

RIVERLIGHTS

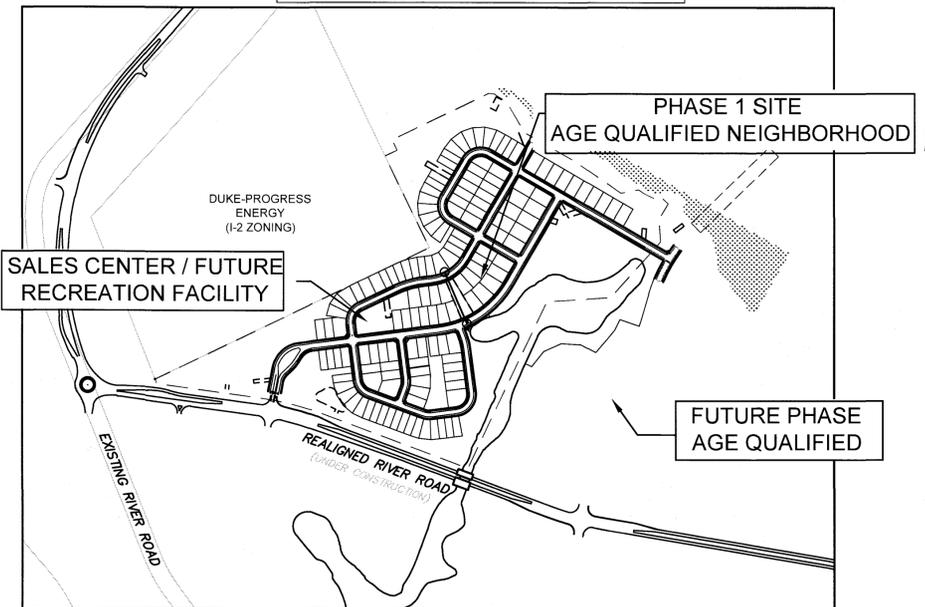
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CITY OF WILMINGTON, NC

REVISED: OCTOBER 2016

AQ-1-ISSUED FOR CONSTRUCTION SET WITH ADDITION FOR SALES CENTER / RECREATION FACILITY

ISSUED FOR CONSTRUCTION



VICINITY MAP
1"=500'

Approved Construction Plan
Name: [Signature] Date: 10/12/16
Planning: [Signature] Traffic: [Signature] Fire: [Signature]

CITY OF WILMINGTON
NORTH CAROLINA
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 10/11/16 Permit # 201503102
Signed: [Signature]

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

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COUNTY AND AGENCY CONTACTS

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PROJECT DATA

NAME OF PROJECT:
RIVERLIGHTS- PHASE 1 AQ-1

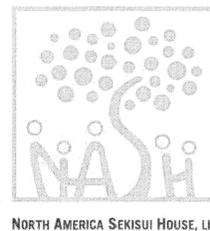
OWNER/DEVELOPER:
AQ-1:
NNP IV-CAPE FEAR RIVER, LLC
3410 RIVER ROAD, SUITE 103
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PHONE: (704)813-8697
CONTACT: DOUG BROWN

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Know what's below.
Call before you dig.

PULTE HOMES CORPORATION
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4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

PHASE I AGE QUALIFIED

02735-0125

REVISED: OCTOBER 2016

CONSTRUCTION NOTES

- CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.
- CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING THE LOCATION OF EXISTING UTILITIES FROM THE APPROPRIATE PARTIES PRIOR TO CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES, USING FLAGMEN, ETC. AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
- 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.
- SHOULD ANY DAMAGE OCCUR TO EXISTING UTILITIES, IT SHALL BE REPAIRED SOLELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO CONSTRUCTION OF UNDERGROUND UTILITIES. TEST PITTING OF EXISTING LINES PRIOR TO CONSTRUCTION, IF NECESSARY, SHALL BE COORDINATED WITH THE OWNER.
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, PROJECT SPECIFICATIONS, AND LOCAL BUILDING CODES.
- 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.)
- 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.
- WHEREVER SEWER OR WATER MAINS CROSS ONE ANOTHER, A MINIMUM VERTICAL CLEARANCE OF 18" SHALL BE PROVIDED BETWEEN THE BOTTOM OF THE WATER PIPE AND THE TOP OF THE SEWER PIPE.
- WHEREVER SEWER OR WATER MAINS RUN PARALLEL TO EACH OTHER, A MINIMUM HORIZONTAL SEPARATION OF 10" SHALL BE PROVIDED, OR 18" VERTICAL SEPARATION.
- IF NEITHER OF THESE CONDITIONS (#10 OR #11 ABOVE) CAN BE MET, THEN THE SEWER SHALL BE CLASS 50 DIP, MINIMUM OF 20 LF CENTERED OVER THE CROSSING.
- ALL WATER VALVES, BOXES, AND FIRE HYDRANT ASSEMBLIES SHALL BE SET AND ADJUSTED TO FINISHED GRADE.
- THE OWNER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, BOTH TEMPORARY AND PERMANENT.
- 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.
- ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS.
- FIRE HYDRANTS SHALL BE PLACED A MINIMUM DISTANCE OF 6 FEET FROM BACK OF CURB AND SHALL HAVE A CLEAR SPACE OF 3 FEET FROM ANY PERMANENT STRUCTURE PER CFPWA STANDARDS.
- ALL SELECT AND BORROW MATERIAL SHALL MEET CRITERIA SET FORTH BY SECTIONS 1016 AND 1018 OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS FOR ROADS AND STRUCTURES. SEE SECTION FOR PLACEMENT AND COMPACTION INFORMATION.
- THE ENGINEER AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION OF THE PIPES PRIOR TO CONSTRUCTION. IF DAMAGE OCCURS TO THESE PIPES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE PIPE(S).
- EXISTING PAVING, CONCRETE, AND OTHER UNSUITABLE MATERIALS INCLUDING UNDERCUT EXCAVATION SHALL NOT BE USED AS FILL MATERIAL AND SHALL BE DISPOSED OF OUTSIDE THE PROJECT LIMITS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING AND FEES FOR DISPOSAL.
- ALL TREES, STUMPS, ROOT MAT, ETC. SHALL BE ENTIRELY REMOVED REGARDLESS OF DEPTH. BURIAL OF ORGANIC MATERIAL WITHIN THE PROJECT LIMITS IS NOT PERMITTED. OPEN BURNING OF DOWNED TREES AND STUMPS IS NOT PERMITTED. CHIPPED MATERIALS MUST BE REMOVED PRIOR TO THE PLACEMENT OF EMBANKMENT OR TOPSOIL.
- THE CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN OFF-SITE SPOIL AREAS FOR DISPOSAL OF EXCESS AND/OR UNSUITABLE MATERIALS AS NECESSARY. OFF-SITE SPOIL AREAS MUST BE SUBMITTED TO THE ENGINEER AND APPLICABLE REGULATORY AGENCIES PRIOR TO UTILIZATION BY THE CONTRACTOR. NO AREAS DESIGNATED AS WETLANDS WILL BE PERMITTED FOR USE AS A DISPOSAL SITE. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER THAT NO WETLANDS WILL BE IMPACTED. THE ENGINEER WILL NOT CONSIDER ANY DELAYS OR MONETARY CLAIMS OF ANY NATURE RESULTING FROM THE CONTRACTOR'S FAILURE OR DIFFICULTY IN FINDING NECESSARY DISPOSAL SITES TO MEET THE TIME FRAMES AND CAPACITIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANS, PERMITS, EROSION AND SEDIMENT CONTROL MEASURES, ETC. REQUIRED BY THE APPROPRIATE REGULATORY AGENCIES FOR UTILIZING OFF-SITE SPOIL AREAS. THE CONTRACTOR SHALL CERTIFY TO THE ENGINEER THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO UTILIZING THE OFF-SITE SPOIL AREAS. ALL COSTS FOR PROCURING AND UTILIZING THE OFF-SITE SPOIL AREAS ARE TO BE INCIDENTAL TO THE BASE BID.

DEMOLITION NOTES

- THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIARIZED WITH FIELD DEMOLITION CONDITIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL DEMOLISHED DEBRIS ASSOCIATED WITH THE PROJECT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST GENERATED BY THE WORK, INCLUDING BUT NOT LIMITED TO DEMOLITION AND CONSTRUCTION ACTIVITIES, SITE VEHICULAR TRAFFIC AND RELATED OPERATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO BEGINNING ANY DEMOLITION. CONTRACTOR SHALL CONTACT NC ONE CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE AND ENGINEER IMMEDIATELY.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF DISCONNECTING AND ABANDONING ALL EXISTING UTILITIES WITH THE OWNER UNLESS OTHERWISE NOTED. ALL EXISTING UTILITIES AND ASSOCIATED PIPING, ETC. NOT IN USE ON THE SITE SHALL BE PROPERLY ABANDONED AND REMOVED AS REQUIRED. COORDINATE WITH THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES THAT REMAIN IN SERVICE DURING DEMOLITION.
- 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 OWNER'S REPRESENTATIVE AND ENGINEER PRIOR TO PROJECT CLOSEOUT. COORDINATE INSPECTION WITH THE OWNER AND ENGINEER PRIOR TO PROJECT CLOSEOUT.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE ENGINEER FOR THE REQUIRED INSPECTIONS ON THE PROJECT.
- WETLANDS DO EXIST ON SITE AND ARE NOTED ON THE PLANS. UNLESS OTHERWISE INDICATED, THE WETLANDS SHALL NOT BE DISTURBED DURING CONSTRUCTION OF THIS PROJECT.

EXCAVATION, GRADING, AND BACKFILLING NOTES

- ANY UNDERCUTTING IN GOOD SOIL SHALL BE REPLACED AND THE REPLACEMENT MATERIAL SHALL BE COMPACTED TO NINETY-FIVE (95) PERCENT OF MAXIMUM DENSITY OBTAINED AT OPTIMUM MOISTURE CONTENT, AS DETERMINED BY THE ASTM D 698 STANDARD PROCTOR TEST METHOD. IN THE EVENT THAT MATERIAL ENCOUNTERED AT PIPE GRADE, SUBGRADE OF PARKING OR ROADWAYS AND SUBGRADE OF BUILDING FOUNDATIONS IS FOUND TO BE SOFT, SPONGY, OR IN ANY OTHER WAY UNSUITABLE, THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER IMMEDIATELY. SUCH UNSUITABLE MATERIAL SHALL BE REMOVED TO A DEPTH AS SPECIFIED BY THE GEOTECHNICAL ENGINEER AND REPLACED WITH A MINIMUM OF SIX (6) INCHES OF STONE, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- BEFORE BACKFILLING IS COMMENCED OVER PIPES AND OTHER INSTALLATIONS, EARTH FILL SHALL BE SOLIDLY TAMPED AROUND AND ABOVE THE PIPE TO A DEPTH OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE. CARE SHALL BE TAKEN TO PREVENT ANY DISTURBANCE TO THE PIPE OR DAMAGE TO NEWLY MADE JOINTS. THE FILLING OF THE TRENCH SHALL BE CARRIED OUT SIMULTANEOUSLY ON BOTH SIDES OF THE PIPES IN SUCH A MANNER THAT INJURIOUS SIDE PRESSURES DO NOT OCCUR.
- THE MATERIAL FOR BACKFILLING SHALL BE FREE FROM ALL PERISHABLE AND OBJECTIONABLE MATERIALS. BEFORE PLACING ANY BACKFILL, ALL RUBBISH, FORM, BLOCKS, WIRES OR OTHER UNSUITABLE MATERIAL SHALL BE REMOVED FROM EXCAVATION. THE BACK-FILLING OVER PIPES SHALL BE PLACED IN LAYERS NOT OVER SIX (6) INCHES THICK AND COMPACTED TO A MINIMUM DENSITY OF NINETY-FIVE (95) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR COMPACTION TEST TO A DEPTH OF 12 INCHES BELOW FINISHED GRADE. THE LAST 12 INCHES OF BACKFILL SHALL BE PLACED IN LAYERS NOT OVER SIX (6) INCHES THICK AND COMPACTED TO A MINIMUM DENSITY OF NINETY-EIGHT (98) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR COMPACTION TEST.

STORM DRAINAGE AND GRADING NOTES

- IN ACCORDANCE WITH NC GENERAL STATUTES, NPDES REGULATIONS, AND NCDENR REQUIREMENTS, STORMWATER DISCHARGE OUTFALLS SHALL BE INSPECTED BY THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR AFTER EACH STORM EVENT OF 1/2 INCH OR GREATER, WITH ONE WEEKLY INSPECTION MINIMUM. NCDENR STANDARD INSPECTION REPORTS SHALL BE PREPARED AND SIGNED WITH COPIES PROVIDED TO THE OWNER, ARCHITECT, AND ENGINEER, BY THE CONTRACTOR.
- INLET PROTECTION SHALL BE INSTALLED AROUND OUTFALL. DEVICES SHALL BE CONSTRUCTED TO FINAL PROPOSED CONDITION UPON STABILIZATION OF CONTRIBUTING GROUND SURFACES AND REMOVAL OF SEDIMENT FROM STORM PIPES.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- UNLESS OTHERWISE NOTED, GRADES AND SPOT ELEVATIONS NOTED ON PLANS INDICATE FINISHED GRADE OR PAVEMENT SURFACE. ALL DIMENSIONS ARE MEASURED TO THE BACK OF CURB UNLESS OTHERWISE INDICATED.

UTILITY NOTES

- SCHEDULE A PRECONSTRUCTION MEETING WITH CAPE FEAR PUBLIC UTILITY AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
 - WATER AND SANITARY SEWER UTILITY MAINS ARE PUBLIC AND PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
 - THIS PROJECT SHALL COMPLY WITH THE CFPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THE "FINAL APPROVAL".
 - ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY CFPWA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO CFPWA AND APPROVED BY USFCCOCHR OR ASSE.
 - BACKFLOW PREVENTION AND METERS WILL BE PROVIDED FOR BOTH FIRE LINES (RPDA) AND DOMESTIC SERVICE (RPZ). FIRE LINE BACKFLOW PREVENTER AND DOMESTIC SERVICE BACKFLOW PREVENTER WILL BE LOCATED AS SHOWN ON THE UTILITY PLANS. INSTALLER OF BACKFLOW PREVENTERS MUST CONTACT CFPWA PRIOR TO INSTALLING UNITS TO GIVE CFPWA THE OPTION TO VERIFY INSTALLATION PROCEDURES.
 - REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR DOMESTIC WATER SERVICE
 - REDUCE PRESSURE DETECTOR ASSEMBLY WILL BE UTILIZED FOR THE BACKFLOW PREVENTER ON THE FIRE SERVICE.
 - IF THE CONTRACTOR DESIRES CFPWA 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.
 - WATER: 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, CL150 (DR-18).
 - SANITARY SEWER: FOR PIPE SIZES 4" AND 8" PIPE SHALL BE SCH 40 CONFORMING TO THE REQUIREMENTS OF ASTM D1785 WITH SOLVENT WELD JOINTS CONFORMING TO ASTM D2672. 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 D3139.
 - 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.
 - PVC WATER MAINS AND POLYETHYLENE SERVICES ARE TO BE MARKED WITH NO. 10 SINGLE STRAND INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND STRAPPED TO THE PIPES WITH DUCT TAPE. THE INSULATED WIRE IS TO BE STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
 - SITE UTILITY CONTRACTOR TO PROVIDE WATER AND SANITARY SEWER SERVICE TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL BUILDING PLANS.
 - MAXIMUM BENDING RADIUS FOR 8" C-900 PVC WATER MAIN BENDS IS 360" (ONE-HALF MANUFACTURER'S RECOMMENDED ALLOWABLE LONGITUDINAL BENDING).
 - UNDERGROUND UTILITIES: ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE SUCH PLACEMENT 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.
 - MINIMUM OF 36" COVERAGE ABOVE ALL WATERMAINS.
 - MINIMUM OF 18" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS.
 - A VARIANCE IS NOT ANTICIPATED FROM ANY NORTH CAROLINA DIVISION OF WATER QUALITY (DWQ) REQUIREMENT.
 - PLANS ARE IN COMPLIANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY TECHNICAL STANDARDS AND SPECIFICATIONS.
- RELATION OF WATER MAINS TO SANITARY SEWERS:**
- LATERAL SEPARATION OF SANITARY 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:
 - 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
 - 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.
 - CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER MAIN, 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.
 - 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.
 - 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 DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.

MATERIALS AND EASEMENT NOTES:

- ALL CATCH BASINS ARE NCDOT STD 840.01
- ALL DROP INLETS ARE NCDOT STD 840.15
- ALL STORM DRAINAGE PIPING TO BE CLASS III RCP, UNLESS OTHERWISE NOTED
- ALL STORM DRAINAGE PIPING CONVEYING DISCHARGE FROM THE PUBLIC RIGHT-OF-WAY SHALL BE CONTAINED WITHIN A PUBLIC DRAINAGE EASEMENT WHOSE WIDTH IS DETERMINED BY THE DEPTH OF BURY
- ALL SANITARY SEWER LINES AND WATERLINES SHALL BE C-900 PVC, UNLESS OTHERWISE NOTED AND MEET CAPE FEAR PUBLIC UTILITY SPECIFICATIONS
- A PUBLIC UTILITY EASEMENT SHALL BE RESERVED WITHIN THE STREET RIGHT-OF-WAY. A 10'-NON-MUNICIPAL EASEMENT SHALL BE RESERVED ALONG BOTH SIDES OF ALL STREETS
- WATER AND SANITARY SEWER UTILITIES ARE PUBLIC - CAPE FEAR PUBLIC UTILITY AUTHORITY

EROSION CONTROL NOTES

- ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE. ANY BUILDER THAT ANTICIPATED THE DISTURBANCE OF MORE THAN ONE 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; AND, A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NEW HANOVER COUNTY.
- SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
- ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
- IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEED, MULCHED, AND TACKED.
- 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.

EROSION CONTROL MAINTENANCE PLAN:

- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AND REPAIRED, AS NECESSARY, EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF EVERY 1/2 INCH OR GREATER RAINFALL.
- 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, RESEED 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 RIDGE AND CHECK DAM. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.
- INSPECT TEMPORARY SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS.
- CHECK THE SEDIMENT BASIN EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.
- INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (0.5" OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED. INLET PROTECTION SHOULD BE CLEANED OUT WHEN IT IS HALF FULL.
- INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEAN OUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH. AFTER THE CONTRIBUTING DRAINAGE AREAS HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.
- 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.

NOTE (G.S. 113A-57 (2))

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.

CITY OF WILMINGTON STANDARD NOTES

- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1-800-632-4949.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ONCE STREETS ARE OPEN TO TRAFFIC, THE DEVELOPER SHALL CONTACT TRAFFIC ENGINEERING TO REQUEST INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- ANY BROKEN OR MISSING SIDEWALK PANELS AND CURBING SHALL BE REPLACED BY THE CONTRACTOR.
- CONTACT CITY OF WILMINGTON TRAFFIC ENGINEERING AT 341-7852 TO DISCUSS STREET LIGHTING OPTIONS.
- IF THE CONTRACTOR DESIRES WATER FOR CONSTRUCTION HE SHALL APPLY WITH THE CAPE FEAR PUBLIC UTILITY AUTHORITY 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.
- THE NUMBER AND SPACING OF DRIVEWAYS FOR ALL INTERCONNECTED SITES WILL BE DETERMINED BY THE COMBINED FRONTAGE OF THE INTERCONNECTED PROPERTIES.
- CONTACT TRAFFIC ENGINEERING TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. CALL TRAFFIC ENGINEERING FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
- TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.
- THERE ARE NO KNOWN CEMETERIES, BURIAL SITES OR BURIAL GROUNDS ON THE PROJECT SITE.

NOTE COW(18-458)

NO EROSION IS ALLOWED ONSITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED BY THE ENGINEER.

FIRE PROTECTION NOTES

- 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.
- HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB PER CITY OF WILMINGTON STANDARDS. HYDRANTS WILL BE LOCATED WITHIN 6' OF THE CURB PER CFPWA STANDARDS.
- COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERRECTED ONSITE WITHOUT CITY FIRE INSPECTOR APPROVAL.
- 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.
- A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM UNDERGROUND UTILITIES
- CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS AT ALL TIMES DURING CONSTRUCTION.
- TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.

UTILITY COMPANY CONTACTS

- DUKE/PROGRESS ENERGY: SID LIVINGSTON/MARK HATFIELD (910) 452-2777
- DUKE ENERGY (TRANSMISSION): BILL WILDER (910) 772-4903
- AT&T (BELLSOUTH): JAMES BATSON (910) 452-5300
- TIME WARNER CABLE: ROBERT JOHN (910) 216-4494
- PIEDMONT NATURAL GAS: PAUL GONKA (910) 512-2841
DJ MEDeiros (910) 431-3233
- CAPE FEAR PUBLIC UTILITY AUTHORITY (910) 332-6550

GROUND STABILIZATION CRITERIA		
SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERIMETER DIKES, 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)

Approved Const. Plan
 Planning: [Signature] Date: 5/11/16
 Public Use: [Signature] 5/11/16
 Title: [Signature] 5/11/16
 File: [Signature] 5/11/16
 Eng: [Signature] 5/20/16

REVNO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/29/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAYS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



MCKIM & CREED
 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

RIVERLIGHTS
 AGE QUALIFIED - PHASE 1
 NOTES AND LEGEND
 NORTH AMERICA SERVICES HOUSE, LLC
 Newland COMMUNITIES

RIVERLIGHTS
 AGE QUALIFIED - PHASE 1
 NOTES AND LEGEND

DATE: 04/15/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NUL
 PROJ. MGR: KCBE

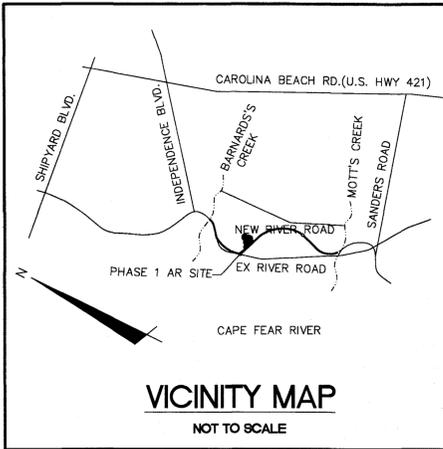
SCALE: HORIZONTAL: N/A
 VERTICAL: N/A

MAC FILE NUMBER: G-002
 DRAWING NUMBER: 2

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

REVISION: 4

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- GENERAL NOTES:**
- FLOODPLAIN INFORMATION WAS OBTAINED FROM NC FLOODPLAIN MAPPING FLOOD RISK INFORMATION SYSTEM PROGRAM. RIVERLIGHTS IS LOCATED WITHIN FIRM MAP 3720312400K, PANEL 3124 AS REVISED JUNE 02, 2006.
 - ITEMS DESIGNATED AS "PROPOSED" ARE PART OF THE RIVER ROAD REALIGNMENT PROJECT THAT IS CURRENTLY UNDER CONSTRUCTION. RIVER ROAD CONSTRUCTION TO BE COMPLETE SPRING 2016.
 - WETLANDS SHOWN IN THIS PORTION OF RIVERLIGHTS WERE DESCRIBED AS POCOSIN WETLAND AND CONSERVATION RESOURCE SETBACK LINES WERE GENERATED AS 25' MINIMUM OUTSIDE OF THE RESOURCE.
 - FINISHED FLOOR ELEVATIONS OFF ALL INHABITABLE STRUCTURES WILL BE MIN. 2'-FEET ABOVE BASE FLOOD ELEVATION
 - RIVERLIGHTS PHASE 1 AGE QUALIFIED COMMUNITY DOES NOT CONTAIN ANY LOCAL, STATE, OR FEDERALLY RECOGNIZED HISTORIC STRUCTURES OR ARCHEOLOGICAL SITES ON SITE. RIVERLIGHTS WAS ISSUED A NOTICE OF NO FURTHER ACTION LETTER DATED JUNE 2, 2008 FOLLOWING COMPLETION OF AN EA/SEPA DOCUMENT.
 - PLATS AND DOCUMENTS SHALL BE RECORDED TO PROVIDE PERPETUAL PROTECTIONS FOR CONSERVATION RESOURCE AND BUFFERS AND PROHIBIT IMPERVIOUS SURFACES AND DISTURBANCE WITHIN THE CONSERVATION SETBACKS, BUFFER SETBACKS, UNLESS EXCEPTIONS ARE PROVIDED BY THE LDC.

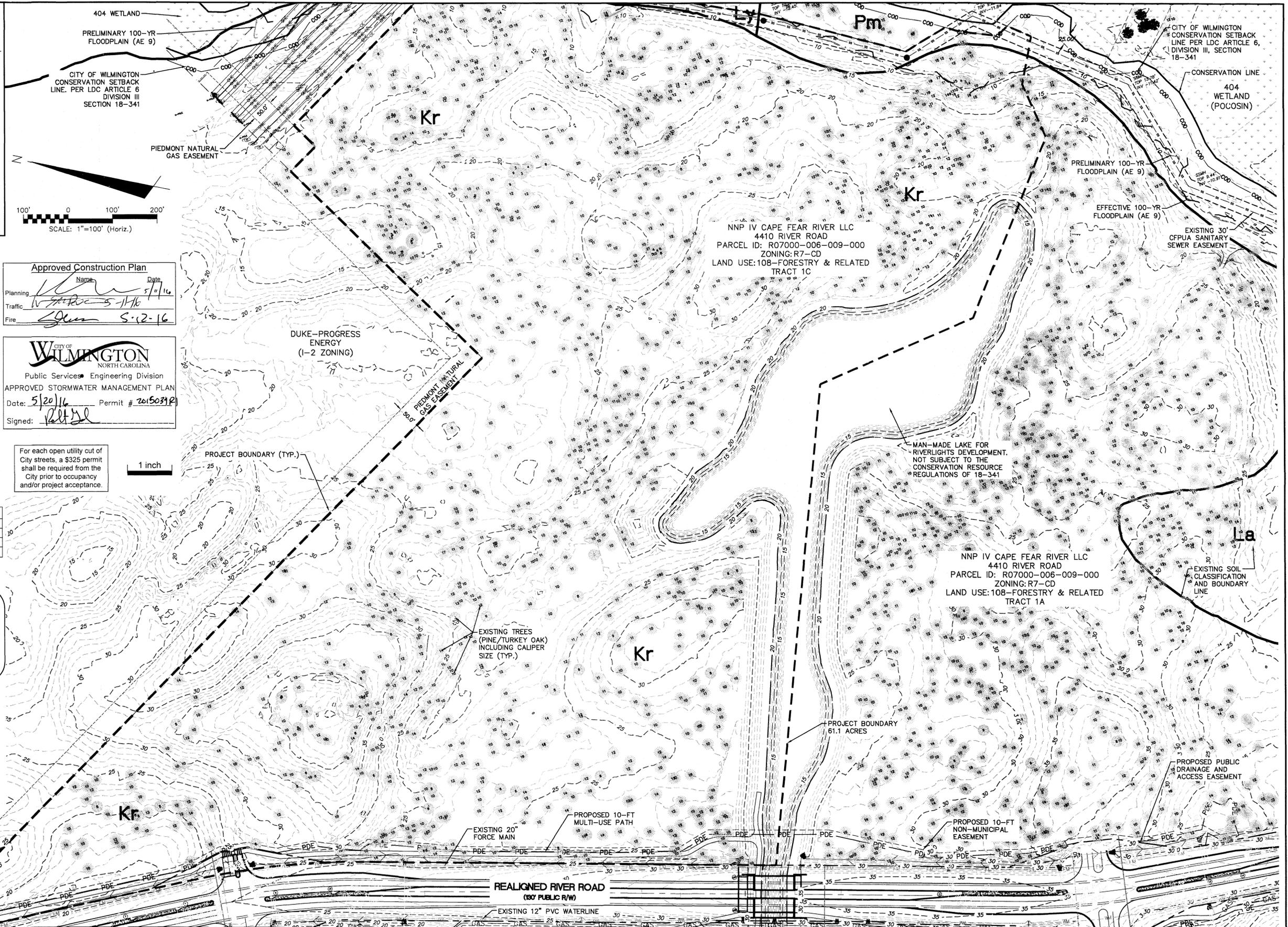
CONSERVATION RESOURCE SETBACK TABLE

CONSERVATION RESOURCE	RES	COMM
POCOSIN	25'	50'
SAVANNAH	25'	50'
BRACKISH/SALT MARSH	75'	100'

REFERENCE: LDC 18-341 (d) 5h

- LEGEND**
- RBC = REBAR & CAP
 - CP = POWER POLE
 - SM = SANITARY SEWER MANHOLE
 - W = WETLAND
 - OHE = OVERHEAD ELECTRIC LINE
 - COO = CONSERVATION SETBACK LINE
 - SS = SANITARY SEWER MAIN

- TREE LEGEND**
- CEDAR
 - GUM
 - OAK
 - MAPLE
 - PINE
- NOTE:** EXISTING TREE CALIPER INCH SIZE IS SHOWN WITHIN THE TREE SYMBOL



Approved Construction Plan

Name: _____ Date: 5/11/16

Planning: _____

Traffic: _____

Fire: _____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services - Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

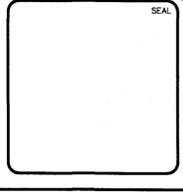
Date: 5/20/16 Permit # 2015031P

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

REV. NO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAY/ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	07/29/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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Wilmington, North Carolina 28401
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RIVERLIGHTS
by Newland COMMUNITIES

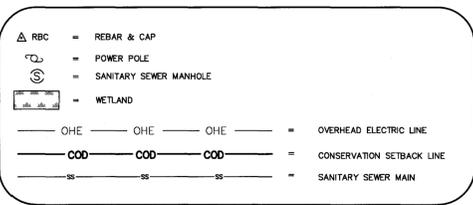
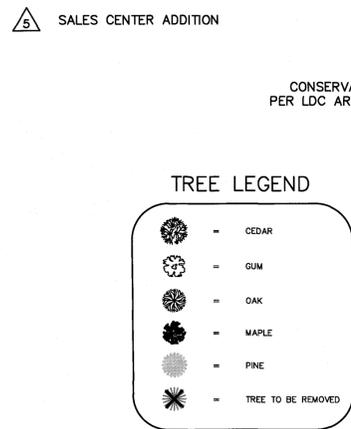
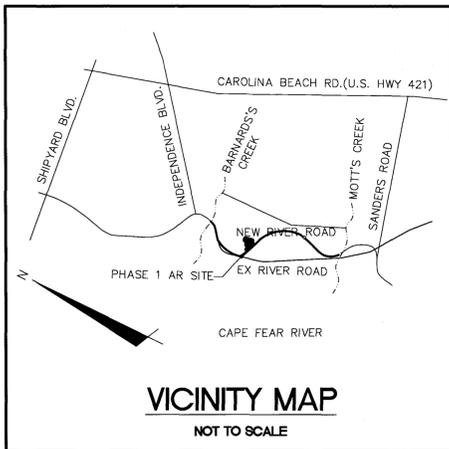
NORTH AMERICA SENSUS HOUSE, LLC

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

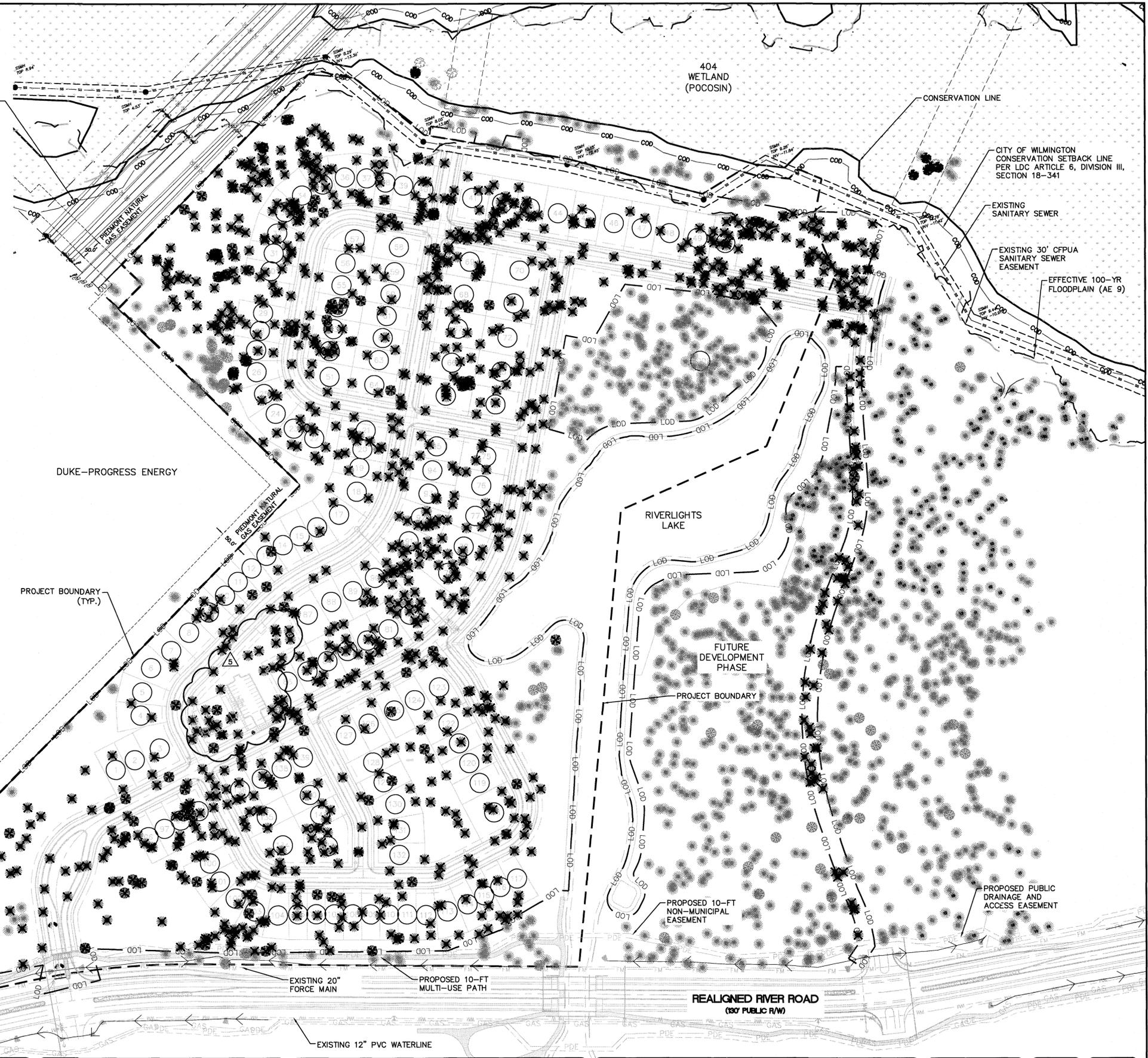
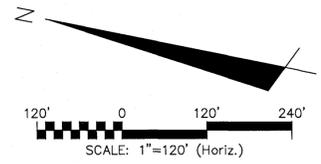
EXISTING CONDITIONS /
SITE INVENTORY PLAN

DATE: 04/15/2015	SCALE: 1"=100'	MAC FILE NUMBER: CX-101
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=100'	DRAWING NUMBER: 3
DRAWN: EEM/KCBE	VERTICAL: N/A	REVISION: 4
DESIGNED: KCBE		
CHECKED: NUL		
PROJ. MGR: KCBE		
STATUS: FINAL DESIGN		
ISSUED FOR CONSTRUCTION		

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- DEMOLITION NOTES:**
- NO EARTH DISTURBING ACTIVITIES SHALL COMMENCE UNTIL ALL PERIMETER EROSION CONTROL MEASURES ARE IN PLACE IN ACCORDANCE WITH THE EROSION CONTROL SEQUENCE SHOWN IN THESE PLANS.
 - NO EARTH-DISTURBING ACTIVITY OR OTHER WORK SHALL TAKE PLACE WITHIN WETLANDS AREAS NOTED ON SURVEY. CONTRACTOR SHALL FIELD VERIFY WETLAND LIMITS FLAGGING IS IN PLACE AND SHALL NOT ENTER WETLAND AREAS. IF WETLAND FLAGGING IS MISSING OR OTHERWISE DAMAGED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTE WETLAND LIMITS AND PREVENT DISTURBANCE OR OTHER ACTIVITY WITHIN WETLANDS.
 - THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNER MONUMENTS, AND SHALL HAVE, AT HIS EXPENSE, ALL CORNER MONUMENTS REPLACED WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES.
 - CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS, AT HIS EXPENSE, DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
 - CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH ALL REGULATIONS GOVERNING THE DEMOLITION, REMOVAL, TRANSPORTATION AND DISPOSAL DO ALL DEMOLITION DEBRIS.
 - CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS FOR EXCAVATION AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.
 - CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ALL UTILITIES AND APPURTENANCES TO REMAIN.



Approved Construction Plan

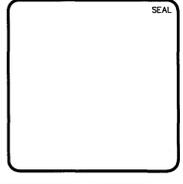
Name	Date
Planning	10/12/16
Traffic	10/12/16
Fire	10/11/16

CITY OF WILMINGTON
NORTH CAROLINA
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 10/11/16 Permit # 201503412
Signed: [Signature]

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



REVNO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMPANY REVISIONS	04/28/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.
4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
TREE REMOVAL PLAN

DATE: 07/11/2015	SCALE: 1"=120'	MAC FILE NUMBER: CX-102
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=120'	DRAWING NUMBER: 4
DRAWN: EEM/KCBE	VERTICAL: N/A	REVISION: 5
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR.: KCBE		
STATUS: FINAL DESIGN		
ISSUED FOR CONSTRUCTION		

PHASE 1 CONSTRUCTION SEQUENCE

1. ESTABLISH LIMITS OF DISTURBANCE AS SHOWN.
2. 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.
3. 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.
4. 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. SILT FENCE WILL BE INSTALLED INSIDE OF THE LIMITS OF DISTURBANCE LINE.
5. INSTALL TEMPORARY SKIMMER BASINS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS IN ORDER TO TREAT SEDIMENT LADEN 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.
6. COMMENCE GRUBBING AND ROUGH GRADING WITHIN THE LIMITS OF CONSTRUCTION.
7. COMMENCE DEMOLITION OF EXISTING BUILDINGS, DRIVES, FENCES, GATES, WELLS, GARDENS AND EXISTING UTILITY SERVICES. ALL DEMOLITION MATERIAL SHALL BE DISPOSED OF, SALVAGED, OR RECYCLED PER THE PROJECT SPECIFICATIONS.
8. 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
9. PROVIDE TEMPORARY STABILIZATION AND SEEDING AS NECESSARY TO PREVENT EROSION. REFER TO SHEET CE-501 FOR GROUND STABILIZATION CRITERIA AND SEEDING SCHEDULE.

LEGEND

TP = POWER POLE
 GW = GUY WIRE
 W = WETLAND
 TPD = TEMPORARY PERIMETER DIKE
 CDD = CITY OF WILMINGTON CONSERVATION RESOURCE
 LOD = LIMITS OF DISTURBANCE
 SF = SILT FENCE
 TPF = TREE PROTECTION FENCE
 TDD = TEMPORARY DIVERSION DITCH

TREE LEGEND

CEDAR
 GUM
 HOLLY
 OAK
 MAPLE
 PINE

LIMITS OF DISTURBANCE = 58.82 AC

LAT: 34° 9' 3" N
LONG: 77° 56' 9" W

Approved Construction Plan

Name: _____ Date: 5/11/16

Planning: _____

Traffic: _____

Fire: _____

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

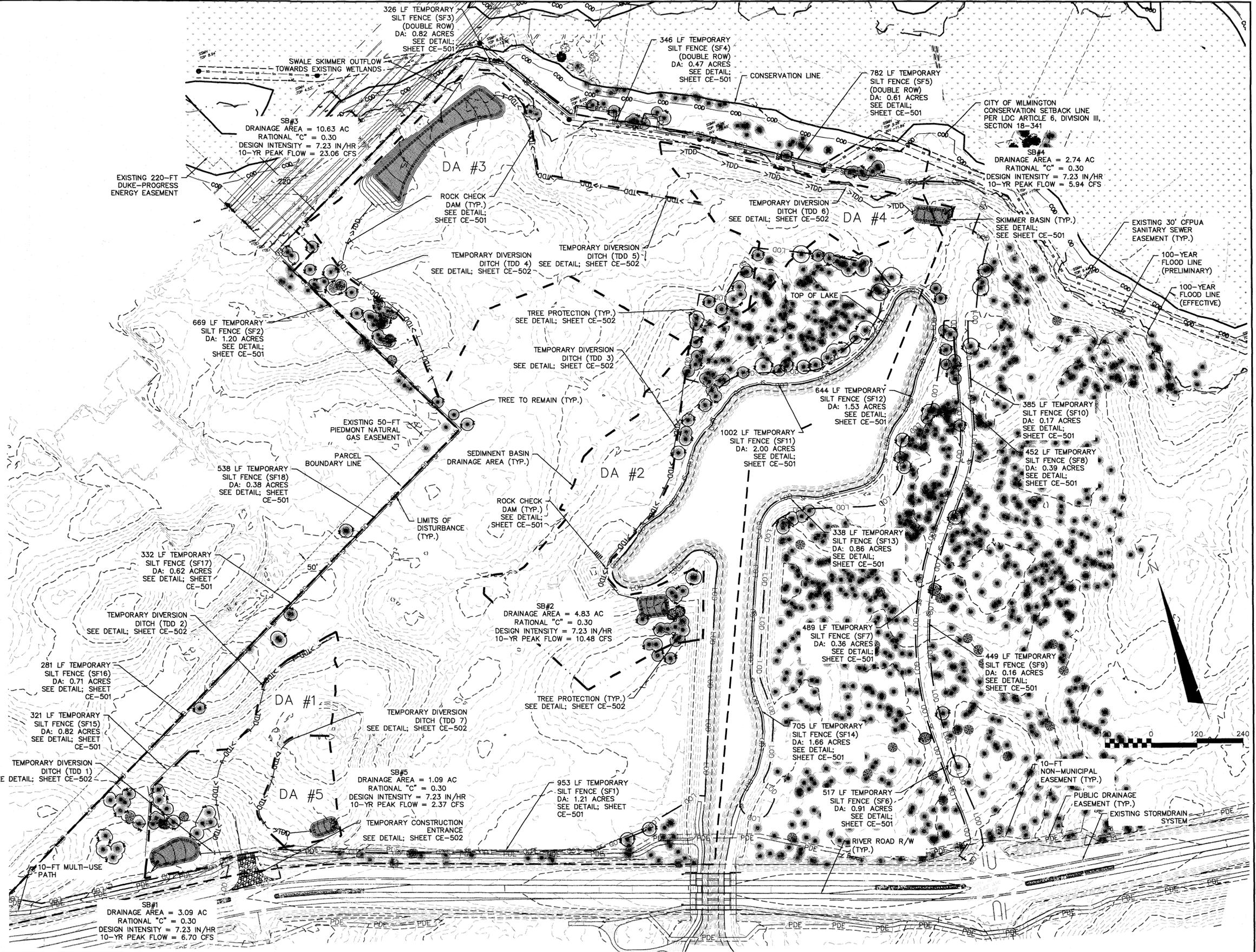
APPROVED STORMWATER MANAGEMENT PLAN

Date: 5/12/16 Permit # 201503910

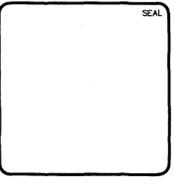
Signed: _____

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.



REVNO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/09/2016
3	QUANTITY CHECK REVISIONS, REMOVAL OF WALKWAYS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/28/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/28/2015



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License: F-1222
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RIVERLIGHTS
by Newland COMMUNITIES

NORTH AMERICA SEEKSHUI HOUSE, LLC

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

PHASE 1 EROSION CONTROL PLAN

DATE: 04/15/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NUL
PROJ. MGR: KCBE

SCALE: HORIZONTAL: 1"=120'
VERTICAL: N/A

MAC FILE NUMBER: CE-101
DRAWING NUMBER: 5
REVISION: 4

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

CONSTRUCTION SEQUENCE:

PHASE 2 CONSTRUCTION SEQUENCE

- BEGIN PHASE 2 SEDIMENT AND EROSION CONTROL UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, ROUGH GRADING OF THE SITE AND INSTALLATION OF THE STORM WATER COLLECTION SYSTEM.
- MAINTAIN MEASURES FROM PHASE 1 AS SHOWN IN THIS PHASE 2 SEDIMENT AND EROSION CONTROL DRAWING.
- REMOVE MEASURES FROM PHASE 1 AS SHOWN. THIS INCLUDES TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSIONS. STABILIZE THESE AREAS ACCORDING TO THE STABILIZATION MEASURES REQUIRED HEREIN.
- INSTALL INLET PROTECTION AS SHOWN IN THE PHASE 2 PLAN AND CONSTRUCTION DETAILS.
- COMPLETE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- UPON COMPLETION OF CONSTRUCTION, ESTABLISH PERMANENT GROUND COVER AND OVERALL SITE STABILIZATION.
- REMOVE THE SEDIMENT AND EROSION CONTROL MEASURES.

Approved Construction Plan

Name: *[Signature]* Date: 10/12/16

Planning: *[Signature]*

Traffic: *[Signature]*

Fire: *[Signature]* 10/11/16

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 10/11/16 Permit # 2015034RZ

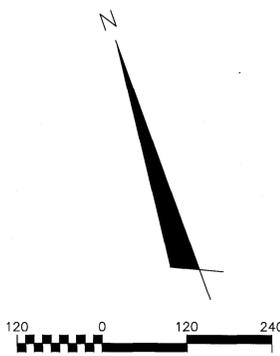
Signed: *[Signature]*

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

LIMITS OF DISTURBANCE = 58.82 AC

LAT: 34° 9' 3" N
LONG: 77° 56' 9" W



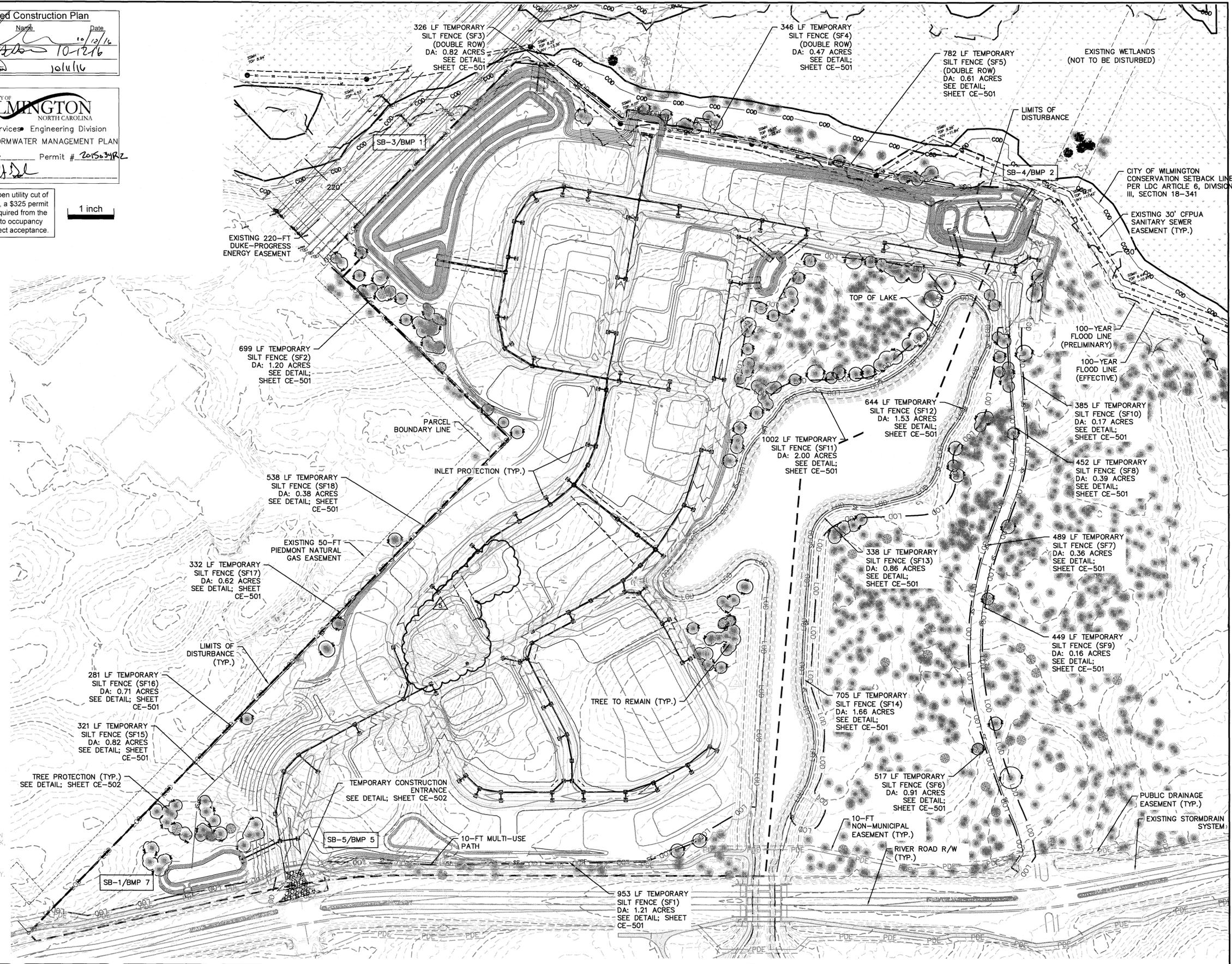
LEGEND

POWER POLE
 GUY WIRE
 WETLAND
 CITY OF WILMINGTON CONSERVATION RESOURCE
 LIMITS OF DISTURBANCE
 TEMPORARY SEDIMENT FENCE
 TREE PROTECTION FENCE

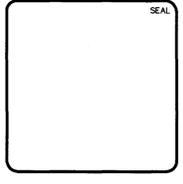
TREE LEGEND

CEDAR
 GUM
 HOLLY
 OAK
 MAPLE
 PINE

- REVISIONS TO GRADING ALONG PASSERINE AVENUE AND ALONG THE WEST SIDE OF PROPERTY AND ADJUSTMENTS TO STORMWATER RIM ELEVATIONS.
- ADJUSTMENT OF INLET PROTECTION DUE TO CHANGES IN STORMWATER DRAINAGE NETWORK, REVISIONS TO GRADING
- GRADING REVISIONS FOR REMOVAL OF WALKINDERS ALLEY, INLET PROTECTION REVISIONS.
- SALES CENTER ADDITION



REVNO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON THE COUNTY REVISIONS	04/02/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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DEL WEBB COMMUNITIES, INC.

4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

PHASE 2 EROSION CONTROL PLAN

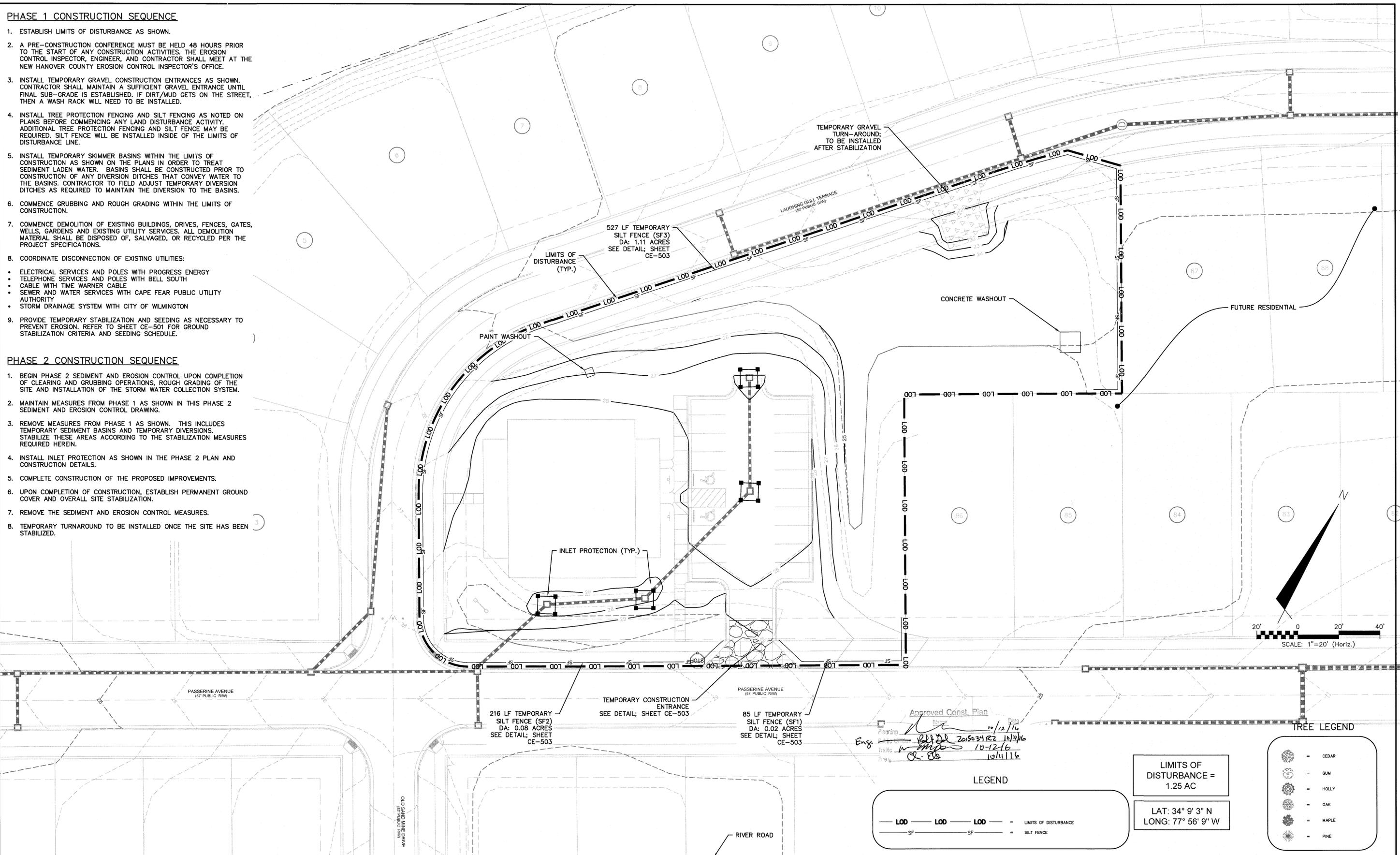
DATE: 07/11/2015	SCALE: HORIZONTAL: 1"=120'	MFC FILE NUMBER: CE-102
MCE PROJ. # 02735-0125	VERTICAL: N/A	DRAWING NUMBER: 6
DRAWN: EEM/KCBE	DESIGNED: KCBE	CHECKED: NJL
PROJ. MGR: KCBE	STATUS: FINAL DESIGN	ISSUED FOR CONSTRUCTION
REVISION: 5		

PHASE 1 CONSTRUCTION SEQUENCE

1. ESTABLISH LIMITS OF DISTURBANCE AS SHOWN.
2. 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.
3. 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.
4. 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. SILT FENCE WILL BE INSTALLED INSIDE OF THE LIMITS OF DISTURBANCE LINE.
5. INSTALL TEMPORARY SKIMMER BASINS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS IN ORDER TO TREAT SEDIMENT LADEN 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.
6. COMMENCE GRUBBING AND ROUGH GRADING WITHIN THE LIMITS OF CONSTRUCTION.
7. COMMENCE DEMOLITION OF EXISTING BUILDINGS, DRIVES, FENCES, GATES, WELLS, GARDENS AND EXISTING UTILITY SERVICES. ALL DEMOLITION MATERIAL SHALL BE DISPOSED OF, SALVAGED, OR RECYCLED PER THE PROJECT SPECIFICATIONS.
8. 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
9. PROVIDE TEMPORARY STABILIZATION AND SEEDING AS NECESSARY TO PREVENT EROSION. REFER TO SHEET CE-501 FOR GROUND STABILIZATION CRITERIA AND SEEDING SCHEDULE.

PHASE 2 CONSTRUCTION SEQUENCE

1. BEGIN PHASE 2 SEDIMENT AND EROSION CONTROL UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, ROUGH GRADING OF THE SITE AND INSTALLATION OF THE STORM WATER COLLECTION SYSTEM.
2. MAINTAIN MEASURES FROM PHASE 1 AS SHOWN IN THIS PHASE 2 SEDIMENT AND EROSION CONTROL DRAWING.
3. REMOVE MEASURES FROM PHASE 1 AS SHOWN. THIS INCLUDES TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSIONS. STABILIZE THESE AREAS ACCORDING TO THE STABILIZATION MEASURES REQUIRED HEREIN.
4. INSTALL INLET PROTECTION AS SHOWN IN THE PHASE 2 PLAN AND CONSTRUCTION DETAILS.
5. COMPLETE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
6. UPON COMPLETION OF CONSTRUCTION, ESTABLISH PERMANENT GROUND COVER AND OVERALL SITE STABILIZATION.
7. REMOVE THE SEDIMENT AND EROSION CONTROL MEASURES.
8. TEMPORARY TURNAROUND TO BE INSTALLED ONCE THE SITE HAS BEEN STABILIZED.



Approved Const. Plan
 Date: 10/12/16
 Eng: [Signature]
 Traffic: [Signature] 10-12-16
 Fire: [Signature] 10/11/16

LEGEND

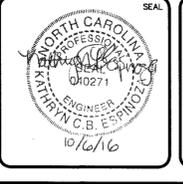
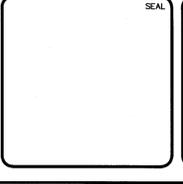
— LOD — LOD — LOD — LIMITS OF DISTURBANCE
 — SF — SF — SF — SILT FENCE

LIMITS OF DISTURBANCE = 1.25 AC
 LAT: 34° 9' 3" N
 LONG: 77° 56' 9" W

TREE LEGEND

- CEDAR
- GUM
- HOLLY
- OAK
- MAPLE
- PINE

REV.	NO.	DESCRIPTION	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016	
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016	
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAY ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016	
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	07/23/2016	
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015	
0	ISSUED FOR CONSTRUCTION	09/29/2015	



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 4000 FABER PLACE DRIVE, SUITE 110
 NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
SALES CENTER / FUTURE PRIVATE
REC FACILITY SEDIMENT & EROSION
CONTROL PHASE 1 AND 2

DATE: 07/11/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NAL
 PROJ. MGR.: KCBE

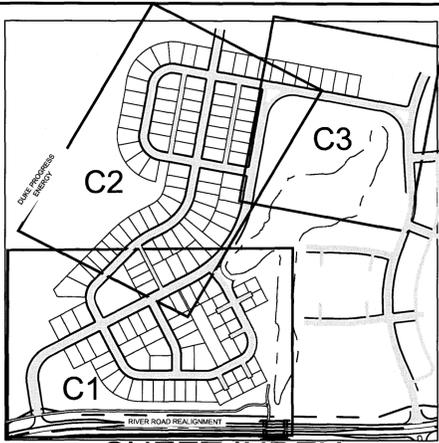
SCALE: HORIZONTAL: 1"=50'
 VERTICAL: N/A

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

M&C FILE NUMBER: CE-103
 DRAWING NUMBER: 6SC
 REVISION: 5

s:\27350125.plt - info-cad\dwg\shades Center\CE-103-01\0660038.dwg 10/6/2016 4:08:01 PM

MATCHLINE - SEE SHEET CG-102



SHEET INDEX
NOT TO SCALE

- ▲ REVISIONS TO GRADING ALONG PASSERNE AVENUE AND ALONG THE WEST SIDE OF PROPERTY AND ADJUSTMENTS TO STORMWATER RIM ELEVATIONS.
- ▲ REMOVAL OF SIDONS COURT, BULLRUSH COURT, WHARTON COURT, AND FOXSEDE COURT, REVISIONS TO LOT LINES AND GRADING
- ▲ GRADING REVISIONS FOR THE REMOVAL OF WALKFINDERS ALLEY
- ▲ SALES CENTER ADDITION

NOTE:
SEE SHEET CG-503/504 FOR STORM DRAIN STRUCTURE/PIPE SCHEDULE.

Approved Construction Plan

Name	Date
Planning: <i>[Signature]</i>	10/12/16
Traffic: <i>[Signature]</i>	10/11/16
Fire: <i>[Signature]</i>	10/11/16

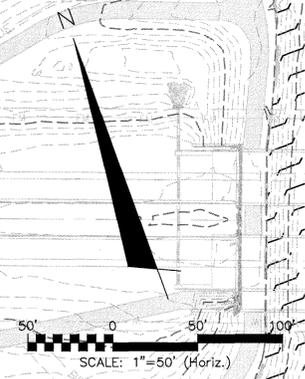
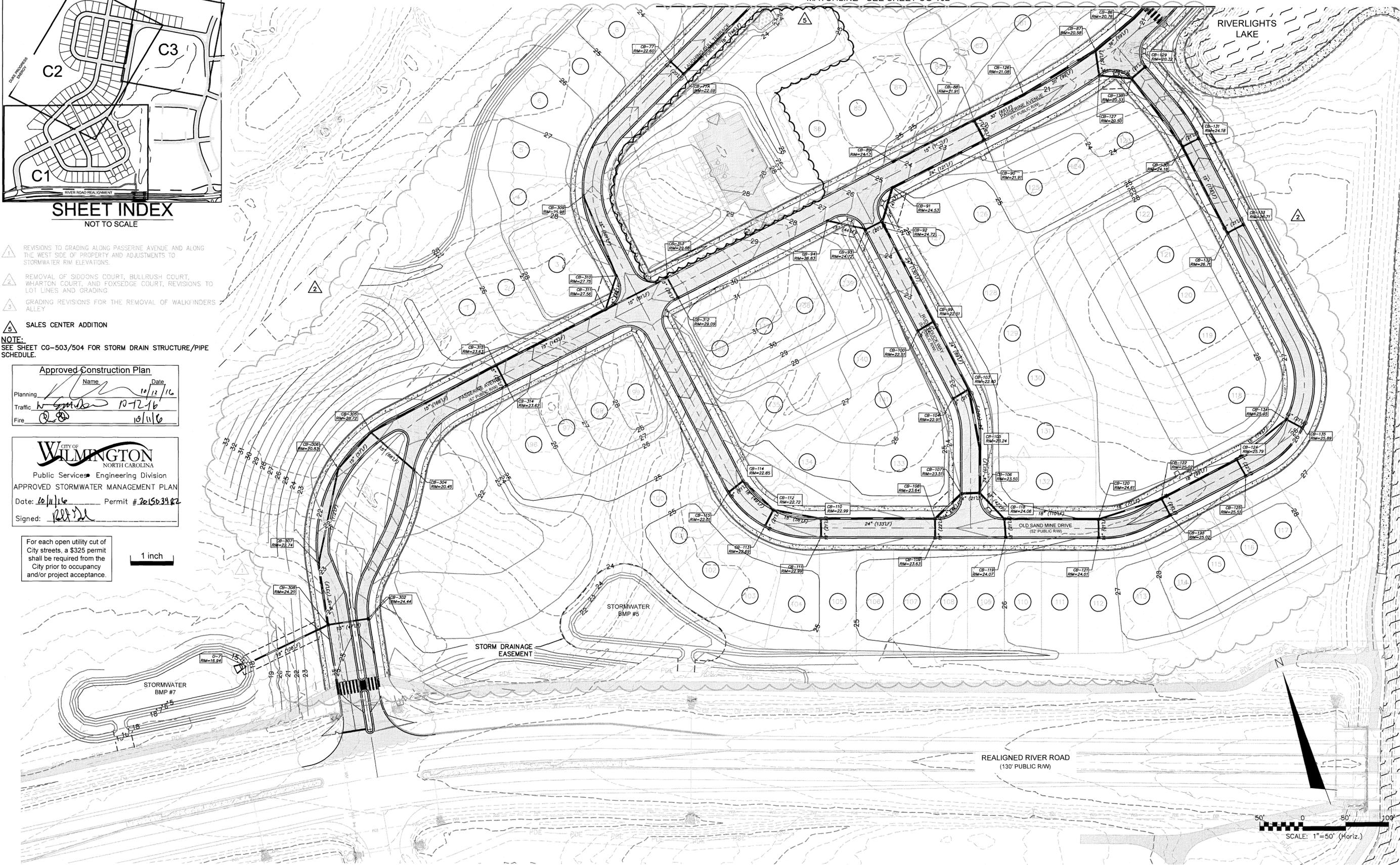
CITY OF WILMINGTON
NORTH CAROLINA
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: 10/11/16 Permit # 201503902

Signed: *[Signature]*

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



REV. NO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/16/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMADIT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
STORM DRAINAGE & GRADING PLAN

DATE:	07/11/2015
MCE PROJ. #	02735-0125
DRAWN	EEM/KCBE
DESIGNED	NLL
CHECKED	KJL
PROJ. MGR.	KCBE
STATUS: FINAL DESIGN	
ISSUED FOR CONSTRUCTION	

SCALE	HORIZONTAL: 1"=50'	VERTICAL: N/A
MAC FILE NUMBER	CG-101	
DRAWING NUMBER	7	
REVISION	5	

DUKE-PROGRESS ENERGY

STORMWATER BMP #1

STORM DRAINAGE EASEMENT

Approved Construction Plan

Name: _____ Date: _____

Planning: _____ 5/11/16

Traffic: _____ 5-11-16

Fire: _____ 5-12-16

CITY OF WILMINGTON NORTH CAROLINA

Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

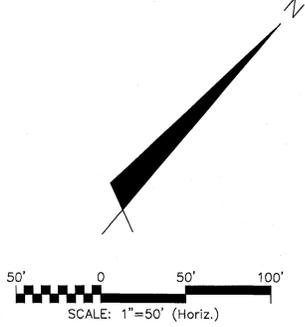
Date: 5/20/16 Permit # 20150392

Signed: *[Signature]*

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

- 1 REVISIONS TO STORMWATER RIM ELEVATIONS
- 2 REMOVAL OF PROVOST ALLEY, VOLUNTEER ALLEY, REVISIONS TO LOT LINES, GRADING AND STORMWATER DRAINAGE NETWORK
- 3 GRADING REVISIONS FOR THE REMOVAL OF WALKFINDERS ALLEY.

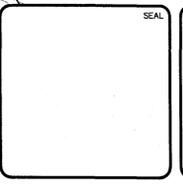


NOTE:
SEE SHEET CG-503-504 FOR STORM DRAIN STRUCTURE/PIPE SCHEDULE.

MATCHLINE - SEE SHEET CG-101

MATCHLINE - SEE SHEET CG-103

REVNO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/22/2015
0	ISSUED FOR CONSTRUCTION	09/28/2015



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RIVERLIGHTS
Newland by COMMUNITIES

NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS AGE QUALIFIED - PHASE 1

STORM DRAINAGE & GRADING PLAN

DATE: 04/15/2015
MCE PROJ. # 02735-0125
DRAWN EEM/KCBE
DESIGNED KCBE
CHECKED NUL
PROJ. MGR. KCBE

SCALE: HORIZONTAL: 1"=50'
VERTICAL: N/A

MAC FILE NUMBER: CG-102
DRAWING NUMBER: 8
REVISION: 4

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

Approved Construction Plan

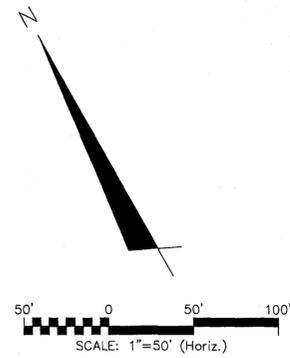
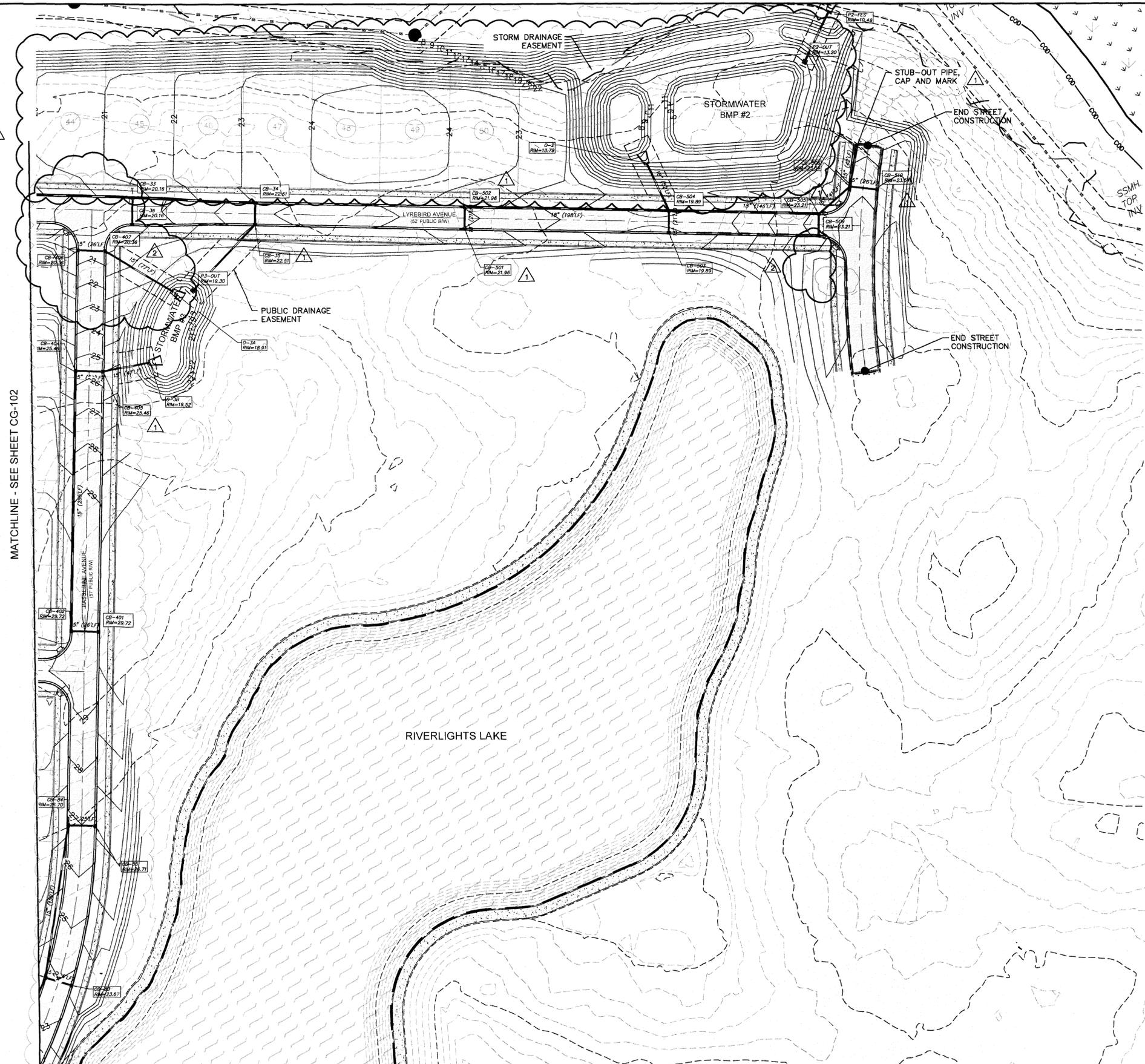
Name: _____ Date: 5/11/16
 Planning: _____
 Traffic: _____ 5-11-16
 Fire: _____ 5-12-16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 201503124
 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

- 1 REVISIONS TO STORMWATER RIM ELEVATIONS
- 2 REVISIONS TO LOT LINES, GRADING, AND STORMWATER DRAINAGE NETWORK



NOTE:
 SEE SHEET CG-503/504 FOR STORM DRAIN STRUCTURE/PIPE SCHEDULE.

REVNO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/09/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKINGERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/15/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015

SEAL



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RIVERLIGHTS
 by
 Newland COMMUNITIES

NASH NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS
 AGE QUALIFIED - PHASE 1

STORM DRAINAGE & GRADING PLAN

DATE: 04/15/2015	SCALE: CG-103	MAC FILE NUMBER: CG-103
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=50'	DRAWING NUMBER: 9
DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: N/A		
PROJ. MGR.: KCBE		
STATUS: FINAL DESIGN		REVISION: 4
ISSUED FOR CONSTRUCTION		

SITE DATA TABLE		AGE QUALIFIED NEIGHBORHOOD - PHASE 1	
PARCEL ADDRESS	4410 RIVER ROAD		
TAX PARCEL IDENTIFICATION NUMBER	R07000-006-009-000		
ZONING DISTRICT	R-7/CD CLUSTER		
CAMA LAND USE CLASSIFICATION	TRANSITION / CONSERVATION		
WATER BODY CLASSIFICATION	SC		
TOTAL ACREAGE WITHIN RIVER LIGHTS BOUNDARY	1,329.41 ACRES (57,909,099.6 SF)		
TOTAL ACREAGE PHASE 1 AGE QUALIFIED BOUNDARY	61.1 ACRES (2,663,144 SF)		
PROPOSED NUMBER OF LOTS	141 SINGLE FAMILY		
TOTAL AMOUNT OF DISTURBED AREA	58.82 ACRES (2,562,221.8 SF)		
IMPERVIOUS AREA (EXISTING)			
LOT COVERAGE	0		
DRIVEWAYS	0		
SIDEWALKS	0		
CONCRETE OR ASPHALT STREETS	0		
TOTAL S.F.	0		
PERCENT S.F.	0		
IMPERVIOUS AREA (PROPOSED)			
LOT COVERAGE	11.78 ACRES (513,240 SF)		
SIDEWALKS	1.83 ACRES (79,699 SF)		
CONCRETE OR ASPHALT STREETS	5.70 ACRES (248,423 SF)		
TOTAL S.F.	21.79 ACRES (841,362 SF+107,949 SF FUT.)		
PERCENT S.F.	35.7%		

*PROPOSED R7-CD CLUSTER FOR ENTIRE RIVER LIGHTS DEVELOPMENT = 1,155.6 ACRES
 (40% OPEN SPACE) = 462.24 ACRES REQUIRED FOR ENTIRE RIVER LIGHTS DEVELOPMENT

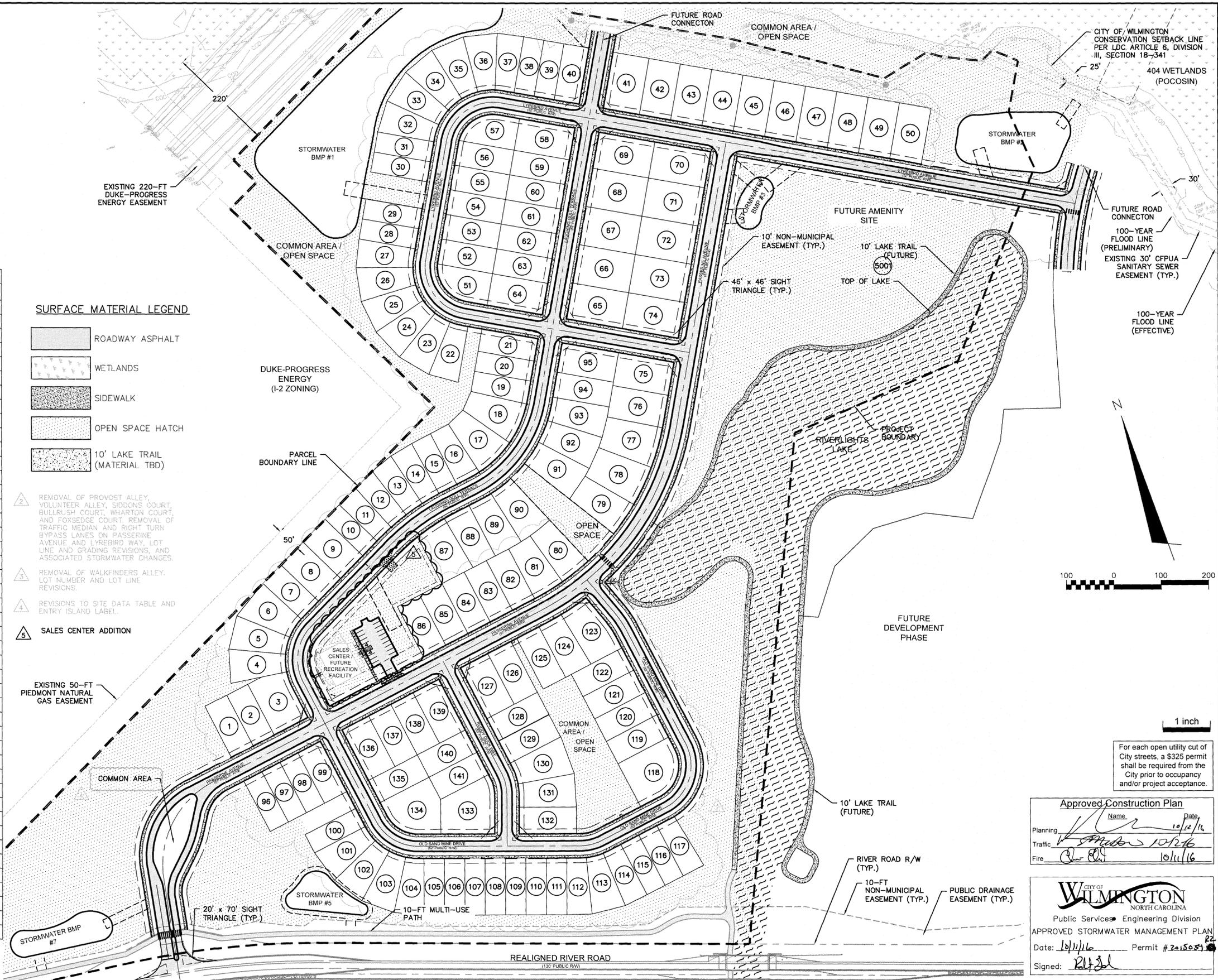
Parcel Table			Parcel Table			Parcel Table		
Parcel #	Area (SF)	Area (AC)	Parcel #	Area (SF)	Area (AC)	Parcel #	Area (SF)	Area (AC)
1	6240	0.14	49	8040	0.18	97	5160	0.12
2	6000	0.14	50	8040	0.18	98	5160	0.12
3	9343	0.21	51	6805	0.16	99	6360	0.15
4	6445	0.15	52	6253	0.14	100	5199	0.12
5	6445	0.15	53	6254	0.14	101	6399	0.15
6	7437	0.17	54	6254	0.14	102	6445	0.15
7	5929	0.14	55	6254	0.14	103	6445	0.15
8	7388	0.17	56	6253	0.14	104	6093	0.14
9	7393	0.17	57	6805	0.16	105	5160	0.12
10	4743	0.11	58	7980	0.18	106	5160	0.12
11	5016	0.12	59	6254	0.14	107	5160	0.12
12	5213	0.12	60	6254	0.14	108	5160	0.12
13	5424	0.12	61	6254	0.14	109	5160	0.12
14	5521	0.13	62	6254	0.14	110	5160	0.12
15	5240	0.12	63	6254	0.14	111	5160	0.12
16	5842	0.13	64	7980	0.18	112	5617	0.13
17	8008	0.18	65	9182	0.21	113	6445	0.15
18	8008	0.18	66	9808	0.23	114	5546	0.13
19	5506	0.13	67	9778	0.22	115	5160	0.12
20	5160	0.12	68	9778	0.22	116	5160	0.12
21	5770	0.13	69	9182	0.21	117	5432	0.12
22	6098	0.14	70	9182	0.21	118	11125	0.26
23	6445	0.15	71	9779	0.22	119	6360	0.15
24	6445	0.15	72	9779	0.22	120	6360	0.15
25	6445	0.15	73	9808	0.23	121	6360	0.15
26	6446	0.15	74	9182	0.21	122	6360	0.15
27	5973	0.14	75	8354	0.19	123	8884	0.20
28	5160	0.12	76	8092	0.19	124	6805	0.16
29	5160	0.12	77	9128	0.21	125	6360	0.15
30	5160	0.12	78	9131	0.21	126	6600	0.15
31	5160	0.12	79	7976	0.18	127	7800	0.18
32	6281	0.14	80	7204	0.17	128	6358	0.15
33	6445	0.15	81	7221	0.17	129	6360	0.15
34	6445	0.15	82	6280	0.14	130	7603	0.17
35	6445	0.15	83	6280	0.14	131	7145	0.16
36	6445	0.15	84	6285	0.14	132	6780	0.16
37	5778	0.13	85	6281	0.14	133	11479	0.26
38	5160	0.12	86	6281	0.14	134	10498	0.24
39	5160	0.12	87	8268	0.19	135	6148	0.14
40	6360	0.15	88	6713	0.15	136	7560	0.17
41	9240	0.21	89	6923	0.16	137	6360	0.15
42	8040	0.18	90	7708	0.18	138	6360	0.15
43	8040	0.18	91	7834	0.18	139	7320	0.17
44	8040	0.18	92	7174	0.16	140	6042	0.14
45	8040	0.18	93	6978	0.16	141	6042	0.14
46	8040	0.18	94	6360	0.15			
47	8040	0.18	95	7560	0.17			
48	8040	0.18	96	5160	0.12			

SURFACE MATERIAL LEGEND

- ROADWAY ASPHALT
- WETLANDS
- SIDEWALK
- OPEN SPACE HATCH
- 10' LAKE TRAIL (MATERIAL TBD)

- REMOVAL OF PROVOST ALLEY, VOLUNTEER ALLEY, SIDDON'S COURT, BULLRUSH COURT, WHARTON COURT, AND FOXEDGE COURT REMOVAL OF TRAFFIC MEDIAN AND RIGHT TURN BYPASS LANES ON PASSEIRIE AVENUE AND LYREBIRD WAY, LOT LINE AND GRADING REVISIONS, AND ASSOCIATED STORMWATER CHANGES.
- REMOVAL OF WALKFINDERS ALLEY, LOT NUMBER AND LOT LINE REVISIONS.
- REVISIONS TO SITE DATA TABLE AND ENTRY ISLAND LABEL.
- SALES CENTER ADDITION

EXISTING 50-FT
PIEDMONT NATURAL
GAS EASEMENT



CITY OF WILMINGTON
CONSERVATION SETBACK LINE
PER LDC ARTICLE 6, DIVISION
III, SECTION 18-341

404 WETLANDS
(POCOSIN)

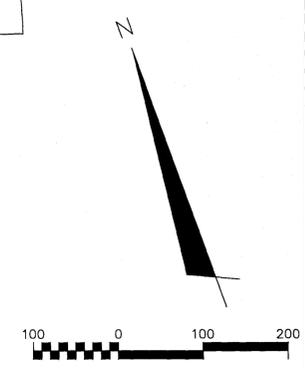
25'

30'

100-YEAR
FLOOD LINE
(PRELIMINARY)

EXISTING 30' OF PUA
SANITARY SEWER
EASEMENT (TYP.)

100-YEAR
FLOOD LINE
(EFFECTIVE)



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.

Approved Construction Plan

Name: _____ Date: 10/12/16

Planning: _____

Traffic: _____

Fire: _____

10/11/16

CITY OF WILMINGTON
NORTH CAROLINA

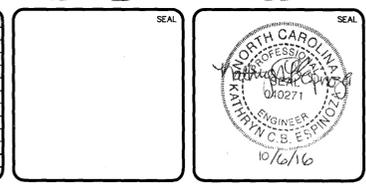
Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 10/11/16 Permit # 2015051

Signed: _____

REV. NO.	DESCRIPTION	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



MCKIM & CREED

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Wilmington, North Carolina 28401
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License: F-1222
www.mckimcreed.com

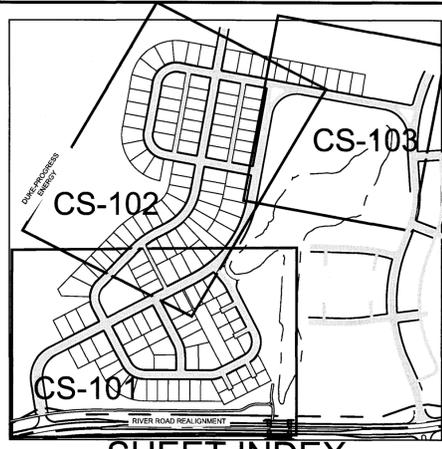
PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.

4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

OVERALL SITE PLAN

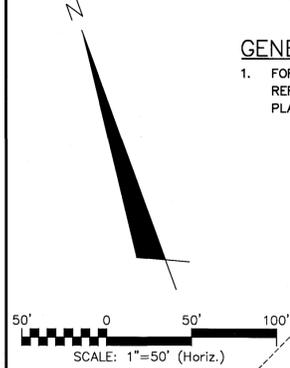
DATE:	07/11/2015	SCALE:	CS-100
MCE PROJ. #:	02735-0125	HORIZONTAL:	1"=100'
DRAWN:	EM/KCBE	VERTICAL:	N/A
DESIGNED:	KCBE	REVISION:	5
CHECKED:	NAL		
PROJ. MGR.:	KCBE		
STATUS: FINAL DESIGN		ISSUED FOR CONSTRUCTION	



SHEET INDEX
NOT TO SCALE

GENERAL NOTES:

- FOR ROADWAY DIMENSIONING REFERENCE TYPICAL SECTIONS ON PLAN SHEET CT-301.



- 2. REMOVAL OF PROVOST ALLEY, VOLUNTEER ALLEY, SIDONS COURT, BULLRUSH COURT, WHARTON COURT, AND FOXSEGE COURT, LOT LINE AND GRADING REVISIONS AND ASSOCIATED STORMWATER CHANGES.
- 3. REMOVAL OF WALKFINDERS ALLEY. REVISIONS TO LOT LINES AND LOT NUMBERS.
- 4. REVISIONS TO ENTRY ISLAND LABEL AND PEDESTRIAN CROSSING SYMBOL.
- 5. SALES CENTER ADDITION

DUKE-PROGRESS ENERGY (I-2 ZONING)

PIEDMONT NATURAL GAS EASEMENT

OPEN SPACE

SALES CENTER

MATCHLINE SEE SHEET CS-102

PRIVATE UTILITY EASEMENT

RIVERLIGHTS LAKE

10' LAKE TRAIL (FUTURE)

COMMON AREA / OPEN SPACE

COMMON AREA / OPEN SPACE

PROJECT BOUNDARY

TRAFFIC ISLAND (SEE CS-103 FOR INSET)

COMMON AREA

PUBLIC DRAINAGE EASEMENT

PROPOSED STORMWATER BMP #7

5' CONCRETE SIDEWALK (TYP.)

10' NON-MUNICIPAL EASEMENT (TYP.)

24" TYPE 'A' CONCRETE CURB & GUTTER (TYP.)

24" TYPE 'A' CONCRETE MEDIAN CURB & GUTTER (TYP.)

EX. PUBLIC DRAINAGE EASEMENT (TYP.)

REFUGE ISLAND (TYP.)

EX. 10' MULTI-USE PATH (TYP.)

EX. 10' NON-MUNICIPAL EASEMENT (TYP.)

PROPOSED STORMWATER BMP #5

HIGH-VISIBILITY CROSSWALK (TYP.) AND SHOULDER - 2.0' LT

STOP SIGN & BAR (TYP.) (133)

CROSSWALK (TYP.) (132)

OLD SAND MINE DRIVE (S2 PUBLIC R/W)

RIVER ROAD R/W (TYP.)

REALIGNED RIVER ROAD (130' PUBLIC R/W)

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: 10/10/16

Planning: _____

Traffic: _____

Fire: _____

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 10/11/16 Permit # 201503922

Signed: _____

REV.	DESCRIPTION	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/29/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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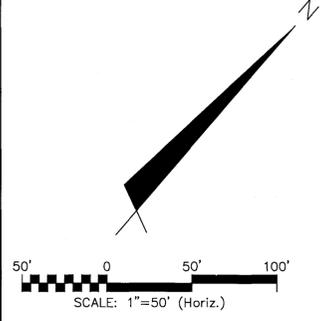
PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.

4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

SITE PLAN

DATE: 07/11/2015	SCALE: 1"=50'	M&C FILE NUMBER: CS-101
M&C PROJ. # 02735-0125	HORIZONTAL: 1"=50'	DRAWING NUMBER: 11
DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: NUL		
PROJ. MGR.: KCBE		
STATUS: FINAL DESIGN	REVISION: 5	
ISSUED FOR CONSTRUCTION		

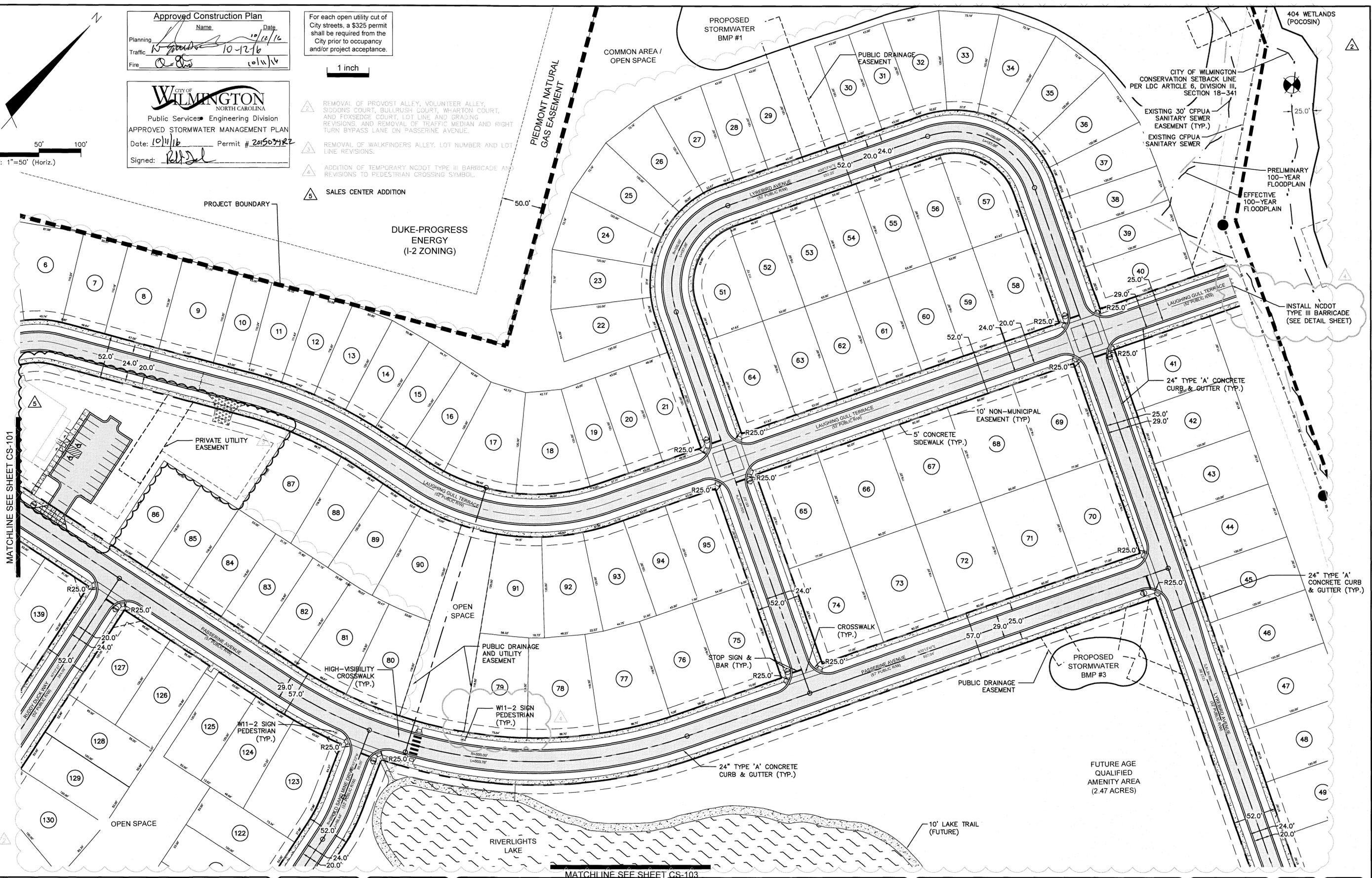


Approved Construction Plan

Name: _____ Date: _____
 Planning: _____ 10/12/16
 Traffic: _____
 Fire: _____ 10/11/16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/11/16 Permit # 201503422
 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
- ▲ REMOVAL OF PROVOST ALLEY, VOLUNTEER ALLEY, SIDGONS COURT, BULLRUSH COURT, WHARTON COURT, AND FOXEDGE COURT; LOT LINE AND GRADING REVISIONS AND REMOVAL OF TRAFFIC MEDIAN AND RIGHT TURN BYPASS LANE ON PASSERINE AVENUE.
 - ▲ REMOVAL OF WALKFINDERS ALLEY, LOT NUMBER AND LOT LINE REVISIONS.
 - ▲ ADDITION OF TEMPORARY NCDOT TYPE III BARRICADE AND REVISIONS TO PEDESTRIAN CROSSING SYMBOL.
 - ▲ SALES CENTER ADDITION



REV. NO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - ASSESS QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
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DEL WEBB COMMUNITIES, INC.
 4000 FABER PLACE DRIVE, SUITE 110
 NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
SITE PLAN

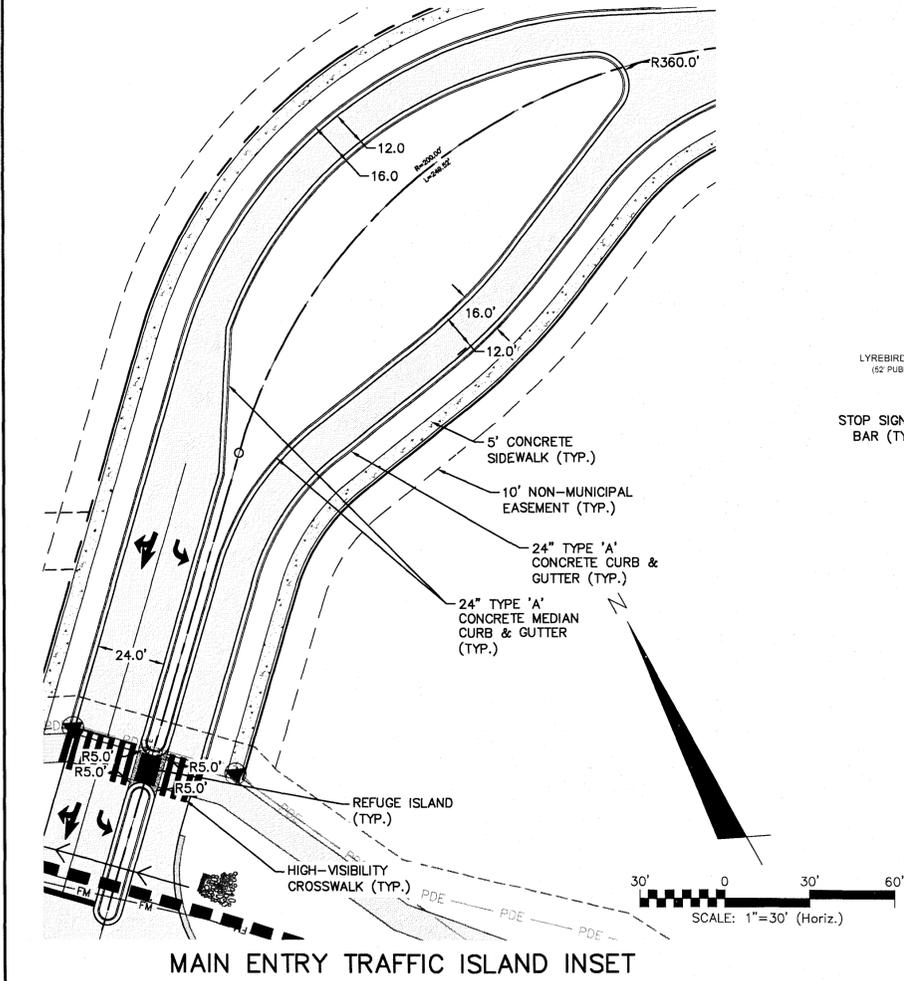
DATE: 07/11/2015	SCALE: 1"=50'	MAC FILE NUMBER: CS-102
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=50'	DRAWING NUMBER: 12
DRAWN: EEM/KCBE	VERTICAL: N/A	REVISION: 5
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR.: KCBE		
STATUS: FINAL DESIGN		
ISSUED FOR CONSTRUCTION		

GENERAL NOTES:

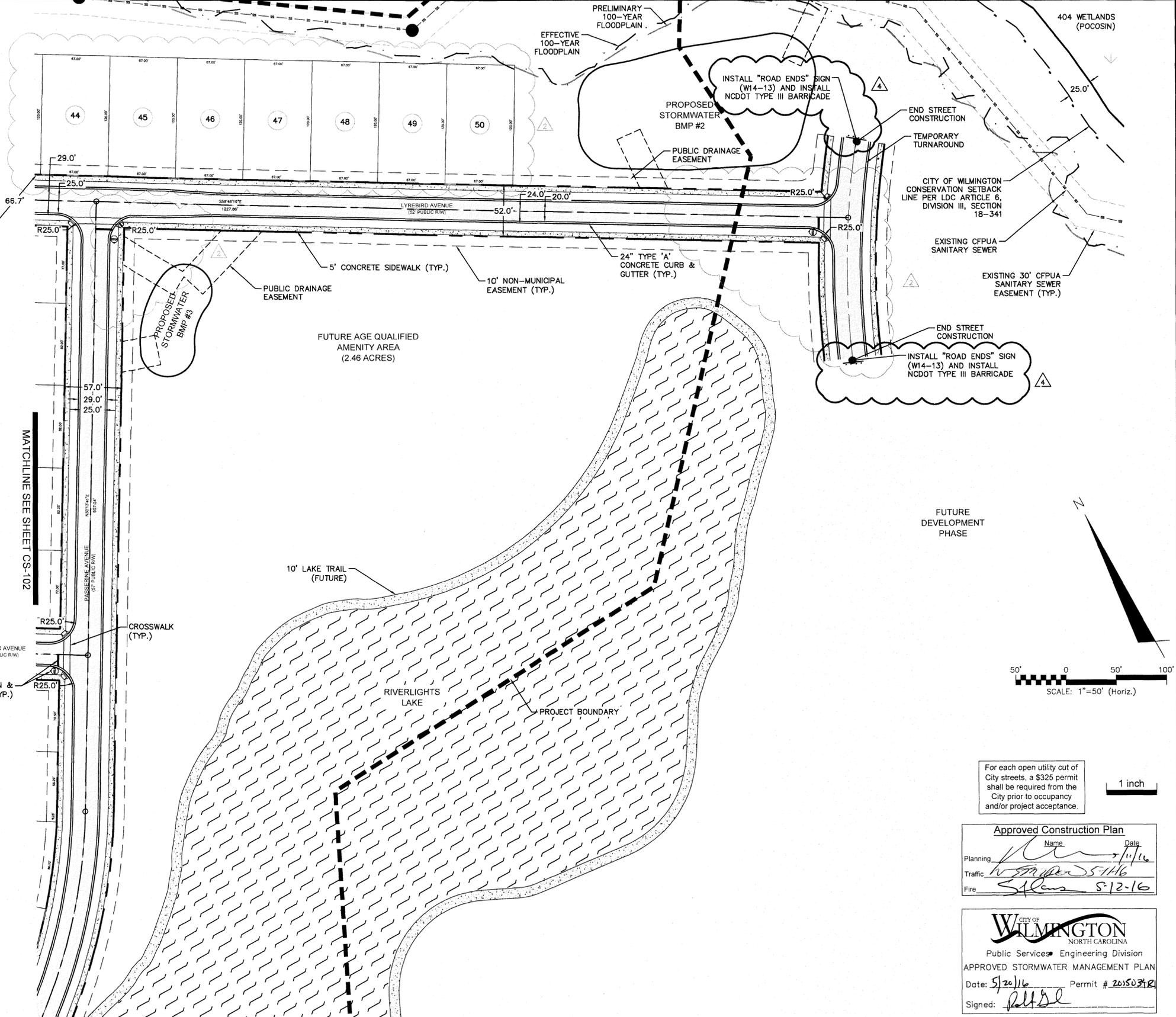
1. A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.
2. 10 FT SEPARATION REQUIRED BETWEEN BUILDINGS.
3. ZERO LOT LINES ARE PERMITTED IN CLUSTER SUBDIVISIONS.
4. ZONING AND LAND USE OF ADJACENT PROPERTIES IS AS FOLLOWS:
 NORTH - FUTURE R7-CD CLUSTER / TRANSITION
 SOUTH - FUTURE R7-CD CLUSTER / TRANSITION
 EAST - FUTURE R7-CD CLUSTER / TRANSITION
 WEST - I-2 / TRANSITION AND CONSERVATION AREA
5. SEE SHEET CT-301 FOR STREET TYPICAL SECTIONS
6. SEE SHEET CG-503 AND CG-504 FOR STORM DRAIN STRUCTURE/PIPE SCHEDULE.
7. SEE SHEET G-002 FOR FULL UTILITY NOTES
8. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
9. ALL SIGN AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
10. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHTS-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
11. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
12. INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
13. IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR MAY CHOOSE TO CONTRACT WITH THE CITY TO INSTALL THE STREET SIGNS AND THE SUBDIVIDER SHALL PAY THE COST OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
14. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING MUST BE REPLACED.
15. CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
16. IF THESE UNITS ARE SOLD AT ANY POINT, THE BUYER MUST RECEIVE A SUBDIVISION STREET DISCLOSURE STATEMENT.
17. A SIGN SHALL BE PLACED AT THE NORTH BOUNDARY OF THE PROPERTY INDICATING THAT A FUTURE CONNECTION WILL BE OPENED WHEN THE PROPERTY TO THE NORTH DEVELOPS.

△ REMOVAL OF PROVOST ALLEY, VOLUNTEER ALLEY, SIDONS COURT, BULLRUSH COURT, WHARTON COURT, AND FOXEDGE COURT, LOT LINE AND GRADING REVISIONS, AND REMOVAL OF TRAFFIC MEDIAN AND RIGHT TURN BYPASS LANE ON LYREBIRD WAY.

△ ADDITION OF TEMPORARY NCDOT TYPE III BARRICADES.



REVNO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKMENDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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

Approved Construction Plan

Planning	Name	Date
Traffic	<i>[Signature]</i>	5/11/16
Fire	<i>[Signature]</i>	5/12/16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 20150312
 Signed: *[Signature]*

SEAL

PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 EXPIRES 12/31/16

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 243 North Front Street
 Wilmington, North Carolina 28401
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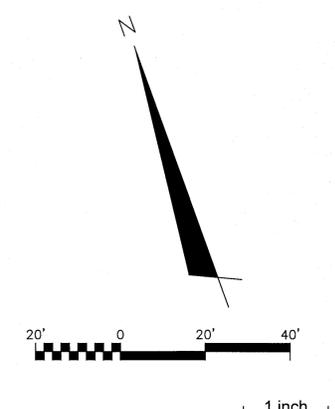
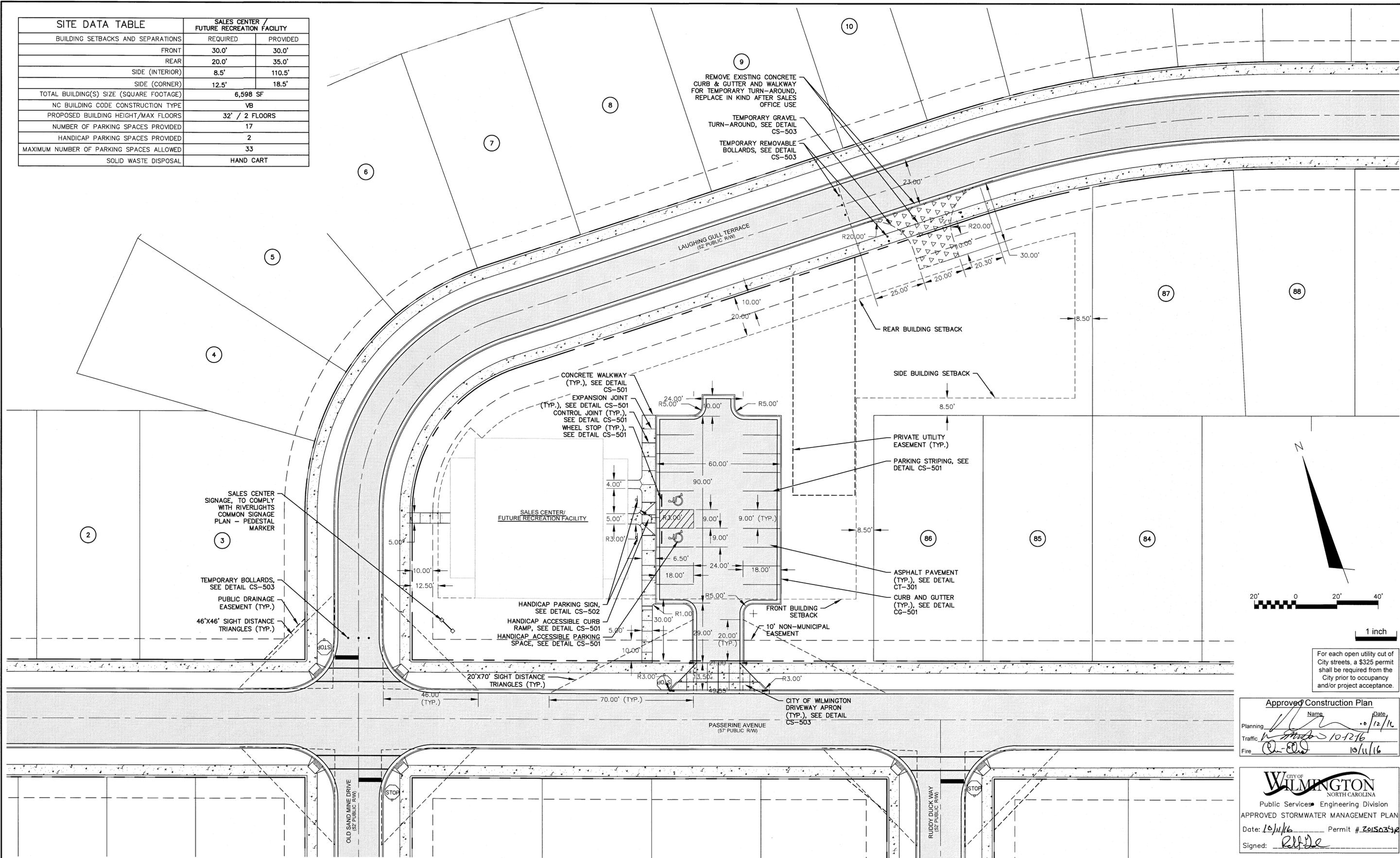
RIVERLIGHTS
 by
 Newland COMMUNITIES

RIVERLIGHTS AGE QUALIFIED - PHASE 1

SITE PLAN

DATE: 04/15/2015	SCALE: HORIZONTAL: 1"=50'	MAC FILE NUMBER: CS-103
MCE PROJ. # 02735-0125	VERTICAL: N/A	DRAWING NUMBER: 13
DRAWN: EEM/KCBE		
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR: KCBE		
STATUS: FINAL DESIGN	ISSUED FOR CONSTRUCTION	REVISION: 4

SITE DATA TABLE		SALES CENTER / FUTURE RECREATION FACILITY	
BUILDING SETBACKS AND SEPARATIONS		REQUIRED	PROVIDED
FRONT		30.0'	30.0'
REAR		20.0'	35.0'
SIDE (INTERIOR)		8.5'	110.5'
SIDE (CORNER)		12.5'	18.5'
TOTAL BUILDING(S) SIZE (SQUARE FOOTAGE)		6,598 SF	
NC BUILDING CODE CONSTRUCTION TYPE		VB	
PROPOSED BUILDING HEIGHT/MAX FLOORS		32' / 2 FLOORS	
NUMBER OF PARKING SPACES PROVIDED		17	
HANDICAP PARKING SPACES PROVIDED		2	
MAXIMUM NUMBER OF PARKING SPACES ALLOWED		33	
SOLID WASTE DISPOSAL		HAND CART	

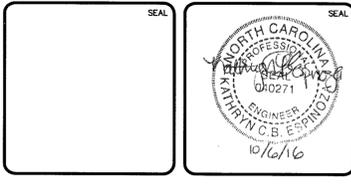


For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Approved Construction Plan
 Name: _____ Date: 10/12/16
 Planning: _____
 Traffic: _____
 Fire: _____

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/11/16 Permit # 201503422
 Signed: *RJF*

REV.	DESCRIPTION	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/08/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKENDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
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0	ISSUED FOR CONSTRUCTION	09/29/2015

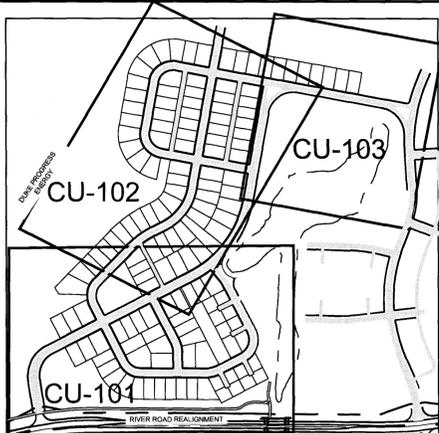


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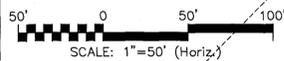
PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.
 4000 FABER PLACE DRIVE, SUITE 110
 NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
SALES CENTER/FUTURE PRIVATE RECREATIONAL FACILITY SITE PLAN

DATE: 07/11/2015	SCALE: CS-104	MFC FILE NUMBER: CS-104
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=50'	DRAWING NUMBER: 13SC
DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: NAL		
PROJ. MGR.: KCBE		
STATUS: FINAL DESIGN		REVISION: 5
ISSUED FOR CONSTRUCTION		



SHEET INDEX
NOT TO SCALE



REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS
 REMOVAL OF SIDDONS COURT, BULLRUSH COURT, WHARTON COURT, AND FOXSCEDGE COURT, REVISIONS TO LOT LINES, LOT NUMBERS, STORMWATER NETWORK, STORMWATER EASEMENTS AND UTILITY EASEMENTS
 SANITARY SEWER MODIFICATIONS, REMOVAL OF WALKFINDERS ALLEY LOT LINE AND LOT NUMBER REVISIONS

LEGEND

SS	SANITARY SEWER LINE
BW	WATER MAIN
SS	STORMWATER DRAINAGE
SS	EXISTING SANITARY SEWER LINE
W	EXISTING WATER MAIN
FM	EXISTING FORCE MAIN
■	STORMWATER CATCH INLET
□	STORMWATER OUTLET
⊙	EXISTING MANHOLE
⊙	SANITARY SEWER MANHOLE
⊙	SANITARY SEWER CLEANOUT
⊙	WATER METER
⊙	FIRE HYDRANT ASSEMBLY (FHA)
---	ROADWAY CENTERLINE
---	ROW
---	LOT LINE
---	PRELIMINARY 100-YR FLOOD LINE
---	EFFECTIVE 100-YR FLOOD LINE
---	CONSERVATION RESOURCE SETBACK
---	UTILITY EASEMENT
---	EXISTING WETLANDS

NOTE:

- SEE SHEET CG-503/504 FOR STORM DRAIN STRUCTURE/PIPE SCHEDULE.
- SEE SHEET G-002 FOR FULL UTILITY NOTES
- SEE SHEET CU-103 FOR SEWER STRUCTURE/PIPE SCHEDULE.
- FLOODPLAIN INFORMATION WAS OBTAINED FROM NC FLOODPLAIN MAPPING FLOOD RISK INFORMATION SYSTEM PROGRAM. RIVERLIGHTS IS LOCATED WITHIN FIRM MAP 3720312400K, PANEL 3124 AS REVISED JUNE 02, 2006. SANITARY SEWER RIMS WILL BE DESIGNED AT A MINIMUM OF 2' ABOVE THE BASE FLOOD ELEVATION OF 9'.

WATER AND SEWER DEMAND:

1. WATER	0 GPD (CURRENT USE)
2. WATER	50,760 GPD (PROPOSED USE)
3. SEWER	0 GPD (CURRENT USE)
4. SEWER	50,760 GPD (PROPOSED USE)

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

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

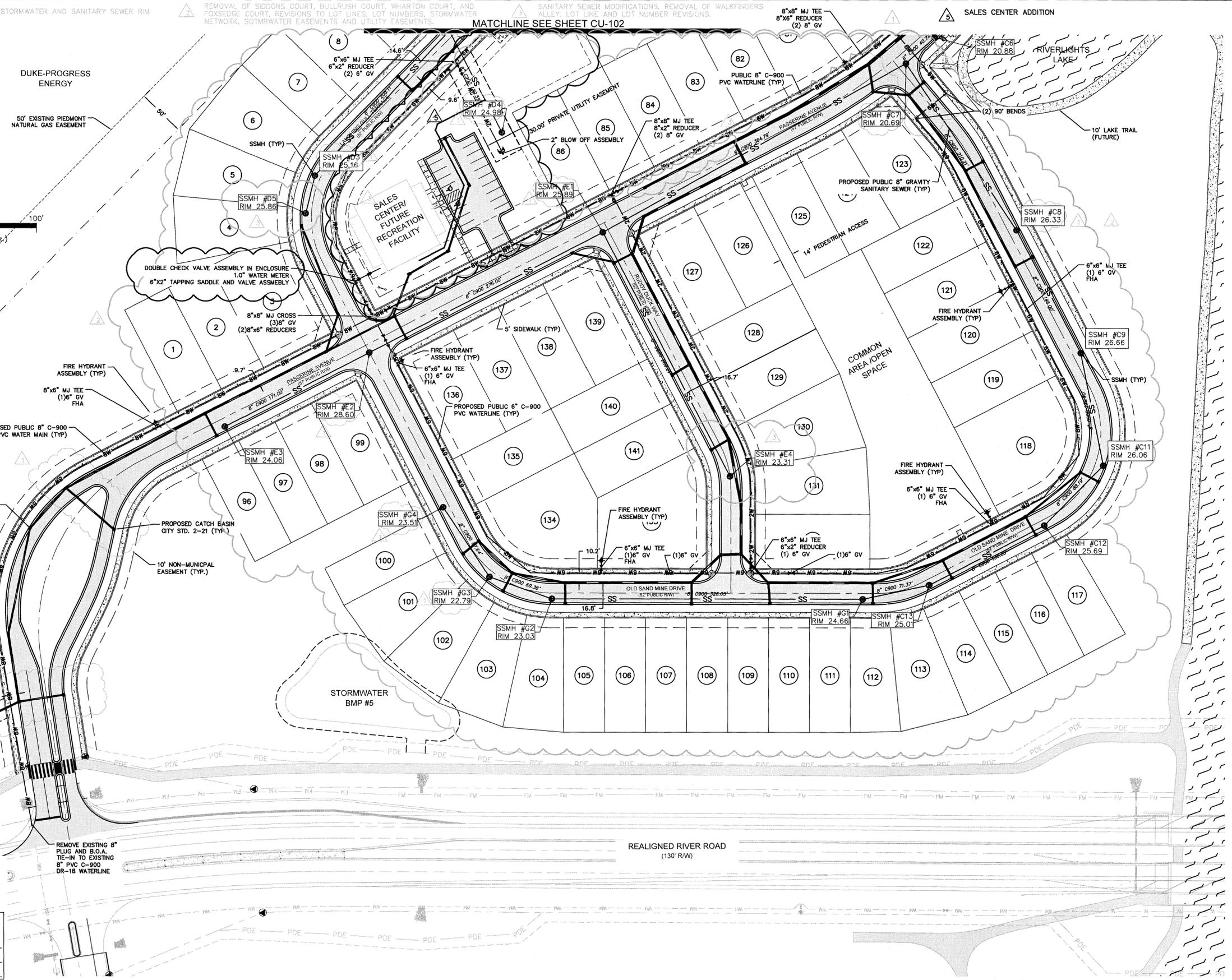
APPROVED STORMWATER MANAGEMENT PLAN

Date: 10/16/16 Permit # 201503124
 Signed: [Signature]

Approved Construction Plan

Name: [Signature] Date: 10/16/16
 Planning: [Signature] 10/16/16
 Traffic: [Signature] 10/16/16
 Fire: [Signature] 10/16/16

REV.	DESCRIPTION	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
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1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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DEL WEBB COMMUNITIES, INC.

4000 FABER PLACE DRIVE, SUITE 110
 NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

UTILITY PLAN

DATE:	07/11/2015	SCALE:	1"=50'	MAC FILE NUMBER:	CU-101
MCE PROJ. #	02735-0125	HORIZONTAL:	1"=50'	DRAWING NUMBER:	14
DRAWN:	EEM/KCBE	VERTICAL:	N/A		
DESIGNED:	KCBE				
CHECKED:	NJL				
PROJ. MGR.:	KCBE				
STATUS: FINAL DESIGN		ISSUED FOR CONSTRUCTION		REVISION:	5

Approved Construction Plan

Name: _____ Date: 10/16/16
 Planning: _____
 Traffic: _____
 Fire: _____

WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/16/16 Permit # 2015-3182
 Signed: _____

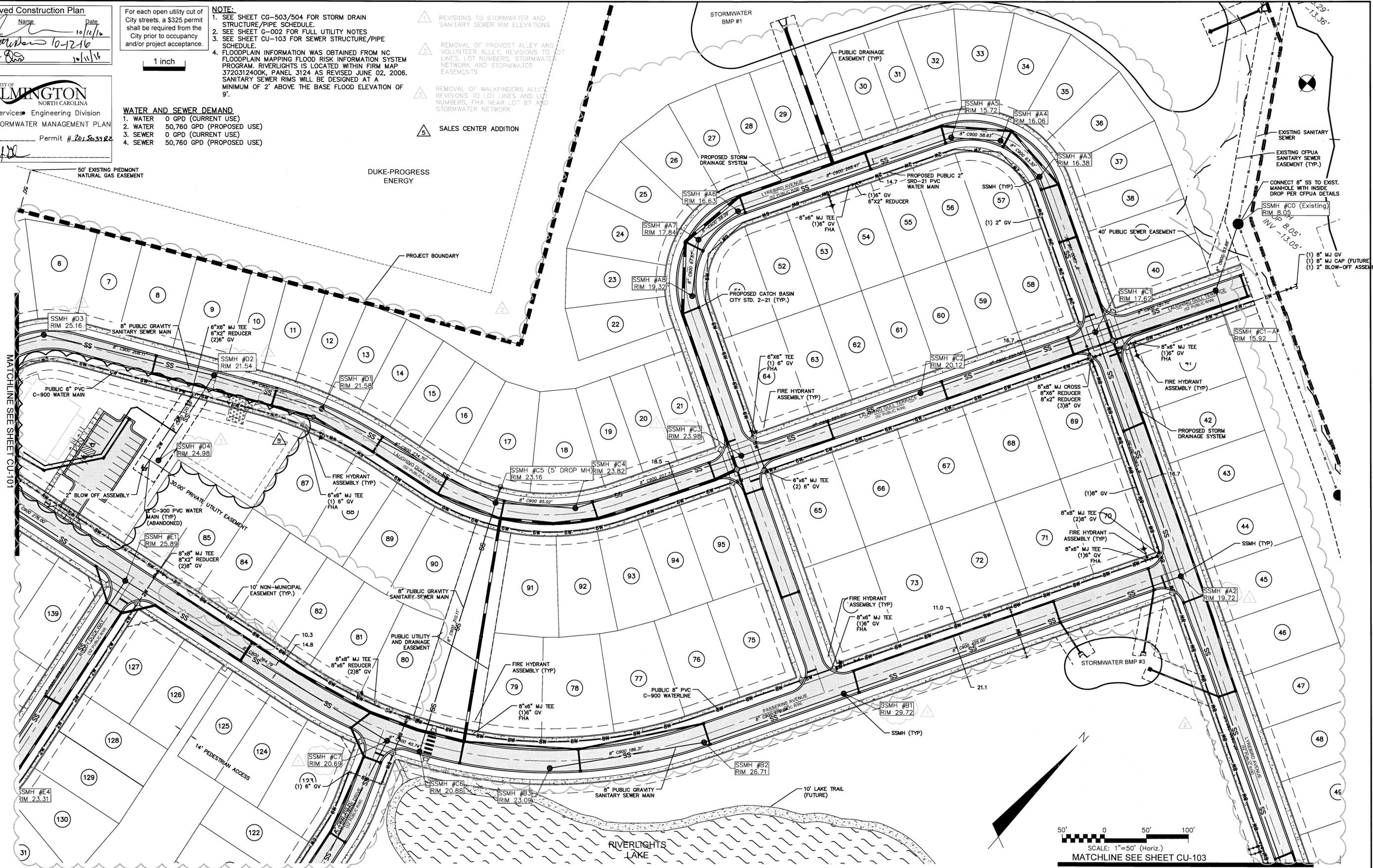
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

- NOTE:**
- SEE SHEET CG-503/504 FOR STORM DRAIN STRUCTURE/PIPE SCHEDULE.
 - SEE SHEET G-002 FOR FULL UTILITY NOTES
 - SEE SHEET CU-103 FOR SEWER STRUCTURE/PIPE SCHEDULE.
 - FLOODPLAIN INFORMATION WAS OBTAINED FROM NC FLOODPLAIN MAPPING FLOOD RISK INFORMATION SYSTEM PROGRAM. RIVERLIGHTS IS LOCATED WITHIN FIRM MAP 3720312400K, PANEL 3124 AS REVISED JUNE 02, 2006. SANITARY SEWER RIMS WILL BE DESIGNED AT A MINIMUM OF 2' ABOVE THE BASE FLOOD ELEVATION OF 9'.

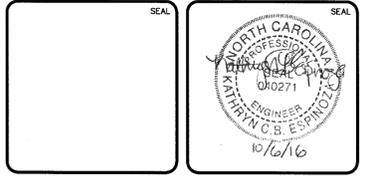
- REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS
- REMOVAL OF PROVOST ALLEY AND VOLUNTEER ALLEY, REVISIONS TO LOT LINES, LOT NUMBERS, STORMWATER NETWORK AND STORMWATER EASEMENTS
- REMOVAL OF WALKFINDERS ALLEY, REVISIONS TO LOT LINES AND LOT NUMBERS, FHA NEAR LOT B7 AND STORMWATER NETWORK
- SALES CENTER ADDITION

- WATER AND SEWER DEMAND**
- WATER 0 GPD (CURRENT USE)
 - WATER 50,760 GPD (PROPOSED USE)
 - SEWER 0 GPD (CURRENT USE)
 - SEWER 50,760 GPD (PROPOSED USE)



SCALE: 1"=50' (Horiz.)
 MATCHLINE SEE SHEET CU-103

REV. NO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	07/23/2016
1	GRAZING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



MCKIM & CREED

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 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
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 www.mckimcreed.com

PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.

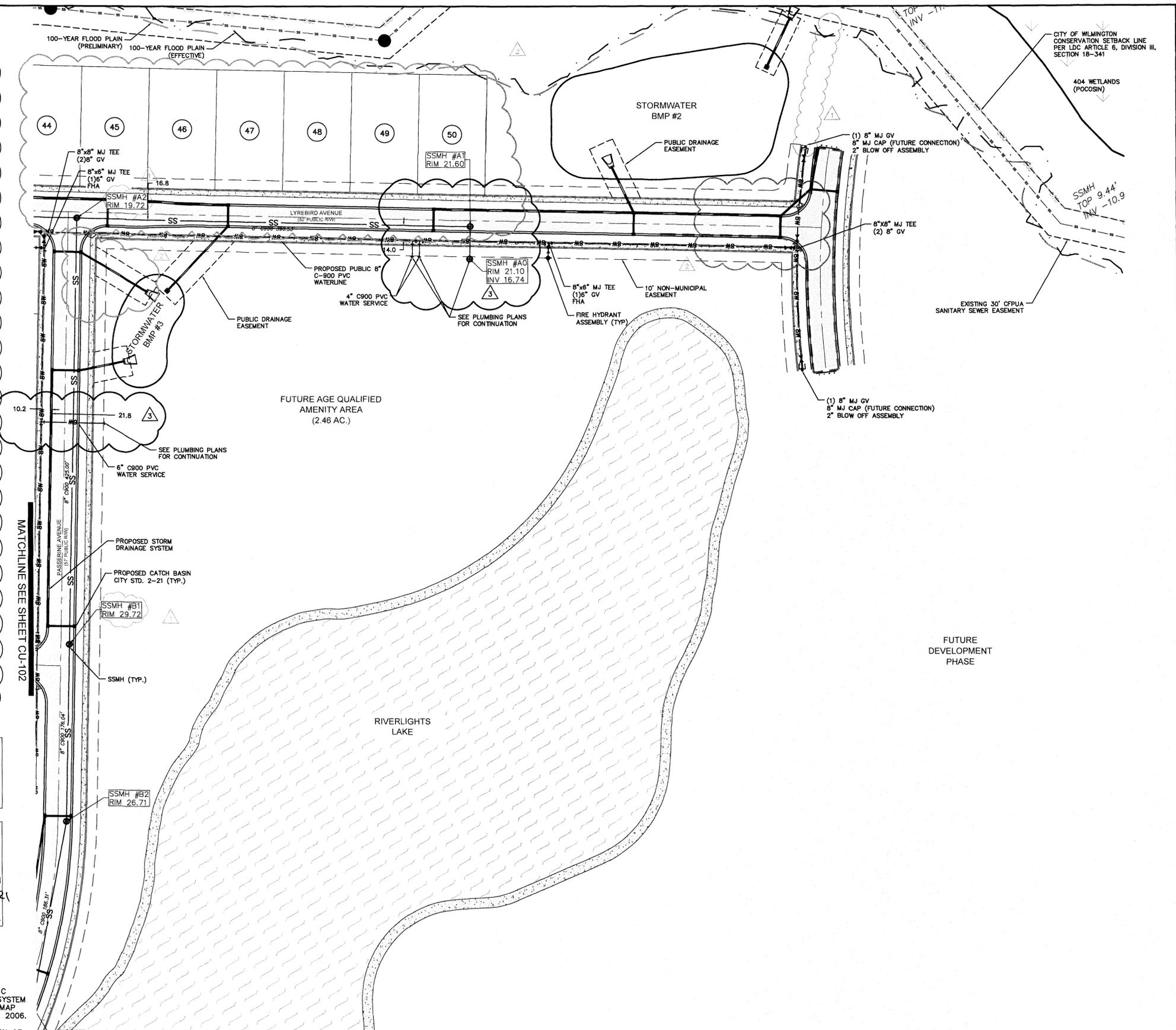
4000 FABER PLACE DRIVE, SUITE 110
 NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

UTILITY PLAN

DATE: 07/11/2015	SCALE: 1"=50'	MAC FILE NUMBER: CU-102
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=50'	DRAWING NUMBER: 15
DRAWN: EEM/KCBE	VERTICAL: N/A	REVISION: 5
DESIGNED: KCBE		
CHECKED: NUL		
PROJ. MGR: KCBE		
STATUS: FINAL DESIGN		ISSUED FOR CONSTRUCTION

SANITARY SEWER PIPE DATA TABLE							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	DOWNSTREAM INVERT	UPSTREAM INVERT
G4	G3	87.64'	8"	C900 PVC DR18	0.40%	17.24	17.59
G3	G2	69.36'	8"	C900 PVC DR18	0.40%	16.96	17.24
G2	G1	326.05'	8"	C900 PVC DR18	0.40%	15.66	16.96
G1	C13	71.37'	8"	C900 PVC DR18	0.40%	15.37	15.66
E4	E1	289.61'	8"	C900 PVC DR18	0.40%	16.11	17.27
E3	E2	171.00'	8"	C900 PVC DR18	0.40%	16.57	17.25
E2	E1	276.00'	8"	C900 PVC DR18	0.40%	15.46	16.57
E1	C7	364.79'	8"	C900 PVC DR18	1.09%	11.48	15.46
D5	D3	40.65'	8"	C900 PVC DR18	1.13%	19.40	19.86
D4	D2	120.59'	8"	C900 PVC DR18	2.50%	15.73	18.74
D3	D2	208.11'	8"	C900 PVC DR18	1.76%	15.73	19.40
D2	D1	134.26'	8"	C900 PVC DR18	0.41%	15.18	15.73
D1	C5 (5' DROP MH)	234.70'	8"	C900 PVC DR18	0.40%	14.24	15.18
C13	C12	136.00'	8"	C900 PVC DR18	0.40%	14.82	15.37
C12	C11	88.19'	8"	C900 PVC DR18	0.40%	14.47	14.82
C11	C9	120.90'	8"	C900 PVC DR18	0.40%	13.98	14.47
C9	C8	146.00'	8"	C900 PVC DR18	0.40%	13.40	13.98
C8	C7	210.21'	8"	C900 PVC DR18	0.40%	12.56	13.40
C7	C6	40.74'	8"	C900 PVC DR18	0.40%	11.32	11.48
C6	C5 (5' DROP MH)	310.11'	8"	C900 PVC DR18	0.40%	10.08	11.32
C5 (5' DROP MH)	C4	95.02'	8"	C900 PVC DR18	0.40%	9.19	9.57
C4	C3	207.72'	8"	C900 PVC DR18	0.40%	8.36	9.19
C3	C2	225.75'	8"	C900 PVC DR18	0.40%	7.46	8.36
C2	C1	220.50'	8"	C900 PVC DR18	0.40%	6.58	7.46
C1-A	C0 (Existing)	83.88'	8"	C900 PVC DR18	3.08%	3.38	5.97
C1	C1-A	151.70'	8"	C900 PVC DR18	0.40%	5.97	6.58
B3	B2	186.31'	8"	C900 PVC DR18	0.40%	17.45	18.20
B2	B1	176.04'	8"	C900 PVC DR18	0.40%	16.75	17.45
B1	A2	425.00'	8"	C900 PVC DR18	0.40%	15.05	16.75
A8	A7	67.67'	8"	C900 PVC DR18	2.17%	12.03	13.50
A7	A6	58.09'	8"	C900 PVC DR18	2.17%	10.77	12.03
A6	A5	268.47'	8"	C900 PVC DR18	0.40%	9.70	10.77
A5	A4	58.93'	8"	C900 PVC DR18	0.40%	9.47	9.70
A4	A3	63.30'	8"	C900 PVC DR18	0.40%	9.21	9.47
A3	C1	196.79'	8"	C900 PVC DR18	0.40%	8.43	9.21
A2	C1	307.50'	8"	C900 PVC DR18	2.15%	8.43	15.05
A1	A2	390.53'	8"	C900 PVC DR18	0.40%	15.05	16.61
A0	A1	32.32'	8"	C900 PVC DR18	0.40%	16.61	16.74



- 1 REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS
- 2 REVISIONS TO LOT LINES, LOT NUMBERS, STORMWATER NETWORK, AND STORMWATER EASEMENTS
- 3 SANITARY SEWER REVISIONS. ADDITION OF UTILITY SERVICES FOR THE FUTURE AMENITY AREA.

Approved Construction Plan

Planning: *[Signature]* 5/1/16
 Traffic: *[Signature]* 5-1-16
 Fire: *[Signature]* 5-12-16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division

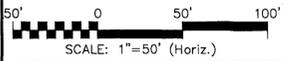
APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/2/16 Permit # 20150314
 Signed: *[Signature]*

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

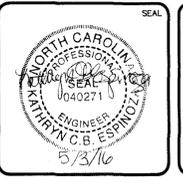
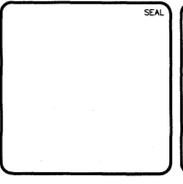
1 inch

WATER AND SEWER DEMAND:
 1. WATER 0 GPD (CURRENT USE)
 2. WATER 50,760 GPD (PROPOSED USE)
 3. SEWER 0 GPD (CURRENT USE)
 4. SEWER 50,760 GPD (PROPOSED USE)

NOTE:
 1. SEE SHEET CG-503/504 FOR STORM DRAIN STRUCTURE/PIPE SCHEDULE.
 2. SEE SHEET 2 (G-002) FOR FULL UTILITY NOTES
 3. FLOODPLAIN INFORMATION WAS OBTAINED FROM NC FLOODPLAIN MAPPING FLOOD RISK INFORMATION SYSTEM PROGRAM. RIVERLIGHTS IS LOCATED WITHIN FIRM MAP 3720312400K, PANEL 3124 AS REVISED JUNE 02, 2006. SANITARY SEWER RIMS WILL BE DESIGNED AT A MINIMUM OF 2' ABOVE THE BASE FLOOD ELEVATION OF 9'.



REV.	DESCRIPTION	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF MULTIPURPOSE ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/02/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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 www.mckimcreed.com

RIVERLIGHTS
 by Newland COMMUNITIES
 NORTH AMERICA SENIUS HOUSE, LLC

RIVERLIGHTS AGE QUALIFIED - PHASE 1
UTILITY PLAN

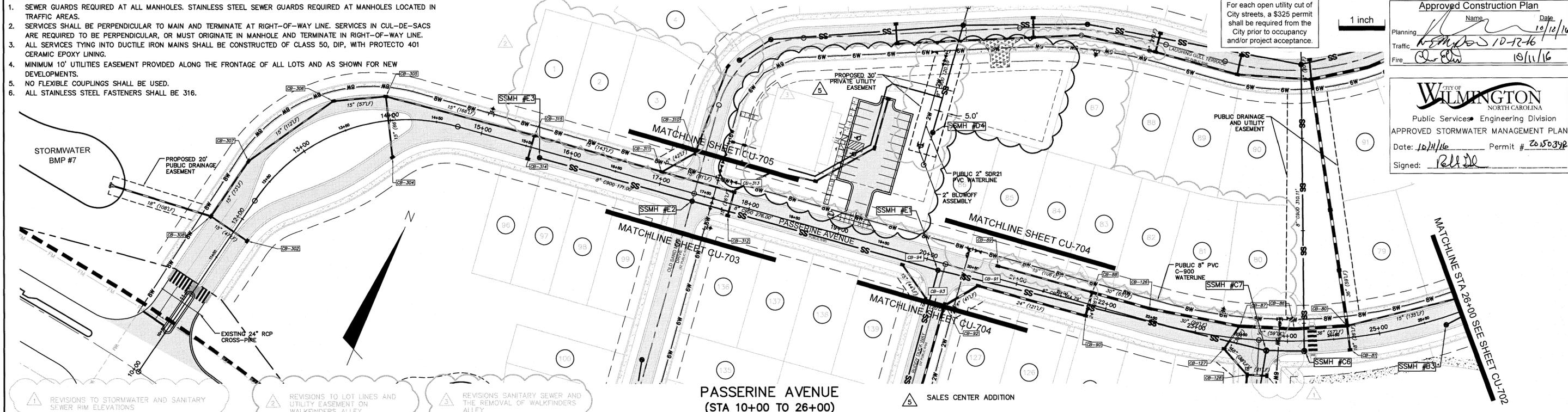
DATE: 04/15/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: N/A
 PROJ. MGR.: KCBE

SCALE: HORIZONTAL: 1"=50' VERTICAL: N/A

MAC FILE NUMBER: CU-103
 DRAWING NUMBER: 16
 STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION
 REVISION: 4

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

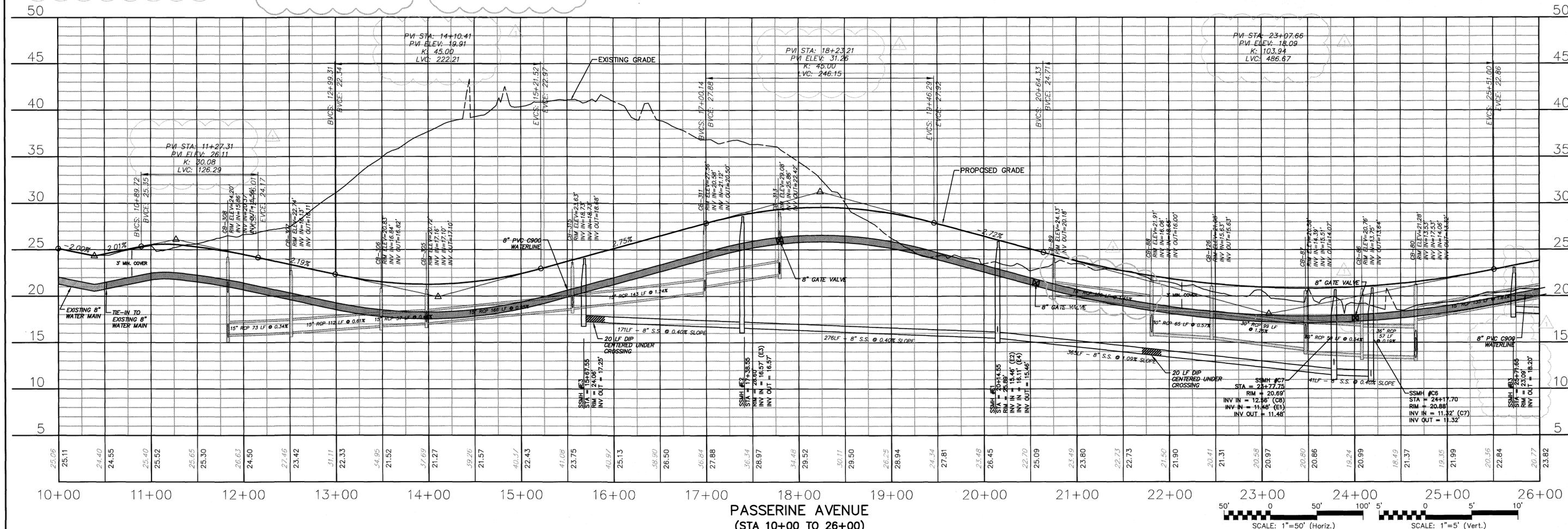
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE IN RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.



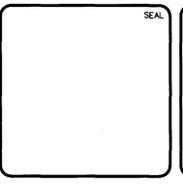
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Approved Construction Plan
 Name: _____ Date: 10/12/16
 Planning: _____ Traffic: 10-12-16
 Fire: _____ Date: 10/11/16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/11/16 Permit # 20150392
 Signed: *Pat De*



REVNO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/28/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.
 4000 FABER PLACE DRIVE, SUITE 110
 NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
PLAN AND PROFILE
PASSERINE AVENUE
STA 10+00 TO STA 26+00

DATE: 07/11/2015
 MCE PROJ # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NJL
 PROJ. MGR: KCBE

SCALE: HORIZONTAL: 1"=50'
 VERTICAL: 1"=5'

STATUS: **FINAL DESIGN**
 ISSUED FOR CONSTRUCTION

MAC FILE NUMBER: **CU-701**
 DRAWING NUMBER: **17**
 REVISION: **5**

Approved Construction Plan

Name: _____ Date: _____

Planning: *[Signature]* 5/11/16

Traffic: *[Signature]* 5/11/16

Fire: *[Signature]* 5/12/16

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

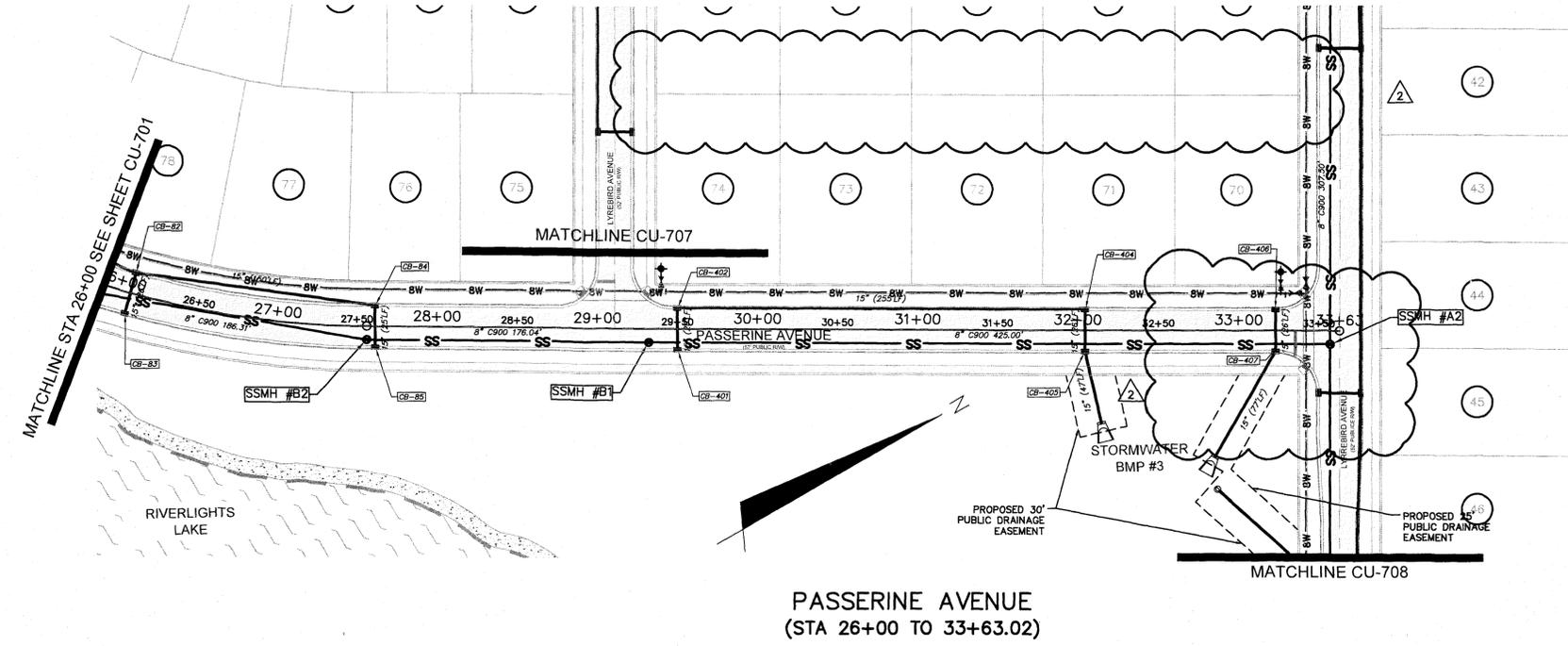
APPROVED STORMWATER MANAGEMENT PLAN

Date: 5/20/16 Permit # 2015039A

Signed: *[Signature]*

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



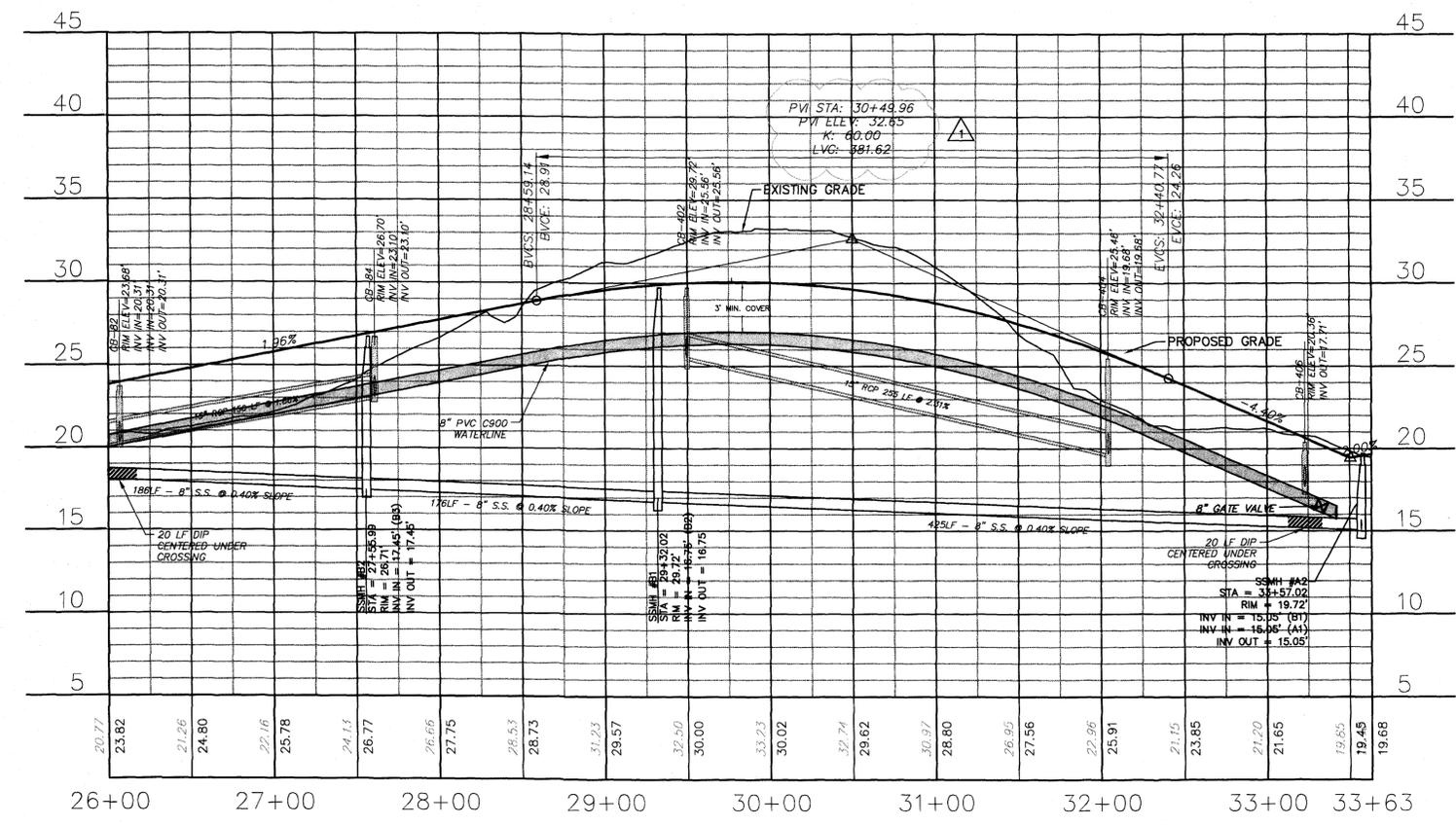
PASSERINE AVENUE
(STA 26+00 TO 33+63.02)

CAPE FEAR PUBLIC UTILITY
AUTHORITY STANDARD SEWER NOTES:

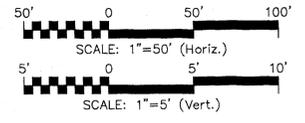
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE IN RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS

REMOVAL OF PROVOST ALLEY, REVISIONS TO LOT LINES AND STORMWATER DRAINAGE NETWORK



PASSERINE AVENUE
(STA 26+00 TO 33+63.02)



REV.	DESCRIPTION	DATE
4	ADDITIONAL CITY OF WILMINGTON TPO COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
WALTER H. C. ESTINE, III
0402711
5/3/16

MCKIM & CREED

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www.mckimcreed.com

RIVERLIGHTS
by Newland COMMUNITIES

NORTH AMERICA SENIUS HOUSE, LLC

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

PLAN AND PROFILE
PASSERINE AVENUE
STA 26+00 TO STA 33+72.61

DATE: 04/15/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NIL
PROJ. MGR.: KCBE

SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

REVISION 4

MAC FILE NUMBER: CU-702
DRAWING NUMBER: 18

CAPE FEAR PUBLIC UTILITY AUTHORITY
STANDARD SEWER NOTES:

- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE IN RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

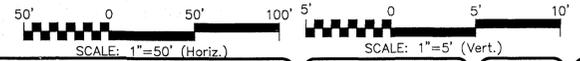
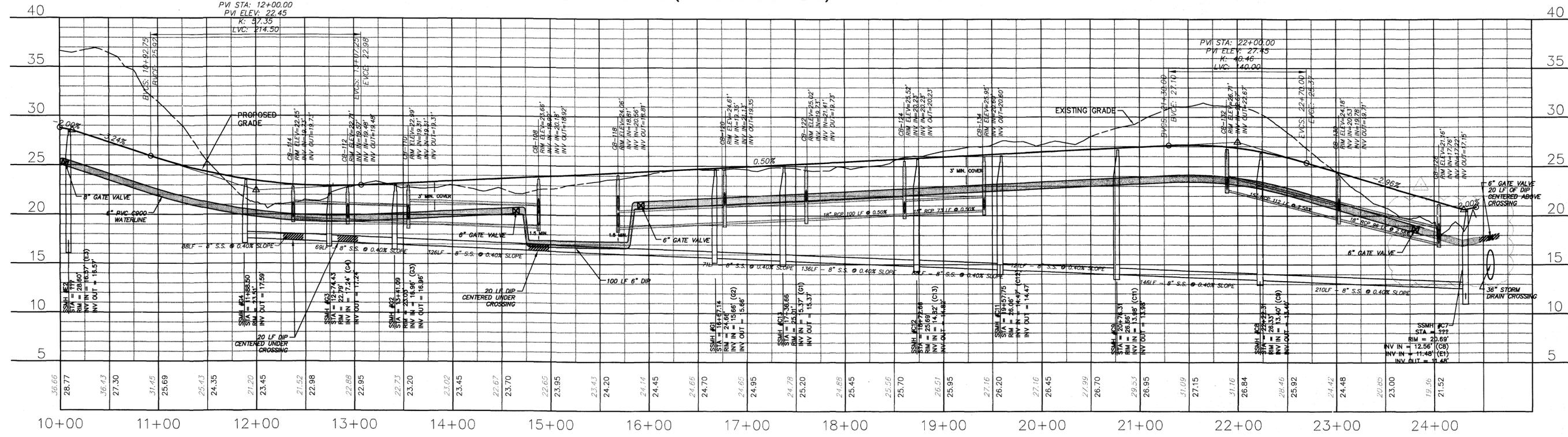
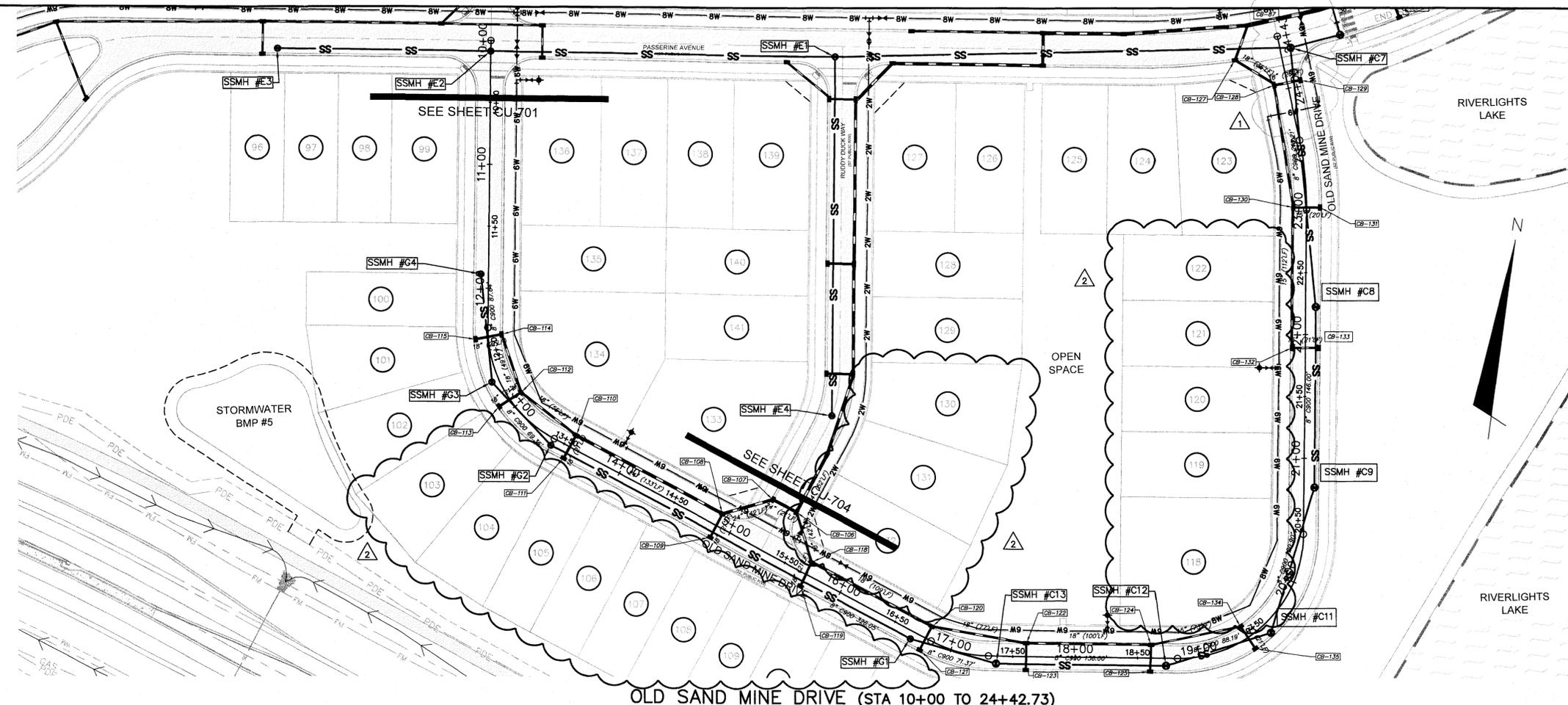
Approved Construction Plan		
Planning	Name	Date
	<i>[Signature]</i>	5/11/16
Traffic	Name	Date
	<i>[Signature]</i>	5-11-16
Fire	Name	Date
	<i>[Signature]</i>	5-12-16

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 5/20/16 Permit # 20150342
Signed: *[Signature]*

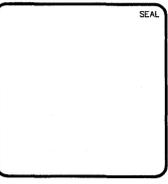
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

- REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS
- REMOVAL OF SIDONS COURT, BULLRUSH COURT, WHARTON COURT, AND FOXEDGE COURT, REVISIONS TO LOT LINES AND ASSOCIATED STORMWATER CHANGES.



REV. NO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRIC COMMENT REVISIONS	04/09/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFENDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015

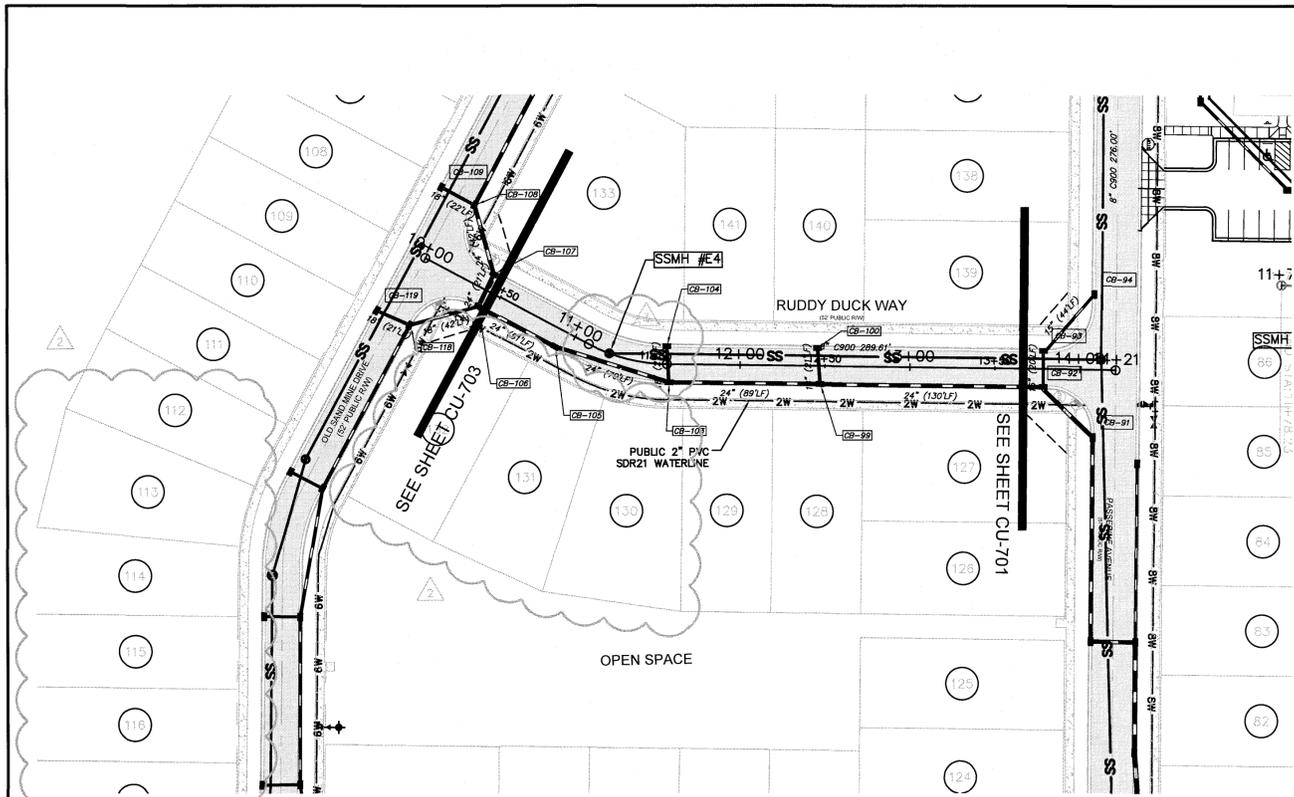


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RIVERLIGHTS
by Newland COMMUNITIES
NORTH AMERICA SENSUS HOUSE, LLC

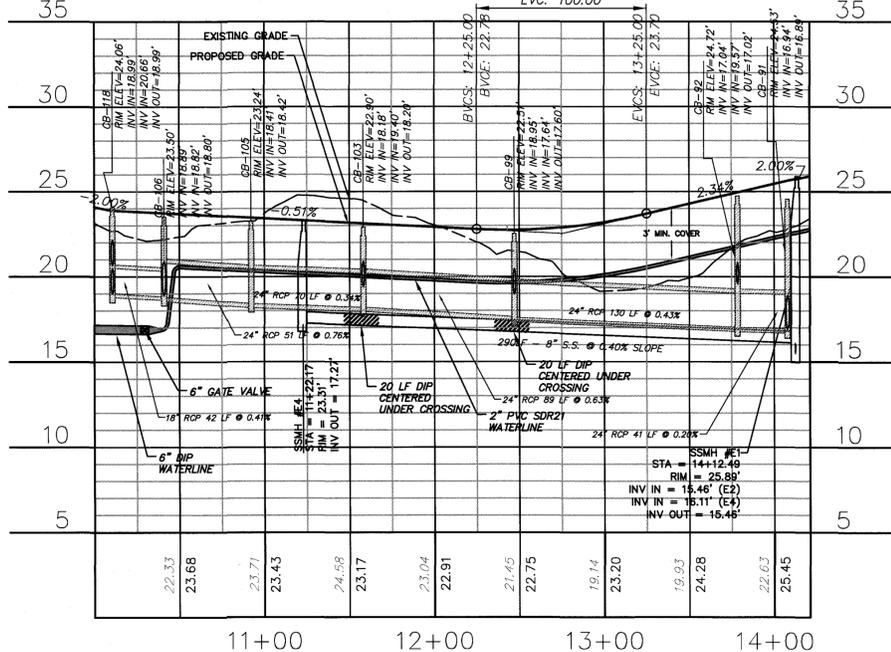
RIVERLIGHTS
AGE QUALIFIED - PHASE 1
PLAN AND PROFILE
OLD SAND MINE DRIVE
STA 10+00 TO STA 24+42.73

DATE: 04/15/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NJL
PROJ. MGR.: KCBE
SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'
STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION
MAC FILE NUMBER: CU-703
DRAWING NUMBER: 19
REVISION: 4



**RUDDY DUCK WAY
(STA 10+00 TO 14+20.99)**

PVI STA: 12+75.00
PVI ELEV: 22.53
K: 35.05
LVC: 100.00

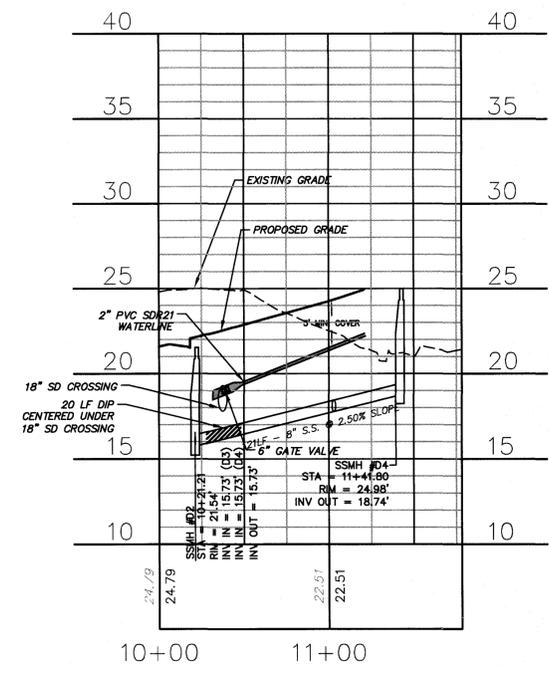


**RUDDY DUCK WAY
(STA 10+00 TO 14+20.99)**



**PRIVATE UTILITY EASEMENT
(STA 10+00 TO 10+20.59)**

- ▲ REVISIONS TO STORMWATER RIM ELEVATIONS
- ▲ REMOVAL OF SIDONS COURT AND BULLRUSH COURT, REVISIONS TO LOT LINE, LOT NUMBERS AND UTILITY EASEMENT
- ▲ SANITARY SEWER AND STORMWATER REVISIONS
- ▲ SALES CENTER ADDITION



**PRIVATE UTILITY EASEMENT
(STA 10+00 TO 10+20.59)**

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.

Approved Construction Plan

Planning: _____ Date: 10/12/16

Traffic: _____ Date: 10-12-16

Fire: _____ Date: 10/11/16

CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

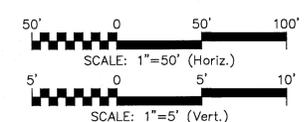
APPROVED STORMWATER MANAGEMENT PLAN

Date: 10/11/16 Permit # 201503522

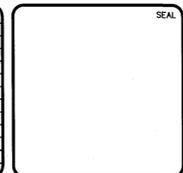
Signed: *[Signature]*

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
2. SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE IN RIGHT-OF-WAY LINE.
3. ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
4. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
5. NO FLEXIBLE COUPLINGS SHALL BE USED.
6. ALL STAINLESS STEEL FASTENERS SHALL BE 316.



REV.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - ARE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENTY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	08/23/2015



MCKIM & CREED

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Wilmington, North Carolina 28401
Phone: (910)343-1048, Fax: (910)251-8282
License: F-1222
www.mckimcreed.com

**PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.**

4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

**RIVERLIGHTS
AGE QUALIFIED - PHASE 1**

**PLAN AND PROFILE
RUDDY DUCK WAY
WALKFINDERS ALLEY**

DATE: 07/11/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NJL
PROJ. MGR: KCBE

SCALE: 1"=50'
HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

MAC FILE NUMBER: **CU-704**
DRAWING NUMBER: **20**

STATUS: **FINAL DESIGN**
ISSUED FOR CONSTRUCTION

REVISION: **4**

**CAPE FEAR PUBLIC UTILITY AUTHORITY
STANDARD SEWER NOTES:**

- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE IN RIGHT-OF-WAY LINE.
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- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

Approved Construction Plan

Name: _____ Date: _____

Planning: *[Signature]* 5/11/16

Traffic: *[Signature]* 5-11-16

Fire: *[Signature]* 5-12-16

CITY OF WILMINGTON
NORTH CAROLINA

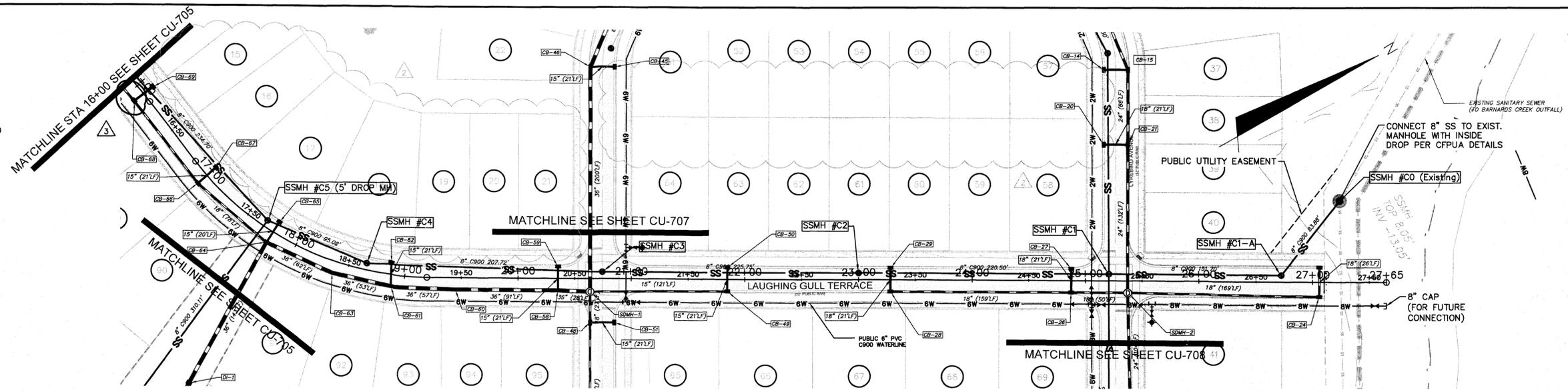
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: 5/12/16 Permit # 20150310

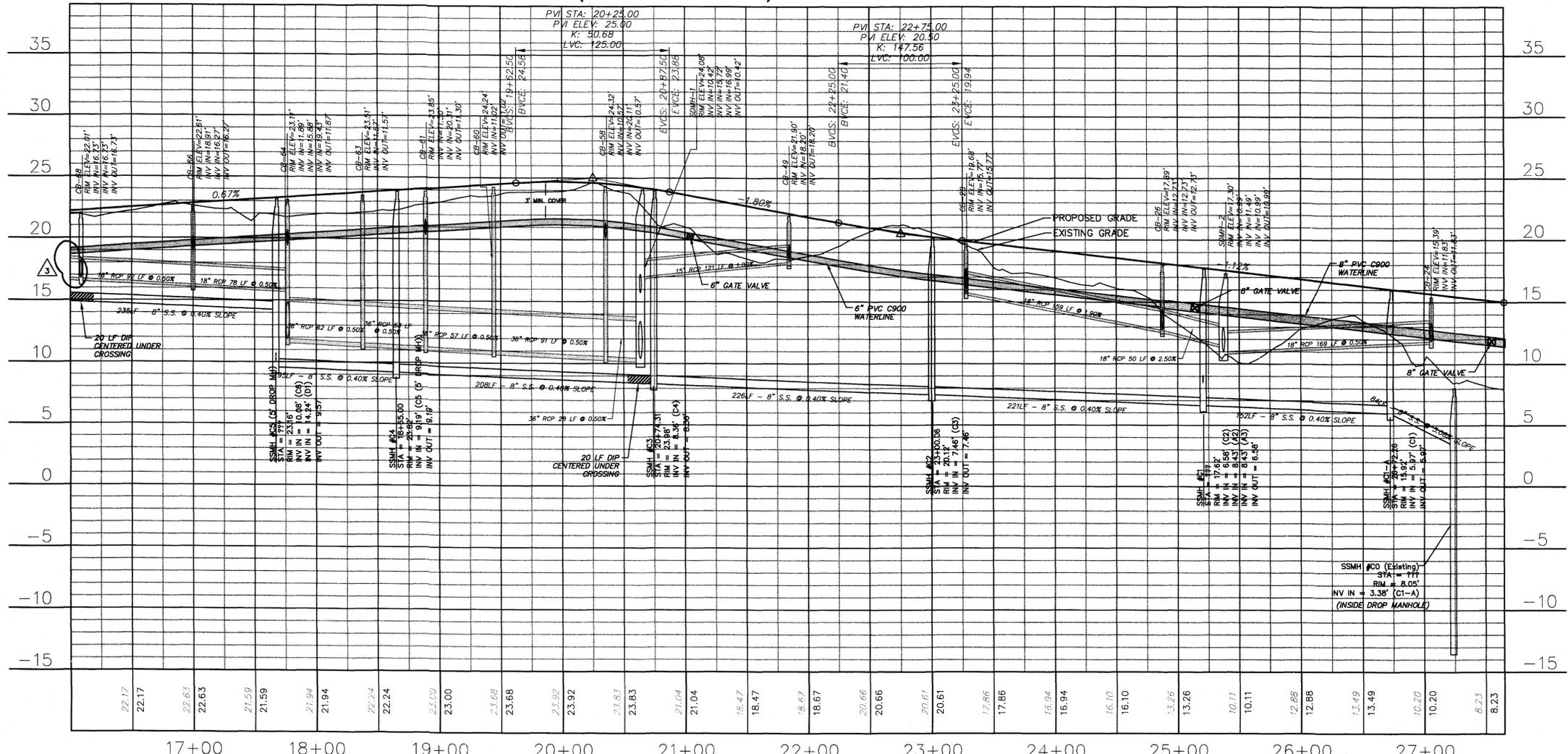
Signed: *[Signature]*

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

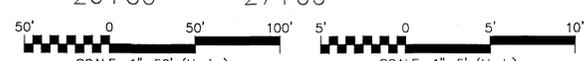
- REVISIONS TO STORMWATER RIM ELEVATIONS
- REMOVAL VOLUNTEER ALLEY AND REVISED LOT LINES AND LOT NUMBERS
- STORMWATER REVISIONS DUE TO REMOVAL OF WALKFINDERS ALLEY



**LAUGHING GULL TERRACE
(STA 15+00 TO 27+65.06)**



**LAUGHING GULL TERRACE
(STA 15+00 TO 27+65.06)**



REVNO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/29/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	03/29/2015



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RIVERLIGHTS
by Newland COMMUNITIES

NORTH AMERICA SEKISUI HOUSE, LLC

**RIVERLIGHTS
AGE QUALIFIED - PHASE 1**

**PLAN AND PROFILE
LAUGHING GULL TERRACE
STA 16+00 TO STA 27+65.06**

DATE: 04/15/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NJL
PROJ. MGR. KCBE

SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

MAC FILE NUMBER: CU-706
DRAWING NUMBER: 22
REVISION: 4

CAPE FEAR PUBLIC UTILITY
 AUTHORITY STANDARD SEWER
 NOTES:

- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
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- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

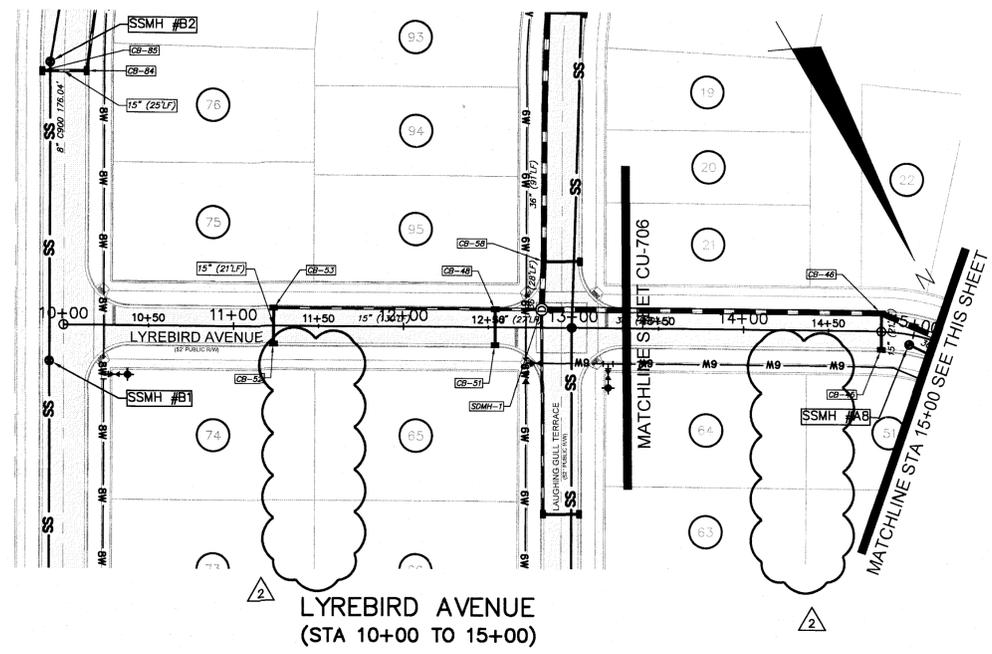
Fire: _____

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN

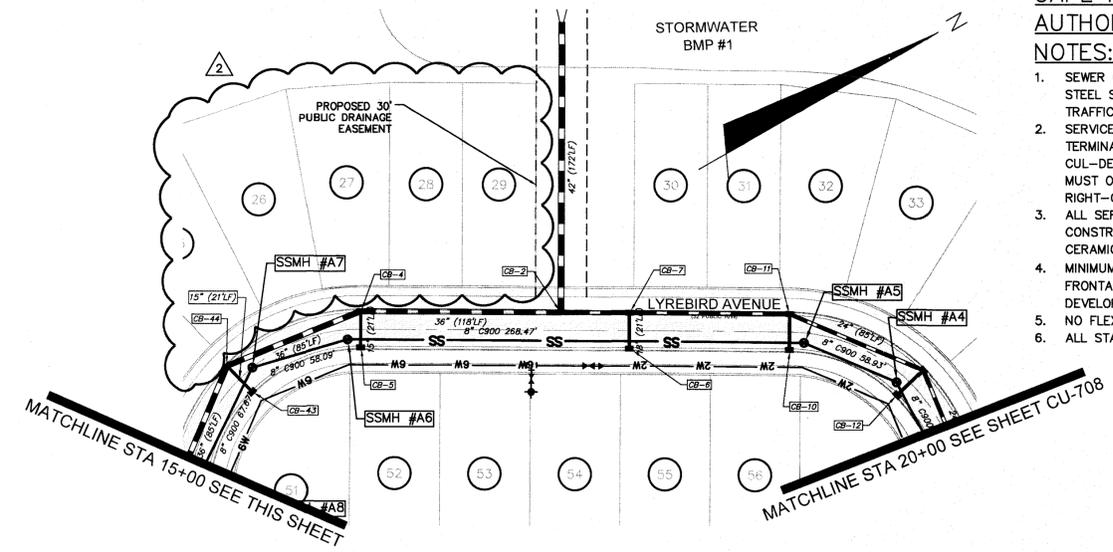
Date: 5/20/16 Permit # 2015034
 Signed: [Signature]

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



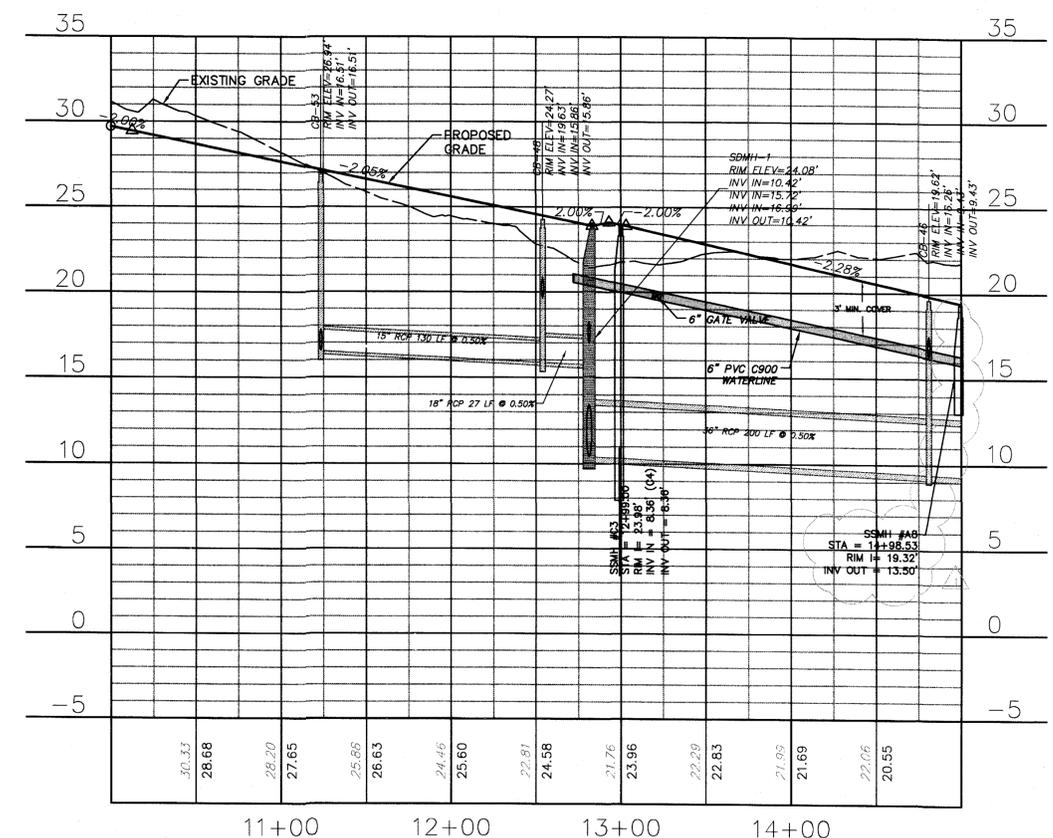
LYREBIRD AVENUE
 (STA 10+00 TO 15+00)



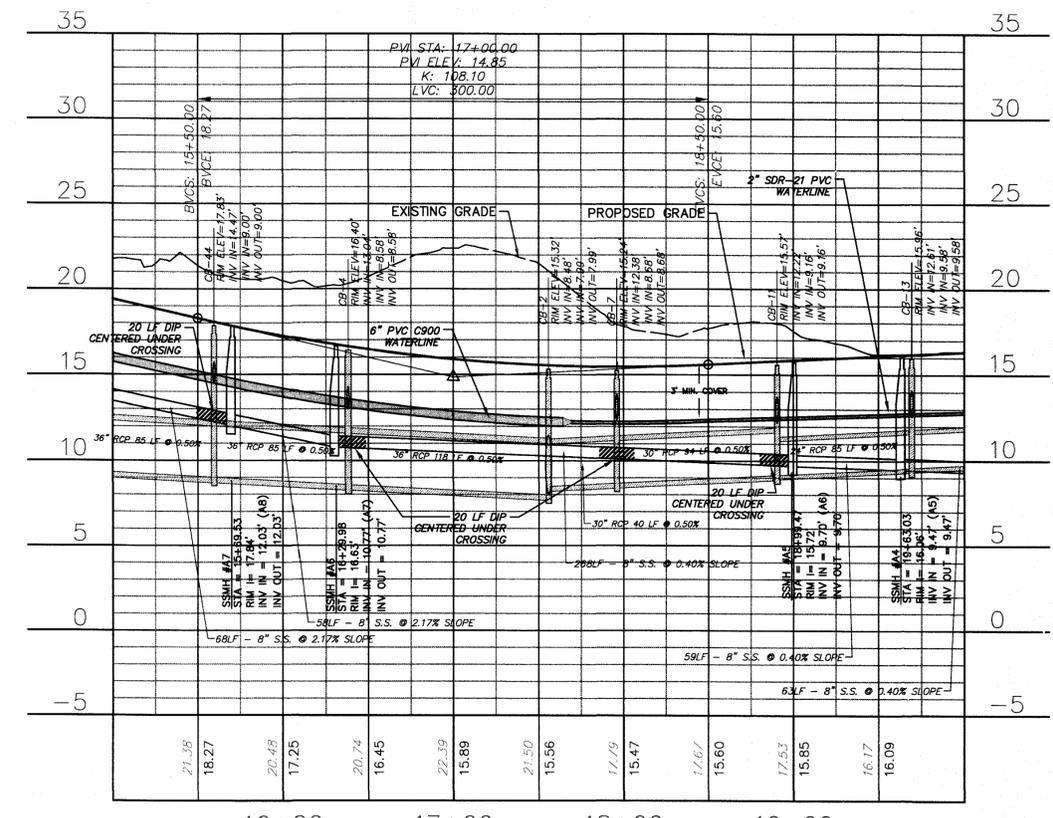
LYREBIRD AVENUE
 (STA 15+00 TO 20+00)

REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS

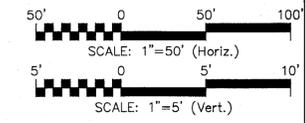
REMOVAL OF PROVOST ALLEY, VOLUNTEER ALLEY, REVISIONS TO LOT LINES AND LOT NUMBERS AND ASSOCIATED STORMWATER CHANGES.



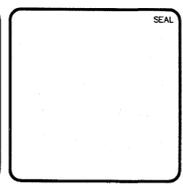
LYREBIRD AVENUE
 (STA 10+00 TO 15+00)



LYREBIRD AVENUE
 (STA 15+00 TO 20+00)



REV.	DESCRIPTION	DATE
4	ADDITIONAL CITY OF WILMINGTON THE COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF HILKINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	02/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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RIVERLIGHTS
 by Newland COMMUNITIES

NORTH AMERICA SEKISUI HOUSE, LLC

**RIVERLIGHTS
 AGE QUALIFIED - PHASE 1**

**PLAN AND PROFILE
 LYREBIRD WAY
 STA 10+00 TO STA 20+00**

DATE: 04/15/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NJL
 PROJ. MGR: KCBE

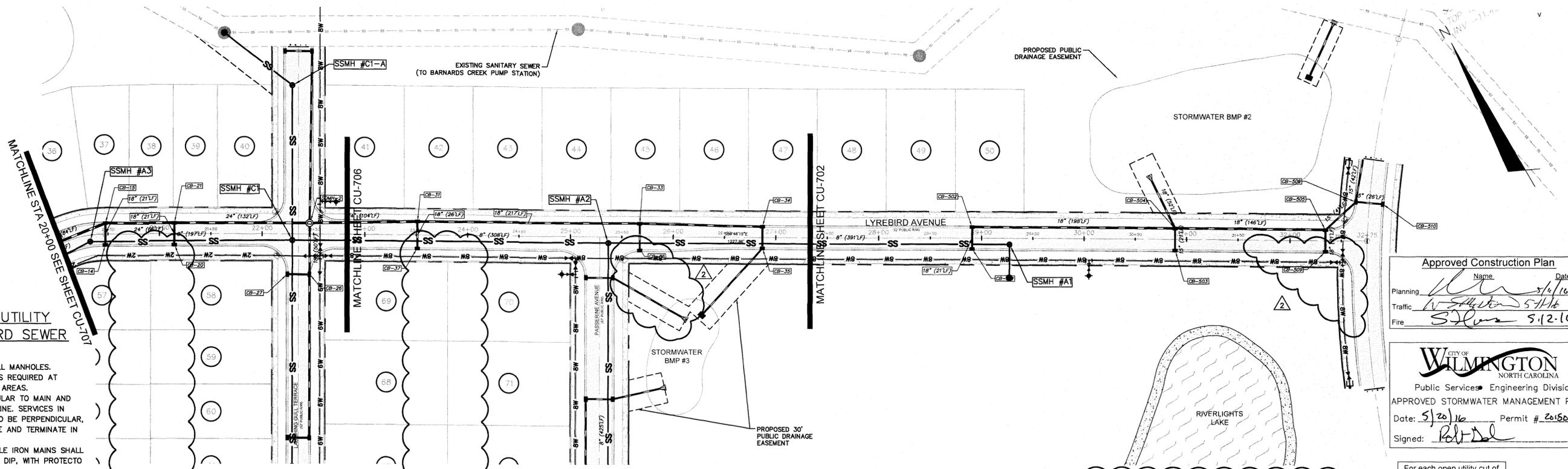
SCALE: 1"=50'
 HORIZONTAL: 1"=50'
 VERTICAL: 1"=5'

MAC FILE NUMBER: CU-707
 DRAWING NUMBER: 23
 REVISION: 4

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

**CAPE FEAR PUBLIC UTILITY
AUTHORITY STANDARD SEWER
NOTES:**

- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
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- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.



Approved Construction Plan

Name: _____ Date: 5/16/16

Planning: _____

Traffic: _____

Fire: _____

CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 5/20/16 Permit # 2016034

Signed: _____

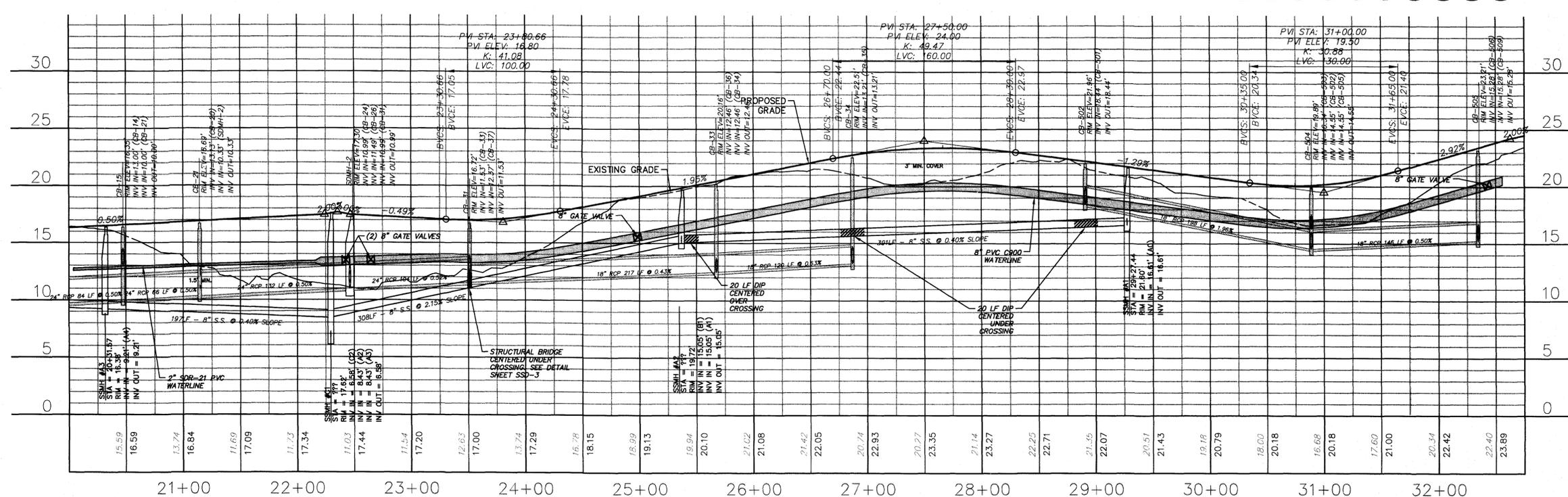
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

**LYREBIRD AVENUE
(STA 20+00 TO 32+74.51)**

REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS

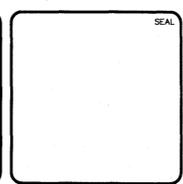
REMOVAL OF PROVOST ALLEY AND VOLUNTEER ALLEY, REVISED STORMWATER DRAINAGE NETWORK AND STORMWATER EASEMENTS



**LYREBIRD AVENUE
(STA 20+00 TO 32+74.51)**

SCALE: 1"=50' (Horiz.)
SCALE: 1"=5' (Vert.)

REV. NO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKERS CREEK ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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RIVERLIGHTS
by Newland COMMUNITIES

NORTH AMERICA SEXISUI HOUSE, LLC

**RIVERLIGHTS
AGE QUALIFIED - PHASE 1
PLAN AND PROFILE
LYREBIRD WAY
STATION 20+00 TO 32+74.51**

DATE: 04/15/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NIL
PROJ. MGR: KCBE

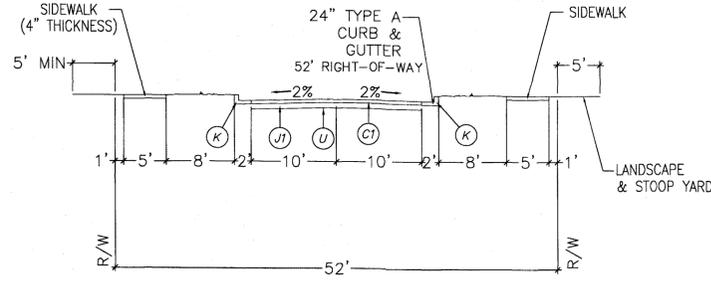
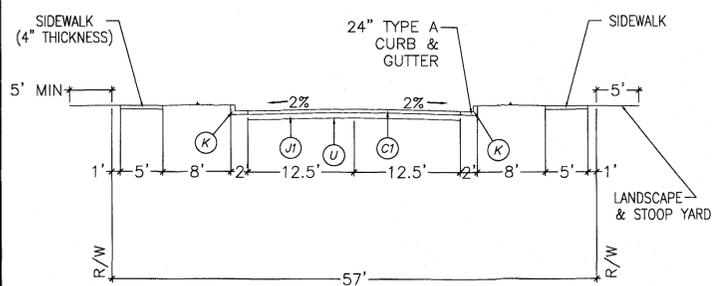
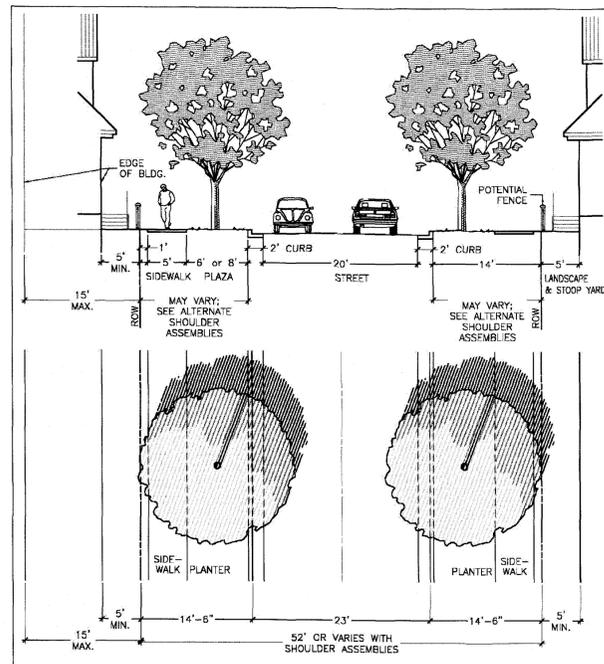
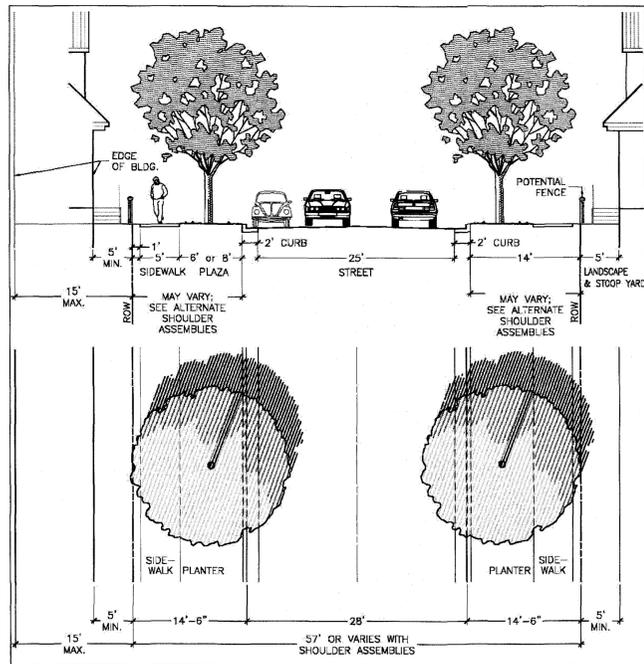
SCALE: HORIZONTAL: 1"=50'
VERTICAL: N/A

M&C FILE NUMBER: **CU-708**
DRAWING NUMBER: **24**

STATUS: **FINAL DESIGN**
ISSUED FOR CONSTRUCTION

REVISION: **4**

ILLUSTRATIVE STREET SECTIONS FROM DEVELOPMENT AGREEMENT



**57' RIGHT-OF-WAY - COLLECTOR
(PUBLIC)**

**52' RIGHT-OF-WAY
(PUBLIC)**

Right-of-Way Width	57 feet
Asphalt Width	25 feet
Design Speed	25 MPH
Traffic Lanes	2 lanes
Parking Lanes	One Side @ 8 feet, marked
Curb Radius	25 feet
Walkway Type	5 foot sidewalk
Curb Type	Curb A
Landscape Type	Irregular spacing-50'oc max

Right-of-Way Width	52 feet
Asphalt Width	20 feet
Design Speed	25 MPH
Traffic Lanes	2 lanes
Parking Lanes	No Parking
Curb Radius	25 feet
Walkway Type	5 foot sidewalk
Curb Type	Curb A
Landscape Type	Irregular spacing-50'oc max

NOTE: SEE SHEET CG-502 AND CS-501 FOR PAVEMENT, SIDEWALK, AND CURB DETAILS

PAVEMENT SCHEDULE	
C1	3" ASPHALT CONCRETE SURFACE COARSE, TYPE S9.5B AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
J1	8.0" COMPACTED ABC STONE BASE COURSE
K	24.0" VERTICAL CURB & GUTTER (TYPE A)
L	12.0" RIBBON CURB
U	COMPACTED SUBGRADE

* SEE SHEET CS-501 (14) FOR ADDITIONAL DETAILS AND SECTIONS FOR CURBING, PAVEMENT, STONE, AND SUBGRADE.

REMOVED

Approved Construction Plan

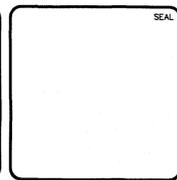
Planning: *[Signature]* Date: 7/11/16
 Traffic: *[Signature]* Date: 5/11/16
 Fire: *[Signature]* Date: 5-12-16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 201503419
 Signed: *[Signature]*

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

REVISION	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKINGERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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RIVERLIGHTS
 by Newland COMMUNITIES

**RIVERLIGHTS
 AGE QUALIFIED - PHASE 1**

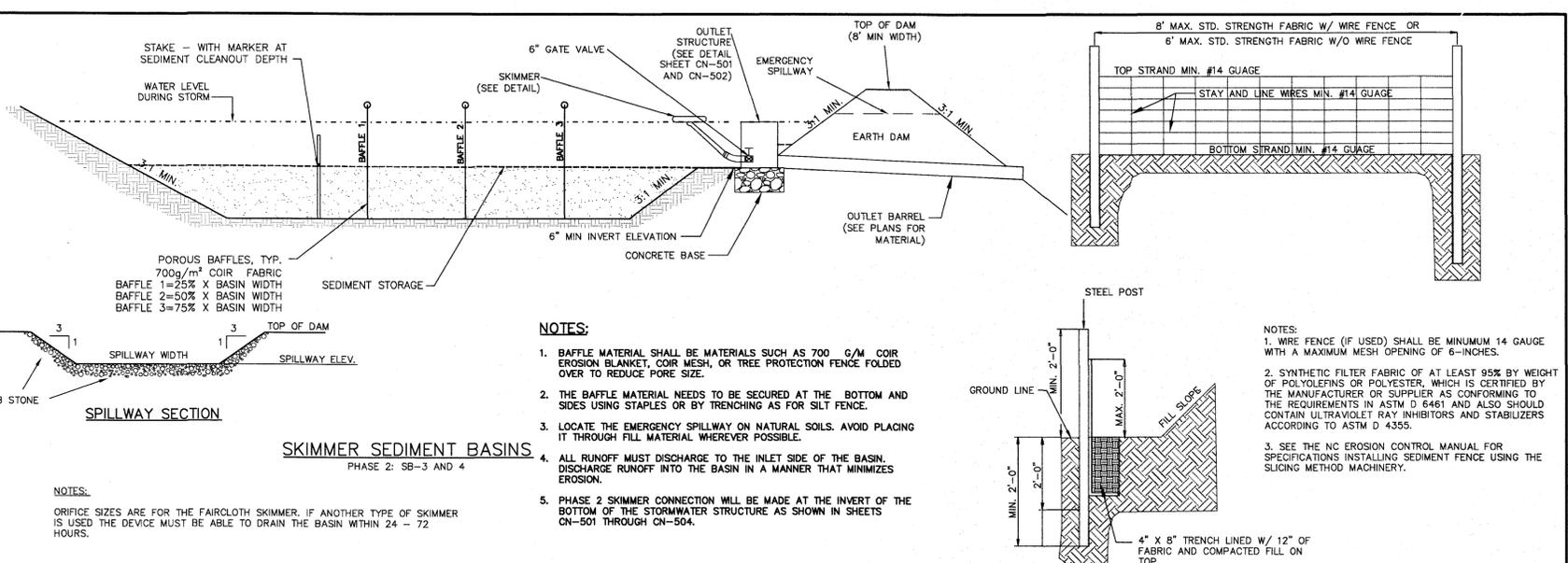
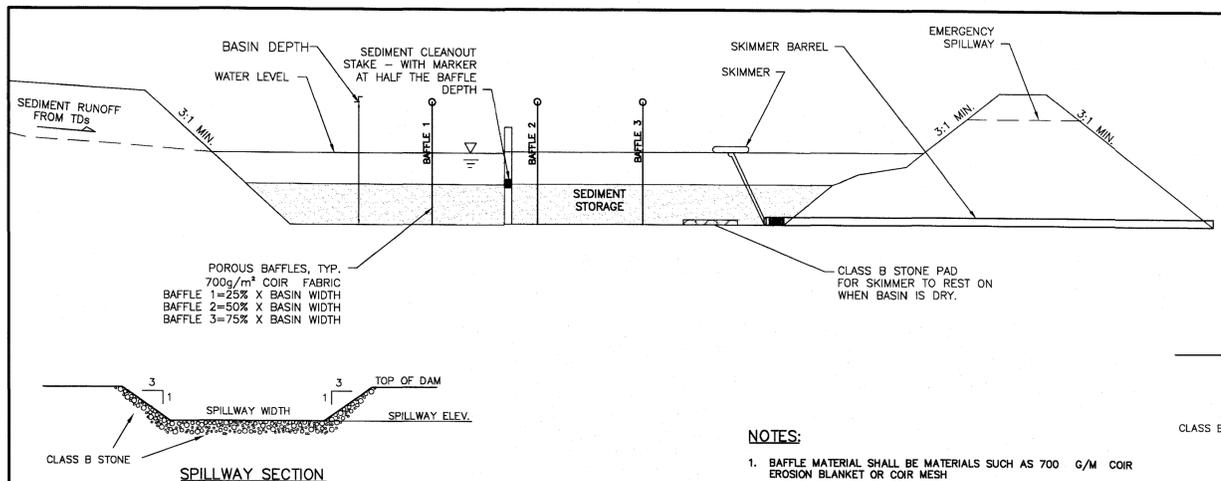
ROADWAY TYPICAL SECTIONS

DATE: 04/15/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NJL
 PROJ. MGR: KCBE

SCALE: HORIZONTAL: 1"=50'
 VERTICAL: N/A

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

MAC FILE NUMBER: CT-301
 DRAWING NUMBER: 27
 REVISION: 4



- NOTES:**
- BAFFLE MATERIAL SHALL BE MATERIALS SUCH AS 700 G/M COIR EROSION BLANKET OR COIR MESH
 - THE BAFFLE MATERIAL NEEDS TO BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
 - 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.

- NOTES:**
- BAFFLE MATERIAL SHALL BE MATERIALS SUCH AS 700 G/M COIR EROSION BLANKET, COIR MESH, OR TREE PROTECTION FENCE FOLDED OVER TO REDUCE PORE SIZE.
 - THE BAFFLE MATERIAL NEEDS TO BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
 - 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.
 - PHASE 2 SKIMMER CONNECTION WILL BE MADE AT THE INVERT OF THE BOTTOM OF THE STORMWATER STRUCTURE AS SHOWN IN SHEETS CN-501 THROUGH CN-504.

- NOTES:**
- WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
 - SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
 - SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.

SKIMMER SEDIMENT BASIN
PHASE 1: SB-1, 2, 3, 4 AND 5
PHASE 2: SB-3 AND 4

SKIMMER BASIN CALCULATION TABLE (PHASE 1)

Skimmer No.	Drainage Area ac	Rational C	Intensity in/hr	Q10 Peak Flow cfs	Required SA (325 x Q10) sf	Provided SA sf	Required Vol (1800cf/ac x DA) cf	Provided Vol cf	Storage Depth ft	Storage Vol Drained cf	Weir Width ft
SB-1	3.09	0.30	7.23	6.70	2,177	6,270	5,559	17,497	3.00	10,742	8.0
SB-2	4.83	0.30	7.23	10.48	3,405	3,542	8,694	9,699	3.00	5,801	12.0
SB-3	10.63	0.30	7.23	23.06	7,493	22,411	19,134	63,152	3.00	39,329	20.0
SB-4	2.74	0.30	7.23	5.94	1,931	3,522	4,932	9,570	3.00	5,669	8.0
SB-5	1.09	0.30	7.23	2.37	769	2,231	1,964	5,975	3.00	3,457	6.0

SKIMMER BASIN CALCULATION TABLE (PHASE 2)

Skimmer No.	Drainage Area ac	Rational C	Intensity in/hr	Q10 Peak Flow cfs	Required SA (325 x Q10) sf	Provided SA sf	Required Vol (1800cf/ac x DA) cf	Provided Vol cf	Storage Depth ft	Storage Vol Drained cf	Weir Width ft
SB-1 / BMP-7	6.48	0.37	7.23	17.33	5,634	5,634	11,664	11,664	3.00	11,664	20.0
SB-3 / BMP-1	36.68	0.52	7.23	137.90	44,818	44,818	66,024	66,024	2.83	66,024	20.0
SB-4 / BMP-2	5.09	0.42	7.23	15.46	5,023	5,023	9,162	9,162	3.78	9,162	20.0
SB-5 / BMP-5	2.37	0.40	7.23	6.85	2,228	2,228	4,266	4,266	2.00	4,266	20.0

TEMPORARY SILT FENCE
NOT TO SCALE

SILT FENCE CALCULATION TABLE

SILT FENCE No.	Drainage Area ac	Length ft	Acre per 100 ft	0.25 Acre per 100 ft YES/NO
SF 1	1.21	953.00	0.13	YES
SF 2	1.20	669.00	0.18	YES
SF 3	0.82	326.00	0.25	YES
SF 4	0.47	346.00	0.13	YES
SF 5	0.61	782.00	0.08	YES
SF 6	0.91	517.00	0.18	YES
SF 7	0.36	489.00	0.07	YES
SF 8	0.39	452.00	0.09	YES
SF 9	0.16	449.00	0.04	YES
SF 10	0.17	385.00	0.04	YES
SF 11	2.00	1002.00	0.20	YES
SF 12	1.53	644.00	0.24	YES
SF 13	0.86	338.00	0.25	YES
SF 14	1.66	705.00	0.24	YES
SF 15	0.82	321.00	0.25	YES
SF 16	0.71	281.00	0.25	YES
SF 17	0.62	332.00	0.19	YES
SF 18	0.38	538.00	0.07	YES

NOTES:

- Calculation taken from Table 6.62a of the NCDENR ESC Manual for slopes < 2% only.

FAIRCLOTH SKIMMER SIZE CALCULATION (PHASE 1)

Skimmer No.	Dewatering Time (days)	Skimmer Outflow cf/day	Skimmer Size in	Orifice Diameter in	Orifice Radius in	Barrel Outflow gpm	Barrel Pipe in
SB-1	3	3,581	2.5	1.9	0.9	18.6	4.0
SB-2	3	1,934	2.0	1.5	0.7	10.0	4.0
SB-3	3	13,110	4.0	3.2	1.6	68.1	4.0
SB-4	3	1,890	2.0	1.5	0.7	9.8	4.0
SB-5	3	1,152	1.5	1.2	0.6	6.0	4.0

Faircloth Skimmer Selection Table

Skimmer Size in	Outflow Qmax cf/day	Head ft
1.5	1,728	0.125
2	3,283	0.167
2.5	6,234	0.208
3	9,774	0.250
4	20,109	0.333
5	32,832	0.333

FAIRCLOTH SKIMMER SIZE CALCULATION (PHASE 2)

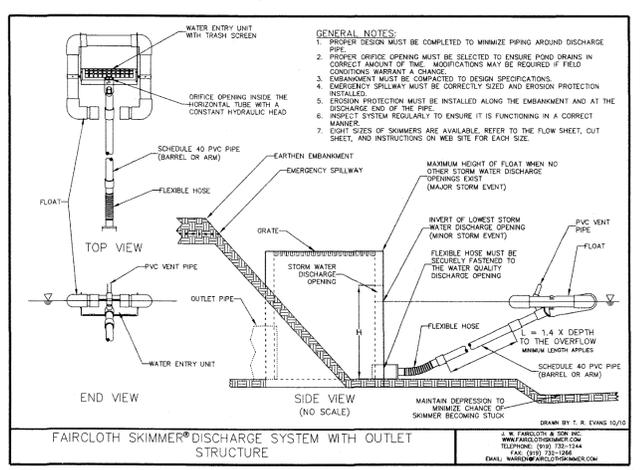
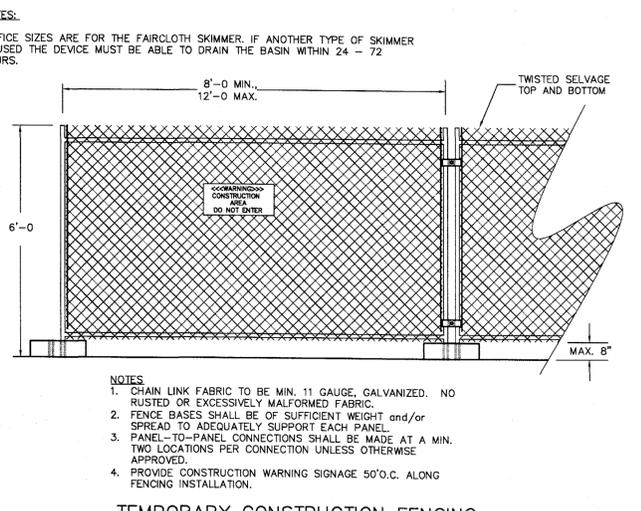
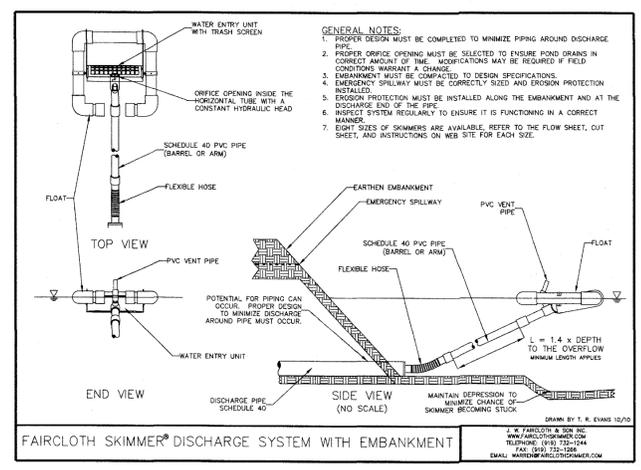
Skimmer No.	Dewatering Time (days)	Skimmer Outflow cf/day	Skimmer Size in	Orifice Diameter in	Orifice Radius in	Barrel Outflow gpm	Barrel Pipe in
SB-1 / BMP-7	3	3,888	2.5	2.0	1.0	20.2	4.0
SB-3 / BMP-1	3	22,008	5.0	4.1	2.1	114.3	5.0
SB-4 / BMP-2	3	3,054	2.0	1.9	0.9	15.9	4.0
SB-5 / BMP-5	3	1,422	1.5	1.4	0.7	7.4	4.0

Faircloth Skimmer Selection Table

Skimmer Size in	Outflow Qmax cf/day	Head ft
1.5	1,728	0.125
2	3,283	0.167
2.5	6,234	0.208
3	9,774	0.250
4	20,109	0.333
5	32,832	0.333

- NOTES:**
- Q10 Peak Flow were taken from Rational Method.
 - Required Surface Areas and Volumes were taken from NCDENR ESC Manual.
 - Faircloth Skimmer Selection Table taken from Table 4-2, NCDOT Level III-A Design of Sediment & Erosion Control Plans Manual
 - Emergency Weir Width taken from Skimmer Basin Criteria Section of NCDENR ESC Manual Table and/or Hydraulic Routing of the basin to ensure non-erosive velocity.
 - Minimum Barrel Pipe on the Skimmer is 4-inches. (On a 1% slope the capacity is 100 GPM)
 - Skimmer Orifice Diameter/Radius were obtained using the Faircloth Skimmer sizing spreadsheet (obtained from their website: <http://www.fairclothskimmer.com/skimmer-sizing>)

- NOTES:**
- Q10 Peak Flow were taken from Rational Method.
 - Required Surface Areas and Volumes were taken from NCDENR ESC Manual.
 - Faircloth Skimmer Selection Table taken from Table 4-2, NCDOT Level III-A Design of Sediment & Erosion Control Plans Manual
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 - Minimum Barrel Pipe on the Skimmer is 4-inches. (On a 1% slope the capacity is 100 GPM)
 - Skimmer Orifice Diameter/Radius were obtained using the Faircloth Skimmer sizing spreadsheet (obtained from their website: <http://www.fairclothskimmer.com/skimmer-sizing>)



Approved Construction Plan

Name: _____ Date: 5/16/16

Planning: _____

Traffic: _____ 5/16/16

Fire: _____ 5/16/16

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

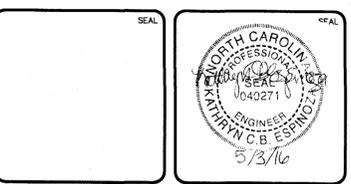
Date: 5/16/16 Permit # 20150814

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

REV. NO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAYS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/23/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



MCKIM & CREED

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License: F-1222
www.mckimcreed.com

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

by **Newland COMMUNITIES**

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

EROSION AND SEDIMENT CONTROL
DETAILS

DATE: 04/15/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NJL
PROJ. MGR. KCBE

SCALE: HORIZONTAL: N/A
VERTICAL: N/A

MAC FILE NUMBER: CE-501
DRAWING NUMBER: 28

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

REVISION: 4

SEEDBED PREPARATION:

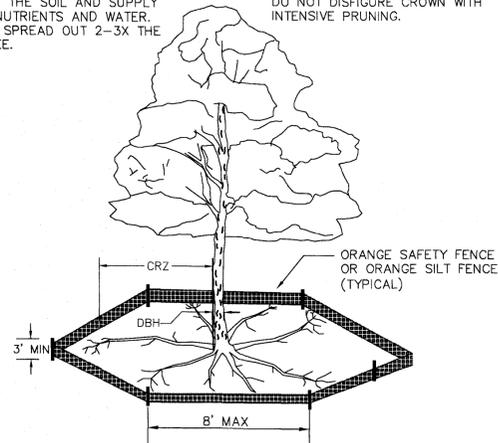
1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTRANCE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW**).
5. CONTINUE TILLAGE UNTIL A WELL - PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. 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.
9. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
10. 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

NOTE:

THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

NOTE:

CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.

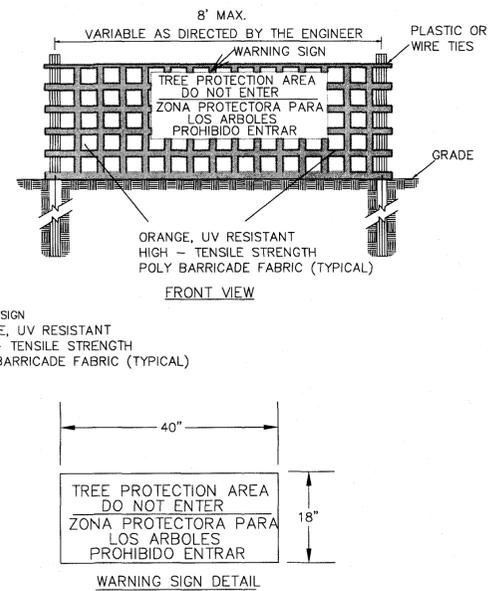


NOTES:

1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

METHOD OF TREE PROTECTION DURING CONSTRUCTION

SD 15-09
NOT TO SCALE



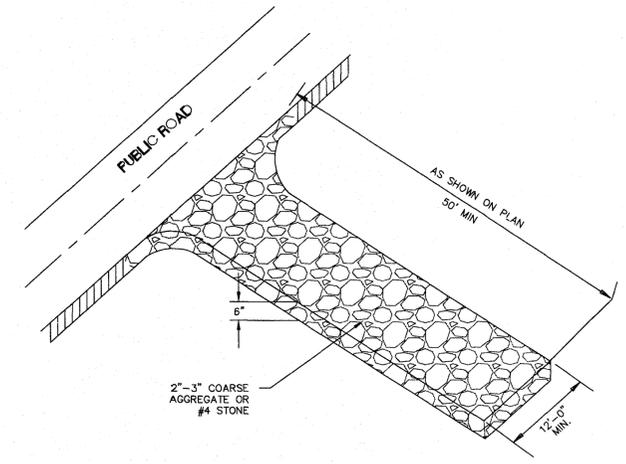
NOTES:

1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

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

CONSTRUCTION ENTRANCE/EXIT

SD 13-03
NOT TO SCALE



Approved Construction Plan

Planning: [Signature] Date: 5/11/16
 Traffic: [Signature] 5/11/16
 Fire: [Signature] 5-12-16

City of WILMINGTON, NORTH CAROLINA
 Public Services - Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 2015057
 Signed: [Signature]

TREE PROTECTION NOTES:

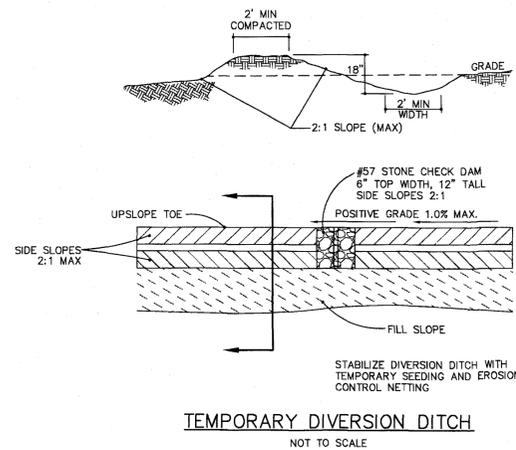
1. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. [18-457(b)]
2. PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. [18-458]
3. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS. [18-457(d)]
4. 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]
5. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. [18-458]
6. 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.

TEMPORARY SEEDING

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

PERMANENT SEEDING

GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA COMMON	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS.	JUNE - AUGUST FEB. - OCT.	25 LBS. 10-10-10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS.	MARCH - APRIL	25 LBS. 10-10-10



TEMPORARY DIVERSION DITCH
NOT TO SCALE

TEMPORARY DIVERSION DITCH CALCULATION TABLE

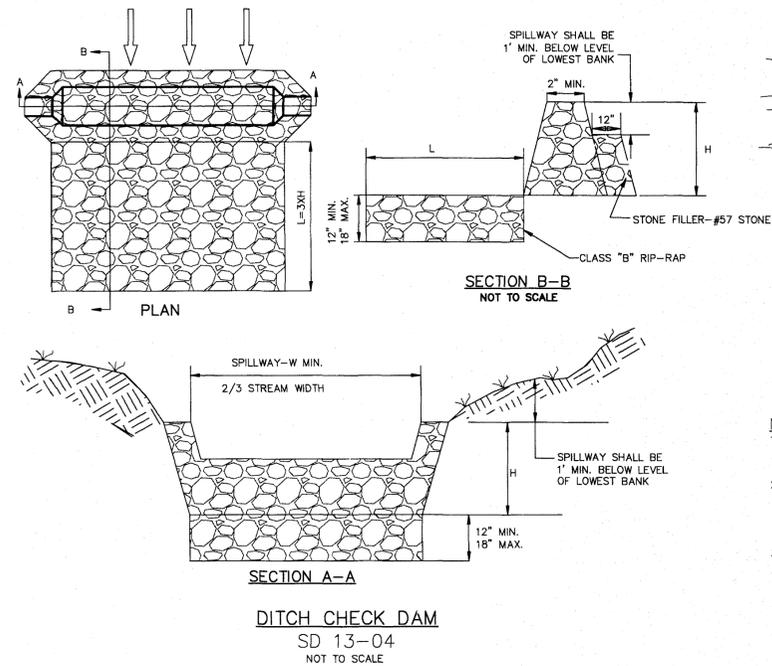
TDD NUMBER	DA (AC)	Q10 (CFS)	LENGTH (FT)	HIGH (FT)	LOW (FT)	ELEVATION DIFF. (FT)	SLOPE (%)	INITIAL LINING	MANNING n	VELOCITY (FPS)	COMMENT
TDD1	0.12	0.3	81	22.00	18.00	4.00	4.94	BARE EARTH	0.020	2.41	LINING REQ
TDD2	1.41	3.1	687	30.00	18.00	12.00	1.75	BARE EARTH	0.020	3.76	LINING REQ
TDD3	2.23	4.8	680	31.00	22.00	9.00	1.32	BARE EARTH	0.020	3.87	LINING REQ
TDD4	1.56	3.4	620	24.00	15.00	9.00	1.45	BARE EARTH	0.020	3.61	LINING REQ
TDD5	4.75	10.3	703	19.00	10.00	9.00	1.28	BARE EARTH	0.020	4.62	LINING REQ
TDD6	2.65	5.8	696	12.50	11.00	1.50	0.22	BARE EARTH	0.020	2.05	LINING REQ
TDD7	1.09	2.4	396	41.00	30.00	11.00	2.78	BARE EARTH	0.020	4.13	LINING REQ

TEMPORARY ROCK CHECK DAMS/WATTLES

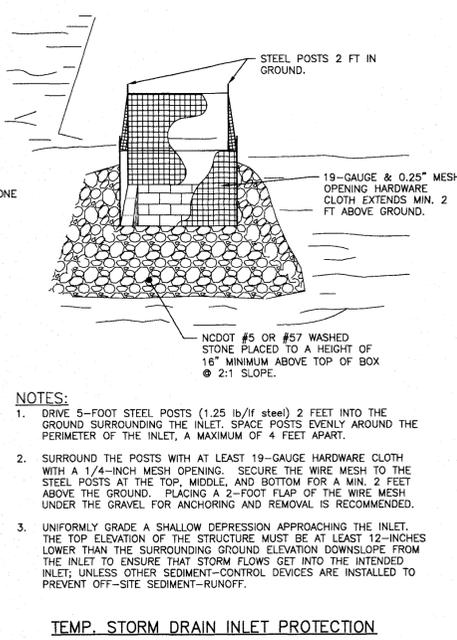
TDD NUMBER	SECONDARY LINING	MANNING n	VELOCITY (FPS)	COMMENT	DEPTH in	MIN. DEPTH in	CHECK DAM SPACING (FT)	NUMBER REQUIRED	NUMBER PROVIDED
TDD1	LINING REQ	0.035	1.65	EXCELSIOR OK	1.4	18	41	2	2
TDD2	LINING REQ	0.035	2.49	EXCELSIOR OK	6.0	18	115	6	6
TDD3	LINING REQ	0.035	2.55	EXCELSIOR OK	7.8	18	151	5	5
TDD4	LINING REQ	0.035	2.38	EXCELSIOR OK	6.5	18	138	5	5
TDD5	LINING REQ	0.035	3.04	EXCELSIOR OK	10.9	18	156	5	5
TDD6	LINING REQ	0.035	1.35	EXCELSIOR OK	12.4	18	928	1	1
TDD7	LINING REQ	0.035	2.74	EXCELSIOR OK	4.7	18	72	6	6

Notes:

1. Q10 taken from Rational Method.
2. Manning n value for bare earth = 0.020 per NC ESC Manual Table 8.05f
3. Manning n value for excelsior (curled wood) matting = 0.035 per NC ESC Manual Table 8.05f
4. Tractive Force (Shear Stress) was also evaluated and found to be sufficient for the proposed lining.



DITCH CHECK DAM
SD 13-04
NOT TO SCALE

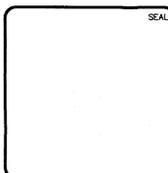


TEMP. STORM DRAIN INLET PROTECTION
NOT TO SCALE

NOTES:

1. DRIVE 5-FOOT STEEL POSTS (1.25 lb/ft steel) 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
2. SURROUND THE POSTS WITH AT LEAST 19-GAUGE HARDWARE CLOTH WITH A 1/4-INCH MESH OPENING. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM FOR A MIN. 2 FEET ABOVE THE GROUND. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING AND REMOVAL IS RECOMMENDED.
3. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET. THE TOP ELEVATION OF THE STRUCTURE MUST BE AT LEAST 12-INCHES LOWER THAN THE SURROUNDING GROUND ELEVATION DOWNSLOPE FROM THE INLET TO ENSURE THAT STORM FLOWS GET INTO THE INTENDED INLET. UNLESS OTHER SEDIMENT-CONTROL DEVICES ARE INSTALLED TO PREVENT OFF-SITE SEDIMENT-RUNOFF.

REVISION	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAY ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/20/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: E-1222
 www.mckimcreed.com

RIVERLIGHTS
 by Newland COMMUNITIES
 NORTH AMERICA SEKISUI HOUSE, LLC

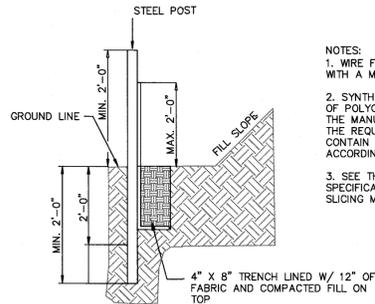
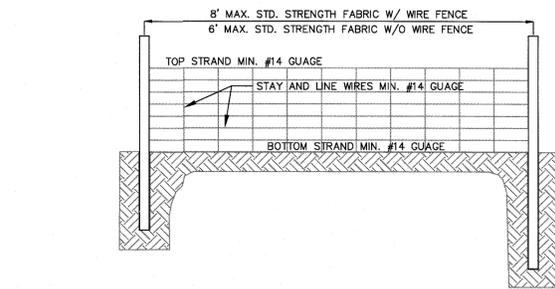
RIVERLIGHTS AGE QUALIFIED - PHASE 1
EROSION AND SEDIMENT CONTROL DETAILS

DATE: 04/15/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: N/A
 PROJ. MGR: KCBE

SCALE: HORIZONTAL: N/A
 VERTICAL: N/A

MAC FILE NUMBER: CE-502
 DRAWING NUMBER: 29
 REVISION: 4

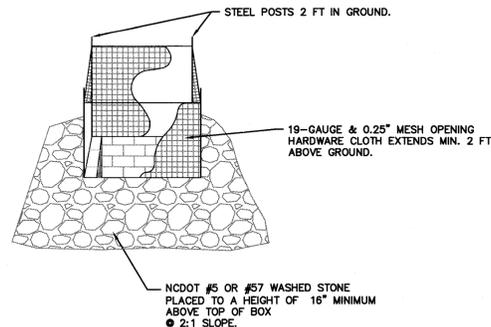
STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION



- NOTES:
1. WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
 2. SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
 3. SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.

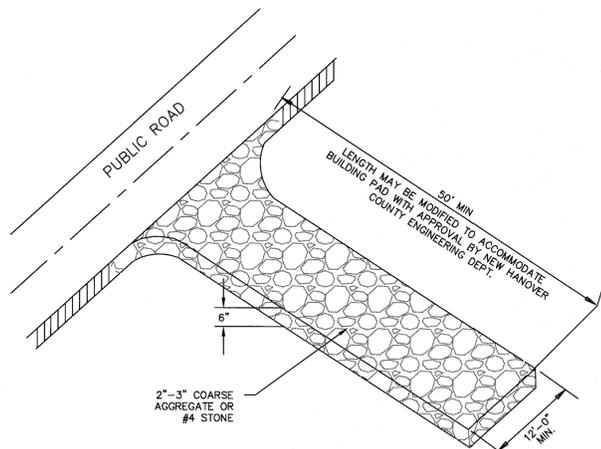
TEMPORARY SILT FENCE
NOT TO SCALE

SILT FENCE	DRAINAGE AREA		LENGTH (LF)	AC per 100 LF	1/4-AC per 100 LF "yes" or "no"
	SF	AC			
SF 1	1071	0.02	85	0.03	yes
SF 2	3598	0.08	216	0.04	yes
SF 3	48292	1.11	527	0.21	yes

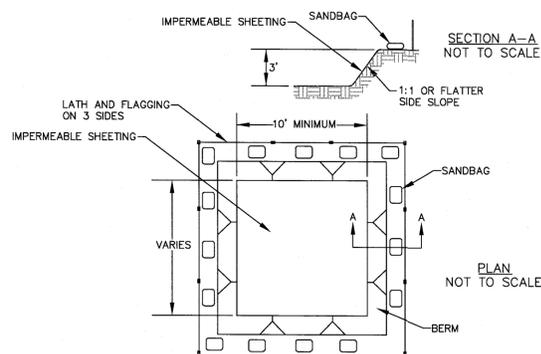


- NOTES:
1. DRIVE 5-FOOT STEEL POSTS (1.25 lb/ft steel) 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
 2. SURROUND THE POSTS WITH AT LEAST 19-GAUGE HARDWARE CLOTH WITH A 1/4-INCH MESH OPENING. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM FOR A MIN. 2 FEET ABOVE THE GROUND. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING AND REMOVAL IS RECOMMENDED.
 3. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET. THE TOP ELEVATION OF THE STRUCTURE MUST BE AT LEAST 12-INCHES LOWER THAN THE SURROUNDING GROUND ELEVATION DOWNSLOPE FROM THE INLET TO ENSURE THAT STORM FLOWS GET INTO THE INTENDED INLET. UNLESS OTHER SEDIMENT-CONTROL DEVICES ARE INSTALLED TO PREVENT OFF-SITE SEDIMENT-RUNOFF.

TEMP. STORM DRAIN INLET PROTECTION
NOT TO SCALE

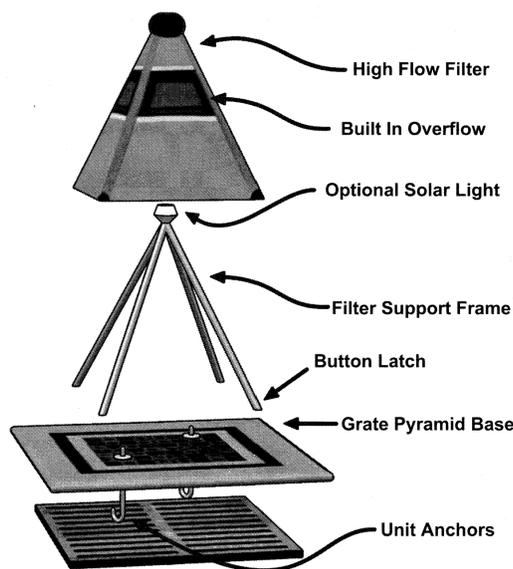


CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE



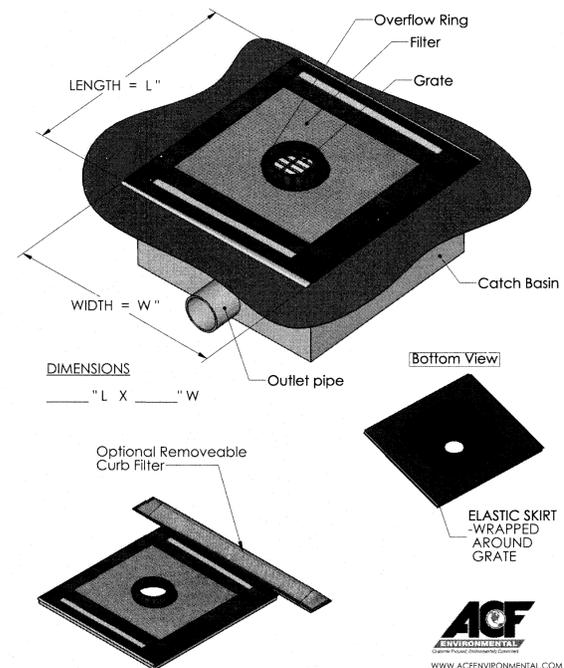
CONCRETE WASHOUT
NOT TO SCALE

Grate Pyramid - Type A
Stormwater Filter



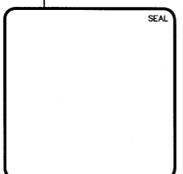
INLET SEDIMENT CONTROL DEVICES
NOT TO SCALE

Grate Gator - Type A



A:\173930125.plt - 10/16/2015 4:12:15 PM

REV. NO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAYS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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Wilmington, North Carolina 28401
Phone: (910)343-1048, Fax: (910)251-8282
License: F-1222
www.mckimcreed.com

**PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.**
4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

**RIVERLIGHTS
AGE QUALIFIED - PHASE 1**
**SEDIMENT & EROSION CONTROL
DETAILS**

DATE: 07/11/2015
MCE PROJ. # 02735-0125
DRAWN: EEM/KCBE
DESIGNED: KCBE
CHECKED: NJL
PROJ. MGR.: KCBE

SCALE
HORIZONTAL: 1"=50'
VERTICAL: N/A

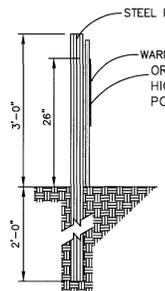
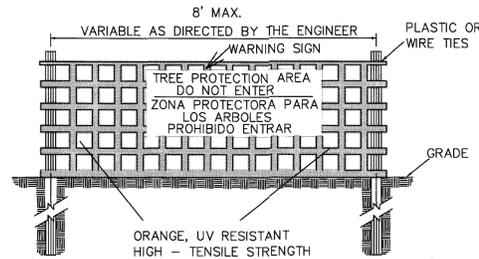
MAC FILE NUMBER
CE-503
DRAWING NUMBER
29SC1

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

REVISION
5

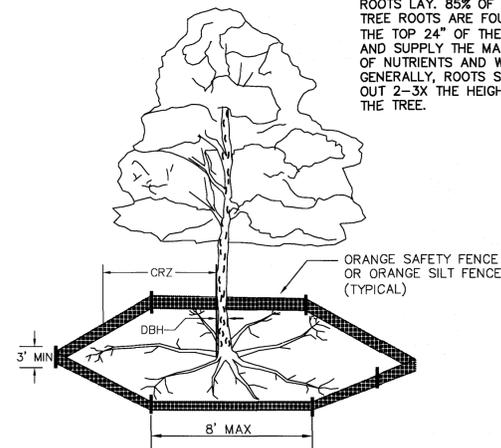
Eng: [Signature] 10/12/14
10/11/16 201503122
10/11/16

NOTE: CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN. FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.



- NOTES:
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
 2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
 4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
 5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
 6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.



- NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
 2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
 3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATTS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
 4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
 5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
 6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

METHOD OF TREE PROTECTION DURING CONSTRUCTION
NOT TO SCALE

GROUND STABILIZATION CRITERIA		
SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERIMETER DIKES, 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 SEEDING			
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
RYE GRAIN	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
BROWNTOP MILLET	1-2 LBS.	JUNE - AUGUST	25 LBS 10-10-10

PERMANENT SEEDING			
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA COMMON	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS.	JUNE - AUGUST FEB. - OCT.	25 LBS 10-10-10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS.	MARCH - APRIL	25 LBS 10-10-10

EROSION CONTROL NOTES:

1. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
2. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE.
3. GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING; AND, A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
4. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NEW HANOVER COUNTY.
5. SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
6. ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
7. IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, AND TACKED.
8. WITHIN 24 HOURS FOLLOWING ANY RAIN EVENT, THE CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ALL DAMAGED EROSION CONTROL MEASURES.
9. ALL ACTIVITY AND INSTALLATION OF EROSION CONTROL MATTING WILL BE COMPLETE PRIOR TO ANY RAIN EVENT.

NOTE (G.S. 113A-57 (2))

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.

CONSTRUCTION SEQUENCE

1. ESTABLISH LIMITS OF DISTURBANCE AS SHOWN.
2. 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.
3. 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.
4. INSTALL SILT FENCING AND INLET PROTECTION ON EXISTING CATCH BASINS BEFORE COMMENCING ANY LAND DISTURBANCE ACTIVITY. ADDITIONAL SILT FENCE MAY BE REQUIRED BY NEW HANOVER COUNTY ENGINEERING OR THE ENGINEER. TREE PROTECTION FENCING INSTALLED UNDER NEWLAND PERMIT GP #25-15 SHALL REMAIN IN PLACE UNTIL LAND DISTURBING ACTIVITIES ARE COMPLETED AND THE SITE IS PERMANENTLY STABILIZED, OR REMOVAL IS APPROVED BY THE CITY OF WILMINGTON.
5. INSTALL (1) CONCRETE WASHDOWN AND INSTALL PAINT WASHDOWN ON EACH HOME SITE AS CONSTRUCTION.
6. PROVIDE TEMPORARY STABILIZATION AND SEEDING AS NECESSARY TO PREVENT EROSION. REFER TO THIS SHEET FOR GROUND STABILIZATION CRITERIA AND SEEDING SCHEDULE.
7. BEGIN CONSTRUCTION OF THE HOMES. UTILIZE INDIVIDUAL LOT EROSION CONTROL MEASURES AS APPROPRIATE. AS EACH HOME SITE IS COMPLETED, PERMANENTLY STABILIZE THAT SITE AND REMOVE THE MEASURES. AS PERIMETER MEASURES ARE PARTIALLY REMOVED PER SITE, THE OVERALL INTEGRITY OF THE EROSION CONTROL PLAN SHALL BE MAINTAINED.
8. UPON COMPLETION OF CONSTRUCTION, ESTABLISH PERMANENT GROUND COVER AND OVERALL SITE STABILIZATION.
9. REMOVE THE REMAINING SEDIMENT AND EROSION CONTROL MEASURES.

SEEDBED PREPARATION:

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

EROSION CONTROL MAINTENANCE PLAN:

1. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AND REPAIRED, AS NECESSARY, EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF EVERY ONE-HALF (0.5) INCH OR GREATER RAINFALL OCCURRENCE.
2. 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.
3. 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.
4. ALL AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
5. 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.
6. INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (0.5" OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED. INLET PROTECTION SHOULD BE CLEANED OUT WHEN IT IS HALF FULL.
7. GRATE GATOR AND GRATE PYRAMID INLET SEDIMENT CONTROL DEVICES SHALL BE INSPECTED, CLEANED, AND REPAIRED AS NECESSARY, EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF EVERY ONE-HALF (0.5) INCH OR GREATER RAINFALL OCCURRENCE.

TREE PROTECTION NOTES:

1. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. [18-457(b)]
2. PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. [18-458]
3. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS. [18-457(d)]
4. 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]
5. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. [18-458]
6. 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.

Approved Const. Plan
 Planning: [Signature] Date: 10/16/16
 Eng: [Signature] Date: 10/11/16
 Traffic: [Signature] Date: 10/12/16
 Fire: [Signature] Date: 10/11/16

8:12725/0125.plt, 1:10/02-drawings/Tables/Content/CE501_01060040.dwg, 10/20/2016 4:12:18 PM

REVISION	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/20/2016
4	ADDITIONAL CITY OF WILMINGTON TRICOMMIT REVISIONS	04/09/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAYS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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RIVERLIGHTS
AGE QUALIFIED - PHASE 1
SEDIMENT & EROSION CONTROL
DETAILS

DATE: 07/11/2015	SCALE: HORIZONTAL: 1"=50'	M&C FILE NUMBER: CE-504
MCE PROJ. # 02735-0125	VERTICAL: N/A	DRAWING NUMBER: 29SC2
DRAWN: EEM/KCBE	DESIGNED: KCBE	CHECKED: NAL
PROJ. MGR: KCBE	STATUS: FINAL DESIGN	ISSUED FOR CONSTRUCTION
	REVISION: 5	

STRUCTURE TABLE -- BMP 1		STRUCTURE TABLE -- BMP 1		STRUCTURE TABLE -- BMP 1		STRUCTURE TABLE -- BMP 1		STRUCTURE TABLE -- BMP 1		STRUCTURE TABLE -- BMP 2		STRUCTURE TABLE -- BMP 3		STRUCTURE TABLE -- BMP 7	
STR. NAME	DETAILS	STR. NAME	DETAILS	STR. NAME	DETAILS	STR. NAME	DETAILS	STR. NAME	DETAILS	STR. NAME	DETAILS	STR. NAME	DETAILS	STR. NAME	DETAILS
(2)DI-2	RIM = 22.53 INV IN = 12.92SE INV OUT = 12.92NW	CB-43	RIM = 17.83 INV OUT = 14.58W	CB-80	RIM = 21.28 INV IN = 13.22SW INV IN = 17.60NE INV IN = 14.16SE INV OUT = 13.22NW	CB-112	RIM = 22.71 INV IN = 19.57SW INV IN = 19.48NW INV OUT = 19.48SE	P1-OUT	RIM = 14.10 INV OUT = 6.83NE	CB-501	RIM = 21.96 INV OUT = 18.55NE	CB-401	RIM = 29.72 INV OUT = 26.17NW	CB-302	RIM = 24.44 INV OUT = 20.90W
CB-2	RIM = 15.32 INV IN = 8.48NE INV IN = 7.99SW INV OUT = 7.99NW	CB-44	RIM = 17.83 INV IN = 14.47E INV IN = 9.00SE INV OUT = 9.00N	CB-81	RIM = 21.27 INV OUT = 16.15NW	CB-113	RIM = 22.69 INV OUT = 19.78NE	P2-FES	RIM = 10.49 INV IN = 8.70SW	CB-502	RIM = 21.96 INV IN = 16.44SW INV OUT = 18.44SE	CB-402	RIM = 29.72 INV IN = 25.56SE INV OUT = 25.56NE	CB-304	RIM = 20.45 INV OUT = 17.46NW
CB-4	RIM = 16.40 INV IN = 13.04SE INV IN = 8.58S INV OUT = 8.58NE	CB-45	RIM = 19.62 INV OUT = 16.37SW	CB-82	RIM = 23.68 INV IN = 20.31NE INV IN = 20.31SE	CB-114	RIM = 22.85 INV IN = 19.73W INV OUT = 19.73SE	P2-OUT	RIM = 13.20 INV OUT = 9.25NE	CB-503	RIM = 19.89 INV OUT = 16.55NE	CB-404	RIM = 25.46 INV IN = 19.68SW INV OUT = 19.68SE	CB-305	RIM = 20.72 INV IN = 17.23SE INV IN = 17.23E INV OUT = 17.23SW
CB-5	RIM = 16.40 INV OUT = 13.15NW	CB-46	RIM = 19.62 INV IN = 16.26NE INV IN = 9.43SE INV OUT = 9.43NW	CB-83	RIM = 23.67 INV OUT = 20.44NW	CB-115	RIM = 22.81 INV OUT = 19.84E	P3-OUT	RIM = 19.30 INV OUT = 15.90E	CB-504	RIM = 19.89 INV IN = 16.34SW INV IN = 14.55NW INV IN = 14.55SE INV OUT = 14.55N	CB-405	RIM = 25.46 INV IN = 19.08NW INV OUT = 19.08E	CB-306	RIM = 20.83 INV IN = 16.71NE INV OUT = 16.71SW
CB-6	RIM = 15.24 INV OUT = 12.49NW	CB-48	RIM = 24.27 INV IN = 19.63NE INV IN = 15.86SE INV OUT = 15.86NW	CB-84	RIM = 26.70 INV IN = 23.10SE INV OUT = 23.10SW	CB-118	RIM = 24.06 INV IN = 18.81E INV IN = 20.56S INV OUT = 18.81NW	SDMH-1	RIM = 24.08 INV IN = 10.42SW INV IN = 16.99SE INV OUT = 10.42NW	CB-505	RIM = 23.21 INV IN = 15.28E INV IN = 15.28SW INV OUT = 15.28NW	CB-406	RIM = 20.36 INV OUT = 17.71SE	CB-307	RIM = 22.74 INV IN = 16.15NE INV OUT = 16.15S
CB-7	RIM = 15.24 INV IN = 12.38SE INV IN = 8.68NE INV OUT = 8.68SW	CB-49	RIM = 21.90 INV IN = 18.20NW INV OUT = 18.20SW	CB-85	RIM = 26.71 INV OUT = 23.22NW	CB-119	RIM = 24.07 INV OUT = 20.77N	SDMH-2	RIM = 17.30 INV IN = 10.99NE INV IN = 11.49SW INV IN = 10.99SE INV OUT = 10.99NW	CB-506	RIM = 23.54 INV IN = 15.47NE INV IN = 15.47SE INV OUT = 15.47W	CB-407	RIM = 20.36 INV IN = 17.63NW INV OUT = 17.63SE	CB-308	RIM = 24.20 INV IN = 15.79N INV IN = 20.50E INV OUT = 15.79W
CB-10	RIM = 15.57 INV OUT = 12.33NW	CB-50	RIM = 21.90 INV OUT = 18.41SE	CB-86	RIM = 20.76 INV IN = 13.51W INV OUT = 13.51NE	CB-120	RIM = 24.61 INV IN = 19.35E INV IN = 21.13S INV OUT = 19.35W	O-3A	RIM = 18.91 INV IN = 17.39NW	CB-509	RIM = 23.21 INV OUT = 17.19NE	O-3B	RIM = 19.52 INV IN = 18.00W	CB-309	RIM = 25.98 INV OUT = 22.74S
CB-11	RIM = 15.57 INV IN = 12.22SE INV IN = 9.16NE INV OUT = 9.16SW	CB-51	RIM = 24.27 INV OUT = 19.84SW	CB-87	RIM = 20.58 INV IN = 14.41W INV IN = 15.41S INV OUT = 13.91E	CB-121	RIM = 20.58 INV OUT = 21.34N	CB-510	RIM = 23.54 INV OUT = 16.28NW	CB-310	RIM = 27.75 INV IN = 21.37N INV OUT = 21.36SW	CB-311	RIM = 27.56 INV IN = 20.80NE INV IN = 21.50E INV OUT = 20.80W		
CB-12	RIM = 15.96 INV OUT = 12.72N	CB-52	RIM = 26.94 INV OUT = 16.62SW	CB-88	RIM = 21.91 INV IN = 15.94S INV IN = 18.50W INV OUT = 15.94E	CB-122	RIM = 25.02 INV IN = 19.73E INV IN = 21.41S INV OUT = 19.73W	O-2	RIM = 13.79 INV IN = 12.00S	CB-312	RIM = 29.09 INV OUT = 26.30N	CB-313	RIM = 29.09 INV IN = 26.04S INV OUT = 22.61W		
CB-13	RIM = 15.96 INV IN = 12.61S INV IN = 9.58E INV OUT = 9.58SW	CB-53	RIM = 26.94 INV IN = 16.51NE INV OUT = 16.51NW	CB-89	RIM = 24.13 INV OUT = 20.37E	CB-123	RIM = 25.02 INV OUT = 21.62N	CB-314	RIM = 23.62 INV OUT = 19.20N	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W	O-7	RIM = 16.79 INV IN = 15.00E		
CB-14	RIM = 16.35 INV OUT = 13.11NE	CB-58	RIM = 24.32 INV IN = 10.57SW INV IN = 20.11NW INV OUT = 10.57NE	CB-90	RIM = 21.91 INV IN = 16.07W INV OUT = 16.07N	CB-124	RIM = 25.52 INV IN = 20.23S INV IN = 20.23E INV OUT = 20.23W	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-15	RIM = 16.35 INV IN = 13.00SW INV IN = 10.00SE INV OUT = 10.00W	CB-59	RIM = 24.32 INV OUT = 20.32SE	CB-91	RIM = 24.53 INV IN = 16.68SW INV OUT = 16.68E	CB-125	RIM = 25.51 INV OUT = 20.34N	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-20	RIM = 16.68 INV OUT = 13.24NE	CB-60	RIM = 24.24 INV IN = 11.02SW INV OUT = 11.02NE	CB-92	RIM = 24.72 INV IN = 16.88S INV IN = 19.71W INV OUT = 16.88NE	CB-126	RIM = 21.08 INV IN = 15.62W INV OUT = 15.62E	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-21	RIM = 16.69 INV IN = 13.13SW INV IN = 10.33SE INV OUT = 10.33NW	CB-61	RIM = 23.85 INV IN = 11.30SW INV IN = 20.31NW INV OUT = 11.30NE	CB-93	RIM = 24.72 INV IN = 19.81NW INV OUT = 19.81E	CB-127	RIM = 20.50 INV IN = 16.07SE INV OUT = 16.07N	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-24	RIM = 15.39 INV IN = 11.83NW INV OUT = 11.83SW	CB-62	RIM = 23.86 INV OUT = 20.52SE	CB-94	RIM = 26.83 INV OUT = 22.69SE	CB-128	RIM = 21.16 INV IN = 17.76E INV IN = 17.22S INV OUT = 17.15NW	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-25	RIM = 15.39 INV OUT = 11.94SE	CB-63	RIM = 23.51 INV IN = 11.57SW INV OUT = 11.57NE	CB-99	RIM = 22.51 INV IN = 19.12W INV IN = 17.54S INV OUT = 17.54N	CB-129	RIM = 21.16 INV OUT = 17.96W	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-26	RIM = 17.89 INV IN = 12.73SW INV IN = 12.73NW INV OUT = 12.73NE	CB-64	RIM = 23.11 INV IN = 11.89SE INV IN = 15.88W INV IN = 19.43NW INV OUT = 11.87NE	CB-100	RIM = 22.51 INV OUT = 19.23E	CB-130	RIM = 24.18 INV IN = 20.53E INV IN = 19.78S INV OUT = 19.71N	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-27	RIM = 17.89 INV OUT = 12.94SE	CB-65	RIM = 23.12 INV OUT = 19.63SE	CB-103	RIM = 22.91 INV IN = 17.99S INV IN = 19.39W INV OUT = 17.99N	CB-131	RIM = 24.18 INV OUT = 20.73W	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-28	RIM = 19.68 INV IN = 15.77NW INV OUT = 15.77NE	CB-66	RIM = 22.61 INV IN = 18.91N INV IN = 16.27W INV OUT = 16.27E	CB-104	RIM = 22.91 INV OUT = 19.50E	CB-132	RIM = 26.71 INV IN = 22.67E INV OUT = 22.67N	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-29	RIM = 19.68 INV OUT = 16.18SE	CB-67	RIM = 22.60 INV OUT = 19.12S	CB-105	RIM = 23.24 INV IN = 18.34S INV OUT = 18.34N	CB-133	RIM = 26.71 INV OUT = 23.22W	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-31	RIM = 16.72 INV IN = 11.53SE INV IN = 12.37SW INV OUT = 11.53NW	CB-68	RIM = 22.01 INV IN = 16.73N INV IN = 16.73W INV OUT = 16.73E	CB-106	RIM = 23.51 INV IN = 18.60W INV IN = 18.60SE INV OUT = 18.60N	CB-134	RIM = 25.95 INV IN = 20.60SE INV OUT = 20.60W	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-33	RIM = 20.16 INV IN = 12.46SW INV IN = 12.46SE INV OUT = 12.46NW	CB-69	RIM = 22.01 INV OUT = 16.84S	CB-107	RIM = 23.51 INV IN = 18.71SW INV OUT = 18.71E	CB-135	RIM = 25.89 INV OUT = 20.71NW	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-34	RIM = 22.51 INV IN = 13.21SW INV OUT = 13.21NW	CB-70	RIM = 21.13 INV OUT = 17.49SE	CB-108	RIM = 23.66 INV IN = 18.92W INV IN = 20.18S INV OUT = 18.92NE	DI-1	RIM = 23.01 INV IN = 12.60SE INV OUT = 12.60NW	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-35	RIM = 22.51 INV IN = 15.02W INV OUT = 13.32NE	CB-71	RIM = 21.13 INV IN = 17.39SW INV IN = 17.39NW INV OUT = 17.39NE	CB-109	RIM = 23.66 INV OUT = 20.39N	MH-72	RIM = 21.54 INV IN = 17.15SW INV OUT = 17.15E	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-36	RIM = 20.16 INV OUT = 12.59NE	CB-77	RIM = 22.60 INV OUT = 19.20SE	CB-110	RIM = 22.99 INV IN = 19.09NW INV IN = 19.51S INV OUT = 19.31E	O-1	RIM = 11.08 INV IN = 7.10SE	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						
CB-37	RIM = 16.72 INV OUT = 12.50NE	CB-77A	RIM = 22.59 INV IN = 19.09NW INV OUT = 18.12NE	CB-111	RIM = 22.99 INV OUT = 19.72N	P1-FES	RIM = 7.58 INV IN = 5.25SW	CB-315	RIM = 23.63 INV IN = 19.07E INV IN = 19.07S INV OUT = 19.07W						

3 REVISIONS TO STORMWATER DUE TO THE REMOVAL OF WALKFINDERS ALLEY

1 REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS

Approved Construction Plan

Name: _____ Date: 5/16/16

Planning: _____

Traffic: _____ 5/1/16

Fire: _____ 5/12/16

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

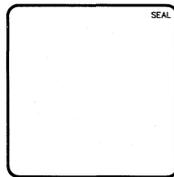
Date: 5/20/16 Permit # 2015034

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

REV. NO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/08/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFINDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	07/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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RIVERLIGHTS
AGE QUALIFIED - PHASE 1

by **NEWLAND COMMUNITIES**

North America Sekisui House, LLC

RIVERLIGHTS
AGE QUALIFIED - PHASE 1

STORM DRAINAGE DETAILS

DATE: 04/15/2015

MCE PROJ. # 02735-0125

DRAWN: EEM/KCBE

DESIGNED: KCBE

CHECKED: NUL

PROJ. MGR: KCBE

SCALE: HORIZONTAL: 1"=50'
VERTICAL: N/A

MAC FILE NUMBER: CG-503

DRAWING NUMBER: 32

REVISION: 4

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

STORM DRAINAGE PIPE DATA TABLE BMP - 1							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
SDMH-2	CB-21	131.74'	24"	RCP	0.50%	10.99'	10.33'
SDMH-1	CB-46	199.69'	36"	RCP	0.50%	10.42'	9.43'
P3-OUT	CB-35	88.08'	15"	RCP	1.00%	15.90'	15.02'
P2-FES	P2-OUT	54.91'	18"	RCP	1.00%	8.70'	9.25'
P1-OUT	P1-FES	63.27'	24"	RCP	2.50%	6.83'	5.25'
MH-72	CB-68	82.13'	18"	RCP	0.51%	17.15'	16.73'
DI-1	CB-64	142.82'	36"	RCP	0.50%	12.60'	11.89'
CB-135	CB-134	21.30'	15"	RCP	0.50%	20.71'	20.60'
CB-134	CB-124	73.08'	15"	RCP	0.50%	20.60'	20.23'
CB-133	CB-132	21.29'	15"	RCP	2.60%	23.22'	22.67'
CB-132	CB-130	111.92'	15"	RCP	2.58%	22.67'	19.78'
CB-131	CB-130	20.15'	15"	RCP	1.00%	20.73'	20.53'
CB-130	CB-128	96.47'	18"	RCP	2.58%	19.71'	17.22'
CB-129	CB-128	20.15'	18"	RCP	1.00%	17.96'	17.76'
CB-128	CB-127	36.18'	18"	RCP	2.99%	17.15'	16.07'
CB-127	CB-87	29.78'	18"	RCP	2.24%	16.07'	15.41'
CB-126	CB-87	98.82'	30"	RCP	1.22%	15.62'	14.41'
CB-125	CB-124	21.41'	15"	RCP	0.51%	20.34'	20.23'
CB-124	CB-122	100.00'	18"	RCP	0.50%	20.23'	19.73'
CB-123	CB-122	21.30'	15"	RCP	1.00%	21.62'	21.41'
CB-122	CB-120	76.72'	18"	RCP	0.50%	19.73'	19.35'
CB-121	CB-120	21.30'	15"	RCP	0.99%	21.34'	21.13'
CB-120	CB-118	108.93'	18"	RCP	0.50%	19.35'	18.81'
CB-119	CB-118	21.22'	18"	RCP	0.99%	20.77'	20.56'
CB-118	CB-106	41.51'	18"	RCP	0.50%	18.81'	18.60'
CB-115	CB-114	21.23'	18"	RCP	0.50%	19.84'	19.73'
CB-114	CB-112	49.04'	18"	RCP	0.50%	19.73'	19.48'
CB-113	CB-112	21.30'	18"	RCP	1.00%	19.78'	19.57'
CB-112	CB-110	55.98'	18"	RCP	0.30%	19.48'	19.31'
CB-111	CB-110	21.30'	18"	RCP	1.00%	19.72'	19.51'
CB-110	CB-108	132.79'	24"	RCP	0.30%	19.31'	18.92'
CB-109	CB-108	21.30'	18"	RCP	1.00%	20.39'	20.18'
CB-108	CB-107	42.12'	24"	RCP	0.50%	18.92'	18.71'
CB-107	CB-106	21.30'	24"	RCP	0.50%	18.71'	18.60'
CB-106	CB-105	52.16'	24"	RCP	0.50%	18.60'	18.34'
CB-105	CB-103	67.56'	24"	RCP	0.51%	18.34'	17.99'
CB-104	CB-103	21.30'	18"	RCP	0.50%	19.50'	19.39'
CB-103	CB-99	87.19'	24"	RCP	0.52%	17.99'	17.54'
CB-100	CB-99	21.33'	18"	RCP	0.50%	19.23'	19.12'
CB-99	CB-92	131.40'	24"	RCP	0.50%	17.54'	16.88'
CB-94	CB-93	43.83'	15"	RCP	6.57%	22.69'	19.81'

STORM DRAINAGE PIPE DATA TABLE BMP - 1							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
CB-93	CB-92	20.15'	15"	RCP	0.50%	19.81'	19.71'
CB-92	CB-91	40.56'	24"	RCP	0.50%	16.88'	16.68'
CB-91	CB-90	120.50'	24"	RCP	0.50%	16.68'	16.07'
CB-90	CB-88	26.30'	24"	RCP	0.50%	16.07'	15.94'
CB-89	CB-88	105.54'	15"	RCP	1.77%	20.37'	18.50'
CB-88	CB-126	64.78'	30"	RCP	0.50%	15.94'	15.62'
CB-87	CB-86	59.33'	36"	RCP	0.67%	13.91'	13.51'
CB-86	CB-80	56.88'	36"	RCP	0.50%	13.51'	13.22'
CB-85	CB-84	25.16'	15"	RCP	0.50%	23.22'	23.10'
CB-84	CB-82	150.27'	15"	RCP	1.86%	23.10'	20.31'
CB-83	CB-82	26.30'	15"	RCP	0.50%	20.44'	20.31'
CB-82	CB-80	135.28'	15"	RCP	2.00%	20.31'	17.60'
CB-81	CB-80	26.30'	18"	RCP	7.57%	16.15'	14.16'
CB-80	(2)DI-2	59.06'	36"	RCP	0.50%	13.22'	12.92'
CB-77A	CB-71	145.87'	18"	RCP	0.50%	18.12'	17.39'
CB-77	CB-77A	20.21'	15"	RCP	0.53%	19.20'	19.09'
CB-71	MH-72	51.68'	18"	RCP	0.47%	17.39'	17.15'
CB-70	CB-71	20.15'	18"	RCP	0.50%	17.49'	17.39'
CB-69	CB-68	21.04'	18"	RCP	0.50%	16.84'	16.73'
CB-68	CB-66	91.75'	18"	RCP	0.50%	16.73'	16.27'
CB-67	CB-66	21.30'	15"	RCP	1.00%	19.12'	18.91'
CB-66	CB-64	78.20'	18"	RCP	0.50%	16.27'	15.88'
CB-65	CB-64	20.15'	15"	RCP	1.00%	19.63'	19.43'
CB-64	CB-63	61.90'	36"	RCP	0.50%	11.87'	11.57'
CB-63	CB-61	53.18'	36"	RCP	0.50%	11.57'	11.30'
CB-62	CB-61	21.48'	15"	RCP	0.98%	20.52'	20.31'
CB-61	CB-60	56.60'	36"	RCP	0.50%	11.30'	11.02'
CB-60	CB-58	90.89'	36"	RCP	0.50%	11.02'	10.57'
CB-59	CB-58	21.30'	15"	RCP	1.00%	20.32'	20.11'
CB-58	SDMH-1	28.28'	36"	RCP	0.50%	10.57'	10.42'
CB-53	CB-48	130.44'	15"	RCP	0.50%	16.51'	15.86'
CB-52	CB-53	21.30'	15"	RCP	0.50%	16.62'	16.51'
CB-51	CB-48	21.30'	15"	RCP	1.00%	19.84'	19.63'
CB-50	CB-49	21.30'	15"	RCP	1.00%	18.41'	18.20'
CB-49	SDMH-1	121.04'	15"	RCP	1.00%	18.20'	16.99'
CB-48	SDMH-1	27.37'	18"	RCP	0.50%	15.86'	15.72'
CB-46	CB-44	84.70'	36"	RCP	0.50%	9.43'	9.00'
CB-45	CB-46	21.30'	15"	RCP	0.50%	16.37'	16.26'
CB-44	CB-4	84.68'	36"	RCP	0.50%	9.00'	8.58'
CB-43	CB-44	21.29'	15"	RCP	0.50%	14.58'	14.47'
CB-37	CB-31	26.14'	18"	RCP	0.50%	12.50'	12.37'

STORM DRAINAGE PIPE DATA TABLE BMP - 1							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
CB-36	CB-33	26.30'	15"	RCP	0.50%	12.59'	12.46'
CB-35	CB-34	21.30'	18"	RCP	0.50%	13.32'	13.21'
CB-34	CB-33	119.53'	18"	RCP	0.63%	13.21'	12.46'
CB-33	CB-31	216.83'	18"	RCP	0.43%	12.46'	11.53'
CB-31	SDMH-2	104.46'	24"	RCP	0.52%	11.53'	10.99'
CB-29	CB-28	21.30'	18"	RCP	1.92%	16.18'	15.77'
CB-28	CB-26	159.46'	18"	RCP	1.90%	15.77'	12.73'
CB-27	CB-26	21.30'	18"	RCP	1.00%	12.94'	12.73'
CB-26	SDMH-2	49.79'	18"	RCP	2.50%	12.73'	11.49'
CB-25	CB-24	26.30'	18"	RCP	0.40%	11.94'	11.83'
CB-24	SDMH-2	168.62'	18"	RCP	0.50%	11.83'	10.99'
CB-21	CB-15	65.50'	24"	RCP	0.50%	10.33'	10.00'
CB-20	CB-21	21.17'	18"	RCP	0.50%	13.24'	13.13'
CB-15	CB-13	84.25'	24"	RCP	0.50%	10.00'	9.58'
CB-14	CB-15	21.30'	18"	RCP	0.50%	13.11'	13.00'
CB-13	CB-11	84.92'	24"	RCP	0.50%	9.58'	9.16'
CB-12	CB-13	21.24'	18"	RCP	0.50%	12.72'	12.61'
CB-11	CB-7	94.48'	30"	RCP	0.50%	9.16'	8.68'
CB-10	CB-11	21.26'	18"	RCP	0.50%	12.33'	12.22'
CB-7	CB-2	40.27'	30"	RCP	0.50%	8.68'	8.48'
CB-6	CB-7	21.30'	18"	RCP	0.50%	12.49'	12.38'
CB-5	CB-4	21.30'	15"	RCP	0.50%	13.15'	13.04'
CB-4	CB-2	117.67'	36"	RCP	0.50%	8.58'	7.99'
CB-2	O-1	171.55'	42"	RCP	0.52%	7.99'	7.10'
(2)DI-2	DI-1	64.82'	36"	RCP	0.50%	12.92'	12.60'

STORM DRAINAGE PIPE DATA TABLE BMP - 2							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
CB-510	CB-506	26.31'	15"	RCP	3.09%	16.28'	15.47'
CB-509	CB-505	21.27'	18"	RCP	8.96%	17.19'	15.28'
CB-508	CB-505	40.52'	15"	RCP	0.48%	15.47'	15.28'
CB-505	CB-504	145.76'	18"	RCP	0.50%	15.28'	14.55'
CB-504	O-2	51.83'	18"	RCP	4.92%	14.55'	12.00'
CB-503	CB-504	21.30'	15"	RCP	1.00%	16.55'	16.34'
CB-502	CB-504	198.00'	18"	RCP	1.96%	18.44'	14.55'
CB-501	CB-502	21.30'	18"	RCP	0.50%	18.55'	18.44'
CB-506	CB-506	42.10'	15"	RCP	0.50%	15.68'	15.47'

STORM DRAINAGE PIPE DATA TABLE BMP - 3							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
O-3A	CB-407	76.68'	15"	RCP	0.31%	17.63'	17.39'
CB-407	CB-406	26.30'	15"	RCP	0.30%	17.71'	17.63'
CB-405	O-3B	46.62'	15"	RCP	2.32%	18.00'	19.08'
CB-404	CB-405	26.30'	15"	RCP	2.31%	19.08'	19.68'
CB-402	CB-404	254.75'	15"	RCP	2.31%	19.68'	25.56'
CB-401	CB-402	26.29'	15"	RCP	2.30%	25.56'	26.17'

STORM DRAINAGE PIPE DATA TABLE BMP - 7							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
CB-315	CB-305	165.75'	15"	RCP	1.11%	19.07'	17.23'
CB-314	CB-315	26.30'	15"	RCP	0.50%	19.20'	19.07'
CB-313	CB-311	81.00'	15"	RCP	1.37%	22.61'	21.50'
CB-312	CB-313	26.30'	15"	RCP	1.00%	26.30'	26.04'
CB-311	CB-315	143.00'	15"	RCP	1.21%	20.80'	19.07'
CB-310	CB-311	41.51'	15"	RCP	1.37%	21.36'	20.80'
CB-309	CB-310	100.55'	15"	RCP	1.37%	22.74'	21.37'
CB-308	O-7	108.37'	18"	RCP	0.73%	15.79'	15.00'
CB-307	CB-308	72.54'	15"	RCP	0.50%	16.15'	15.79'
CB-306	CB-307	112.29'	15"	RCP	0.50%	16.71'	16.15'
CB-305	CB-306	56.83'	15"	RCP	0.92%	17.23'	16.71'
CB-304	CB-305	66.28'	15"	RCP	0.34%	17.46'	17.23'
CB-302	CB-308	47.30'	15"	RCP	0.85%	20.90'	20.50'

3 REVISIONS TO STORMWATER DUE TO REMOVAL OF WALKFINDERS ALLEY

1 REVISIONS TO STORMWATER AND SANITARY SEWER RIM ELEVATIONS

Approved Construction Plan

Name: *[Signature]* Date: 5/11/16

Planning: *[Signature]* 5-11-16

Traffic: *[Signature]* 5-11-16

Fire: *[Signature]* 5-12-16

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 5/29/16 Permit # 301503421

Signed: *[Signature]*

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

REV. NO.	DESCRIPTION	DATE
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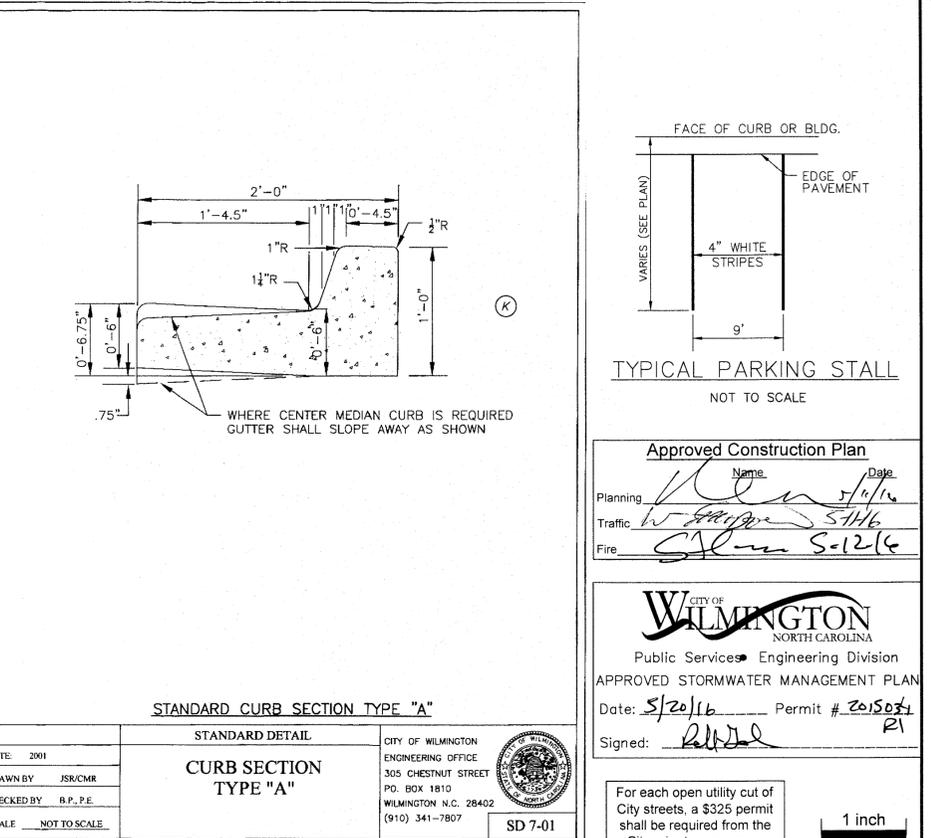
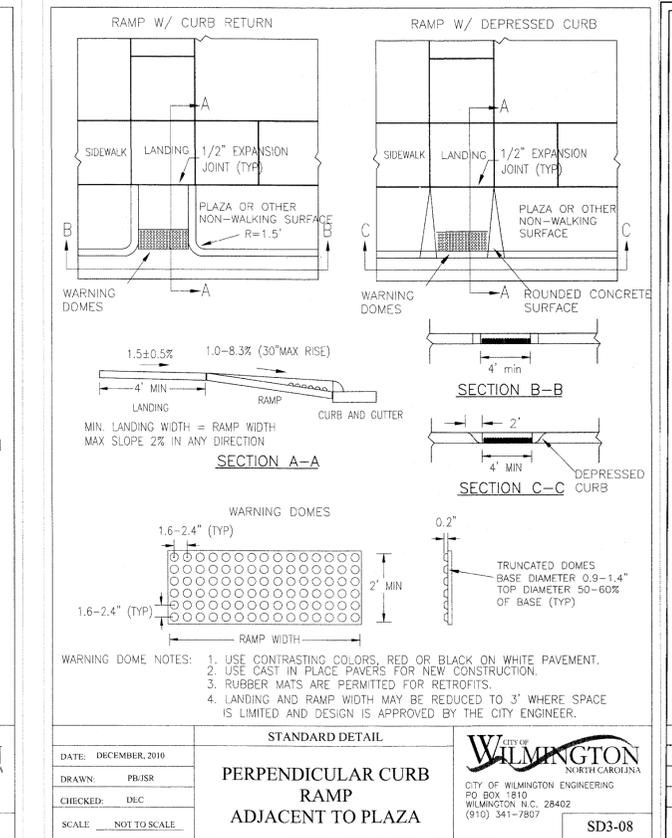
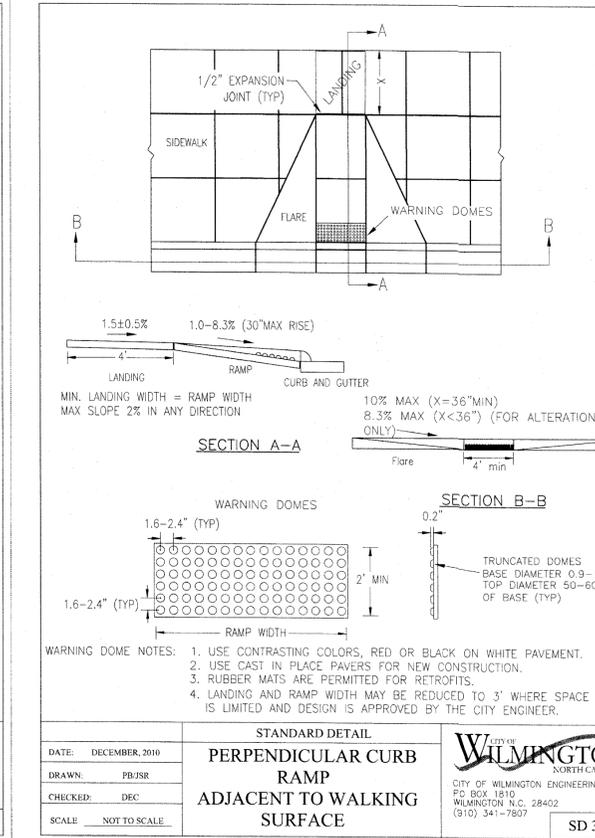
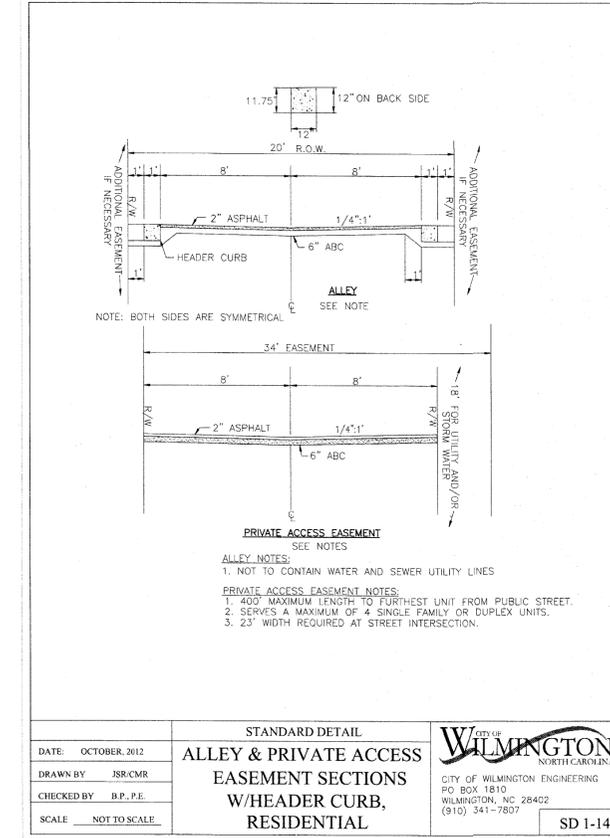
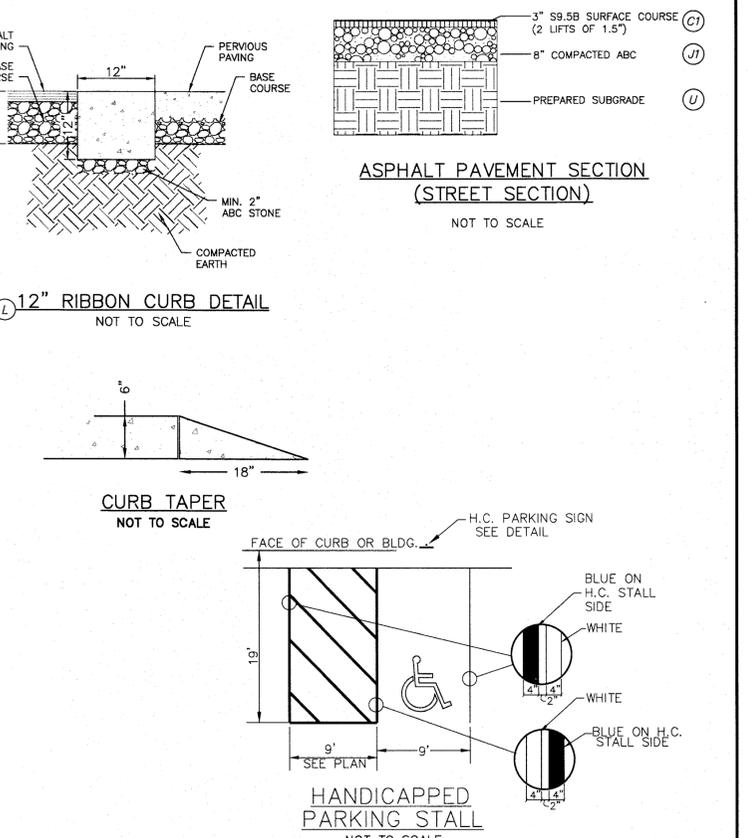
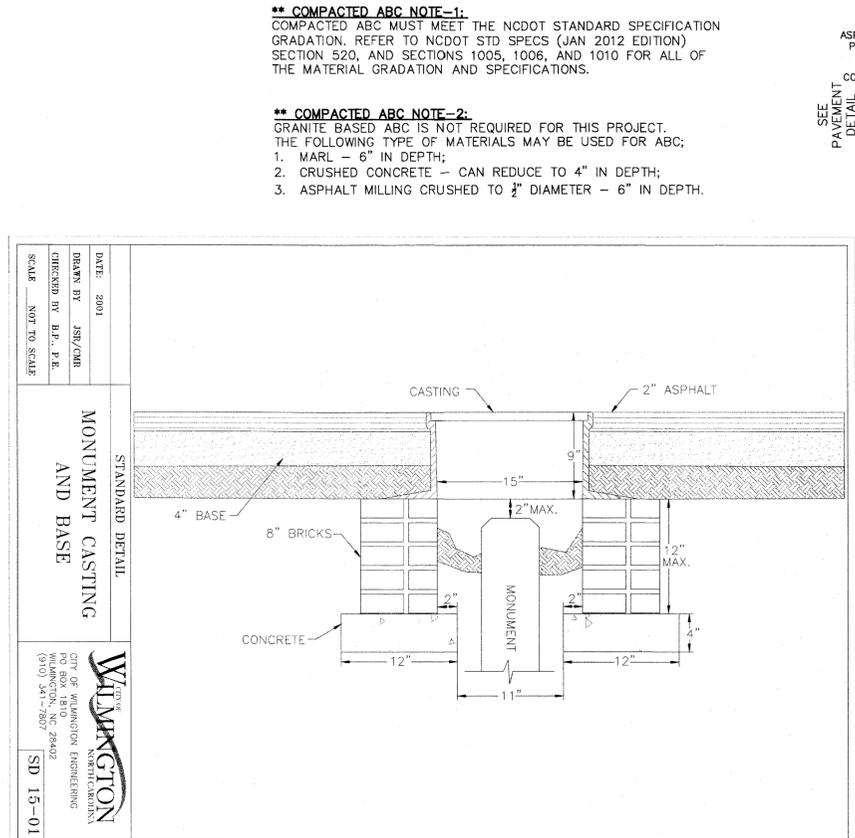
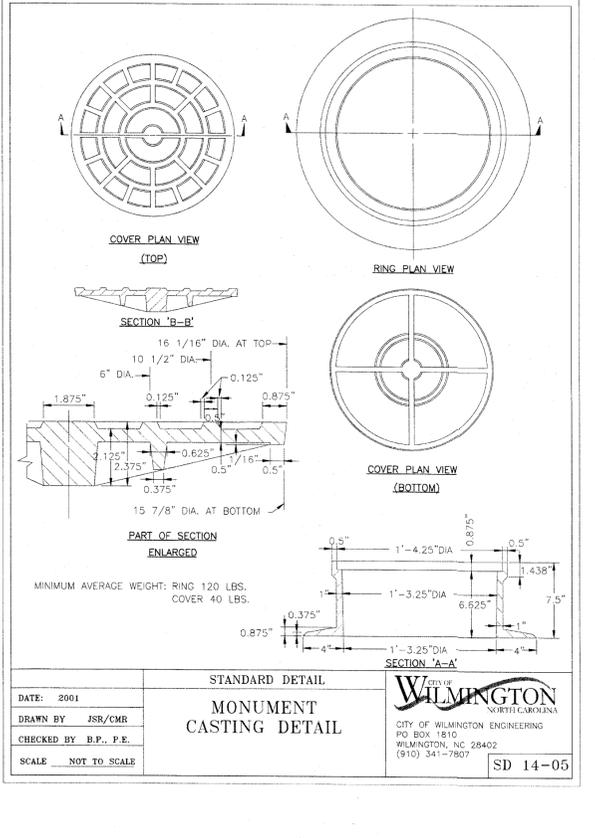
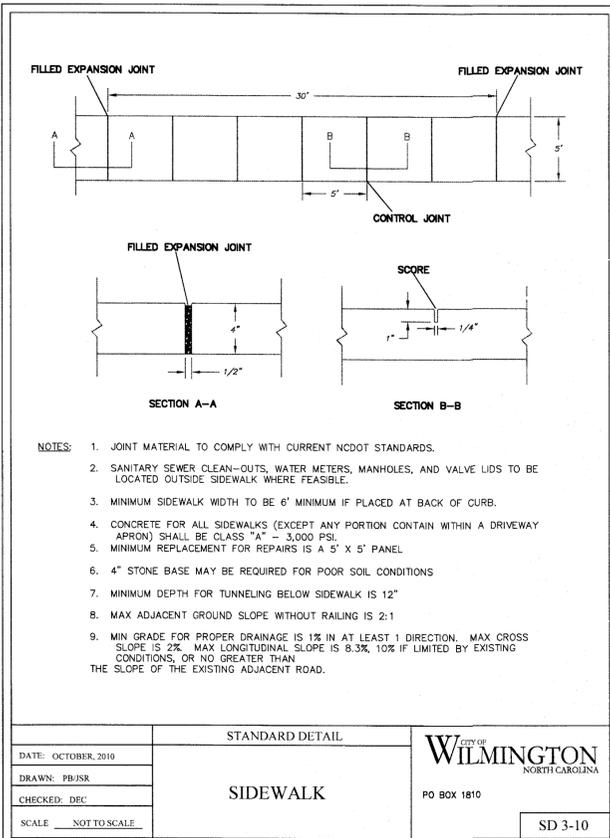
RIVERLIGHTS
by Newland COMMUNITIES

NASH NORTH AMERICA SENIUS HOUSE, LLC

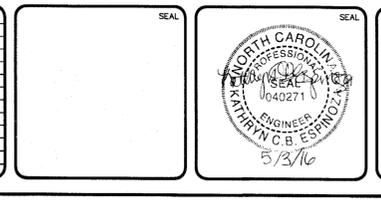
**RIVERLIGHTS
AGE QUALIFIED - PHASE 1**

STORM DRAINAGE DETAILS

DATE: 04/15/2015
MCE PROJ # 02735-0125
DRAWN: EEM/KCBE
DESIGNED



REVNO.	DESCRIPTIONS REVISIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKING ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



MCKIM & CREED
 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

RIVERLIGHTS
 by Newland COMMUNITIES
 NORTH AMERICA SENSUS HOUSE, LLC

RIVERLIGHTS AGE QUALIFIED - PHASE 1
SITE PLAN DETAILS

DATE: 2015-04-15
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NAL
 PROJ. MGR.: KCBE

SCALE: HORIZONTAL: N/A
 VERTICAL: N/A

MAC FILE NUMBER: CS-501
 DRAWING NUMBER: 34

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

REVISION: 4

Approved Construction Plan

Planning: [Signature]
 Traffic: [Signature]
 Fire: [Signature]

CITY OF WILMINGTON NORTH CAROLINA
 Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 201507
 Signed: [Signature]

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

GENERAL NOTES

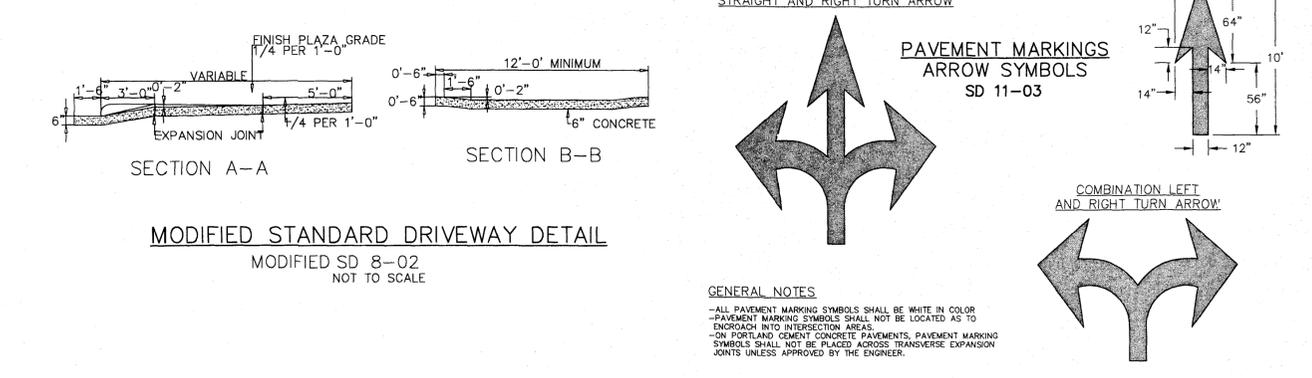
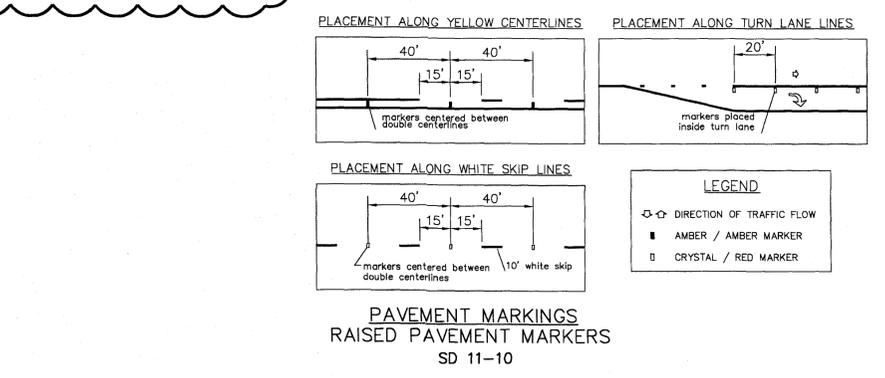
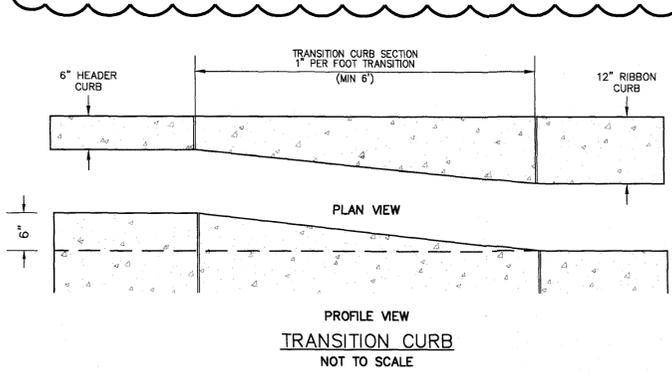
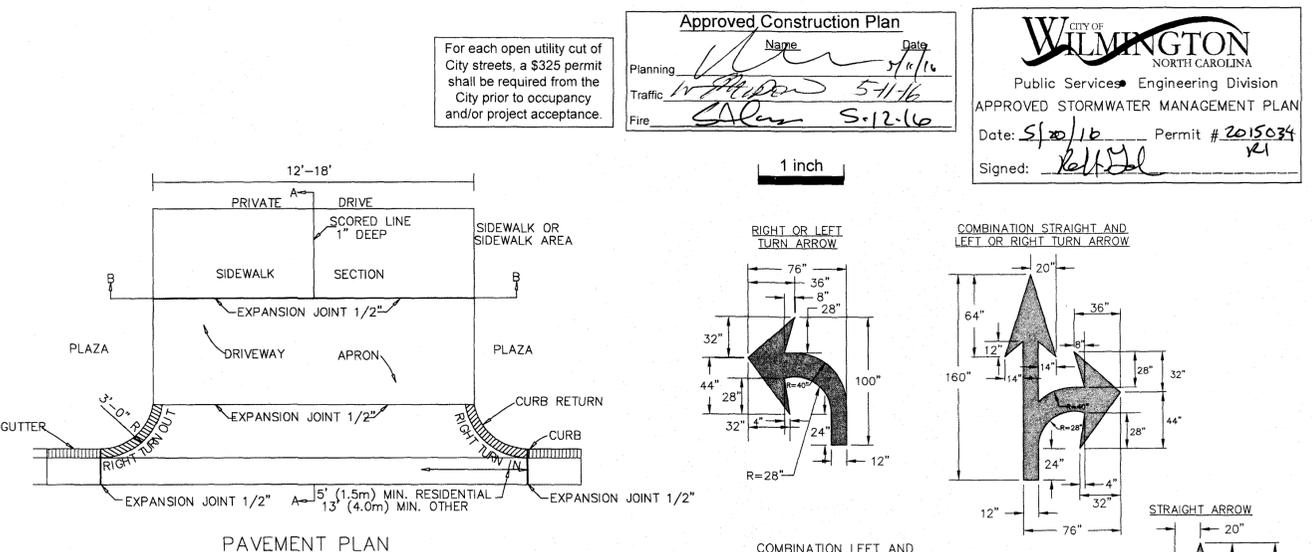
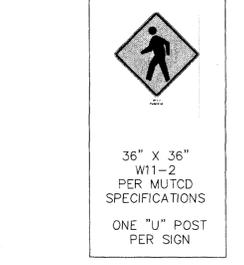
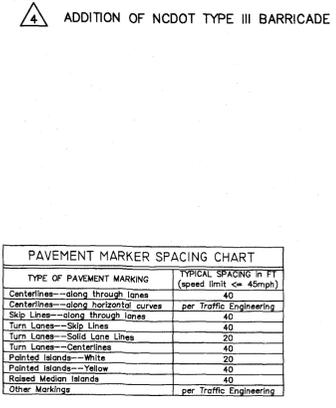
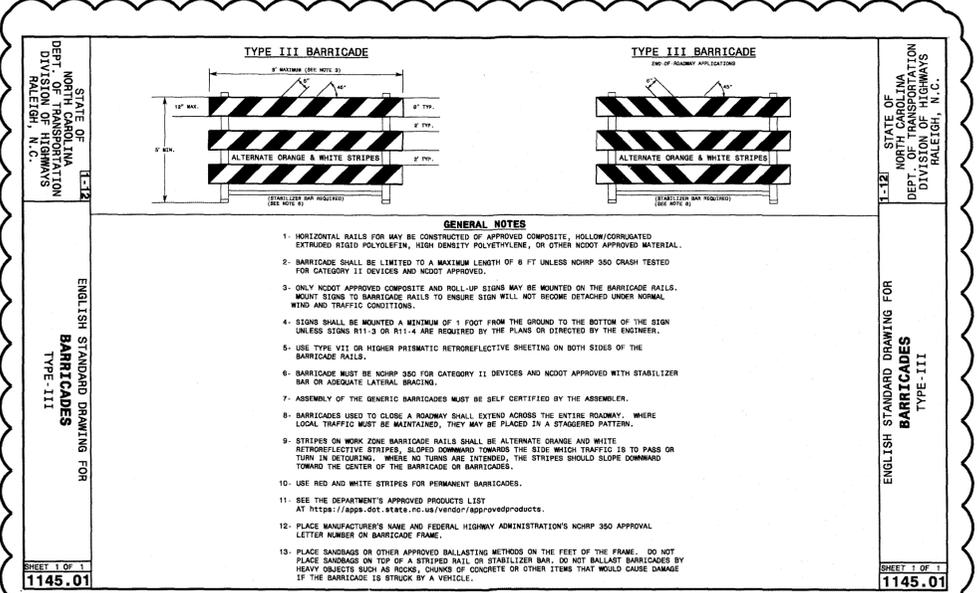
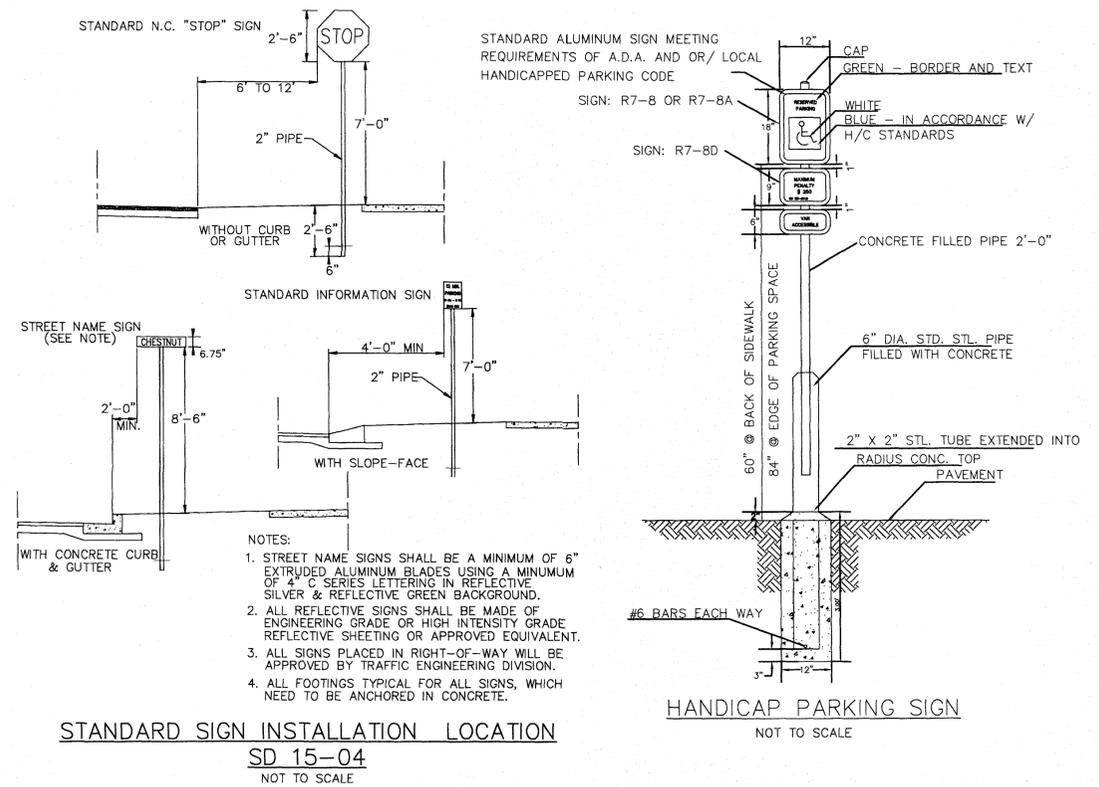
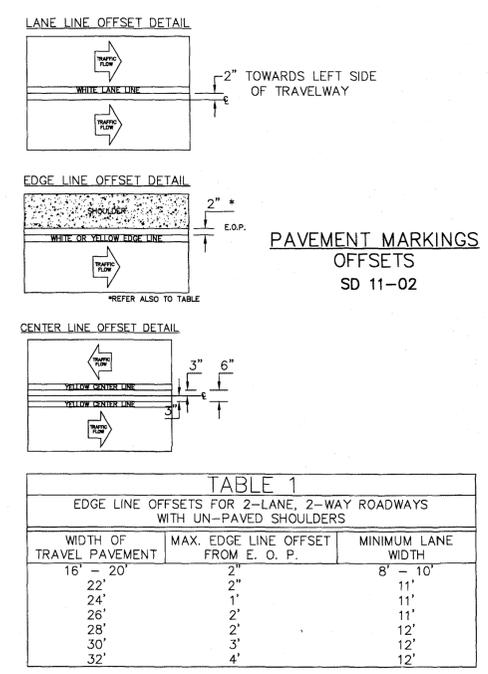
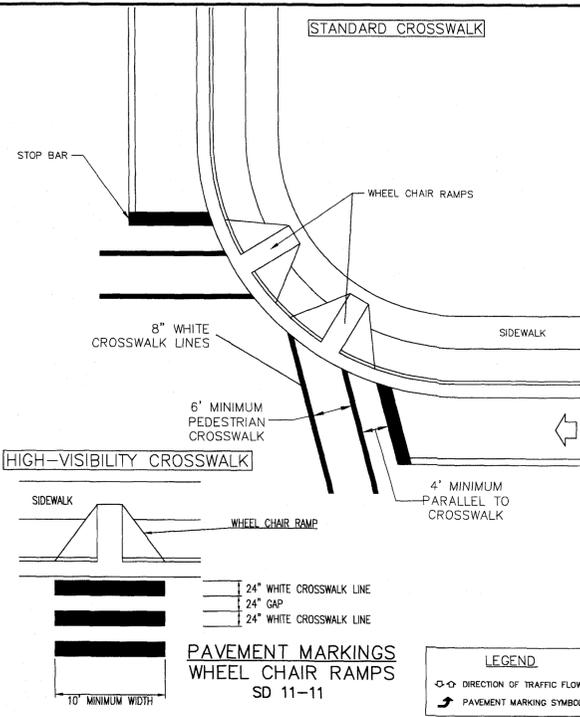
1. IN ACCORDANCE WITH N.C.G.S. 136-44.14, ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED SHALL PROVIDE WHEELCHAIR RAMP FOR THE PHYSICALLY HANDICAPPED ON EACH SIDE OF ANY STREET OR ROAD, WHERE CURBS AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
2. WHEELCHAIR RAMP SHALL BE LOCATED AS INDICATED IN DETAIL DRAWINGS; HOWEVER, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
3. CURB RAMPS SHALL HAVE DETECTABLE WARNINGS EXTENDING THE FULL WIDTH OF THE RAMP AND A MINIMUM OF 2'-FT. IN LENGTH.

CONSTRUCTION NOTES

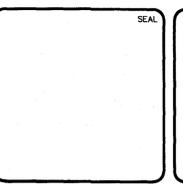
1. CONSTRUCTION SHALL CONFORM WITH CONSTRUCTION STANDARDS OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.
2. WHEELCHAIR RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
3. A 1/2-IN. EXPANSION JOINT SHALL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
4. IN NO CASE SHALL THE WIDTH OF A CURB RAMP OR CURB CUT BE LESS THAN 40-IN. (3'-FT, 4-IN.), NOT INCLUDING THE FLARED SIDES.
5. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
6. THE MAXIMUM SLOPE ON THE CURB RAMP RUN IS 1:12.
7. THE MAXIMUM CROSS SLOPE OF THE CURB RAMP IS 1:50.
8. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
9. ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48-IN. LONG BETWEEN THE CURB RAMPS.
10. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9-IN., A HEIGHT OF NOMINAL 0.2-IN. AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35-IN. AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

ADDITIONAL NOTES

1. STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT.
2. PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF THE PEDESTRIAN CROSSWALK.
3. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. THIS DOCUMENT IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402.
4. CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
5. THE BOTTOM OF DIAGONAL (CORNER TYPE) CURB RAMPS AT MARKED CROSSINGS SHALL HAVE 48-IN. MINIMUM CLEAR SPACE WITHIN THE MARKINGS.
6. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THEY SHALL HAVE AT LEAST A 24-IN. LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING.



REVNO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKWAY ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/29/2016
1	DRAINING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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RIVERLIGHTS
 NORTH AMERICA SEKISUI HOUSE, LLC
 Newland COMMUNITIES

RIVERLIGHTS AGE QUALIFIED - PHASE 1
SITE PLAN DETAILS

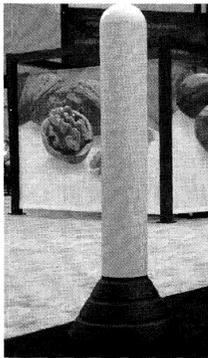
DATE: 04/15/2016
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NJL
 PROJ. MGR.: KCBE

SCALE: HORIZONTAL: N/A
 VERTICAL: N/A

MAC FILE NUMBER: CS-502
 DRAWING NUMBER: 35

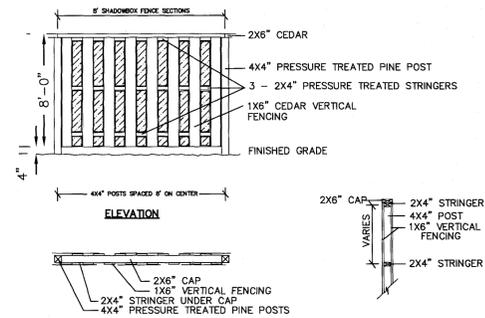
STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

REVISION: 4



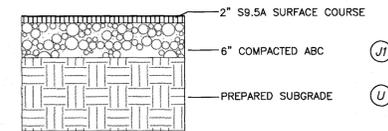
TEMPORARY BOLLARD DETAIL
NOT TO SCALE

NOTE: RUBBERFORM HEAVY DUTY PORTABLE RUBBER BASE BOLLARD OR APPROVED EQUAL

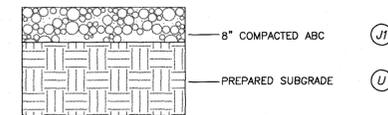


SHADOWBOX FENCE DETAIL
NOT TO SCALE

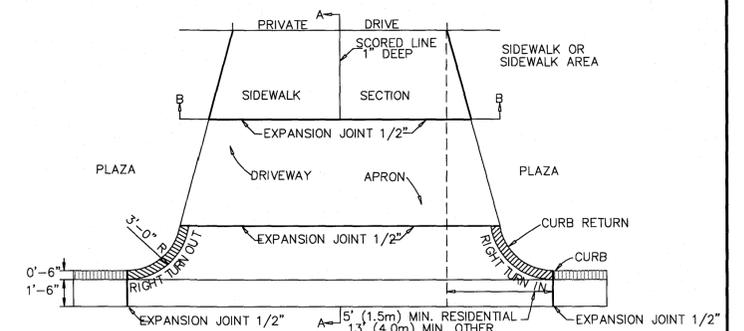
NOTE: FOUNDATIONS FOR THE FENCE POSTS SHALL BE DESIGNED BY THE FENCE CONTRACTOR



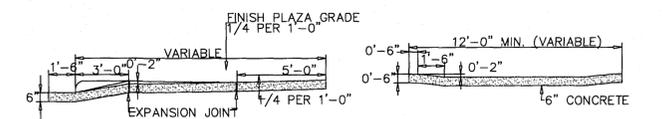
ASPHALT PAVEMENT SECTION
(PARKING LOT)
NOT TO SCALE



GRAVEL TURN-A-ROUND SECTION
NOT TO SCALE



PAVEMENT PLAN



SECTION A-A

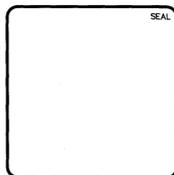
SECTION B-B

STANDARD DRIVEWAY DETAIL

SD 8-02
NOT TO SCALE

Approved Const. Plan
Name: _____ Date: 10/12/16
Planning: _____
E.g. Traffic: _____
Fire: _____

REV.	DESCRIPTION	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKINGERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.
4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
SALES CENTER/FUTURE PRIVATE
RECREATIONAL FACILITY SITE PLAN
DETAILS

DATE:	07/11/2015
MCE PROJ. #	02735-0125
DRAWN	EEM/KCBE
DESIGNED	KCBE
CHECKED	NJL
PROJ. MGR.	KCBE

SCALE	HORIZONTAL:	VERTICAL:
	N/A	N/A

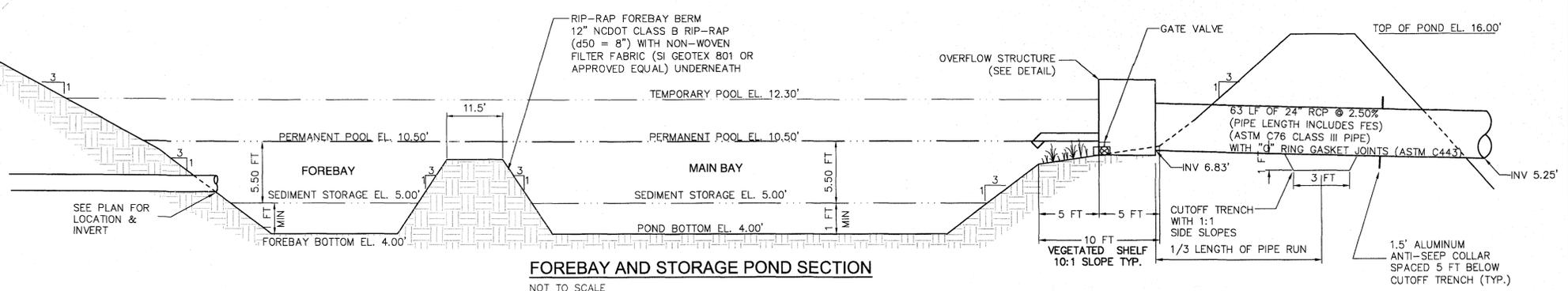
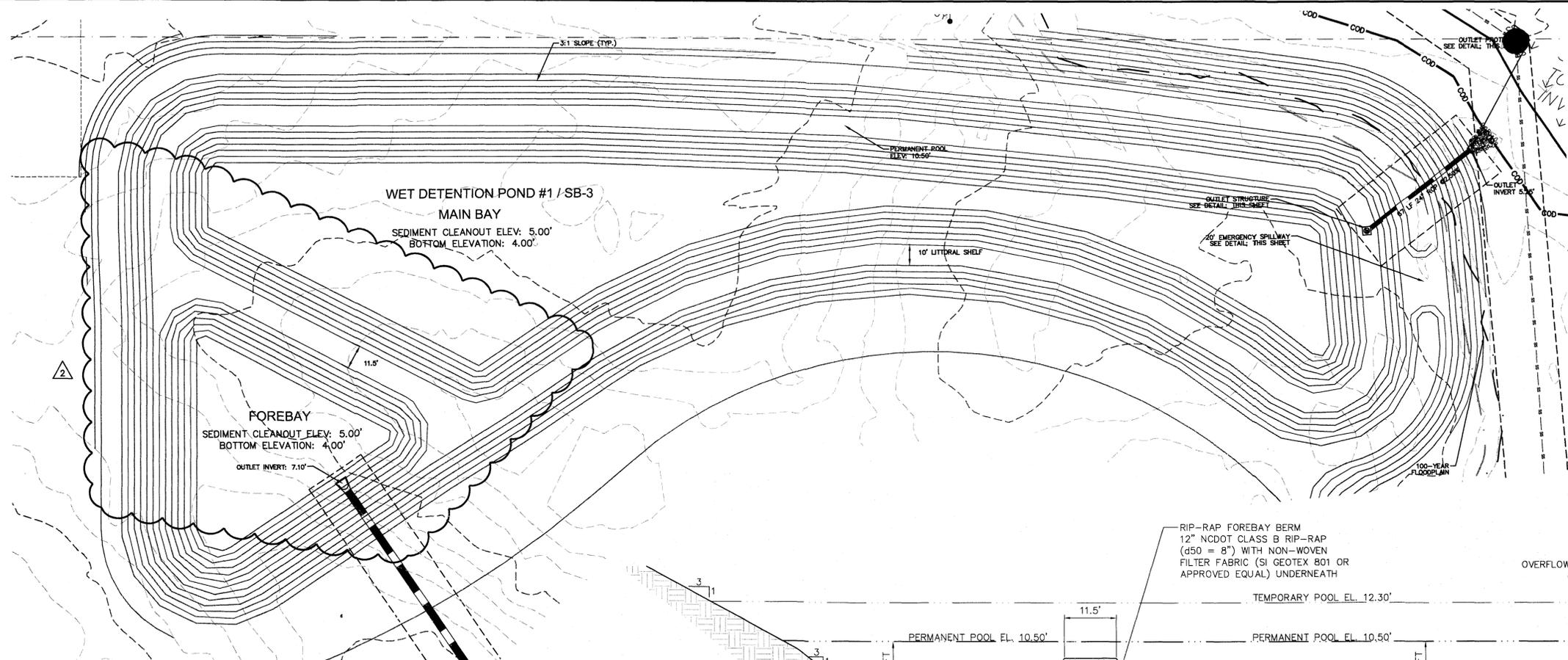
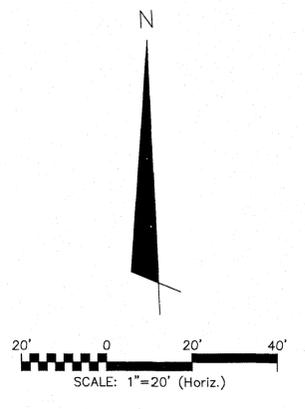
M&C FILE NUMBER	CS-503
DRAWING NUMBER	355C

STATUS: **FINAL DESIGN**
ISSUED FOR CONSTRUCTION
REVISION 5

Approved Construction Plan
 Name: _____ Date: _____
 Planning: _____ 5/11/16
 Traffic: _____ 5-11-16
 Fire: _____ 5-12-16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 20160312
 Signed: [Signature]

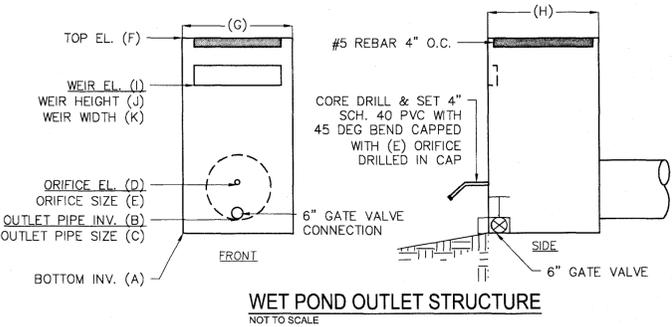
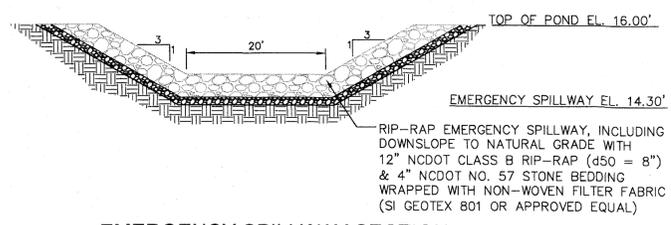
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



2 GRADING REVISIONS TO STORMWATER BMPS

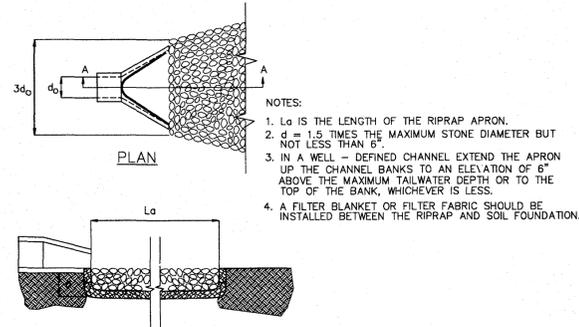
- WET DETENTION POND NOTES**
- TEMPORARY PUMP WILL BE PROVIDED BY OWNER TO DRAIN POND/FOREBAY FOR ROUTINE MAINTENANCE OR IN AN EMERGENCY.
 - SOD SLOPES ABOVE THE PERMANENT POOL AROUND THE INSIDE OF THE FOREBAY, ABOVE THE VEGETATED SHELF AROUND THE MAIN BAY AND SLOPES OUTSIDE OF THE POND.
 - CONTRACTOR SHALL EXCAVATE VEGETATED SHELF AS NECESSARY TO PROVIDE ADEQUATE CLEARANCE AROUND RISER FOR PVC PIPE INVERT.
 - THE SEASONAL HIGH WATER TABLE WAS FOUND TO BE ~ EL. 10.94 IN THE MAIN BAY OF THE WET DETENTION POND.

- GENERAL NOTES**
- CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES.
 - THE IMPROVEMENTS SHOWN ON THIS SITE PLAN CANNOT DEVIATE FROM THE PLAN ONCE APPROVED WITHOUT WRITTEN APPROVAL OF ENGINEER.
 - SITE WILL REQUIRE A COUNTY EROSION CONTROL PERMIT AND CITY STORMWATER PERMIT.
 - IMPERVIOUS AREA SHALL DRAIN TO PROPOSED CITY PERMITTED STORMWATER POND.



WET POND OUTLET STRUCTURE	
WET POND 1	
A	6.83'
B	6.83'
C	24" RCP
D	10.5'
E	3.00"
F	14.30
G	4'
H	4'
I	12.30'
J	2"
K	4"

OUTLET PROTECTION	
OUTLET PIPE DIA.	24"
OUTLET FLOW RATE	1.19 CFS
OUTLET VELOCITY	5.20 FT/S
MATERIAL	CLASS A
LENGTH	8'
WIDTH	6'
STONE DIA.	3"
THICKNESS	9"



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RIVERLIGHTS
 Newland by COMMUNITIES
 NORTH AMERICA SERVISUI HOUSE, LLC

RIVERLIGHTS
 AGE QUALIFIED - PHASE 1
STORMWATER MANAGEMENT DETAILS

DATE: 04/15/2016
 MCE PROJ. #: 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: N/L
 PROJ. MGR.: KCBE

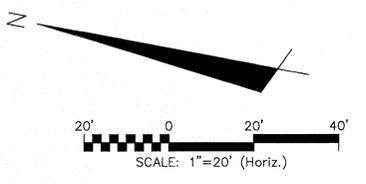
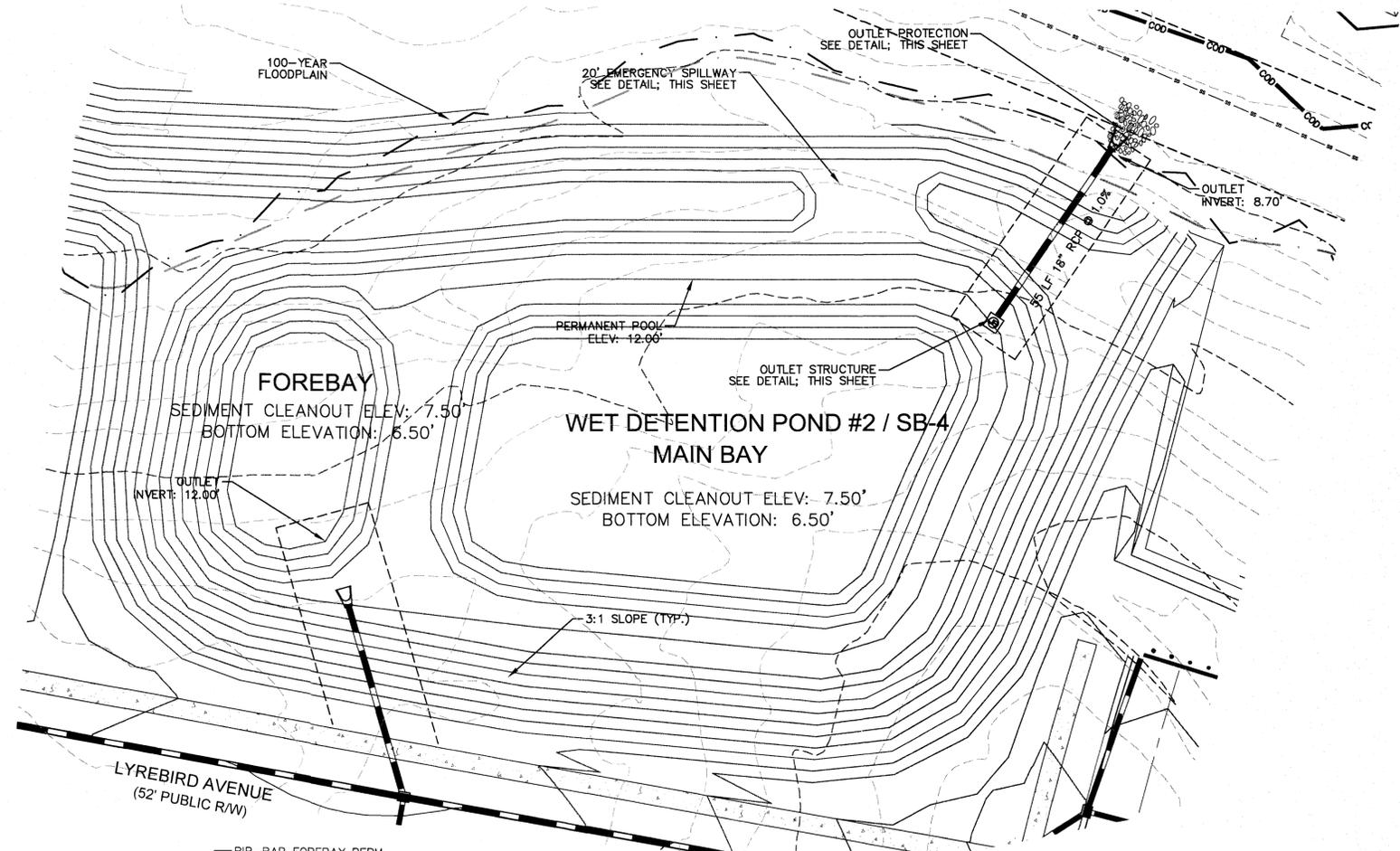
SCALE: HORIZONTAL: 1"=30' VERTICAL: N/A

MAC FILE NUMBER: CN-501
 DRAWING NUMBER: 42

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

REVISION: 4

REVNO.	DESCRIPTIONS REVISIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKPONDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015

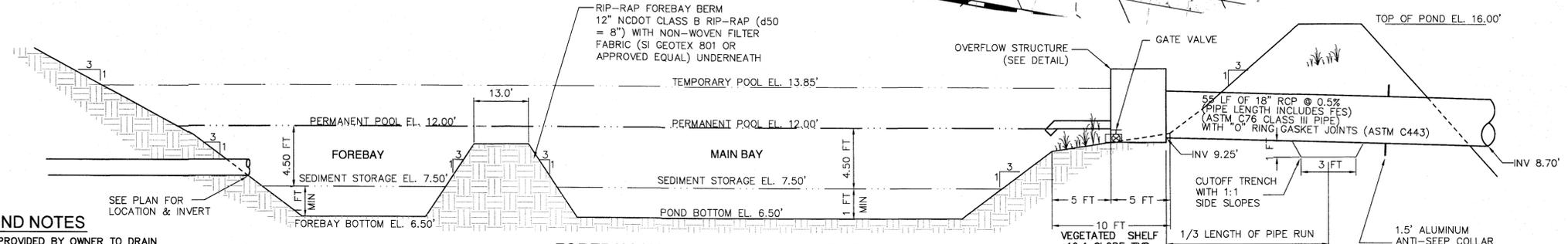


Approved Construction Plan
 Name: [Signature] Date: 5/16/16
 Planning: [Signature] 5/11/16
 Traffic: [Signature] 5-11-16
 Fire: [Signature] 5-12-16

WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 201503312
 Signed: [Signature]

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

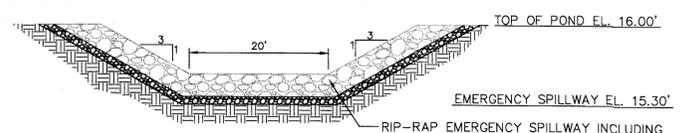


WET DETENTION POND NOTES

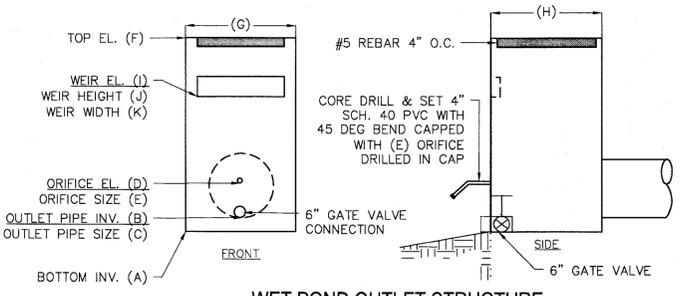
- TEMPORARY PUMP WILL BE PROVIDED BY OWNER TO DRAIN POND/FOREBAY FOR ROUTINE MAINTENANCE OR IN AN EMERGENCY.
- SOD SLOPES ABOVE THE PERMANENT POOL AROUND THE INSIDE OF THE FOREBAY, ABOVE THE VEGETATED SHELF AROUND THE MAIN BAY AND SLOPES OUTSIDE OF THE POND.
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- THE SEASONAL HIGH WATER TABLE WAS FOUND TO BE ~ EL. 11.87 IN THE MAIN BAY OF THE WET DETENTION POND.

GENERAL NOTES

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- THE IMPROVEMENTS SHOWN ON THIS SITE PLAN CANNOT DEVIATE FROM THE PLAN ONCE APPROVED WITHOUT WRITTEN APPROVAL OF ENGINEER.
- SITE WILL REQUIRE A COUNTY EROSION CONTROL PERMIT AND CITY STORMWATER PERMIT.
- IMPERVIOUS AREA SHALL DRAIN TO PROPOSED CITY PERMITTED STORMWATER POND.

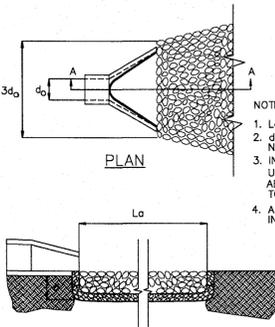


EMERGENCY SPILLWAY SECTION
NOT TO SCALE



WET POND OUTLET STRUCTURE
NOT TO SCALE

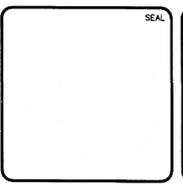
WET POND OUTLET STRUCTURE	
WET POND 2	
A	9.25'
B	9.25'
C	18" RCP
D	12.00'
E	1.75"
F	14.80'
G	3'
H	3'
I	13.85'
J	3"
K	6"



PIPE OUTLET PROTECTION	
OUTLET PIPE DIA.	18"
OUTLET FLOW RATE	0.203 CFS
OUTLET VELOCITY	1.8 FT/S
MATERIAL	CLASS A
LENGTH	6'
WIDTH	4.5'
STONE DIA.	3"
THICKNESS	9"

PIPE OUTLET PROTECTION
NOT TO SCALE

REV.	DESCRIPTION	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF MAILBOXES ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	03/02/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/28/2015



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RIVERLIGHTS
 by Newland COMMUNITIES
 NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS
 AGE QUALIFIED - PHASE 1
STORMWATER MANAGEMENT DETAILS

DATE: 04/15/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NAL
 PROJ. MGR.: KCBE

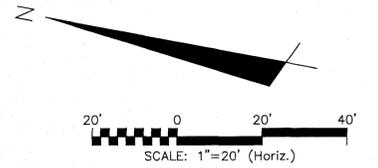
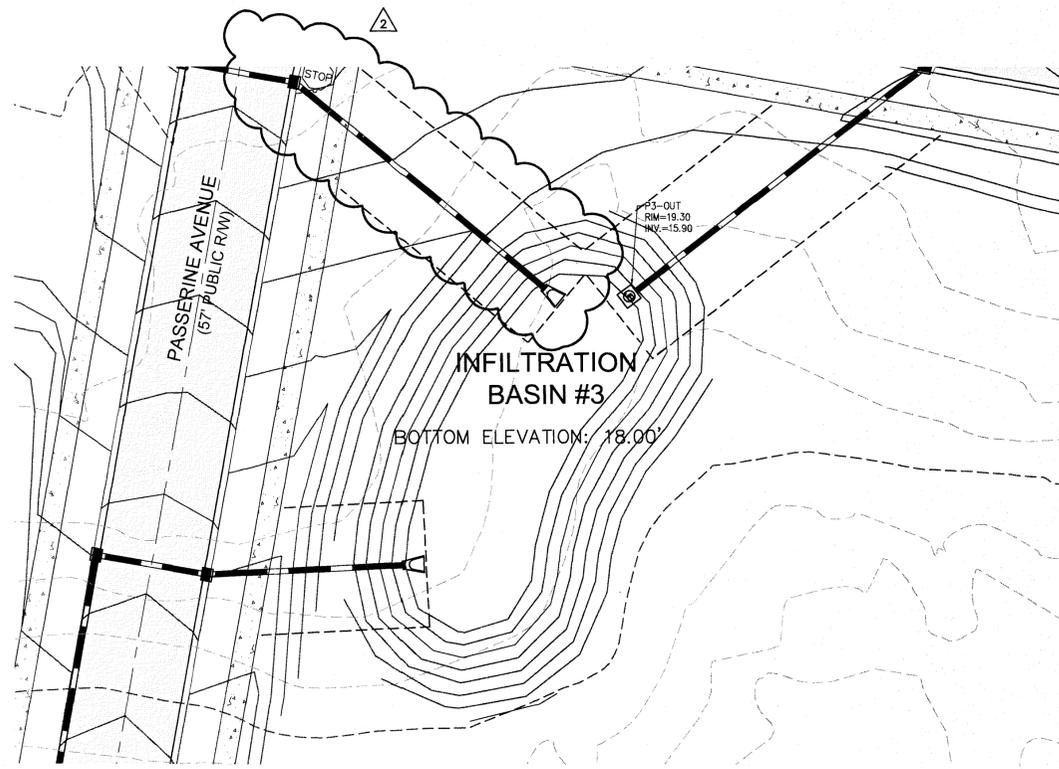
SCALE: HORIZONTAL: 1"=20' VERTICAL: N/A

M&C FILE NUMBER: CN-502
 DRAWING NUMBER: 43

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

REVISION: 4

△ REVISIONS TO GRADING AND STORMWATER NETWORK

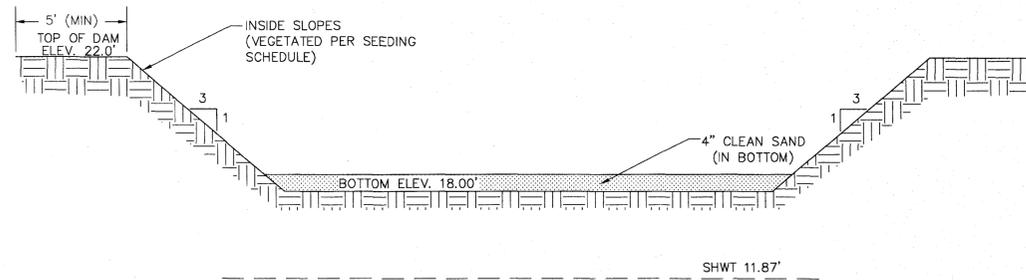


Approved Construction Plan	
Name	Date
Planning	5/11/16
Traffic	5/11/16
Fire	5/12/16

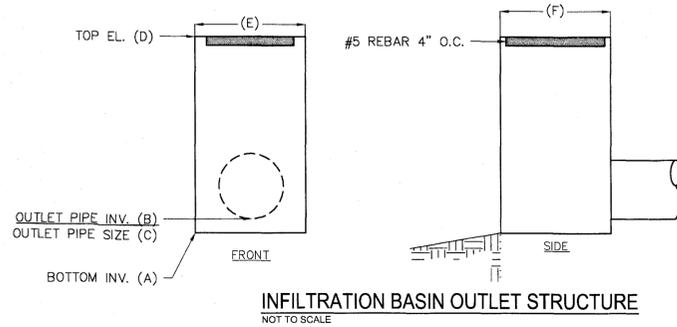
CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 5/20/16 Permit # 2015031821
Signed: *[Signature]*

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



INFILTRATION BASIN
NOT TO SCALE



INFILTRATION BASIN OUTLET STRUCTURE
NOT TO SCALE

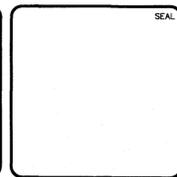
INFILTRATION OUTLET STRUCTURE	
INFILTRATION BASIN 3	
A	15.90'
B	15.90'
C	15" RCP
D	19.30'
E	2'
F	2'

NOTES

1. THE ENTIRE INFILTRATION BASIN SHALL BE SEEDING PER THE SEEDING SCHEDULE IMMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION.
2. THE BOTTOM SHALL BE OVEREXCAVATED 4" AND BACKFILLED WITH CLEAN SAND TO THE BOTTOM ELEVATION SPECIFIED.
3. IF HARDPAN OR OTHER UNSUITABLE SOILS ARE ENCOUNTERED, OVEREXCAVATE THE BOTTOM A MINIMUM OF 2' AND BACKFILL WITH ENGINEER APPROVED SANDY SOIL MATERIAL.
4. IF THE BASIN IS USED AS AN EROSION CONTROL DEVICE, THE BOTTOM MUST BE COMPLETELY CLEANED OUT, OVEREXCAVATED 6" AND BACKFILLED WITH AN ENGINEER APPROVED SANDY SOIL MATERIAL.
5. 50-YR DISCHARGE THROUGH WEIR ASSUMING THE BASIN WILL NOT INFILTRATE.

WEIR EQUATION: $Q_{50} = C \cdot L \cdot h^{3/2}$
 $Q_{50} = 8.278cfs = 3.0 \cdot 8.0ft \cdot h^{3/2}$
 $h = 0.492' = 5.90"$

REV. NO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKPONDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/20/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015

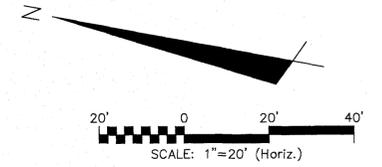
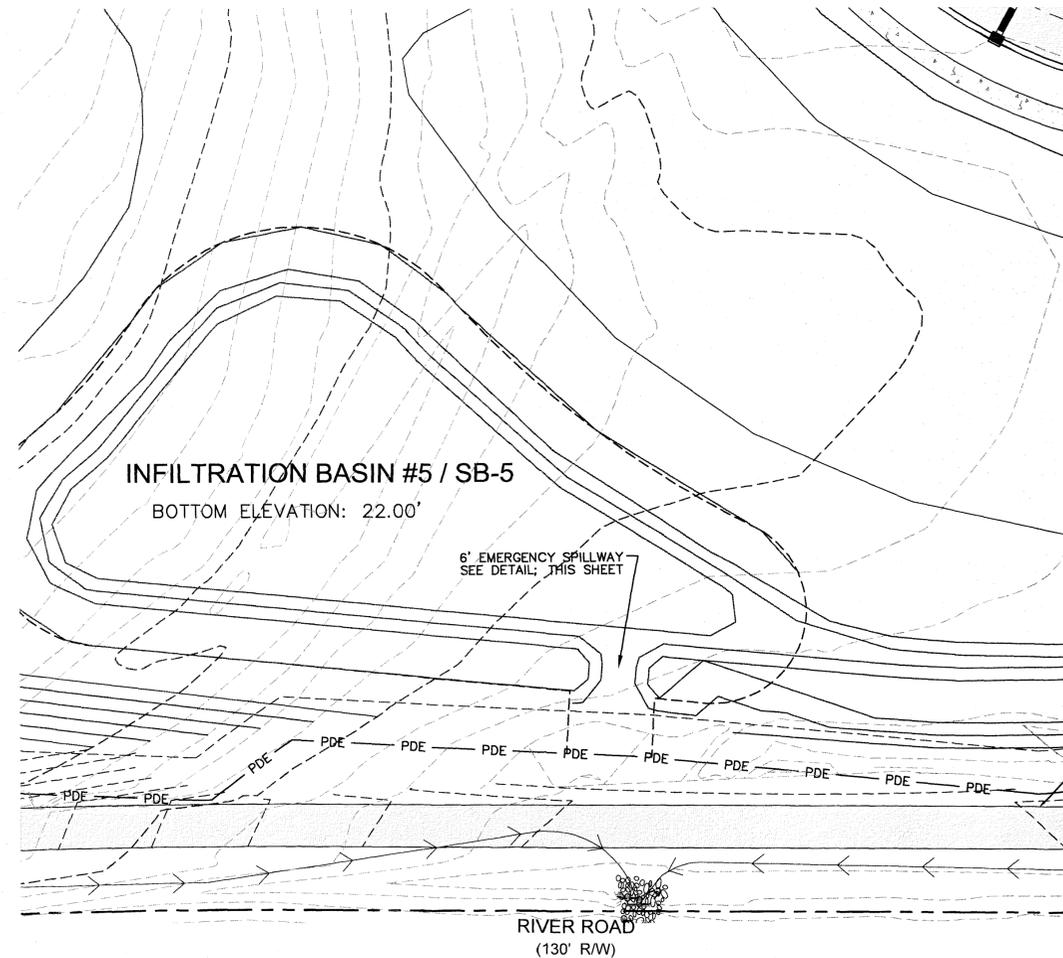


MCKIM & CREED
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License: F-1222
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RIVERLIGHTS™
by Newland COMMUNITIES
NASH NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
STORMWATER MANAGEMENT DETAILS

DATE: 04/15/2015	SCALE: N/A	SAC FILE NUMBER: CN-503
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=20'	DRAWING NUMBER: 44
DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: N.J.		
PROJ. MGR.: KCBE		
STATUS: FINAL DESIGN		REVISION: 4
ISSUED FOR CONSTRUCTION		



Approved Construction Plan

Name: _____ Date: _____

Planning: _____ 5/4/16

Traffic: _____ 5-11-16

Fire: _____ 5.12.16

CITY OF WILMINGTON
 NORTH CAROLINA

Public Services Engineering Division

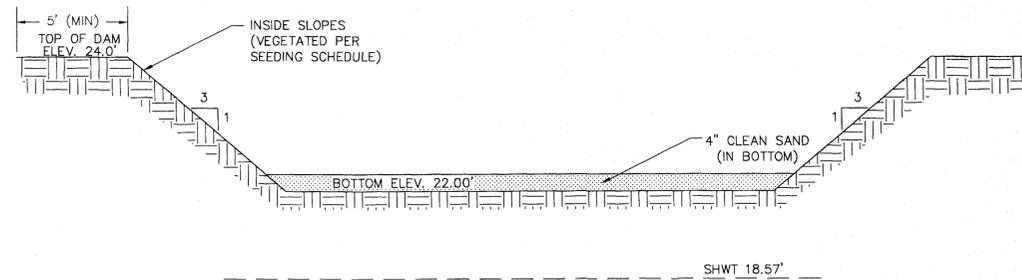
APPROVED STORMWATER MANAGEMENT PLAN

Date: 5/20/16 Permit # 2015 0342

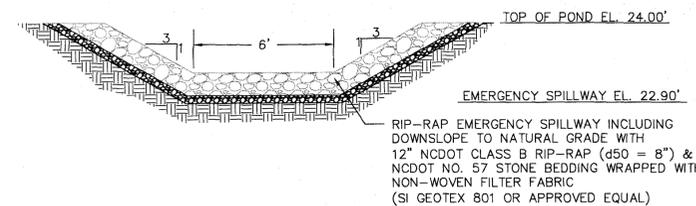
Signed: *R. J. Del*

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



INFILTRATION BASIN
 NOT TO SCALE



EMERGENCY SPILLWAY SECTION
 NOT TO SCALE

NOTES

1. THE ENTIRE INFILTRATION BASIN SHALL BE SEEDING SCHEDULE IMMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION.
2. THE BOTTOM SHALL BE OVEREXCAVATED 4" AND BACKFILLED WITH CLEAN SAND TO THE BOTTOM ELEVATION SPECIFIED.
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5. 50-YR DISCHARGE THROUGH WEIR ASSUMING THE BASIN WILL NOT INFILTRATE.
 $Q_{50} = C_w \cdot L \cdot h^{3/2}$
 $Q_{50} = 1.957 \text{ cfs} = 3.0 \cdot 8.0 \text{ ft} \cdot h^{3/2}$
 $h = 0.228' = 2.73"$

REV. NO.	DESCRIPTION	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF MAINTENANCE ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



MCKIM & CREED

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 Wilmington, North Carolina 28401
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 License: F-1222
 www.mckimcreed.com

RIVERLIGHTS
 by Newland COMMUNITIES

NORTH AMERICA SENSUS HOUSE, LLC

RIVERLIGHTS
 AGE QUALIFIED - PHASE 1

STORMWATER MANAGEMENT DETAILS

DATE: 04/15/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: N/A
 PROJ. MGR.: KCBE

SCALE: HORIZONTAL: 1"=20' VERTICAL: N/A

MAC FILE NUMBER: CN-504
 DRAWING NUMBER: 45

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

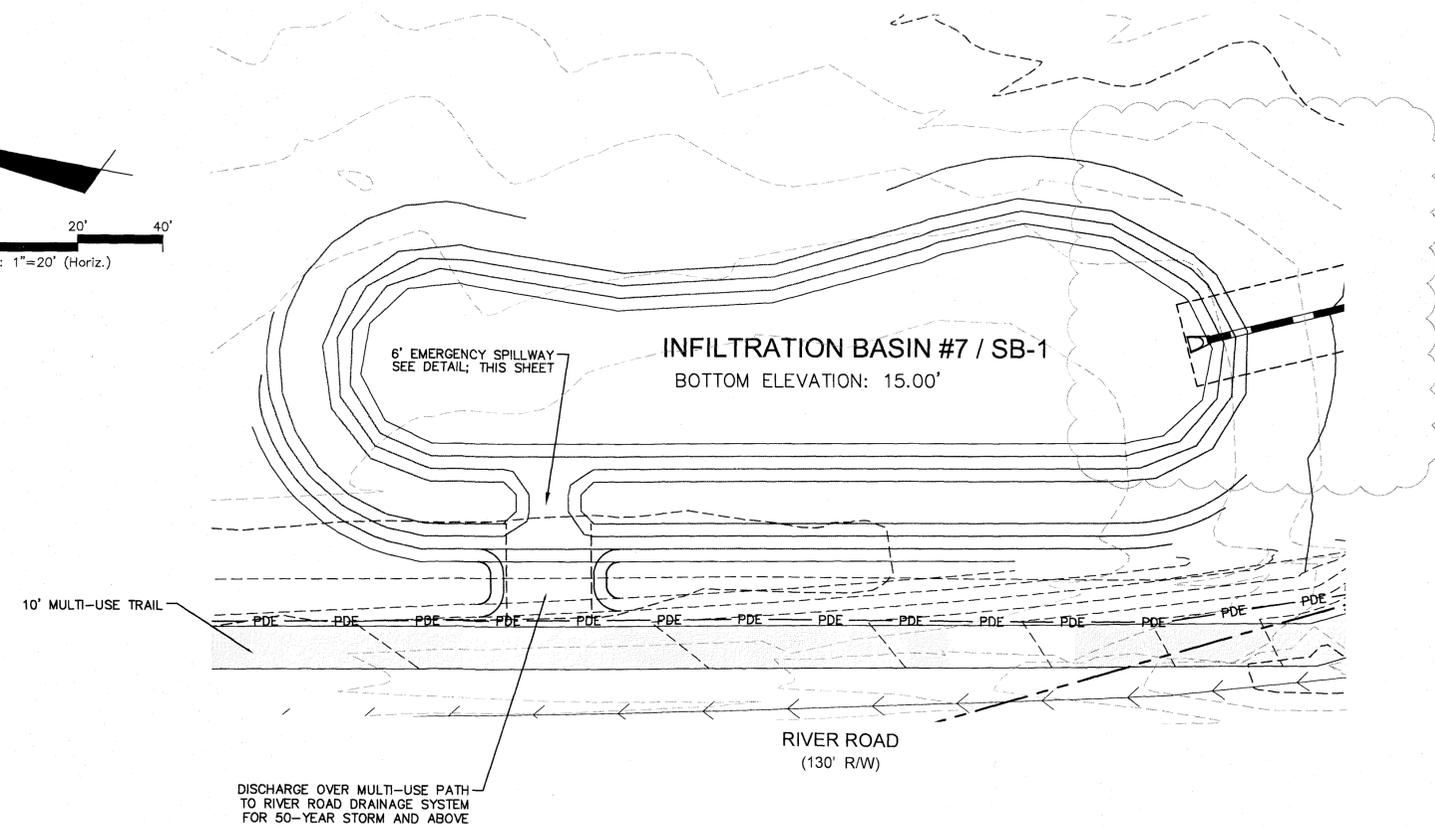
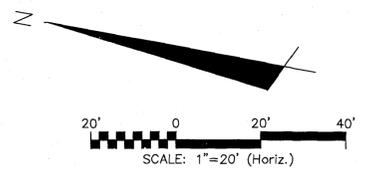
REVISION: 4

Approved Construction Plan	
Name	Date
Planning	5/11/16
Traffic	5-11-16
Fire	5-12-16

CITY OF WILMINGTON
NORTH CAROLINA
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 5/20/16 Permit # 201503421
Signed: *[Signature]*

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

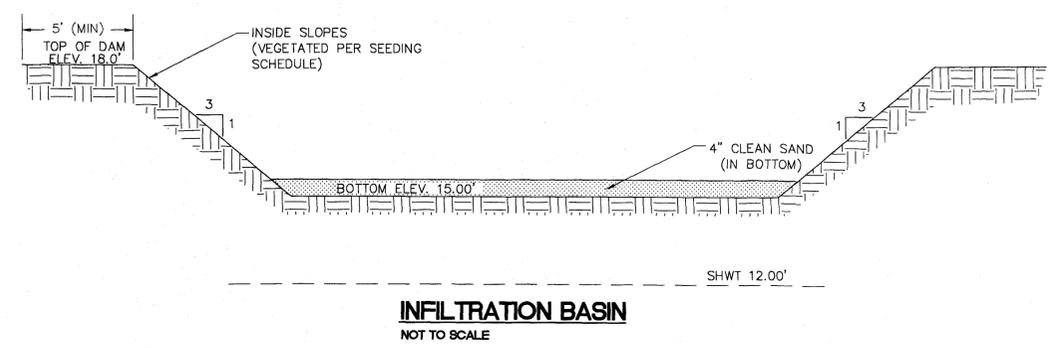
1 inch



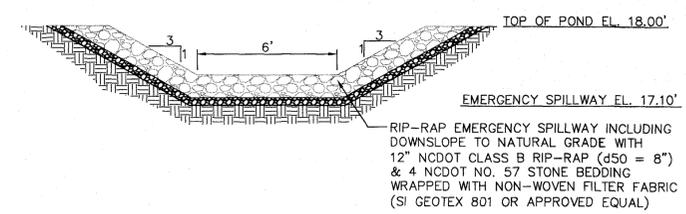
NOTES

1. THE ENTIRE INFILTRATION BASIN SHALL BE SEEDED PER THE SEEDING SCHEDULE IMMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION.
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5. 50-YR DISCHARGE THROUGH WEIR ASSUMING THE BASIN WILL NOT INFILTRATE.

WEIR EQUATION: $Q_{50} = C * L * h^{3/2}$
 $Q_{50} = 6.367 cfs = 3.0 * 6.0 ft * h^{3/2}$
 $h = 0.500' = 6.00"$



INFILTRATION BASIN
NOT TO SCALE



EMERGENCY SPILLWAY SECTION
NOT TO SCALE

REV. NO.	DESCRIPTIONS	DATE
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKINGDECKS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/29/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015

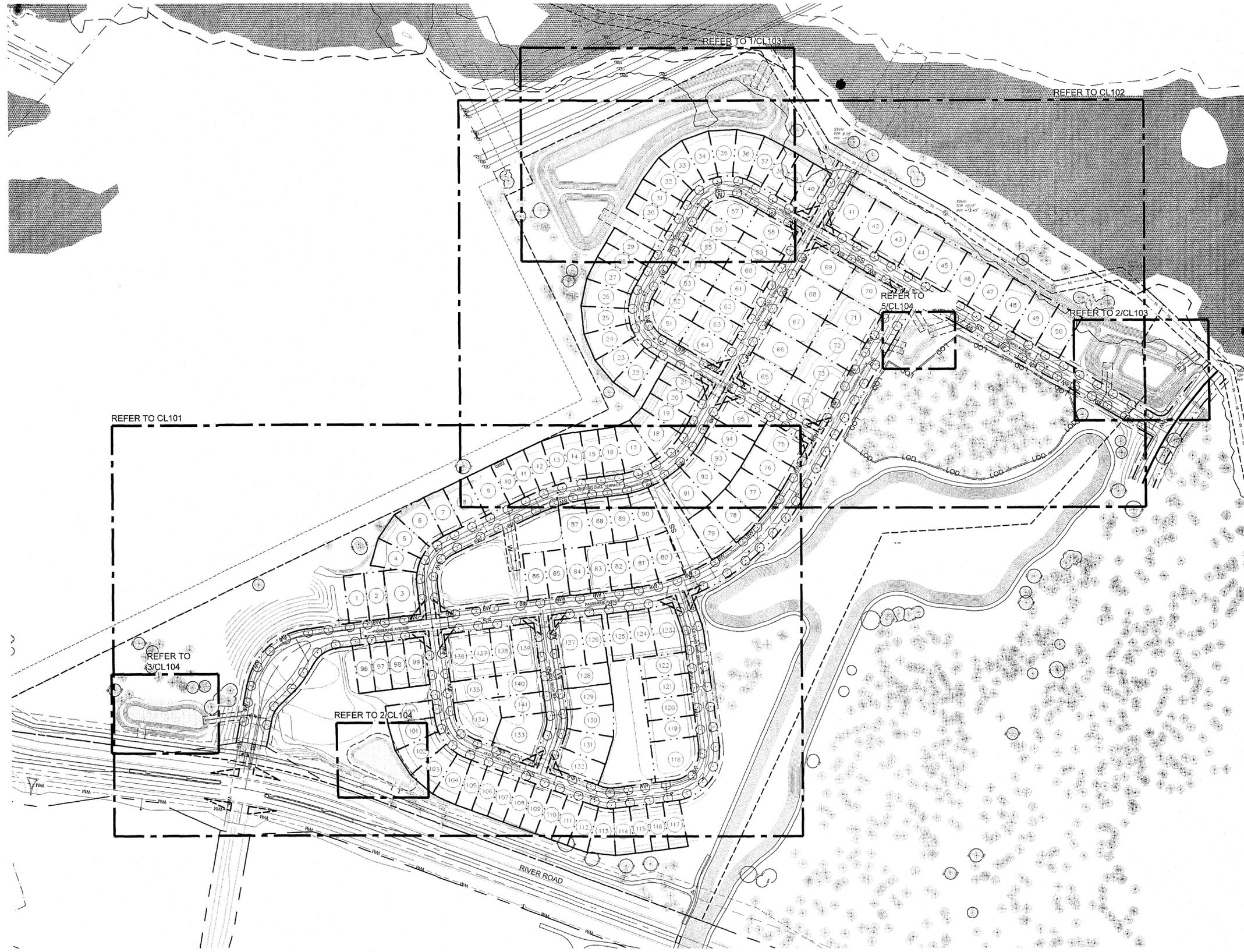


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RIVERLIGHTS
by Newland COMMUNITIES
NASH NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
STORMWATER MANAGEMENT DETAILS

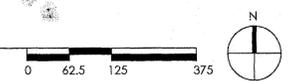
DATE: 04/15/2015	SCALE: 1"=20'	MAC FILE NUMBER: CN-505
MCE PROJ. # 02735-0125	HORIZONTAL: 1"=20'	DRAWING NUMBER: 46
DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR: KCBE		
STATUS: FINAL DESIGN		REVISION: 4
ISSUED FOR CONSTRUCTION		



PLANTING NOTES

- EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT THE CITY OF WILMINGTON AT 1-800-632-4949 FOR LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.
- NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.
- PLANT LIST IS PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF DISCREPANCIES BETWEEN THE PLAN AND PLANT LIST QUANTITIES, THE PLAN SHALL TAKE PRECEDENCE.
- AFTER THE SITE IS STABILIZED AND FREE OF SEDIMENTATION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES, SILT, RIP RAP AND TEMPORARY STONE STAGING AREAS FOR REPLACEMENT WITH PLANTING SOIL. PROVIDE PLANTING ACCORDING TO THE LANDSCAPE PLAN.
- TEMPORARY EROSION CONTROL SEED MUST BE FULLY REMOVED PRIOR TO PREPARATION OF PERMANENT SEED, SOD OR LANDSCAPE BEDS.
- UNLESS OTHERWISE NOTED IN THE PLANT LIST, THE CONTRACTOR SHALL OBTAIN AND INSTALL ONLY PLANT MATERIAL THAT IS GROWN ON ITS OWN ROOT - GRAFTED OR BUDDED PLANT MATERIAL WILL BE REJECTED.
- ALL TREES SHALL BE OBTAINED FROM THE NURSERY WITH EXPOSED ROOT CROWNS. B&B MATERIAL DELIVERED TO SITE WITH BURIED OR RECENTLY BURIED ROOT CROWNS WILL BE REJECTED.
- FURNISHED PLANT MATERIAL SHALL MEET THE MINIMUM HEIGHT OR MINIMUM SPREAD DIMENSIONS SHOWN IN THE PLANT LIST HEADINGS. THE CONTRACTOR SHALL UTILIZE THE MOST STRINGENT DIMENSION SHOWN ON THE PLANT LIST.
- DO NOT PLANT IN STORM WATER CONVEYANCE SWALES OR PROVIDE FINE GRADING THAT DISRUPTS FLOW OR CHANGES LONGITUDINAL SLOPES.
- PLANT THE OUTER EDGES OF EACH PLANTING GROUP FOLLOWING THE BED OUTLINE ACCORDING TO THE PLAN. ONCE A SATISFACTORY MATCHED OUTER SHAPE IS OBTAINED, FILL THE CENTER OF EACH AREA WITH PLANTS ACCORDING TO THE PLAN AND SPACING NOTES.
- THE PLANTING LAYOUT WITHIN PLANTING BEDS SHOULD BE SHIFTED TO MINIMIZE CONFLICTS WITH EXISTING TREE ROOTS.
- THE CONTRACTOR SHALL REPAIR ALL DISTURBED AREAS INCLUDING CONSTRUCTION ACCESS OUTSIDE PROJECT LIMITS TO EXISTING CONDITIONS PRIOR TO COMPLETION.
- REFER TO CIVIL DRAWINGS FOR ABBREVIATIONS AND LEGENDS.
- REFER TO CIVIL FOR TREE PROTECTION FENCE DETAILS AND NOTES.

1 OVERALL STREET TREE LAYOUT AND SHEET INDEX PLAN
SCALE: 1" = 125'-0"



Approved Construction Plan

Name	Date
Planning <i>[Signature]</i>	5/11/16
Traffic <i>[Signature]</i>	5/11/16
Fire <i>[Signature]</i>	5.16.16

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

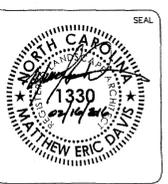
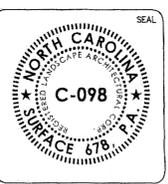
Date: 5/20/16 Permit # 2015034R

Signed: *[Signature]*

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.

REV. NO.	DESCRIPTIONS	DATE
3	LOT REVISIONS	01/28/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	10/27/2015
1	GRADING, STORMWATER, AND UTILITY REVISIONS	09/29/2015
0	ISSUED FOR CONSTRUCTION	



RIVER LIGHTS - AGE QUALIFIED

PLANTING PLAN

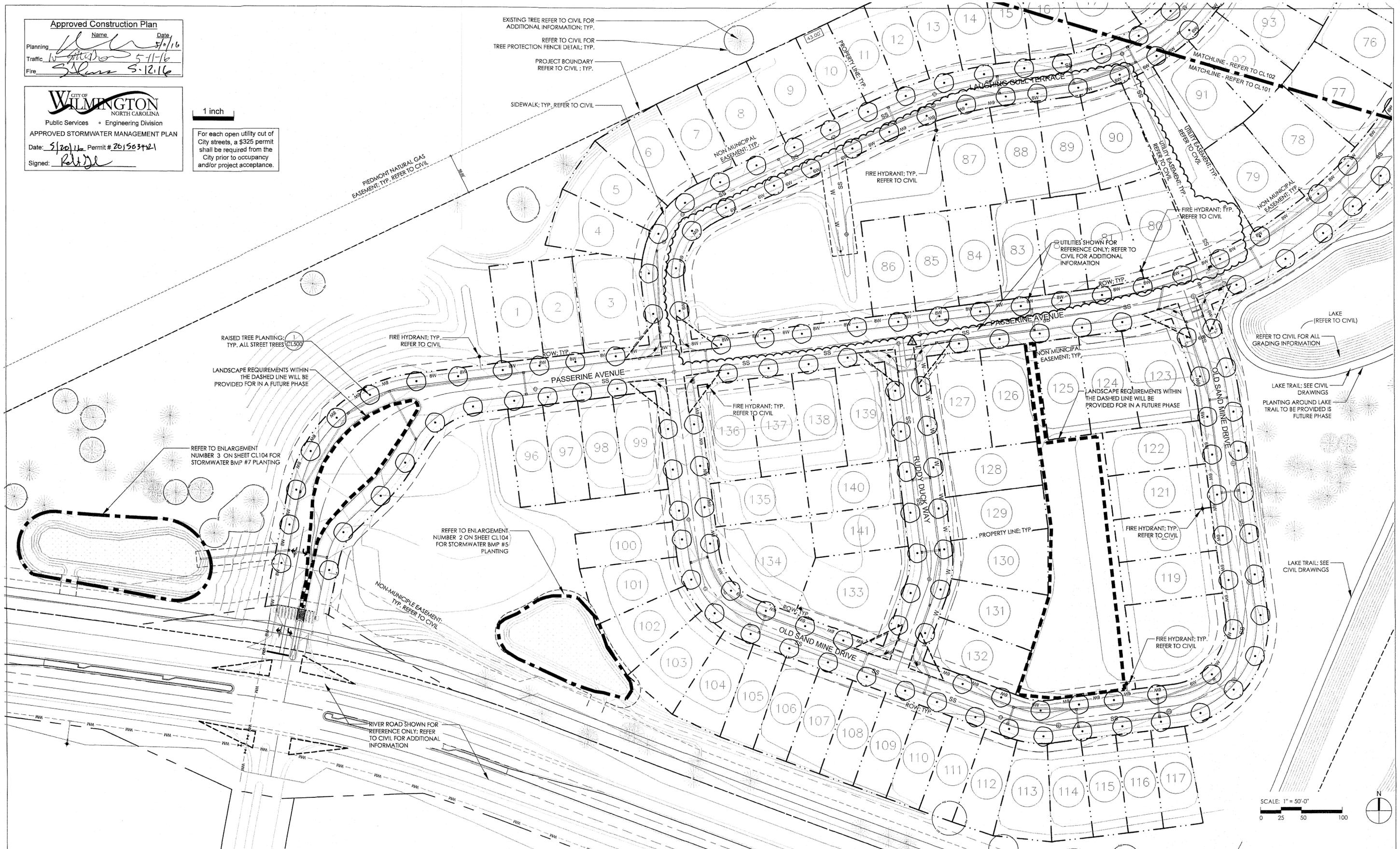
DATE: 04/15/2016	SCALE: 1" = 125'-0"	M&C FILE NUMBER
MCE PROJ. # 2735-0125		DRAWING NUMBER
DRAWN: JI		CL-100
DESIGNED: ED		
CHECKED: JG, ED		
PROJ. MGR: JC		
STATUS: FINAL DESIGN ISSUE FOR CONSTRUCTION		REVISION: 2

Approved Construction Plan
 Name: _____ Date: 5/1/16
 Planning: _____
 Traffic: _____ 5-11-16
 Fire: _____ 5-12-16

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: 5/20/16 Permit # 261503421
 Signed: *[Signature]*

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.

EXISTING TREE REFER TO CIVIL FOR ADDITIONAL INFORMATION; TYP.
 REFER TO CIVIL FOR TREE PROTECTION FENCE DETAIL; TYP.
 PROJECT BOUNDARY REFER TO CIVIL; TYP.
 SIDEWALK; TYP. REFER TO CIVIL



RAISED TREE PLANTING; TYP. ALL STREET TREES (CL500)
 LANDSCAPE REQUIREMENTS WITHIN THE DASHED LINE WILL BE PROVIDED FOR IN A FUTURE PHASE

REFER TO ENLARGEMENT NUMBER 3 ON SHEET CL104 FOR STORMWATER BMP #7 PLANTING

REFER TO ENLARGEMENT NUMBER 2 ON SHEET CL104 FOR STORMWATER BMP #5 PLANTING

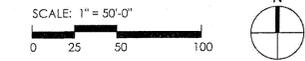
NON-MUNICIPAL EASEMENT; TYP. REFER TO CIVIL

RIVER ROAD SHOWN FOR REFERENCE ONLY; REFER TO CIVIL FOR ADDITIONAL INFORMATION

LAKE (REFER TO CIVIL)
 REFER TO CIVIL FOR ALL GRADING INFORMATION

LAKE TRAIL; SEE CIVIL DRAWINGS
 PLANTING AROUND LAKE TRAIL TO BE PROVIDED IN FUTURE PHASE

LAKE TRAIL; SEE CIVIL DRAWINGS



REV. NO.	DESCRIPTION	DATE
3	LOT REVISIONS	
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/26/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015

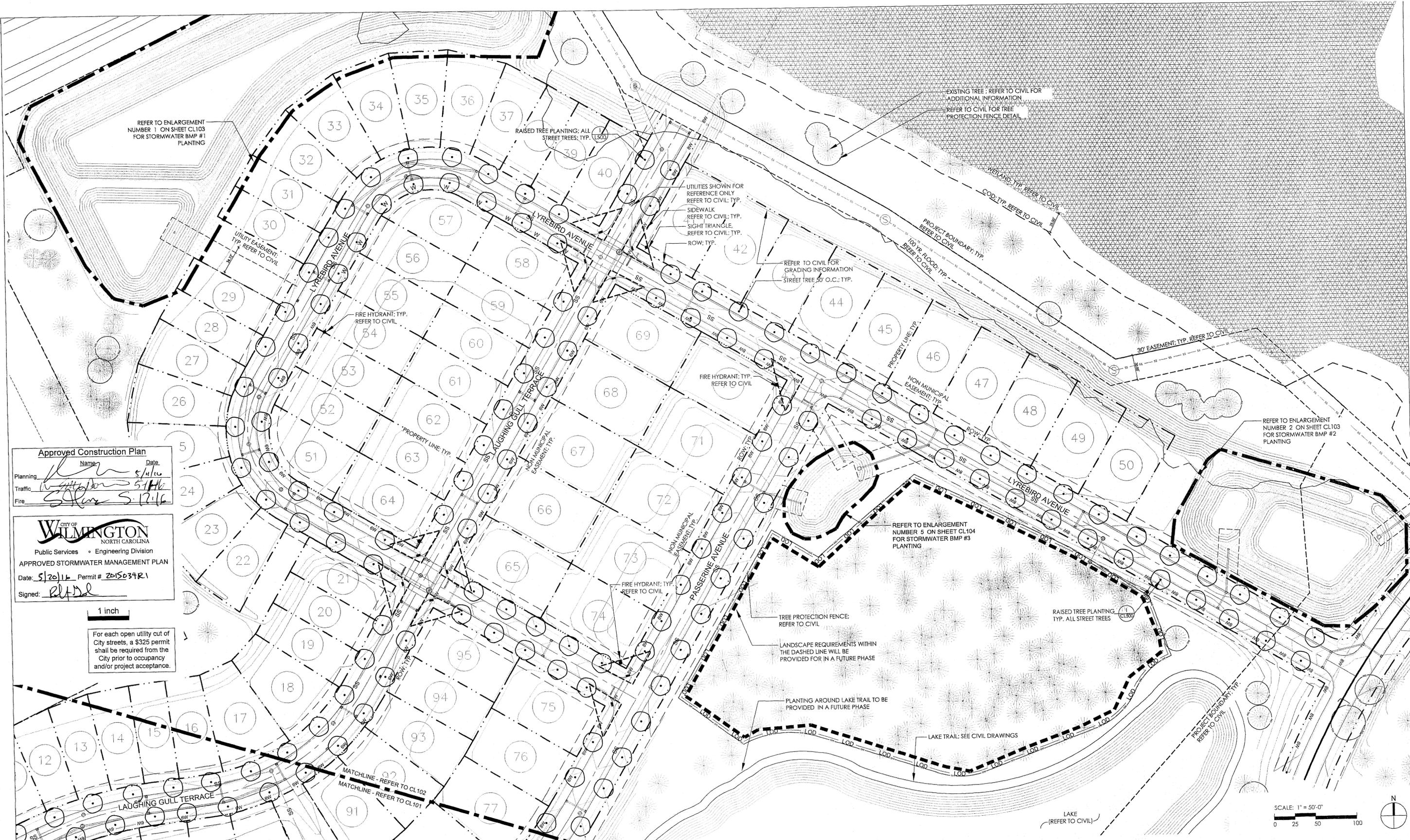


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Surface
 RIVERLIGHTS
 Newland COMMUNITIES

RIVER LIGHTS - AGE QUALIFIED
PLANTING PLAN

DATE: 04/15/2015	SCALE: 1" = 50'-0"	MAC FILE NUMBER
MCE PROJ. # 2735-0125		
DRAWN: JI		DRAWING NUMBER
DESIGNED: ED		CL-101
CHECKED: JC, ED		
PROJ. MGR.: JC		
STATUS: FINAL DESIGN ISSUE FOR CONSTRUCTION		REVISION
		2



Approved Construction Plan

Name: _____ Date: _____

Planning: _____ 5/11/16

Traffic: _____ 5/11/16

Fire: _____ 5/11/16

CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 5/20/16 Permit # 201503421

Signed: *RLH*

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.

SCALE: 1" = 50'-0"

0 25 50 100

N

REVNO.	DESCRIPTIONS	DATE
3	LOT REVISIONS	01/26/2015
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	10/27/2015
1	GRADING, STORMWATER, AND UTILITY REVISIONS	09/29/2015
0	ISSUED FOR CONSTRUCTION	



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Surface

RIVERLIGHTS

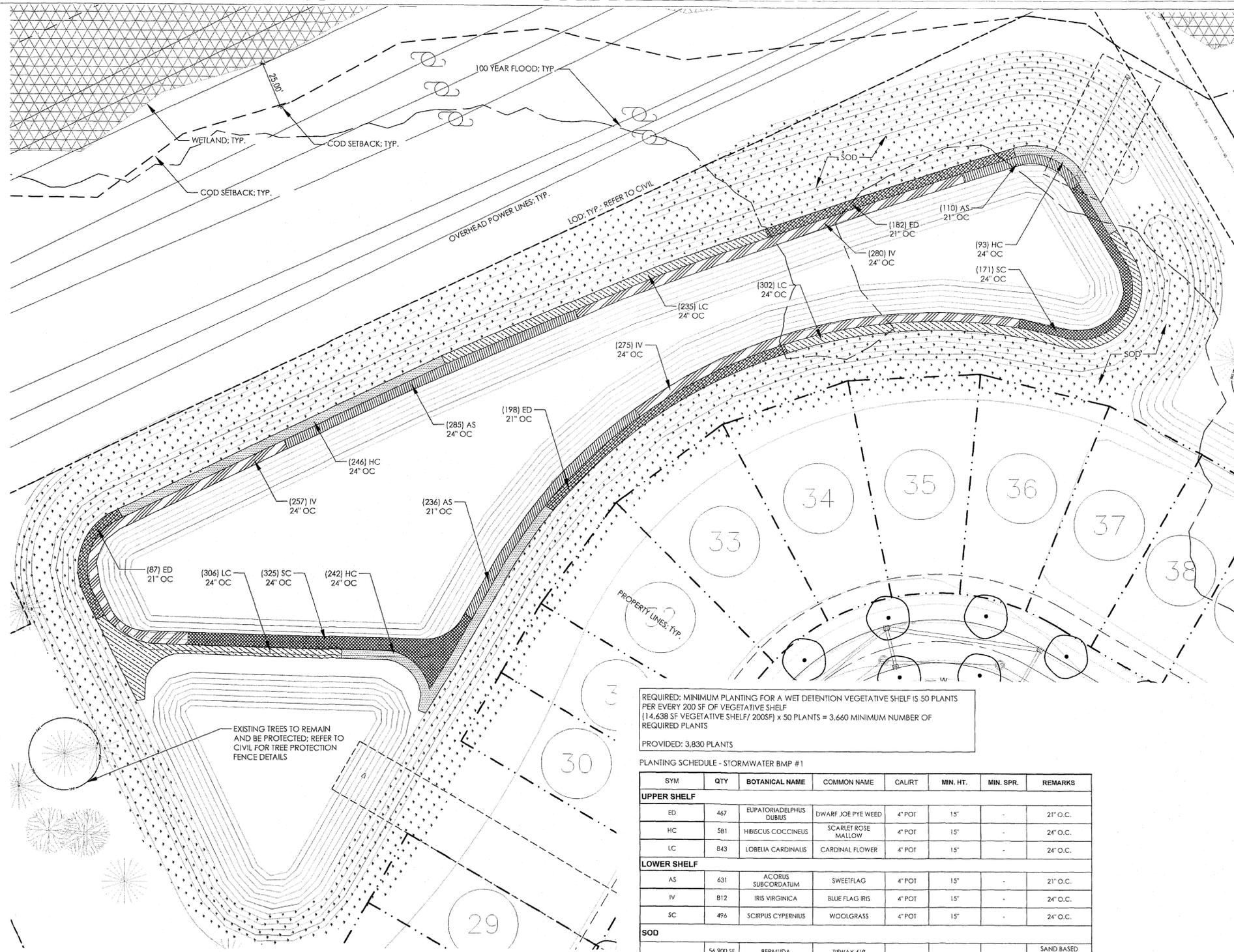
by Newland COMMUNITIES

Surface 678, P.A.
215 Waring Street, Suite 150
Durham, NC 27705
www.surface678.com
p: 919-419-1199
f: 919-419-1699

RIVER LIGHTS - AGE QUALIFIED

PLANTING PLAN

DATE: 04/15/2015	SCALE: 1" = 50'-0"	MAC FILE NUMBER
MCE PROJ. # 2735-0125		DRAWING NUMBER
DRAWN: JL		CL-102
DESIGNED: ED		
CHECKED: JC, ED		
PROJ. MGR: JC		
STATUS: FINAL DESIGN ISSUE FOR CONSTRUCTION	REVISION	
	2	

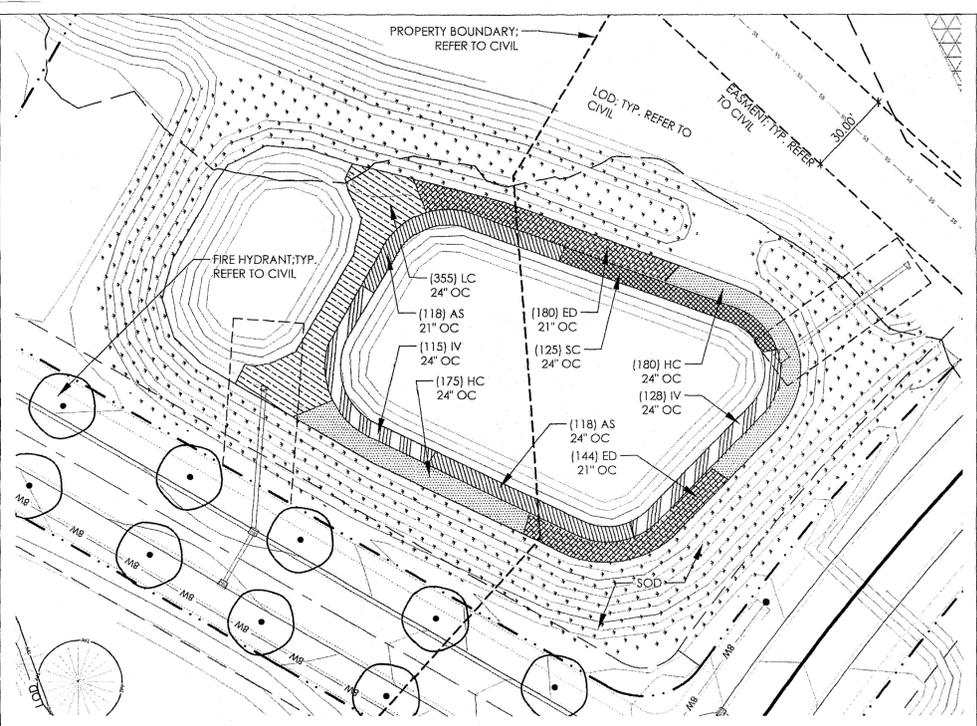


1 STORMWATER BMP #1
SCALE: 1" = 30'-0"
NOTE: CONTRACTOR SHALL USE A SAND BASED SOD IN INFILTRATION AREAS WHERE INDICATED ON PLANS

REQUIRED: MINIMUM PLANTING FOR A WET DETENTION VEGETATIVE SHELF IS 50 PLANTS PER EVERY 200 SF OF VEGETATIVE SHELF
(14,638 SF VEGETATIVE SHELF / 200SF) x 50 PLANTS = 3,660 MINIMUM NUMBER OF REQUIRED PLANTS
PROVIDED: 3,830 PLANTS

PLANTING SCHEDULE - STORMWATER BMP #1

SYM	QTY	BOTANICAL NAME	COMMON NAME	CAL/RT	MIN. HT.	MIN. SPR.	REMARKS
UPPER SHELF							
ED	467	EUPATORIADDELPHUS DUBIUS	DWARF JOE PYE WEED	4" POT	15"	-	21" O.C.
HC	581	HIBISCUS COCCINEUS	SCARLET ROSE MALLOW	4" POT	15"	-	24" O.C.
LC	843	LOBELIA CARDINALIS	CARDINAL FLOWER	4" POT	15"	-	24" O.C.
LOWER SHELF							
AS	431	ACORUS SUBCORDATUM	SWEETFLAG	4" POT	15"	-	21" O.C.
IV	812	IRIS VIRGINICA	BLUE FLAG IRIS	4" POT	15"	-	24" O.C.
SC	496	SCIRPUS CYPERNIUS	WOOLGRASS	4" POT	15"	-	24" O.C.
SOD							
	56,900 SF	BERMUDA	TIFWAY 419				SAND BASED GROWN SOD

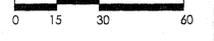


REQUIRED: MINIMUM PLANTING FOR A WET DETENTION VEGETATIVE SHELF IS 50 PLANTS PER EVERY 200 SF OF VEGETATIVE SHELF
(6,487 SF VEGETATIVE SHELF / 200SF) x 50 PLANTS = 1,622 MINIMUM NUMBER OF REQUIRED PLANTS
PROVIDED: 1,638 PLANTS

PLANTING SCHEDULE - STORMWATER BMP #2

SYM	QTY	BOTANICAL NAME	COMMON NAME	CAL/RT	MIN. HT.	MIN. SPR.	REMARKS
UPPER SHELF							
ED	324	EUPATORIADDELPHUS DUBIUS	DWARF JOE PYE WEED	4" POT	15"	-	21" O.C.
HC	355	HIBISCUS COCCINEUS	SCARLET ROSE MALLOW	4" POT	15"	-	24" O.C.
LC	355	LOBELIA CARDINALIS	CARDINAL FLOWER	4" POT	15"	-	24" O.C.
LOWER SHELF							
AS	236	ACORUS SUBCORDATUM	SWEETFLAG	4" POT	15"	-	21" O.C.
IV	243	IRIS VIRGINICA	BLUE FLAG IRIS	4" POT	15"	-	24" O.C.
SC	125	SCIRPUS CYPERNIUS	WOOLGRASS	4" POT	15"	-	24" O.C.
SOD							
	18,000 SF	BERMUDA	TIFWAY 419				SAND BASED GROWN SOD

2 STORMWATER BMP #2
SCALE: 1" = 30'-0"
NOTE: CONTRACTOR SHALL USE A SAND BASED SOD IN INFILTRATION AREAS WHERE INDICATED ON PLANS



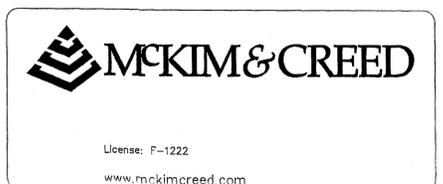
Approved Construction Plan
Name: [Signature] Date: 5/1/16
Planning: [Signature] 5/1/16
Traffic: [Signature] 5/1/16
Fire: [Signature] 5/2/16

CITY OF WILMINGTON NORTH CAROLINA
Public Services - Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 5/20/16 Permit # 2015039 R1
Signed: [Signature]

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.

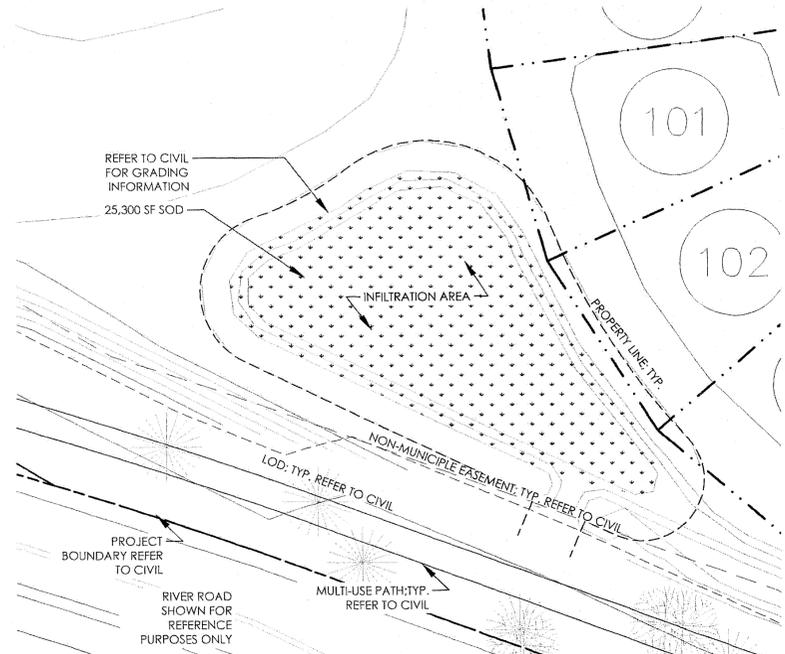


REV. NO.	DESCRIPTIONS	DATE
3	LOT REVISIONS	
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/26/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



RIVER LIGHTS - AGE QUALIFIED
PLANTING PLAN

DATE: 04/15/2015	SCALE: 1" = 30'-0"	M&C FILE NUMBER: CL-103
M&C PROJ. # 2735-0125		DRAWING NUMBER: 50
DRAWN: JI		
DESIGNED: ED		
CHECKED: JC, ED		
PROJ. MGR: JC		
STATUS: FINAL DESIGN ISSUE FOR CONSTRUCTION		REVISION: 2

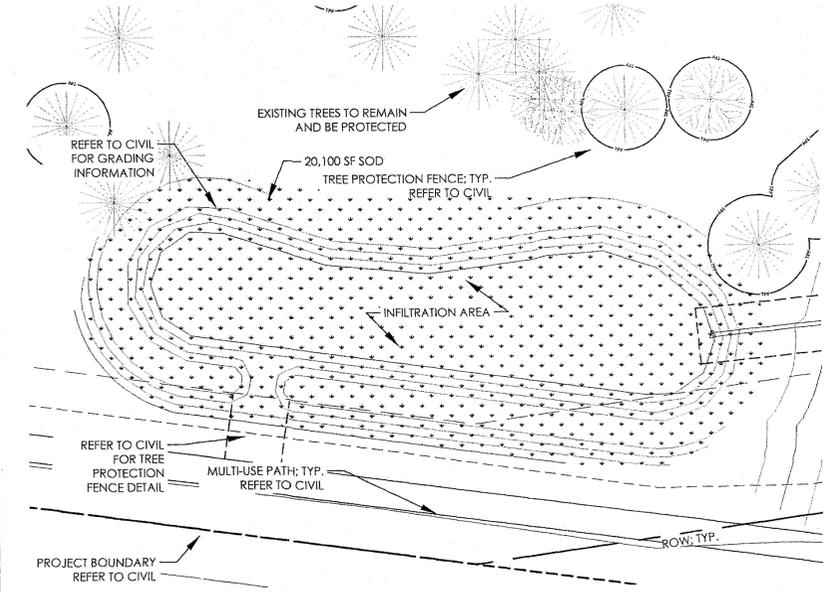


PLANTING SCHEDULE - STORMWATER BMP #5

SYM	QTY	BOTANICAL NAME	COMMON NAME	CAL/RT	MIN. HT.	MIN. SPR.	REMARKS
SOD							
	8,400 SF	BERMUDA	TIFWAY 419				SAND BASED GROWN SOD

2 STORMWATER BMP #5

SCALE: 1" = 30'-0"
NOTE: CONTRACTOR SHALL USE A SAND BASED SOD IN INFILTRATION AREAS WHERE INDICATED ON PLANS

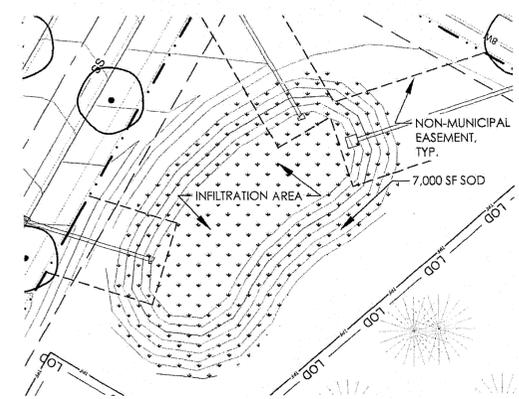


PLANTING SCHEDULE - STORMWATER BMP #7

SYM	QTY	BOTANICAL NAME	COMMON NAME	CAL/RT	MIN. HT.	MIN. SPR.	REMARKS
SOD							
	20,100 SF	BERMUDA	TIFWAY 419				SAND BASED GROWN SOD

3 STORMWATER BMP #7

SCALE: 1" = 30'-0"
NOTE: CONTRACTOR SHALL USE A SAND BASED SOD IN INFILTRATION AREAS WHERE INDICATED ON PLANS



PLANTING SCHEDULE - STORMWATER BMP #3

SYM	QTY	BOTANICAL NAME	COMMON NAME	CAL/RT	MIN. HT.	MIN. SPR.	REMARKS
SOD							
	7,000 SF	BERMUDA	TIFWAY 419				SAND BASED GROWN SOD

5 STORMWATER BMP #3

SCALE: 1" = 30'-0"
NOTE: CONTRACTOR SHALL USE A SAND BASED SOD IN INFILTRATION AREAS WHERE INDICATED ON PLANS



Approved Construction Plan

Name	Date
Planning: <i>[Signature]</i>	5/11/16
Traffic: <i>[Signature]</i>	5-11-16
Fire: <i>[Signature]</i>	5-12-16

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN
Date: 5/20/16 Permit # 2015039 R1
Signed: *[Signature]*

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.

REV. NO.	DESCRIPTIONS	DATE
3	LOT REVISIONS	
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/29/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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Surface

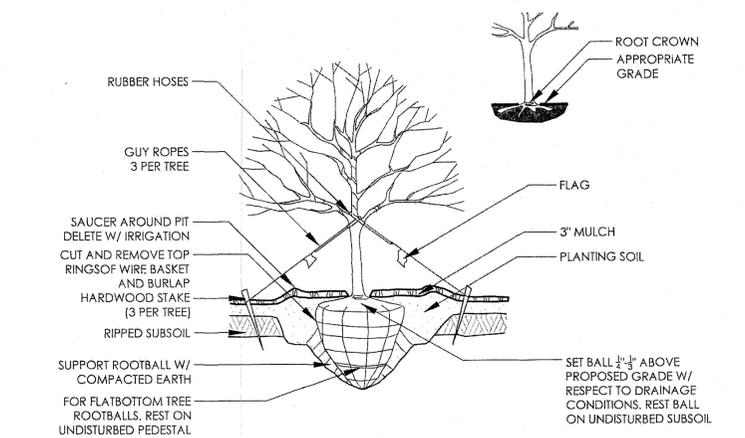
RIVERLIGHTS
by Newland COMMUNITIES

Surface #78, P.A.
215 North Street, Suite 100
Durham, NC 27701
www.surface78.com
P: 919-419-1199
F: 919-419-1899

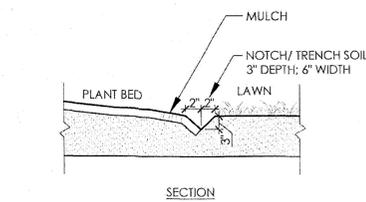
RIVER LIGHTS - AGE QUALIFIED

PLANTING PLAN

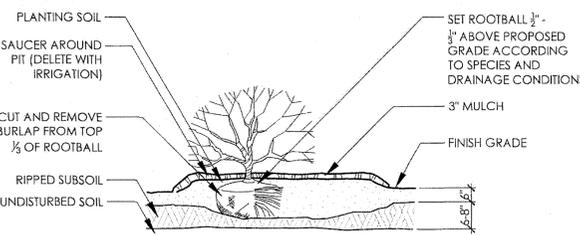
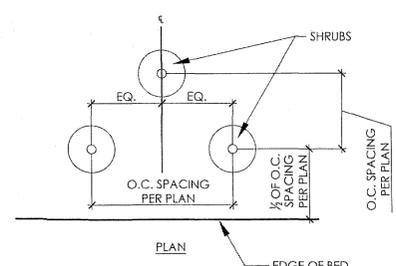
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MCE PROJ. # 2735-0125		DRAWING NUMBER: 51
DRAWN: JD		
DESIGNED: ED		
CHECKED: JC, ED		
PROJ. MGR: JC		
STATUS: FINAL DESIGN ISSUE FOR CONSTRUCTION		REVISION: 2



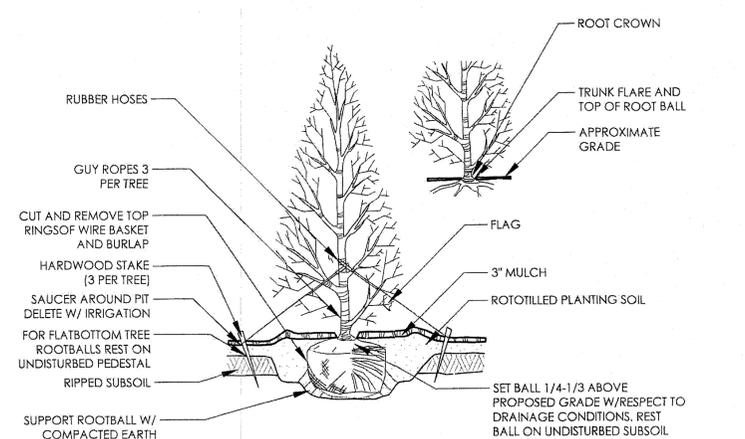
1 RAISED TREE PLANTING SCALE: NTS



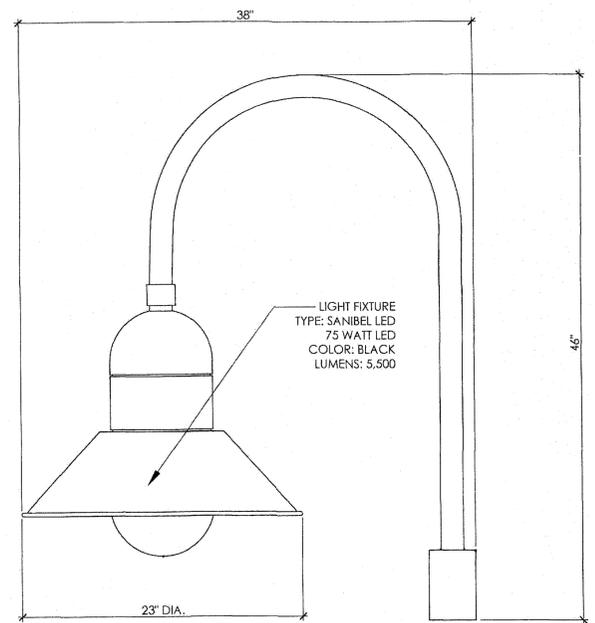
2 LAWN/PLANT BED EDGE



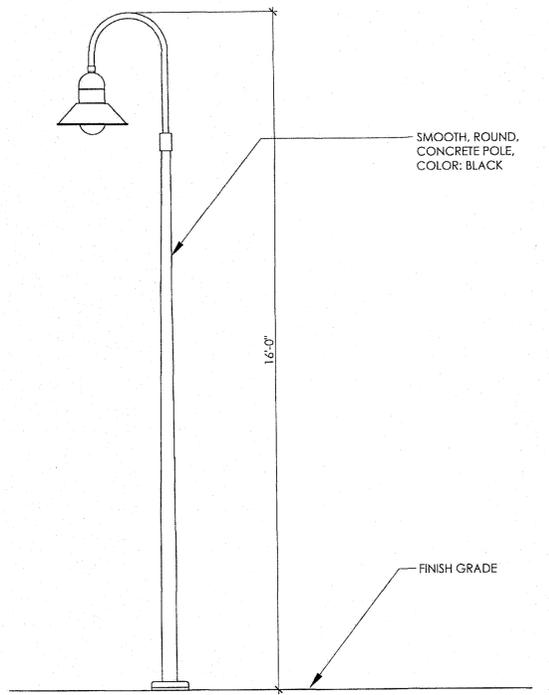
5 RAISED SHRUB PLANTING SCALE: NTS



4 EVERGREEN TREE PLANTING SCALE: NTS

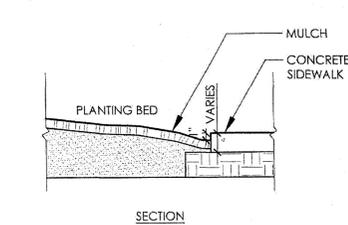


NON STANDARD LIGHT FIXTURE DETAIL

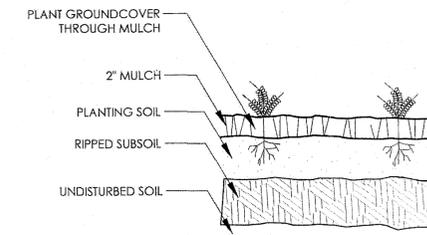
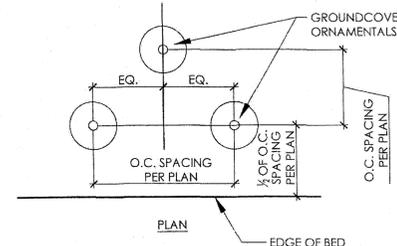


LIGHT FIXTURE POLE ELEVATION

7 LIGHT POLE
 * LIGHTING SHOWN FOR REFERENCE ONLY.
 * LIGHT POLE TO BE SIMILAR IN STYLE, COLOR, TYPE.
 * FINAL LAYOUT AND FOOT CANDLE STUDIES SHALL BE PROVIDED BY THE POWER COMPANY.



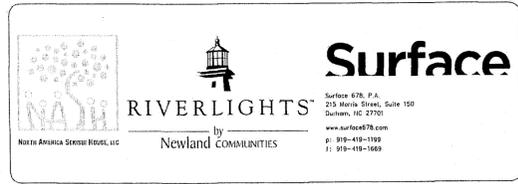
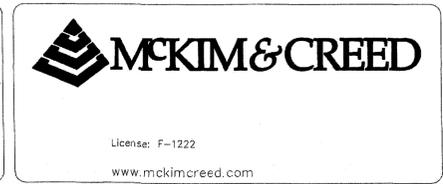
8 CONCRETE/PLANT BED EDGE



6 GROUNDCOVER PLANTING SCALE: NTS

Approved Const. Plan
 Date: 5/11/16
 Drawn: J.C.
 Checked: J.C.
 Proj. Mgr: J.C.
 Date: 5/20/16

REVNO.	DESCRIPTIONS	DATE
3	LOT REVISIONS	
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/26/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/22/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



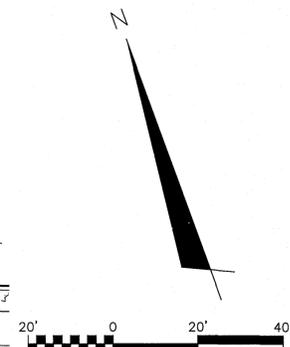
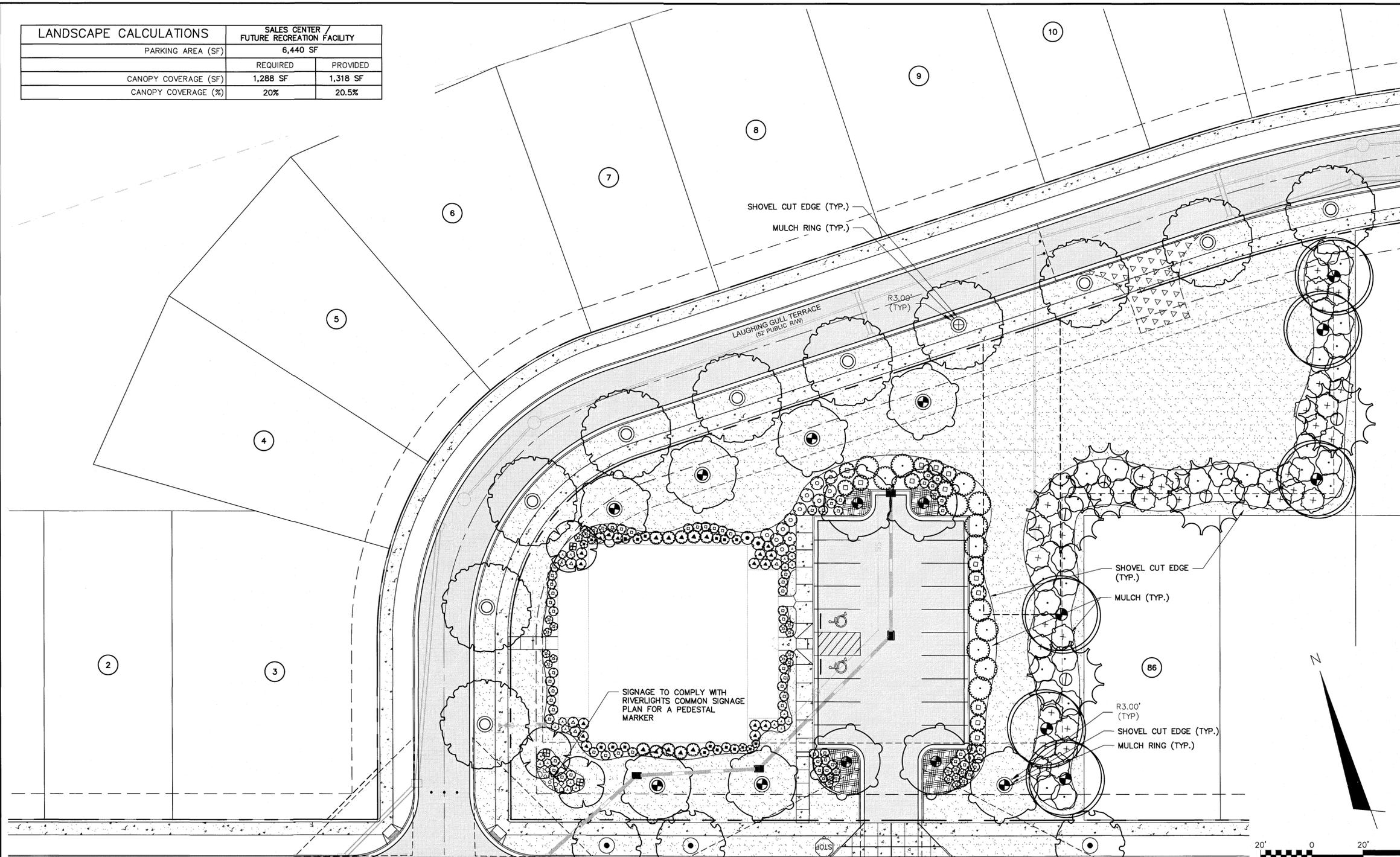
RIVERLIGHTS - AGE QUALIFIED
 DETAILS

DATE: 04/15/2015	SCALE:	MAC FILE NUMBER: CL-500
MGE PROJ. # 2735-0125		DRAWING NUMBER: 52
DRAWN: J.C.		
DESIGNED: ED		
CHECKED: J.C., ED		
PROJ. MGR: J.C.		
STATUS: FINAL DESIGN ISSUE FOR CONSTRUCTION		REVISION: 2

LANDSCAPE CALCULATIONS	SALES CENTER / FUTURE RECREATION FACILITY	
	PARKING AREA (SF)	6,440 SF
	REQUIRED	PROVIDED
CANOPY COVERAGE (SF)	1,288 SF	1,318 SF
CANOPY COVERAGE (%)	20%	20.5%

PLANT SCHEDULE

TREES	BOTANICAL NAME
	CERCIS CANADENSIS 'FOREST PANSY'™ Forest Pansy Redbud
	PINUS TAEDA Loblolly Pine
	QUERCUS LAURIFOLIA 'DARLINGTONIA' Darlington Oak
	QUERCUS LYRATA Overcup Oak
	QUERCUS VIRGINIANA Southern Live Oak
	ULMUS PARVIFOLIA 'LACEBARK ELM' Chinese Elm Tree
SHRUBS	BOTANICAL NAME
	AZALEA KURUME HYBRID 'HERSHEY RED' (15 Gal.) Kurume Azalea
	AZALEA KURUME HYBRID 'HERSHEY RED' (7 Gal.) Kurume Azalea
	CLEYERA JAPONICA (15 Gal.) Cleyera
	CRYPTOMERIA JAPONICA 'GLOBOSA NANA' (3 Gal.) Dwarf Japanese Cedar
	ELAEAGNUS PUNGENS 'FRUITLANDII' (15 Gal.) Silverberry
	ILEX CORNUTA 'CARISSA' (15 Gal.) Carissa Holly
	ILEX CORNUTA 'CARISSA' (7 Gal.) Carissa Holly
	LOROPETALUM CHINENSE 'HINES' (7 Gal.) PURPLELEAF PLUM DELIGHT™ Plum Delight Fringe-Flower
	LOROPETALUM CHINENSE 'RUBY' (15 Gal.) Ruby Loropetalum
	LOROPETALUM CHINENSE 'RUBY' (7 Gal.) Ruby Loropetalum
	MYRICA CERIFERA (15 Gal.) Wax Myrtle
	PITTOSPORUM TOBIRA 'COMPACTUM' (15 Gal.) Compact Pittosporum
	PITTOSPORUM TOBIRA 'COMPACTUM' (7 Gal.) Compact Pittosporum
GROUND COVERS	BOTANICAL NAME
	CYNODON DACTYLON Bermuda Grass
	JUNIPERUS PROCUMBENS 'NANA' Shore Juniper
	MIXED ANNUALS Mixed Annuals



PLANT SCHEDULE CONTINUED

	PITTOSPORUM TOBIRA 'VARIEGATA' (7 Gal.) Variegated Mock Orange
	CYNODON DACTYLON Bermuda Grass
	JUNIPERUS PROCUMBENS 'NANA' Shore Juniper
	MIXED ANNUALS Mixed Annuals

REVNO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/06/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKFIDERS ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



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 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Name: [Signature] Date: 10/12/16
 Traffic: [Signature] 10/12/16
 Fire: [Signature] 10/11/16
 Date: 10/11/16 Permit # 2015034122
 Signed: [Signature]

RIVERLIGHTS
AGE QUALIFIED - PHASE 1
SALES CENTER/FUTURE PRIVATE
RECREATIONAL FACILITY LANDSCAPE
PLAN

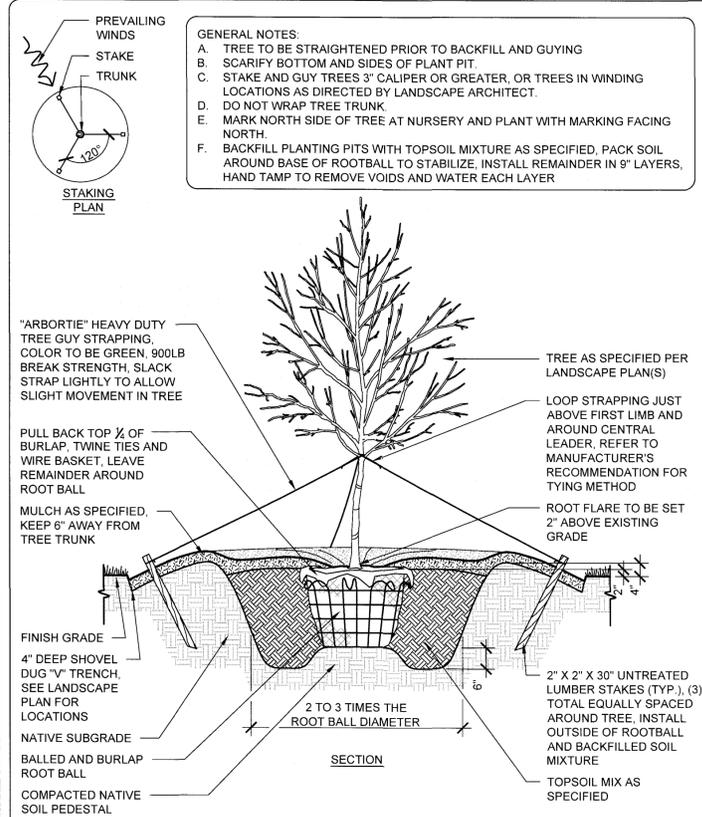
DATE: 07/11/2015
 MCE PROJ. # 02735-0125
 DRAWN: EEM/KCBE
 DESIGNED: KCBE
 CHECKED: NLL
 PROJ. MGR.: KCBE

SCALE: HORIZONTAL: 1"=20'
 VERTICAL: N/A

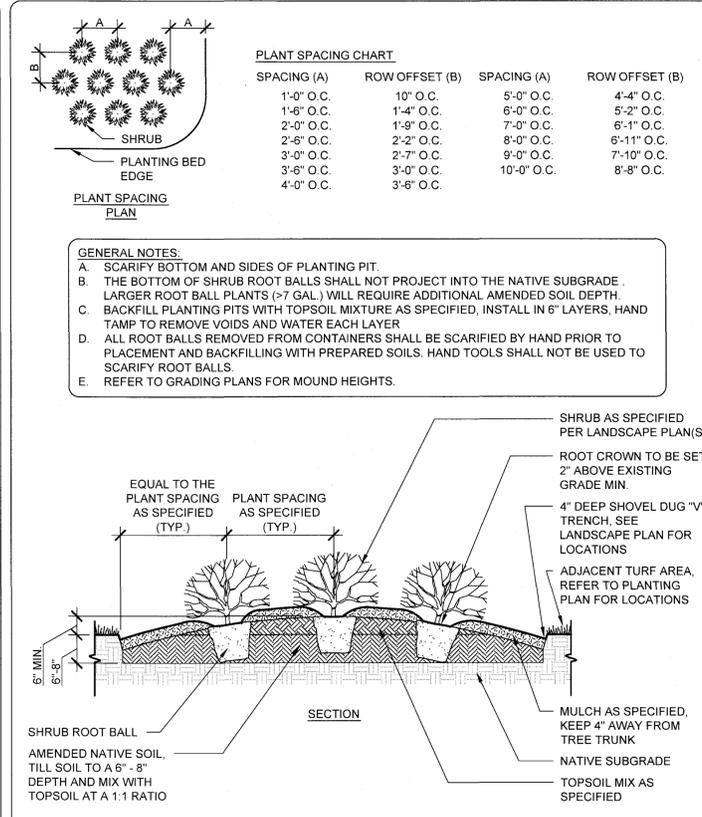
MAC FILE NUMBER: CL-106
 DRAWING NUMBER: 52SC1
 STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION
 REVISION: 5

- A. ALL EXISTING VEGETATION THAT IS USED TO MEET LANDSCAPING REQUIREMENTS, ALL REQUIRED PLANTED LIVING MATERIAL, AND ALL REQUIRED BERMS SHALL BE MAINTAINED BY THE OWNER OF THE PROPERTY ON A CONTINUING BASIS. ANY PLANTED MATERIAL WHICH BECOMES DAMAGED OR DISEASED OR DIES SHALL BE REPLACED BY THE OWNER WITHIN 60 DAYS OF THE OCCURRENCE OF SUCH CONDITION. IF, IN THE OPINION OF THE ZONING ADMINISTRATOR THERE ARE SEASONAL CONDITIONS WHICH WILL NOT PERMIT THE TIMELY REPLACEMENT OF THE VEGETATION (E.G. TOO HOT OR TOO COOL FOR SUCCESSFUL REPLANTING) THIS REQUIREMENT MAY BE ADMINISTRATIVELY WAIVED UNTIL A TIME CERTAIN WHEN THE REPLANTING WOULD BE SUCCESSFUL.
- B. VERIFICATION OF TOTAL LANDSCAPE MATERIAL QUANTITIES AS SHOWN ON THE LANDSCAPE PLANS AND IN THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING OR INSTALLATION.
- C. ALL PLANTING TYPES SHALL COMPLY WITH LOCAL GOVERNING CODES AND REGULATIONS, CONFORM TO REQUIREMENTS OF PLANT LIST AND TO THE AMERICAN ASSOCIATION OF NURSERYMEN 'AMERICAN STANDARD OF NURSERY STOCK' AND 'HORTICULTURAL STANDARDS' AS TO SPECIES, AGE, SIZE, AND PLANTING RECOMMENDATIONS.
- D. LANDSCAPE MATERIAL PLACED IN PREPARED HOLES SHALL BE PROPERLY BACKFILLED PRIOR TO THE END OF THE WORKING DAY.
- E. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
- F. ALL PREPARED GROUND COVER AND ANNUAL BED INSTALLATIONS SHALL BE PROPERLY SOAKED AND MULCHED PRIOR TO THE END OF THE DAY.
- G. LANDSCAPE ARCHITECT SHALL APPROVE ANY ON-SITE PLANT STORAGE AREA FOR ACCESSIBILITY, SHADE CONDITIONS, HEALING-IN MULCH MATERIAL AND TEMPORARY WATERING METHODS.
- H. ALL ROPE AND WRAPPING TWINE SHALL BE CUT AND REMOVED FROM AROUND THE UPPER PARTS OF THE ROOT BALL. METAL BASKET WIRES AND BURLAP SHALL BE PULLED BACK AND TUCKED UNDER THE EDGES OF THE SAUCER RINGS ON ALL TREES AND LARGE SHRUBS. ALL SYNTHETIC BURLAP SHALL BE REMOVED FROM PLANT BALLS PRIOR TO BACK FILLING.
- I. ALL PLANT BEDS OR RAISED SAUCER RINGS SHALL BE EDGED WITH SMOOTH, CONTINUOUS CURVES.
- J. ALL PLANT MATERIAL SHALL BE PLANTED AT HEIGHTS AND WIDTHS AS ILLUSTRATED IN PLANTING DETAILS.
- K. TREE GUYING SHALL BE PERFORMED WITHIN A WEEK OF PLANTING. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TREE GUYING STRAPPING AND STAKES AFTER THE FIRST FULL GROWING SEASON OR ONE YEAR, WHICH EVER COMES FIRST.
- L. CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO PLANTING.
- M. ANY EXPOSED OR UNCOVERED LINES SHALL BE SHOWN TO GENERAL CONTRACTOR PRIOR TO BACKFILLING.
- N. ALL PLANT BEDS AND RAISED SAUCER RINGS SHALL BE GRADED TO PROVIDE ADEQUATE DRAINAGE AND SHALL BE MULCHED AS SPECIFIED.
- O. ALL MATERIALS, PLANTING AND LANDSCAPE WORK SHALL CONFORM TO THE CURRENT MUNICIPAL AUTHORITIES STANDARD SPECIFICATIONS AND DETAILS.
- P. ALL LANDSCAPE AREAS THAT ARE NOT PLANTED AND MULCHED OR PAVED SHALL BE SEEDED OR SODDED.
- Q. FIRST YEAR PRUNING OF TREE CROWN SHALL BE LIMITED TO REMOVAL OF DEAD & DAMAGED WOOD.
- R. TREE PROTECTION FENCE SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO CLEARING, GRADING AND CONSTRUCTION ACTIVITY OR ISSUANCE OF ANY RELATED PERMITS. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- S. MULCH LINE SMOOTH CONTINUOUS CURVES. CLEAR OUT FIRST 5' FROM DEBRIS AND UNDERBRUSH AT AREAS OF EXISTING VEGETATION TO REMAIN.
- T. ALL TREES NOT WITHIN A PLANT BED TO BE TREATED WITH A 6" DIAMETER MULCH RING TYPICAL, UNLESS OTHERWISE INDICATED ON THE PLANTING PLANS.
- U. ALL TREES TO HAVE A MINIMUM 2" CALIPER AT THE TIME OF PLANTING, UNLESS OTHERWISE INDICATED IN THE PLANTING SPECIFICATION. CALIPER TO BE MEASURED 48" ABOVE THE ROOT BALL.
- V. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
- W. SUBSTITUTIONS OF PLANT MATERIALS SPECIFIED CAN ONLY OCCUR WITH PRIOR APPROVAL BY LANDSCAPE ARCHITECT.
- X. ESTABLISH PLANT BED CONFIGURATION. LANDSCAPE ARCHITECT TO APPROVE BED LAYOUT IN FIELD.
- Y. AREAS DAMAGED BY ACTIVITIES OF CONTRACTOR SHALL BE RE-ESTABLISHED TO PRE-DISTURBANCE CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- Z. USE HERBICIDES, PESTICIDES, AND FERTILIZER IN A MANNER CONSISTENT WITH THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT AND IN ACCORDANCE WITH LABEL RESTRICTIONS.
- AA. CONTRACTOR SHALL INSURE THAT ALL PLANT MATERIAL IS FREE OF FIRE ANTS PRIOR TO INSTALLATION.
- AB. LANDSCAPE ARCHITECT OR OWNER SHALL APPROVE PLACEMENT OF TREES PRIOR TO PLANTING.

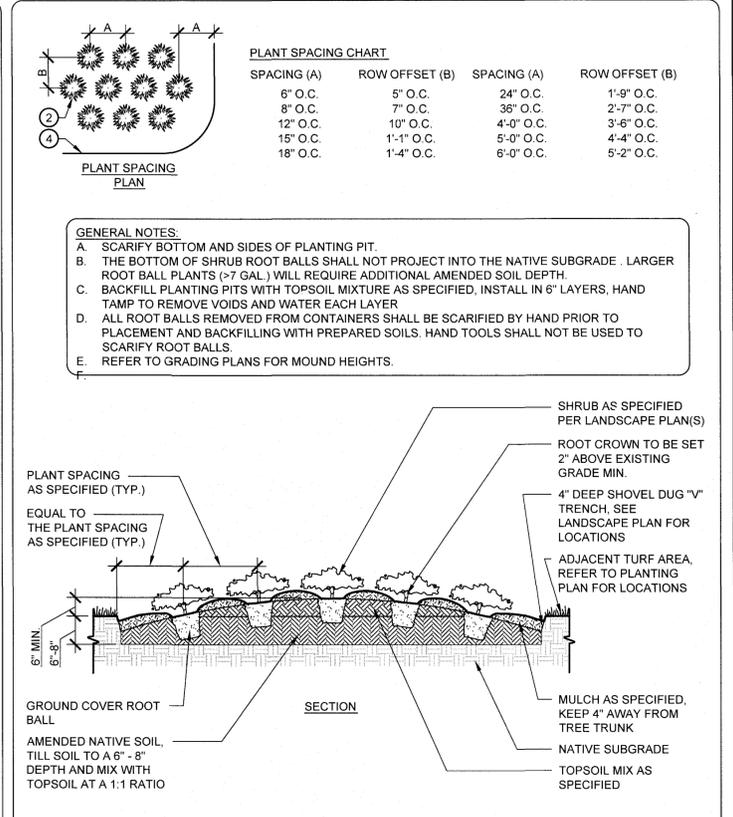
6 GENERAL LANDSCAPE NOTES SCALE: NTS



5 TYPICAL TREE PLANTING SCALE: NTS



4 TYPICAL SHRUB PLANTING SCALE: NTS



2 GROUND COVER PLANTING SCALE: NTS

TREES	COMMON NAME	SIZE	CALIPER	HEIGHT	QTY	REMARKS
CERCIS CANADENSIS 'FOREST PANSY' TM	FOREST PANSY REDBUD	B & B	2" CAL.	8'-10' HT.	3	UNIFORM CANOPY & MATCHED
PINUS TAEDA	LOBLOLLY PINE	B & B	2" CAL.	8'-10' HT.	5	SINGLE DOMINANT LEADER, UNIFORM CANOPY & MATCHED
QUERCUS LAURIFOLIA 'DARLINGTONIA'	DARLINGTON OAK	B & B	2" CAL.	10'-12' HT.	6	SINGLE DOMINANT LEADER, UNIFORM CANOPY & MATCHED
QUERCUS LYRATA	OVERCUP OAK	B & B	2" CAL.	10'-12' HT.	3	SINGLE DOMINANT LEADER, UNIFORM CANOPY & MATCHED
QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	B & B	2" CAL.	10'-12' HT.	10	UNIFORM CANOPY & MATCHED
ULMUS PARVIFOLIA 'LACEBARK ELM'	CHINESE ELM TREE	B & B	2" CAL.	10'-12' HT.	11	UNIFORM CANOPY & MATCHED

SHRUBS	COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	QTY	REMARKS
AZALEA KURUME HYBRID 'HERSHEY RED'	KURUME AZALEA	15 GAL.	18"-24" HT.	18"-24" SPD.	3' O.C.	5	UNIFORM HEAD & MATCHED
AZALEA KURUME HYBRID 'HERSHEY RED'	KURUME AZALEA	7 GAL.	15"-18" HT.	15"-18" SPD.	3' O.C.	28	UNIFORM HEAD & MATCHED
CLEYERA JAPONICA	CLEYERA	15 GAL.	30"-36" HT.	24"-30" SPD.	5' O.C.	10	UNIFORM HEAD & MATCHED
CRYPTOMERIA JAPONICA 'GLOBOSA NANA'	DWARF JAPANESE CEDAR	3 GAL.	15"-18" HT.	15"-18" SPD.	3' O.C.	22	UNIFORM HEAD & MATCHED
ELAEAGNUS PUNGENS 'FRUITLANDII'	SILVERBERRY	15 GAL.	36"-48" HT.	36"-48" SPD.	7' O.C.	33	UNIFORM HEAD & MATCHED
ILEX CORNUTA 'CARISSA'	CARISSA HOLLY	15 GAL.	24"-30" HT.	24"-30" SPD.	3.5' O.C.	14	UNIFORM HEAD & MATCHED
ILEX CORNUTA 'CARISSA'	CARISSA HOLLY	7 GAL.	18"-24" HT.	18"-24" SPD.	3.5' O.C.	67	UNIFORM HEAD & MATCHED
LOROPETALUM CHINENSE 'HINES PURPLELEAF PLUM DELIGHT' TM	PLUM DELIGHT FRINGE-FLOWER	7 GAL.	18"-24" HT.	18"-24" SPD.	6' O.C.	14	UNIFORM HEAD & MATCHED
LOROPETALUM CHINENSE 'RUBY'	RUBY LOROPETALUM	15 GAL.	24"-30" HT.	24"-30" SPD.	4' O.C.	16	UNIFORM HEAD & MATCHED
LOROPETALUM CHINENSE 'RUBY'	RUBY LOROPETALUM	7 GAL.	18"-24" HT.	18"-24" SPD.	4' O.C.	4	UNIFORM HEAD & MATCHED
MYRICA CERIFERA	WAX MYRTLE	15 GAL.	36"-48" HT.	36"-48" SPD.	7' O.C.	31	UNIFORM HEAD & MATCHED
PITTIOSPORUM TOBIRA 'COMPACTUM'	COMPACT PITTIOSPORUM	15 GAL.	24"-30" HT.	24"-30" SPD.	5' O.C.	2	UNIFORM HEAD & MATCHED
PITTIOSPORUM TOBIRA 'COMPACTUM'	COMPACT PITTIOSPORUM	7 GAL.	18"-24" HT.	18"-24" SPD.	5' O.C.	12	UNIFORM HEAD & MATCHED
PITTIOSPORUM TOBIRA 'VARIEGATA'	VARIEGATED MOCK ORANGE	7 GAL.	24"-30" HT.	24"-30" SPD.	9' O.C.	13	UNIFORM HEAD & MATCHED

GROUND COVERS	COMMON NAME	SIZE	SPACING	SPACING	QTY	REMARKS
CYNODON DACTYLON	BERMUDA GRASS	SOD			27,427 SF	
JUNIPERUS PROCUMBENS 'NANA'	SHORE JUNIPER	1 GAL.	48" O.C.	48" o.c.	37	MATCHED
MIXED ANNUALS	MIXED ANNUALS	FLAT	8' O.C.	8' o.c.	110	PER OWNER

NOTE: ALL PLANTING BEDS AND TREE RINGS TO RECEIVE 3" LAYER OF BROWN SHREDDED BARK MULCH

3 PLANTING SCHEDULE & NOTES NO SCALE

- NOTES:
- LIMB TREES TO ENSURE PASSAGE ON ALL SIDEWALKS, TRAVEL LANES, DRIVEWAYS AND SIGHT DISTANCE TRIANGLES.
 - ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10'. [SEC. 18-566 CoW LDC]

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

Approved Construction Plan

Name: _____ Date: 10/12/16

Planning: _____ Traffic: _____ Fire: _____

STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON
ENGINEERING DEPARTMENT

DATE 10/11/16 PERMIT # 201503922

SIGNED: _____

REVNO.	DESCRIPTIONS	DATE
5	ISSUED FOR CONSTRUCTION - AGE QUALIFIED SALES CENTER / RECREATIONAL FACILITY	10/09/2016
4	ADDITIONAL CITY OF WILMINGTON TRC COMMENT REVISIONS	04/06/2016
3	SANITARY SEWER REVISIONS, REMOVAL OF WALKINGWAY ALLEY AND ADDITION OF UTILITY SERVICES TO FUTURE AMENITY AREA	02/10/2016
2	MODIFICATIONS TO LOTS, ALLEYS, AND GRADING	01/25/2016
1	GRADING, STORMWATER, AND UTILITY REVISIONS	10/27/2015
0	ISSUED FOR CONSTRUCTION	09/29/2015



MCKIM & CREED

243 North Front Street
Wilmington, North Carolina 28401
Phone: (910)343-1048, Fax: (910)251-8282
License: F-1222
www.mckimcreed.com

**PULTE HOMES CORPORATION
DEL WEBB COMMUNITIES, INC.**

4000 FABER PLACE DRIVE, SUITE 110
NORTH CHARLESTON, SC 29405

**RIVERLIGHTS
AGE QUALIFIED - PHASE 1**

**SALES CENTER/FUTURE PRIVATE
RECREATIONAL FACILITY LANDSCAPE
DETAILS**

DATE: 07/11/2015	SCALE: N/A	MAC FILE NUMBER: CL-107
MCE PROJ. # 02735-0125	HORIZONTAL: N/A	DRAWING NUMBER: 52SC2
DRAWN: EEM/KCBE	VERTICAL: N/A	
DESIGNED: KCBE		
CHECKED: NJL		
PROJ. MGR: KCBE		
STATUS: FINAL DESIGN	ISSUED FOR CONSTRUCTION	REVISION 5