of ground monumentation signage within Veridea. It serves as a guiding document that outlines the overall vision, design guidelines, and specifications for all signage elements to ensure consistency, brand identity, and functional clarity.

The Master Sign Plan identifies ground signage only. Additional signage, such as building-mounted signage traffic control devices, digital directories and trail markers, can be further defined on the project level.

Standards for other types of signs, such as wall and building signs, are further defined in this Section. Refer to Sections 7.2 and 7.3 for definitions, example imagery and allowable modifications.

This map indicates signage opportunities as determined at the time of this publication and is for reference only.



7.2: MASTER SIGNAGE PLAN

Principal Ground (Dimensional)

- A sign type specific to Veridea and is not a standard Town of Apex sign typology.
- Defined as a sign supported permanently upon the ground by a continuous base or two or more support features, not attached to any building, that includes a three-dimensional or artistic element.
- Intended to be visible and experienced by both vehicles and pedestrians as an artistic approach to placemaking and signage.
- Signage may be integrated into the three-dimensional element or adjacent to, but no further than 10 feet from, the three-dimensional element.



Lighting may be incorporated. See Section 08.



Signage may be integrated or adjacent to the dimensional art element







Use of structure and material selection to mimic natural landscapes and forms

7.2: MASTER SIGNAGE PLAN

Principal Ground (Non-residential, residential, multifamily)

- Per the Town UDO Definition: A sign supported permanently upon the ground by a continuous base or two (2) or more supported posts at the outside edge, not attached to any building.
- Applies to non-residential, residential and multifamily uses.





Mounted to retaining wall





Use of mulitple levels and layers





Use of natural materials, such as stone and wood



Freestanding letters

7.2: MASTER SIGNAGE PLAN

Directory Ground (Non-Residential, Multifamily)

- Per the Town UDO Definition: A ground sign with a continuous base for a building or development that is intended to support wayfinding.
- Applies to non-residential and multifamily uses.

If digital signage is provided, it shall meet the following:

- Digital signage cannot face the public right of way.
- The display area of the sign shall remain static for at least 30 seconds unless a person is actively using any interactive features of the display area.
- Digital signs shall be equipped with automatic dimming technology that adjusts the sign's brightness in direct correlation with natural ambient light conditions.
- The brightness shall not exceed six (6) footcandles from dusk to dawn when measured one (1) foot from the center of the display area.







Use of natural materials and layers



Utilization of height for visibility





Integration of art

7.2: MASTER SIGNAGE PLAN

Wall Sign

- Per the Town UDO Definition: A sign attached parallel to a wall, professionally painted on the wall surface or erected and confined within the limits of an outside wall of any building or structure, which is supported by such wall or building.
- Applies to non-residential uses.



Projection from building face



Back lit box lettering



Painted wall mural signage



Side mounted to building wall

SECTION 7.3

MODIFICATIONS: PERMANENT SIGNS

Sign Type (Permanent)	Definition (Abbreviated definition provided, refer to Town of Apex UDO for full definition and requirements.)	Modification Request (If no modification provided, follow the Town of Apex UDO)
Awning	A material such as fabric, metal, flexible plastic, or vinyl that is supported by or attached to a frame and that extends from the exterior wall of a building without ground-mounted support	No modifications.
Home Occupation	Advertising home occupations permitted only where a home occupation has been approved	No modifications.
Building Marker	A plaque, plate or seal placed on a building to signify origin	Quantity - Maximum 1 per building facade, not to exceed 2 per building Sign Area - Maximum 4 square feet
Directory (Building)	A wall sign mounted to a building for the purpose of wayfinding or navigation.	Quantity - 1 per building entrance, not to exceed 3 per building Sign area - Maximum 6 square feet Material - Digital permitted. Refer to digital standards on page 68.
Directory (Ground) - Non-residential	A ground sign with a continuous base less than two (2) feet in height for the purpose of wayfinding, navigation or directional information.	Maximum height - 8 feet Maximum base height - 4 feet Maximum sign area - 10 square feet Material - Digital permitted. Refer to digital standards on page 68.
Directory (Ground) -Residential (multifamily)	A ground sign with a continuous base less than two (2) feet in height for the purpose of wayfinding, navigation or directional information.	Maximum height - 6 feet Maximum base height - 4 feet Maximum sign area - 10 square feet Material - Digital permitted. Refer to digital standards on page 68.
Flags	A fabric, usually rectangular or triangular in shape, designed to be flown from a flag pole	No modifications.
Gasoline Sales	A service station sign advertising fuel prices in accordance with North Carolina General Statutes	No modifications.
Governmental	A temporary or permanent sign erected and maintained by or required by the city, county, state or federal government	No modifications.
Health/Hospital	Permanent signs erected and maintained by an Ambulatory Healthcare Facility with Emergency Department or a Hospital	No modifications.
Incidental	A sign, generally informational, that is directory as to the use of the subject property on which it is located.	No modifications.
Marquee	A theater wall sign designed to have changeable copy	Digital theatre marquee signs permitted. A singular image must be static for a minimum of 30 seconds. Digital cannot face the public right of way.
Menu Board	An accessory sign providing associated with a drive-through window or walk-up window	No modifications.

- This table indicates signage typologies identified in the Town of Apex UDO and associated modifications allowed within the limits of Veridea. The Town of Apex UDO shall apply to any standard or sign typology not listed. Any revisions to modifications, up to a 10% deviation from listed, must be approved by the Planning Director. Any revisions to modifications that exceed a 10% deviation are subject to a revision to the Pattern Book and approval by Town Council.
- Signage less than 1 square foot located on permanent site elements other than buildings is exempt from sign standards.

SECTION 7.3

MODIFICATIONS: PERMANENT SIGNS

Sign Type (Permanent)	**Definition (Abbreviated definition provided, refer to Town of Apex UDO for full definition and requirements.)**	**Modification Request (If no modification provided, follow the Town of Apex UDO)**
Parapet Building Sign	A sign extending above the parapet or placed on a roof surface	Permitted only within non-residential districts of Veridea. Quantity - 1 per commercial district Maximum height - 15 feet Sign area - Maximum 80 square feet
Principal Ground (Dimensional) *Non-standard sign type*	A sign supported permanently upon the ground by a continuous base or two or more support features, not attached to any building, that includes a three-dimensional or artistic element.	Permitted only within non-residential districts of Veridea. Quantity - 1 per major full service vehicular intersection Maximum height - 15 feet Maximum sign area - 50 square feet Three dimension or artistic element excluded from sign area calculation. Not permitted within landscape medians. Must be located within 30 feet of the public right of way.
Principal Ground (Non-residential)	A sign supported permanently upon the ground by a continuous base or two (2) or more support posts at the outside edge, not attached to any building	Quantity - 2 permitted at each full service vehicular entrance Height - maximum 8 feet on major collector or thoroughfare roads; maximum 6 feet on local streets Sign area - maximum 50 square feet on major collector or thoroughfare roads; maximum 30 square feet on local streets May be located on a retaining wall that does not exceed 10 feet in height
Principal Ground (Residential and Multifamily)	A sign supported permanently upon the ground by a continuous base or two (2) or more support posts at the outside edge, not attached to any building	Quantity - 2 permitted at each full service vehicular entrance Height - maximum 8 feet on major collector or thoroughfare roads; maximum 6 feet on local streets Sign area - maximum 50 square feet on major collector or thoroughfare roads; 30 square feet on local streets May be located on a retaining wall that does not exceed 10 feet in height
Projecting Sign	A sign affixed to a building or wall in such a manner that its leading edge extends more than 12 inches beyond the surface of said building or wall.	No modifications.
Suspended	A sign that is suspended from the underside of a horizontal plane surface and is supported by such surface	No modifications.
Wall	A sign attached parallel to a wall, professionally painted on the wall surface or erected and confined within the limits of an outside wall of any building or structure, which is supported by such wall or building	No modifications.
Interior Sign	A ground or sign located adjacent to parking spaces that is directory as to the use of the parking area.	No modifications.

^ This table indicates signage typologies identified in the Town of Apex UDO and associated modifications allowed within the limits of Veridea. The Town of Apex UDO shall apply to any standard or sign typology not listed. Any revisions to modifications, up to a 10% deviation from listed, must be approved by the Planning Director. Any revisions to modifications that exceed a 10% deviation are subject to a revision to the Pattern Book and approval by Town Council.

^ Signage less than 1 square foot located on permanent site elements other than buildings is exempt from sign standards.

SECTION 7.3

MODIFICATIONS: TEMPORARY SIGNS

Sign Type (Temporary)	**Definition (Abbreviated definition provided, refer to Town of Apex UDO for full definition and requirements.)**	**Modification Request (If no modification provided, follow the Town of Apex UDO)**
On-premise, non-commercial temporary signs	A temporary sign with non-commercial messaging that is not associated with an event not located on residential property	No modifications.
Banners *Non standard sign type*	A lightweight sign that is temporarily installed on a streetlight in the public right-of-way for decorative or informational purposes	Quantity - 1 per streetlight pole Size - Maximum 24 inches wide by 60 inches height Maximum Sign Area - 10 square feet Changeable when desired and allowed year-round.
Construction Sites	An on-premise, freestanding temporary sign erected during the construction of a development project	No modifications.
Event (Commercial)	Temporary on-premise signs erected during commercial events	No modifications.
Event (Non-commercial)	Temporary on-premise signs erected during non-commercial events	No modifications.
Sandwich Board Sign	Consisting of two panels joined together at the top and configured into the shade of an inverted "V" so that the bottom of the sign rests upon the ground	No modifications.
Seasonal Outdoor Sales	Outdoor temporary signs not located on a farm permitted with a temporary use permit allowing seasonal outdoor sales	No modifications.
Window	Any sign that is placed on the outside or inside of a window or door and is visible from the exterior	No modifications.

- This table indicates signage typologies identified in the Town of Apex UDO and associated modifications allowed within the limits of Veridea. The Town of Apex UDO shall apply to any standard or sign typology not listed. Any revisions to modifications, up to a 10% deviation from listed, must be approved by the Planning Director. Any revisions to modifications that exceed a 10% deviation are subject to a revision to the Pattern Book and approval by Town Council.
- Signage less than 1 square foot located on permanent site elements other than buildings is exempt from sign standards.

SECTION 8

Lighting

Introduction
Site Lighting



SECTION 8.1

INTRODUCTION

Street and landscape lighting is an important component for not only safety but also aids in orientation, highlights the identity of an area, and creates a sense of drama. Veridea is committed to providing a site lighting strategy that is complementary to each street's character and creates a delightful sense of place during evening hours.



Site lighting shall comply with the following:

- Incorporate the latest energy-efficiency technology for directing light, reducing glare and limiting light pollution.
- Street fixture shall be consistent for entire roadway lengths.
- This Pattern Book does not overrule lighting standards otherwise required by the Town of Apex UDO, the SD Plan or the Environmental Enhancement Plan. The key elements listed within this Section are intended to complement and provide framework for the design approach of site lighting. Lighting that is an alternative from the Town standard located within the public right of way may be included as part of a maintenance agreement between the Town and the Responsible Person/ Developer.



8.3: SITE LIGHTING

Streetscape Lighting

Streetscape and roadway lighting within the public right of way shall follow the Town of Apex UDO standards, including the following:

- Pedestrian scale poles shall be between 12′ and 18′ mounting height with a black fiberglass pole.
- Vehicular scale poles shall be between 20′ and 35′ mounting height with a black fiberglass pole.
- Post top luminaries shall be the Town standard or a contemporary, round form style, consistent with the ARB Arbor Post Top by Cooper Lighting, the Pacifica family by Architectural Area Lighting, or similar.
- Cobra head luminaries shall follow the Town of Apex standard LED shoebox, or similar.
- All fixtures and poles shall be black.
- Structural footings shall be direct burial with foundations conceals. Footings shall be sized sufficiently to accommodate attachment arms for banners and hanging planter pots.
- Poles located within urban streetscapes shall accommodate electrical outlets for holiday lighting.
- Fixtures shall meet dark sky requirements.



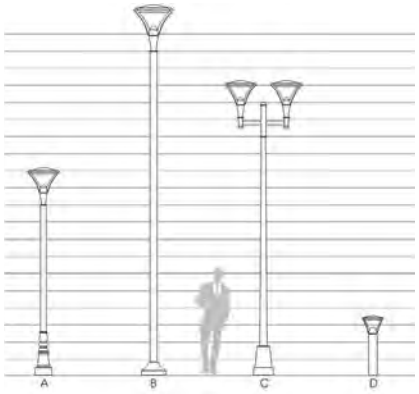
At urban streetscape locations and along major thoroughfares, pole foundations shall be structurally engineered to accommodate attachments such as banners, planter pots and holiday decorations.



The Town's standard fixture or ARB Arbor Post Top by Cooper Lighting (or similar) is permitted for use in the public right of way.



Post top fixtures are permitted to follow differing assemblies, such as single-mounted, double-mounted or wall mounted. Where applicable, utilization of the entire family product line of post tops, bollards and wall-mounted lighting is encouraged.





The Pacifica family by Architectural Area Lighting is permitted for use in the public right-of-way but subject to be included as part of a developer's maintenance agreement.



Cobra style lighting shall follow Town of Apex standard shoebox fixture, or similar.

8.3: SITE LIGHTING

Site and Area Lighting

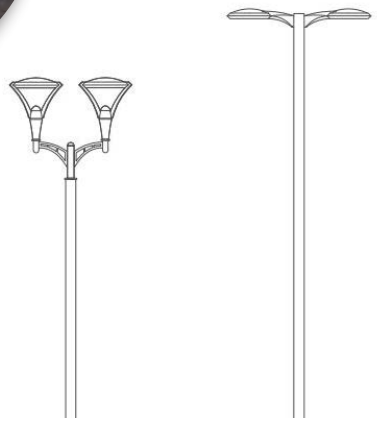
Site and area lighting within private and Town owned and operated developments shall be utilized for safety lighting, large-scale spatial lighting, and vehicular roadway and pedestrian lighting. Fixtures mounted to poles should meet the following requirements:

- Pedestrian scale poles shall have a mounting height between 12’ and 18’.
- Vehicular scale poles shall have a mounting height between 20’ and 35’.
- All fixtures shall be black. All poles shall be black fiberglass.
- Fixture and post top styles shall be of the same style as streetscape and right of way fixtures (see page 75).
- Utilization of the entire family line of products is encouraged for consistency.
- Structural footings shall be direct burial with foundation conceals.
- Poles located within urban plazas and open spaces dedicated to public large scale gatherings shall accommodate electrical outlets for holiday lighting.
- Cobra fixtures for parking lot lighting shall follow the Town standard shoebox fixture, or similar.

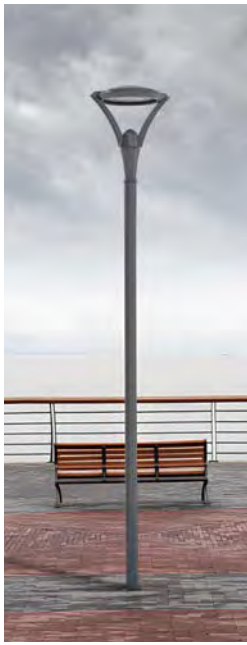




Veridea’s standard lighting products are contemporary, round form style, including the Pacifica Family by Architectural Area Lighting and the Arbor Family by Cooper Lighting, or similar.



Fixtures may be double-headed to accommodate both vehicular and pedestrian needs.









Utilization of the entire family product line of post tops, bollards and wall-mounted lighting is encouraged.

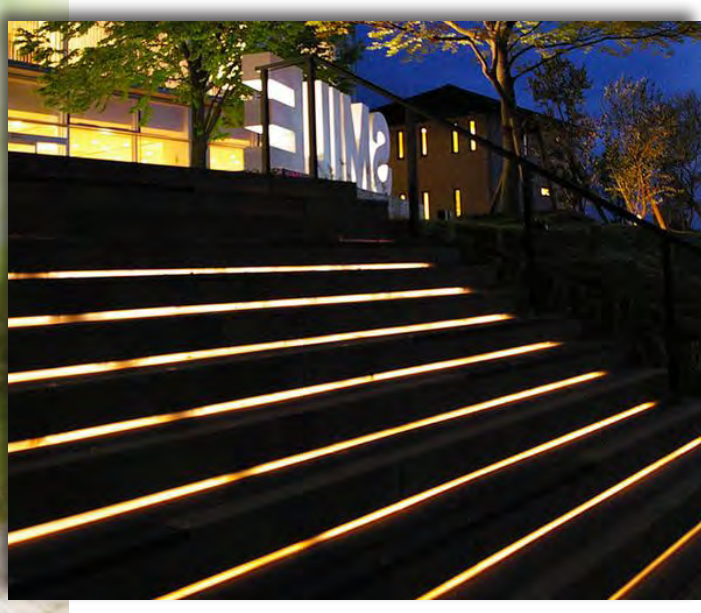
8.3: SITE LIGHTING

Pathway Lighting

Pathway lighting includes bollard lights, step and wall lights, strip lighting and handrail illumination. Pathway lighting shall comply with the following:

- Bollards shall be no taller than 3’ in height.
- In-grade lighting shall be direct burial with foundations concealed.
- Step or wall lighting shall be flush with adjacent materials.
- Fixtures shall be LED and a modern style.
- Fixtures shall be black or bronze in color.
- Integrated lighting, such as in handrails, shall be hidden.



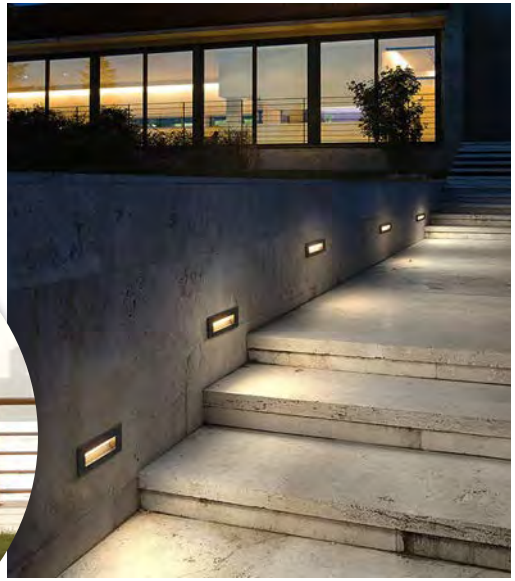


Bollards and pathway lighting shall have a modern style and no taller than 3’ in height.









Wall mounted and step lights shall be flush with adjacent materials.

8.3: SITE LIGHTING

Landscape Lighting

Landscape lighting should be utilized as a way to enhance landscape aesthetics, highlight important elements, and provide soft, safe lighting. This style of lighting shall be limited to high impact gathering areas, plazas and streetscapes to reduce light pollution. All landscape lighting shall be low-voltage.

Landscape lighting may include:

- Tree and landscape uplights.
- String lighting/catenary lighting.
- Artistic light applications.
- In-grade hardscape lighting.



Artistic lighting applications are encouraged.





In non-residential, urban gathering areas, street trees may be uplight or adorned with tree wrap lights for decorative purposes. Limit quantity of uplighting to reduce light pollution.



Utilize downlighting mounted to building walls and structures to reduce light pollution and provide an aesthetic experience.



String and catenary lighting at public gathering areas provide opportunities for aesthetic lighting and holiday applications.

APPENDIX

SUPPLEMENTAL DOCUMENTATION

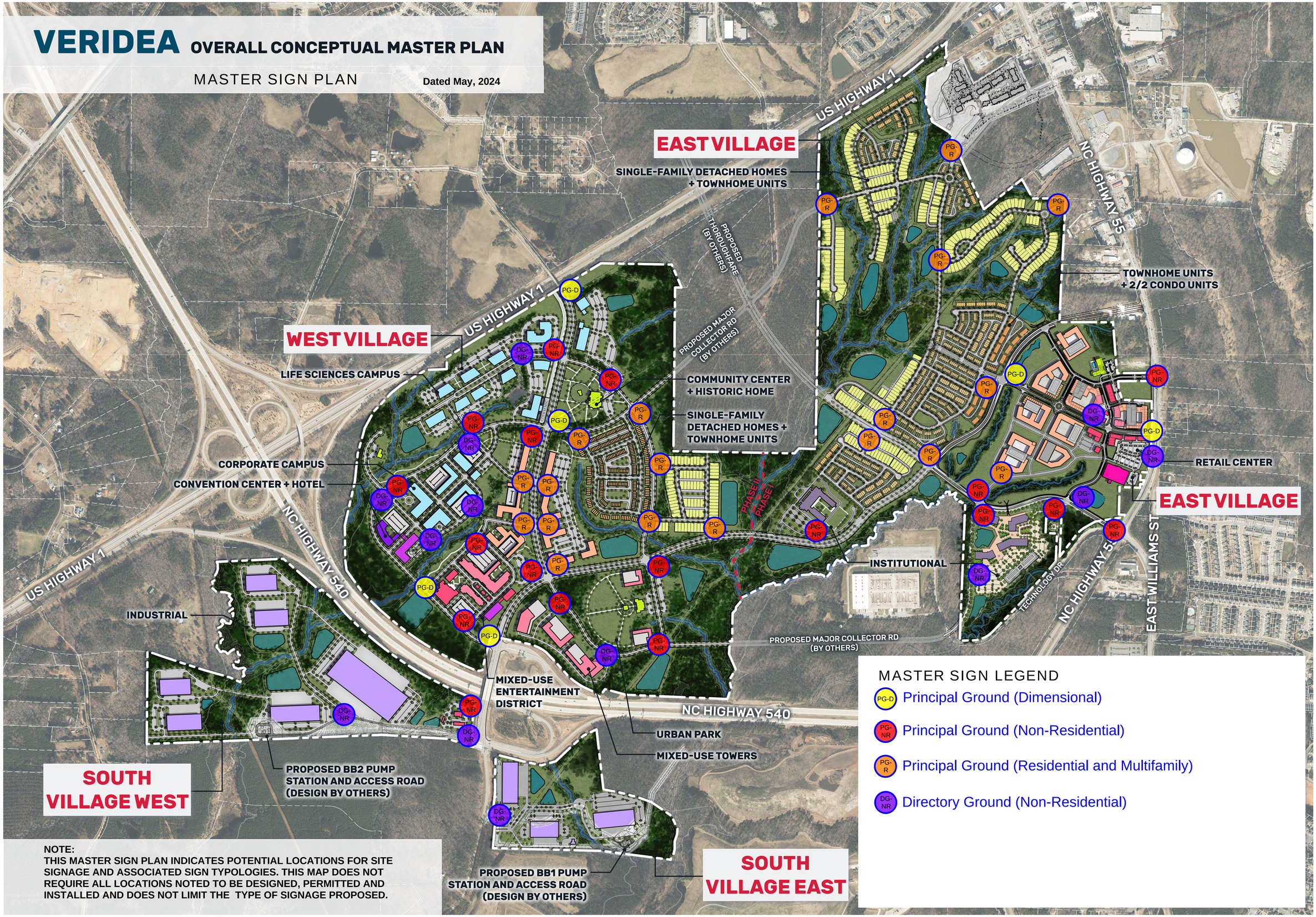
i. Master Signage Plan



VERIDEA OVERALL CONCEPTUAL MASTER PLAN

MASTER SIGN PLAN

Dated May, 2024



NOTE:
THIS MASTER SIGN PLAN INDICATES POTENTIAL LOCATIONS FOR SITE SIGNAGE AND ASSOCIATED SIGN TYPOLOGIES. THIS MAP DOES NOT REQUIRE ALL LOCATIONS NOTED TO BE DESIGNED, PERMITTED AND INSTALLED AND DOES NOT LIMIT THE TYPE OF SIGNAGE PROPOSED.

MASTER SIGN LEGEND

- PG-D — Principal Ground (Dimensional)
- PG-NR — Principal Ground (Non-Residential)
- PG-R — Principal Ground (Residential and Multifamily)
- DG-NR — Directory Ground (Non-Residential)

McADAMS

PREPARED FOR:
RXR REALTY

VERIDEA CONCEPTUAL MASTER PLAN
APEX, NORTH CAROLINA

10' 500'
SCALE: 1" = 500'

RXR-22001
09. 07. 2023

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