

VICINITY MAP
N.T.S.

1/4 F
EY PEGGY
7-002-081-002
ZONING O&I-1
OFFICE

RANDALL SQUARE OWNERS
ASSOCIATION
I.D. R05507-002-081-000
ZONING O&I-1
OFFICE

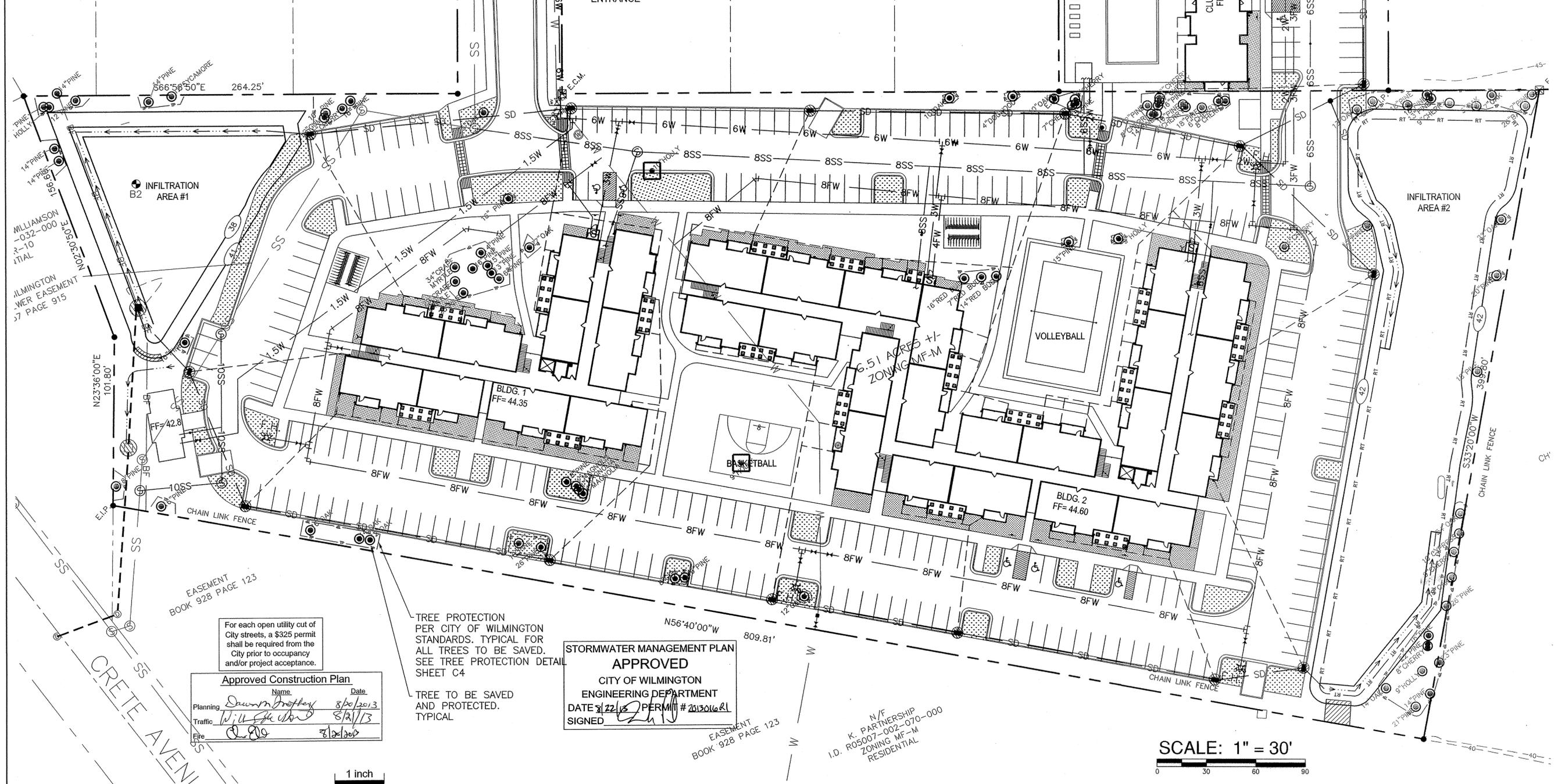
N/F
KHS PROFESSIONAL
PROPERTIES
I.D. R05507-002-081-001
ZONING O&I-1
OFFICE

N/F
NOLA VENTURES, LLC
I.D. R05507-002-079-000
ZONING O&I-1
OFFICE

N/F
EVERYDAY PROPERTIES, LLC
I.D. R05507-002-078-000
ZONING O&I-1
OFFICE

N/F
RANDALL EAST OFFICE CONDO
HOA
I.D. R05507-002-077-005
ZONING O&I-1
OFFICE

N/F
CRESCENT STATE BANK
I.D. R05507-002-075-00
ZONING O&I-1
OFFICE



For each open utility cut of
City streets, a \$325 permit
shall be required from the
City prior to occupancy and
or project acceptance.

Approved Construction Plan	
Name	Date
Planning <i>Dawn Broffey</i>	8/30/2013
Traffic <i>Willie</i>	8/21/13
Fire <i>[Signature]</i>	8/21/2013

TREE PROTECTION
PER CITY OF WILMINGTON
STANDARDS. TYPICAL FOR
ALL TREES TO BE SAVED.
SEE TREE PROTECTION DETAIL
SHEET C4

TREE TO BE SAVED
AND PROTECTED.
TYPICAL

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 8/22/13 PERMIT # 20130162L
SIGNED *[Signature]*

EASEMENT
BOOK 928 PAGE 123

N/F
K. PARTNERSHIP
I.D. R05007-002-070-000
ZONING MF-M
RESIDENTIAL

SCALE: 1" = 30'

1 inch

RT	SYMBOL	DATE	DESCRIPTION	BY
		08/15/13	REVISED RETAINING WALL LAYOUT	JPN

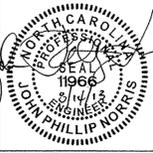
© 2013 NORRIS & TUNSTALL

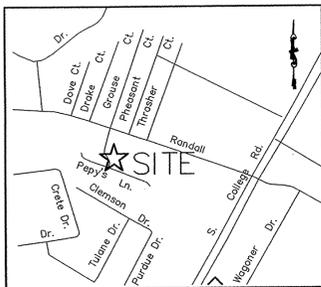
TREE PROTECTION PLAN
THE LIGHHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
RB-WILMINGTON, LLC A A
DELAWARE LIMITED
LIABILITY COMPANY
2234 W. NORTH AVE.
CHICAGO, IL 60647

NORRIS & TUNSTALL
CONSULTING ENGINEERS, P.C.
1127 FLORAL PARKWAY, SUITE 400 PHONE (910) 343-9653
WILMINGTON, NC, 28403 FAX (910) 343-9604
N&T LICENSE NO. C-3641

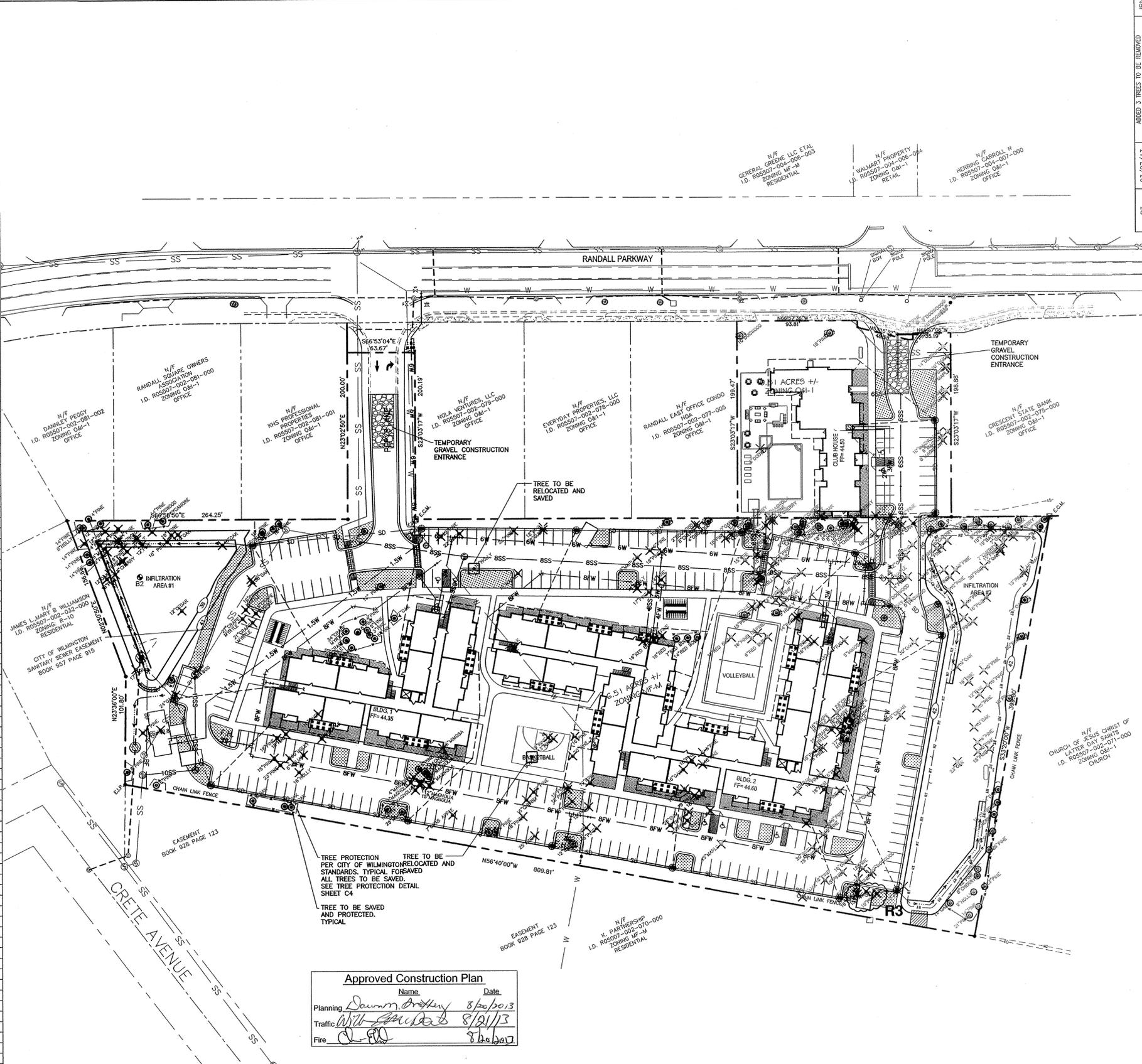
12080
DES. JPN
CVD. JPN
DRWL. EDB
DATE 05/15/13





VICINITY MAP
N.T.S.

TREE DESCRIPTION	SAVE/REMOVE	TREE DESCRIPTION	SAVE/REMOVE	TREE DESCRIPTION	SAVE/REMOVE	TREE DESCRIPTION	SAVE/REMOVE
2" DOGWOOD	REMOVE	12" DOGWOOD	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
3" MAGNOLIA	REMOVE	12" MAGNOLIA	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
4" CHERRY	SAVE	12" MAGNOLIA	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
4" DOGWOOD	SAVE	12" OAK	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
4" MAGNOLIA	REMOVE	12" OAK	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
4" MAGNOLIA	REMOVE	12" OAK	SAVE	15" PINE	REMOVE	18" PINE	REMOVE
4" MAGNOLIA	REMOVE	12" OAK	SAVE	15" PINE	REMOVE	18" PINE	REMOVE
4" MAGNOLIA	SAVE	12" PINE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
4" MAGNOLIA	SAVE	12" PINE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
4" MAGNOLIA	SAVE	12" PINE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
4" MAPLE	REMOVE	12" PINE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
5" DOGWOOD	REMOVE	12" PINE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE
5" EUCALYPT	REMOVE	12" PINE	REMOVE	15" PINE	SAVE	18" PINE	REMOVE
5" MIMOSA	REMOVE	12" PINE	REMOVE	15" PINE	SAVE	18" PINE	REMOVE
5" OAK	SAVE	12" PINE	REMOVE	15" PINE	SAVE	18" PINE	REMOVE
6" CHERRY	SAVE	12" PINE	REMOVE	16" CHERRY	REMOVE	18" PINE	REMOVE
6" DOGWOOD	REMOVE	12" PINE	REMOVE	16" CHERRY	REMOVE	18" PINE	REMOVE
6" DOGWOOD	REMOVE	12" PINE	REMOVE	16" CRAPE MYRTLE	REMOVE	18" PINE	REMOVE
6" HOLLY	REMOVE	12" PINE	REMOVE	16" HOLLY	REMOVE	18" PINE	REMOVE
6" MAGNOLIA	REMOVE	12" PINE	REMOVE	16" MAPLE	REMOVE	18" PINE	REMOVE
6" MAGNOLIA	REMOVE	12" PINE	REMOVE	16" OAK	REMOVE	18" PINE	SAVE
6" MAGNOLIA	REMOVE	12" PINE	REMOVE	16" OAK	REMOVE	18" PINE	SAVE
6" OAK	REMOVE	12" PINE	REMOVE	16" OAK	REMOVE	18" PINE	SAVE
6" RED BUD	REMOVE	12" PINE	SAVE	16" OAK	SAVE	18" PINE	SAVE
7" CHERRY	SAVE	12" PINE	SAVE	16" PINE	REMOVE	18" PINE	SAVE
7" CHERRY	SAVE	12" RED BUD	REMOVE	16" PINE	REMOVE	18" PINE	SAVE
7" CHERRY	REMOVE	12" SYCAMORE	SAVE	16" PINE	REMOVE	18" PINE	SAVE
7" CHERRY	REMOVE	13" OAK	REMOVE	16" PINE	REMOVE	18" PINE	SAVE
7" CHERRY	SAVE	13" OAK	SAVE	16" PINE	REMOVE	19" MAPLE	REMOVE
7" CRAB APPLE	REMOVE	13" PINE	REMOVE	16" PINE	REMOVE	19" BAY	REMOVE
7" OAK	REMOVE	13" PINE	REMOVE	16" PINE	REMOVE	19" CRAPE MYRTLE	REMOVE
7" OAK	SAVE	13" PINE	REMOVE	16" PINE	REMOVE	19" CRAPE MYRTLE	REMOVE
7" RED BUD	SAVE	13" PINE	REMOVE	16" PINE	REMOVE	19" PINE	REMOVE
8" CHERRY	REMOVE	13" PINE	REMOVE	16" PINE	REMOVE	19" PINE	REMOVE
8" CHERRY	REMOVE	13" PINE	SAVE	16" PINE	REMOVE	19" RED BUD	REMOVE
8" CHERRY	REMOVE	13" PINE	SAVE	16" PINE	REMOVE	20" CRAPE MYRTLE	REMOVE
8" CHERRY	SAVE	14" CRAPE MYRTLE	REMOVE	16" PINE	REMOVE	20" OAK	REMOVE
8" CHERRY	SAVE	14" DOGWOOD	REMOVE	16" PINE	REMOVE	20" PINE	REMOVE
8" CHERRY	SAVE	14" HOLLY	REMOVE	16" PINE	REMOVE	20" PINE	REMOVE
8" CHERRY	SAVE	14" HOLLY	REMOVE	16" PINE	REMOVE	20" PINE	REMOVE
8" CHERRY	SAVE	14" HOLLY	REMOVE	16" PINE	REMOVE	20" PINE	REMOVE
8" DOGWOOD	REMOVE	14" MAGNOLIA	REMOVE	16" PINE	REMOVE	20" PINE	REMOVE
8" DOGWOOD	REMOVE	14" OAK	REMOVE	16" PINE	REMOVE	20" PINE	REMOVE
8" GUM	SAVE	14" OAK	SAVE	16" PINE	REMOVE	20" PINE	SAVE
8" HOLLY	SAVE	14" OAK	SAVE	16" PINE	REMOVE	21" RED BUD	SAVE
8" MAGNOLIA	REMOVE	14" PINE	REMOVE	16" PINE	REMOVE	21" CRAPE MYRTLE	REMOVE
8" MAPLE	REMOVE	14" PINE	REMOVE	16" PINE	REMOVE	21" CRAPE MYRTLE	REMOVE
8" OAK	REMOVE	14" PINE	REMOVE	16" PINE	REMOVE	21" PINE	SAVE
8" OAK	REMOVE	14" PINE	REMOVE	16" PINE	REMOVE	22" OAK	SAVE
8" OAK	REMOVE	14" PINE	REMOVE	16" PINE	REMOVE	22" PINE	REMOVE
8" OAK	REMOVE	14" PINE	REMOVE	16" PINE	REMOVE	22" PINE	REMOVE
9" CHERRY	REMOVE	14" PINE	REMOVE	16" PINE	REMOVE	22" PINE	REMOVE
9" CHERRY	SAVE	14" PINE	REMOVE	16" PINE	REMOVE	22" PINE	SAVE
9" CHERRY	SAVE	14" PINE	REMOVE	16" PINE	REMOVE	23" GUM	REMOVE
9" CHERRY	SAVE	14" PINE	REMOVE	16" PINE	REMOVE	23" OAK	REMOVE
9" CHERRY	SAVE	14" PINE	REMOVE	16" PINE	REMOVE	23" PINE	REMOVE
9" CHERRY	SAVE	14" PINE	REMOVE	16" PINE	REMOVE	23" PINE	REMOVE
9" HOLLY	RELOCATE/SAVE	14" PINE	SAVE	16" PINE	REMOVE	23" PINE	REMOVE
9" HOLLY	SAVE	14" PINE	SAVE	16" PINE	REMOVE	23" PINE	SAVE
9" HOLLY	SAVE	14" PINE	SAVE	16" PINE	REMOVE	23" PINE	SAVE
10" CHERRY	REMOVE	14" PINE	SAVE	16" PINE	REMOVE	24" OAK	REMOVE
10" CHERRY	REMOVE	14" PINE	SAVE	16" PINE	REMOVE	25" OAK	REMOVE
10" CHERRY	REMOVE	14" PINE	SAVE	16" PINE	REMOVE	25" PINE	REMOVE
10" CHERRY	REMOVE	14" PINE	SAVE	16" PINE	REMOVE	25" PINE	REMOVE
10" CHERRY	REMOVE	14" PINE	SAVE	16" PINE	REMOVE	25" PINE	REMOVE
10" CHERRY	REMOVE	14" PINE	SAVE	16" PINE	REMOVE	26" BAY	REMOVE
10" CYPRUS	SAVE	14" RED BUD	SAVE	16" RED BUD	SAVE		
10" DOGWOOD	SAVE	15" CEDAR	REMOVE	17" CRAPE MYRTLE	REMOVE	26" PINE	SAVE
10" GUM	SAVE	15" CRAPE MYRTLE	REMOVE	17" OAK	REMOVE	26" PINE	SAVE
10" HOLLY	RELOCATE/SAVE	15" MAGNOLIA	REMOVE	17" PINE	REMOVE	27" OAK	SAVE
10" HOLLY	REMOVE	15" MAPLE	REMOVE	17" PINE	REMOVE	28" CRAPE MYRTLE	REMOVE
10" MAGNOLIA	REMOVE	15" MIMOSA	REMOVE	17" PINE	SAVE	28" GUM	REMOVE
10" OAK	REMOVE	15" OAK	REMOVE	18" OAK	REMOVE	29" CRAPE MYRTLE	SAVE
10" OAK	REMOVE	15" PINE	REMOVE	18" OAK	REMOVE	29" CRAPE MYRTLE	REMOVE
10" OAK	REMOVE	15" PINE	REMOVE	18" OAK	REMOVE	30" OAK	REMOVE
10" OAK	REMOVE	15" PINE	REMOVE	18" OAK	REMOVE	30" OAK	REMOVE
10" OAK	SAVE	15" PINE	REMOVE	18" PINE	REMOVE	30" OAK	REMOVE
10" OAK	SAVE	15" PINE	REMOVE	18" PINE	REMOVE	34" CRAPE MYRTLE	SAVE
10" PINE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE	38" OAK	REMOVE
10" PINE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE	45" MAPLE	REMOVE
11" OAK	SAVE	15" PINE	REMOVE	18" PINE	REMOVE		
12" CEDAR	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE		
12" CRAPE MYRTLE	REMOVE	15" PINE	REMOVE	18" PINE	REMOVE		



Approved Construction Plan
 Name: Dawnn Britten Date: 8/22/13
 Planning: Will Gaudin Date: 8/21/13
 Traffic: Will Gaudin
 Fire: Will Gaudin

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN
 APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 8/22/13 PERMIT # 2013016R1
 SIGNED [Signature]

1 inch

SCALE: 1" = 50'

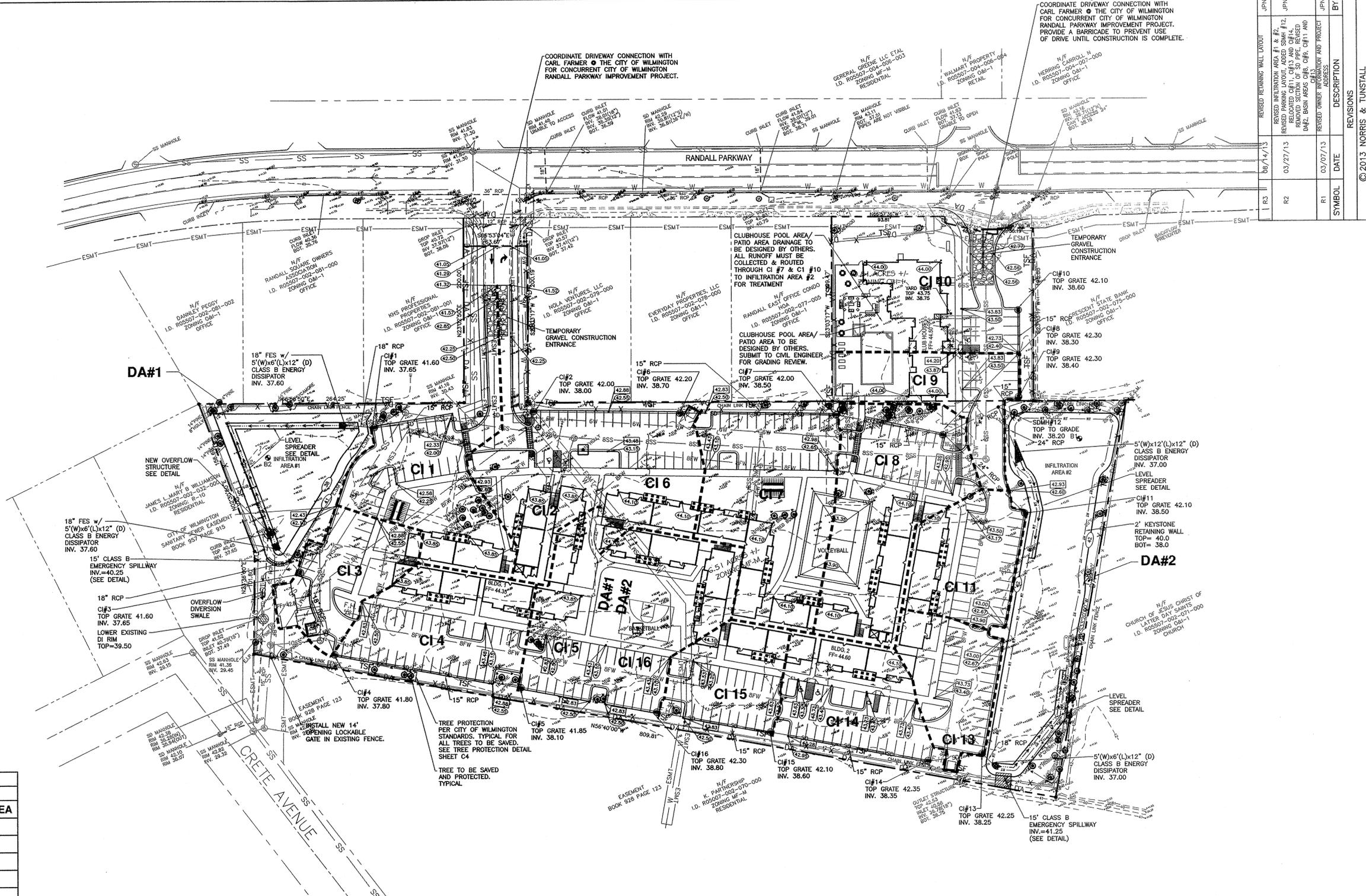
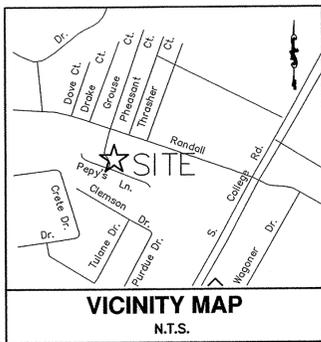
REVISIONS	DATE	DESCRIPTION	BY
R3	03/27/13	ADDED 3 TREES TO BE REMOVED	JPN
R2	03/07/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS	JPN
R1	02/06/13	UPDATED PER C.O.M. COMMENTS	JPN

TREE EXHIBIT
 THE LIGHHOUSE APARTMENTS
 4926 RANDALL PARKWAY
 WILMINGTON, NORTH CAROLINA

OWNER:
 RB-WILMINGTON, LLC A DELAWARE LIMITED LIABILITY COMPANY
 2234 W. NORTH AVE. CHICAGO, IL 60647

NORRIS & TUNSTALL
 CONSULTING ENGINEERS, P.C.
 1127 FLORAL PARKWAY, SUITE 400 WILMINGTON, NC 28403
 PHONE (910) 343-9653 FAX (910) 343-9604
 N&T LICENSE NO. C-3641

12080
 DES. JPN
 CKD. JPN
 DRWN. EDB
 DATE 03/07/13



DA#1		
TOTAL DRAINAGE AREA = 98,380 SF/2.26 AC		
INLET AREA	TOTAL AREA	IMPERVIOUS AREA
1	0.48 AC	0.35 AC
2	0.42 AC	0.32 AC
3	0.26 AC	0.19 AC
4	0.40 AC	0.33 AC
5	0.29 AC	0.20 AC

DA#2		
TOTAL DRAINAGE AREA = 185,447 SF/4.26 AC		
INLET AREA	TOTAL AREA	IMPERVIOUS AREA
6	0.27 AC	0.21 AC
7	0.57 AC	0.37 AC
8	0.57 AC	0.35 AC
9	0.28 AC	0.25 AC
10	0.40 AC	0.33 AC
11	0.29 AC	0.26 AC
13	0.25 AC	0.22 AC
14	0.35 AC	0.29 AC
15	0.25 AC	0.21 AC
16	0.39 AC	0.28 AC

Approved Construction Plan		
Name	Date	
Planning <i>Dawn Brubaker</i>	8/6/2013	
Traffic <i>W. Sullivan</i>	8/14/13	
Fire <i>Q. E. O.</i>	8/28/2013	

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 8/22/13 PERMIT # 20130601
 SIGNED *[Signature]*

1 inch

SCALE: 1" = 50'

LEGEND	
	PROPERTY LINE
	RIGHT OF WAY
	PROPOSED STORM DRAIN
	PROPOSED 6" WATER LINE
	PROPOSED 6" SANITARY SEWER
	EASEMENT
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING TREE TO BE SAVED
	PROPOSED TOP OF CURB
	PROPOSED FINISH GRADE
	INLET PROTECTION

BY	DATE	DESCRIPTION
JPN	03/27/13	REVISED INFILTRATION AREA #1 & #2, REVISED INFILTRATION AREA #3, REVISED SECTION OF SD PIPE, REVISED DNEZ, BASH AREAS CH#8, CH#9, CH#11 AND CH#12
JPN	03/07/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS

DRAINAGE AREA PLAN

THE LIGHTHOUSE APARTMENTS
 4926 RANDALL PARKWAY
 WILMINGTON, NORTH CAROLINA

OWNER: RB-WILMINGTON, LLC A.A. DELAWARE LIMITED LIABILITY COMPANY 2234 W. NORTH AVE. CHICAGO, IL 60647

NORRIS & TUNSTALL
 CONSULTING ENGINEERS, P.C.
 1127 FLORAL PARKWAY, SUITE 400 WILMINGTON, NC 28403
 PHONE (910) 343-9653 FAX (910) 343-9604
 N&T LICENSE NO. C-3641

12080

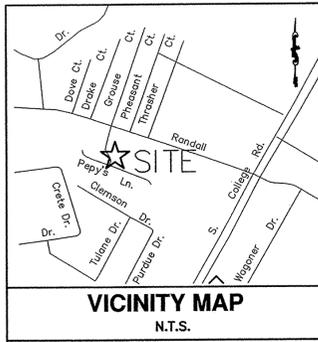
DES. JPN
 CKD. JPN
 DRWN. EDB

DATE 03/07/13

DA

THE LIGHTHOUSE APARTMENTS

WILMINGTON, NORTH CAROLINA



RS	DATE	DESCRIPTION	BY
R3	07/03/13	REPRINTED TO SHOW UPDATES REMAINING	JPN
R2	03/14/13	REVISED COVER SHEET AND SHEET INDEX	JPN
R1	03/07/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS	JPN

© 2013 NORRIS & TUNSTALL

COVER SHEET
THE LIGHTHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
 RB-WILMINGTON, LLC A A
 DELAWARE LIMITED
 LIABILITY COMPANY
 2234 W. NORTH AVE.
 CHICAGO, IL 60647

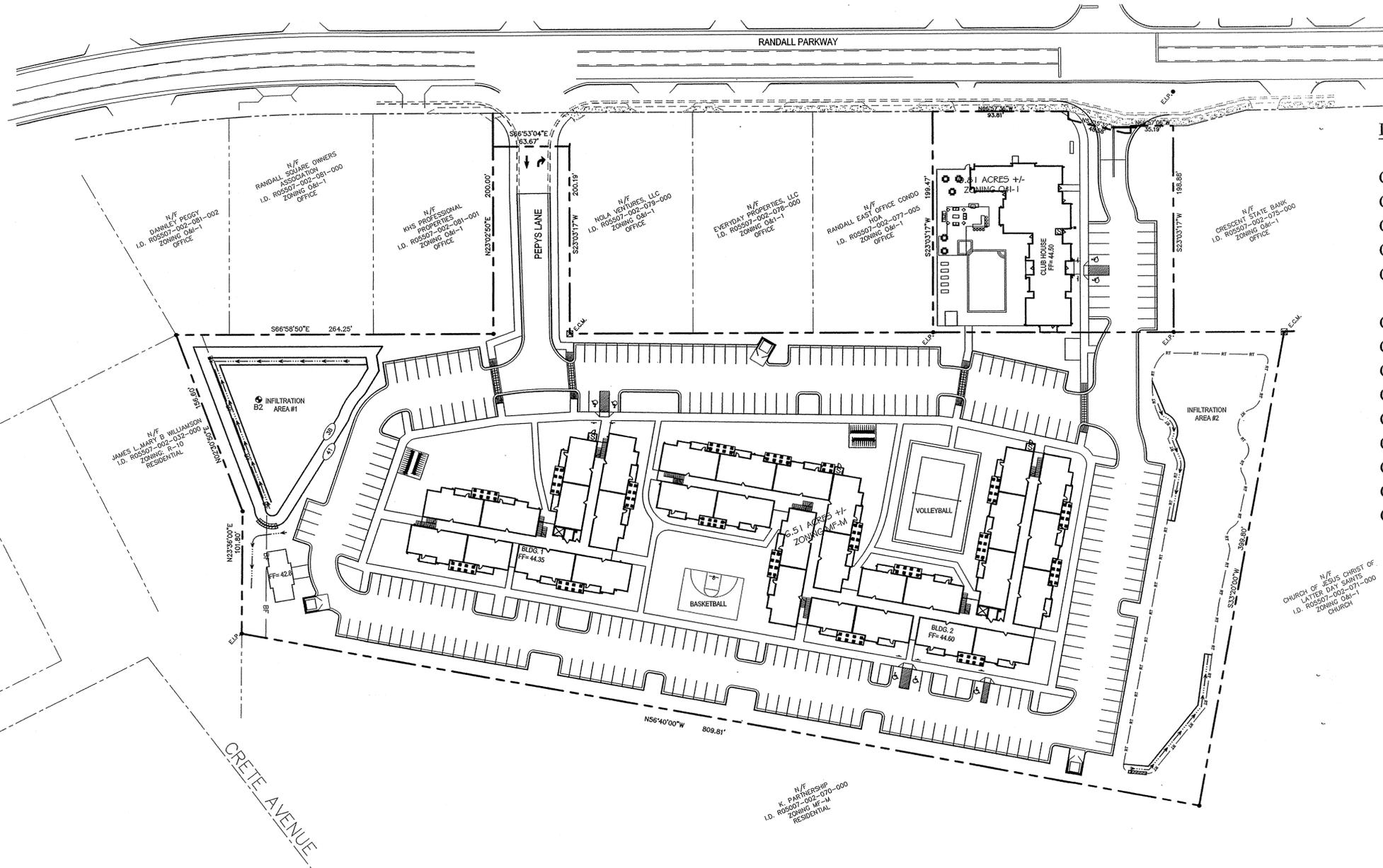
NORRIS & TUNSTALL
CONSULTING ENGINEERS, P.C.
 1127 FLORAL PARKWAY, SUITE 400 PHONE (910) 343-9653
 WILMINGTON, NC, 28403 FAX (910) 343-9604
 N&T LICENSE NO. C-3641

12080

DES. JPN
 CKD. JPN
 DRWN. EDB
 DATE 04/11/13



CO



INDEX OF SHEETS

C0	COVER SHEET
C1	EXISTING CONDITIONS
C2	DEMO SHEET
C3	SITE PLAN
C4	GRADING, DRAINAGE & EROSION CONTROL PLAN
C4.1	ROOF DRAIN PLAN
C5	UTILITY PLAN
C6	SEWER PLAN & PROFILE
C7	DETAILS
C7.1	DETAILS
C8	POND DETAILS
C9	CFPUA DETAILS
C10	CFPUA DETAILS
C11	CFPUA DETAILS

Approved Construction Plan

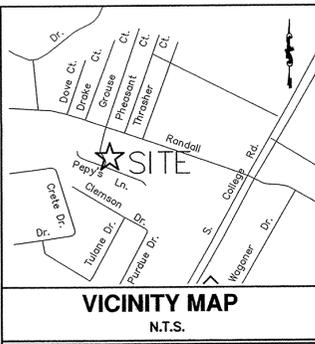
Name	Date
Planning <i>Dawn M. Drayton</i>	8/10/2013
Traffic <i>Will Spivey</i>	8/21/13
Fire <i>[Signature]</i>	8-20-2013

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

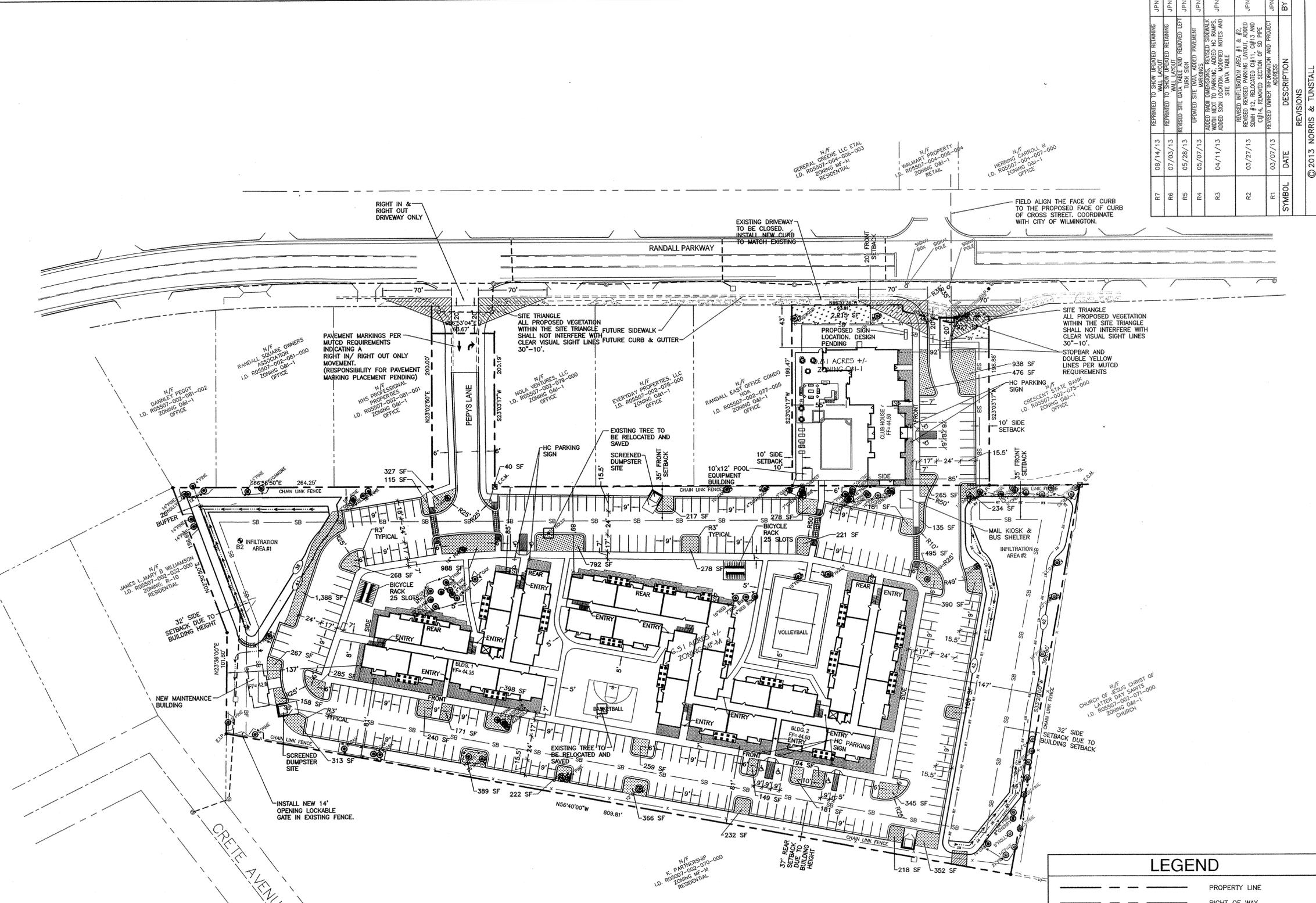
STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 8/22/13 PERMIT # 2013016R
 SIGNED *[Signature]*

1 inch





SITE DATA TABLE			
SITE AREA:	318,859 SF / 7.32 AC	(6.51 AC)	
PARCEL ID#:	4922 PEPSY LN. RO5507-002-080-000	(0.81 AC)	
ZONING:	4926 RANDALL PKWY. RO5507-002-076-000	(MF-M)	
	RO5507-002-080-000	(O&I-1)	
	RO5507-002-076-000	(O&I-1)	
DISTURBED AREA: 316,652.62 SF / 7.27 ACRES			
15 TREES PER DISTURBED ACRE IS REQUIRED ON THE SITE. = 110 TREES			
CAMA LAND USE: URBAN			
SOIL TYPES ON SITE: LEON			
BUILDING SETBACKS: MF-M			
	REQUIRED	ACTUAL	
	FRONT: 35'	FRONT: 85'/89'	
	* SIDE: 32'	SIDE: 137'/147'	
	* REAR: 37'	REAR: 81'	
	* INCREASED DUE TO BUILDING HEIGHT		
BUILDING SETBACKS: O&I-1			
	REQUIRED	ACTUAL	
	FRONT: 20'	FRONT: 43'/133'	
	* SIDE: 10'	SIDE: 85'/10'	
	* REAR: N/A	REAR: N/A	
	* INCREASED DUE TO BUILDING HEIGHT		
BUILDINGS 1 & 2: TYPE 3B CONSTRUCTION			
CLUB HOUSE BUILDING: TYPE 5A & 5B CONSTRUCTION			
PROPOSED BUILDING:	USES:	HEIGHT:	SIZE:
BLDG. 1	4 STORY RESIDENTIAL	56'	14,385 SF/FLOOR
BLDG. 2	4 STORY RESIDENTIAL	56'	31,136 SF/FLOOR
CLUB HOUSE	RECREATION/PERSONAL SERVICES	25'	6,134 SF
RECREATION PERSONAL SERVICES 81 SF			
MAINTENANCE BUILDING 744 SF			
POOL EQUIPMENT BUILDING 120 SF			
BUS SHELTER/MAIL KIOSK 234 SF			
TOTAL FOOTPRINT OF BUILDINGS: 52,753 SF			
MAX DENSITY: 17 UNITS / AC			
ACTUAL DENSITY: 124 UNITS / 7.32 AC = 16.94 UNITS / AC			
TOTAL FOOTPRINT OF BUILDINGS: 52,753 SF			
MAX LOT COVERAGE: 30%			
ACTUAL LOT COVERAGE: 16.54%			
UNITS PER BUILDING:			
BUILDING 1:	12-2 BR UNITS & 28-3 BR UNITS		
BUILDING 2:	12-2 BR UNITS & 72-3 BR UNITS		
REQUIRED PARKING:			
2.25 SP. PER 3 BED UNITS			
2.0 SP. PER 2 BED UNITS			
1 SP. PER 400 SF MIN., 1 SP. PER 225 SF MAX.			
REQUIRED PARKING:			
3 BED UNITS = 2.25(100) = 225 SP.			
2 BED UNITS = 2.0(24) = 48 SP.			
(81 SF/400) = 1 SP.			
TOTAL REQUIRED PARKING: 274 SP. (INCLUDING 7 HC)			
PARKING PROVIDED: 277 SP. (INCLUDING 7 HC)			
BICYCLE PARKING: 274 PARKING SPACES = MIN. 15 PROVIDED: 50 BICYCLE SPACES			
IMPERVIOUS AREAS: PROPOSED			
BLDG. 1	14,385 SF		
BLDG. 2	31,136 SF		
CLUB HOUSE	6,134 SF		
(INCLUDES SALES OFFICE & MODEL UNIT)			
MAINTENANCE BUILDING	744 SF		
POOL EQUIPMENT BUILDING	120 SF		
BUS SHELTER/MAIL KIOSK	234 SF		
ASPHALT	96,621 SF		
SIDEWALK	22,005 SF		
BASKETBALL COURT	1,750 SF		
ACTIVITY CENTER PATIO	8,165 SF		
TOTAL IMPERVIOUS AREA: 181,294 SF / 4.16 AC			
% IMPERVIOUS: 56.86%			
IMPERVIOUS AREAS: EXISTING			
ALL EXISTING IMPERVIOUS SURFACES TO BE REMOVED			
OPEN SPACE			
REQUIRED: 35% OF SITE AREA LESS INFILTRATION AREA #2 (318,859 SF - 21,127 SF) x .35 = 104,206 SF			
PROVIDED OPEN SPACE: 104,743 SF / 35.18%			
ACTIVE PROVIDED: 41,167 SF			
PASSIVE PROVIDED: 63,576 SF			
SHADED AREA REQUIRED:			
REQUIRED: 20% x 96,621 SF = 19,325 SF			
PROVIDED: SEE LANDSCAPE PLAN			
ISLAND AREA PROVIDED: 12,688 SF			
PRIMARY STREET YARD REQUIRED: (200 LF - 28 LF)18 = 3,096 SF			
PRIMARY STREET YARD PROVIDED: 3,142 SF			
FOUNDATION PLANTINGS REQUIRED: BLDG. 1			
FRONT:	(187'(L)x44'(H))(12) = 987.4 SF		
SIDE:	(55'(L)x44'(H))(12) = 290.4 SF		
REAR:	(95'(L)x44'(H))(12) = 501.6 SF		
REAR:	(55'(L)x44'(H))(12) = 290.4 SF		
FOUNDATION PLANTINGS PROVIDED: BLDG. 1			
FRONT:	1,860 SF		
SIDE:	307 SF		
REAR:	586 SF		
REAR:	320 SF		
FOUNDATION PLANTINGS REQUIRED: BLDG. 2			
FRONT:	(218'(L)x44'(H))(12) = 1,151.0 SF		
SIDE:	(175'(L)x44'(H))(12) = 924.0 SF		
REAR:	(55'(L)x44'(H))(12) = 290.4 SF		
REAR:	(167'(L)x44'(H))(12) = 881.8 SF		
FOUNDATION PLANTINGS PROVIDED: BLDG. 2			
FRONT:	2,040 SF		
SIDE:	1,425 SF		
REAR:	427 SF		
REAR:	910 SF		
FOUNDATION PLANTINGS REQUIRED: CLUB HOUSE			
FRONT:	(131'(L)x12'(H))(12) = 188.6 SF		
SIDE:	(37'(L)x12'(H))(12) = 53.3 SF		
FOUNDATION PLANTINGS PROVIDED: CLUB HOUSE			
FRONT:	1,130 SF		
SIDE:	129 SF		



Approved Construction Plan		
Name	Date	
Planning: <i>Dammichroff</i>	8/20/13	
Traffic: <i>W. S. ...</i>	8/21/13	
Fire: <i>...</i>	8/20/13	

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE *8/22/13* PERMIT # *2013016RL*
 SIGNED *[Signature]*

1 inch

SCALE: 1" = 50'

- NOTE:
- USE 4" HIGH CURB & GUTTER THROUGHOUT PROJECT TO DEFINE PAVEMENT EDGE EXCEPT WHERE PAVEMENT ABUTS SIDEWALK. IN THOSE LOCATIONS USE TURN DOWN SIDEWALK TO DEFINE PAVEMENT EDGE.
 - TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.

LEGEND	
	PROPERTY LINE
	RIGHT OF WAY
	SETBACK
	BUFFER
	STREET YARD
	24" CURB & GUTTER
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING TREE TO BE RELOCATED AND SAVED
	EXISTING TREE TO BE SAVED
	FOUNDATION PLANTING
	STREET YARD / LANDSCAPING

BY	DATE	DESCRIPTION
R7	08/14/13	REPRINTED TO SHOW UPDATED REPAIRING
R6	07/05/13	REPRINTED TO SHOW UPDATED REPAIRING
R5	05/28/13	REVISION TO SHOW LAYOUT
R4	05/07/13	UPDATED SITE DATA, ADDED PAVEMENT MARKINGS
R3	04/11/13	ADDED SIGN LOCATIONS, MODIFIED SIGN LOCATIONS, ADDED SIGN DATA TABLE
R2	03/27/13	REVISED INFILTRATION AREA #1 & #2, SWAM #12, REMOVED CH11, CH13 AND CH14, REMOVED SECTION OF SD PFE
R1	03/07/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS

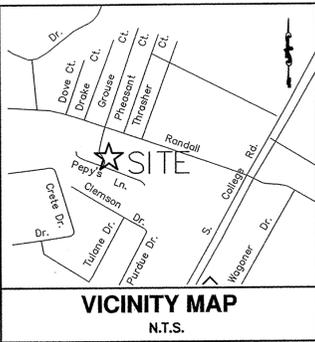
SITE PLAN
THE LIGHTHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
 RB-WILMINGTON, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 2234 W. NORTH AVE.
 CHICAGO, IL 60647

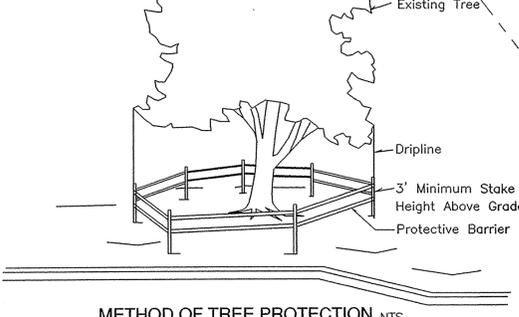
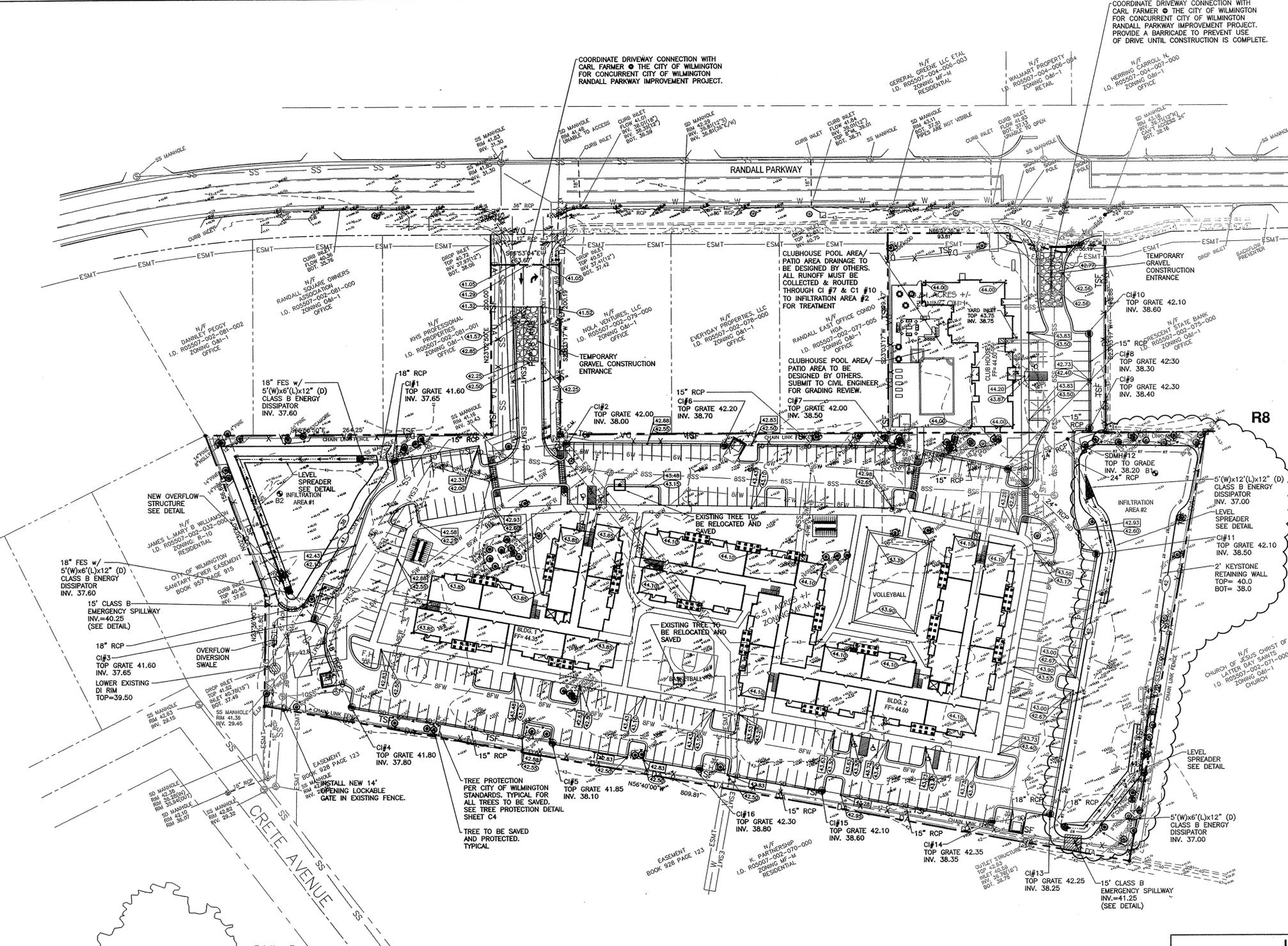
NORRIS & TUNSTALL
 CONSULTING ENGINEERS, P.C.
 1127 FLORAL PARKWAY, SUITE 400
 WILMINGTON, NC, 28403
 PHONE (910) 343-9653
 FAX (910) 343-9604
 N&T LICENSE NO. C-3641

12080
 DES. JPN
 CDD. JPN
 DRWN. EDB
 DATE 04/11/13

C3



- CITY OF WILMINGTON STANDARD NOTES:**
- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1-800-632-4949.
 - PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING. ALL TREE PROTECTION MUST BE MAINTAINED DURING CONSTRUCTION.
 - ALL PAVEMENT MARKINGS IN PUBLIC RIGHT-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
 - THE SUBDIVIDER SHALL INSTALL TRAFFIC SIGNALS, TRAFFIC SIGNS, STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION, DEAD-END BARRICADES AND MARKINGS, AND OTHER REQUIRED TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CITY'S TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL.
 - TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
 - CONTACT TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. CALL TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
 - ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, OR CURBING WILL BE REPLACED.
 - CONTACT TRAFFIC ENGINEERING AT 341-7893 TO DISCUSS STREET LIGHTING OPTIONS.
 - THE NUMBER AND SPACING OF DRIVEWAYS FOR ALL INTERCONNECTED SITES WILL BE DETERMINED BY THE COMBINED FRONTAGE OF THE INTERCONNECTED PROPERTIES.
 - ALL SITE LIGHTING SHALL BE LOCATED AND INSTALLED SO AS NOT TO SHINE DIRECTLY ONTO ADJACENT PREMISES. UNRESTRICTED LIGHTING IS LIMITED TO A HEIGHT OF TEN (10) FEET AND 90 DEGREE CUTOFF LIGHTING IS LIMITED TO FIFTEEN (15) FEET.
 - MECHANICAL EQUIPMENT AND TRASH RECEPTACLES WILL BE SCREENED BY AN EIGHT (8) FEET HIGH OPAQUE FENCE.
 - PROJECT SHALL COMPLY WITH CAPE FEAR PUBLIC UTILITIES AUTHORITY CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL.
 - IF THE CONTRACTOR DESIRES WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
 - ANY IRRIGATION SYSTEM SHALL COMPLY WITH THE CAPE FEAR PUBLIC UTILITIES AUTHORITY CROSS CONNECTION CONTROL REGULATIONS.
 - ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CAPE FEAR PUBLIC UTILITIES AUTHORITY WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFOCOORR OR ASSE.
 - WHEN PVC WATER MAINS AND/OR POLYETHYLENE SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 SINGLE STRAND INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND STRAPPED TO THE PIPES WITH DUCT TAPE. THE INSULATED WIRE IS TO BE STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
 - CONTRACTOR SHALL COORDINATE ALL UTILITIES WITH CFPWA PRIOR TO CONSTRUCTION.
 - ALL TRAFFIC CONTROL SIGNS AND MARKING OFF THE RIGHT OF WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
 - ALL PARKING MARKINGS AND LANE ARROWS WITHIN THE PARKING AREA SHALL BE WHITE.
 - INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS.
 - TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPPING.
 - A LANDSCAPE PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.
 - TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
 - CALL 341-5888 TO SEE IF A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
 - PROVIDE A LANDSCAPING PLAN FOR THE STORMWATER BASIN(S) AS IDENTIFIED IN SD 15-16.
 - THE IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZE SENSOR.
 - DEPRESS LANDSCAPE AREAS WITH CURB CUT TO ALLOW RUNOFF INTO THESE AREAS. SEE PLAN.
 - ANY GROUND LEVEL MECHANICAL EQUIPMENT, HVAC AND ELECTRICAL PANELS MUST BE SCREENED FROM THE VIEW OF ANY ADJACENT PROPERTY OR RIGHT OF WAY.
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED. PLEASE COORDINATE WITH ENGINEERING FOR CONSTRUCTION SEQUENCING FOR RANDALL PARKWAY WIDENING EFFORTS AND POTENTIAL LIMITATIONS ON CUTS TO NEW ASPHALT THAT COULD IMPACT THIS DEVELOPMENT.



CLEARLY mark the trees to be saved prior to construction and erect a protective barrier at the dripline.
 Dripline—The area of soil directly beneath the tree extending out to the tips of the outermost branches.

Approved Construction Plan

Name	Date
Planning <i>Downm Drafting</i>	8/20/13
Traffic <i>W. J. Sander</i>	8/21/13
Fire <i>[Signature]</i>	8/21/13

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 8/22/13 PERMIT #20130621
 SIGNED *[Signature]*

1 inch

SCALE: 1" = 50'

LEGEND

---	PROPERTY LINE
---	RIGHT OF WAY
SD	PROPOSED STORM DRAIN
6W	PROPOSED 6" WATER LINE
6SS	PROPOSED 6" SANITARY SEWER
RT	2' KEYSTONE RETAINING WALL
ESMT	EASEMENT
-42-	EXISTING CONTOUR
X X	TEMPORARY SILT FENCE
DA	DISTURBED AREA
43.54	EXISTING SPOT ELEVATION
43.10	EXISTING TREE TO BE SAVED
43.60	PROPOSED TOP OF CURB
43.10	PROPOSED FINISH GRADE
⊙	INLET PROTECTION

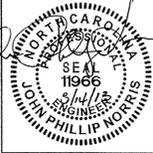
DATE	SYMBOL	DESCRIPTION	BY
06/25/13	JPN	SEE THE CITY OF WILMINGTON STANDARD SPECIFICATIONS AND WMO INLET, MODIFIED HANDDAP RAMP	JPN
05/22/13	JPN	ADDED SECOND TEMPORARY GRAVEL HANDDAP RAMP	JPN
04/11/13	JPN	REVISED SIDEWALK WIDTHS AND REVISED REVISION DRAINAGE	JPN
04/04/13	JPN	REVISED DRIVEWAY GRIDES	JPN
03/27/13	JPN	REVISED INFILTRATION AREA #1 & #2, REVISED PARKING LAYOUT, ADDED SIDEWALK, REVISED SECTION OF SD PIPE, CH-4 REMOVED SECTION OF SD PIPE	JPN
03/07/13	JPN	REVISED OWNER INFORMATION AND PROJECT ADDRESS	JPN

GRADING, DRAINAGE AND EROSION CONTROL PLAN
THE LIGHTHOUSE APARTMENTS
 4926 RANDALL PARKWAY
 WILMINGTON, NORTH CAROLINA

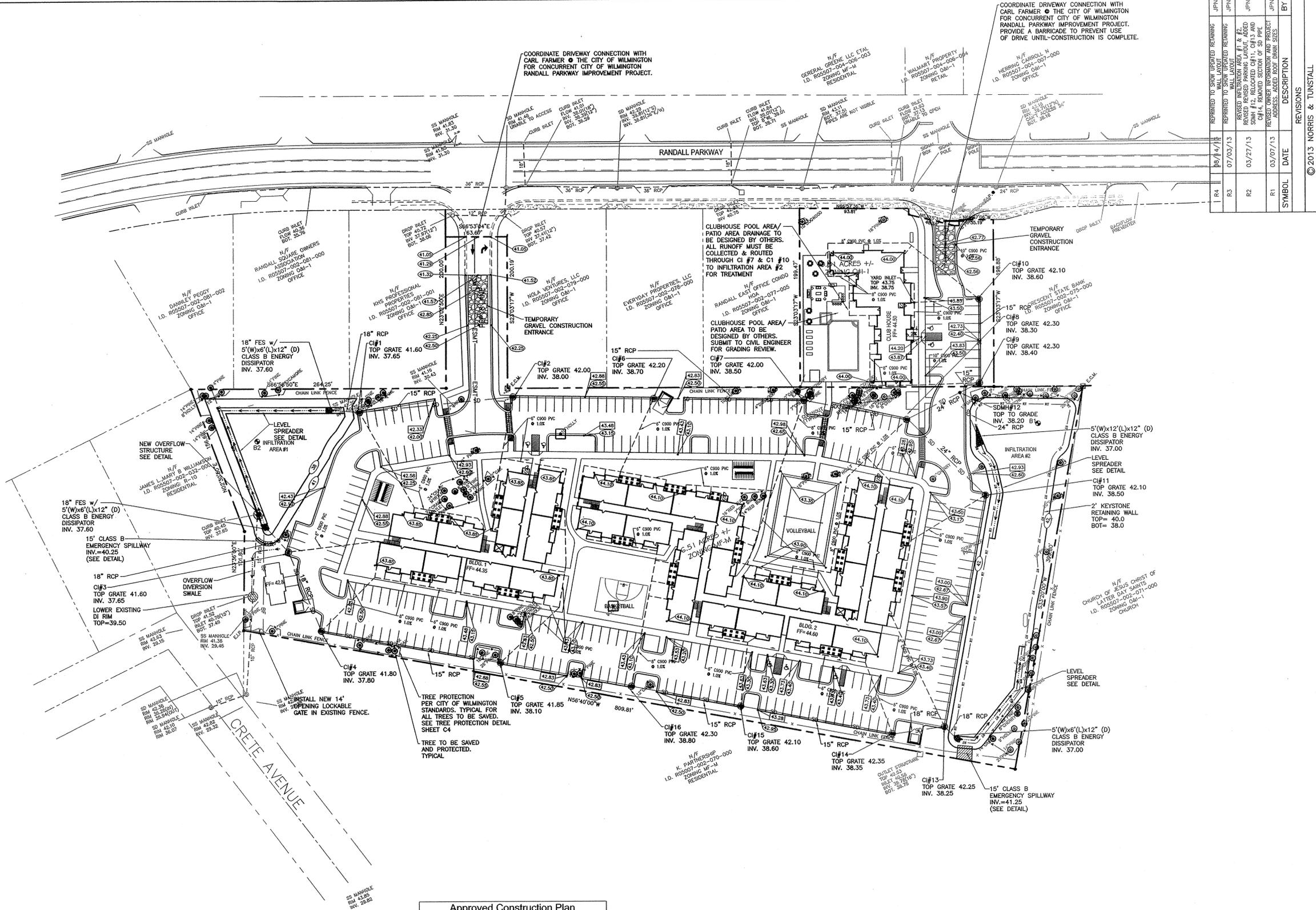
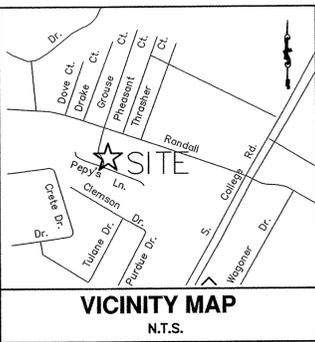
OWNER:
 RB-WILMINGTON, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 2234 W. NORTH AVE.
 CHICAGO, IL 60647

NORRIS & TUNSTALL
 CONSULTING ENGINEERS, P.C.
 1127 FLORAL PARKWAY, SUITE 400
 WILMINGTON, NC 28403
 PHONE (910) 343-9653
 FAX (910) 343-9604
 N&T LICENSE NO. C-3641

12080
 DES. JPN
 CHK. JPN
 DRWN. EDB
 DATE 04/11/13



C4



NO.	DATE	DESCRIPTION	BY
R4	08/14/13	REPRINTED TO SHOW UPDATED RETAINING WALL LAYOUT	JPN
R3	07/03/13	REPRINTED TO SHOW UPDATED RETAINING WALL LAYOUT	JPN
R2	03/27/13	REVISED INFILTRATION AREA #1 & #2. SOME #12, RELOCATED CI#11, CI#13 AND CI#14, REMOVED SECTION OF SD PIPE. REVISED OWNER INFORMATION AND PROJECT ADDRESS. ADDED ROOF DRAIN SIZES.	JPN
R1	03/07/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS. ADDED ROOF DRAIN SIZES.	JPN
		REVISIONS	

© 2013 NORRIS & TUNSTALL

ROOF DRAIN PLAN
THE LIGHTHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
 RB-WILMINGTON, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 2234 W. NORTH AVE.
 CHICAGO, IL 60647

NORRIS & TUNSTALL
CONSULTING ENGINEERS, P.C.
 1127 FLOREAL PARKWAY, SUITE 400
 WILMINGTON, NC 28403
 PHONE (910) 343-9653
 FAX (910) 343-9604
 N&T LICENSE NO. C-3641

12080

DES. JPN
 CVD. JPN
 DRWN. EDB
 DATE 04/11/13

* NOTE: MINIMUM SIZE FOR ALL ROOF DRAIN LINES SHALL BE 6" C900 PVC.

LEGEND	
---	PROPERTY LINE
---	RIGHT OF WAY
SD	PROPOSED STORM DRAIN
---	PROPOSED ROOF DRAIN
⊙	INLET PROTECTION

Approved Construction Plan	
Name	Date
Planning <i>Dawn M. Duffley</i>	8/20/13
Traffic <i>N. J. Sullivan</i>	8/21/13
Fire <i>R. E. B. B.</i>	8/28/13

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

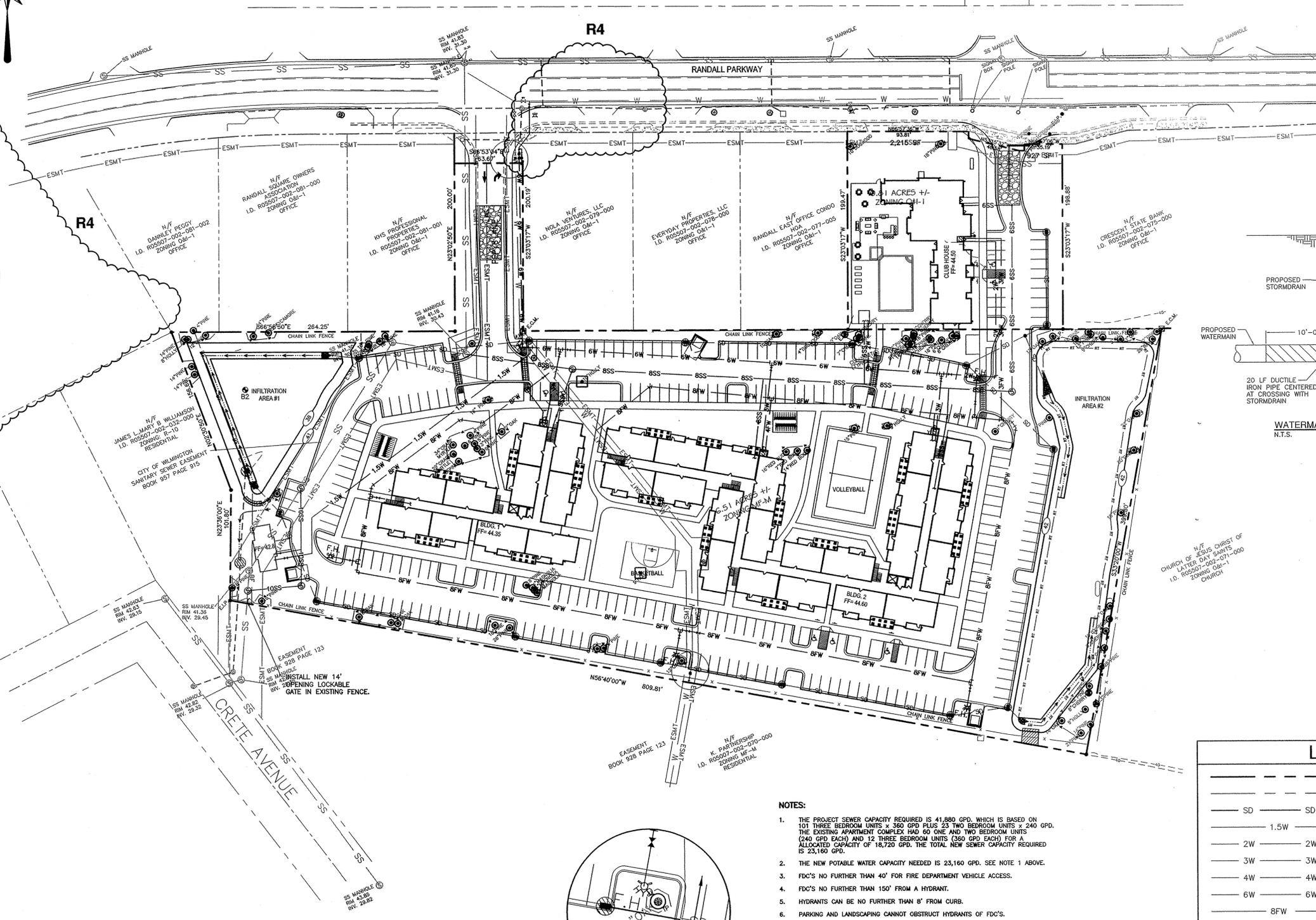
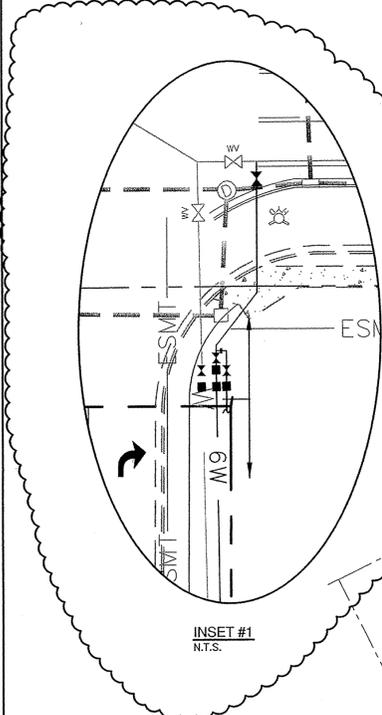
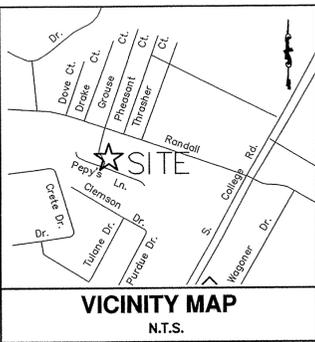
1 inch

STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 8/23/13 PERMIT # 2013016RL
 SIGNED *[Signature]*

SCALE: 1" = 50'
 0 50 100 150



C4.1



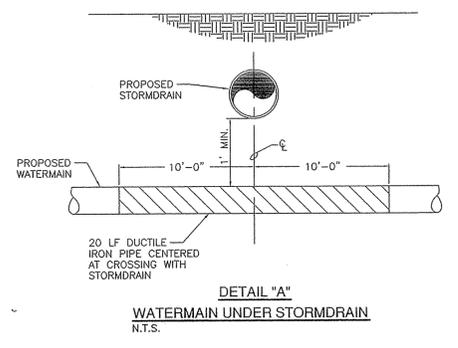
DATE	DESCRIPTION	BY
05/14/13	REPERATED TO SHOW UPDATED RETAINING WALL LAYOUT	JPN
07/03/13	CHANGE 8" WATER TAPPING LOCATION AND 2" IRRIGATION LINE CONFIGURATION	JPN
06/11/13	ADDED IRRIGATION METER AND LINE, ADDED DETAIL "A", ADDED INSET #1 & #2	JPN
05/08/13	REVISED INFILTRATION AREA #1 & #2, REVISED SANITARY SEWER AND 2" IRRIGATION LINE, ADDED SANITARY SEWER CHAIN LINK FENCE, CHAIN LINK FENCE, REMOVED SECTION OF SD PIPE	JPN
03/27/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS	JPN
03/07/13	DATE	JPN

© 2013 NORRIS & TUNSTALL
REVISIONS

UTILITY PLAN
THE LIGHTHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
RB-WILMINGTON, LLC
A DELAWARE LIMITED
LIABILITY COMPANY
2234 W. NORTH AVE.
CHICAGO, IL 60647

NORRIS & TUNSTALL
CONSULTING ENGINEERS, P.C.
1127 FLORAL PARKWAY, SUITE 400 PHONE (910) 343-9653
WILMINGTON, NC, 28403 FAX (910) 343-9604
N&T LICENSE NO. C-3641



CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS
I.D. R05507-002-071-000
ZONING OSM-1
CHURCH

Approved Construction Plan	
Name	Date
Planning <i>Dawn D. Doughty</i>	8/20/13
Traffic <i>W. J. Shubert</i>	8/20/13
Fire <i>D. B. S.</i>	8-20-13

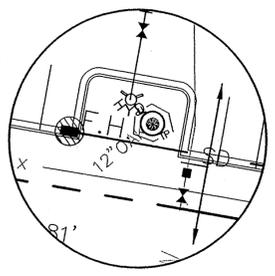
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 8/22/13 PERMIT # 201301681
SIGNED *[Signature]*

1 inch

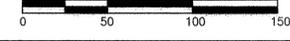
NOTES:

- THE PROJECT SEWER CAPACITY REQUIRED IS 41,880 GPD, WHICH IS BASED ON 101 THREE BEDROOM UNITS x 360 GPD PLUS 23 TWO BEDROOM UNITS x 240 GPD. THE EXISTING APARTMENT COMPLEX HAD 60 ONE AND TWO BEDROOM UNITS (240 GPD EACH) AND 12 THREE BEDROOM UNITS (360 GPD EACH) FOR A TOTAL CAPACITY OF 18,720 GPD. THE TOTAL NEW SEWER CAPACITY REQUIRED IS 23,160 GPD.
- THE NEW POTABLE WATER CAPACITY NEEDED IS 23,160 GPD. SEE NOTE 1 ABOVE.
- FDC'S NO FURTHER THAN 40' FOR FIRE DEPARTMENT VEHICLE ACCESS.
- FDC'S NO FURTHER THAN 150' FROM A HYDRANT.
- HYDRANTS CAN BE NO FURTHER THAN 8' FROM CURB.
- PARKING AND LANDSCAPING CANNOT OBSTRUCT HYDRANTS OR FDC'S.
- NEW HYDRANTS MUST BE OPERATIONAL PRIOR TO COMBUSTIBLE MATERIALS BROUGHT ONTO THE CONSTRUCTION SITE.
- AN ALL WEATHER DRIVING SURFACE MUST BE MAINTAINED FOR EMERGENCY VEHICLE ACCESS AT ALL TIMES DURING CONSTRUCTION.
- ALL PRIVATE FIRE LINES WILL REQUIRE A SEPARATE PERMIT FROM WILMINGTON FIRE AND LIFE SAFETY 910-343-0666 FOR FURTHER INFORMATION.



INSET #2
N.T.S.

SCALE: 1" = 50'



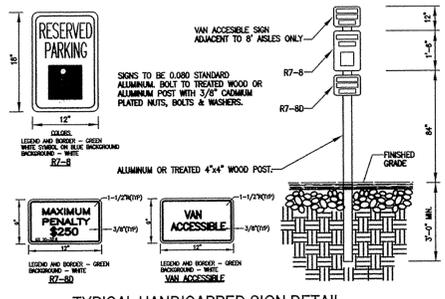
LEGEND

---	PROPERTY LINE
---	RIGHT OF WAY
---	PROPOSED STORM DRAIN
---	PROPOSED 1.5" WATER LINE
---	PROPOSED 2" WATER LINE
---	PROPOSED 3" WATER LINE
---	PROPOSED 4" WATER LINE
---	PROPOSED 6" WATER LINE
---	PROPOSED 8" FIRE LINE
---	PROPOSED 4" SANITARY SEWER
---	PROPOSED 6" SANITARY SEWER
---	PROPOSED 8" SANITARY SEWER
---	PROPOSED 10" SANITARY SEWER
---	EXISTING EASEMENT
---	PROPOSED EASEMENT
---	2 WAY CLEANOUT. SEE DETAIL SHEET C7
---	NEW FIRE HYDRANT
---	EXISTING TREE TO BE SAVED

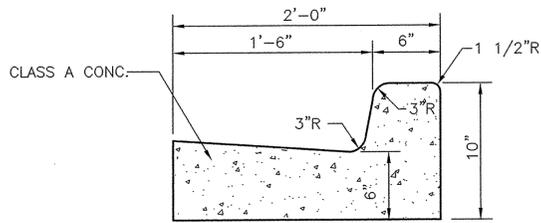
12080
DES. JPN
CND. JPN
DRWN. EDB
DATE 03/07/13



C5

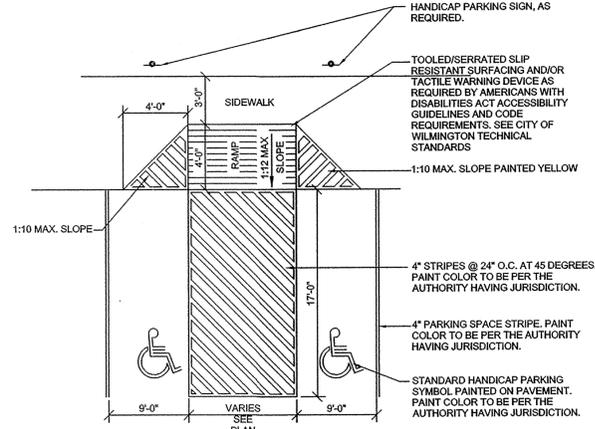


TYPICAL HANDICAPPED SIGN DETAIL
NTS



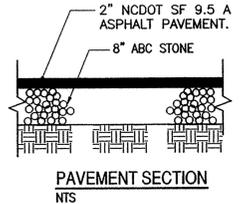
24" FLOW LINE CURB SECTION
NTS

NOTE: CURB TYPE DEPENDS ON GRADES SHOWN ON GRADING PLAN. GRADES INDICATING FALL AWAY FROM CURB SHALL BE SPILL OFF TYPE CURB. GRADES INDICATING CURB ACCEPTING FLOW SHALL BE FLOW LINE TYPE.



HANDICAP PARKING DETAIL
NTS

NOTE: 1. ALL HANDICAPPED RAMP AND ACCESS AISLES SHALL MEET ALL CODES AND ADAAG REGULATIONS. 2. PAVEMENT MARKINGS, SIGNS OR OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION AND/OR INTERPRETATION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

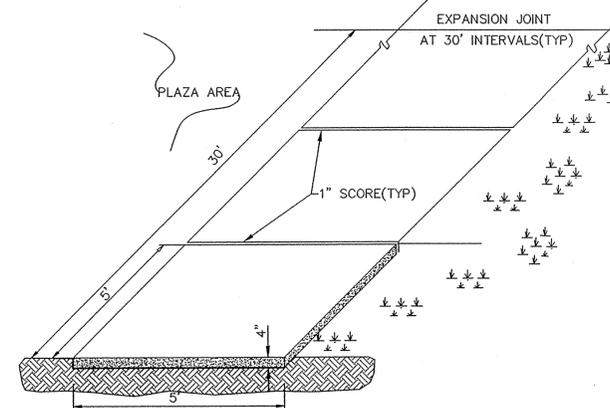


PAVEMENT SECTION
NTS

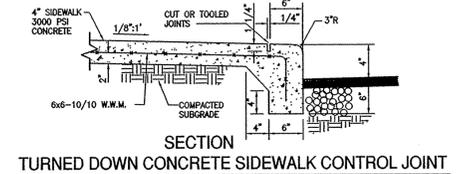
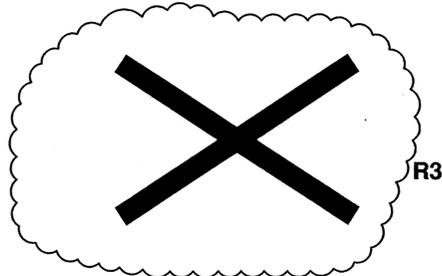
- TEMPORARY/PERMANENT GRASS SPECIFICATION
- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS.
 - RIP THE ENTIRE AREA TO A 6 INCH DEPTH.
 - REMOVE ALL ROCKS, ROOTS AND OTHER OBSTRUCTIONS LEAVING SURFACES SMOOTH AND UNIFORM.
 - APPLY AGRICULTURAL LIME AND FERTILIZER UNIFORMLY AND MIX WITH SOIL. LIME: 45 LBS. PER 1000 S.F. FERTILIZER: 17 LBS. PER 1000 S.F.
 - CONTINUE TILLAGE UNTIL A WELL PULVERIZED, FIRM, UNIFORM SEED BED IS PREPARED 4-6 INCHES DEEP.
 - SEED ON A FRESHLY PREPARED SEED BED AND COVER SEED LIGHTLY. 2 - 3 LBS PER 1000 S.F. (SEE MIXTURE BELOW)
 - MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH. GRAIN STRAW & HAY AT 75 TO 100 LBS PER 1000 S.F. WOOD CHIPS AT 500 LBS. PER 1000 S.F. JUTE & MESH AS PER MANUFACTURER
 - ASPHALT FOR ANCHORING MULCH SHALL BE TYPE SS-1 EMULSION AND APPLIED AT A RATE OF 1000 GAL. PER ACRE FOR SLOPE STABILIZATION, AND 150 GAL. PER TON OF STRAW FOR ANCHORING STRAW.
 - INSPECT ALL SEEDING AREAS AND MAKE NECESSARY REPAIRS OR RESEED WITHIN THE PLANTING SEASON, IF POSSIBLE. IF GRASS 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.
 - SEED FOR TEMPORARY AND PERMANENT APPLICATIONS SHALL BE:
 - 20% CARPET GRASS
 - 24% BERMUDA GRASS
 - 20% TURF FESCUE 10% CREEPING RED FESCUE
 - 24% ANNUAL RYE GRASS
- *BERMUDA SEED SHALL BE HULLED FOR WARM WEATHER PLANTING. PURITY OF SEED SHALL BE A MIN. OF 98% AND GERMINATION SHALL BE A MIN. OF 85%.
- ALL DISTURBED AREA SHALL BE SEEDED WITHIN 15 DAYS OF THE COMPLETION OF GRADING. CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENIED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS, OTHER SEEDING SCHEDULES MAY BE POSSIBLE.

NPDES STABILIZATION TIMEFRAMES

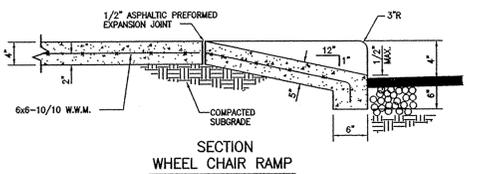
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES



STANDARD SIDEWALK DETAIL
NTS SD 8-15

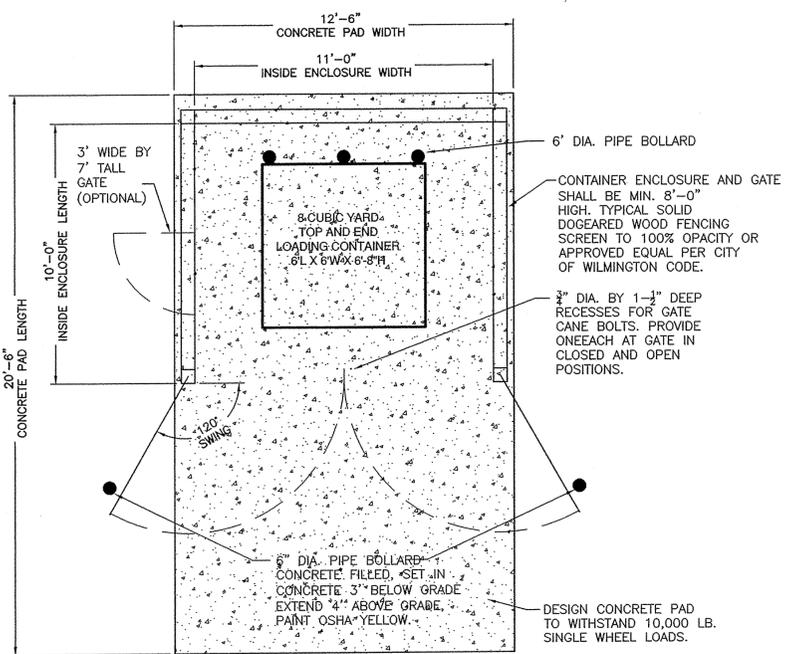


SECTION TURNED DOWN CONCRETE SIDEWALK CONTROL JOINT
NTS

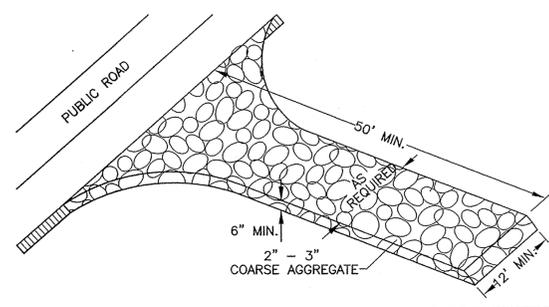


TYPICAL TURNED DOWN SIDEWALK AND WHEEL CHAIR RAMP DETAIL
NTS

- EROSION CONTROL NOTES AND MAINTENANCE PLAN:
- INSTALL EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION OR AS SOON THEREAFTER AS POSSIBLE. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
 - MAINTAIN THE GRAVEL CONSTRUCTION ENTRANCES IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THE CONTRACTOR SHALL INSPECT THE CONSTRUCTION ENTRANCES ON A DAILY BASIS. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL NO. 4 STONE. ANY OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS SHALL BE REMOVED IMMEDIATELY.
 - SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAP AND BLOCK AND GRAVEL INLET PROTECTION DEVICE WHEN STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS PROPERLY.
 - INSTALL EROSION CONTROL MEASURES AROUND THE DROP INLETS AS SHOWN ON THE PLANS TO TRAP SILT DURING CONSTRUCTION. INSPECT THE EROSION CONTROL AROUND THE INLETS AFTER EACH RAIN AND MAKE REPAIRS IMMEDIATELY. REMOVE SEDIMENT WHEN IT BECOMES 0.50' DEEP TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE AND APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE DROP INLETS.
 - SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES 0.5 FT DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.
 - SEDIMENT BASINS ARE TO BE CLEANED OUT WHEN THE DESIGN STORAGE CAPACITY HAS BEEN 3/4 FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED.
 - NO CUT OR FILL SLOPES SHALL EXCEED A SIDE SLOPE OF 1 VERTICAL TO 3 HORIZONTAL UNLESS OTHERWISE SPECIFIED ON THE PLAN. ALL SLOPES SHALL BE SEEDED AND STABILIZED WITHIN 21 CALENDAR DAYS.
 - ALL DISTURBED AREAS SHALL BE SEEDED WITHIN 15 WORKING DAYS OF DISTURBANCE. ALL SEEDING AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
 - MORE STRINGENT MEASURES SHALL BE USED TO HALT EROSION IF THOSE SHOWN ON THIS PLAN ARE NOT EFFECTIVE.
 - ALL EROSION SHALL BE CONTROLLED INCLUDING SIDE SLOPES BEFORE THE PROJECT IS COMPLETED.
 - REMOVE TEMPORARY MEASURES UPON COMPLETION OF PROJECT. ALL PERMANENT MEASURES WILL BE WELL ESTABLISHED BEFORE PROJECT



CONTAINER ENCLOSURE PLAN
NTS



TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE
NTS

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Approved Construction Plan

Name: Dawn M. Druffey Date: 8/22/13

Planning: Dawn M. Druffey 8/22/13

Traffic: [Signature] 8/22/13

File: [Signature] 8/22/13

STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON ENGINEERING DEPARTMENT

DATE 8/22/13 PERMIT # 2013016481

SIGNED [Signature]

REVISED OWNER INFORMATION AND PROJECT ADDRESS	DATE	DESCRIPTION	BY
R3	06/25/13	DELETED PART OF TURN DOWN SIDEWALK AND WHEELCHAIR RAMP DETAIL	JPN
R2	04/11/13	REVISED NOTES ADDED TO PERIMETER CONTROL JOINT	JPN
R1	03/07/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS	JPN

DETAILS

THE LIGHTHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
RB-WILMINGTON, LLC
A DELAWARE LIMITED LIABILITY COMPANY
2234 W. NORTH AVE.
CHICAGO, IL 60647

NORRIS & TUNSTALL
CONSULTING ENGINEERS, P.C.
1127 FLORAL PARKWAY, SUITE 400 WILMINGTON, NC, 28403
PHONE (910) 343-9653 FAX (910) 343-9604
N&T LICENSE NO. C-3641

12080

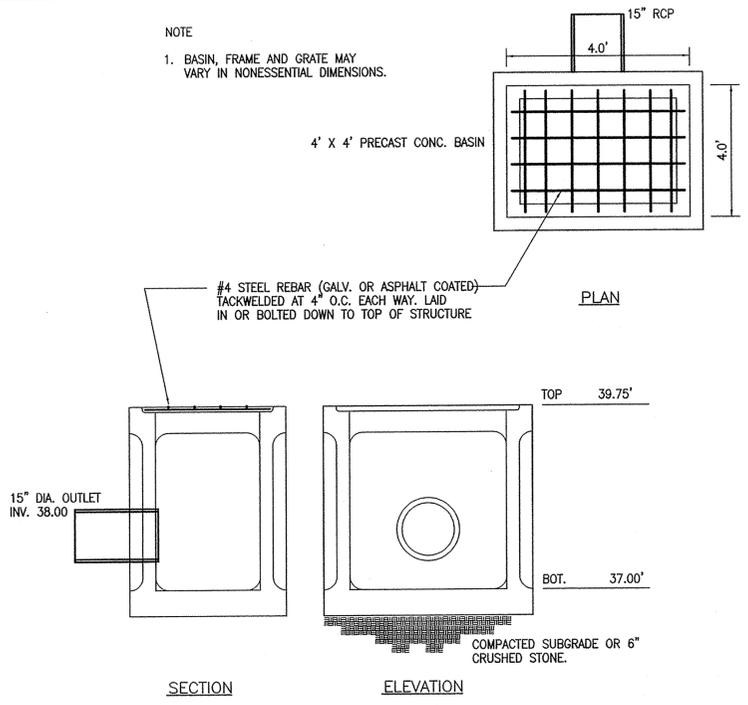
DES. JPN
OBS. JPN
DRAW. EDB

DATE 04/11/13

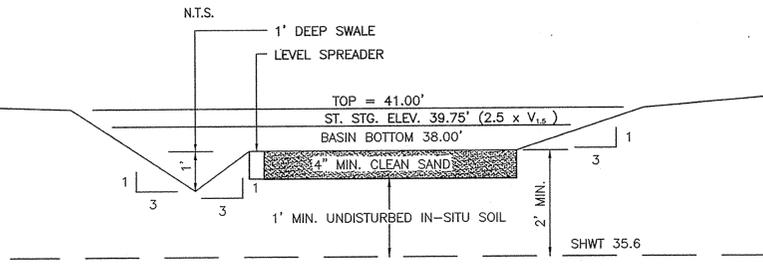


C7

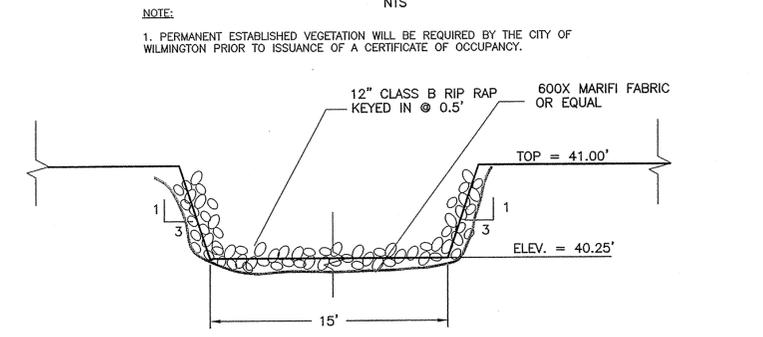
NOTE
1. BASIN, FRAME AND GRATE MAY VARY IN NONESSENTIAL DIMENSIONS.



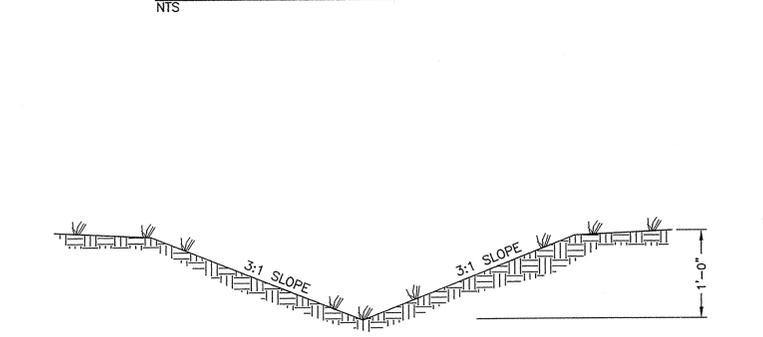
INFILTRATION BASIN #1 OUTLET STRUCTURE



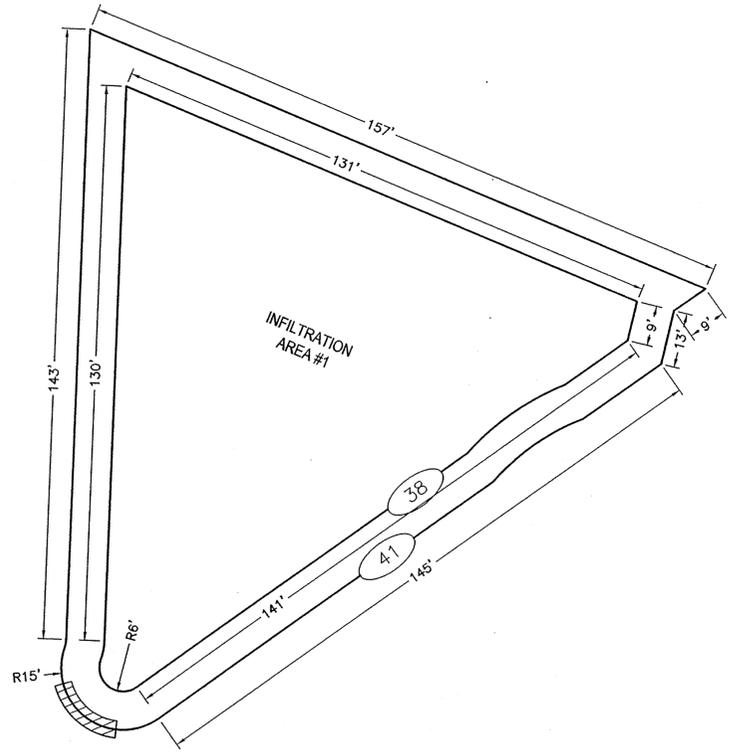
INFILTRATION BASIN #1: CROSS SECTION



INFILTRATION BASIN #1 EMERGENCY SPILLWAY

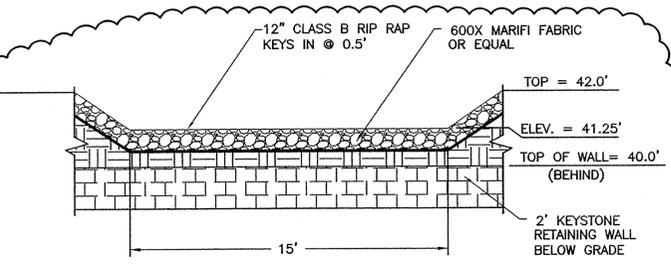


TYPICAL GRASS SWALE



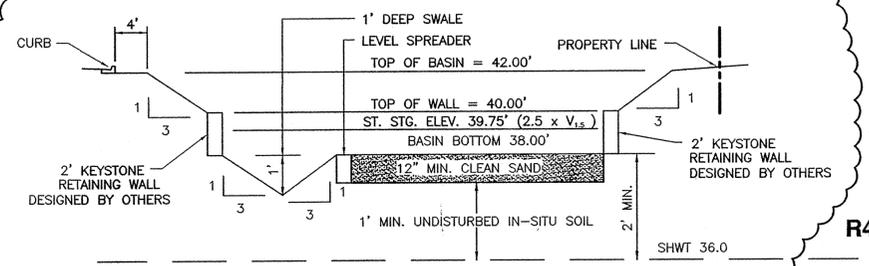
INFILTRATION BASIN #1 DIMENSIONS

SCALE: 1"=20'



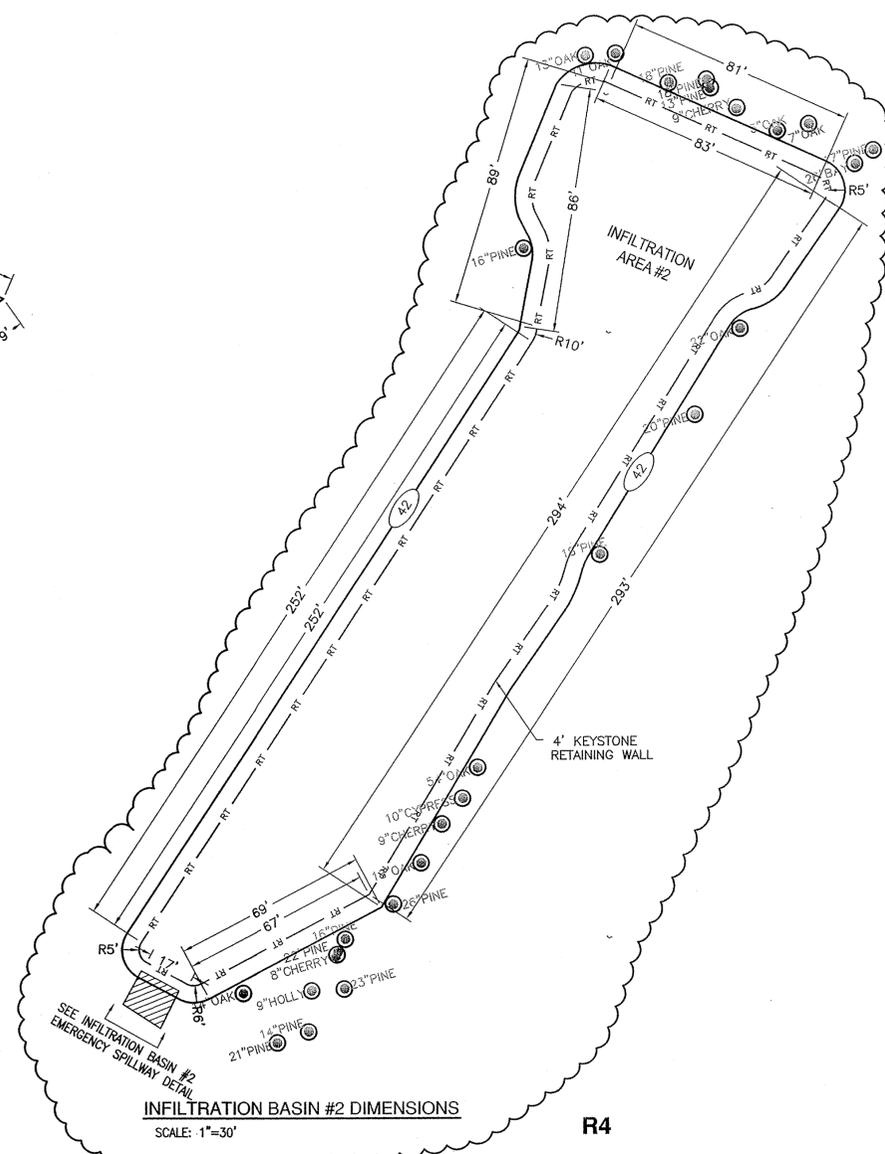
INFILTRATION BASIN #2 EMERGENCY SPILLWAY

NTS



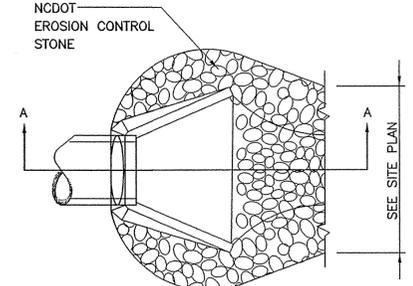
INFILTRATION BASIN #2: CROSS SECTION

NOTE:
1. PERMANENT ESTABLISHED VEGETATION WILL BE REQUIRED BY THE CITY OF WILMINGTON PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
2. DEPTH OF WALL MAY VARY AT LEVEL SPREADER LOCATIONS DEPENDENT UPON DESIGN BY OTHERS.



INFILTRATION BASIN #2 DIMENSIONS

SCALE: 1"=30'



ENERGY DISSIPATOR

NOTE: FILTER FABRIC AND STONE SHALL BE TOED UNDER FLARED END SECTION

ENERGY DISSIPATOR

NTS

REVISIONS	DATE	DESCRIPTION	BY
R3	07/05/13	REVISED INFILTRATION AREA #2 RETAINING WALL LAYOUT AND DIMENSIONS ADDED TREES FOR CLARITY	JPN
R2	03/27/13	REVISED EMERGENCY SPILLWAY DETAILS, INFILTRATION AREAS, SECTIONS AND DIMENSIONS	JPN
R1	03/07/13	REVISED OWNER INFORMATION AND PROJECT ADDRESS	JPN

REVISIONS	DATE	DESCRIPTION	BY
R4	07/31/13	REVISED INFILTRATION AREA #2 RETAINING WALL LAYOUT, CROSS SECTION AND EMERGENCY SPILLWAY.	JPN

POND DETAILS

THE LIGHTHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
RB-WILMINGTON, LLC
A DELAWARE LIMITED LIABILITY COMPANY
2234 W. NORTH AVE.
CHICAGO, IL 60647

NORRIS & TUNSTALL
CONSULTING ENGINEERS, P.C.
1127 FLORAL PARKWAY, SUITE 400
WILMINGTON, NC, 28403
PHONE (910) 343-9653
FAX (910) 343-9604
N&T LICENSE NO. C-3641

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

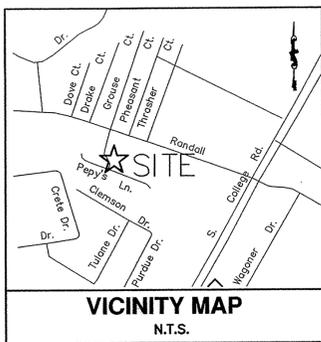
1 inch

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 8/2/13 PERMIT #20130166
SIGNED [Signature]

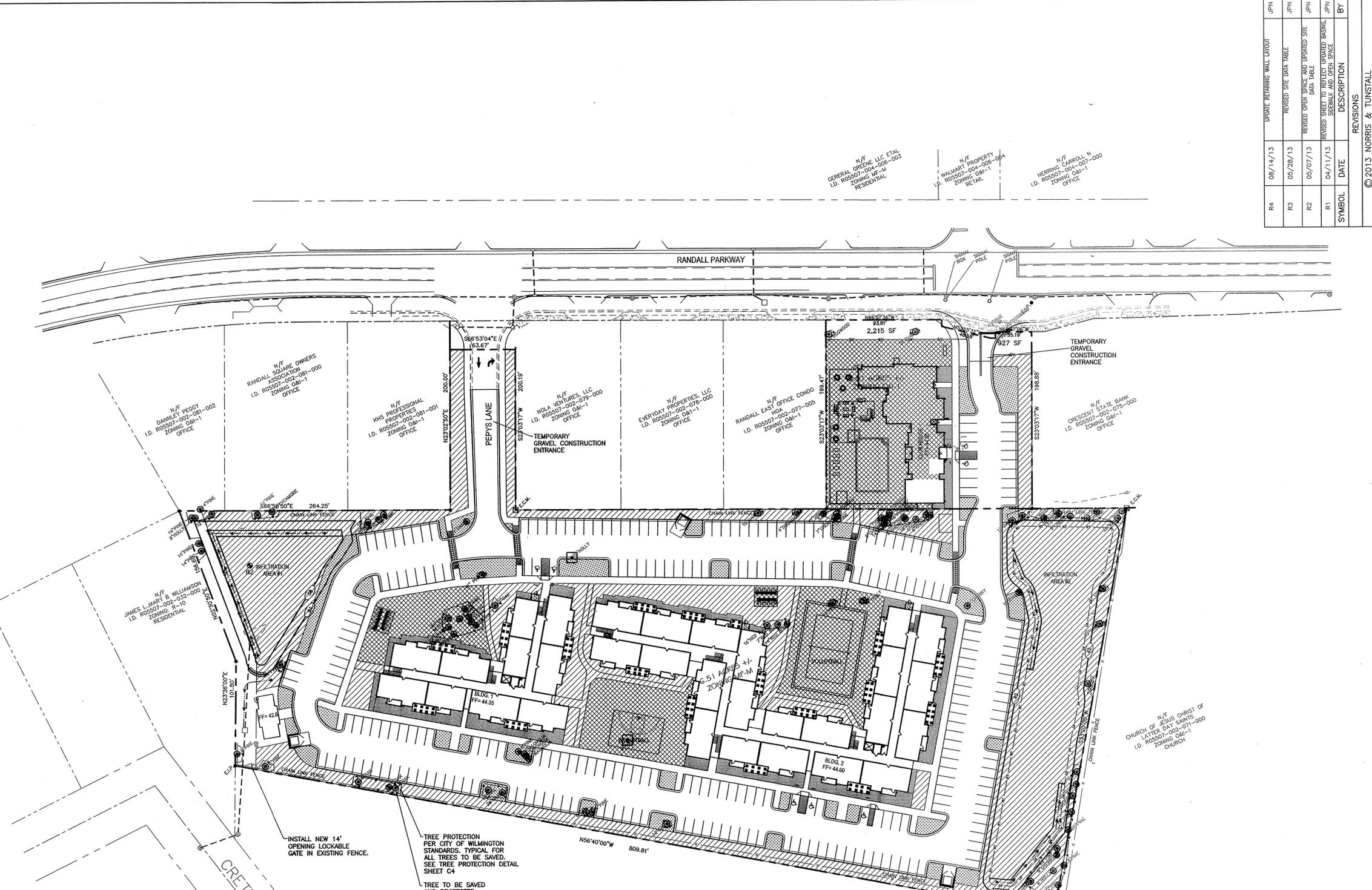


Approved Construction Plan
Name: Dawn M. Driffling
Date: 8/2/2013
Planning: Dawn M. Driffling 8/2/2013
Traffic: [Signature] 8/2/13
Fire: [Signature] 8/2/13

C8



SITE DATA TABLE	
SITE AREA:	318,859 SF / 7.32 AC
PARCEL ID#:	4922 PEPYS LN. R05507-002-080-000 (6.51 AC) 4926 RANDALL PKWY. R05507-002-076-000 (0.81 AC)
ZONING:	R05507-002-080-000 (MF-M) R05507-002-076-000 (O&I-1)
DISTURBED AREA: 316,652.62 SF / 7.27 ACRES 15 TREES PER DISTURBED ACRE IS REQUIRED ON THE SITE. = 110 TREES CAMA LAND USE: URBAN	
SOIL TYPES ON SITE: LEON	
BUILDING SETBACKS: MF-M	REQUIRED FRONT: 35' * SIDE: 32' * REAR: 37' * INCREASED DUE TO BUILDING HEIGHT
	ACTUAL FRONT: 85'/89' SIDE: 137'/147' REAR: 81'
BUILDING SETBACKS: O&I-1	REQUIRED FRONT: 20' * SIDE: 10' * REAR: N/A * INCREASED DUE TO BUILDING HEIGHT
	ACTUAL FRONT: 43'/133' SIDE: 88'/110' REAR: N/A
BUILDINGS 1 & 2: TYPE 3B CONSTRUCTION CLUB HOUSE BUILDING: TYPE 5A & 5B CONSTRUCTION	
PROPOSED BUILDING:	USES: HEIGHT: SIZE:
BLDG. 1	4 STORY RESIDENTIAL 56' 14,385 SF/FLOOR
BLDG. 2	4 STORY RESIDENTIAL 56' 31,136 SF/FLOOR
CLUB HOUSE	RECREATION/PERSONAL SERVICES 25' 6,134 SF
RECREATION	6,053 SF
PERSONAL SERVICES	81 SF
MAINTENANCE BUILDING	744 SF
POOL EQUIPMENT BUILDING	120 SF
BUS SHELTER/MAIL KIOSK	234 SF
TOTAL FOOTPRINT OF BUILDINGS:	52,753 SF
MAX DENSITY:	17 UNITS / AC
ACTUAL DENSITY:	124 UNITS / 7.32 AC = 16.94 UNITS / AC
TOTAL FOOTPRINT OF BUILDINGS:	52,753 SF
MAX LOT COVERAGE:	30%
ACTUAL LOT COVERAGE:	16.54%
UNITS PER BUILDING:	
BUILDING 1:	12-2 BR UNITS & 28-3 BR UNITS
BUILDING 2:	12-2 BR UNITS & 72-3 BR UNITS
REQUIRED PARKING:	2.25 SP. PER 3 BED UNITS 2.0 SP. PER 2 BED UNITS 1 SP. PER 400 SF MIN., 1 SP. PER 225 SF MAX.
REQUIRED PARKING:	3 BED UNITS = 2.25(100) = 225 SP. 2 BED UNITS = 2.0(24) = 48 SP. (81 SF/400)1 = 1 SP.
TOTAL REQUIRED PARKING:	274 SP. (INCLUDING 7 HC)
PARKING PROVIDED:	277 SP. (INCLUDING 7 HC)
BICYCLE PARKING:	REQUIRED: 274 PARKING SPACES = MIN. 15 PROVIDED: 50 BICYCLE SPACES
IMPERVIOUS AREAS: PROPOSED	
BLDG. 1	14,385 SF
BLDG. 2	31,136 SF
CLUB HOUSE	6,134 SF
(INCLUDES SALES OFFICE & MODEL UNIT)	
MAINTENANCE BUILDING	744 SF
POOL EQUIPMENT BUILDING	120 SF
BUS SHELTER/MAIL KIOSK	234 SF
ASPHALT	96,621 SF
SIDEWALK	22,005 SF
BASKETBALL COURT	1,750 SF
ACTIVITY CENTER PATIO	8,165 SF
TOTAL IMPERVIOUS AREA:	181,294 SF / 4.16 AC
% IMPERVIOUS:	56.86%
IMPERVIOUS AREAS: EXISTING	
ALL EXISTING IMPERVIOUS SURFACES TO BE REMOVED	
OPEN SPACE	
REQUIRED:	35% OF SITE AREA LESS INFILTRATION AREA #2 (318,859 SF - 21,127 SF) x .35 = 104,206 SF
PROVIDED OPEN SPACE:	104,743 SF / 35.18%
ACTIVE PROVIDED:	41,187 SF
PASSIVE PROVIDED:	63,576 SF
SHADED AREA REQUIRED:	
REQUIRED:	20% x 96,621 SF = 19,325 SF
PROVIDED:	SEE LANDSCAPE PLAN
ISLAND AREA PROVIDED:	12,688 SF
PRIMARY STREET YARD REQUIRED:	(200 LF - 28 LF)18 = 3,096 SF
PRIMARY STREET YARD PROVIDED:	3,142 SF
FOUNDATION PLANTINGS REQUIRED: BLDG. 1	
FRONT:	(187'(L)x44'(H))(12) = 987.4 SF
SIDE:	(55'(L)x44'(H))(12) = 290.4 SF
REAR:	(95'(L)x44'(H))(12) = 501.6 SF
REAR:	(55'(L)x44'(H))(12) = 290.4 SF
FOUNDATION PLANTINGS PROVIDED: BLDG. 1	
FRONT:	1,860 SF
SIDE:	307 SF
REAR:	586 SF
REAR:	320 SF
FOUNDATION PLANTINGS REQUIRED: BLDG. 2	
FRONT:	(218'(L)x44'(H))(12) = 1,151.0 SF
SIDE:	(175'(L)x44'(H))(12) = 924.0 SF
REAR:	(55'(L)x44'(H))(12) = 290.4 SF
REAR:	(167'(L)x44'(H))(12) = 881.8 SF
FOUNDATION PLANTINGS PROVIDED: BLDG. 2	
FRONT:	2,040 SF
SIDE:	1,425 SF
REAR:	427 SF
REAR:	910 SF
FOUNDATION PLANTINGS REQUIRED: CLUB HOUSE	
FRONT:	(131'(L)x12'(H))(12) = 188.6 SF
SIDE:	(37'(L)x12'(H))(12) = 53.3 SF
FOUNDATION PLANTINGS PROVIDED: CLUB HOUSE	
FRONT:	1,130 SF
SIDE:	129 SF

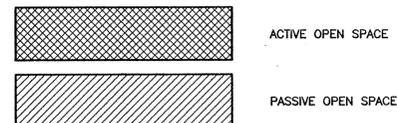


Approved Construction Plan		
Name	Date	
Planning: <i>Dawn M. Drotter</i>	8/20/13	
Traffic: <i>Will Anderson</i>	8/21/13	
Fire: <i>[Signature]</i>	8/23/13	

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 8/22/13 PERMIT # 201304681
SIGNED *[Signature]*

1 inch



SCALE: 1" = 50'

LEGEND	
---	PROPERTY LINE
---	RIGHT OF WAY
---	SETBACK
---	BUFFER
---	STREET YARD
---	2' KEYSTONE RETAINING WALL
---	24" CURB & GUTTER
---	EXISTING CONTOUR
---	EXISTING SPOT ELEVATION
---	EXISTING TREE TO BE SAVED
---	FOUNDATION PLANTING
---	STREET YARD / LANDSCAPING

BY	DATE	DESCRIPTION
JPN	08/14/13	UPDATE RETAINING WALL EXCISE
JPN	05/28/13	REVISION SITE DATA TABLE
JPN	05/07/13	REVISION OPEN SPACE AND UPGRADED SITE DATA TABLE
JPN	04/11/13	REVISION SHEET TO REFLECT UPGRADED BASINS, SIDEWALK AND OPEN SPACE
SYMBOL	DATE	DESCRIPTION

OPEN SPACE EXHIBIT SHEET
THE LIGHTHOUSE APARTMENTS
4926 RANDALL PARKWAY
WILMINGTON, NORTH CAROLINA

OWNER:
RB-WILMINGTON, LLC A.A.
DELAWARE LIMITED LIABILITY COMPANY
2234 W. NORTH AVE.
CHICAGO, IL 60647

NORRIS & TUNSTALL
CONSULTING ENGINEERS, P.C.
1127 FLORAL PARKWAY, SUITE 400 PHONE (910) 343-9653
WILMINGTON, NC 28403 FAX (910) 343-9604
N&T LICENSE NO. C-3641

DATE 04/11/13

