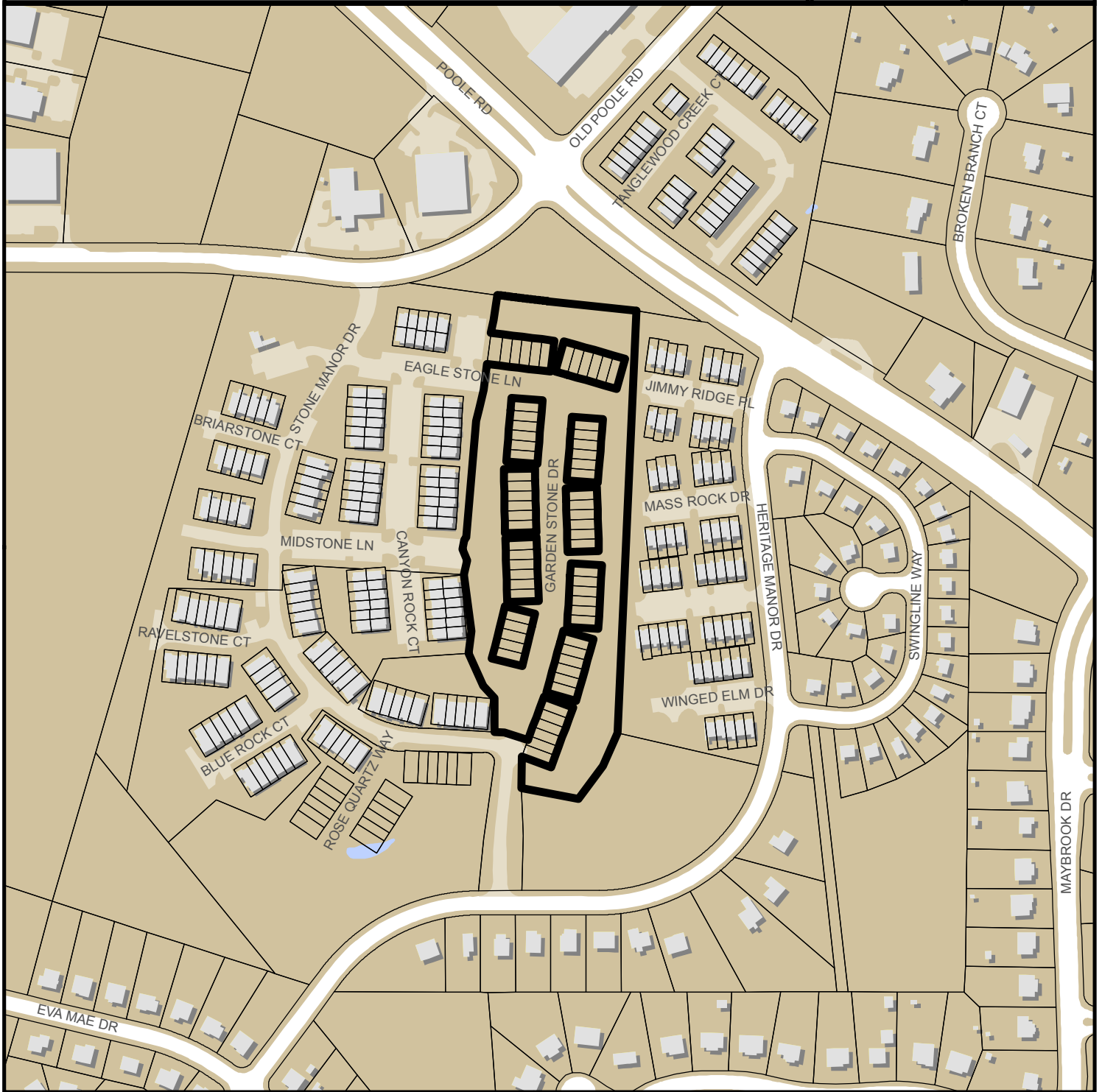


**FIELDSTONE CROSSINGS SUBDIVISION PHASE 4**  
**S-8-2017**



0 300 600 Feet

Zoning: **R-10**

CAC: **Souteast**

Drainage Basin: **Walnut Creek**

Acreage: **4.28**

Number of Lots: **66**

Planner: **Martha Lobo**

Phone: **(919) 996-2664**

Applicant: **Harold Yelle**

Phone: **(919) 877-9992**



# Preliminary Subdivision Plan Application



DEVELOPMENT  
SERVICES  
DEPARTMENT

Development Services Customer Service Center | Exchange Plaza, Suite 400 | Raleigh, NC 27601 | 919-996-2495 | efax 919-996-1831  
Litchford Satellite Office | 8320 - 130 Litchford Road | Raleigh, NC 27601 | 919-996-4200

When submitting plans, please check the appropriate review type and include the Plan Checklist document.

S-8-17  
LoBo

Office Use Only: Transaction # <b>503832</b>		Project Coordinator		Team Leader	
<b>PRELIMINARY APPROVALS</b>					
<input checked="" type="checkbox"/> Subdivision *		<input type="checkbox"/> Conventional Subdivision		<input type="checkbox"/> Compact Development	
<input type="checkbox"/> Conservative Subdivision					
*May require City Council approval if in a Metro Park Overlay or Historic Overlay District					
If your project has been through the Due Diligence process, provide the transaction #: <b>480499</b>					
<b>GENERAL INFORMATION</b>					
Development Name <b>Fieldstone Crossing Phase 4</b>					
Proposed Use <b>Residential</b>					
Property Address(es) <b>4420 Stone Manor Drive, Raleigh, NC 1351 Garden Stone Dr</b>					
Wake County Property Identification Number(s) for each parcel to which these guidelines will apply:					
PIN Recorded Deed <b>4733-11-5787</b>		PIN Recorded Deed <b>1733127088</b>		PIN Recorded Deed	
What is your project type?					
<input type="checkbox"/> Single family		<input checked="" type="checkbox"/> Townhouse		<input type="checkbox"/> Subdivision in a non-residential zoning district	
<input type="checkbox"/> Other (describe):					
<b>OWNER/DEVELOPER INFORMATION</b>					
Company Name <b>Fieldstone Crossing Devel, LLC / Fieldstone Crossing HOA, Inc</b>			Owner/Developer Name <b>Howard Moye / Jim Smith</b>		
Address <b>314 W. Millbrook Rd, Ste. 013, PO Box 20667, Raleigh, NC 27609</b>					
Phone <b>919-669-7650</b>		Email <b>hmoyeiii@nc.rr.com</b>		Fax	
<b>CONSULTANT/CONTACT PERSON FOR PLANS</b>					
Company Name <b>Aiken &amp; Yelle, Assoc</b>			Contact Name <b>Harold A. Yelle, P.E.</b>		
Address <b>3755 Benson Drive, Raleigh, NC 27609</b>					
Phone <b>919-877-9992</b>		Email <b>ayes@raleigh.twcbc.com</b>		Fax	

**DEVELOPMENT TYPE AND SITE DATE TABLE (Applicable to all developments)**

**ZONING INFORMATION**

Zoning District(s) **R-10 (CUD)**

If more than one district, provide the acreage of each: **NA**

Overlay District?  Yes  No

Inside City Limits?  Yes  No

CUD (Conditional Use District) Case # Z-

COA (Certificate of Appropriateness) Case #

BOA ( Board of Adjustment) Case # A-

**STORMWATER INFORMATION**

Existing Impervious Surface <b>2.68 acres</b> acres/sf	Flood Hazard Area <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	---

Proposed Impervious Surface <b>2.71 acres</b> acres/sf	Neuse River Buffer <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--

Wetlands <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--

If in a Flood Hazard Area, provide the following:

Alluvial Soils	Flood Study	FEMA Map Panel #
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**NUMBER OF LOTS AND DENSITY**

Total # of Townhouse Lots: Detached <b>66</b>	Attached
---	----------

Total # of Single Family Lots	Total # of All Lots
-------------------------------	---------------------

Overall Unit(s)/Acre Densities Per Zoning Districts **6.95**

Total # of Open Space and/or Common Area Lots **1**

**SIGNATURE BLOCK (Applicable to all developments)**

In filing this plan as the property owner(s), I/we do hereby agree and firmly bind ourselves, my/our heirs, executors, administrators, successors and assigns jointly and severally to construct all improvements and make all dedications as shown on this proposed subdivision plan as approved by the City.

I hereby designate **Harold A. Yelle, P.E.** to serve as my agent regarding this application, to receive and respond to administrative comments, to resubmit plans on my behalf, and to represent me in any public meeting regarding this application.

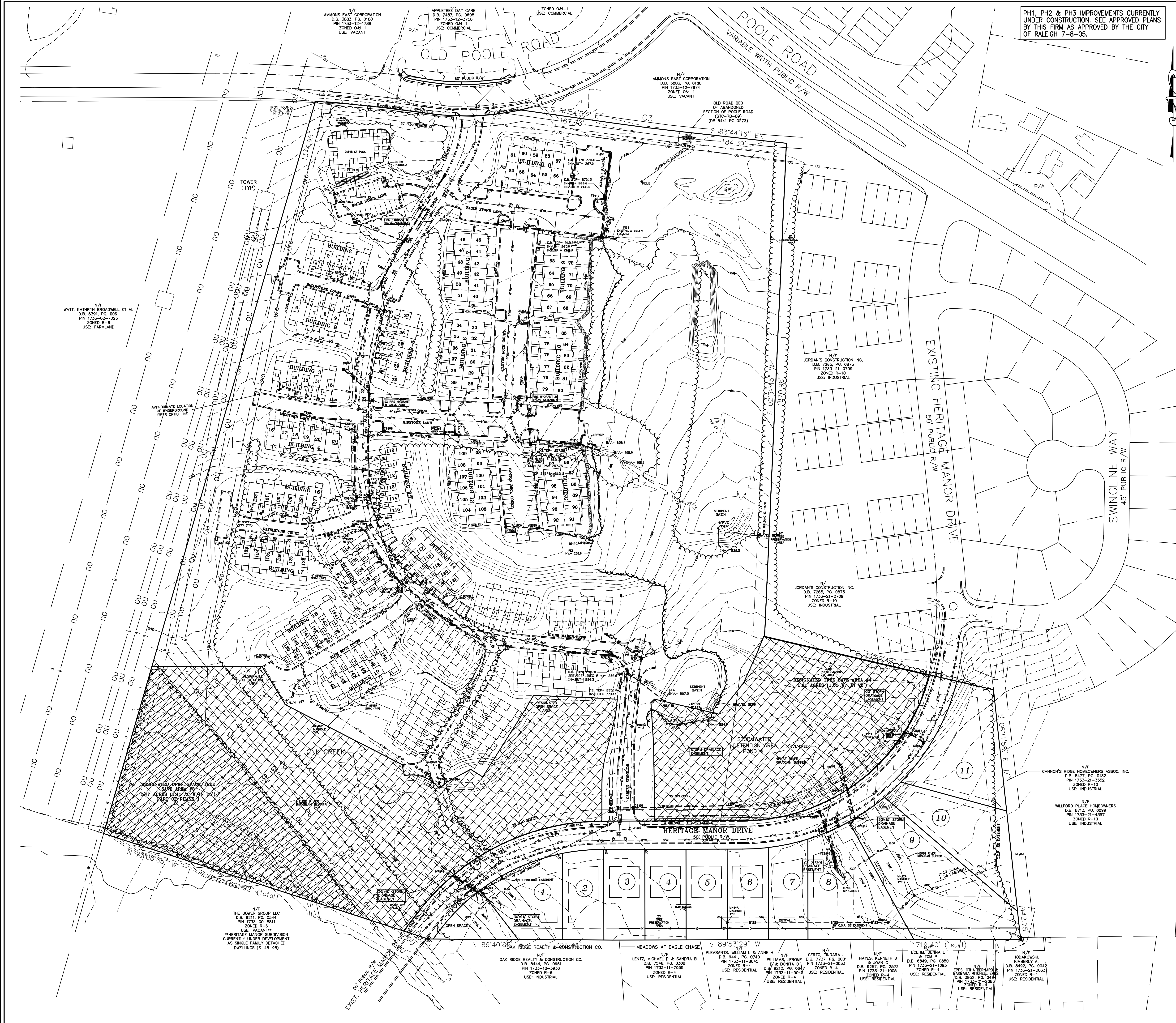
I/we have read, acknowledge, and affirm that this project is conforming to all application requirements applicable with the proposed development use.

Signature *Paul Hall* (managing agent) Date 2/9/17

Signature *Jimmy Smith* / HOA President Date 2/9/17

*J.D. Anderson*  
Fieldstone Development / Manager

GENERAL REQUIREMENTS	TO BE COMPLETED BY APPLICANT		OFFICE USE ONLY		
	YES	N/A	YES	NO	N/A
1. Applicant must contact a Planner to determine if a Pre-Application Conference is required prior to application submittal	<input checked="" type="checkbox"/>		✓		
2. Filing fee for plan review – payments may be made by cash, Visa, Mastercard, or check made payable to the City of Raleigh (no fee for infill recombination)	<input checked="" type="checkbox"/>			✓	<i>Call Client</i>
3. Preliminary Subdivision Plan Application must be completed and signed by the property owner	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
4. Applicant must complete and print page 1 and 2 of the Preliminary Subdivision Plan Application to the plan cover sheet (not applicable for infill recombination)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
5. I have referenced the Preliminary Subdivision Plan Checklist, and by using this as a guide, it will ensure that I receive a complete and thorough first review by the City	<input checked="" type="checkbox"/>				
6. Provide the following plan sheets:	<input checked="" type="checkbox"/>				
a) Cover sheet, to include general notes, owner's name, contact's name, phone number, mailing address, email address	<input checked="" type="checkbox"/>		✓		
b) Existing conditions sheet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
c) Proposed Subdivision Plan	<input checked="" type="checkbox"/>		✓		
d) Proposed Grading and Stormwater Plan <i>(Client included)</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓		
e) Proposed Utility Plan, including Fire <i>1"</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓		
f) Proposed Tree Conservation Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>		✓	
g) Proposed Landscaping <i>1"</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓		
h) Transportation Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>		✓	
7. Ten (10) sets of proposed plans to engineering scale (1"=20', 1"=100', etc.) and date of preparation. For re-submittals only, include all revision dates.	<input checked="" type="checkbox"/>		✓		
8. Plan size must be 18" x 24" or 24" x 36"	<input checked="" type="checkbox"/>		✓		
9. A vicinity map no smaller/less than 1"=500' and no larger than 1"=1000' to the inch, showing the position of the subdivision with its relation to surrounding streets and properties, and oriented in the same direction as the preliminary plan	<input checked="" type="checkbox"/>		✓		
10. Include sheet index and legend defining all symbols with true north arrow, with north being at the top of the map	<input checked="" type="checkbox"/>		✓		
11. Digital copy of only the plan and elevations – label the CD with the plan name, case file number, and indicate how many times the plan has been resubmitted for review	<input checked="" type="checkbox"/>		✓		
12. Wake County School form, if dwelling units are proposed	<input type="checkbox"/>	<input checked="" type="checkbox"/>		✓	
13. Preliminary stormwater quantity and quality summary and calculations package <i>Client included</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓		
14. For secondary tree conservation areas, include two (2) copies of the tree cover report completed by a certified arborist, North Carolina licensed landscape architect, or North Carolina registered forester	<input type="checkbox"/>	<input checked="" type="checkbox"/>		✓	



PH1, PH2 & PH3 IMPROVEMENTS CURRENTLY UNDER CONSTRUCTION. SEE APPROVED PLANS BY THIS FIRM AS APPROVED BY THE CITY OF RALEIGH 7-8-05.

**GENERAL NOTES**

- BEARINGS FOR THIS MAP ARE BASED ON N.C. GRID (NAD 83) AS SHOWN ON SURVEY ENTITLED "PROPERTY OF B.A. ANTOINE TRUST - BOUNDARY SURVEY" PREPARED BY THE JOHN R. McADAMS COMPANY, INC. DATED 11-6-02.
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
- NO GRID MONUMENTS FOUND WITHIN 2000' OF SITE.
- FLOOD NOTE: THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY HUD F.I.R.M. COMMUNITY PANEL # 37183 C 0555 E, DATED MARCH 3, 1992.
- REFERENCES: DEED BOOK 2755, PAGE 197  
DEED BOOK 6391, PAGE 61  
DEED BOOK 9211, PAGE 544  
BOOK OF MAPS 1986, PAGE 716  
BOOK OF MAPS 1988, PAGES 1523-1524  
BOOK OF MAPS 1999, PAGE 360  
BOOK OF MAPS 2000, PAGE 746  
BOOK OF MAPS 2000, PAGE 980  
OF THE WAKE COUNTY REGISTRY  
PIN 1733115999 & 1733115131  
BOOK OF MAPS 2004, PAGE 991-993
- 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.
- ELEVATIONS FOR THIS MAP ARE BASED ON NGVD 29 TAKEN FROM NCGS MONUMENT "WHEELER" HAVING ELEV=291.11'

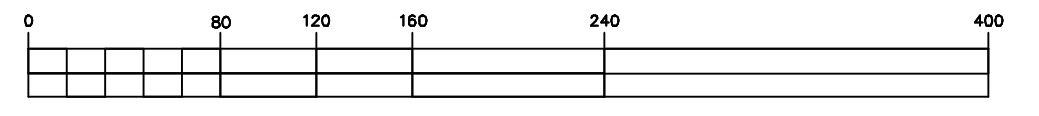
**LEGEND**

●	EXISTING IRON PIPE	— — — —	STORM DRAIN
○	IRON PIPE SET	— OU —	OVERHEAD UTILITY LINE
▲	CALCULATED POINT	— UE —	UNDERGROUND ELECTRIC
⊙	BORE HOLE	— UT —	UNDERGROUND TELEPHONE
⊕	SANITARY SEWER MANHOLE	— W —	WATER LINE
⊕	SANITARY SEWER CLEANOUT	— SS —	SANITARY SEWER LINE
⊕	WATER VALVE	— G —	GAS LINE
⊕	WATER METER	— X — X —	FENCE LINE
⊕	FIRE HYDRANT	— UFO —	UNDERGROUND FIBER OPTIC
⊕	TELEPHONE PEDESTAL		
⊕	TELEPHONE MANHOLE		
⊕	ELECTRIC BOX		
⊕	LIGHT POLE		
⊕	POWER POLE		
⊕	CURB INLET		
⊕	STORM DRAINAGE MANHOLE		
⊕	YARD INLET		

NOTE: THIS MAP WAS PREPARED FROM COMPILED SOURCES WHICH INCLUDE PH1, PH2 & PH3 CONSTRUCTION DRAWINGS AND A BASE TOPOGRAPHIC SURVEY PREPARED PRIOR TO CURRENT CONSTRUCTION ACTIVITIES FOR PHASE 1, 2 & 3. CONSTRUCTION ACTIVITIES FOR PHASE 1, 2 & 3 ARE CURRENTLY UNDERWAY.

NOTE: THE FOLLOWING PLANS HAVE BEEN PREPARED TO MEET THE MINIMUM CONFORMANCE OF DESIGN FOR APPROVAL OF THE LOCAL GOVERNING AUTHORITIES. PRIOR TO ORDERING MATERIALS AND STARTING CONSTRUCTION IT SHALL BE THE RESPONSIBILITY OF ALL CONTRACTORS AND SUB-CONTRACTORS TO REVIEW PLANS AND BECOME FAMILIAR WITH LOCAL AUTHORITY STANDARDS AND SPECIFICATIONS. DURING REVIEW OF PLANS AND PRIOR TO CONSTRUCTION THE CONTRACTOR (S) OR THE MANAGING REPRESENTATIVE OF THE OWNER SHALL NOTIFY AIKEN & YELLE ASSOCIATES OF ANY DISCREPANCIES. THE CONTRACTORS SHALL BE RESPONSIBLE FOR ASSURING POSITIVE DRAINAGE ON ALL PAVED SURFACES AND ALL DRAINAGE SYSTEMS.

**GRAPHIC SCALE**



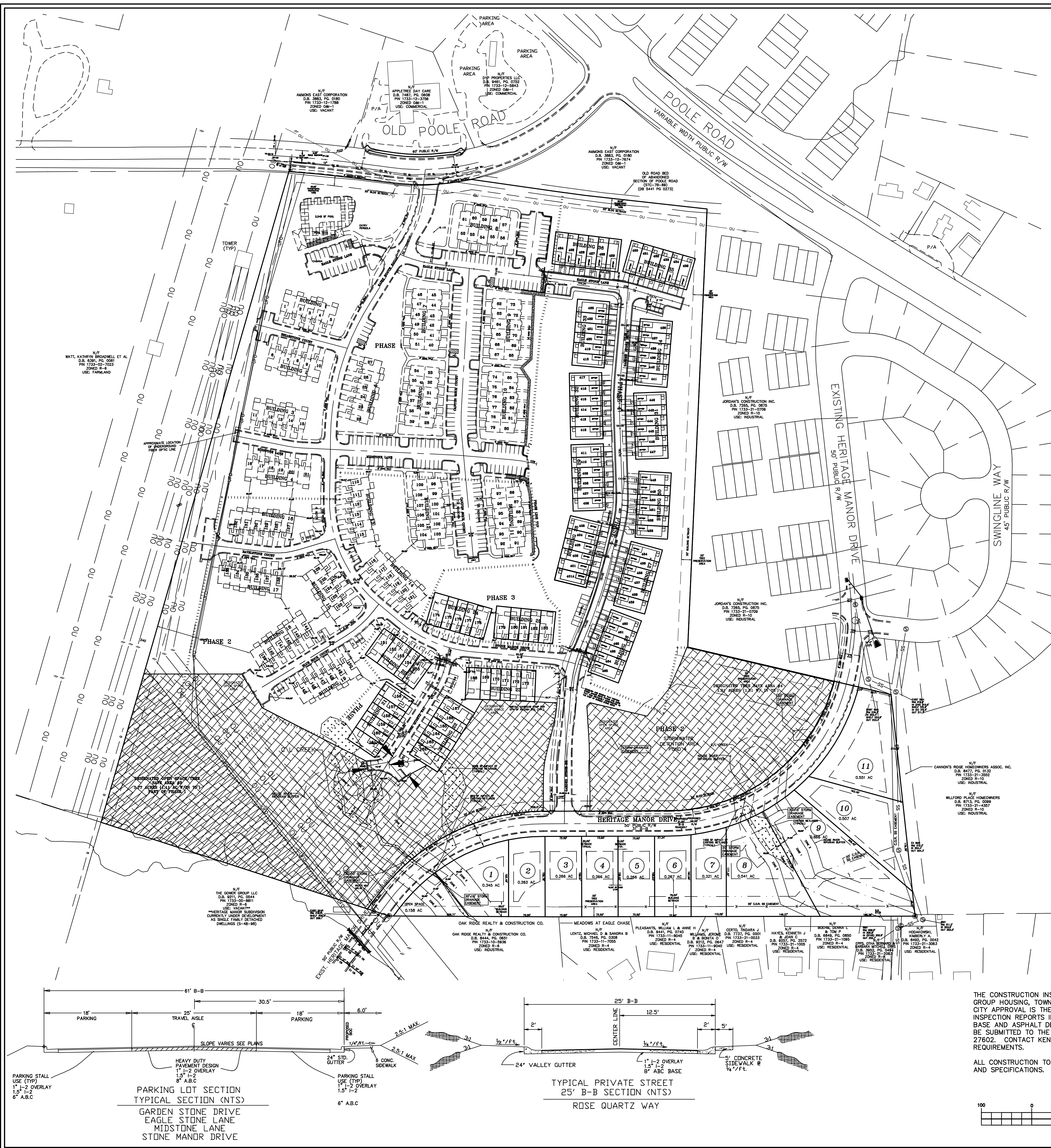
( IN FEET )  
1 inch = 80 ft.

**AIKEN & YELLE ASSOCIATES, PA**  
Professional Engineers & Land Surveyors  
3755 Benson Drive  
Raleigh, North Carolina 27609  
919-877-9992 Fax 919-877-9979  
email: AYES@BELL-SOUTH.NET

DRAWN BY: FMH  
CHECKED BY: HAY  
SCALE: 1"=80'  
DATE: 12/2/15  
REVISONS:  
1-2-15 2-23-16 3-17-16 3-23-16  
3-23-16 5-3-16 5-25-16 6-15-16

**COMPOSITE EXISTING CONDITIONS PLAN**

**PHASES 3 & 4 FIELDSTONE CROSSING CLUSTER UNIT DEVELOPMENT CITY OF RALEIGH, NORTH CAROLINA**



- GENERAL CONSTRUCTION NOTES:
1. ALL CONSTRUCTION SHALL CONFORM TO ALL CURRENT CITY OF RALEIGH AND NCDOT STANDARD DETAILS AND SPECIFICATIONS.
  2. THE TOPOGRAPHY AND BOUNDARY SHOWN HERE ON WAS PROVIDED BY JOHN R. MACDAMAS COMPANY INC. IN A SURVEY TITLED "PROPERTY OF B.A. ANTONIO TRUST - BOUNDARY SURVEY" DATED 11-08-02. AVENUE AND YELLE ASSOCIATES, PA ASSUMES NO RESPONSIBILITY FOR ACCURACY OF BOUNDARY, TOPOGRAPHY AND PHYSICALLY LOCATED FEATURES.
  3. ANY DISTURBANCE OF MORE THAN 12,000 SF REQUIRES THE ISSUANCE OF A GRADING PERMIT BY THE CITY OF RALEIGH INSPECTIONS DEPARTMENT.
  4. ANY ROADWAY CROSSING OR ENCROACHMENT INTO THE NEUSE RIVER RIPARIAN BUFFER WILL REQUIRE PERMITTING BY NC DWR.
  5. ANY DISTURBANCE OF MORE THAN 0.10 AC OF WETLANDS WILL REQUIRE ISSUANCE OF A NATION WIDE 39 PERMIT BY THE US ARMY CORP. OF ENGINEERS.
  6. A COMPLETE COORDINATE LISTING AND AUTOCAD RELEASE 14 DRAWING FILE ARE AVAILABLE UPON REQUEST FROM THIS FIRM.
  7. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES. CONTACT ULOC AT 1-800-632-4949 FOR FIELD LOCATION OF UNDERGROUND UTILITIES.
  8. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES. IF DISCREPANCIES ARE FOUND CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
  9. ALL CURB AND GUTTER SHOWN ON SITE IS STANDARD 24" CURB AND GUTTER, WITH THE EXCEPTION OF STONE MANOR DRIVE, BIRMGARSTON COURT, GARDEN STONE DRIVE AND THE WESTERN PORTION OF MIDSTONE DRIVE WHICH SHALL BE 24" VALLEY GUTTER. ALL GUTTER SHOWN WITHIN RIGHT-OF-WAY SHALL BE STANDARD 30" CURB AND GUTTER. REFER TO SECTION DETAILS ON SHEET 2.
  10. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, UNLESS OTHERWISE STATED ON PLANS.
  11. ALL PAVEMENT ON SITE SHALL BE IN ACCORDANCE WITH SECTION DETAILS ON SHEET 2.
  12. THE SLOPE OF HANDICAP PARKING SPACES SHALL NOT EXCEED 1/4" PER FOOT. THE LATERAL SLOPE OF SIDEWALK SHALL NOT EXCEED 2%.
  13. UNLESS OTHERWISE NOTED ALL PROPOSED SPOT ELEVATIONS ARE TOP OF ASPHALT OR FINISHED FLOOR. ELEVATIONS SHALL BE IN ACCORDANCE WITH SECTION 2.14. REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND FEATURES.
  15. REFER TO PLUMBING PLANS FOR LOCATION OF UTILITY CONNECTIONS TO BUILDING.
  16. ALL SANITARY SEWER SLOPES AND PIPE LENGTHS ARE COMPUTED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
  17. CONSTRUCT ALL SANITARY SEWER MANHOLES FLUSH TO FINAL PAVEMENT GRADE OR AS SHOWN IN NON-PAVED AREAS.
  18. SEWER LATERALS TO BE PLACED AT A MINIMUM SLOPE OF 1% ON 4" LINES AND 0.5% ON 6" LINES. CLEANOUTS SHALL BE PLACED AT 50' INTERVALS AND AT BEND POINTS. ALL CLEANOUTS IN PAVED AREAS SHALL BE APPROVED LOAD BEARING TYPE.
  19. WATER MAINS SHALL HAVE A MINIMUM 3' OF COVER.
  20. CONSTRUCT ALL FIRE HYDRANTS WITH BASE FLANGE SIX INCHES ABOVE FINAL GRADE.
  21. THE CONTRACTOR IS RESPONSIBLE FOR INSURING POSITIVE DRAINAGE TO ALL STORM STRUCTURES.
  22. ALL STORM WATER CONTROL MEASURES AND BMP MEASURES SHOWN HEREON SHALL BE CONSTRUCTED IN ACCORDANCE WITH NCDWR AND CITY OF RALEIGH STANDARD SPECIFICATION AND DETAILS.
  23. SEED ALL AREAS DISTURBED BY CONSTRUCTION, AND NOT INDICATED TO BE PAVED OR PLANTED, UPON COMPLETION OF GRADING ACTIVITIES. USE REBEL 3 FESCUE IN ACCORDANCE WITH SEEDING SCHEDULE ON DETAIL SHEETS.
  24. CONTRACTOR SHALL CLEAR AND GRUB ENTIRE R/W WITHIN 100' OF ALL INTERSECTIONS.
  25. THE CONSTRUCTION INSPECTION OF PRIVATE STREETS WITHIN CLUSTER UNITS, CONDOMINIUMS, GROUP HOUSING, TOWNHOUSE DEVELOPMENTS AND MOBILE HOME PARKS SUBMITTED FOR CITY APPROVAL IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER. COPIES OF CERTIFIED INSPECTION REPORTS INVOLVING SUBGRADE/AGGREGATE BASE PROFILES, AGGREGATE BASE AND ASPHALT DENSITIES AND THICKNESS, AND OTHER PERTINENT INFORMATION MUST BE SUBMITTED TO THE CITY ENGINEERING INSPECTIONS COORDINATOR AT 400 W. PEACE ST., RALEIGH, NC 27602. CONTACT TOM HIGGINS AT 919-996-8814 TO OBTAIN DETAILS OF THE ABOVE REQUIREMENTS.
  - IMPORTANT NOTE: PERMITS FOR THE REMAINING 25% OF THE BUILDINGS WITHIN A DEVELOPMENT WILL NOT BE ISSUED UNTIL THE ABOVE REQUIREMENTS HAVE BEEN MET AND A LETTER OF ACCEPTANCE ISSUED.

- GENERAL SITE NOTES:
1. ALL STREETS WITHIN THIS PHASE OF THIS DEVELOPMENT SHALL BE PRIVATE.
  2. TRASH & RECYCLABLE PICKUP FOR THIS PHASE OF THIS DEVELOPMENT SHALL BE PROVIDED BY THE CITY OF RALEIGH SOLID WASTE DEPARTMENT.
  3. NOT USED.
  4. LESS THAN 0.10 ACRE OF WETLAND DISTURBANCE WILL BE REQUIRED TO CONSTRUCT THIS PROJECT, THEREFORE CORP. OF ENGINEER PERMITS SHALL NOT BE REQUIRED.
  5. THE WATER SYSTEM SERVING TOWNHOMES SHALL BE PRIVATE AND SHALL BE MAINTAINED BY HOME OWNERS ASSOCIATION.
  6. THE 8" SEWER MAINS, SHOWN HERE ON, SHALL BE PRIVATE AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION WITH THE EXCEPTION OF OUTFALL 1 CONNECTING TO EXISTING SANITARY SEWER LOCATED ON THE SOUTHEASTERN PROPERTY LINE.
  7. ALL 8" SEWER MAINS, SHOWN HERE ON, SHALL BE PRIVATE AND TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
  8. ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH CONDITIONAL USE SET FORTH IN APPROVED RE-ZONING CASE Z-75-01 AND APPROVED PRELIMINARY SUBDIVISION PLAN (S-08-003).
  9. THIS DEVELOPMENT WILL PROVIDE A MINIMUM OF 2 ACCESS POINTS WHEN 150 UNITS HAVE BEEN PERMITTED.
  10. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT CITY OF RALEIGH AND NCDOT STANDARD DETAILS AND SPECIFICATIONS.
  11. WITHIN SIGHT TRIANGLES SHOWN ON THESE PLANS, NO OBSTRUCTION BETWEEN 2' AND 8' ABOVE CURB LINE ELEVATION SHALL BE LOCATED IN WHOLE OR PART. OBSTRUCTIONS INCLUDE, BUT ARE NOT LIMITED TO ANY BERM, FOLIAGE, FENCE, WALL SIGN, PARKED VEHICLE OR OTHER OBJECT.
  12. MINIMUM CORNER CLEARANCE FROM THE CURB LINE OF INTERSECTING STREETS SHALL BE AT LEAST 20' FROM THE POINT OF TANGENCY OF THE CURB. ON THIS MINIMUM CORNER CLEARANCE.

CENTERLINE CURVE TABLE PHASE 2 - 3

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORDSD
CL C1	129.69	300.00	24°46'11"	65.88	119°31'53"	128.89
CL C2	99.36	512.50	11°08'28"	49.83	526°21'44"	99.20
CL C3	177.53	512.50	19°30'49"	89.66	510°25'06"	176.64
CL C4	234.72	262.50	31°30'01"	125.48	524°35'17"	226.44
CL C5	181.07	262.50	30°39'29"	83.16	587°33'04"	158.55
CL C6	46.24	200.00	13°14'44"	23.22	178°40'23"	46.13
CL C7	31.16	22.50	78°21'26"	16.67	371°35'41"	28.73
CL C8	38.84	277.56	12°04'47"	29.53	574°00'01"	38.73
CL C9	46.84	312.50	08°35'17"	23.46	501°06'14"	46.80
CL C10	30.30	200.00	08°40'52"	15.18	583°01'25"	30.27
CL C11	11.50	300.00	02°11'46"	3.78	188°15'57"	11.50
CL C12	34.86	300.00	06°39'30"	17.45	181°50'17"	34.84
CL C13	221.16	2684.35	04°42'11"	110.64	184°26'18"	221.10
CL C14	157.69	458.37	19°44'09"	79.73	188°02'43"	157.11
CL C15	20.23	458.37	02°01'50"	10.13	176°34'42"	20.23
CL C16	62.38	150.00	23°48'42"	31.68	185°17'57"	61.93
CL C17	87.80	300.00	16°46'04"	44.21	515°04'39"	87.48
CL C18	14.93	262.50	03°15'41"	7.48	104°17'45"	14.95
CL C19	95.95	930.05	05°54'40"	48.02	503°16'58"	95.91
CL C20	354.84	384.50	52°33'28"	191.25	563°26'16"	342.47
CL C21	474.89	442.50	74°26'36"	277.65	152°39'41"	442.16
CL C22	174.74	1036.50	09°39'31"	87.28	181°17'04"	174.21
CL C23	38.83	630.50	03°31'44"	19.42	504°55'45"	38.83
CL C24	71.26	200.00	20°24'52"	36.01	148°16'26"	70.88
CL C25	38.01	142.50	15°16'54"	19.12	125°07'09"	37.89

CURVE TABLE PHASE 3 - 4

CURVE	LENGTH	RADIUS	DELTA	TAN.	CHD	CHD BRG
C26	31.33	200.00	09°38'35"	15.70	187°27'23"	31.30
C27	62.38	536.50	06°39'44"	31.23	501°30'06"	62.35
C28	68.21	250.00	15°37'54"	34.32	105°59'11"	68.00
C29	15.57	300.00	02°38'53"	7.79	177°01'21"	15.57
C30	103.80	350.00	16°39'42"	52.28	584°01'56"	103.42

SITE DATA TABLE

OWNER OF RECORD: FIELDSTONE, LLC  
 ADDRESS: 1516 JABEZ RUN MILLERSVILLE, MD 21108 (919) 697-0828  
 WAKE COUNTY P.L.N.: PORTION OF 1733-11-5787  
 ZONING: R-10 (CUD)  
 CURRENT USE: VACANT  
 INSIDE CITY LIMITS? YES  
 INSIDE FLOOD HAZARD AREA? NO  
 IN NEUSE RIVER BASIN? YES  
 TOTAL TRACT AREA: 37.384 AC  
 - PHASE 1 TRACT AREA: 10.664 AC  
 - PHASE 2 TRACT AREA: 14.166 AC  
 - PHASE 3 TRACT AREA: 5.353 AC  
 - PHASE 4 TRACT AREA: 6.751 AC

PHASE 4 UNITS COUNT  
 PHASE 4 TRACT AREA: 6.751 ACRES (GROSS)  
 MULTI-FAMILY USE: 6.751 ACRES  
 TRACT AREA: 6.751 ACRES  
 R/W DEDICATION: 0.000 ACRES  
 NET LOT AREA: 6.751 ACRES  
 PROPOSED DWELLING UNITS: 66 TOWNHOMES

MAXIMUM BUILDING HEIGHT: ±38' FOR ALL TOWNHOME UNITS  
 OPEN SPACE DATA ALL PHASES

OPEN SPACE REQUIRED:  
 SINGLE FAMILY: 4.628 AC  
 NET TRACT AREA: 4.628 AC  
 OPEN SPACE (CUD) REQUIRED = 4.628 X 10% = 0.46 ACRES

TOWNHOME:  
 NET TRACT AREA: 31.474 AC  
 TREE SAVE/OPEN SPACE ROD. = 31.474 X 12% = 3.78 ACRES  
 TOTAL OPEN SPACE REQUIRED: 3.78 ACRES  
 NET TRACT AREA AFTER R/W DEDICATION: 4.24 ACRES  
 TOTAL TREE SAVE REQUIRED: 3.78 ACRES  
 OPEN SPACE PROVIDED: 5.339 AC  
 DESIGNATED OPEN SPACE: 2497 FT  
 PERIMETER OF OPEN SPACE: 2497 FT  
 TREE SAVE AREA PROVIDED: AREA WITHIN 75'

AREA: TOTAL SIZE: PERIPHERAL BOUNDARY  
 1 0.76 AC 0.33 AC  
 2 0.83 AC 0.19 AC  
 3 1.77 AC 1.11 AC  
 4 1.01 AC 1.01 AC  
 5 4.37 AC 2.64 AC

TOTALS: 4.37 AC 2.64 AC  
 OPEN SPACE QUOTIENT: = (5.339 x 43560)/(2497x4) = 372.55  
 PROPOSED UNITS & DENSITY:  
 SINGLE FAMILY: 0 UNITS / 0 ACRES  
 TOWNHOME: 66 UNITS / 31.474 AC  
 R/W DEDICATION = 0.641 AC  
 NET TRACT AREA AFTER R/W DEDICATION = 4.628 AC  
 PROPOSED DWELLING UNITS: 11 SINGLE FAMILY  
 PROPOSED DENSITY = 11 DU/5.269 AC = 2.1 DU/ACRE  
 TOWNHOME:  
 TOTAL TRACT AREA = 32.115 AC  
 R/W DEDICATION = 0.641 AC  
 NET TRACT AREA AFTER R/W DEDICATION = 31.474 AC  
 PROPOSED DWELLING UNITS: 249 TOWNHOMES  
 PROPOSED DENSITY = 249 DU/32.115 AC = 7.75 DU/AC  
 TOTAL DWELLING UNITS = 11 + 249 = 260  
 PROPOSED TOTAL DENSITY = 260/37.384 AC = 6.95  
 ALLOWABLE TOTAL DENSITY = 10 DU/AC

REQUIRED PARKING CALCULATIONS

REQUIRED PARKING TOWNHOMES:	ALL PHASES	PHASE 4
249 3 BDRM DU's x 2.5 SP/DU	623 SPACES	165 SPACES
REQUIRED PARKING SINGLE FAMILY:	0 SPACES	0 SPACES
REQUIRED PARKING POOL AREA:		
PARKING REQUIRED FOR UNITS WITHIN 400' OF POOL:		
= 73 UNITS x 2.5 SPACES/UNIT = 183 SPACES		
RATIO OF PARKING WITHIN 400' RADIUS TO TOTAL REQUIREMENTS FOR SITE:		
= 183 SPACES/723 SPACES = 0.25% (25% REDUCTION ALLOWABLE)		
POOL PARKING REQUIRED:		
2053 SP. POOL / 100 = 27 - (27x0.25) = 20 SPACES	0 SPACES	
TOTAL REQUIRED PARKING PRIOR TO REDUCTION:	643 SPACES	165 SPACES
PARKING REDUCTION PER SECTION 10.2082.6C.6:		
= 643 SPACES x 10% REDUCTION	64 SPACES	16 SPACES
TOTAL REQUIRED PARKING AFTER REDUCTION:	579 SPACES	149 SPACES
PARKING PROVIDED:		
DRIVEWAY SPACES	167 SPACES	66 SPACES
GARAGE SPACES	167 SPACES	66 SPACES
GENERAL PARKING AREA	261 SPACES	17 SPACES
POOL PARKING PROVIDED:	20 SPACES	0 SPACES
TOTAL PARKING PROVIDED:	615 SPACES	149 SPACES

Alken & Yelle Associates, PA  
 Professional Engineers & Land Surveyors  
 3765 Benson Drive  
 Raleigh, North Carolina 27609  
 919-877-9992 Fax 919-877-9979  
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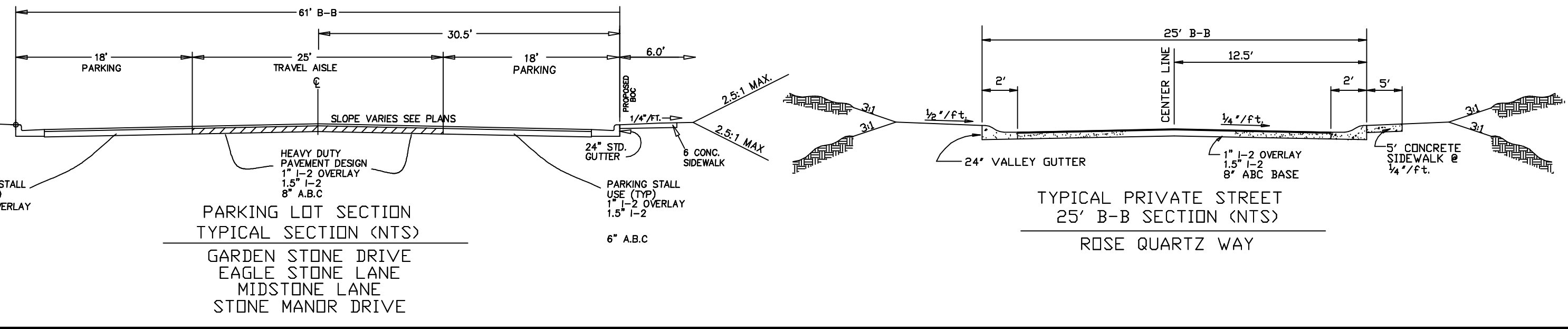
AYES

DRAWN BY: FMH  
 CHECKED BY: HAY  
 SCALE: 1"=400'  
 DATE: 12/2/15  
 REVISED: 12-18-15 2-23-16 3-17-16 3-23-16 11-19-16 12-17-16 6-28-16 8-23-16

OVERALL SITE LAYOUT PLAN  
 CLUSTER UNIT DEVELOPMENT  
 SUBDIVISION PLAN  
 CITY OF RALEIGH, NORTH CAROLINA

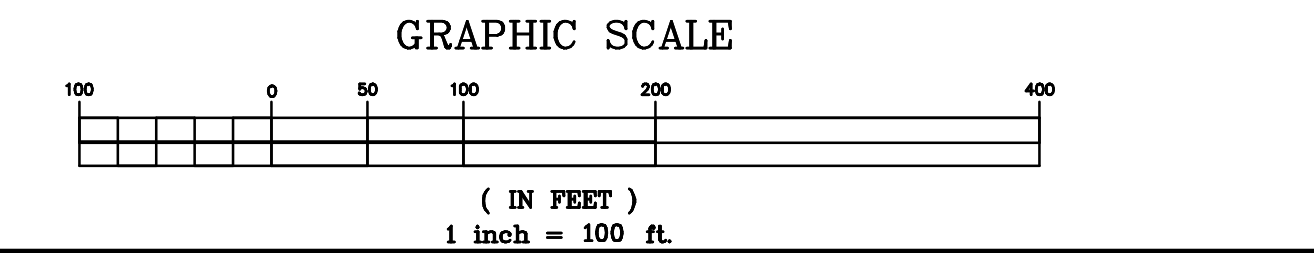
PHASES 3 & 4 FIELDSTONE CROSSING  
 CLUSTER UNIT DEVELOPMENT  
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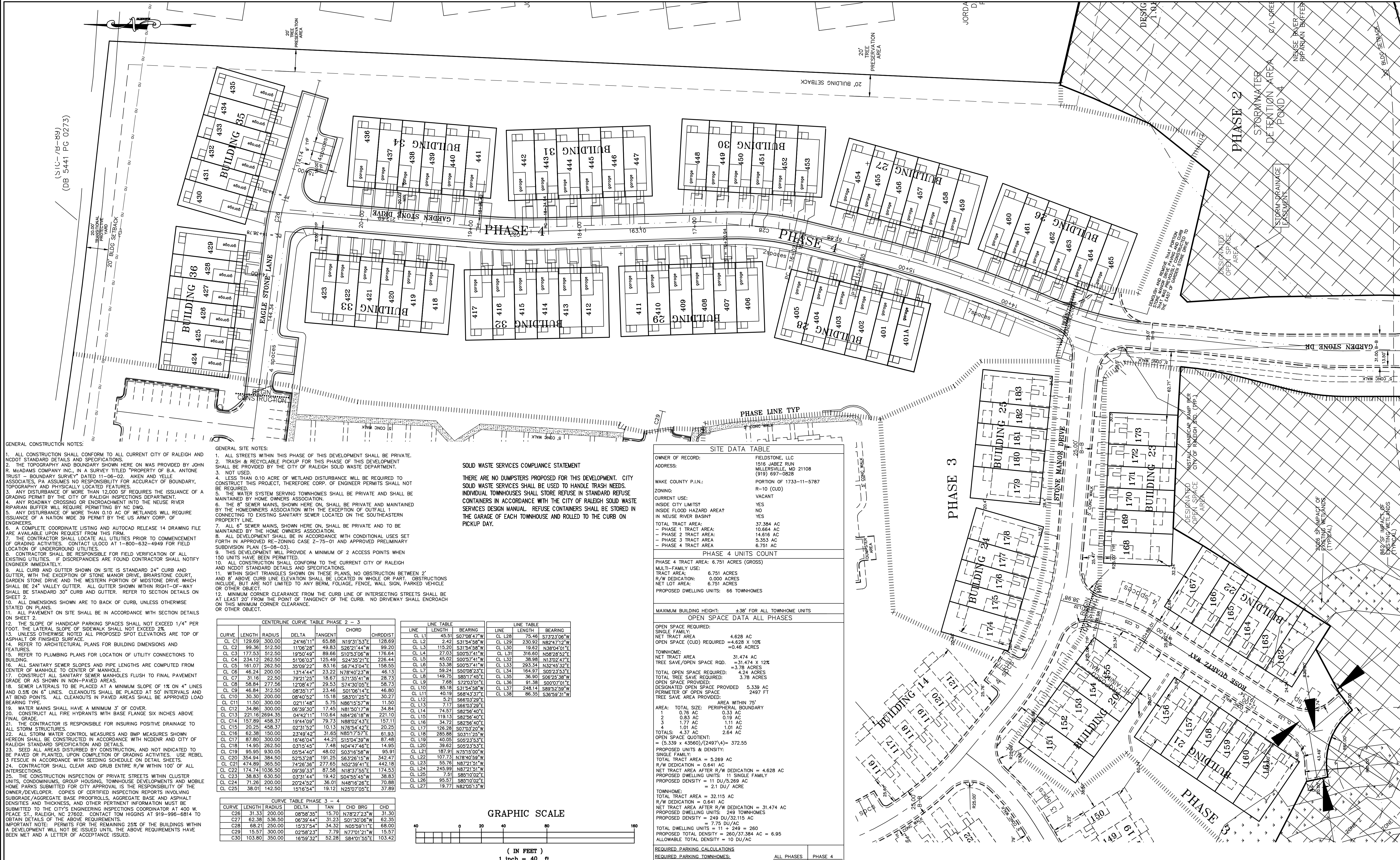
PROFESSIONAL SEAL  
 24951  
 HAROLD A. YELLE  
 1-25-17



THE CONSTRUCTION INSPECTION OF PRIVATE STREETS WITHIN CLUSTER UNITS, CONDOMINIUMS, GROUP HOUSING, TOWNHOUSE DEVELOPMENTS AND MOBILE HOME PARKS SUBMITTED FOR CITY APPROVAL IS THE RESPONSIBILITY OF THE OWNER / DEVELOPER. COPIES OF CERTIFIED INSPECTION REPORTS INVOLVING SUBGRADE/AGGREGATE BASE PROFILES, AGGREGATE BASE AND ASPHALT DENSITIES AND THICKNESS AND OTHER PERTINENT INFORMATION MUST BE SUBMITTED TO THE CITY ENGINEERS INSPECTIONS MANAGER AT PO BOX 590, RALEIGH, NC 27602. CONTACT KENNETH RITCHIE AT 919-996-2409 TO OBTAIN DETAILS OF THE ABOVE REQUIREMENTS.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF RALEIGH AND NCDOT STANDARDS AND SPECIFICATIONS.





**GENERAL CONSTRUCTION NOTES:**

1. ALL CONSTRUCTION SHALL CONFORM TO ALL CURRENT CITY OF RALEIGH AND NC DOT STANDARD DETAILS AND SPECIFICATIONS.
2. THE TOPOGRAPHY AND BOUNDARY SHOWN HERE ON WAS PROVIDED BY JOHN R. McADAMS COMPANY, INC., IN A SURVEY TITLED "PROPERTY OF B.A. ANTOINE TRUST BOUNDARY SURVEY" DATED 11-26-02. AIKEN AND YELLE ASSOCIATES, PA ASSUMES NO RESPONSIBILITY FOR ACCURACY OF BOUNDARY, TOPOGRAPHY AND PHYSICALLY LOCATED FEATURES.
3. ANY DISTURBANCE OF MORE THAN 12,000 SF REQUIRES THE ISSUANCE OF A GRADING PERMIT BY THE CITY OF RALEIGH INSPECTIONS DEPARTMENT.
4. ANY ROADWAY CROSSING OR ENCROACHMENT INTO THE NEUSE RIVER RIPARIAN BUFFER WILL REQUIRE PERMITTING BY NC DWM.
5. ANY DISTURBANCE OF MORE THAN 0.10 AC OF WETLANDS WILL REQUIRE ISSUANCE OF A NATION WIDE 39 PERMIT BY THE US ARMY CORP. OF ENGINEERS.
6. A COMPLETE COORDINATE LISTING AND AUTOCAD RELEASE 14 DRAWING FILE ARE AVAILABLE UPON REQUEST FROM THIS FIRM.
7. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES. CONTACT ULCOO AT 1-800-632-4949 FOR FIELD LOCATION OF UNDERGROUND UTILITIES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES. IF DISCREPANCIES ARE FOUND CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
9. ALL CURB AND GUTTER SHOWN ON SITE IS STANDARD 24" CURB AND GUTTER, WITH THE EXCEPTION OF STONE MANOR DRIVE, BRIARSTONE COURT, GARDEN STONE DRIVE AND THE WESTERN PORTION OF MIDSTONE DRIVE WHICH SHALL BE 24" VALLEY GUTTER. ALL GUTTER SHOWN WITH RIGHT-OF-WAY SHALL BE STANDARD 30" CURB AND GUTTER. REFER TO SECTION DETAILS ON SHEET 2.
10. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, UNLESS OTHERWISE STATED ON PLANS.
11. ALL PAVEMENT ON SITE SHALL BE IN ACCORDANCE WITH SECTION DETAILS ON SHEET 2.
12. THE SLOPE OF HANDICAP PARKING SPACES SHALL NOT EXCEED 1/4" PER FOOT. THE LATERAL SLOPE OF SIDEWALK SHALL NOT EXCEED 2%.
13. UNLESS OTHERWISE NOTED ALL PROPOSED SPOTS ARE TOP OF ASPHALT OR FINISHED SURFACE.
14. REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND FEATURES.
15. REFER TO PLUMBING PLANS FOR LOCATION OF UTILITY CONNECTIONS TO BUILDING.
16. ALL SANITARY SEWER SIZES AND PIPE LENGTHS ARE COMPUTED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
17. CONSTRUCT ALL SANITARY SEWER MANHOLES FLUSH TO FINAL PAVEMENT GRADE OR AS SHOWN IN NON-PAVED AREAS.
18. SEWER LATERALS TO BE PLACED AT A MINIMUM SLOPE OF 1% ON 4" LINES AND 0.5% ON 6" LINES. CLEANOUTS SHALL BE PLACED AT 50' INTERVALS AND AT BOND POINTS. ALL CLEANOUTS IN PAVED AREAS SHALL BE APPROVED LOAD BEARING TYPE.
19. WATER MAINS SHALL HAVE A MINIMUM 3" OF COVER.
20. CONSTRUCT ALL FIRE HYDRANTS WITH BASE FLANGE SIX INCHES ABOVE FINAL GRADE.
21. THE CONTRACTOR IS RESPONSIBLE FOR INSURING POSITIVE DRAINAGE TO ALL STORM STRUCTURES.
22. ALL STORM WATER CONTROL MEASURES AND BMP MEASURES SHOWN HEREON SHALL BE CONSTRUCTED IN ACCORDANCE WITH NC DENR AND CITY OF RALEIGH STANDARD SPECIFICATION AND DETAILS.
23. SEED ALL AREAS DISTURBED BY CONSTRUCTION, AND NOT INDICATED TO BE PAVED OR PLANTED, UPON COMPLETION OF GRADING ACTIVITIES. USE REBEL 3 FESCUE IN ACCORDANCE WITH SEEDING SCHEDULE ON DETAIL SHEETS.
24. CONTRACTOR SHALL CLEAR AND GRUB ENTIRE R/W WITHIN 100' OF ALL INTERSECTIONS.
25. THE CONSTRUCTION INSPECTION OF PRIVATE STREETS WITH CLUSTER UNITS, CONDOMINIUMS, GROUP HOUSING, TOWNHOUSE DEVELOPMENTS AND MOBILE HOME PARKS SUBMITTED FOR CITY APPROVAL IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER. COPIES OF CERTIFIED INSPECTION REPORTS INVOLVING SUBGRADE/AGGREGATE BASE PROOF ROLLS, AGGREGATE BASE AND ASPHALT DENSITIES AND THICKNESS AND OTHER PERTINENT INFORMATION MUST BE SUBMITTED TO THE CITY ENGINEERS INSPECTIONS MANAGER AT PO BOX 590, RALEIGH, NC 27602. CONTACT TOM HIGGINS AT 919-996-6814 TO OBTAIN DETAILS OF THE ABOVE REQUIREMENTS.
- IMPORTANT NOTE: PERMITS FOR THE REMAINING 25% OF THE BUILDINGS WITHIN A DEVELOPMENT WILL NOT BE ISSUED UNTIL THE ABOVE REQUIREMENTS HAVE BEEN MET AND A LETTER OF ACCEPTANCE ISSUED.

**GENERAL SITE NOTES:**

1. ALL STREETS WITHIN THIS PHASE OF THIS DEVELOPMENT SHALL BE PRIVATE.
2. TRASH & RECYCLABLE PICKUP FOR THIS PHASE OF THIS DEVELOPMENT SHALL BE PROVIDED BY THE CITY OF RALEIGH SOLID WASTE DEPARTMENT.
3. NOT USED.
4. LESS THAN 0.10 ACRE OF WETLAND DISTURBANCE WILL BE REQUIRED TO CONSTRUCT THIS PROJECT. THEREFORE CORP. OF ENGINEER PERMITS SHALL NOT BE REQUIRED.
5. THE WATER SYSTEM SERVING TOWNHOMES SHALL BE PRIVATE AND SHALL BE MAINTAINED BY HOME OWNERS ASSOCIATION.
6. THE 8" SEWER MAINS, SHOWN HERE ON, SHALL BE PRIVATE AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION WITH THE EXCEPTION OF GUT ALL 1" CONNECTING TO EXISTING SANITARY SEWER LOCATED ON THE SOUTHEASTERN PROPERTY LINE.
7. ALL 8" SEWER MAINS, SHOWN HERE ON, SHALL BE PRIVATE AND TO BE MAINTAINED BY THE HOME OWNERS ASSOCIATION.
8. ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH CONDITIONAL USES SET FORTH IN APPROVED ZONING CASE 2-75-01 AND APPROVED PRELIMINARY SUBDIVISION PLAN (S-08-03).
9. THIS DEVELOPMENT WILL PROVIDE A MINIMUM OF 2 ACCESS POINTS WHEN 150 UNITS HAVE BEEN PROVIDED.
10. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT CITY OF RALEIGH AND NC DOT STANDARD DETAILS AND SPECIFICATIONS.
11. WITHIN SIGHT TRIANGLES SHOWN ON THESE PLANS, NO OBSTRUCTION BETWEEN 2' AND 8' ABOVE CURB LINE ELEVATION SHALL BE LOCATED IN WHOLE OR PART. OBSTRUCTIONS INCLUDE, BUT ARE NOT LIMITED TO ANY BERM, FOLIAGE, FENCE, WALL SIGN, PARKED VEHICLE OR OTHER OBJECT.
12. MINIMUM CORNER CLEARANCE FROM THE CURB LINE OF INTERSECTING STREETS SHALL BE AT LEAST 20' FROM THE POINT OF TANGENCY OF THE CURB. NO DRIVEWAY SHALL ENCRUSH ON THIS MINIMUM CORNER CLEARANCE.
- OR OTHER OBJECT.

**SOLID WASTE SERVICES COMPLIANCE STATEMENT**

THERE ARE NO DUMPSTERS PROPOSED FOR THIS DEVELOPMENT. CITY SOLID WASTE SERVICES SHALL BE USED TO HANDLE TRASH NEEDS. INDIVIDUAL TOWNHOUSES SHALL STORE REFUSE IN STANDARD REFUSE CONTAINERS IN ACCORDANCE WITH THE CITY OF RALEIGH SOLID WASTE SERVICES DESIGN MANUAL. REFUSE CONTAINERS SHALL BE STORED IN THE GARAGE OF EACH TOWNHOUSE AND ROLLED TO THE CURB ON PICKUP DAY.

**SITE DATA TABLE**

OWNER OF RECORD: FIELDSTONE, LLC  
 ADDRESS: 1516 JABEZ RUN MILLERSVILLE, MD 21108 (915) 697-0828  
 WAKE COUNTY P.L.N.: PORTION OF 1733-11-5787  
 ZONING: R-10 (CUD)  
 CURRENT USE: VACANT  
 INSIDE CITY LIMITS? YES  
 INSIDE FLOOD HAZARD AREA? NO  
 IN NEUSE RIVER BASIN? YES  
 TOTAL TRACT AREA: 37.394 AC  
 - PHASE 1 TRACT AREA: 10.664 AC  
 - PHASE 2 TRACT AREA: 14.816 AC  
 - PHASE 3 TRACT AREA: 5.353 AC  
 - PHASE 4 TRACT AREA: 6.751 AC

**PHASE 4 UNITS COUNT**

PHASE 4 TRACT AREA: 6.751 ACRES (GROSS)  
 MULTI-FAMILY USE:  
 TRACT AREA: 6.751 ACRES  
 R/W DEDICATION: 0.000 ACRES  
 NET LOT AREA: 6.751 ACRES  
 PROPOSED DWELLING UNITS: 66 TOWNHOMES

**MAXIMUM BUILDING HEIGHT: #38' FOR ALL TOWNHOME UNITS**

**OPEN SPACE DATA ALL PHASES**

OPEN SPACE REQUIRED:  
 SINGLE FAMILY: 4.628 AC  
 NET TRACT AREA: 4.628 AC  
 OPEN SPACE (CUD) REQUIRED = 4.628 X 10% = 0.463 ACRES  
 TOWNHOME:  
 NET TRACT AREA: 31.474 AC  
 TREE SAVE/OPEN SPACE REQ. = 31.474 X 12% = 3.78 ACRES  
 TOTAL OPEN SPACE REQUIRED: 4.215 ACRES  
 TOTAL TREE SAVE REQUIRED: 3.78 ACRES  
 OPEN SPACE PROVIDED: 5.339 ACRES  
 DESIGNATED OPEN SPACE PROVIDED: 5.339 ACRES  
 PERIMETER OF OPEN SPACE: 2497 FT  
 TREE SAVE AREA PROVIDED:  
 AREA WITHIN 75' PERIPHERAL BOUNDARY:  
 2 0.83 AC  
 3 1.77 AC  
 4 1.01 AC  
 TOTALS: 3.61 AC

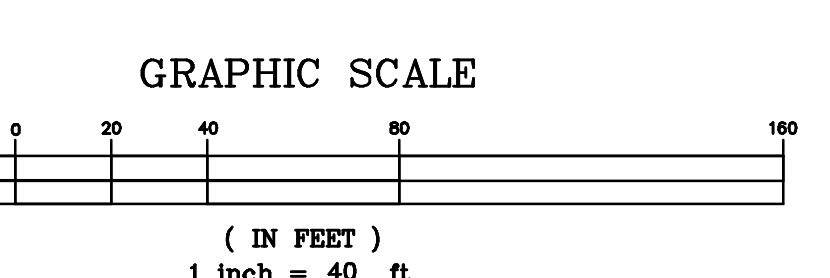
OPEN SPACE QUOTIENT:  
 = (5.339 x 43560) / (2497 x 4) = 372.55  
 PROPOSED UNITS & DENSITY:  
 SINGLE FAMILY:  
 TOTAL TRACT AREA = 5.269 AC  
 R/W DEDICATION = 0.641 AC  
 NET TRACT AREA AFTER R/W DEDICATION = 31.474 AC  
 NET TRACT AREA AFTER R/W DEDICATION = 4.628 AC  
 PROPOSED DWELLING UNITS: 11 SINGLE FAMILY  
 PROPOSED DENSITY = 11 DU/5.269 AC = 2.1 DU/AC  
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 PROPOSED DENSITY = 249 DU/32.115 AC = 7.75 DU/AC  
 TOTAL DWELLING UNITS = 11 + 249 = 260  
 PROPOSED TOTAL DENSITY = 260/37.394 AC = 6.95  
 ALLOWABLE TOTAL DENSITY = 10 DU/AC

**CENTERLINE CURVE TABLE PHASE 2 - 3**

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIST
CL C1	128.69	350.00	24°48'11"	65.88	N19°31'53.71"	128.69
CL C2	98.36	512.00	11°42'00"	49.83	S28°21'44.47"	89.20
CL C3	177.53	512.00	19°50'49"	89.66	S10°53'06.76"	176.64
CL C4	234.12	262.50	51°06'03"	125.49	S24°35'21.21"	226.44
CL C5	161.07	262.50	35°08'22"	83.16	S8°24'33.04"	158.55
CL C6	46.24	200.00	13°14'44"	23.22	N78°40'37.74"	46.13
CL C7	31.16	22.50	79°21'25"	18.67	S71°35'41.71"	28.73
CL C8	58.84	277.56	12°08'47"	29.53	S74°30'05.71"	58.73
CL C9	46.84	312.50	08°55'17"	23.46	S01°08'14.71"	46.80
CL C10	30.30	200.00	08°40'52"	15.18	S83°01'22.71"	30.27
CL C11	11.50	300.00	02°11'48"	5.75	N86°15'57.71"	11.50
CL C12	34.86	300.00	06°39'30"	17.45	N81°50'17.71"	34.84
CL C13	221.16	2684.35	04°42'11"	110.64	N84°26'18.71"	221.10
CL C14	157.89	458.37	19°44'09"	79.73	N88°02'43.71"	157.11
CL C15	20.25	458.37	02°31'52"	10.13	N76°54'42.71"	20.25
CL C16	62.38	150.00	23°49'42"	31.65	N85°17'57.71"	61.93
CL C17	87.80	350.00	16°46'04"	44.21	S19°04'59.71"	87.48
CL C18	14.95	262.50	03°15'45"	7.48	N84°47'46.71"	14.85
CL C19	95.95	930.05	05°54'40"	48.02	S03°16'58.71"	95.91
CL C20	354.94	384.50	52°33'28"	191.25	S63°26'15.71"	342.47
CL C21	474.89	365.50	74°26'36"	277.65	N52°39'41.71"	442.18
CL C22	174.74	1036.50	09°39'13"	87.58	N18°37'55.71"	174.53
CL C23	38.83	630.50	03°31'44"	19.42	S04°56'45.71"	38.83
CL C24	71.26	200.00	20°24'52"	36.01	N48°16'26.71"	70.88
CL C25	38.01	142.50	15°16'54"	19.12	N25°07'05.71"	37.89

**CURVE TABLE PHASE 3 - 4**

CURVE	LENGTH	RADIUS	DELTA	TAN	CHD BRG	CHD
C26	31.33	200.00	08°58'35"	15.70	N78°27'23.71"	31.30
C27	62.66	361.50	17°57'10"	31.40	S01°30'06.71"	62.62
C28	68.21	250.00	15°37'54"	34.32	N05°59'11.71"	68.00
C29	15.57	300.00	02°58'23"	7.79	N77°01'21.71"	15.57
C30	103.60	350.00	16°59'32"	52.28	S84°01'55.71"	103.42



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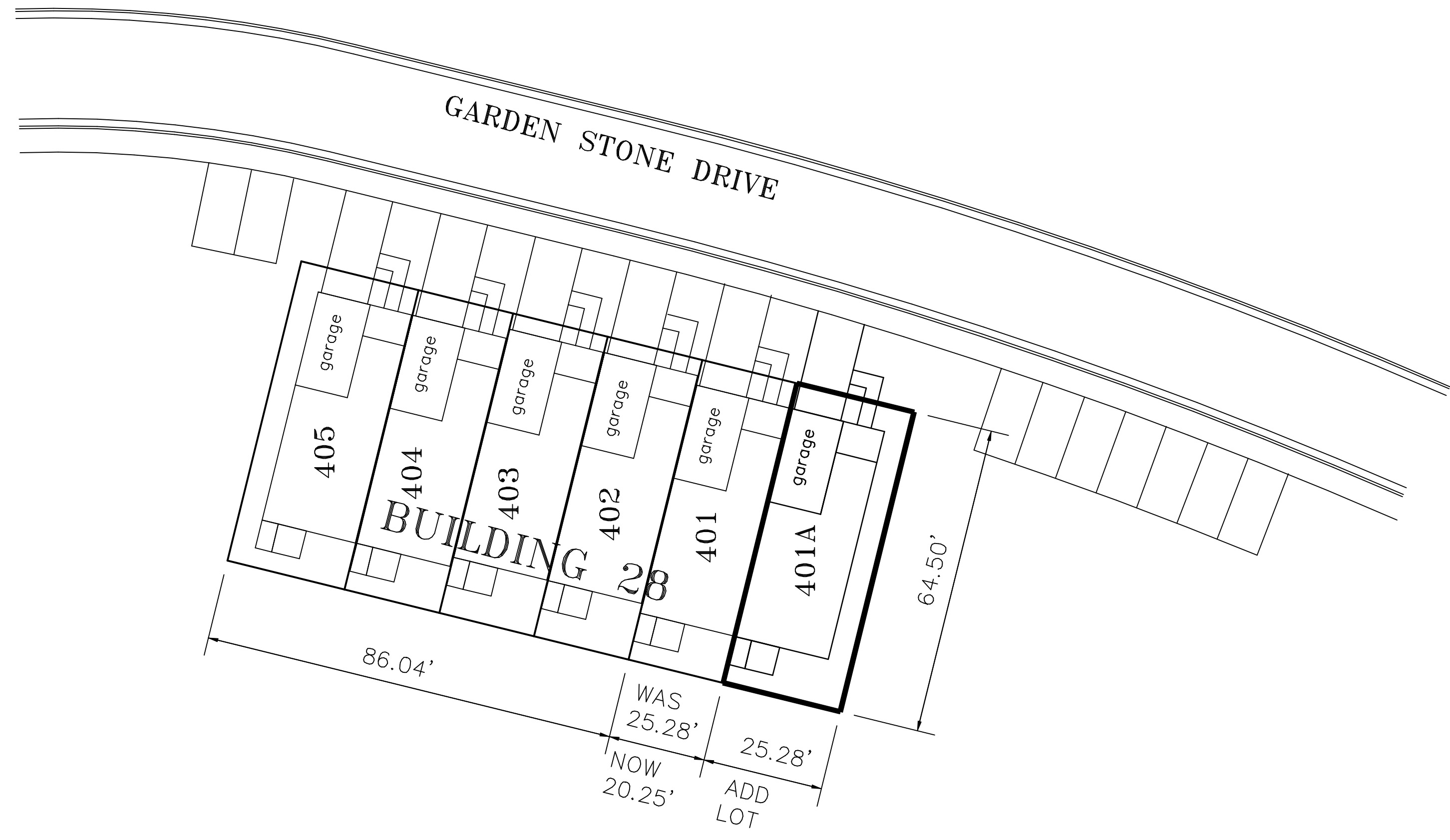
Seal: NORTH CAROLINA PROFESSIONAL ENGINEERS AND SURVEYORS  
 No. 24951  
 HAROLD A. YELLE  
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**AYES**  
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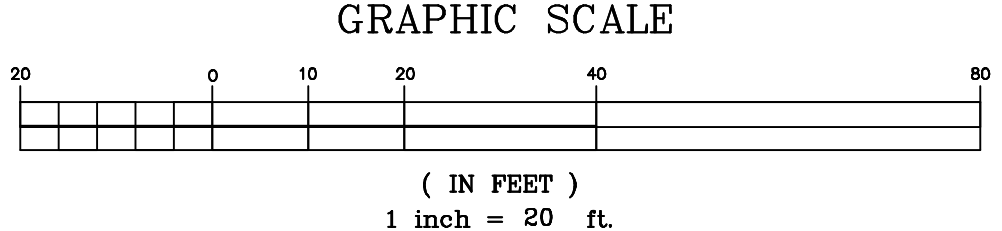
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 CHECKED BY: HAY  
 SCALE: 1"=40'  
 DATE: 12/2/15  
 REVISIONS:  
 1-19-18 2-23-18 3-17-18 3-23-18  
 3-29-18 5-3-18 5-29-18 6-13-18

**ENLARGED SITE LAYOUT PLAN  
 SUBDIVISION PLAN**

**PHASES 3 & 4 FIELDSTONE CROSSING  
 CLUSTER UNIT DEVELOPMENT  
 CITY OF RALEIGH, NORTH CAROLINA**



*Harold A. Yelle II*  
1-25-17



PHASES 3 & 4 FIELDSTONE CROSSING  
CLUSTER UNIT DEVELOPMENT  
CITY OF RALEIGH, NORTH CAROLINA

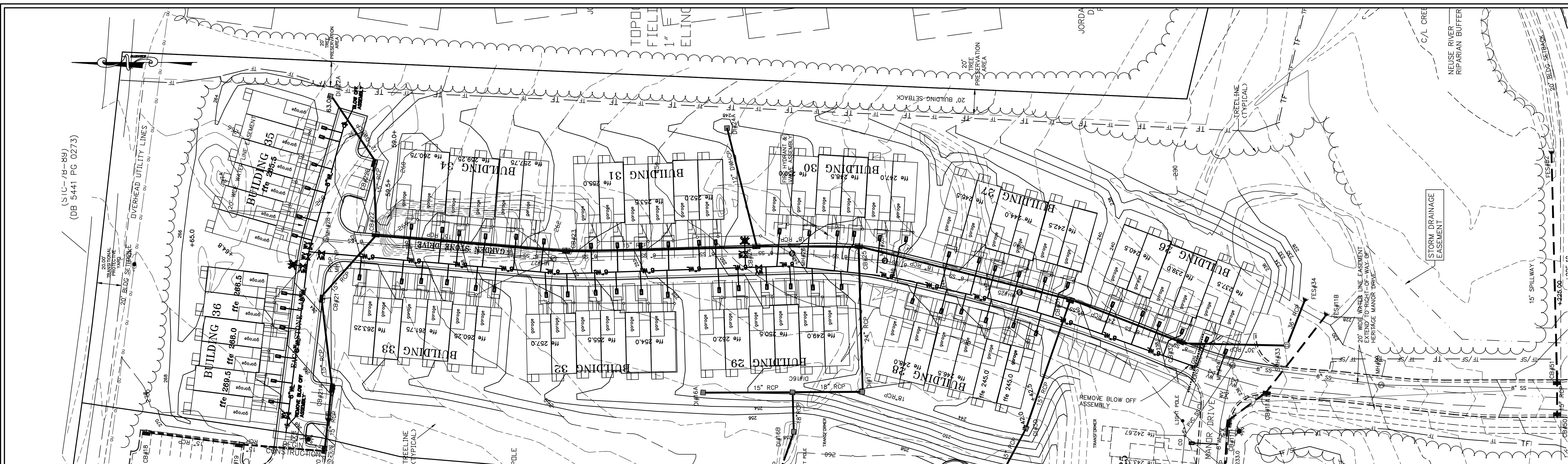
ONE LOT SUBDIVISION  
SUBDIVISION PLAN

DRAWN BY: FMH
CHECKED BY: HAY
SCALE: 1"=20'
DATE: 1/10/17
REVISIONS:



**Aiken & Yelle Associates, PA**  
Professional Engineers & Land Surveyors  
3755 Benson Drive  
Raleigh, North Carolina 27609  
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email: AYES@BELL-SOUTHERN.NET



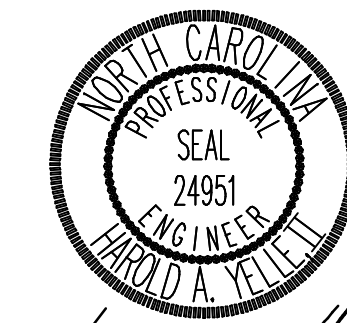
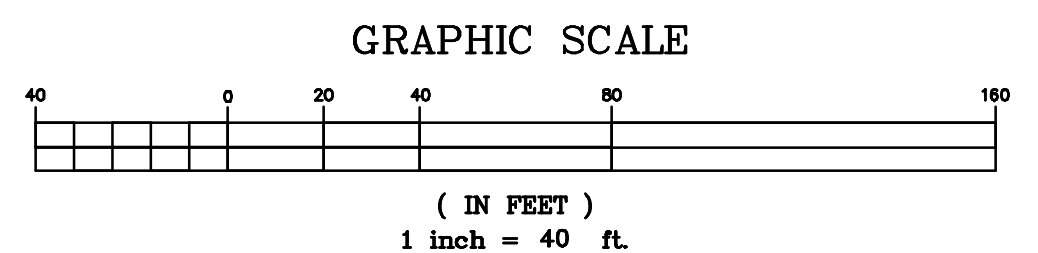


**STANDARD UTILITY NOTES (as applicable):**

- All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPLD Handbook, current edition)
- Utility separation requirements:
  - A distance of 100" shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, remove sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25" from a private well or 50" from a public well
  - When installing water & sewer service, the horizontal separation between utilities shall be 10". If this separation cannot be maintained due to existing conditions, the variation allowed to the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter
  - Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10" on each side of crossing must be specified & installed to waterline specifications
  - 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
  - Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings, maintain 24" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPLD details W-41 & S-49)
  - All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required
- Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction
- Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department
- 3.0' minimum cover is required on all water mains & sewer force mains. 4.0' minimum cover is required on all reuse mains
- It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPLD Handbook procedure
- Install 4" copper water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. *NOTE: It is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure.*
- Install 4" PVC sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum
- Pressure reducing valves are required on all water services exceeding 80 psi, backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole
- All environmental permits applicable to the project must be obtained from NCTMQU, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction
- NCDOT Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction
- Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the CORPLD POC Program Coordinator prior to issuance of a Building Permit. Contact Tim Beasley at (919) 996-2334 or [timothy.beasley@raleighnc.gov](mailto:timothy.beasley@raleighnc.gov) for more information
- Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix 4 of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact Jonnie Hartley at (919) 996-5923 or [johnie.hartley@raleighnc.gov](mailto:johnie.hartley@raleighnc.gov) for more information

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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF RALEIGH AND NCDOT STANDARDS AND SPECIFICATIONS.

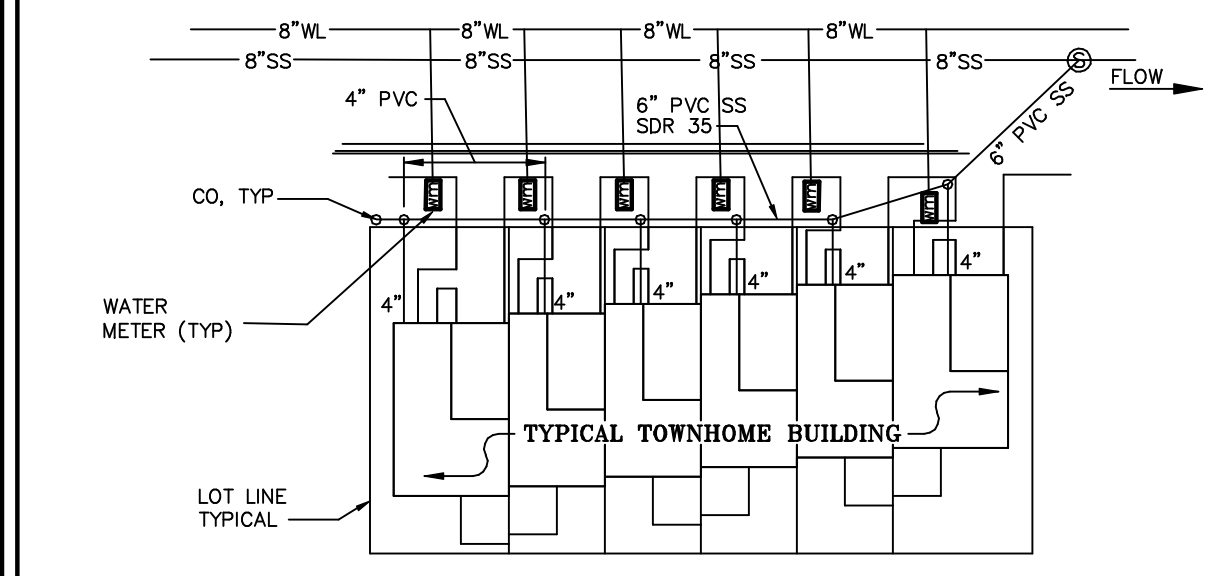


*Harold A. Yelle*  
1-25-17

**GENERAL CONSTRUCTION NOTES:**

- ALL CONSTRUCTION SHALL CONFORM TO ALL CURRENT CITY OF RALEIGH AND NCDOT STANDARD DETAILS AND SPECIFICATIONS.
- THE TOPOGRAPHY AND BOUNDARY SHOWN HERE ON WAS PROVIDED BY JOHN R. MCGADAMS COMPANY INC., IN A SURVEY TITLED "PROPERTY OF B.A. ANTONIO TRUST - BOUNDARY SURVEY" DATED 11-06-02. AIKEN AND YELLE ASSOCIATES, PA ASSUMES NO RESPONSIBILITY FOR ACCURACY OF BOUNDARY, TOPOGRAPHY AND PHYSICALLY LOCATED FEATURES.
- ANY DISTURBANCE OF MORE THAN 12,000 SF REQUIRES THE ISSUANCE OF A GRADING PERMIT BY THE CITY OF RALEIGH INSPECTIONS DEPARTMENT.
- ANY ROADWAY CROSSING OR ENCROACHMENT INTO THE NEUSE RIVER RIPARIAN BUFFER WILL REQUIRE PERMITTING BY NC DWR.
- ANY DISTURBANCE OF MORE THAN 0.10 AC OF WETLANDS WILL REQUIRE ISSUANCE OF A NATION WIDE 39 PERMIT BY THE US ARMY CORP. OF ENGINEERS.
- A COMPLETE COORDINATE LISTING AND AUTOCAD RELEASE 14 DRAWING FILE ARE AVAILABLE UPON REQUEST FROM THIS FIRM.
- THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES. CONTACT ULCOO AT 1-800-632-4949 FOR FIELD LOCATION OF UNDERGROUND UTILITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES. IF DISCREPANCIES ARE FOUND CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- ALL CURB AND GUTTER SHOWN ON SITE IS STANDARD 24" CURB AND GUTTER, WITH THE EXCEPTION OF STONE MANOR DRIVE, BRIARSTONE COURT, GARDEN STONE DRIVE, AND THE WESTERN PORTION OF MIDSTONE DRIVE WHICH SHALL BE 24" VALLEY GUTTER. ALL GUTTER SHOWN WITHIN RIGHT-OF-WAY SHALL BE STANDARD 30" CURB AND GUTTER. REFER TO SECTION DETAILS ON SHEET 2.
- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, UNLESS OTHERWISE STATED ON PLANS.
- ALL PAVEMENT ON SITE SHALL BE IN ACCORDANCE WITH SECTION DETAILS ON SHEET 2.
- THE SLOPE OF HANDICAP PARKING SPACES SHALL NOT EXCEED 1/4" PER FOOT. THE LATERAL SLOPE OF SIDEWALK SHALL NOT EXCEED 2%.
- UNLESS OTHERWISE NOTED ALL PROPOSED SPOT ELEVATIONS ARE TOP OF ASPHALT OR FINISHED SURFACE.
- REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND FEATURES.
- REFER TO PLUMBING PLANS FOR LOCATION OF UTILITY CONNECTIONS TO BUILDING.
- SANITARY SEWER SLOPES AND PIPE LENGTHS ARE COMPUTED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
- CONSTRUCT ALL SANITARY SEWER MANHOLES FLUSH TO FINAL PAVEMENT GRADE OR AS SHOWN IN NON-PAVED AREAS.
- SEWER LATERALS TO BE PLACED AT A MINIMUM SLOPE OF 1% ON 4" LINES AND 0.5% ON 6" LINES. CLEANOUTS SHALL BE PLACED AT 50' INTERVALS AND AT BEND POINTS. ALL CLEANOUTS IN PAVED AREAS SHALL BE APPROVED LOAD BEARING TYPE.
- WATER MAINS SHALL HAVE A MINIMUM 3' OF COVER.
- CONSTRUCT ALL FIRE HYDRANTS WITH BASE FLANGE SIX INCHES ABOVE FINAL GRADE.
- THE CONTRACTOR IS RESPONSIBLE FOR INSURING POSITIVE DRAINAGE TO ALL STORM STRUCTURES.
- ALL STORM WATER CONTROL MEASURES AND BMP MEASURES SHOWN HEREON SHALL BE CONSTRUCTED IN ACCORDANCE WITH NCDNR AND CITY OF RALEIGH STANDARD SPECIFICATION AND DETAILS.
- SEED ALL AREAS DISTURBED BY CONSTRUCTION, AND NOT INDICATED TO BE PAVED OR PLANTED, UPON COMPLETION OF GRADING ACTIVITIES. USE REBEL 3 FESCUE IN ACCORDANCE WITH SEEDING SCHEDULE ON DETAIL SHEETS.
- CONTRACTOR SHALL CLEAR AND GRUB ENTIRE R/W WITHIN 100' OF ALL INTERSECTIONS.
- THE CONSTRUCTION INSPECTION OF PRIVATE STREETS WITHIN CLUSTER UNITS, CONDOMINIUMS, GROUP HOUSING, TOWNHOUSE DEVELOPMENTS AND MOBILE HOME PARKS SUBMITTED FOR CITY APPROVAL IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER. COPIES OF CERTIFIED INSPECTION REPORTS INVOLVING SUBGRADE/AGGREGATE BASE PROOF ROLLS, AGGREGATE BASE AND ASPHALT DENSITIES AND THICKNESS, AND OTHER PERTINENT INFORMATION MUST BE SUBMITTED TO THE CITY'S ENGINEERING INSPECTIONS COORDINATOR AT 400 W. PEACE ST., RALEIGH, NC 27602. CONTACT TOM HIGGINS AT 919-996-6814 TO OBTAIN DETAILS OF THE ABOVE REQUIREMENTS.
- IMPORTANT NOTE: PERMITS FOR THE REMAINING 25% OF THE BUILDINGS WITHIN A DEVELOPMENT WILL NOT BE ISSUED UNTIL THE ABOVE REQUIREMENTS HAVE BEEN MET AND A LETTER OF ACCEPTANCE ISSUED.

Private	Public
<b>Sewer Collection/Extension System</b>	<b>Water Distribution/Extension System</b>
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.	The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____	City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____	Authorization to Construct _____
Date _____	Date _____



TYPICAL WATER & SEWER SERVICE CONNECTION DETAIL / PHASE 4

**AYES**  
Alken & Yelle Associates, PA  
Professional Engineers & Land Surveyors  
3755 Benson Drive  
Raleigh, North Carolina 27609  
919-877-9992 Fax 919-877-9979  
email: AYES@BELL-SOUTHERN.NET

DRAWN BY: FMH  
CHECKED BY: HAY  
SCALE: 1" = 40'  
DATE: 12/2/15  
REVISIONS:  
1-25-17 2-25-17 2-28-17 5-17-17  
4-23-18 2-28-18 5-3-18 2-28-18

SITE UTILITY PLAN  
SUBDIVISION PLAN

PHASES 3 & 4 FIELDSTONE CROSSING  
CLUSTER UNIT DEVELOPMENT  
CITY OF RALEIGH, NORTH CAROLINA

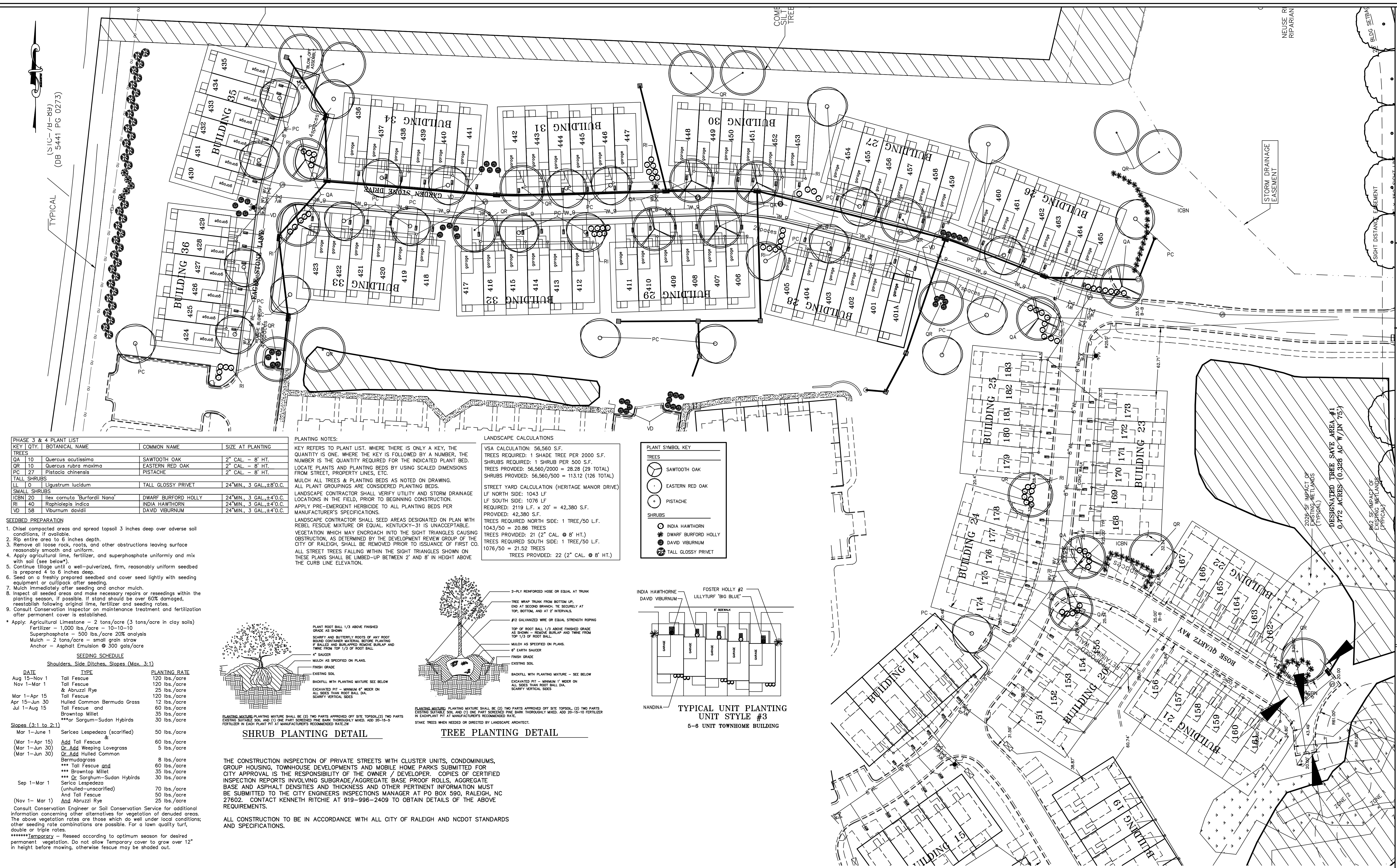
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(DB 5441 PG 0273)

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REVISONS:  
1-2-16 2-23-16 3-17-16 3-23-16  
3-28-16 5-3-16 5-26-16-15-16

**SITE LANDSCAPE PLAN  
SUBDIVISION PLAN**

**PHASES 3 & 4 FIELDSTONE CROSSING  
CLUSTER UNIT DEVELOPMENT  
CITY OF RALEIGH, NORTH CAROLINA**



**PHASE 3 & 4 PLANT LIST**

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE AT PLANTING
<b>TREES</b>				
QA	10	Quercus acutissima	SAWTOOTH OAK	2" CAL. - 8' HT.
QR	10	Quercus rubra maxima	EASTERN RED OAK	2" CAL. - 8' HT.
PC	27	Pistacia chinensis	PISTACHE	2" CAL. - 8' HT.
<b>TALL SHRUBS</b>				
LL	0	Ligustrum lucidum	TALL GLOSSY PRIVET	24" MIN., 3 GAL. ± 8" O.C.
<b>SMALL SHRUBS</b>				
ICBN	20	Ilex cornuta 'Burfordii Nana'	DWARF BURFORD HOLLY	24" MIN., 3 GAL. ± 4" O.C.
RI	40	Raphidophora indica	INDIA HAWTHORN	24" MIN., 3 GAL. ± 4" O.C.
VD	58	Viburnum davidii	DAVID VIBURNUM	24" MIN., 3 GAL. ± 4" O.C.

- SEEDBED PREPARATION**
- Chisel compacted areas and spread topsoil 3 inches deep over adverse soil conditions, if available.
  - Rip entire area to 6 inches depth.
  - Remove all loose rocks, roots, and other obstructions leaving surface reasonably smooth and uniform.
  - Apply agricultural lime, fertilizer, and superphosphate uniformly and mix with soil (see below).
  - Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared 4 to 6 inches deep.
  - Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
  - Mulch immediately after seeding and anchor mulch.
  - Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be over 60% damaged, reestablish following original lime, fertilizer and seeding rates.
  - Consult Conservation Inspector on maintenance treatment and fertilization after permanent cover is established.
  - Apply: Agricultural Limestone - 2 tons/acre (3 tons/acre in clay soils)  
Fertilizer - 1,000 lbs./acre - 10-10-10  
Superphosphate - 500 lbs./acre 20% analysis  
Mulch - 2 tons/acre - small grain straw  
Anchor - Asphalt Emulsion @ 300 gals/acre

**SEEDING SCHEDULE**

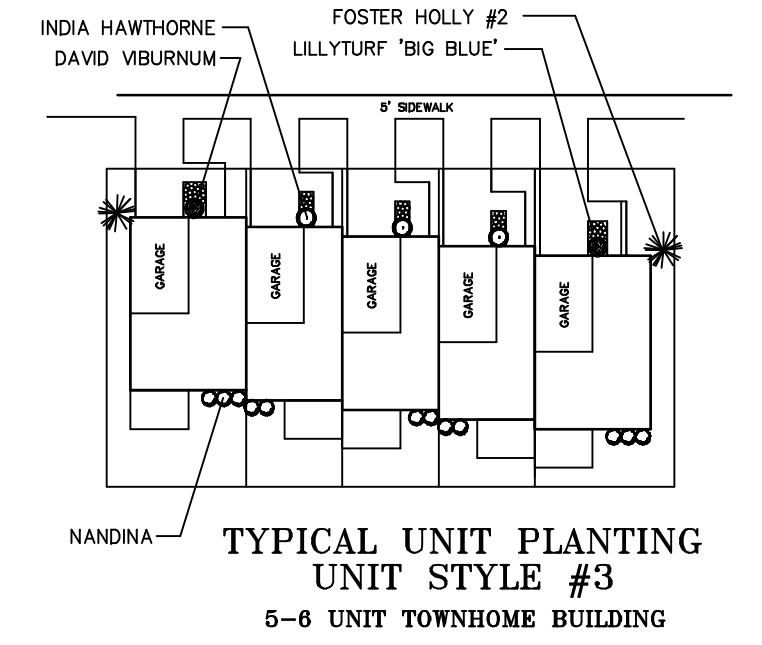
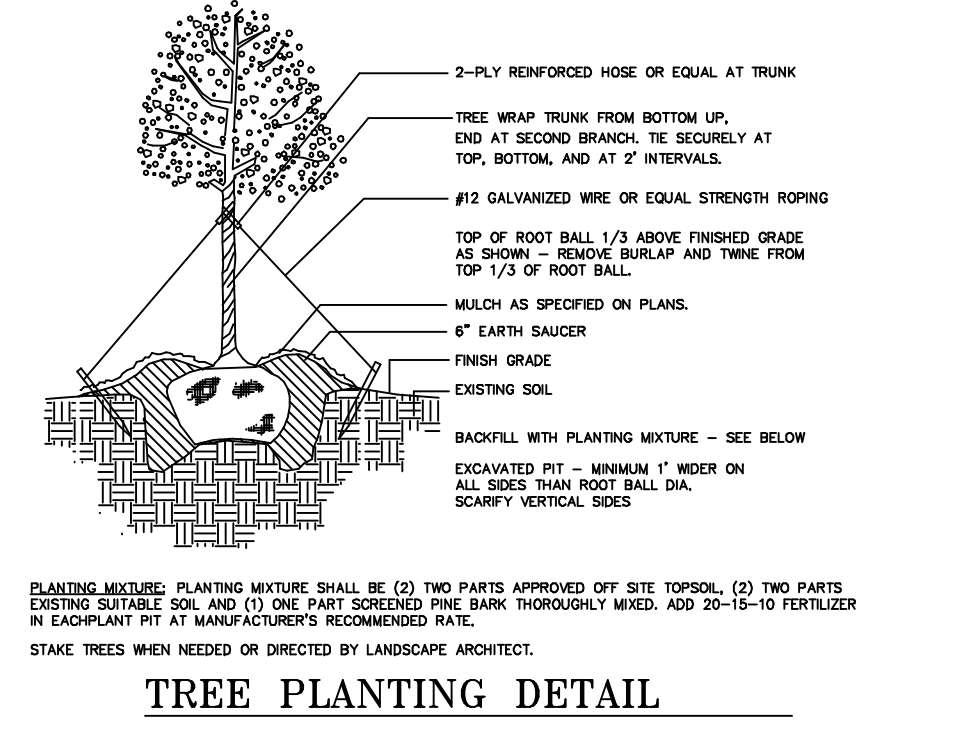
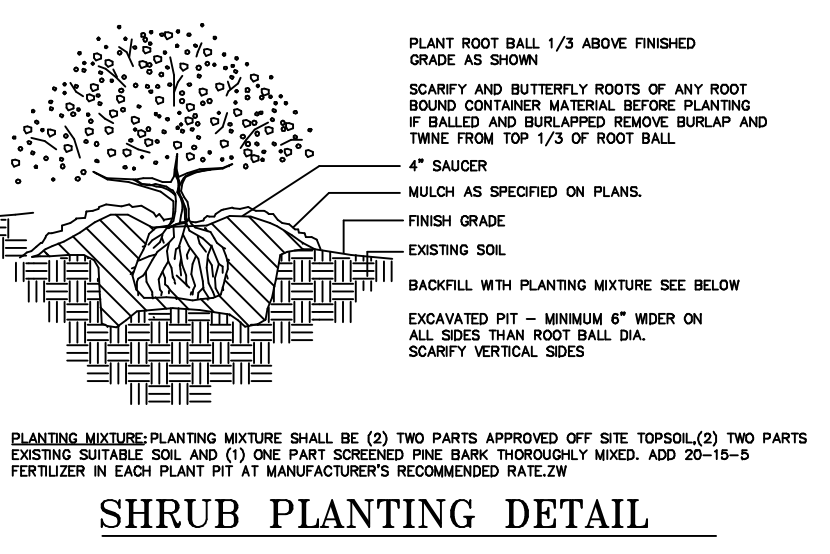
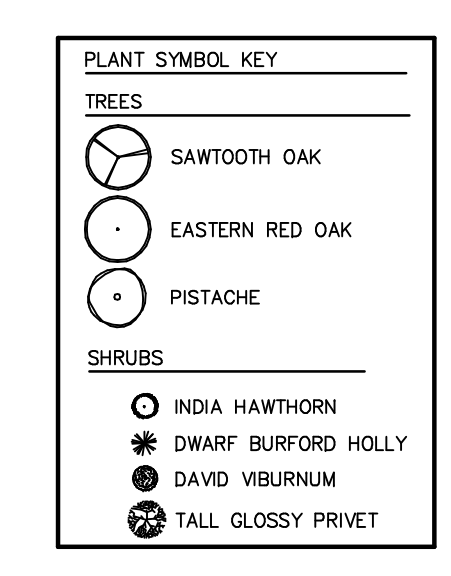
Shoulders, Side Ditches, Slopes (Max. 3:1)

DATE	TYPE	PLANTING RATE
Aug 15-Nov 1	Tall Fescue	120 lbs./acre
Nov 1-Mar 1	Tall Fescue & Abruzzi Rye	25 lbs./acre
Mar 1-Apr 15	Tall Fescue	120 lbs./acre
Apr 15-Jun 30	Hulled Common Bermuda Grass	12 lbs./acre
Jul 1-Aug 15	Tall Fescue and Browntop Millet	60 lbs./acre
	***or Sorghum-Sudan Hybrids	35 lbs./acre
Mar 1-June 1	Scirpus Lepedeza (scarified)	50 lbs./acre
Mar 1-Apr 15	Add Tall Fescue	60 lbs./acre
Mar 1-Jun 30	Or Add Weeping Lovegrass	5 lbs./acre
Mar 1-Jun 30	Or Add Hulled Common Bermudagrass	8 lbs./acre
	*** Tall Fescue and	60 lbs./acre
	*** Browntop Millet	35 lbs./acre
	*** Or Sorghum-Sudan Hybrids	30 lbs./acre
Sep 1-Mar 1	Scirpus Lepedeza (unhulled-unsscarified)	70 lbs./acre
	And Tall Fescue	50 lbs./acre
(Nov 1- Mar 1)	And Abruzzi Rye	25 lbs./acre

Consult Conservation Engineer or Soil Conservation Service for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding rate combinations are possible. For a lawn quality turf, double or triple rates.  
\*\*\*\*\*Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow Temporary cover to grow over 12" in height before mowing, otherwise fescue may be shaded out.

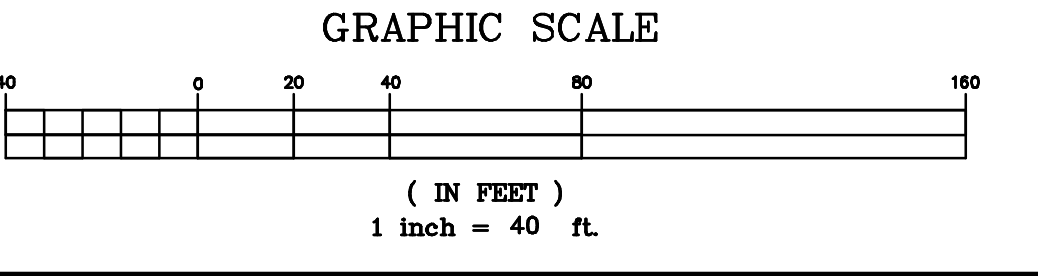
**PLANTING NOTES:**  
KEY REFERS TO PLANT LIST. WHERE THERE IS ONLY A KEY, THE QUANTITY IS ONE. WHERE THE KEY IS FOLLOWED BY A NUMBER, THE NUMBER IS THE QUANTITY REQUIRED FOR THE INDICATED PLANT BED. LOCATE PLANTS AND PLANTING BEDS BY USING SCALED DIMENSIONS FROM STREET, PROPERTY LINES, ETC.  
MULCH ALL TREES & PLANTING BEDS AS NOTED ON DRAWING. ALL PLANT GROUPINGS ARE CONSIDERED PLANTING BEDS.  
LANDSCAPE CONTRACTOR SHALL VERIFY UTILITY AND STORM DRAINAGE LOCATIONS IN THE FIELD, PRIOR TO BEGINNING CONSTRUCTION. APPLY PRE-EMERGENT HERBICIDE TO ALL PLANTING BEDS PER MANUFACTURER'S SPECIFICATIONS.  
LANDSCAPE CONTRACTOR SHALL SEED AREAS DESIGNATED ON PLAN WITH REBEL FESOU MIXTURE OR EQUAL. KENTUCKY-31 IS UNACCEPTABLE. VEGETATION WHICH MAY ENCRoACH INTO THE SIGHT TRIANGLES CAUSING OBSTRUCTION, AS DETERMINED BY THE DEVELOPMENT REVIEW GROUP OF THE CITY OF RALEIGH, SHALL BE REMOVED PRIOR TO ISSUANCE OF FIRST CO. ALL STREET TREES FALLING WITHIN THE SIGHT TRIANGLES SHOWN ON THESE PLANS SHALL BE LIMBED-UP BETWEEN 2' AND 8' IN HEIGHT ABOVE THE CURB LINE ELEVATION.

**LANDSCAPE CALCULATIONS**  
VSA CALCULATION: 56,560 S.F.  
TREES REQUIRED: 1 SHADE TREE PER 2000 S.F.  
SHRUBS REQUIRED: 1 SHRUB PER 500 S.F.  
TREES PROVIDED: 56,560/2000 = 28.28 (28 TOTAL)  
SHRUBS PROVIDED: 56,560/500 = 113.12 (126 TOTAL)  
STREET YARD CALCULATION (HERITAGE MANOR DRIVE)  
LF NORTH SIDE: 1043 LF  
LF SOUTH SIDE: 1076 LF  
REQUIRED: 2119 L.F. x 20' = 42,380 S.F.  
PROVIDED: 42,380 S.F.  
TREES REQUIRED NORTH SIDE: 1 TREE/50 L.F.  
1043/50 = 20.86 TREES  
TREES PROVIDED: 21 (2" CAL. @ 8' HT.)  
TREES REQUIRED SOUTH SIDE: 1 TREE/50 L.F.  
1076/50 = 21.52 TREES  
TREES PROVIDED: 22 (2" CAL. @ 8' HT.)



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