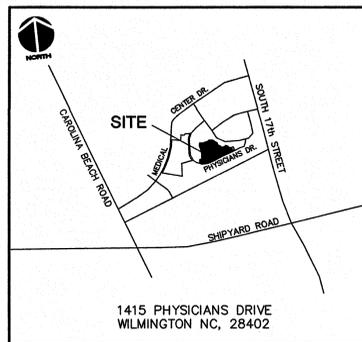


EARLY GRADING RELEASE NHRMC OUTPATIENT CARDIOLOGY CENTER

FOR
LS3P ASSOCIATES, LTD.
CITY OF WILMINGTON, NORTH CAROLINA
MAY 10, 2013 - PERMIT SET



VICINITY MAP
NOT TO SCALE

PROPERTY OWNER (FINANCIALLY RESPONSIBLE PARTY):

NEW HANOVER REGIONAL MEDICAL CENTER
ATTN: CHRISTINA MAROULIS-OLLIE
2131 S. 17TH ST.
PO BOX 9000
WILMINGTON, NC 28401
(P) 910-343-7000

ARCHITECT:

LS3P ASSOCIATES, LTD.
2528 INDEPENDENCE BLVD., SUITE 200
WILMINGTON, NORTH CAROLINA 28412
(P) 910-790-9901
(F) 910-790-3111

CIVIL ENGINEER / LANDSCAPE ARCHITECT:

McKIM & CREED, INC
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
(P) 910-343-1048
(F) 910-251-8282



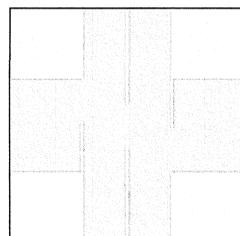
SHEET INDEX

FILE #	DESCRIPTION
C-001	COVER
CR-001	GENERAL NOTES
CX-101	EXISTING CONDITIONS-SITE INVENTORY MAP
CD-101	DEMOLITION PLAN
CS-101	SITE PLAN
CE-101	PHASE 1 SEDIMENT & EROSION CONTROL PLAN
CE-102	PHASE 2 SEDIMENT & EROSION CONTROL PLAN
CG-101	GRADING AND STORM DRAINAGE PLAN
CU-101	UTILITY PLAN
CL-101	LANDSCAPE PLAN
CS-501	SITE DETAILS
CE-501	SEDIMENT & EROSION CONTROL DETAILS
CG-501	STORM DRAINAGE & GRADING DETAILS
CU-501	UTILITY DETAILS
CU-502	UTILITY DETAILS
CU-503	UTILITY DETAILS
CU-504	UTILITY DETAILS
CU-505	UTILITY DETAILS
CU-506	UTILITY DETAILS
CL-501	LANDSCAPE DETAILS

REVISIONS:		
No.	Description	Date
0	DESIGN DEVELOPMENT	02/27/2013
1	TRC COMMENT REVISIONS	04/17/2013



THIS PLAN SET IS ISSUED FOR EARLY GRADING RELEASE FROM THE CITY OF WILMINGTON. NO IMPERVIOUS AREAS ALL ALLOWED TO BE CONSTRUCTED UNTIL SUCH TIME AS FULL CONSTRUCTION RELEASE IS OBTAINED. TREE REMOVAL, SITE DEMOLITION, CLEARING, GRUBBING AND ROUGH GRADING ARE PERMITTED UNDER THIS EARLY GRADING RELEASE.



McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
PHONE: (910)343-1048, FAX: (910)251-8282
NC LICENSE# F-1222
www.mckimcreed.com



LS3P ASSOCIATES LTD.
2528 INDEPENDENCE BLVD., SUITE 200
WILMINGTON, NORTH CAROLINA 28412
TEL. 910.790.9901 FAX 910.790.3111
WWW.LS3P.COM



PHONE# 1(800)632-4949

Approved Construction Plan

Name: Edward A. Moore Date: 6/1/13

Planning: William H. Hester 6/1/13

Traffic: William H. Hester 6/1/13

Fire: S. Hester 6/1/13

STORMWATER MANAGEMENT PLAN
APPROVED

CITY OF WILMINGTON
ENGINEERING DEPARTMENT

DATE: _____ PERMIT # _____

SIGNED: _____

1 inch

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

CP 1283

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND FIELD DETERMINING THE EXACT DEMOLITION LIMITS. QUESTIONS DURING BIDDING SHALL BE DIRECTED TO THE ARCHITECT.
2. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIARIZED WITH FIELD DEMOLITION CONDITIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL DEMOLISHED DEBRIS ASSOCIATED WITH THE PROJECT.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST GENERATED BY THE WORKING INCLUDING BUT NOT LIMITED TO DEMOLITION AND CONSTRUCTION ACTIVITIES, SITE VEHICULAR TRAFFIC AND RELATED OPERATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO BEGINNING ANY DEMOLITION. CONTRACTOR SHALL NOTIFY NC ONE CALL PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED.
6. EXISTING UTILITIES AND STRUCTURES SHOWN ARE BASED ON FIELD SURVEY. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER IMMEDIATELY.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF DISCONNECTING AND ABANDONING ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED. ALL EXISTING UTILITIES AND ASSOCIATED PIPING, ETC. NOT IN USE ON THE SITE SHALL BE PROPERLY ABANDONED AND REMOVED.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES THAT REMAIN IN SERVICE DURING DEMOLITION.
9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REMOVAL OR RELOCATION OF ANY EXISTING UTILITY POLES/GUY LINES, LIGHT POLES, TELEPHONE PEDESTALS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPLICABLE UTILITY COMPANY AS REQUIRED.
10. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS AND SLOPES ON AND OFF SITE IN ACCORDANCE WITH THE EROSION CONTROL MEASURES SPECIFIED ON THE PLANS AND IN THE SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHO IS RESPONSIBLE FOR PROVIDING THE PERMANENT STABILIZATION MEASURES AND THE TYPE OF PERMANENT MEASURES PRIOR TO BEGINNING DEMOLITION AND CONSTRUCTION. THE PERMANENT STABILIZATION MEASURES SHALL BE IN PLACE AND ACCEPTABLE TO THE OWNERS REPRESENTATIVE AND ENGINEER PRIOR TO PROJECT CLOSEOUT. COORDINATE INSPECTION WITH THE OWNER AND ENGINEER PRIOR TO PROJECT CLOSEOUT.
11. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE ENGINEER FOR THE REQUIRED INSPECTIONS ON THE PROJECT.
12. WETLANDS DO NOT EXIST ON SITE.
13. CITY OF WILMINGTON TEMPORARY METER REMOVAL POLICY MUST BE ADHERED TO IF CONSTRUCTION OR CONSTRUCTION LAYDOWN AREA REQUIRES THE USE OF PUBLIC SPACES CONTAINING PARKING METERS.
14. THE SITE DEMOLITION CONTRACTOR SHALL REMOVE AND DELIVER TO THE OWNER, IN WORKING CONDITION, ALL ITEMS AS INDICATED ON THE DRAWINGS. THE SITE DEMOLITION CONTRACTOR SHALL TEST THE EXISTING LIGHTING SYSTEM PRIOR TO PERFORMING ANY WORK ON THE SYSTEM AND IDENTIFY ALL DEFECTIVE COMPONENTS AND DAMAGE IN WRITING TO THE ARCHITECT/ENGINEER. IF NONE ARE IDENTIFIED, THE EXISTING SALVAGED FIXTURES AND POLES WILL BE CONSIDERED DAMAGE FREE AND OPERATIONAL, AND ANY DAMAGE NOTED AFTER REMOVAL WILL BE CONSIDERED A RESULT OF CONTRACTOR OPERATIONS AND WILL BE REPAIRED OR REPLACED BY THE CONTRACTOR. THE SITE DEMOLITION CONTRACTOR SHALL REMOVE ALL EXISTING UNDERGROUND RACEWAYS AND CONDUCTORS FEEDING THE EXISTING SITE LIGHTING FIXTURES. THE EXISTING ELECTRICAL FEEDER FOR THE SITE LIGHTING WILL BE DE-ENERGIZED BY THE ELECTRICAL CONTRACTOR PRIOR TO DEMOLITION.
15. THE CONTRACTOR IS REQUIRED TO CAPTURE ALL REFRIGERANT ON ALL EQUIPMENT PLANNED FOR DEMOLITION CONTAINING REFRIGERANT.
16. CITY OF WILMINGTON TRAFFIC CONTROL SIGNS LOCATED IN THE RIGHT-OF-WAY SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE OR REPLACED AT THE END OF CONSTRUCTION AT LOCATION IDENTIFIED BY CITY OF WILMINGTON TRAFFIC ENGINEERING OR SHOWN ON THE SITE PLAN.

TREE PROTECTION NOTES:

1. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
2. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. [18-457(B)]
3. PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. [18-458]
4. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS. [18-457(D)]
5. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. [18-458]
6. ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS. [18-458]
7. REGULATED AND SIGNIFICANT TREES IN THE STREET YARD [18-456(D)] AND ANY TREES IN ANY REQUIRED BUFFERS [18-456(B)] ARE REQUIRED TO BE RETAINED.

CONSTRUCTION NOTES:

1. PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE LOWERING OR RAISING OF EXISTING GRADE AROUND A TREE OR STRIPING OF TOPSOIL, A CLEAR, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA.
2. HANDICAP PARKING SIGNS WILL CONFORM TO N.C.S.B.C. DETAILS R7-8 AND R7-8D.
3. ALL SIGNAGE AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC SHALL MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A TRAFFIC CONTROL PLAN AND DEVICES DURING CONSTRUCTION WORK IN ACCORDANCE WITH THE MUTCD, OWNER AND CITY OF WILMINGTON STANDARDS.
5. ALL DIMENSIONS ARE MEASURED TO THE BACK OF CURB UNLESS OTHERWISE INDICATED.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE PARKING SIGNS, TRAFFIC SIGNS AND PAVEMENT MARKINGS. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE OWNER REPRESENTATIVE PRIOR TO BIDDING AND CONSTRUCTION AS REQUIRED.
7. CONSTRUCTION FENCING WILL BE INSTALLED AND MAINTAINED FOR DURATION OF PROJECT.
8. ALL SIGNAGE MUST BE OBTAINED AS A SEPARATE PERMIT THROUGH THE CITY OF WILMINGTON.
9. NO OBSTRUCTIONS SHALL BE PERMITTED IN THE SPACE BETWEEN 30 INCHES AND TEN FEET ABOVE GROUND LEVEL WITHIN THE AREA OF THE TRIANGULAR SITE DISTANCE.
10. ALL PROPOSED VEGETATION WITHIN SITE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SITE LINES FROM 30 INCHES AND TEN FEET.
11. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING. 1-800-632-4949
12. THE BELL SOUTH CONTACT IS STEVE DAYVAULT. HE IS THE BUILDING INDUSTRY CONSULTANT (910) 392-8712. PLEASE CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.
13. THE PROCESS FOR TELEPHONE CABLE PLACEMENT; *FINAL GRADE WILL NEED TO BE ESTABLISHED. *POWER WILL PLACE THEIR CABLE FIRST - ABOUT 3' DEEP *BELL SOUTH/CABLE TV WILL THEN PLACE CABLE - ABOUT 2' DEEP

EXISTING CONDITIONS GENERAL NOTES

1. SITE CONDITIONS ARE BASED ON SIGNED & SEALED SURVEY PROVIDED BY STEWART ENGINEERING ON FEBRUARY 25th, 2013.
2. THE SITE IS ZONED O4-1.
3. SOIL TYPES PER THE USDA NRCS SOIL SURVEY ARE DELINEATED ON THE SITE INVENTORY PLAN.
4. THIS TRACT IS NOT LOCATED IN A DESIGNATED 100-YEAR FLOOD ZONE.
5. THIS TRACT IS NOT LOCATED IN A CAMA AREA OF CONCERN. THERE ARE NO CAMA JURISDICTIONAL WATERS LOCATED ON OR NEAR THE SITE.
6. THE CAMA LAND USE CLASSIFICATION IS "URBAN" AS DETERMINED BY THE WILMINGTON-NEW HANOVER COUNTY CAMA LAND USE PLAN 2006.
7. BASED ON AVAILABLE DATA, WETLANDS, CLASS IV SOILS AND 100-YEAR FLOOD PLAIN ARE NOT PRESENT ON THE SITE. DUE TO THIS THERE ARE NO KNOWN CONSERVATION RESOURCES ON THE SITE.
8. BASED ON AVAILABLE DATA THERE ARE NO KNOWN CEMETERIES, BURIAL SITES OR BURIAL GROUNDS LOCATED ON THE PROJECT SITE.
9. THE SITE IS NOT RECOGNIZED AS A LOCAL, STATE OR FEDERALLY HISTORIC OR ARCHAEOLOGICAL SITE PER THE STATE HISTORIC PRESERVATION OFFICE.
10. REVIEW OF HYDRIC SOILS AND AERIAL IMAGERY INDICATE THAT THERE ARE NO USACE SECTION 404 WETLANDS OR SECTION 10 NAVIGABLE WATERS.
11. BASED ON AVAILABLE DATA NO KNOWN FORESTED RESOURCES ARE AVAILABLE ON THE SITE. IT IS NOT ANTICIPATED THAT PROTECTED SPECIES ARE PRESENT ON THE SITE.
12. UTILITIES LOCATIONS ARE BASED UPON THE LOCATIONS OF EXISTING STRUCTURES, PAINT MARKINGS, AND OTHER VISIBLE EVIDENCE. UTILITIES OTHER THAN THOSE SHOWN HEREIN MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL UTILITIES BEFORE CONSTRUCTION OR EXCAVATION.
13. A RECOMBINATION PLAT WAS COMPLETED BY HANOVER DESIGN SERVICES, PA ON JANUARY 23RD, 2013. TOTAL AREA OF THE SITE IS 8.24 ACRES.

PARKING FACILITY DESIGN NOTES (SD 15-13)

1. STREET SIGN AND PAVEMENT MARKING APPROVALS ARE REQUIRED FROM TRAFFIC ENGINEERING AT 341-7888.
2. TRAFFIC ENGINEERING MUST APPROVE PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
3. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 910-341-5888 FOR MORE DETAILS. IN CERTAIN CASES, AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
4. WHEEL STOPS SHALL NOT EXCEED 4-INCH IN HEIGHT AND SHALL BE PLACED 2.5-FEET FROM THE END OF STALL.
5. CURBING, CROSSTIES, UTILITY POLES, ETC., CAN BE USED AS WHEEL STOPS. (MUST BE ANCHORED DOWN)
6. TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
7. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH CITY AND/OR MUTCD STANDARDS.
8. ALL PARKING STALL MARKINGS AND LANE ARROWS SHALL BE WHITE.
9. ALL PAVEMENT MARKINGS REGULATING TRAFFIC FLOW MUST BE THERMOPLASTIC.
10. ALL OTHER 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).
11. NO OBSTRUCTIONS WILL BE ALLOWED ADJACENT TO A PARKING STALL WHICH WOULD PREVENT SAFE INGRESS AND EGRESS FROM A PARKED VEHICLE.
12. PARKING IN FIRE LANES AND IN NON-RESIDENTIAL DRIVEWAYS SHALL BE PREVENTED BY STANDARD SIGNS AND AS NEEDED BY PORTABLE BARRICADES.

CITY OF WILMINGTON STANDARD NOTES:

1. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1-800-632-4949.
2. 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.
3. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
4. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCS (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
5. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY APRON PANELS, AND CURB & GUTTER SECTIONS SHALL BE REPLACED.
6. EXISTING WHEELCHAIR RAMPS WILL BE BROUGHT UP TO CURRENT ADA STANDARDS, WHERE APPLICABLE.
7. THE TWO DUMPSTER LOCATIONS WILL REQUIRE A LIVING AND NON-LIVING SCREEN.
8. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
9. IF THE CONTRACTOR DESIRES WATER FOR CONSTRUCTION HE SHALL APPLY WITH THE CPWA IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
10. THE NUMBER AND SPACING OF DRIVEWAYS FOR ALL INTERCONNECTED SITES WILL BE DETERMINED BY THE COMBINED FRONTAGE OF THE INTERCONNECTED PROPERTIES.
11. A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRANSPORTATION PLANNING AND TRAFFIC ENGINEERING DIVISIONS FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.

FIRE PROTECTION NOTES:

1. HYDRANT MUST BE WITHIN 150' OF THE FDC.
2. THE FDC MUST BE WITHIN 40' OF FIRE DEPARTMENT VEHICLE PLACEMENT.
3. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
4. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
5. COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERECTED ONSITE WITHOUT CITY FIRE INSPECTOR APPROVAL.
6. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.
7. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
8. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM UNDERGROUND UTILITIES.
9. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS ROAD AROUND THE CONSTRUCTION SITE FOR EMERGENCY VEHICLES AT ALL TIMES.
10. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.

UTILITY NOTES:

1. SCHEDULE A PRECONSTRUCTION MEETING WITH CAPE FEAR PUBLIC UTILITY AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
2. WATER AND SANITARY SEWER UTILITY MAINS ARE PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
3. THIS PROJECT SHALL COMPLY WITH THE CPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THE "FINAL APPROVAL".
4. ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY CPWA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO CPWA AND APPROVED BY USFPCOCHR OR ASSE.
5. BACKFLOW PREVENTION AND METERS WILL BE PROVIDED FOR BOTH FIRE LINES (RPZ) AND DOMESTIC WATER SERVICES. FIRE LINE BACKFLOW PREVENTER AND DOMESTIC SERVICE BACKFLOW PREVENTER WILL BE LOCATED AS SHOWN ON THE UTILITY PLANS. INSTALLER OF BACKFLOW PREVENTERS MUST CONTACT CPWA PRIOR TO INSTALLING UNITS TO JOINTS CONFORMING TO ASTM D3212 OR ASTM D3259.
- 5.1. REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR DOMESTIC WATER SERVICE
- 5.2. REDUCED PRESSURE DETECTOR ASSEMBLY WILL BE UTILIZED FOR THE BACKFLOW PREVENTER ON THE FIRE SERVICE.
6. IF THE CONTRACTOR DESIRES CPWA WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
7. WATER: 1.5" & 2" PVC MAINS SHALL BE CONSTRUCTED USING ASTM D2241, IPS, GASKETED PIPE, SDR 21. 4"-12" PVC MAINS AND SERVICES SHALL BE CONSTRUCTED USING AWWA C-900 PVC, D1238 (DR-18)
8. SANITARY SEWER: FOR PIPE SIZES 4" AND 6" PIPE SHALL BE SCH 40 CONFORMING TO THE REQUIREMENTS OF ASTM D1785 WITH SOLVENT WELD JOINTS CONFORMING TO ASTM D2872. FOR PIPE SIZES 8" THROUGH 12", PIPE SHALL BE CLASS 150, DR18 CONFORMING TO THE REQUIREMENTS OF AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D3212 OR ASTM D3259.
9. WATER AND SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY PUBLIC WATER SUPPLY SECTION OF NCDENR AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY OF NCDENR.
10. PVC WATER MAINS AND POLYETHYLENE SERVICES ARE TO BE MARKED WITH NO. 10 SINGLE STRAND RED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND DOMESTIC SERVICE 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.
11. SITE UTILITY CONTRACTOR TO PROVIDE WATER AND SANITARY SEWER SERVICE TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN WITH ARCHITECTURAL BUILDING PLANS.
12. MAXIMUM BENDING RADIUS FOR 8" C-900 PVC WATER MAIN BENDS IS 360" (ONE-HALF MANUFACTURER'S RECOMMENDED ALLOWABLE LONGITUDINAL BENDING).
13. FIRE SPRINKLERS WILL BE PROVIDED FOR BUILDING.
14. UNDERGROUND UTILITIES: ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE SUCH IS PROHIBITED OR DEEMED IMPRACTICAL BY THE UTILITY PROVIDER. UNDERGROUND TERMINAL FACILITIES FOR STREET LIGHTING ALONG THE PUBLIC STREETS ABUTTING THE SUBJECT SITE SHALL BE INSTALLED BY THE DEVELOPER.
15. MINIMUM OF 36" COVERAGE ABOVE ALL WATERMANS.
16. MINIMUM OF 36" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS.

RELATION OF WATER MAINS TO SEWERS:

1. LATERAL SEPARATION OF SEWERS AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
 - 1.1. THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
 - 1.2. 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 ABOVE THE TOP OF THE SEWER.
2. CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS 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 24 INCHES ABOVE THE TOP OF THE SEWER MAIN, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
3. CROSSING A WATER MAIN UNDER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAIN BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
4. CROSSING A SEWER MAIN/WATER MAIN OVER OR UNDER A STORM DRAIN: WHENEVER IT IS NECESSARY FOR A SEWER MAIN/WATER MAIN TO CROSS A STORM DRAIN PIPE, THE SEWER MAIN/WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER MAIN/WATER MAIN NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 24 INCH CLEAR SEPARATION DISTANCE HORIZONTAL, OR THE SEWER MAIN/WATER MAIN SHALL EITHER BE CONSTRUCTED OF DUCTILE IRON PIPE OR ENCASED IN EITHER CONCRETE OR DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.

ADDITIONAL TREATMENTS:

HVAC EQUIPMENT, AIR CONDITIONING WINDOW UNITS, AND OTHER ELECTRICAL EQUIPMENT SHALL NOT BE LOCATED ON STREET FRONTAGES. ALL SUCH EQUIPMENT SHALL BE PLACED IN THE INTERIOR YARDS OR ON THE ROOF OF THE BUILDING AND SCREENED FROM THE RIGHT OF WAY THROUGH-WALL MECHANICAL UNITS ARE PERMITTED ON ANY FACADE IF THEY ARE INCORPORATED INTO THE DESIGN OF THE BUILDING. FLUSH WITH THE FACADE ON WHICH THEY ARE LOCATED, CONCEALED BY A VENT COVER AND HAVE AN INTERNAL DRIP SYSTEM FOR CONDENSATION. UTILITY METERS, TRANSFORMERS AND FIXED TRASH DISPOSAL RECEPTACLES SHALL BE SCREENED IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE SCREENING REQUIREMENTS.

SOLID WASTE:

1. SOLID WASTE DISPOSAL WILL BE LOCATED IN THE DUMPSTER AREA.

UTILITY MARKING:

- ALL UNDERGROUND UTILITY LINES OUTSIDE OF THE BUILDING FOOTPRINT, EXCEPT LAWN IRRIGATION LINES, SHALL HAVE WARNING TAPE INSTALLED IN THE BACKFILL BETWEEN 6" TO 24" BELOW FINISHED GRADE, DIRECTLY OVER PIPING.
1. METALLIC LINES SHALL BE IDENTIFIED WITH PRINTED DURABLE PLASTIC WARNING TAPE, MINIMUM 3" WIDTH AT 12" BELOW FINISHED GRADE, WITH LETTERING TO IDENTIFY BURIED LINE BELOW.
 2. NON-METALLIC LINES, OTHER THAN GAS LINES, SHALL BE IDENTIFIED BY DETECTABLE WARNING TAPE, MINIMUM 2" WIDTH AT 12" BELOW FINISHED GRADE, WITH LETTERING TO IDENTIFY BURIED LINE BELOW.
 3. 2008 NC GAS CODE 404.14.3 TRACER: AN INSULATED COPPER WIRE OR OTHER APPROVED TRACER SHALL BE INSTALLED ADJACENT TO UNDERGROUND NON-METALLIC LINES. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT THE END OF THE NON-METALLIC LINE. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.

ESTIMATED WATER & SANITARY DEMAND			
PROPOSED USE	EXISTING FLOW (GPD)	REQUIREMENT	FLOW (GAL)
MEDICAL OFFICE BUILDING (52 PRACTITIONERS)	0 (SURFACE PARKING)	250 GAL/PRACTITIONER/SHIFT	13,000
HOSPITALITY CENTER (24 ROOMS)	0 (SURFACE PARKING)	120 GPD/ROOM	2,880
TOTAL =			15,880

UTILITY CONSTRUCTION NOTES:

1. THESE DRAWINGS SHOW INFORMATION OBTAINED FROM THE AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST ALONG THE LINES OF WORK AND BELOW THE SURFACE OF THE GROUND. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITIES FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION, AND SUCH INFORMATION IS BEING SHOWN ONLY FOR THE CONVENIENCE OF THE CONTRACTOR WHO MUST VERIFY THE INFORMATION TO HIS OWN SATISFACTION DURING THE BIDDING AND CONSTRUCTION PHASES. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THE INFORMATION ON THE CONTRACT DRAWINGS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO SUPPORT AND PROTECT ALL PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES, WHETHER ABOVE OR BELOW GRADE.
2. SHOULD ANY DAMAGE OCCUR TO EXISTING UTILITIES, IT SHALL BE REPAIRED SOLELY AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO CONSTRUCTION OF UNDERGROUND UTILITIES. TEST FITTING OF EXISTING LINES PRIOR TO CONSTRUCTION, IF NECESSARY, SHALL BE COORDINATED WITH THE OWNER.
4. THE CONTRACTOR SHALL NOTIFY THE CPWA AT LEAST TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM.
5. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, PROJECT SPECIFICATIONS, AND LOCAL BUILDING CODES.
6. ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROMOTE POSITIVE DRAINAGE AND STABILIZED WITH TOPSOIL, SEED, AND MULCH. IF SETTLEMENT OCCURS, TOPSOIL, SEEDING, AND MULCH SHALL BE REPEATED UNTIL SETTLEMENT SUBSIDES. (SEE EROSION AND SEDIMENT CONTROL DETAILS AND SPECIFICATIONS.)
7. WATER MAINS WILL BE INSTALLED AT A DEPTH THAT WILL PROVIDE 36" COVER OVER THE PIPES BELOW PROPOSED GRADE UNLESS SHOWN OTHERWISE ON THESE PLANS OR DIRECTED OTHERWISE BY THE ENGINEER.
8. WHEREVER SEWER OR WATER MAINS CROSS ONE ANOTHER, A MINIMUM VERTICAL CLEARANCE OF 24" SHALL BE PROVIDED BETWEEN THE BOTTOM OF THE WATER PIPE AND THE TOP OF THE SEWER PIPE OR THE SEWER SHALL BE CLASS 50 DIP, MINIMUM OF 20 LF CENTERED OVER THE CROSSING.
9. WHEREVER SEWER OR WATER MAINS RUN PARALLEL TO EACH OTHER, A MINIMUM HORIZONTAL SEPARATION OF 10" SHALL BE PROVIDED, OR 24" VERTICAL SEPARATION OR THE SEWER SHALL BE CLASS 50 DIP, MINIMUM OF 20 LF CENTERED OVER THE CROSSING.
10. ALL WATER VALVES, BOXES, AND FIRE HYDRANT ASSEMBLIES SHALL BE SET AND ADJUSTED TO FINISHED GRADE.
11. THE OWNER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, BOTH TEMPORARY AND PERMANENT.
12. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL SURVEY CONTROL PRIOR TO STAKING OUT CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
13. ANY PROPERTY LINE MONUMENT DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS.

Approved Construction Plan

Name	Date
Planning <i>Dan M. Dwyer</i>	6/4/13
Traffic <i>William S. Spitzer</i>	6/11/13
Fire <i>S. K. K. K.</i>	6/5/13

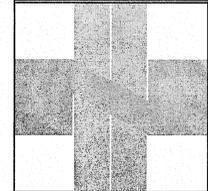
STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON
ENGINEERING DEPARTMENT

DATE _____ PERMIT # _____
SIGNED _____

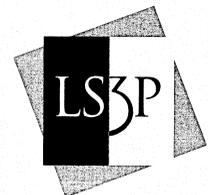
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch



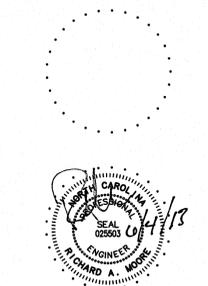
**NHRMC
OUTPATIENT
CARDIOLOGY
CENTER**

1415 PHYSICIANS DRIVE
WILMINGTON NC, 28402



LS3P ASSOCIATES LTD.

2528 INDEPENDENCE BLVD. SUITE 200
WILMINGTON, NORTH CAROLINA 28412
TEL. 910.790.9901 FAX 910.790.3111
WWW.LS3P.COM



THIS PLAN SET IS ISSUED FOR EARLY GRADING RELEASE FROM THE CITY OF WILMINGTON. NO IMPERVIOUS AREAS ARE ALLOWED TO BE CONSTRUCTED UNTIL SUCH TIME AS FULL CONSTRUCTION RELEASE IS OBTAINED. TREE REMOVAL, SITE DEMOLITION, CLEARING, GRUBBING AND ROUGH GRADING ARE PERMITTED UNDER THIS EARLY GRADING RELEASE.

REVISIONS:

No.	Description	Date
0	DESIGN DEVELOPMENT	02/27/2013
1	TRC COMMENT REVISIONS	04/17/2013

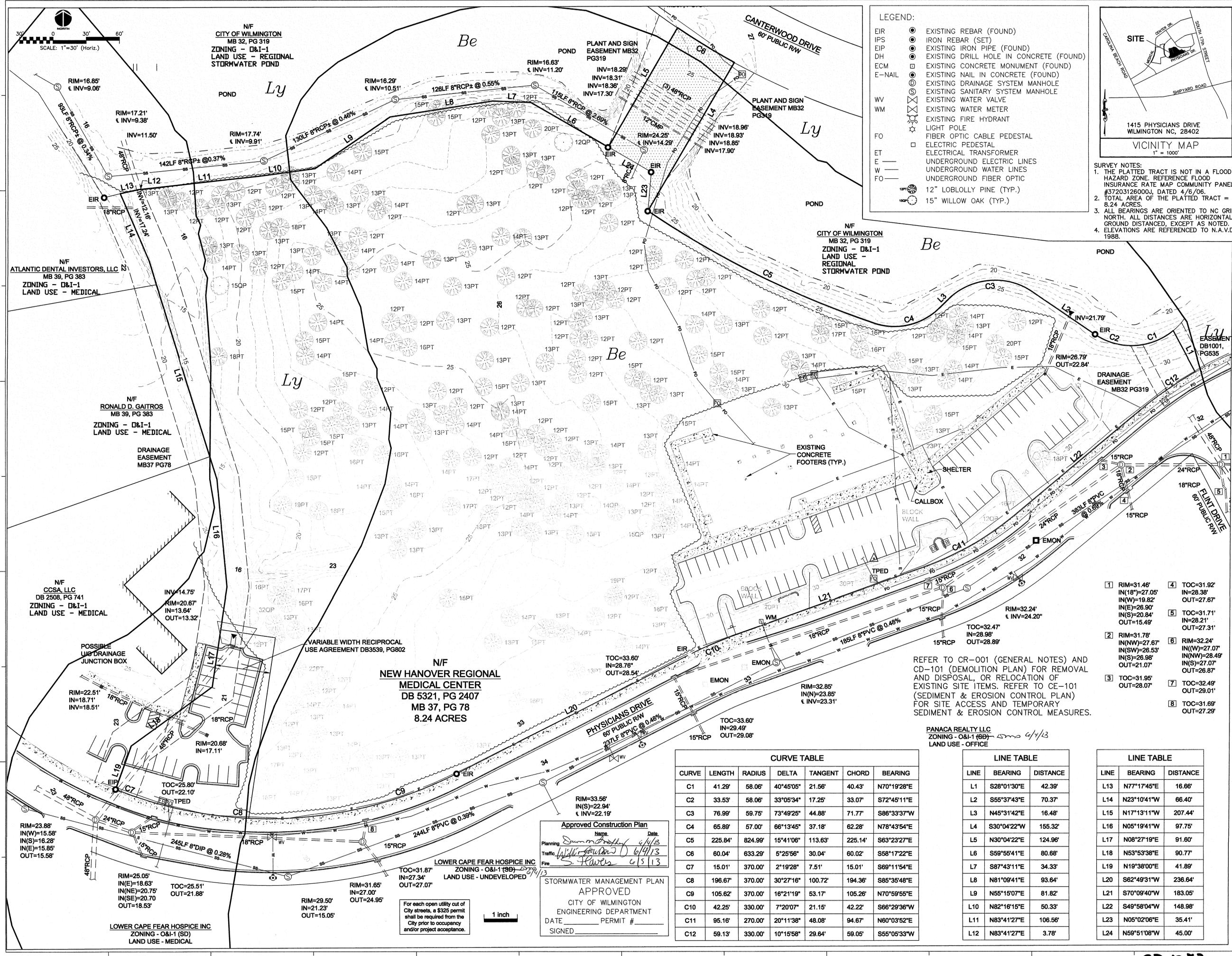
PROJECT: 04853-0015
DATE: 10 MAY 2013
DRAWN BY: EEM
CHECKED BY: RAM

CR-001

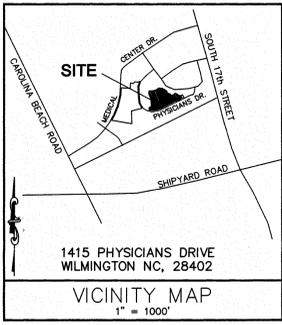
SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN

CP 1283

EARLY GRADING RELEASE



- LEGEND:**
- EIR ○ EXISTING REBAR (FOUND)
 - IPS ○ IRON REBAR (SET)
 - EIP ○ EXISTING IRON PIPE (FOUND)
 - DH ○ EXISTING DRILL HOLE IN CONCRETE (FOUND)
 - ECM ○ EXISTING CONCRETE MONUMENT (FOUND)
 - E-NAIL ○ EXISTING NAIL IN CONCRETE (FOUND)
 - EXISTING DRAINAGE SYSTEM MANHOLE
 - EXISTING SANITARY SYSTEM MANHOLE
 - EXISTING WATER VALVE
 - EXISTING WATER METER
 - EXISTING FIRE HYDRANT
 - LIGHT POLE
 - FIBER OPTIC CABLE PEDESTAL
 - ELECTRIC PEDESTAL
 - ELECTRICAL TRANSFORMER
 - UNDERGROUND ELECTRIC LINES
 - UNDERGROUND WATER LINES
 - UNDERGROUND FIBER OPTIC
 - 12" LOBLOLLY PINE (TYP.)
 - 15" WILLOW OAK (TYP.)



SURVEY NOTES:

- THE PLATTED TRACT IS NOT IN A FLOOD HAZARD ZONE. REFERENCE FLOOD INSURANCE RATE MAP COMMUNITY PANEL #37203126000J, DATED 4/6/06. 8.24 ACRES.
- TOTAL AREA OF THE PLATTED TRACT = 8.24 ACRES.
- ALL BEARINGS ARE ORIENTED TO NC GRID NORTH. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES, EXCEPT AS NOTED. ELEVATIONS ARE REFERENCED TO N.A.V.D. 1988.

THIS PLAN SET IS ISSUED FOR EARLY GRADING RELEASE FROM THE CITY OF WILMINGTON. NO IMPERVIOUS AREAS ARE ALLOWED TO BE CONSTRUCTED UNTIL SUCH TIME AS FULL CONSTRUCTION RELEASE IS OBTAINED. TREE REMOVAL, SITE DEMOLITION, CLEARING, GRUBBING AND ROUGH GRADING ARE PERMITTED UNDER THIS EARLY GRADING RELEASE.

REVISIONS:

No.	Description	Date
0	DESIGN DEVELOPMENT	02/27/2013
1	TRC COMMENT REVISIONS	04/17/2013

REFER TO CR-001 (GENERAL NOTES) AND CD-101 (DEMOLITION PLAN) FOR REMOVAL AND DISPOSAL, OR RELOCATION OF EXISTING SITE ITEMS. REFER TO CE-101 (SEDIMENT & EROSION CONTROL PLAN) FOR SITE ACCESS AND TEMPORARY SEDIMENT & EROSION CONTROL MEASURES.

- | | | | | | | | |
|--|--|----------------------------|---|---|---|----------------------------|----------------------------|
| 1 RIM=31.46'
IN(18")=27.05'
IN(W)=19.82'
IN(E)=26.90'
IN(S)=20.84'
OUT=15.49' | 2 RIM=31.78'
IN(NW)=27.67'
IN(SW)=26.53'
IN(S)=26.98'
OUT=21.07' | 3 TOC=31.95'
OUT=28.07' | 4 TOC=31.92'
IN=28.38'
OUT=27.67' | 5 TOC=31.71'
IN=28.21'
OUT=27.31' | 6 RIM=32.24'
IN(W)=27.07'
IN(NW)=28.49'
IN(S)=27.07'
OUT=26.87' | 7 TOC=32.48'
OUT=29.01' | 8 TOC=31.69'
OUT=27.29' |
|--|--|----------------------------|---|---|---|----------------------------|----------------------------|

PANACA REALTY LLC
ZONING - O&I-1 (SD)
LAND USE - OFFICE

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
C1	41.29'	58.06'	40°45'05"	21.56'	40.43'	N70°19'28"E
C2	33.53'	58.06'	33°05'34"	17.25'	33.07'	S72°45'11"E
C3	76.99'	59.75'	73°49'25"	44.88'	71.77'	S86°33'37"W
C4	65.89'	57.00'	66°13'45"	37.18'	62.28'	N78°43'54"E
C5	225.84'	824.99'	15°41'06"	113.63'	225.14'	S63°23'27"E
C6	60.04'	633.29'	5°25'56"	30.04'	60.02'	S58°17'22"E
C7	15.01'	370.00'	2°19'28"	7.51'	15.01'	S69°11'54"E
C8	196.67'	370.00'	30°27'16"	100.72'	194.36'	S85°35'48"E
C9	105.62'	370.00'	16°21'19"	53.17'	105.26'	N70°59'55"E
C10	42.25'	330.00'	7°20'07"	21.15'	42.22'	S66°29'36"W
C11	95.16'	270.00'	20°11'38"	48.08'	94.67'	N60°03'52"E
C12	59.13'	330.00'	10°15'58"	29.64'	59.05'	S55°05'33"W

LINE TABLE

LINE	BEARING	DISTANCE
L1	S28°01'30"E	42.39'
L2	S55°37'43"E	70.37'
L3	N45°31'42"E	16.48'
L4	S30°04'22"W	155.32'
L5	N30°04'22"E	124.96'
L6	S59°55'41"E	80.88'
L7	S87°43'11"E	34.33'
L8	N81°09'41"E	93.64'
L9	N55°15'07"E	81.82'
L10	N82°16'15"E	50.33'
L11	N83°41'27"E	106.56'
L12	N83°41'27"E	3.78'

LINE TABLE

LINE	BEARING	DISTANCE
L13	N77°17'45"E	16.66'
L14	N23°10'41"W	66.40'
L15	N17°13'11"W	207.44'
L16	N05°19'41"W	97.75'
L17	N08°27'19"E	91.60'
L18	N53°53'38"E	90.77'
L19	N19°38'00"E	41.89'
L20	S62°49'31"W	236.64'
L21	S70°09'40"W	183.05'
L22	S49°58'04"W	148.98'
L23	N05°02'06"E	35.41'
L24	N59°51'08"W	45.00'

Approved Construction Plan

Name: *Sumner* Date: *4/1/13*

Planning: *W. H. Hester* 6/1/13

Traffic: *W. H. Hester* 6/1/13

Fire: *W. H. Hester* 6/1/13

STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE: _____ PERMIT # _____
SIGNED: _____

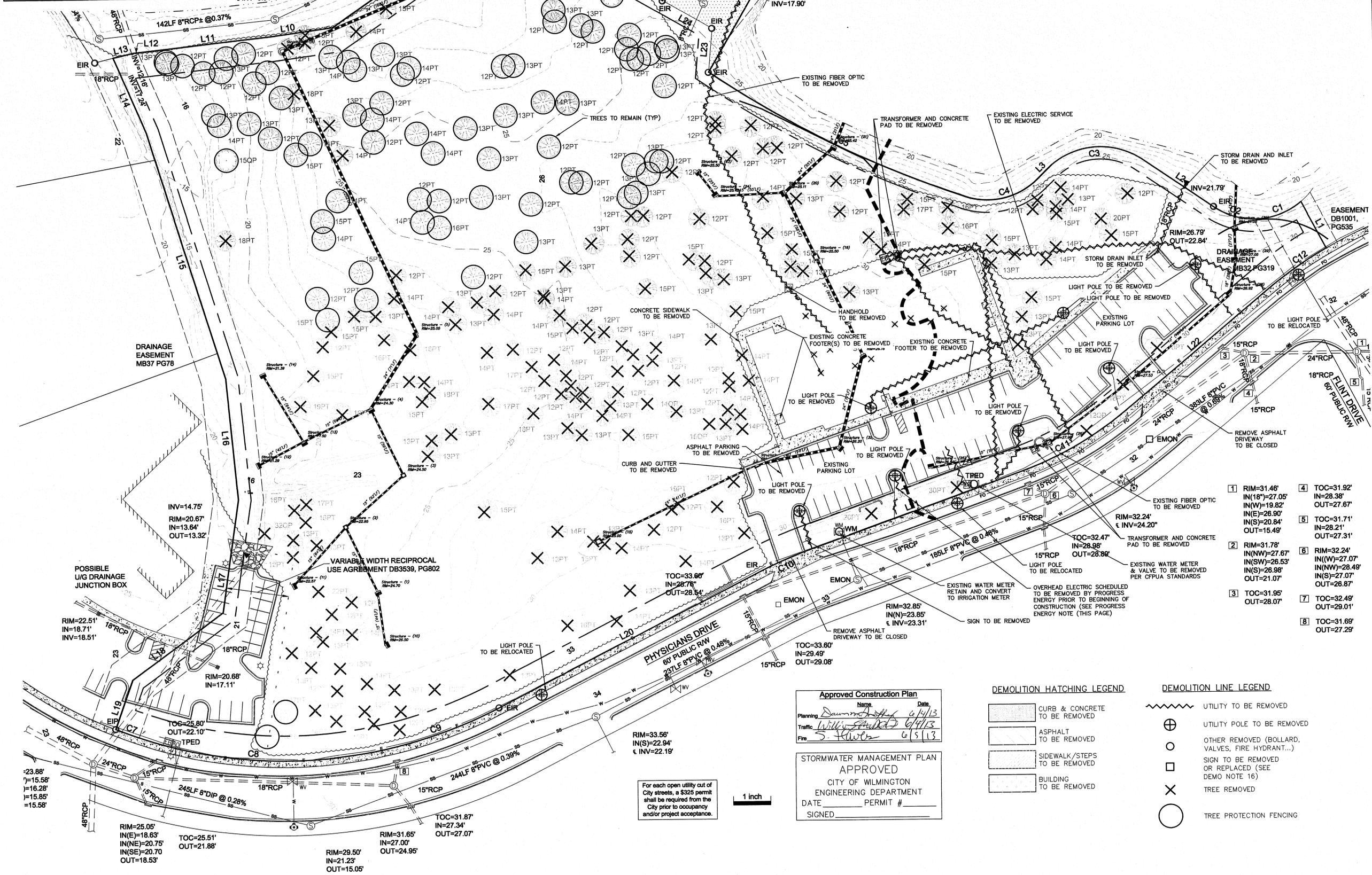
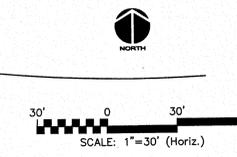
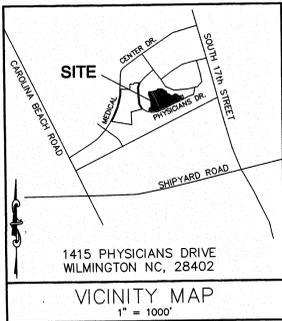
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

PROJECT: 04853-0015
DATE: 10 MAY 2013
DRAWN BY: EEM
CHECKED BY: RAM

EXISTING CONDITIONS & SITE INVENTORY MAP

CX-101

SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN



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

Approved Construction Plan
 Name _____ Date _____
 Planning _____ 6/14/13
 Traffic _____ 6/11/13
 Fire _____ 6/5/13

STORMWATER MANAGEMENT PLAN
 APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE _____ PERMIT # _____
 SIGNED _____

DEMOLITION HATCHING LEGEND

- CURB & CONCRETE TO BE REMOVED
- ASPHALT TO BE REMOVED
- SIDEWALK/STEPS TO BE REMOVED
- BUILDING TO BE REMOVED

DEMOLITION LINE LEGEND

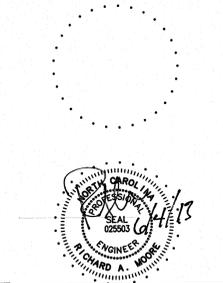
- UTILITY TO BE REMOVED
- UTILITY POLE TO BE REMOVED
- OTHER REMOVED (BOLLARD, VALVES, FIRE HYDRANT...)
- SIGN TO BE REMOVED OR REPLACED (SEE DEMO NOTE 16)
- TREE REMOVED
- TREE PROTECTION FENCING

- | | |
|--|---|
| 1 RIM=31.46'
IN(18")=27.05'
IN(W)=19.82'
IN(E)=26.90'
IN(S)=20.84'
OUT=15.49' | 4 TOC=31.92'
IN=28.38'
OUT=27.67' |
| 2 RIM=31.78'
IN(NW)=27.67'
IN(SW)=26.53'
IN(S)=26.98'
OUT=21.07' | 5 TOC=31.71'
IN=28.21'
OUT=27.31' |
| 3 TOC=31.95'
OUT=28.07' | 6 RIM=32.24'
IN(W)=27.07'
IN(NW)=28.49'
IN(S)=27.07'
OUT=26.87' |
| | 7 TOC=32.49'
OUT=29.01' |
| | 8 TOC=31.69'
OUT=27.29' |

**NHRMC
 OUTPATIENT
 CARDIOLOGY
 CENTER**
 1415 PHYSICIANS DRIVE
 WILMINGTON NC, 28402



LS3P ASSOCIATES LTD.
 2528 INDEPENDENCE BLVD., SUITE 200
 WILMINGTON, NORTH CAROLINA 28412
 TEL. 910.790.9901 FAX 910.790.3111
 WWW.LS3P.COM



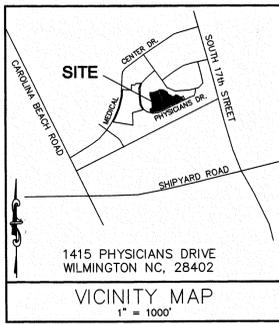
THIS PLAN SET IS ISSUED FOR EARLY GRADING RELEASE FROM THE CITY OF WILMINGTON. NO IMPERVIOUS AREAS ALL ALLOWED TO BE CONSTRUCTED UNTIL SUCH TIME AS FULL CONSTRUCTION RELEASE IS OBTAINED. TREE REMOVAL, SITE DEMOLITION, CLEARING, GRUBBING AND ROUGH GRADING ARE PERMITTED UNDER THIS EARLY GRADING RELEASE.

REVISIONS:

No.	Description	Date
0	DESIGN DEVELOPMENT	02/27/2013
1	TRC COMMENT REVISIONS	04/17/2013

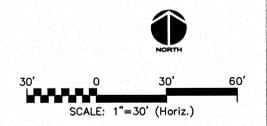
PROJECT: 04853-0015
 DATE: 10 MAY 2013
 DRAWN BY: EEM
 CHECKED BY: RAM

DEMOLITION PLAN
CD-101
 SOLUTIONS THROUGH LISTENING
 SERVICE BY DESIGN



LIMITS OF DISTURBANCE = 6.28 AC
 LAT: 34° 11' 55" N
 LONG: 77° 55' 36" W

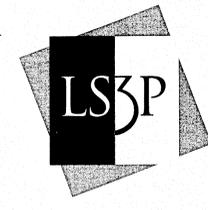
STORMWATER MANAGEMENT PLAN
 APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE PERMIT #
 SIGNED



Approved Construction Plan
 Name: *Demetrius* Date: *6/4/13*
 Planning: *William* Date: *6/4/13*
 Traffic: *William* Date: *6/4/13*
 Fire: *S. Kates* Date: *6/5/13*

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

NHRMC
 OUTPATIENT
 CARDIOLOGY
 CENTER
 1415 PHYSICIANS DRIVE
 WILMINGTON, NC, 28402



LS3P ASSOCIATES LTD.
 2528 INDEPENDENCE BLVD. SUITE 200
 WILMINGTON, NORTH CAROLINA 28412
 TEL. 910.790.8901 FAX 910.790.3111
 WWW.LS3P.COM



THIS PLAN SET IS ISSUED FOR EARLY GRADING RELEASE FROM THE CITY OF WILMINGTON. NO IMPERVIOUS AREAS ARE ALLOWED TO BE CONSTRUCTED UNTIL SUCH TIME AS FULL CONSTRUCTION RELEASE IS OBTAINED. TREE REMOVAL, SITE DEMOLITION, CLEARING, GRUBBING AND ROUGH GRADING ARE PERMITTED UNDER THIS EARLY GRADING RELEASE.

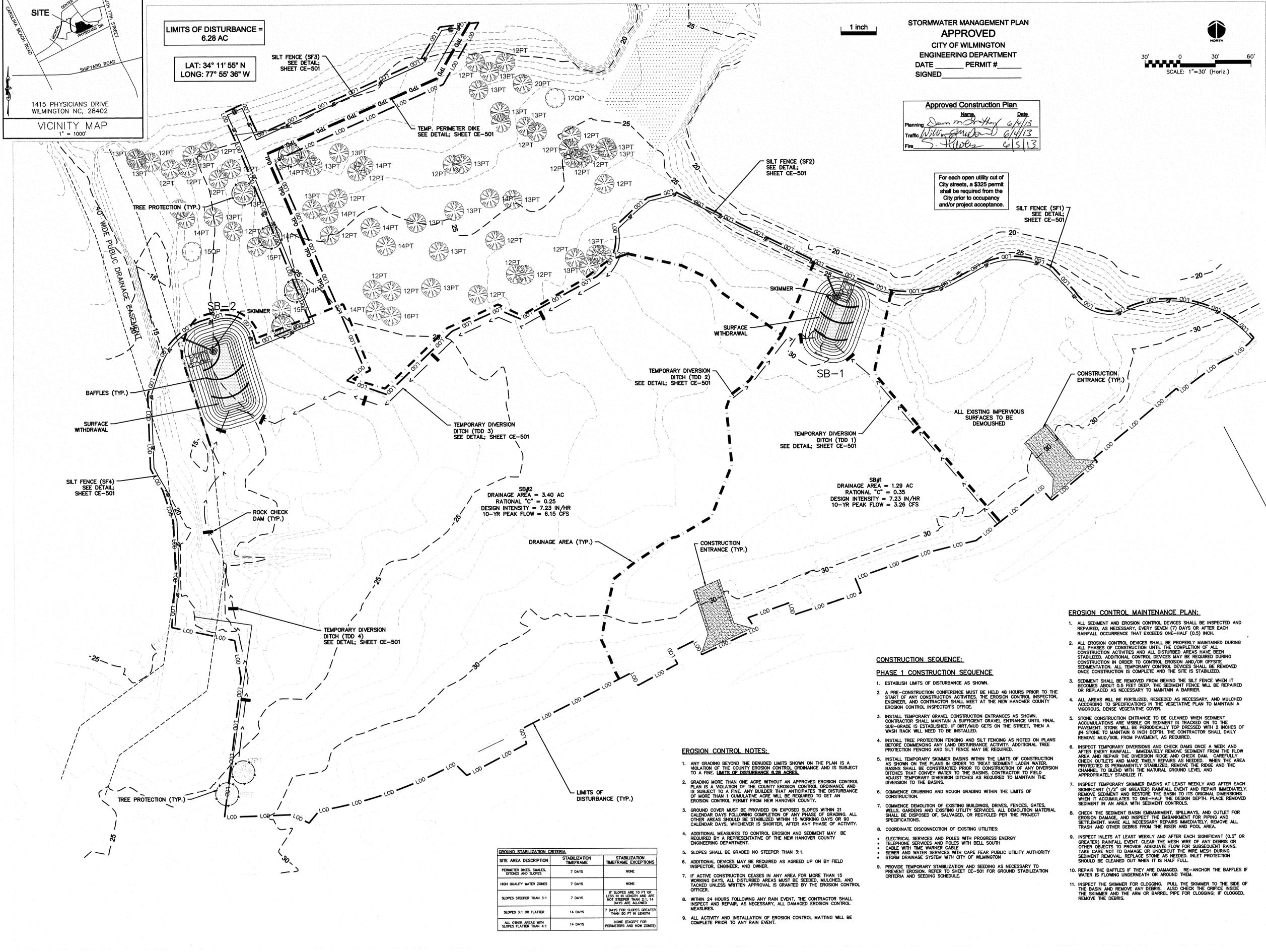
REVISIONS:

No.	Description	Date
0	DESIGN DEVELOPMENT	02/27/2013
1	TRC COMMENT REVISIONS	04/17/2013

PROJECT: 04653-0015
 DATE: 10 MAY 2013
 DRAWN BY: EEM
 CHECKED BY: RAM

PHASE 1
 SEDIMENT &
 EROSION
 CONTROL PLAN
CE-101

SOLUTIONS THROUGH LISTENING
 SERVICE BY DESIGN



EROSION CONTROL MAINTENANCE PLAN:

- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AND REPAIRED, AS NECESSARY, EVERY SEVEN (7) DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF (0.5) INCH.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP. THE SEDIMENT FENCE WILL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
- ALL AREAS WILL BE FERTILIZED, RESEEDDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
- STONE CONSTRUCTION ENTRANCE TO BE CLEANED WHEN SEDIMENT ACCUMULATIONS ARE VISIBLE OR SEDIMENT IS TRACKED ON TO THE PAVEMENT. STONE WILL BE PERIODICALLY TOP DRESSED WITH 2 INCHES OF #4 STONE TO MAINTAIN 6 INCH DEPTH. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS REQUIRED.
- INSPECT TEMPORARY DIVERSIONS AND CHECK DAMS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION ROOF AND CHECK DAM CAREFULLY. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE DITCHES THAT CONVEY WATER TO THE BASINS. CONTRACTOR TO FIELD ADJUST TEMPORARY DIVERSION DITCHES AS REQUIRED TO MAINTAIN THE DIVERSION TO THE BASINS.
- INSPECT TEMPORARY SKIMMER BASINS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS IN ORDER TO TREAT SEDIMENT LOADED WATER. BASINS SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ANY DIVERSION DITCHES THAT CONVEY WATER TO THE BASINS. CONTRACTOR TO FIELD ADJUST TEMPORARY DIVERSION DITCHES AS REQUIRED TO MAINTAIN THE DIVERSION TO THE BASINS.
- COORDINATE DISCONNECTION OF EXISTING UTILITIES:
 - ELECTRICAL SERVICES AND POLES WITH PROGRESS ENERGY
 - TELEPHONE SERVICES AND POLES WITH BELL SOUTH
 - CABLE WITH TIME WARNER CABLE
 - SEWER AND WATER SERVICES WITH CAPE FEAR PUBLIC UTILITY AUTHORITY
 - STORM DRAINAGE SYSTEM WITH CITY OF WILMINGTON
- PROVIDE TEMPORARY STABILIZATION AND SEEDING AS NECESSARY TO PREVENT EROSION. REFER TO SHEET CE-501 FOR GROUND STABILIZATION CRITERIA AND SEEDING SCHEDULE.
- REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
- INSPECT THE SKIMMER FOR CLOGGING. PULL THE SKIMMER TO THE SIDE OF THE BASIN AND REMOVE ANY DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER AND THE ARM OR BARREL PIPE FOR CLOGGING; IF CLOGGED, REMOVE THE DEBRIS.

CONSTRUCTION SEQUENCE:

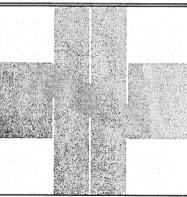
PHASE 1 CONSTRUCTION SEQUENCE

- ESTABLISH LIMITS OF DISTURBANCE AS SHOWN.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE EROSION CONTROL INSPECTOR, ENGINEER, AND CONTRACTOR SHALL MEET AT THE NEW HANOVER COUNTY EROSION CONTROL INSPECTOR'S OFFICE.
- INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES AS SHOWN. CONTRACTOR SHALL MAINTAIN A SUFFICIENT GRAVEL ENTRANCE UNTIL FINAL SUB-GRADE IS ESTABLISHED. IF DIRT/MUD GETS ON THE STREET, THEN A WASH RACK WILL NEED TO BE INSTALLED.
- INSTALL TREE PROTECTION FENCING AND SILT FENCING AS NOTED ON PLANS BEFORE COMMENCING ANY LAND DISTURBANCE ACTIVITY. ADDITIONAL TREE PROTECTION FENCING AND SILT FENCE MAY BE REQUIRED.
- INSTALL TEMPORARY SKIMMER BASINS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS IN ORDER TO TREAT SEDIMENT LOADED WATER. BASINS SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ANY DIVERSION DITCHES THAT CONVEY WATER TO THE BASINS. CONTRACTOR TO FIELD ADJUST TEMPORARY DIVERSION DITCHES AS REQUIRED TO MAINTAIN THE DIVERSION TO THE BASINS.
- COMMENCE GRUBBING AND ROUGH GRADING WITHIN THE LIMITS OF CONSTRUCTION.
- COMMENCE DEMOLITION OF EXISTING BUILDINGS, DRIVES, FENCES, GATES, WEEDS, GARDENS, AND EXISTING UTILITY SERVICES. ALL DEMOLITION MATERIAL SHALL BE DISPOSED OF, SALVAGED, OR RECYCLED PER THE PROJECT SPECIFICATIONS.
- COORDINATE DISCONNECTION OF EXISTING UTILITIES:
 - ELECTRICAL SERVICES AND POLES WITH PROGRESS ENERGY
 - TELEPHONE SERVICES AND POLES WITH BELL SOUTH
 - CABLE WITH TIME WARNER CABLE
 - SEWER AND WATER SERVICES WITH CAPE FEAR PUBLIC UTILITY AUTHORITY
 - STORM DRAINAGE SYSTEM WITH CITY OF WILMINGTON
- PROVIDE TEMPORARY STABILIZATION AND SEEDING AS NECESSARY TO PREVENT EROSION. REFER TO SHEET CE-501 FOR GROUND STABILIZATION CRITERIA AND SEEDING SCHEDULE.

EROSION CONTROL NOTES:

- ANY GRADING BEYOND THE DENOTED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE. LIMITS OF DISTURBANCE 6.28 ACRES.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE. ANY BUILDER THAT ANTICIPATES THE DISTURBANCE OF MORE THAN 1 CUMULATIVE ACRE WILL BE REQUIRED TO GET AN EROSION CONTROL PERMIT FROM NEW HANOVER COUNTY.
- GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. ALL OTHER AREAS SHOULD BE STABILIZED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS, WHICHEVER IS SHORTER, AFTER ANY PHASE OF ACTIVITY.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE NEW HANOVER COUNTY ENGINEERING DEPARTMENT.
- SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
- ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UP ON BY FIELD INSPECTOR, ENGINEER, AND OWNER.
- IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS, ALL DISTURBED AREAS MUST BE SEEDDED, MULCHED, AND TACKED UNLESS WRITTEN APPROVAL IS GRANTED BY THE EROSION CONTROL OFFICER.
- WITHIN 24 HOURS FOLLOWING ANY RAIN EVENT, THE CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ALL DAMAGED EROSION CONTROL MEASURES.
- ALL ACTIVITY AND INSTALLATION OF EROSION CONTROL MATTING WILL BE COMPLETE PRIOR TO ANY RAIN EVENT.

GROUND STABILIZATION CRITERIA		
SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERIMETER DITCHES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10 FT 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 FT IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HOW ZONES)

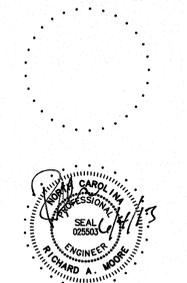


**NHRMC
OUTPATIENT
CARDIOLOGY
CENTER**

1415 PHYSICIANS DRIVE
WILMINGTON NC, 28402



LS3P ASSOCIATES LTD.
2538 INDEPENDENCE BLVD. SUITE 200
WILMINGTON, NORTH CAROLINA 28412
TEL. 910.790.9901 FAX 910.790.3111
WWW.LS3P.COM



THIS PLAN SET IS ISSUED FOR EARLY GRADING RELEASE FROM THE CITY OF WILMINGTON. NO IMPERVIOUS AREAS ALL ALLOWED TO BE CONSTRUCTED UNTIL SUCH TIME AS FULL CONSTRUCTION RELEASE IS OBTAINED. TREE REMOVAL, SITE DEMOLITION, CLEARING, GRUBBING AND ROUGH GRADING ARE PERMITTED UNDER THIS EARLY GRADING RELEASE.

REVISIONS:

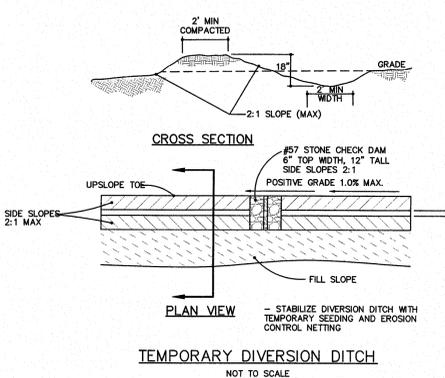
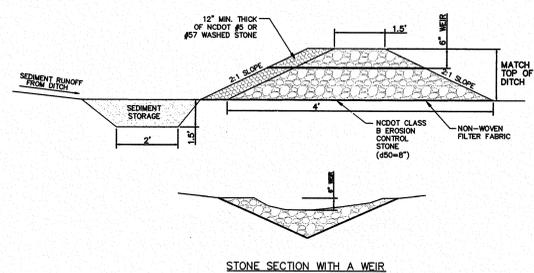
No.	Description	Date
0	DESIGN DEVELOPMENT	02/27/2013
1	TRC COMMENT REVISIONS	04/17/2013

PROJECT: 04853-0015
DATE: 10 MAY 2013
DRAWN BY: EEM
CHECKED BY: RAM

**SEDIMENT &
EROSION
CONTROL DETAILS**

CE-501

SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN



Temporary Diversion Ditch Calculations

TDD NUMBER	LENGTH (FT)	HIGH (FT)	LOW (FT)	ELEVATION DIFF. (FT)	SLOPE (%)	MANNING n	VELOCITY (FPS)	LINING
TDD1	206	31.00	27.00	4.00	1.94	0.020	0.59	BARE EARTH
TDD2	92	28.00	27.00	1.00	1.09	0.020	0.17	BARE EARTH
TDD3	387	27.00	20.00	7.00	1.81	0.020	1.12	BARE EARTH
TDD4	311	28.50	20.00	8.50	2.73	0.020	0.90	BARE EARTH

TEMPORARY ROCK CHECK DAMS

TDD NUMBER	DA (AC)	DEPTH (IN)	FLOW DEPTH (IN)	SIDE SLOPES H:V	SLOPE (%)	MANNING n	VELOCITY (FPS)	LINING	CHECK DAM NUMBER	CHECK DAM NUMBER
TDD1	1.00	18	12	3	1.94	0.035	0.59	GRASS	103	2
TDD2	0.29	18	12	3	1.09	0.035	0.17	GRASS	184	1
TDD3	1.89	18	12	3	1.81	1.035	1.12	GRASS	111	4
TDD4	1.51	18	12	3	2.73	2.035	0.90	GRASS	73	4

- SEEDBED PREPARATION:**
- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
 - RIP THE ENTRANCE AREA TO 6 INCHES DEPTH.
 - REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
 - APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
 - CONTINUE TILLAGE UNTIL A WELL - PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
 - SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
 - MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
 - INSPECT ALL SEEDBED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
 - CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
 - APPLY:
AGRICULTURAL LIMESTONE - 2 TONS/ACRE
FERTILIZER - 1000 LBS/ACRE (10-10-10)
SUPERPHOSPHATE - 500 LBS/ACRE (20%)
MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)
ANCHOR - ASPHALT EMULSION AT 450 GAL/ACRE

TEMPORARY SEEDING

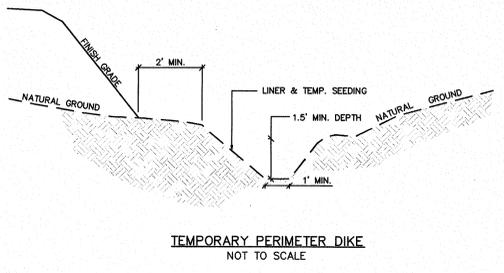
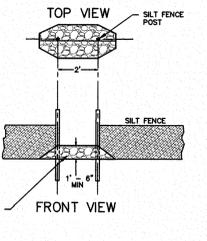
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
RYE GRASS	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
BROWN TOP MILLET	1-2 LBS.	JUNE - AUGUST	25 LBS. 10-10-10

PERMANENT SEEDING

GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA GRASS	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
PERNIX TALL (KENTUCKY 31)	6-7 LBS.	APRIL - AUGUST FEB - OCT.	25 LBS. 10-10-10
SERICEA LEOPOLDA (SLOPES)	1-2 LBS.	MARCH - APRIL	25 LBS. 10-10-10

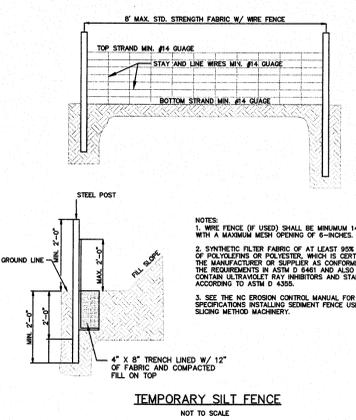
GROUND STABILIZATION CRITERIA

SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERIMETER DICES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10 FT 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 FT IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HOW ZONES)



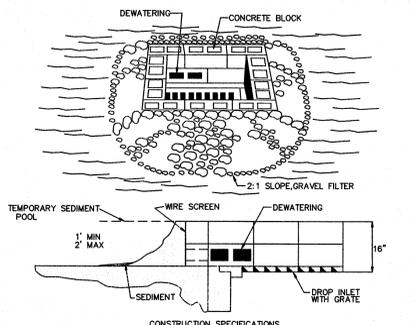
Temporary Perimeter Dike Calculations

Perm Dike NUMBER	LENGTH (FT)	HIGH (FT)	LOW (FT)	ELEVATION DIFF. (FT)	SLOPE (%)	VELOCITY (FPS)	MANNING n	CHECK DAM NUMBER	CHECK DAM NUMBER	CHECK DAM NUMBER
TPD 1	354	25.00	16.00	9.00	2.94	0.31	GRASS	0.035	79	5



Silt Fence Table

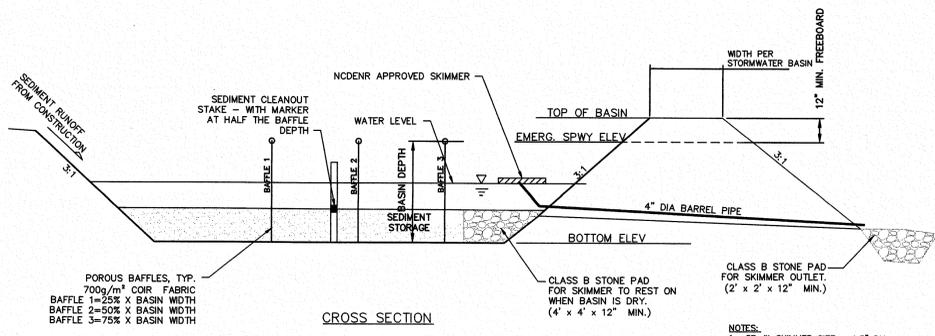
SILT FENCE	DRAINAGE AREA (AC)	LENGTH (LF)	AC per 100 LF	1/4-AC per 100 LF "yes" or "no"
SF 1	0.93	378	0.25	yes
SF 2	0.24	241	0.10	yes
SF 3	0.64	474	0.14	yes
SF 4	0.21	399	0.05	yes



- NOTES:
- DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
 - SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACE A 1-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
 - PLACE CLEAN GRAVEL (NO DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.

GUIDELINES FOR HARDWARE CLOTH & GRAVEL INLET PROTECTION

SD 13-01
NOT TO SCALE



- NOTES:
- LOCATE THE EMERGENCY SPILLWAY ON NATURAL SOILS. AVOID PLACING IT THROUGH FILL MATERIAL WHEREVER POSSIBLE.
 - ALL RUNOFF MUST DISCHARGE TO THE INLET SIDE OF THE BASIN. DISCHARGE RUNOFF INTO THE BASIN IN A MANNER THAT MINIMIZES EROSION.

NUMBER BASIN CALCULATIONS TABLE

Basin No.	Design Flow (MGD)	Basin Area (Sq. Ft.)	Basin Length (Feet)	Basin Width (Feet)	Basin Depth (Feet)	Basin Volume (MG)	Basin Detention Time (Hours)
SB 1	0.15	1000	100	10	5	0.0001	0.0001
SB 2	0.15	1000	100	10	5	0.0001	0.0001

PERMITS AND APPROVALS TABLE

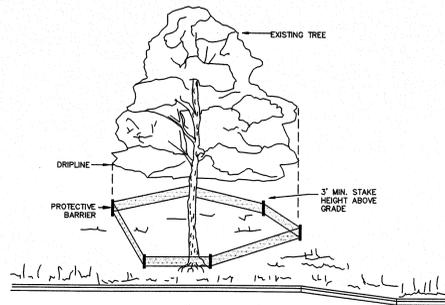
Permit/Approval	Issued To	Issued Date	Expiration Date
Permit	City of Wilmington	05/13/13	05/13/14
Approval	City of Wilmington	05/13/13	05/13/14

- NOTES:
- SD 13-01 is a reference to the City of Wilmington Engineering Department.
 - Required Station Area and Volume were taken from NCDENR Submittal & Erosion Manual.
 - Match Station Number Table shown on Table 2-12 NCDENR Erosion Control Manual.

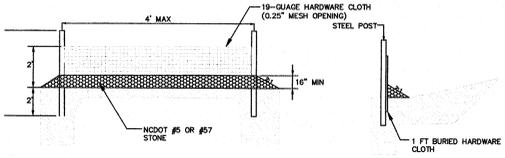
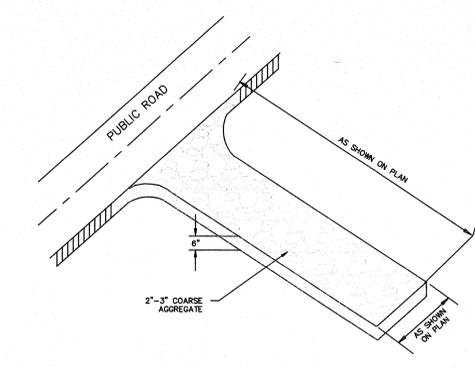
SKIMMER DETAIL
NOT TO SCALE

TREE PROTECTION NOTES:

- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. [18-457(b)]
- PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. [18-458]
- LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS. [18-457(d)]
- ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS. [18-458]
- NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. [18-458]
- REGULATED AND SIGNIFICANT TREES IN THE STREET YARD [18-456(c)] AND ANY TREES IN ANY REQUIRED BUFFERS [18-456(b)] ARE REQUIRED TO BE RETAINED.



CONSTRUCTION ENTRANCE/EXIT
SD 13-03
NOT TO SCALE



Approved Construction Plan

Name: *James M. Moore* Date: *05/13/13*

Planning: *W. Moore* Date: *05/13/13*

Traffic: *W. Moore* Date: *05/13/13*

Fire: *S. Howard* Date: *05/13/13*

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE: _____ PERMIT # _____
SIGNED: _____

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