

# WILLIAMSON MEDICAL OFFICES

## MINOR SITE PLAN SUBMITTAL

CITY OF WILMINGTON  
NEW HANOVER COUNTY, NORTH CAROLINA

### OWNER

JUDI C. WILLIAMSON  
P.O. BOX 332  
LINCOLNDALE, NEW YORK 10540  
PHONE: (914) 525-5468  
EMAIL: JCWILLIES@OPTONLINE.NET

### ARCHITECT

PGH ARCHITECTURE  
4006 PARK AVENUE  
WILMINGTON, NORTH CAROLINA 28403  
PHONE: (910) 297-9570  
EMAIL: PGHARCHITECTURE@GMAIL.COM

### LANDSCAPE ARCHITECT

EXISTING	LEGEND	PROPOSED
---	PROPERTY LINE	---
---(4TD)---	MAJOR CONTOURS	---(4TD)---
---(4TD)---	MINOR CONTOURS	---(4TD)---
---oe---	TELEPHONE LINE	---
---gas---	GAS LINE	---
---wtr---	WATER LINE	---w---
	SETBACK/EASEMENT	---
[RPZ]	BACKFLOW PREVENTER	---
[WM]	WATER METER	---
[C]	CABLE	---
	STORM PIPE/CULVERT	---
	LIMITS OF DISTURBANCE	---
	FINISHED GRADE	--- LOD ---
⊗ EG= 28.71	EXISTING GRADE	⊗ FG= 28.71
⊗ INV= 28.71	INVERT OF PIPE	
	FLOW ARROWS	→

LEGEND

ADA NOTE: ALL ACCESSIBLE PARKING SIGNAGE & MARKINGS SHALL MEET THE MOST CURRENT VERSION OF THE ADA AND MUTCD STANDARDS.

DESIGN STUDIO



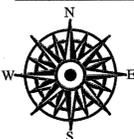
1319-CC Military Cutoff Road  
Wilmington, NC 28405  
tel. 910.821.0084  
www.b-and-o.net

### CIVIL ENGINEER

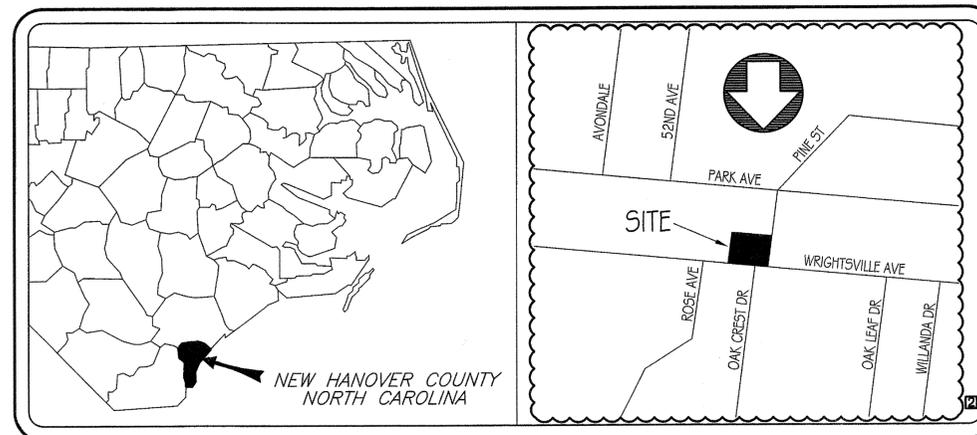


Engineering, P.C.  
(C-3075)  
3305-109 DURHAM DRIVE  
RALEIGH, NORTH CAROLINA 27603  
PHONE: (919) 779-6851  
FAX: (919) 779-0826

### SURVEYOR



PATRICK C. BRISTOW  
LAND SURVEYING, PC  
4113-A OLEANDER DRIVE  
WILMINGTON, N.C. 28403  
PHONE: (910) 791-1500 FAX: (910) 791-1504  
E-MAIL: pat@bristowsurveying.com  
FIRM LICENSURE NO. C-3071



VICINITY MAP  
NOT TO SCALE

SUMMARY OF PERMITS	
AGENCY	PERMIT NUMBER
NEW HANOVER COUNTY EROSION CONTROL	N/A (EXEMPT)
NC DENR GRAVITY SEWER COLLECTION SYSTEM	N/A (EXISTING SERVICE)
NC DENR PUBLIC WATER SUPPLY	N/A (EXISTING SERVICE)
NC DENR STORMWATER MANAGEMENT	N/A (EXEMPT)
CAPE FEAR PUBLIC UTILITY AUTHORITY FILE #	N/A (EXISTING SERVICE)

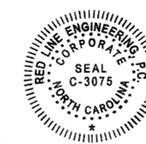


Approved Construction Plan	
Name	Date
Planning: <i>Samuel Briffley</i>	2/26/13
Traffic: <i>[Signature]</i>	2/26/13
Fire: <i>[Signature]</i>	2/26/13

### SHEET INDEX

- C1 COVER SHEET
- C2 EXISTING CONDITIONS & DEMOLITION PLAN
- C3 PROPOSED SITE IMPROVEMENTS
- C4 PROPOSED GRADING & DRAINAGE PLAN
- C5 DETAILS SHEET
- L1 TREE PROTECTION PLAN
- L2 LANDSCAPE PLAN

FINAL DRAWING  
RELEASED  
FOR CONSTRUCTION



REVISION [A]: JANUARY 28, 2013

REVISION [B]: DECEMBER 19, 2012  
DATE: NOVEMBER 13, 2012

PROJ. NO.: 12-016

SHEET C1

CP 1268

**SURVEY NOTES:**

- 1) ALL ELEVATIONS SHOWN ARE ASSUMED WITH SITE BENCHMARK BEING THE FINISHED FLOOR OF THE WESTERN BUILDING (30.00').
- 2) TREES ARE AS IDENTIFIED, SIZE IS DIAMETER IN INCHES MEASURED AT BREAST HEIGHT.
- 3) THIS LOT IS SUBJECT TO ALL UTILITY EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
- 4) WATER AND SEWER PROVIDED BY CFPWA. WATER METER IS LOCATED AND PLOTTED. SEWER PUMP STATION LOCATED AND PLOTTED IN BACK YARD. STATUS OF CONNECTION TO GRAVITY SEWER IS UNKNOWN.
- 5) CONTOUR INTERVAL IS ONE FOOT.
- 6) ADJOINER INFORMATION IS FROM NEW HANOVER COUNTY ONLINE G.I.S.
- 7) THERE APPEARS TO BE NO VEHICULAR ACCESS TO PARK AVENUE. THE STATUS AND RIGHT OF ACCESS TO THE UNNAMED PUBLIC RIGHT OF WAY ALONG THE WESTERN BOUNDARY IS UNKNOWN.

EXISTING BIKE TRAIL (APPROX.)

PARK AVENUE

(PUBLIC R/W - WIDTH VARIES)

EXISTING BIKE TRAIL (APPROX.)

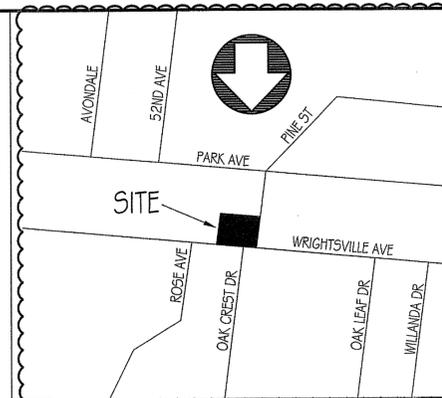
60' UNNAMED PUBLIC R/W (NOT IMPROVED)

N/F BHAT  
5106 WRIGHTSVILLE AVENUE  
DB 3477 PG 624

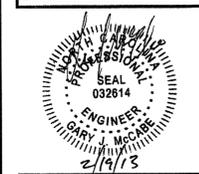
ZONING: O&I-1  
USE: MEDICAL OFFICE

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED DRAINAGE PLAN  
Date: 2/27/13 Permit # 2013003  
Signed: [Signature]

**Approved Construction Plan**  
Name: [Signature] Date: 2/25/13  
Planning: [Signature] 2/25/13  
Public Utilities: [Signature] 2/26/13  
Traffic: [Signature] 2/26/13  
Fire: [Signature] 2/26/13



VICINITY MAP  
NOT TO SCALE



FINAL DRAWING  
RELEASED  
FOR CONSTRUCTION

THIS ORIGINAL SHEET IS 24"X36". OTHER DIMENSIONS INDICATE IT HAS BEEN ALTERED. ALL INFORMATION REPRESENTED ON THIS SHEET IS THE PROPERTY OF RED LINE ENGINEERING, P.C. AND MAY NOT BE DUPLICATED IN PART OR IN WHOLE WITHOUT WRITTEN AUTHORIZATION FROM RED LINE ENGINEERING, P.C. 2012 ©

**Red Line Engineering, P.C.**  
(C-3075)  
3305-109 DURHAM DRIVE  
RALEIGH, NORTH CAROLINA 27603  
PHONE - (919) 779-6851  
FAX - (919) 779-0826



**WILIAMSON MEDICAL OFFICES**  
5114 WRIGHTSVILLE AVENUE  
WILMINGTON, NORTH CAROLINA 28403  
EXISTING CONDITIONS &  
DEMOLITION PLAN

REVISIONS:	DATE:
1 PER C.O.W.	12/19/12
2 PER C.O.W.	1/28/13

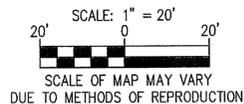
ISSUED FOR:	DATE:
REVIEW/PERMITS	11/14/12
CONSTRUCTION	02/19/13

PROJECT NO.: 12-016  
DRAWN BY: GJM  
REVIEWED BY: GJM

SHEET NUMBER:  
**C2**  
OF 2 SHEETS



Know what's below.  
Call before you dig.



ALL PROPOSED SIDEWALK H/C WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE TO NCDOT STANDARD DRAWINGS 848.05 & 848.06

NOTE: ALL EXISTING UTILITIES AND ELEVATIONS OF UTILITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY LOCATION, SIZE AND ELEVATION/DEPTH OF ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION OR DEMOLITION.

NOTE: CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IMMEDIATELY IF ANY CONFLICTS, INCONSISTENCIES OR AMBIGUITIES EXIST BETWEEN ARCHITECTURAL, P.M.E., STRUCTURAL & CIVIL DRAWINGS & SPECIFICATIONS. IF HIDDEN SITE CONDITIONS ARE DISCOVERED DURING CONSTRUCTION/DEMOLITION, CONTRACTOR SHALL OBTAIN WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT HIS/HER OWN RISK.

NOTE: ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF WILMINGTON, NEW HANOVER COUNTY, CFPWA, & NCDOT STANDARDS, DETAILS AND SPECIFICATIONS

**GENERAL NOTES**

- 1) BOUNDARY & TOPOGRAPHIC SURVEY WAS CONDUCTED BY PATRICK C. BRISTOW, P.L.S. (L-4148) OF PATRICK C. BRISTOW LAND SURVEYING, P.C. (C-3071), DATED OCTOBER 10, 2012. INFORMATION PROVIDED FOR ENGINEERING DESIGN PURPOSES ONLY. NOT FOR SALE OR RECORDATION.
- 2) CONTRACTOR SHALL FIELD VERIFY LOCATION, SIZE, MATERIAL AND DEPTH OF ALL EXISTING UTILITIES (ESPECIALLY WATER, SEWER, ELECTRICAL, CABLE, TELE, ETC.) AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. ELEVATIONS INDICATED ON PLANS SHOWN AS APPROXIMATE, CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION.
- 3) ACCORDING TO FEMA FLOOD PANELS #3720314600J & 3720314700J, EFFECTIVE DATE APRIL 3, 2006, THE PROPOSED SITE IS NOT LOCATED WITHIN A FLOOD PLAIN.
- 4) CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIALS GENERATED THROUGH ALL CONSTRUCTION RELATED ACTIVITIES.
- 5) ALL DISTURBED AREAS TO BE SEEDED, FERTILIZED, AND MULCHED IN ACCORDANCE W/NPDES STABILIZATION TABLE. SEE DETAIL 10/C5.
- 6) WATER, SEWER, AND STORMWATER PIPES TO BE INSTALLED IN TRENCHES ACCORDING TO THE CAPE FEAR PUBLIC UTILITY AUTHORITY AND CITY OF WILMINGTON STANDARD SPECIFICATIONS AND DETAILS.
- 7) ACCORDING TO THE SEDIMENTATION POLLUTION CONTROL ACT OF 1973 (NORTH CAROLINA GENERAL STATUTE 113A 51-66) THIS PROJECT IS NOT SUBJECT TO AN APPROVED SEDIMENTATION AND EROSION CONTROL PLAN.
- 8) ALL WORK MUST COMPLY WITH APPLICABLE NORTH CAROLINA BUILDING CODES, CITY OF WILMINGTON, NEW HANOVER COUNTY

- 9) ANY CONFLICT(S) BETWEEN ARCHITECTURAL, STRUCTURAL, PLUMBING, MECHANICAL, ELECTRICAL AND CIVIL SHEETS SHALL BE SUBMITTED BY CONTRACTOR, IN WRITING, TO BOTH ARCHITECT AND ENGINEER. WRITTEN CLARIFICATION/RESOLUTION MUST BE RECEIVED BY CONTRACTOR FROM ARCHITECT AND ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
- 10) LATERAL SEPARATION OF SEWERS OR WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST TEN (10) FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A TEN (10) FOOT LATERAL SEPARATION --- IN WHICH CASE:
  - (A) THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION ON THE BOTTOM OF THE WATER MAIN AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF SEWER; OR
  - (B) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF SEWER.
- 11) CROSSING A WATER MAIN OVER A SEWER. WHENEVER NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN EIGHTEEN (18) INCH SEPARATION --- IN WHICH CASE, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE CROSSING.
- 12) CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE POINT(S) OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

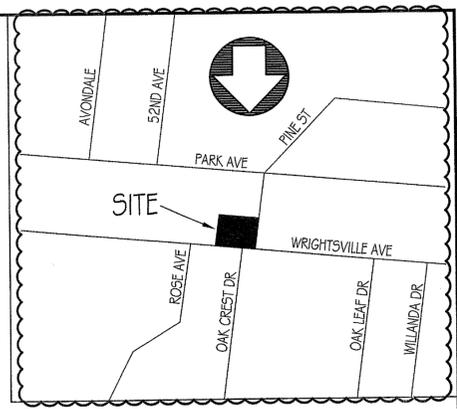
CP 1268

**SURVEY NOTES:**  
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 3) THIS LOT IS SUBJECT TO ALL UTILITY EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.  
 4) WATER AND SEWER PROVIDED BY CFWA. WATER METER IS LOCATED AND PLOTTED. SEWER PUMP STATION LOCATED AND PLOTTED IN BACK YARD. STATUS OF CONNECTION TO GRAVITY SEWER IS UNKNOWN.  
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 6) ADJOINER INFORMATION IS FROM NEW HANOVER COUNTY ONLINE G.I.S.  
 7) THERE APPEARS TO BE NO VEHICULAR ACCESS TO PARK AVENUE. THE STATUS AND RIGHT OF ACCESS TO THE UNNAMED PUBLIC RIGHT OF WAY ALONG THE WESTERN BOUNDARY IS UNKNOWN.

**PARK AVENUE**  
 (PUBLIC R/W - WIDTH VARIES)

**WETLANDS NOTE:** NO JURISDICTIONAL WETLANDS OR SURFACE WATER FEATURES HAVE BEEN FOUND ON THIS SITE.

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED DRAINAGE PLAN  
 Date: 2/27/13 Permit # 2013003  
 Signed: *R. D. [Signature]*



**SEAL**  
 032614  
**ENGINEER**  
 R. D. [Signature]  
 2/14/13  
**FINAL DRAWING**  
 RELEASED  
 FOR CONSTRUCTION  
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**Approved Construction Plan**

Name	Date
Planning: <i>Dawn M. [Signature]</i>	2/25/13
Public Utilities:	
Traffic: <i>Bill [Signature]</i>	2/26/13
Fire: <i>R. D. [Signature]</i>	2/16/13

**SITE PLAN INFORMATION:**

1. DEVELOPMENT NAME:	WILLIAMSON MEDICAL OFFICES
2. STREET ADDRESS:	5114 WRIGHTSVILLE AVENUE WILMINGTON, NORTH CAROLINA 28403
3. NHC PARCEL NUMBER:	R05617-004-001-000
4. TOTAL NUMBER OF LOTS:	1
5. TOTAL AREA:	35,964 SF / 0.826 ACRES
6. PROPOSED LAND DISTURBANCE:	15,000 SF / 0.34 ACRES
REQUIRED TREES PER LAND DISTURBANCE:	0.34 AC X 15 TREES/AC 5 REQUIRED TREES PER LAND DISTURBANCE
7. CURRENT LAND USE:	MEDICAL OFFICE & RESIDENTIAL
8. PROPOSED LAND USE:	MEDICAL OFFICES
9. CURRENT ZONING:	O&I-1 (OFFICE & INSTITUTIONAL-1)
10. CAMA LAND USE CLASSIFICATION:	URBAN
11. BUILDING SQUARE FOOTAGE & USE:	EXISTING BLDG. 3,524 SF (EXTERIOR)
12. PARKING SUMMARY:	
PARKING REQUIREMENTS:	OFFICES (MEDICAL):
13. BUILDING SETBACKS:	
14. IMPERVIOUS SURFACES SUMMARY:	
ON-SITE IMPERVIOUS:	
EXISTING IMPERVIOUS AREA:	7,222 SF / 0.17 ACRES (20%)
EXISTING IMPERVIOUS TO BE REMOVED:	3,617 SF / 0.08 ACRES
EXISTING IMPERVIOUS TO REMAIN:	3,605 SF / 0.08 ACRES
PROPOSED NEW IMPERVIOUS PARKING:	5,592 SF / 0.13 ACRES
PROPOSED NEW IMPERVIOUS SIDEWALKS:	919 SF / 0.02 ACRES
TOTAL NEWLY CONSTRUCTED ON-SITE IMPERVIOUS AREA:	6,511 SF / 0.15 ACRES
TOTAL ON-SITE IMPERVIOUS AREA:	10,116 SF / 0.23 ACRES (28%)
OFF-SITE IMPERVIOUS:	
PROPOSED NEW IMPERVIOUS PAVEMENT:	612 SF / 0.01 ACRES
PROPOSED NEW IMPERVIOUS SIDEWALKS:	761 SF / 0.02 ACRES
TOTAL NEW OFF-SITE IMPERVIOUS AREA:	1,373 SF / 0.03 ACRES
TOTAL NEWLY CONSTRUCTED IMPERVIOUS AREA:	7,884 SF / 0.18 ACRES
15. INSIDE CITY LIMITS:	YES
16. INSIDE FLOOD HAZARD BOUNDARY:	NO (PER FEMA PANELS #3720314600J & 3720314700J, EFFECTIVE DATE: APRIL 3, 2006)
17. BUILDING LOT COVERAGE:	9.80%
18. OWNER/DEVELOPER:	JUDI C. WILLIAMSON P.O. BOX 332 LINCOLNDALE, NY 10540

**PARKING REQUIREMENTS:**

1 SPACE PER 250 GSF X 3,240 GSF (USABLE)	13 SPACES (MINIMUM)
1 SPACE PER 170 GSF X 3,240 GSF (USABLE)	19 SPACES (MAXIMUM)
	14 SPACES (13 REGULAR + 1 H.C.)

**PROPOSED PARKING:**

FRONT - 20 FT.
SIDE - 10 FT.
CORNER SIDE - 20 FT.
REAR - 20 FT.

60' UNNAMED PUBLIC R/W (NOT IMPROVED)

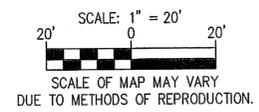
**SITE DISTANCE NOTE:** NO OBSTRUCTIONS SHALL BE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND LEVEL WITHIN THE TRIANGULAR SITE DISTANCE.

ALL PROPOSED SIDEWALK H/C WHEELCHAIR RAMP SHALL BE IN ACCORDANCE TO NCDOT STANDARD DRAWINGS 848.05 & 848.06

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**RED LINE ENGINEERING, P.C.**  
 SEAL  
 C-3075  
 NORTH CAROLINA

**WILLIAMSON MEDICAL OFFICES**  
 5114 WRIGHTSVILLE AVENUE  
 WILMINGTON, NORTH CAROLINA 28403  
**PROPOSED SITE IMPROVEMENTS**

**REVISIONS:**

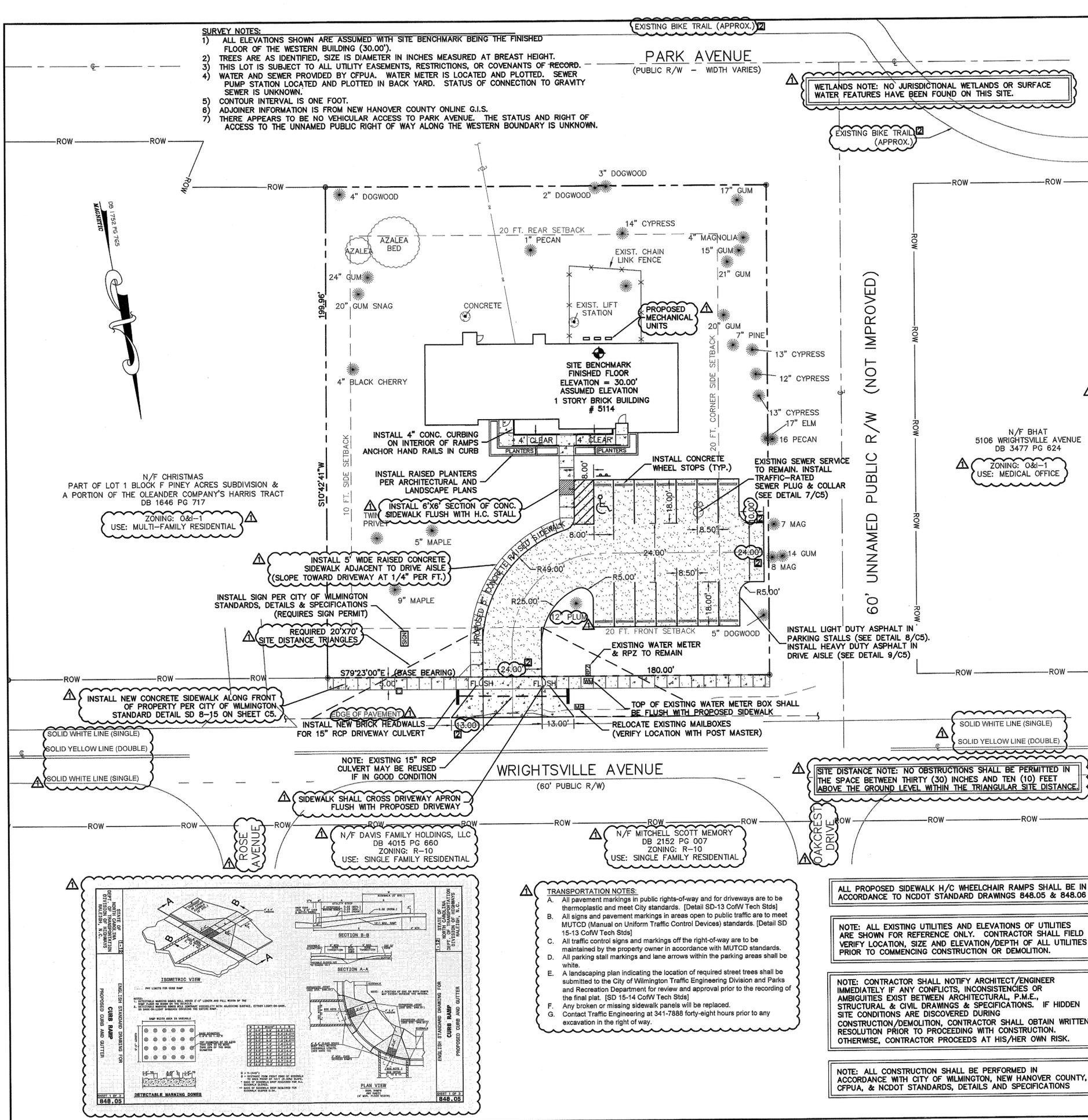
REVISIONS	DATE
1 PER C.O.W.	12/19/12
2 PER C.O.W.	1/28/13

**ISSUED FOR:**

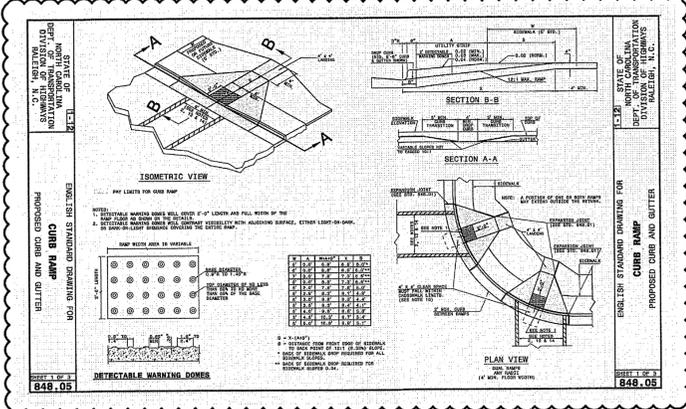
REVIEW/PERMITS	11/14/12
CONSTRUCTION	02/19/13

PROJECT NO.: 12-016  
 DRAWN BY: GJM  
 REVIEWED BY: GJM  
 SHEET NUMBER:  
**C3**  
 OF 2 SHEETS

**CP 1268**



**TRANSPORTATION NOTES:**  
 A. All pavement markings in public rights-of-way and for driveways are to be thermoplastic and meet City standards. [Detail SD-13 Co/W Tech Stds]  
 B. All signs and pavement markings in areas open to public traffic are to meet MUTCD (Manual on Uniform Traffic Control Devices) standards. [Detail SD 15-13 Co/W Tech Stds]  
 C. All traffic control signs and markings off the right-of-way are to be maintained by the property owner in accordance with MUTCD standards.  
 D. All parking stall markings and lane arrows within the parking areas shall be white.  
 E. A landscaping 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. [SD 15-14 Co/W Tech Stds]  
 F. Any broken or missing sidewalk panels will be replaced.  
 G. Contact Traffic Engineering at 341-7888 forty-eight hours prior to any excavation in the right of way.



**SURVEY NOTES:**

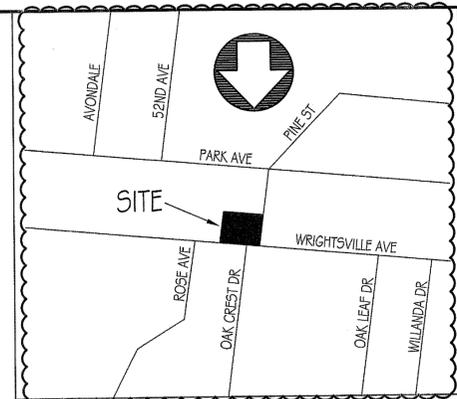
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EXISTING BIKE TRAIL (APPROX.)

**PARK AVENUE**  
(PUBLIC R/W - WIDTH VARIES)

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED DRAINAGE PLAN

Date: 2/27/13 Permit # 2013003  
Signed: [Signature]



**Professional Engineer Seal**  
SEAL 032614  
GARY L. MOORE  
2/19/13

**FINAL DRAWING RELEASED FOR CONSTRUCTION**

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**Approved Construction Plan**

Name	Date
Planning: Dawn M. [Signature]	2/26/13
Public Utilities	
Traffic: Bill [Signature]	2/26/13
Fire: [Signature]	2/26/13

**Red Line Engineering, P.C.**  
3305-109 DURHAM DRIVE  
RALEIGH, NORTH CAROLINA 27603  
PHONE - (919) 779-6851  
FAX - (919) 779-0826

**GRADING & EROSION CONTROL NOTES:**

- (1) PROPOSED DENUDED AREA: 0.34 ACRES
- (2) IMPERVIOUS SURFACES SUMMARY:
 

ON-SITE IMPERVIOUS:	7,222 SF / 0.17 ACRES (20%)
EXISTING IMPERVIOUS AREA:	3,617 SF / 0.08 ACRES
EXISTING IMPERVIOUS TO BE REMOVED:	3,605 SF / 0.08 ACRES
EXISTING IMPERVIOUS TO REMAIN:	
PROPOSED NEW IMPERVIOUS PARKING:	5,592 SF / 0.13 ACRES
PROPOSED NEW IMPERVIOUS SIDEWALKS:	919 SF / 0.02 ACRES
TOTAL NEWLY CONSTRUCTED ON-SITE IMPERVIOUS AREA:	6,511 SF / 0.15 ACRES
TOTAL ON-SITE IMPERVIOUS AREA:	10,116 SF / 0.24 ACRES (28%)
OFF-SITE IMPERVIOUS:	
PROPOSED NEW IMPERVIOUS PAVEMENT:	612 SF / 0.01 ACRES
PROPOSED NEW IMPERVIOUS SIDEWALKS:	761 SF / 0.02 ACRES
TOTAL NEW OFF-SITE IMPERVIOUS AREA:	1,373 SF / 0.03 ACRES
TOTAL NEWLY CONSTRUCTED IMPERVIOUS AREA:	7,884 SF / 0.18 ACRES
- (3) TOTAL PERCENT IMPERVIOUS: 28%
- (4) THE PROPOSED SITE IMPROVEMENTS DISTURB LESS THAN ONE (1) ACRE AND CREATES MORE THAN 2,500 SF BUT LESS THAN 10,000 SF OF NEW IMPERVIOUS SURFACE. THEREFORE SITE MUST OBTAIN AN APPROVED DRAINAGE PLAN FROM THE CITY OF WILMINGTON.
- (5) EVEN THOUGH THIS PROJECT IS NOT REQUIRED TO OBTAIN AN APPROVED EROSION CONTROL PLAN/PERMIT, THE CONTRACTOR SHALL MAINTAIN THE SITE WITH THE NECESSARY EROSION CONTROL MEASURES. THE CONTRACTOR SHALL SEED & STABILIZE THE SITE WITHIN 15 CALENDAR DAYS OF ANY LAND DISTURBING ACTIVITY. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT NO SEDIMENT LEAVES THE PROJECT SITE OR ENTERS THE PUBLIC RIGHT OF WAY.

**DRIVEWAY CULVERTS**

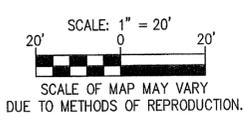
CULVERT #	PIPE SIZE (INCHES)	INVERT IN	INVERT OUT	SLOPE (%)	COVER (FT.)
1	15" RCP	27.45	27.09	1.00%	1.45

ALL DISTURBED AREAS SHALL BE SEED, FERTILIZED & MULCHED IN ACCORDANCE WITH DETAIL 10/C5. (SOD MAY BE SUBSTITUTED FOR SEED) ALL DISTURBED AREAS OF THE ROADSIDE DITCHES SHALL BE EQUIPPED WITH EXCELISOR MATTING (NORTH AMERICAN GREEN S1508B OR APPROVED EQUAL) FOR EROSION CONTROL. AN EMERGENT, STABLE STAND OF GRASS MUST BE PRESENT IN THE ROADSIDE DITCHES AT THE TIME OF FINAL INSPECTION AND PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

NOTE: ALL EXISTING UTILITIES AND ELEVATIONS OF UTILITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY LOCATION, SIZE AND ELEVATION/DEPTH OF ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION OR DEMOLITION.

NOTE: CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IMMEDIATELY IF ANY CONFLICTS, INCONSISTENCIES OR AMBIGUITIES EXIST BETWEEN ARCHITECTURAL, P.E., STRUCTURAL & CIVIL DRAWINGS & SPECIFICATIONS. IF HIDDEN SITE CONDITIONS ARE DISCOVERED DURING CONSTRUCTION/DEMOLITION, CONTRACTOR SHALL OBTAIN WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT HIS/HER OWN RISK.

NOTE: ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF WILMINGTON, NEW HANOVER COUNTY, CFPWA, & NCDOT STANDARDS, DETAILS AND SPECIFICATIONS



**Professional Engineer Seal**  
SEAL C-3075  
WILLIAMSON MEDICAL OFFICES

**WILLIAMSON MEDICAL OFFICES**  
5114 WRIGHTSVILLE AVENUE  
WILMINGTON, NORTH CAROLINA 28403

**PROPOSED GRADING & DRAINAGE PLAN**

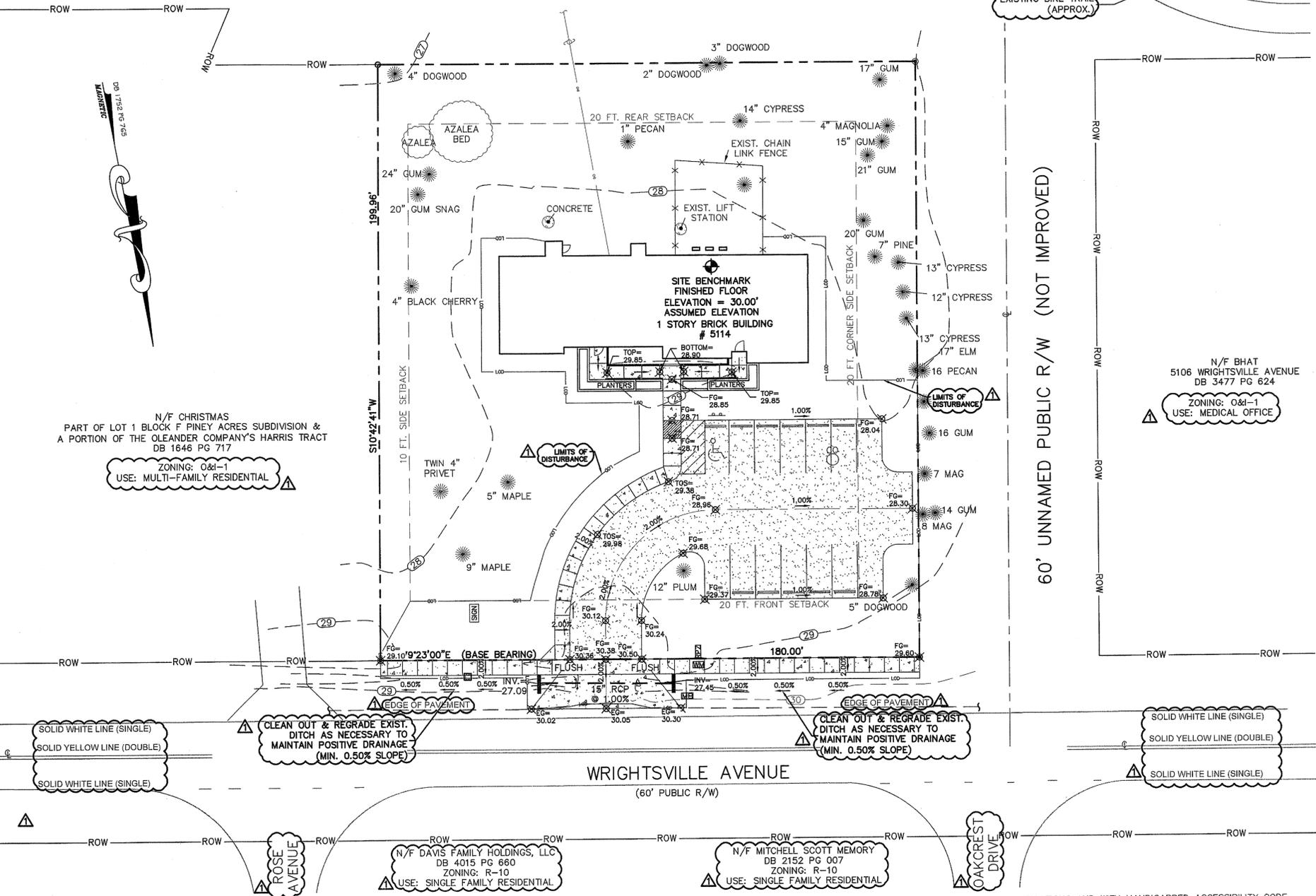
REVISIONS:	DATE:
1 PER C.O.W.	12/19/12
2 PER C.O.W.	1/28/13

ISSUED FOR: REVIEW/PERMITS  
DATE: 11/14/12

CONSTRUCTION  
DATE: 02/19/13

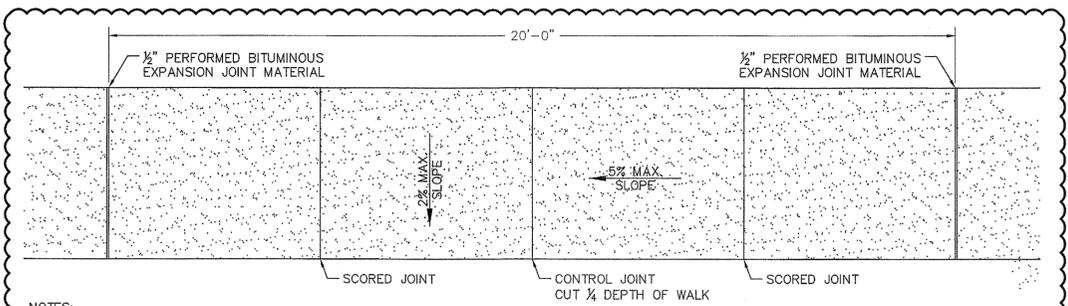
PROJECT NO.: 12-016  
DRAWN BY: GJM  
REVIEWED BY: GJM

SHEET NUMBER:  
**C4**  
OF 2 SHEETS

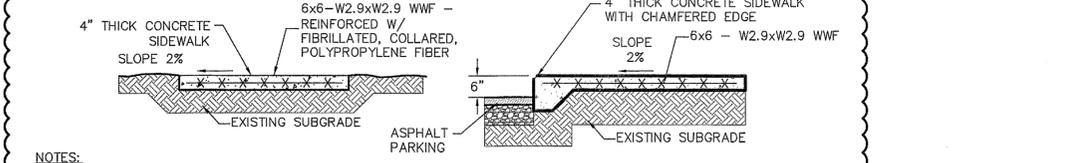


- GENERAL NOTES**
- (1) BOUNDARY & TOPOGRAPHIC SURVEY WAS CONDUCTED BY PATRICK C. BRISTOW, P.L.S. (L-4148) OF PATRICK C. BRISTOW LAND SURVEYING, P.C. (C-3071), DATED OCTOBER 10, 2012. INFORMATION PROVIDED FOR ENGINEERING DESIGN PURPOSES ONLY. NOT FOR SALE OR RECORDATION.
  - (2) CONTRACTOR SHALL FIELD VERIFY LOCATION, SIZE, MATERIAL AND DEPTH OF ALL EXISTING UTILITIES (ESPECIALLY WATER, SEWER, ELECTRICAL, CABLE, TELE, ETC.) AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. ELEVATIONS INDICATED ON PLANS SHOWN AS APPROXIMATE, CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION.
  - (3) ACCORDING TO FEMA FLOOD PANELS #3720314600J & 3720314700J, EFFECTIVE DATE APRIL 3, 2006, THE PROPOSED SITE IS NOT LOCATED WITHIN A FLOOD PLAIN.
  - (4) CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIALS GENERATED THROUGH ALL CONSTRUCTION RELATED ACTIVITIES.
  - (5) ALL DISTURBED AREAS TO BE SEED, FERTILIZED, AND MULCHED IN ACCORDANCE WITH W/NPDES STABILIZATION TABLE. SEE DETAIL 10/C5.
  - (6) WATER, SEWER, AND STORMWATER PIPES TO BE INSTALLED IN TRENCHES ACCORDING TO THE CAPE FEAR PUBLIC UTILITY AUTHORITY AND CITY OF WILMINGTON STANDARD SPECIFICATIONS AND DETAILS.
  - (7) ACCORDING TO THE SEDIMENTATION POLLUTION CONTROL ACT OF 1973 (NORTH CAROLINA GENERAL STATUTE 113A 51-66) THIS PROJECT IS NOT SUBJECT TO AN APPROVED SEDIMENTATION AND EROSION CONTROL PLAN.
  - (8) ALL WORK MUST COMPLY WITH APPLICABLE NORTH CAROLINA BUILDING CODES, CITY OF WILMINGTON, NEW HANOVER COUNTY AND
- (9) ANY CONFLICT(S) BETWEEN ARCHITECTURAL, STRUCTURAL, PLUMBING, MECHANICAL, ELECTRICAL AND CIVIL SHEETS SHALL BE SUBMITTED BY CONTRACTOR, IN WRITING, TO BOTH ARCHITECT AND ENGINEER. WRITTEN CLARIFICATION/RESOLUTION MUST BE RECEIVED BY CONTRACTOR FROM ARCHITECT AND ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
  - (10) LATERAL SEPARATION OF SEWERS OR WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST TEN (10) FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A TEN (10) FOOT LATERAL SEPARATION -- IN WHICH CASE:
    - (A) THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION ON THE BOTTOM OF THE WATER MAIN AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF SEWER; OR
    - (B) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF SEWER.
  - (11) CROSSING A WATER MAIN OVER A SEWER. WHENEVER NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN EIGHTEEN (18) INCH SEPARATION -- IN WHICH CASE, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE CROSSING.
  - (12) CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE POINT(S) OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

CP 1268



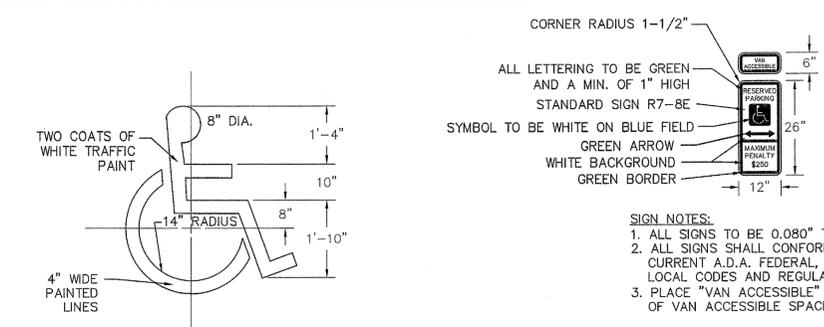
NOTES:  
 1. WALKS SHALL BE PLACED ON COMPACTED STONE BASE COURSE.  
 2. CROSS SLOPE OF ALL WALKS SHALL BE 1/4" PER FOOT MAX. (2% MAX.).  
 3. THICKNESS OF CONCRETE WALKS SHALL BE 4" UNLESS OTHERWISE NOTED.  
 4. SURFACE FINISH OF WALK SHALL BE LIGHT/MEDIUM BROOM FINISH PERPENDICULAR TO RUN OF WALK.  
 5. DIFFERENCE BETWEEN TOP OF WALKWAY AND ADJACENT FINISHED GRADE SHALL BE 6" MAX.



NOTES:  
 1. A GROOVE JOINT 1" DEEP WITH A 1/8" RADIUS SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS NOT TO EXCEED 50' AND MATCHING EXPANSION/CONSTRUCTION JOINT IN ADJACENT CURB. A SEALED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.  
 2. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3,000 PSI IN 28 DAYS.

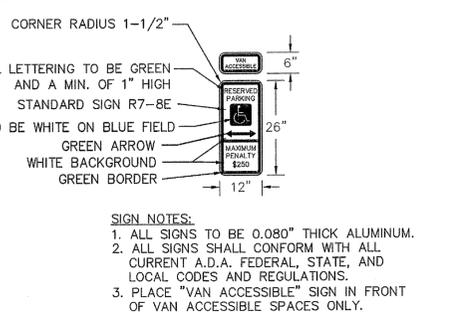
**CONCRETE WALKWAYS (NOT IN R/W)**  
**DETAIL**  
 SCALE: NOT TO SCALE

1  
C5



**HANDICAP PAVEMENT SYMBOL**  
**DETAIL**  
 SCALE: NOT TO SCALE

2  
C5



**ACCESSIBILITY PARKING DETAILS**  
**DETAIL**  
 SCALE: NOT TO SCALE

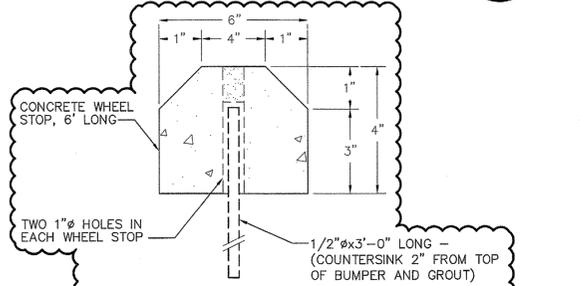
3  
C5

**STABILIZATION TIME FRAMES**

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	7 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	7 DAYS	NONE EXCEPT FOR PERIMETERS AND HQW ZONES

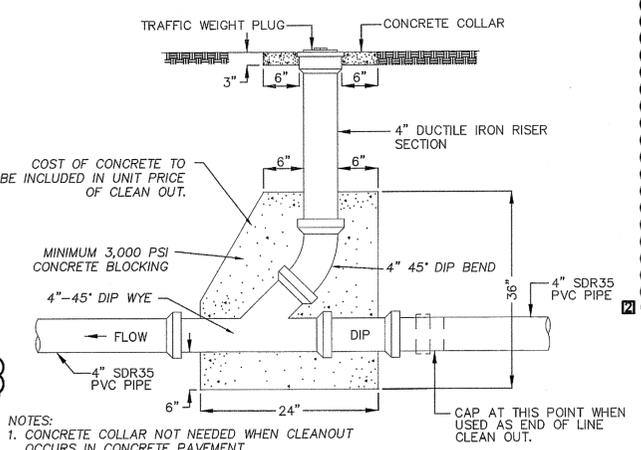
**STABILIZATION TIME FRAMES**  
**DETAIL**  
 SCALE: NOT TO SCALE

10  
C5



**TYPICAL WHEEL STOP SECTION**  
**DETAIL**  
 SCALE: NOT TO SCALE

6  
C5

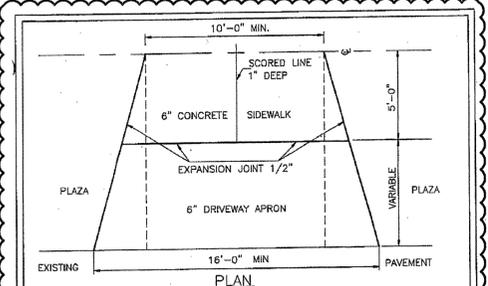


**TYPICAL SEWER CLEANOUT**  
**DETAIL**  
 SCALE: NOT TO SCALE

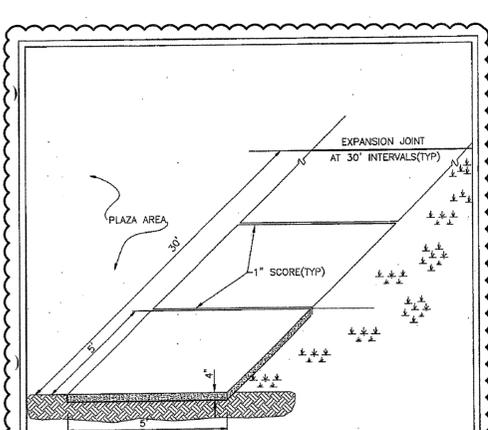
7  
C5

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
**APPROVED DRAINAGE PLAN**  
 Date: 2/27/13 Permit # 2013003  
 Signed: *[Signature]*

**Approved Construction Plan**  
 Name: *[Name]* Date: *[Date]*  
 Planning: *[Signature]* 2/25/13  
 Traffic: *[Signature]* 2/26/13  
 Fire: *[Signature]* 2/26/13

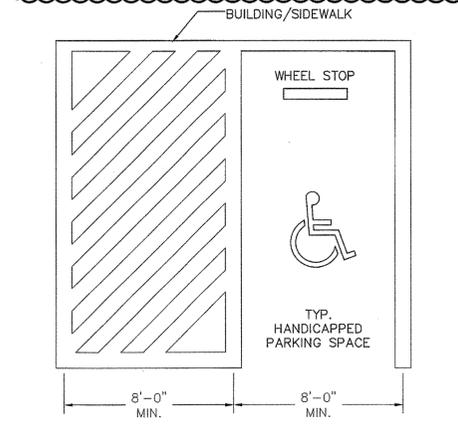


**RESIDENTIAL DRIVEWAY**  
**STREETS WITH NO CURB**  
 STANDARD DETAIL  
 CITY OF WILMINGTON  
 ENGINEERING OFFICE  
 305 CHESTNUT STREET  
 P.O. BOX 1810  
 WILMINGTON, N.C. 28402  
 (910) 341-7807  
 SD 8-05



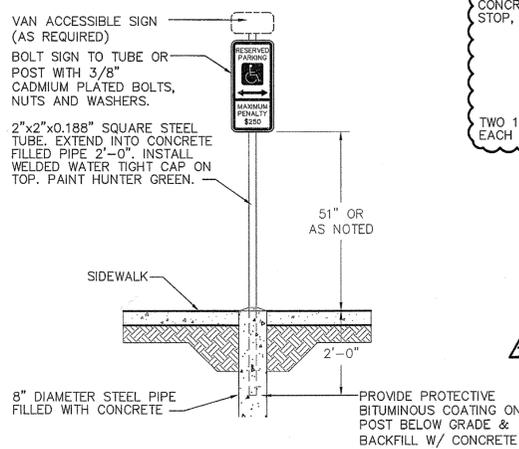
**SIDEWALK**  
**DETAIL**  
 STANDARD DETAIL  
 CITY OF WILMINGTON  
 ENGINEERING OFFICE  
 305 CHESTNUT STREET  
 P.O. BOX 1810  
 WILMINGTON, N.C. 28402  
 (910) 341-7807  
 SD 8-15

**81**  
 Know what's below.  
 Call before you dig.



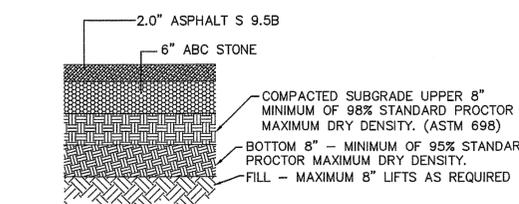
**HANDICAP PAVEMENT STRIPING**  
**DETAIL**  
 SCALE: NOT TO SCALE

4  
C5



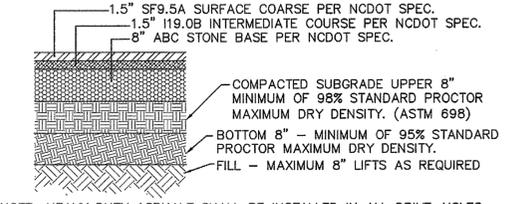
**POST AND PANEL SIGN DETAILS**  
**DETAIL**  
 SCALE: NOT TO SCALE

5  
C5



**LIGHT DUTY ASPHALT PAVEMENT**  
**DETAIL**  
 SCALE: NOT TO SCALE

8  
C5



**HEAVY DUTY ASPHALT PAVEMENT**  
**DETAIL**  
 SCALE: NOT TO SCALE

9  
C5

**SEEDING SCHEDULE**  
**DETAIL**  
 SCALE: NOT TO SCALE

TEMPORARY			PERMANENT		
SPECIES	RATE (LB/AC)	DATES	SPECIES	RATE (LB/AC)	DATES
RYE (GRAIN)	120	DEC 1 - APR. 15	CENTPEDEGRASS	10-20	MAR. - JUNE
KOBE LESPEDEZA	50	DEC. 1 - APR. 15	SERICEA LESPEDEZA	30	APR. 1 - JULY 15
GERMAN MILLET	40	APR. 15 - AUG. 15	COMMON BERMUDAGRASS	10	APR. 1 - JULY 15
RYE (GRAIN)	120	AUG. 15 - DEC. 30	GERMAN MILLET	10	APR. 1 - JULY 15
SOIL AMENDMENTS			SOIL AMENDMENTS		
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER			FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 500 LB/ACRE 10-10-10 FERTILIZER		
MULCH			MULCH		
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.			APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.		
MAINTENANCE			MAINTENANCE		
IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR ACCORDING TO SOIL TESTS OR TOPDRESS WITH 500 LB/ACRE 10-10-10 FERTILIZER. RESEED, REFERTILIZE, AND MULCH AREA IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. IF SEEDING IN FALL, TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.			REFERTILIZE THE FOLLOWING APR. WITH 50 LB/ACRE NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOWED ONLY ONCE A YEAR, WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND MOW AS OFTEN AS NEEDED.		

**SEEDING SCHEDULE**  
**DETAIL**  
 SCALE: NOT TO SCALE

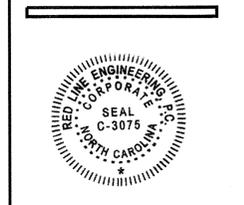
10  
C5



FINAL DRAWING  
 RELEASED  
 FOR CONSTRUCTION

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**Red Line Engineering, P.C.**  
 3305-109 DURHAM DRIVE  
 RALEIGH, NORTH CAROLINA 27603  
 PHONE - (919) 779-6851  
 FAX - (919) 779-0826



WILLIAMSON MEDICAL OFFICES  
 5114 WRIGHTSVILLE AVENUE  
 WILMINGTON, NORTH CAROLINA 28403

**DETAILS SHEET**

REVISIONS:

REVISIONS:	DATE:
1 PER C.O.W.	12/19/12
2 PER C.O.W.	1/26/13

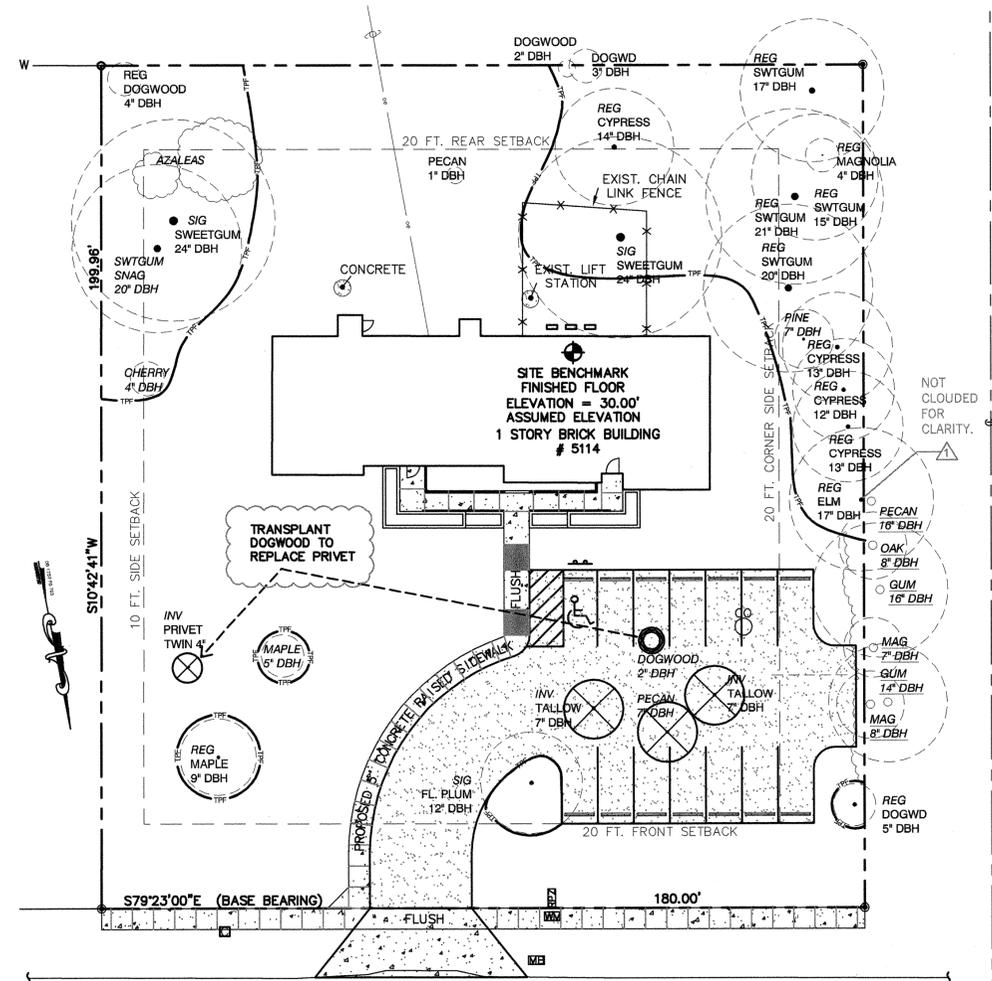
ISSUED FOR:

ISSUED FOR:	DATE:
REVIEW/PERMITS	11/14/12
CONSTRUCTION	02/19/13

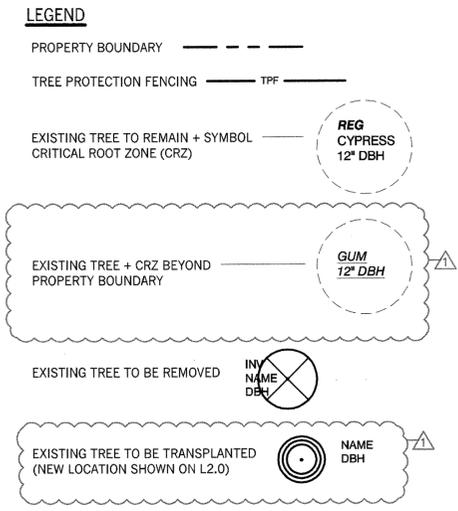
PROJECT NO.: 12-016  
 DRAWN BY: GJM  
 REVIEWED BY: GJM

SHEET NUMBER:  
**C5**  
 OF 7 SHEETS

CP 1268



- GENERAL NOTES:**
- ALL EXISTING INFORMATION BASED ON SURVEY PREPARED BY PATRICK C. BRISTOW LAND SURVEYING, P.C., OCTOBER 10, 2012. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO FIELD-VERIFY ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY SITE DISTURBANCE, EXCAVATION, OR PLANTING.
  - NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. (COW SEC.18-458)
  - TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETE. THE TREE PROTECTION FENCE SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
  - PRIOR TO GRADING, TREE ROOTS SHALL BE PRUNED USING APPROPRIATE ARBORCULTURE PRUNING TOOLS AND PRACTICES. (COW SEC.18-458)

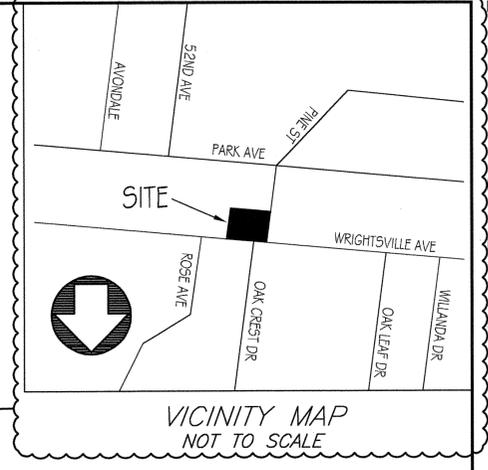


60' UNNAMED PUBLIC R/W (NOT IMPROVED)

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED DRAINAGE PLAN  
 Date: 2/27/13 Permit # 2013003  
 Signed: *[Signature]*

**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Planning: *Down on Drafting 2/25/13*  
 Public Utilities: \_\_\_\_\_  
 Traffic: *Bill McDow 2/26/13*  
 Fire: *[Signature]* 2/26/13



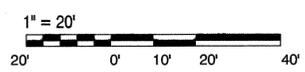
**NORTH CAROLINA**  
 LANDSCAPE ARCHITECT  
 1448  
 LARRY D. BEKLEY  
 2/19/13  
 FINAL DRAWING  
 RELEASED  
 FOR CONSTRUCTION

**Red Line Engineering, P.C.**  
 (C-3075)  
 3305-109 DURHAM DRIVE  
 RALEIGH, NORTH CAROLINA 27603  
 PHONE - (919) 779-6851  
 FAX - (919) 779-0826

**B+O design studio, pllc**  
 1319-CC Military Cutoff Rd.  
 FMS 221  
 WILMINGTON, NC 28405  
 www.b-and-o.net

WRIGHTSVILLE AVENUE  
 (60' PUBLIC R/W)

**1 TREE PRESERVATION PLAN**



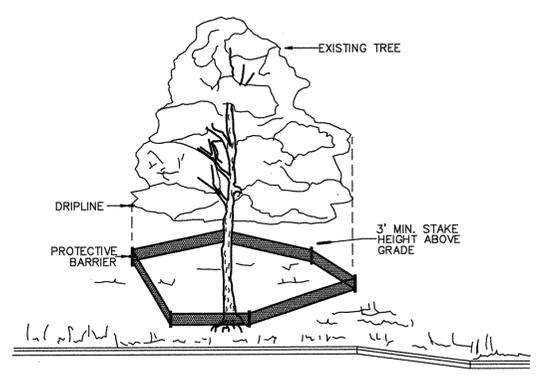
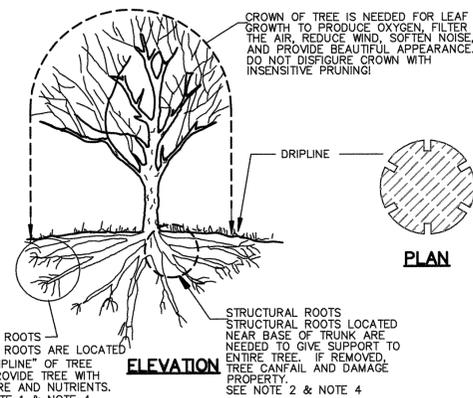
EXISTING TREES TO BE PRESERVED				
DBH	TYPE	CATEGORY	QUANTITY	CREDIT
24"	SWEETGUM	SIGNIFICANT	2	6 X 2 = 12
12"	FLOWRG. PLUM	SIGNIFICANT	1	3 X 1 = 3
21"	SWEETGUM	REGULATED	1	4 X 1 = 4
20"	SWEETGUM	REGULATED	2	4 X 2 = 8
17"	SWEETGUM	REGULATED	1	3 X 1 = 3
17"	ELM	REGULATED	1	3 X 1 = 3 (ON PROPERTY LINE)
15"	SWEETGUM	REGULATED	1	3 X 1 = 3
14"	CYPRESS	REGULATED	1	3 X 1 = 3
13"	CYPRESS	REGULATED	2	3 X 1 = 3
12"	CYPRESS	REGULATED	1	3 X 1 = 3
9"	MAPLE	REGULATED	1	2 X 1 = 2
5"	DOGWOOD	REGULATED	1	1 X 1 = 1
4"	DOGWOOD	REGULATED	1	1 X 1 = 1
4"	MAGNOLIA	REGULATED	1	1 X 1 = 1
5"	MAPLE	N/A	1	1 X 1 = 1
4"	CHERRY	N/A	1	1 X 1 = 1
3"	DOGWOOD	N/A	1	1 X 1 = 1
2"	DOGWOOD	N/A	1	1 X 1 = 1
			21 TOTAL TREES,	54 TOTAL TREE CREDITS

EXISTING TREES TO BE REMOVED DUE TO ESSENTIAL SITE IMPROVEMENTS				
DBH	TYPE	LOCATION	CATEGORY	MITIGATION
7"	TALLOW	PARKING	N/A	NOT IN MITIGATION CHART
7"	TALLOW	PARKING	N/A	NOT IN MITIGATION CHART
7"	PECAN	PARKING	N/A	EXEMPT

EXISTING TREES TO BE TRANSPLANTED				
DBH	TYPE	LOCATION	CATEGORY	MITIGATION
2"	DOGWOOD	PARKING	N/A	EXEMPT



- TREE PROTECTION DURING CONSTRUCTION**
- DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO HEAVY MATERIALS SHALL BE STORED BENEATH TREES. RESULTS OF COMPACTION CAUSE WATER AND AIR NOT TO REACH THE ROOTS AND THE TREE WILL DIE. THESE "FEEDER ROOTS" OCCUR WELL AWAY FROM THE BASE OF THE TREE TO THE EDGE OF THE OVERHEAD BRANCH CANOPY. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. A PROTECTIVE BARRIER SHOULD PREVENT DAMAGE FROM OCCURRING DURING CONSTRUCTION.
  - NO CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK. THESE ARE ESSENTIAL IN SUPPORTING THE TREE AND HOLDING IT UPRIGHT IN HIGH WINDS. REMOVAL OF THESE ROOTS ALONG ONE SIDE IS OFTEN DONE BECAUSE OF A WALK, PAVING OR BUILDING WHICH IS BEING CONSTRUCTED.
  - AVOID CUT AND FILL WITHIN DIAMETER OF TREE CROWN DURING EXCAVATION.

SD 15-09  
 NOT TO SCALE

SD 15-08  
 NOT TO SCALE

**WILLIAMSON MEDICAL OFFICES**  
 5114 WRIGHTSVILLE AVENUE  
 WILMINGTON, NORTH CAROLINA 28403  
**TREE PROTECTION PLAN**

**REVISIONS:**

REVISION	DATE
1 PER C.O.W.	12/19/12
2 PER C.O.W.	1/28/13
FINAL	2/19/13

**ISSUED FOR:**

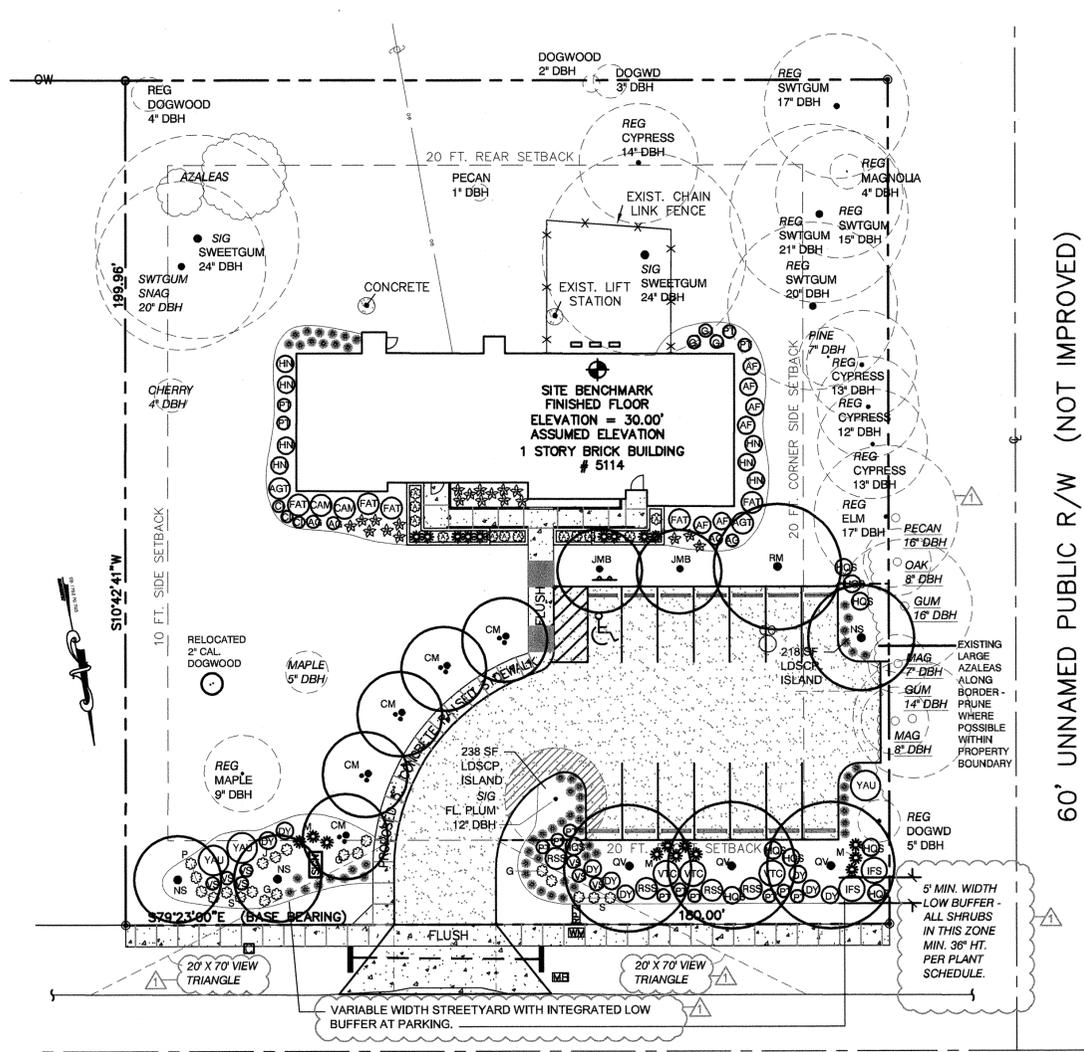
REVIEW/PERMITS	DATE
	11/14/12

PROJECT NO.: 1209  
 DRAWN BY: LDB  
 REVIEWED BY: LDB

SHEET NUMBER:  
**L1**  
 OF 2 SHEETS

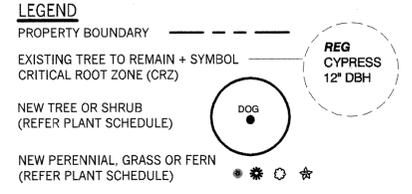


CP 1268



60' UNNAMED PUBLIC R/W (NOT IMPROVED)

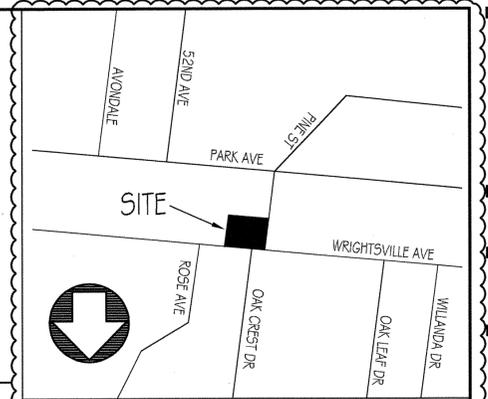
- GENERAL LANDSCAPE NOTES:**
- ALL EXISTING INFORMATION BASED ON SURVEY PREPARED BY PATRICK C. BRISTOW LAND SURVEYING, P.C., OCTOBER 10, 2012. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO FIELD-VERIFY ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY SITE DISTURBANCE, EXCAVATION, OR PLANTING.
  - TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETE. THE TREE PROTECTION FENCE SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
  - THE PLANT SCHEDULE IS PRESENTED FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT KEY, THE PLAN SHALL PREVAIL.
  - PLANTS SHALL BE BID AS SPECIFIED UNLESS UNAVAILABLE, AT WHICH TIME THE LANDSCAPE CONTRACTOR WILL NOTIFY THE OWNER AND LANDSCAPE ARCHITECT BY TELEPHONE AND IN WRITING OF INTENDED CHANGES. THERE SHALL BE NO ADDITIONS, DELETIONS, OR SUBSTITUTIONS WITHOUT THE WRITTEN APPROVAL OF THE OWNER.
  - TOPSOIL AND DRAINAGE MEDIA SHALL BE INSTALLED IN NEW PLANTERS PER DETAIL, REFER A-SERIES DRAWINGS.
  - REPAIR ALL DISTURBED AREAS NOT IN PLANTING BEDS TO MATCH EXISTING SOD.
  - ALL NEW PLANTING BEDS SHALL BE MULCHED WITH 3" LAYER OF TRIPLE-SHREDDED HARDWOOD BARK MULCH, NATURAL COLOR.
  - THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE COLLECTION, REMOVAL, AND PROPER DISPOSAL OF ANY AND ALL DEBRIS GENERATED DURING THE INSTALLATION OF THE PROJECT.
  - THE LANDSCAPE CONTRACTOR SHALL GUARANTEE, IN WRITING, PLANT SURVIVABILITY FOR A PERIOD OF TWELVE (12) MONTHS FROM FINAL ACCEPTANCE BY OWNER.
  - NO OBSTRUCTIONS SHALL BE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE GROUND LEVEL WITHIN THE TRIANGULAR SIGHT DISTANCE.
  - A RAIN/FREEZE SENSOR SHALL BE INSTALLED AS A PART OF ANY IRRIGATION SYSTEM USED ON THIS SITE.



PLANT SCHEDULE	TYPE	SCIENTIFIC NAME	COMMON NAME	QTY.	SIZE	NOTES
TREES	JMB	ACER JAPONICUM 'BLOODGOOD'	BLOODGOOD JAPANESE MAPLE	2	2" CAL.	
	RM	ACER RUBRUM	RED MAPLE	1	2" CAL.	
	CM	LAGERSTROEMIA INDICA 'MUSKOGEE'	CREPE MYTLE	5	2" CAL.	MULTI-TRUNK
	NS	NYSSA SYLVATICA	BLACKGUM	3	2.5" CAL.	STREETYARD, PKG ISLD.
	QV	QUERCUS VIRGINIANA	LIVE OAK	3	2.5" CAL.	STREETYARD
SHRUBS	CAM	CAMELLIA JAPONICA	CAMELLIA	2	MIN 24" HT.	
	FAT	FATSIA JAPONICA	FATSIA	5	MIN 24" HT.	
	GJ	GARDENIA JASMINOIDES 'RADICANS'	DWARF JASMINE	3	MIN 18" HT.	
	HN	HYDRANGEA MACROPHYLLA 'NIKKO BLUE'	HYDRANGEA	7	MIN 24" HT.	
	HQS	HYDRANGEA QUERCIFOLIA 'SIKES DWARF'	DWARF OAKLEAF HYDRANGEA	9	MIN 36" HT.	
	DY	ILEX VOMITORIA 'SCHILLINGS'	DWARF YAUPON	8	MIN 36" HT.	
	YAU	ILEX VOMITORIA 'PRIDE OF HOUSTON'	YAUPON (FEMALE)	3	MIN 48" HT.	
	IFS	ILICUM FLORIDANUM 'SEMME'S'	FLORIDA ANISE	2	MIN 36" HT.	
	VS	ITEA VIRGINICA 'LITTLE HENRY'	VIRGINIA SWEETSPIRE	7	MIN 36" HT.	
	PT	PITTIOSPORUM TOBIRA 'MOJO'	DWARF PITTIOSPORUM	13	MIN 36" HT.	
	RSS	RAPHOLEPIS UMBELLATA 'SPRING SONATA'	INDIAN HAWTHORN	4	MIN 36" HT.	
	AGT	RHODODENDRON 'GEORGE TABOR'	GEORGE TABOR AZALEA	2	MIN 36" HT.	
	AG	RHODODENDRON 'WHITE GUMPO'	WHITE GUMPO AZALEA	4	MIN 18" HT.	
AF	RHODODENDRON 'FASHION'	FASHION AZALEA	6	MIN 24" HT.		
VTC	VIBURNUM TINUS 'COMPACTUM'	LAURUSTINUS	3	MIN 36" HT.		
GROUNDCOVERS + PERENNIALS	A	ACAPANTHUS AFRICANUS 'STORM CLOUD'	LILY OF THE NILE	12	MIN 12" HT.	IN PLANTER
	C	ASPIDISTRA ELIATOR	CAST IRON PLANT	3	MIN 12" HT.	FOUNDATION
	J	EUPATORIUM DUBIUM 'BABY JOE'	DWARF JOE-PYEWEED	3	MIN 12" HT.	
	G	GAURA LINDHEIMERI	WHIRLING BUTTERFLIES	7	MIN 12" HT.	STREETYARD
	M	LIRIOPE SPICATA 'EVERGREEN GIANT'	EVERGREEN GIANT LIRIOPE	60	MIN 12" HT.	STREETYARD & FOUNDATION
	M	MUHLENBERGIA CAPILLARIS	MUHLY GRASS	11	MIN 12" HT.	STREETYARD
	M	FARGESIA RUFA	CLUMPING BAMBOO	9	3 GAL.	IN PLANTER (WILL NEED CAGE TO PREVENT FLOP) PLEASE CONSIDER ANOTHER GRASS OR LIVING VINE SCREEN PANEL
	P	PENSTEMON LAEVIGATUS 'MAPLE HILL'	EASTERN BEARDTONGUE	4	MIN 12" HT.	STREETYARD
	S	SALVIA LYRATA	LYRELEAF SAGE	6	MIN 12" HT.	STREETYARD
	FERNS	*	DRYOPTERIS ERYTHROSA	AUTUMN FERN	10	MIN 18" HT.
*		POLYSTICHUM ACROSTICHODES	CHRISTMAS FERN	10	MIN 18" HT.	FOUNDATION - GROUPS OF >3

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED DRAINAGE PLAN  
Date: 2/27/13 Permit # 2013003  
Signed: *[Signature]*

**Approved Construction Plan**  
Name: *[Name]* Date: *[Date]*  
Planning: *[Signature]* 2/25/13  
Traffic: *[Signature]* 2/26/13  
Fire: *[Signature]* 2/26/13



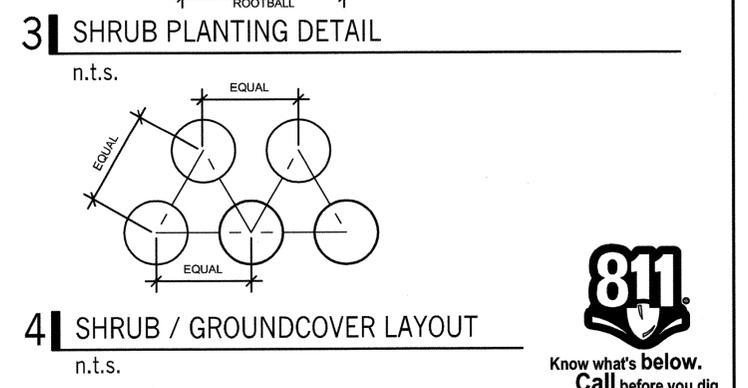
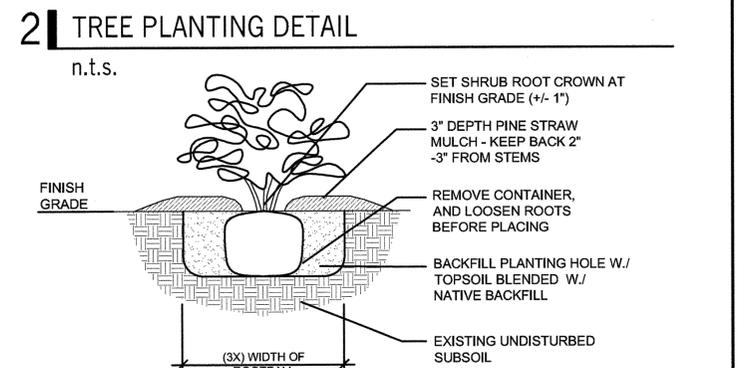
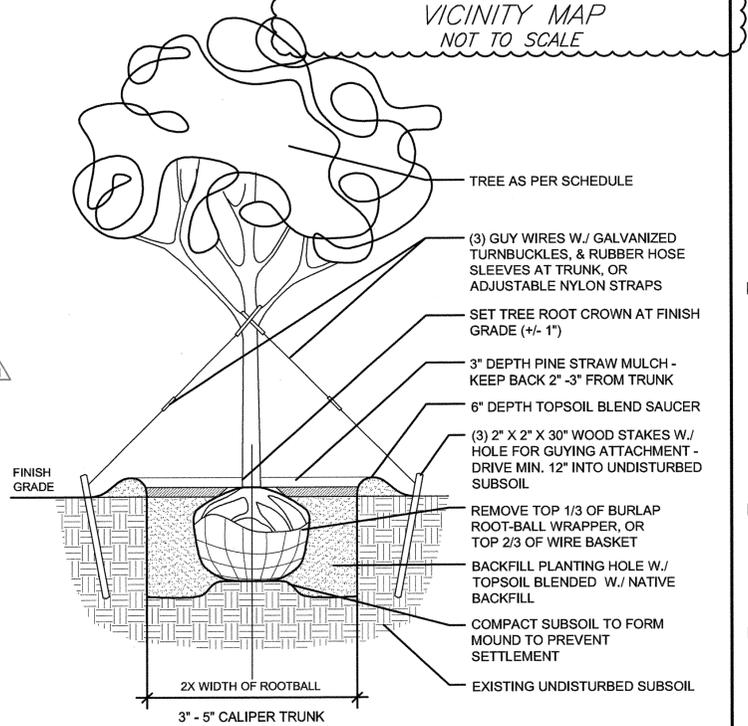
**REVISIONS:**

REVISIONS:	DATE:
PER C.O.W.	12/19/12
PER C.O.W.	1/28/13
FINAL	2/19/13

ISSUED FOR: REVIEW/PERMITS DATE: 11/14/12

PROJECT NO.: 1209  
DRAWN BY: LDB  
REVIEWED BY: LDB

SHEET NUMBER:  
**L2**  
OF 2 SHEETS



**1 LANDSCAPE PLAN**

**LANDSCAPE CALCULATIONS**

**STREET YARD ALONG WRIGHTSVILLE AVENUE**  
REQUIRED: 180.00 LF ROW (-24.00 LF DRIVE) = 156.00 LF STREET YARD  
156 LF (x 18' O & 1-1 MULTIPLIER) = 2,808 SF STREET YARD  
MIN WIDTH = 9'  
MAX. WIDTH = 27'

PROPOSED: 3,025 SF STREETYARD

**TREES**  
REQUIRED: 1 CANOPY TREE/600 SF = 5 CANOPY TREES (MIN 2" CAL., 8'-10' MIN. HT AT PLTG)  
PROPOSED: 5 NEW TREES

**SHRUBS**  
REQUIRED: 6 SHRUBS/600 SF = 29 SHRUBS (12" MIN. HEIGHT AT PLANTING)  
PROPOSED: 41 NEW SHRUBS

**PARKING LOT LANDSCAPING**  
INTERIOR AREA LANDSCAPING

FOR 5,592 SF PROPOSED IMPERVIOUS PARKING (W/O PERVIOUS PAVING)  
SHADING REQUIRED: (0 & 1-1 REQUIRED SHADING @ 20%) = 1,119 SF  
SHADING PROVIDED: CANOPY TREES AT PARKING LOT PROVIDE 314 SF SHADED AREA EACH  
13 SHADE TREES X 314 SF = 4,082 SF  
TOTAL SHADED AREA PROVIDED = 4,082 SF

**PERIMETER LANDSCAPING** N/A

PARKING AREA SCREENING AT WRIGHTSVILLE AVENUE: INCORPORATED IN 15' WIDE STREETYARD (LOW BUFFER PER 18-483) REQUIRED VEGETATION MIN. 3' HT., 5' WIDE

**FOUNDATION PLANTINGS**  
1248 SF AREA OF FRONT BUILDING FACE X 12% = 150 SF FOUNDATION PLANTINGS REQUIRED  
(12' BLDG. HT. X 104' FACADE LENGTH) 540 SF FOUNDATION PLANTINGS PROVIDED

ALL PLANTED AND RETAINED LIVING MATERIAL, REQUIRED TO MEET THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, SHALL BE PERPETUALLY PROTECTED AND MAINTAINED TO PROFESSIONALLY ACCEPTED STANDARDS BY JOINT AND SEVERAL RESPONSIBILITY OF THE OWNER, OCCUPANT, TENANT, AND RESPECTIVE AGENTS OF THE PROPERTY ON WHICH THE MATERIAL IS LOCATED.

**Red Line Engineering, P.C.**  
(C-3075) 1319-CC Military Cutoff Rd.  
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Wilmington, NC 28405  
www.b-and-o.net

**B and O design studio, pllc**  
1319-CC Military Cutoff Rd.  
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**WILLIAMSON MEDICAL OFFICES**  
5114 WRIGHTSVILLE AVENUE  
WILMINGTON, NORTH CAROLINA 28403

**LANDSCAPE PLAN**

**811**  
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CP1268