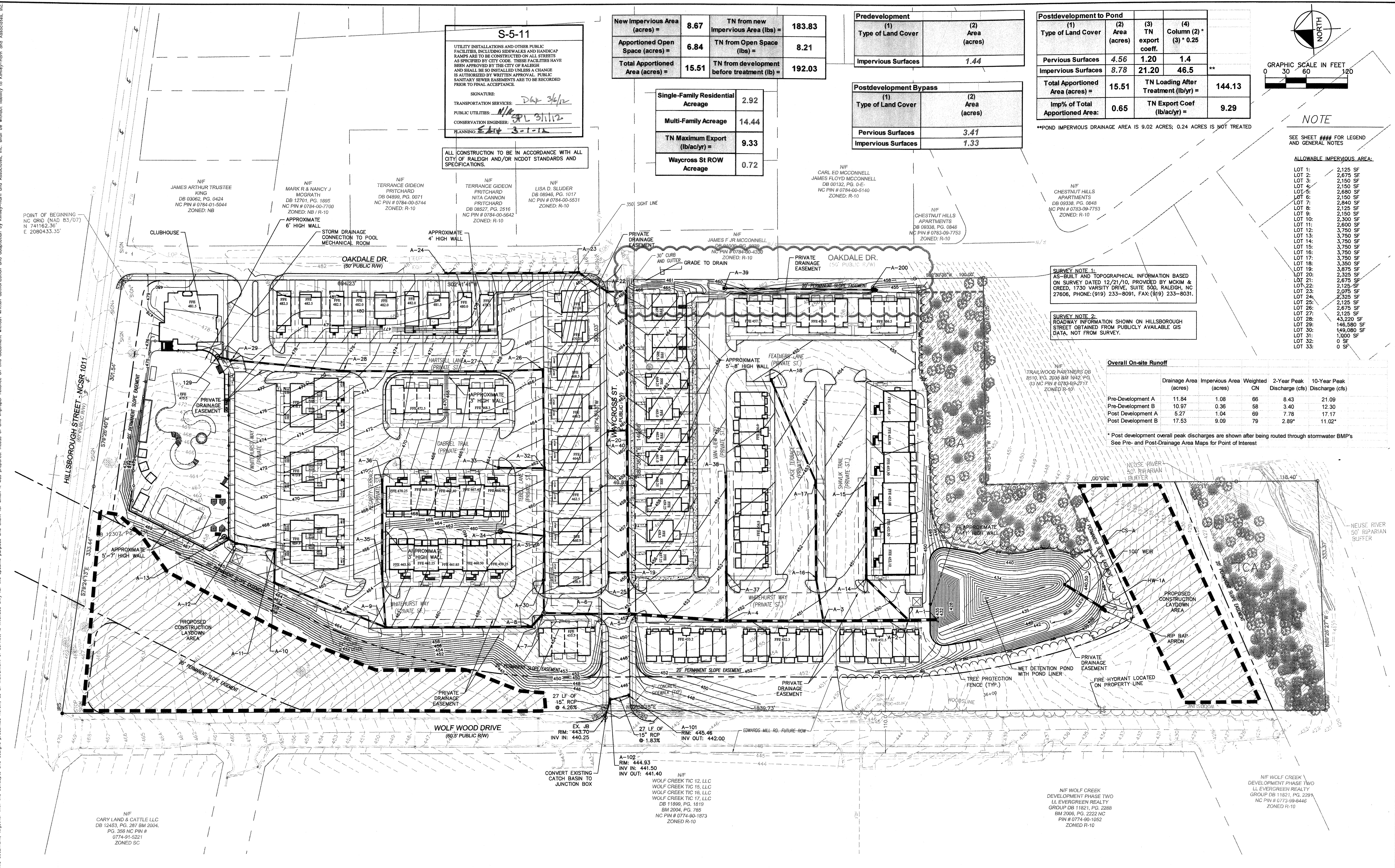


Plotted By: Corey, Brad. Sheet Set: Retreat at Raleigh. Overall Grading and Drainage Plan. February 17, 2012. 02:23:15pm. K:\RET_LDEV\01170001-The Retreat at Raleigh-SP-CD-15-CAD Files\Draw-C-06-Overall Grading and Drainage Plan.dwg. This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



S-5-11
UTILITY INSTALLATIONS AND OTHER PUBLIC FACILITIES, INCLUDING SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY CITY CODE. THESE FACILITIES HAVE BEEN APPROVED BY THE CITY OF RALEIGH AND SHALL BE SO INSTALLED UNLESS A CHANGE IS AUTHORIZED BY WRITTEN APPROVAL. PUBLIC SANITARY SEWER EASEMENTS ARE TO BE RECORDED PRIOR TO FINAL ACCEPTANCE.
SIGNATURE: *[Signature]*
TRANSPORTATION SERVICES: *[Signature]*
PUBLIC UTILITIES: *[Signature]*
CONSERVATION ENGINEER: *[Signature]*
PLANNING: *[Signature]*

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

New Impervious Area (acres) =	8.67	TN from new Impervious Area (lbs) =	183.83
Apportioned Open Space (acres) =	6.84	TN from Open Space (lbs) =	8.21
Total Apportioned Area (acres) =	15.51	TN from development before treatment (lb) =	192.03

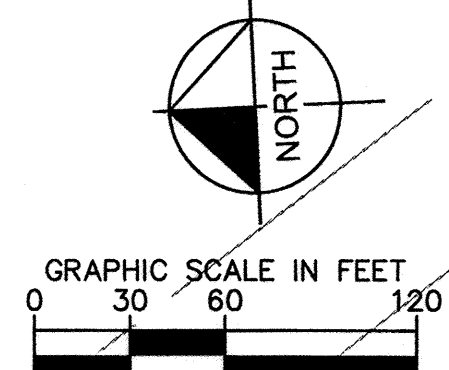
Single-Family Residential Acreage	2.92
Multi-Family Acreage	14.44
TN Maximum Export (lb/ac/yr) =	9.33
Waycross St ROW Acreage	0.72

Predevelopment	
(1) Type of Land Cover	(2) Area (acres)
Impervious Surfaces	1.44

Postdevelopment Bypass	
(1) Type of Land Cover	(2) Area (acres)
Pervious Surfaces	3.41
Impervious Surfaces	1.33

Postdevelopment to Pond			
(1) Type of Land Cover	(2) Area (acres)	(3) TN export coeff.	(4) Column (2) * (3) * 0.25
Pervious Surfaces	4.56	1.20	1.4
Impervious Surfaces	8.78	21.20	46.5
Total Apportioned Area (acres) =	15.51	TN Loading After Treatment (lb/yr) =	144.13
Imp% of Total Apportioned Area:	0.65	TN Export Coef (lb/ac/yr) =	9.29

**POND IMPERVIOUS DRAINAGE AREA IS 9.02 ACRES; 0.24 ACRES IS NOT TREATED



NOTE

SEE SHEET ### FOR LEGEND AND GENERAL NOTES

ALLOWABLE IMPERVIOUS AREA:

LOT 1:	2,125 SF
LOT 2:	2,675 SF
LOT 3:	2,150 SF
LOT 4:	2,150 SF
LOT 5:	2,680 SF
LOT 6:	2,150 SF
LOT 7:	2,840 SF
LOT 8:	2,125 SF
LOT 9:	2,150 SF
LOT 10:	2,300 SF
LOT 11:	2,600 SF
LOT 12:	3,750 SF
LOT 13:	3,750 SF
LOT 14:	3,750 SF
LOT 15:	3,750 SF
LOT 16:	3,750 SF
LOT 17:	3,750 SF
LOT 18:	3,350 SF
LOT 19:	3,875 SF
LOT 20:	2,325 SF
LOT 21:	2,675 SF
LOT 22:	2,125 SF
LOT 23:	2,075 SF
LOT 24:	2,125 SF
LOT 25:	2,125 SF
LOT 26:	2,675 SF
LOT 27:	2,125 SF
LOT 28:	43,220 SF
LOT 29:	146,580 SF
LOT 30:	146,580 SF
LOT 31:	1,000 SF
LOT 32:	0 SF
LOT 33:	0 SF

SURVEY NOTE 1:
AS-BUILT AND TOPOGRAPHICAL INFORMATION BASED ON SURVEY DATED 12/21/10, PROVIDED BY MCKIM & CREED, 1730 VARSITY DRIVE, SUITE 500, RALEIGH, NC 27606, PHONE: (919) 233-8091, FAX: (919) 233-8031.

SURVEY NOTE 2:
ROADWAY INFORMATION SHOWN ON HILLSBOROUGH STREET OBTAINED FROM PUBLICLY AVAILABLE GIS DATA, NOT FROM SURVEY.

	Drainage Area (acres)	Impervious Area (acres)	Weighted CN	Peak Discharge (cfs)	
				2-Year Peak	10-Year Peak
Pre-Development A	11.84	1.08	66	8.43	21.09
Pre-Development B	10.97	0.36	58	3.40	12.30
Post Development A	5.27	1.04	69	7.78	17.17
Post Development B	17.53	9.09	79	2.89*	11.02*

* Post development overall peak discharges are shown after being routed through stormwater BMP's. See Pre- and Post-Drainage Area Maps for Point of Interest.

No.	REVISIONS	DATE	BY
8	WAYCROSS STREET AND GRADING REVISIONS	02/16/12	WJB
3	SITE EXPRESS REVIEW COMMENTS	10/18/11	WJB
2	CITY OF RALEIGH 2ND REVIEW COMMENTS	10/07/11	WJB
1	CITY OF RALEIGH 1ST REVIEW COMMENTS	9/21/11	WJB

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WWW.KIMLEY-HORN.COM

KHA PROJECT	011170001
DATE	7/29/11
SCALE	AS SHOWN
DESIGNED BY	COB
DRAWN BY	WJB
CHECKED BY	PAB

THE RETREAT AT RALEIGH

PREPARED FOR
LANDMARK PROPERTIES



OVERALL GRADING AND DRAINAGE PLAN

SHEET NUMBER
C-06