

**- Final Drawing -**  
**Issued for Permit**  
**Review Purposes Only**



**EXISTING CONDITIONS & DEMOLITION PLAN**  
**WALLBROOK - LOT 8**  
**MASS GRADING / EROSION CONTROL**  
 Town of Rolesville Project No. CID 24-  
 Rolesville, Wake County, North Carolina

NC License: P-1109  
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 Project Number: 21089  
 Drawing Number: D-1472

**C0.2**

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**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCGO1 CONSTRUCTION GENERAL PERMIT**

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCGO1 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

**SECTION E: GROUND STABILIZATION**

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	
	Stabilization	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed. -7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones
(d) Slopes 3:1 to 4:1	14	-7 days for Falls Lake Watershed -10 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

**Note:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

**GROUND STABILIZATION SPECIFICATION**

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Roll-on erosion control products with or without temporary grass seed</li> <li>Hydroseeding</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to retain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Roll-on erosion control products with grass seed</li> </ul>

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging off-site.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

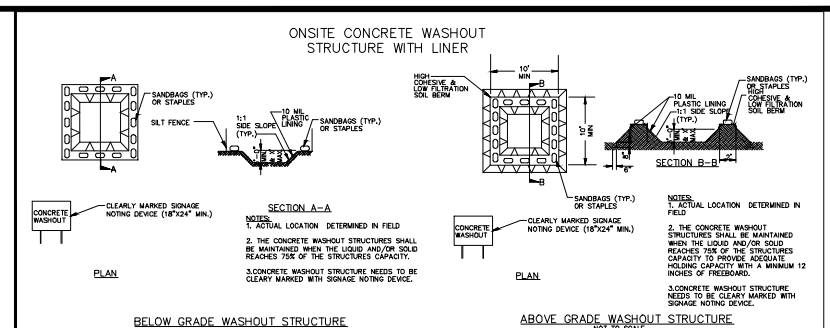
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sealed and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating units.

**EARTHEN STOCKPILE MANAGEMENT**

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available or accidental poisoning.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



**CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlets (closest to the washout which could receive spills or overflow).
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Removeavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

**HAZARDOUS AND TOXIC WASTE**

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

**Legend**

EXISTING	PROPOSED
● = FOUND MONUMENT AS NOTED	○ = SET IRON PIN
○ = NCGS MONUMENT	○ = DIMENSION POINT (NOTHING SET)
— = PROPERTY LINE	— = RIGHT OF WAY
C&G = CURB AND GUTTER	— = CABLE TV PEDESTAL
DI = DROP INLET	— = ELECTRIC BOX
ELEC = ELECTRIC METER	— = FIBER OPTIC
FH = FIRE HYDRANT	— = GAS VALVE
GV = GAS VALVE	— = HAND BOX
LP = LIGHT POLE	— = POWER POLE
PP = GUY WIRE	— = REINFORCED CONCRETE PIPE
S.F. = SQUARE FEET (AREA)	— = SIGN
— = TRAFFIC SIGNAL POLE	— = SANITARY SEWER MANHOLE
— = SANITARY SEWER FORCE MAIN VALVE	— = STORM DRAIN MANHOLE
— = TELEPHONE PEDESTAL	— = TRAFFIC BOX
— = WATER BOX	— = WATER METER
— = WATER MANHOLE	— = WATER VALVE
— = WELL	— = PEDESTRIAN X-WALK POLE
— = ELECTRIC LINE	— = SANITARY SEWER FORCE MAIN
— = FIBER OPTIC LINE	— = GAS LINE
— = OVERHEAD ELECTRIC LINE	— = SANITARY SEWER LINE
— = TELEPHONE LINE	— = CABLE TV LINE
— = WATER LINE	— = FIRE LINE
— = 8" WATER LINE	— = 12" WATER LINE
— = RIPARIAN BUFFER	— = TREELINE
— = MAJOR CONTOUR (5')	— = MINOR CONTOUR (1')
— = DESIGN CONTOUR (ARK CONSULTING GROUP)	— = DESIGN CONTOUR (MADAMS, CO.)
— = SILT FENCE	— = TEMPORARY DIVERSION (TDD)
— = LIMITS OF DISTURBANCE	— = TREE PROTECTION FENCE
— = TDD DRAINAGE AREA	— = SKIMMER BASIN DRAINAGE AREA
— = STORM PIPE	— = SKIMMER OUTLET DEVICE
— = STONE CHECK DAM	— = RIPARIAN BUFFER
— = ACCESS AND UTILITY EASEMENT	— = STORMWATER MAINT. EASEMENT
— = RIGHT-OF-WAY TO BE DEDICATED AS PART OF U-6241	— = PROJECT AREA

**Demolition Notes:**

- CONTRACTOR SHALL CONTACT NORTH CAROLINA ONE-CALL CENTER (NC 811) BY DIALING 811 OR 1-800-632-4949 AT LEAST 72 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY OR DIGGING AND HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO EXCAVATING OR TRENCHING.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS REQUIRED FOR DEMOLITION WORK.
- THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND/OR ENGINEER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
- EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE AND DO NOT INCLUDE MECHANICAL, ELECTRICAL AND MISCELLANEOUS STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE DEMOLITION WORK FOR THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- ALL DEMOLITION WASTE AND DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
- ASBESTOS OR HAZARDOUS MATERIALS, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
- CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL, AND OSHA REGULATIONS WHEN OPERATING DEMOLITION EQUIPMENT AROUND UTILITIES.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH THE NCDOT STANDARDS, AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH THE LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT, AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
- CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES AND ITEMS FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL REMOVE EXISTING VEGETATION AND IMPROVEMENTS WITHIN LIMITS OF DISTURBANCE UNLESS NOTED OTHERWISE.
- TREES OUTSIDE OF CONSTRUCTION LIMITS OR TREES NOT INDICATED TO BE REMOVED SHALL BE PROTECTED.

**Wake County Basin Removal Sequence:**

- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- CONTACT NCDCEQ - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DOWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DOWATERING ACTIVITY, SEND EMAIL TO NCDCEQ-DEMUR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ON SITE. THE EMAIL SHOULD INCLUDE: E&S JURISDICTION; WAKE COUNTY, WAKE COUNTY PROJECT; NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A) REASON FOR CONVERSION, B) BASIN #, C) DOWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION 6, ITEM 4 OF THE NCGO1. KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION.
- AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDCEQ-DEMUR THAT YOU MAY REMOVE THE BASIN OR ON- DAY 11, WHICHEVER IS SOONER, REMOVE BASINS) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY.
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.

**NCGO1 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19**

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION A: SELF-INSPECTION**

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the inspection Record.

Inspect	Frequency (at least once per business hour)	Inspection records must include:
(1) Soil grade maintained in post-washing or on	Daily	Soil conditions If no daily rain gauge observations are made, daily rainfall measurements for the site shall be taken. Daily site soil moisture data is required to be recorded. One or more soil moisture measurements shall be taken. A permittee may use weather forecasting tools approved by the Division.
(2) E&S Measure	At least once per calendar day and within 24 hours of a rain event > 0.2 inch in 24 hours	1. Identification of the measure in context. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Identification of whether the measure was operating properly. 5. Description of maintenance needs for the measure. Description, make, size, and date of corrective maintenance. 6. Identification of the person who inspected.
(3) Stormwater discharge controls (SDCs)	At least once per calendar day and within 24 hours of a rain event > 0.2 inch in 24 hours	1. Name of the person performing the inspection. 2. Number of indicators of disapproval, pollution such as oil, grease, sediment, and debris on the structure. 3. Identification of whether the measure was operating properly. 4. Description of maintenance needs for the measure. Description, make, size, and date of corrective maintenance. 5. Identification of the person who inspected.
(4) Perimeter dike	At least once per calendar day and within 24 hours of a rain event > 0.2 inch in 24 hours	1. Visible and measurable erosion on the dike structure, then a record of the following shall be made: a. Location of the erosion. b. Description, make, size, and date of corrective action taken, and c. An application as to the action taken to control future erosion.
(5) Streams or other water courses or ditches (where applicable)	At least once per calendar day and within 24 hours of a rain event > 0.2 inch in 24 hours	1. If the stream or waterway has increased water sedimentation or stream bank erosion, the permittee shall: a. Identify the location of the erosion. b. Describe, make, size, and date of corrective action taken, and c. Record of the required reports to the appropriate Division Regional Office per Section C.04 (DWR) of this permit of this permit.
(6) Erosion stabilization measures	After each phase of grading	1. The date of the inspection of the erosion stabilization measure, including of grading, installation of storm drainage facilities, completion of all land disturbing activity, disturbance or re-erosion, permanent grass cover. 2. Documentation that the required general stabilization or similar inspection form that includes all the required elements. Use of electronically available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

**NOTE:** The rain inspection resets the required 7 calendar day inspection requirement.

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

**1. E&S Plan Documentation**

The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&S Measure has been installed and does not significantly deviate from the location, dimensions and relative elevations shown on the approved E&S Plan.	Initial and date each E&S Measure on a copy of the approved E&S Plan or complete, date and sign an inspection report that lists each E&S Measure shown on the approved E&S Plan. This documentation is required for the initial installation of the E&S Measures or if the E&S Measures are modified after initial installation.
(b) A plan of grading has been completed.	Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&S Plan.	Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S Measures.	Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

**2. Additional Documentation**

In addition to the E&S Plan documents above, the following items shall be kept on the site:

- This general permit as well as the certificate of coverage, after it is received.
- Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- All data used to complete the Notice of Intent and order inspection records shall be maintained for a period of three years after project completion and made available upon request. (40 CFR 122.41)

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION C: REPORTING**

**1. Occurrences that must be reported**

Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills:
  - They are 25 gallons or more,
  - They are less than 25 gallons but cannot be cleaned up within 24 hours,
  - They cause sheen on surface waters (regardless of volume), or
  - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

**2. Reporting Timeframes and Other Requirements**

After a reporting becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0366 or (919) 733-3300.

Occurrence	Reporting Timeframes (With Bypasses) and Other Requirements
(a) Visible sediment deposition in a stream or wetland.	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>If the stream is within the NC 3300 List as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more rigorous practices. Staff determine that additional requirements are needed to assure compliance with the federal or state imposed water conditions.</li> </ul>
(b) Oil spill or release of hazardous substances per item 1(b)-(c) above.	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> <li><b>Report of Next Business Day</b> before the date of the bypass. If possible the report shall include an evaluation of the spill's potential quality and effect of the bypass.</li> </ul>
(c) Unanticipated bypasses (40 CFR 122.41(d)(3)).	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(d) Noncompliance with the conditions of this permit that may endanger health or the environment (40 CFR 122.41(d)(7)).	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the non-compliance, and it causes the permittee to take corrective action to correct the non-compliance as expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance (40 CFR 122.41(d)(8)). Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

**NCGO1 SELF-INSPECTION, RECORDKEEPING AND REPORTING EFFECTIVE: 04/01/19**

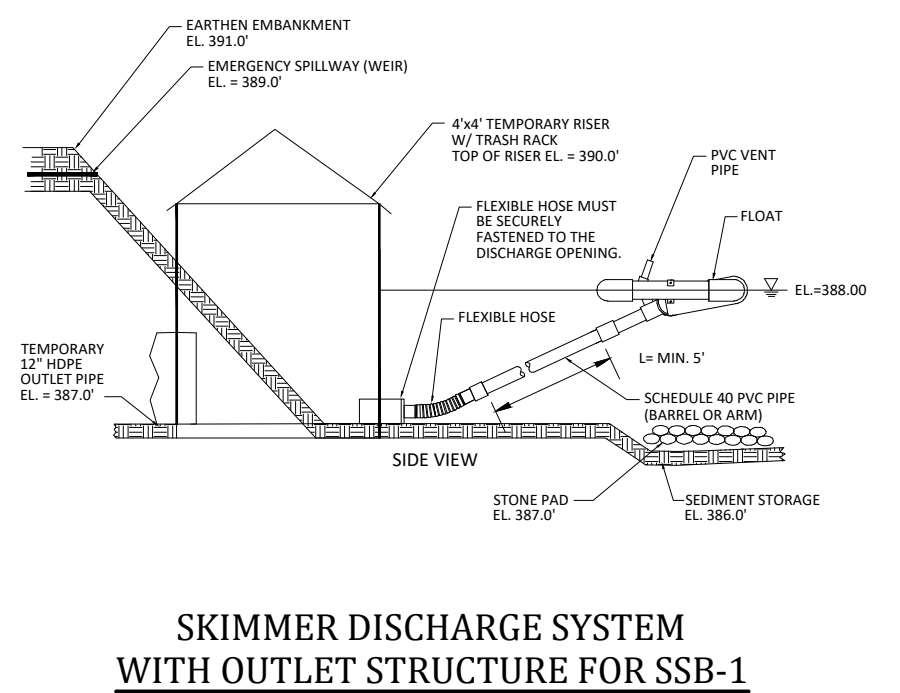
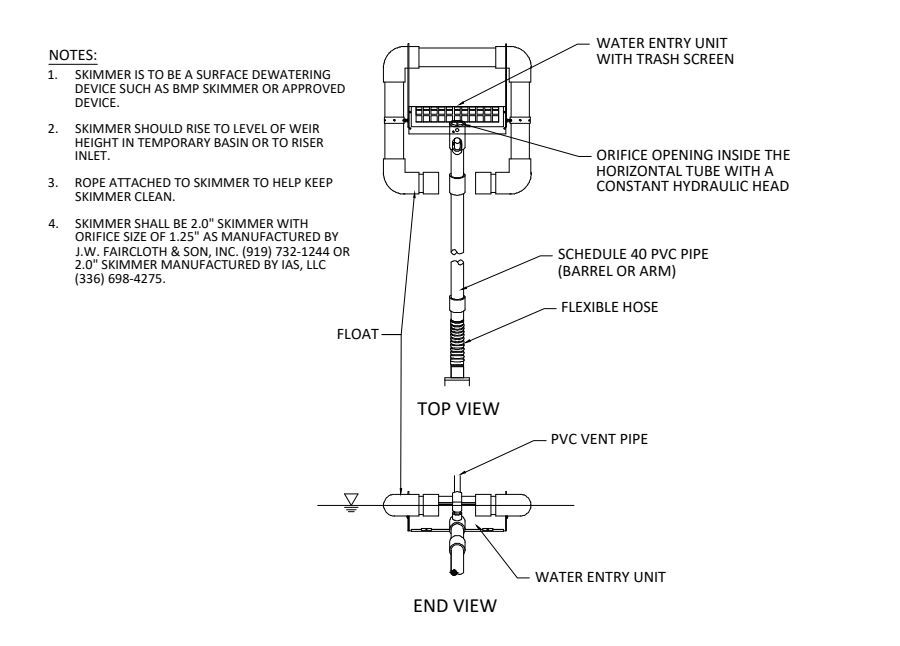
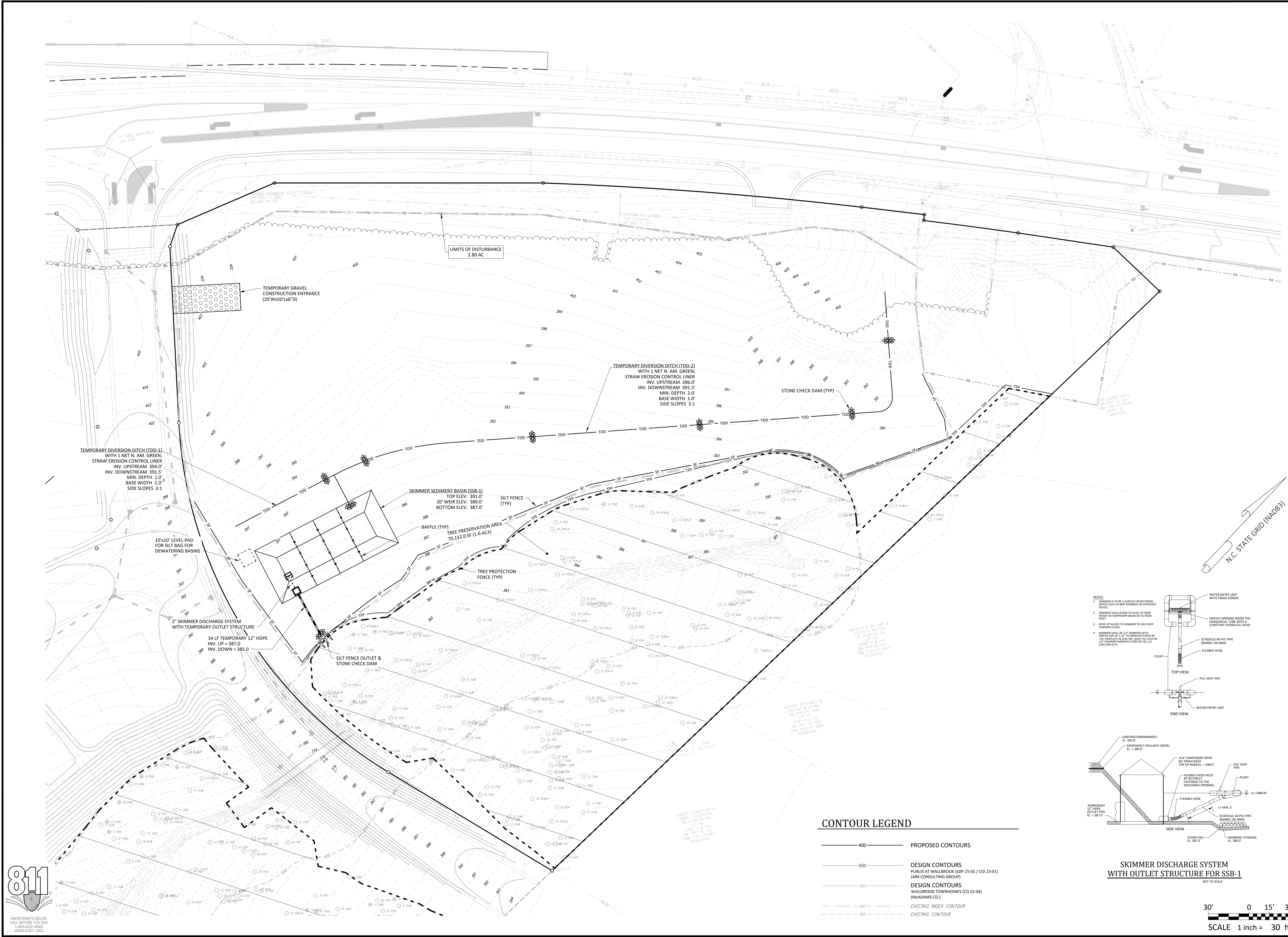
**Erosion Control Provisions:**

- NO PERSON MAY INITIATE A LAND DISTURBING ACTIVITY BEFORE NOTIFYING WAKE COUNTY WATERSHED MANAGEMENT OF THE DATE THAT THE LAND DISTURBING ACTIVITY WILL BEGIN.
- LAND DISTURBING ACTIVITY BEYOND THAT REQUIRED TO INSTALL APPROPRIATE EROSION CONTROL MAY NOT PROCEED UNTIL EROSION CONTROL MEASURES ARE INSPECTED AND APPROVED BY THE ENGINEER.
- SCHEDULING OF A PRE-CONSTRUCTION CONFERENCE WITH THE WAKE COUNTY WATERSHED MANAGER, JEEVAN NEUPANE, PE (919-819-8907) PRIOR TO INITIATING LAND DISTURBING ACTIVITIES IS REQUIRED. FOR INSPECTION CALL 919-819-8907. 48 HOUR NOTICE IS REQUIRED.
- INSTALL TREE PROTECTION FENCING AROUND ALL AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS SHOWN ON PLANS.
- PROVIDE 20' X 50' X 6" STONE CONSTRUCTION ENTRANCES AS SHOWN ON PLAN.
- SEED OR OTHERWISE PROVIDE GROUND COVER DEVICES OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION FOR ALL EXPOSED SLOPES WITHIN 7 DAYS OF COMPLETION OF ANY PHASE OF GRADING ON PERIMETER AREAS AND SLOPES STEEPER THAN 3:1. ALL OTHER AREAS SHALL BE STABILIZED WITHIN 14 DAYS.
- CONTRACTOR SHALL INSPECT AND MAINTAIN AS NEEDED ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER EACH MAJOR STORM EVENT. FAILURE TO KEEP ALL EROSION CONTROL DEVICES IN PROPER WORKING ORDER MAY RESULT IN A STOP WORK ORDER OR CIVIL PENALTIES UP TO \$500.00 PER DAY OF VIOLATION.
- THE ENGINEER RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES SHOULD THE PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.
- ACCEPTANCE AND APPROVAL OF THIS PLAN IS CONDITIONED UPON YOUR COMPLIANCE WITH FEDERAL AND STATE WATER QUALITY LAWS, REGULATION AND RULES. IN ADDITION LOCAL CITY AND COUNTY ORDINANCES OR RULES MAY ALSO APPLY TO THIS LAND DISTURBING ACTIVITY. APPROVAL BY THE COUNTY DOES NOT SUPERSEDE ANY OTHER PERMIT OR APPROVAL.
- PLEASE BE ADVISED OF THE RULES TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE AND TAR RIVER BASINS. THESE RULES ARE ENFORCED BY THE DIVISION OF WATER RESOURCES (DWR). DIRECT ANY QUESTIONS ABOUT THE APPLICABILITY OF THESE RULES TO YOUR PROJECT TO THE REGIONAL WATER QUALITY SUPERVISOR, RALEIGH REGIONAL OFFICE AT (919) 791-4200.
- ALL AREAS DOWNSTREAM OF TEMPORARY BASINS AND DITCHES ARE TO BE STABILIZED IMMEDIATELY UPON CONSTRUCTION.

**Construction Sequence:**

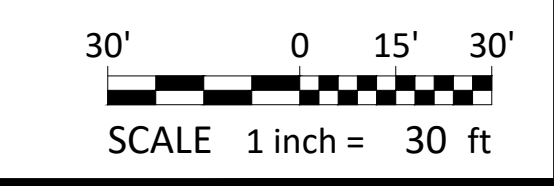
- EROSION AND SEDIMENT CONTROL (E&S) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES OCCUR.
- CALL WAKE COUNTY WATERSHED MANAGER JEEVAN NEUPANE AT (919) 819-8907 A MINIMUM OF 48 HOURS IN ADVANCE TO SCHEDULE A PRE-CONSTRUCTION MEETING AND FOR NOTIFICATION OF PROJECT START UP.
- ANY DOWATERING ON THE SITE SHALL BE DONE THROUGH A SILT BAG THAT IS CONSTANTLY MONITORED.
- INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- CALL WATERSHED MANAGER, JEEVAN NEUPANE FOR AN ON-SITE INSPECTION TO OBTAIN A CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE. INSTALL TEMPORARY SKIMMER SEDIMENT BASINS, ALONG WITH TEMPORARY DIVERSION DITCHES THAT SHALL BE INSTALLED TO ENSURE AS MUCH FLOW AS POSSIBLE IS DIRECTED TO THE BASIN.
- AS ROUGH MASS GRADING CONTINUES, SKIMMER SEDIMENT BASINS SHALL BE MAINTAINED AND CLEANED OF SEDIMENT. IN THE FUTURE SITE-SPECIFIC EROSION CONTROL PLAN SKIMMER SEDIMENT BASINS TO BE ABANDONED SHALL BE REMOVED AS FOLLOWS: DEWATER THROUGH SILT BAG, CLEAN SEDIMENT, REMOVE BAFFLES, BACKFILL BASIN AND STABILIZE IMMEDIATELY. DEWATERING OPERATIONS THROUGH SILT BAGS SHALL BE MONITORED CONTINUOUSLY.
- STABILIZE STE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAME.
- WHEN MASS GRADING IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL WATERSHED MANAGER JEEVAN NEUPANE FOR INSPECTION.
- IF SITE IS APPROVED, MAINTAIN TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OR STABILIZED ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR FINAL SITE INSPECTION BY THE WATERSHED MANAGER, JEEVAN NEUPANE. OBTAIN CERTIFICATE OF COMPLETION.

**-Final Drawing - Issued for Permit Review Purposes Only**  
**EROSION CONTROL NOTES & LEGEND**  
**WALLBROOK - LOT 8**  
**MASS GRADING / EROSION CONTROL**  
 Town of Rolesville Project No. CID 24-  
 Rolesville, Wake County, North Carolina  
 S Main St. / US-401 Business & Wall Creek Drive  
 NC License: P-1109  
**ARK CONSULTING GROUP PLLC**  
 ENGINEERS & PLANNERS  
 2755-B Churchville Blvd.  
 #200  
 Cary, NC 27513  
 (919) 558-0888  
 www.arkconsultinggroup.com  
 4/1/2024  
 Project Manager: BCF  
 Drawn By: DLC  
 Checked By: TN  
 Project Number: 21089  
 Drawing Number: D-1472  
 Date: April 1, 2024  
 C1.0



**CONTOUR LEGEND**

— 400 —	PROPOSED CONTOURS
— 400 —	DESIGN CONTOURS PUBUX AT WALLBROOK (SDP 23-05 / CID 23-01) (ARK CONSULTING GROUP)
— 400 —	DESIGN CONTOURS WALLBROOK TOWNHOMES (CD 22-04) (MCADAMS CO.)
- - - 400 - - -	EXISTING INDEX CONTOUR
- - - 399 - - -	EXISTING CONTOUR



- Final Drawing -  
 Issued for Permit  
 Review Purposes Only

REVISIONS:

#	DATE	DESCRIPTION
1.1	1-APPX-24	ISSUED FOR INITIAL REVIEW

EROSION CONTROL PHASE 1  
**WALLBROOK - LOT 8**  
 MASS GRADING / EROSION CONTROL  
 Town of Rolesville Project No. CID 24-

Rolesville, Wake County, North Carolina  
 S Main St. / US-401 Business & Wall Creek Drive

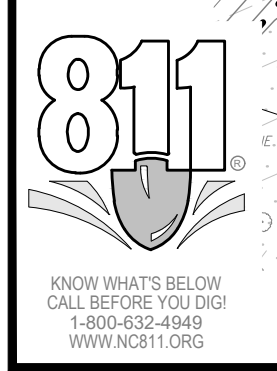
NC License: P-1199  
**ARK CONSULTING GROUP PLLC**  
 ENGINEERS & PLANNERS  
 2755-B Charles Blvd.  
 #100  
 Raleigh, NC 27608  
 (919) 878-0888  
 www.arkconsultinggroup.com

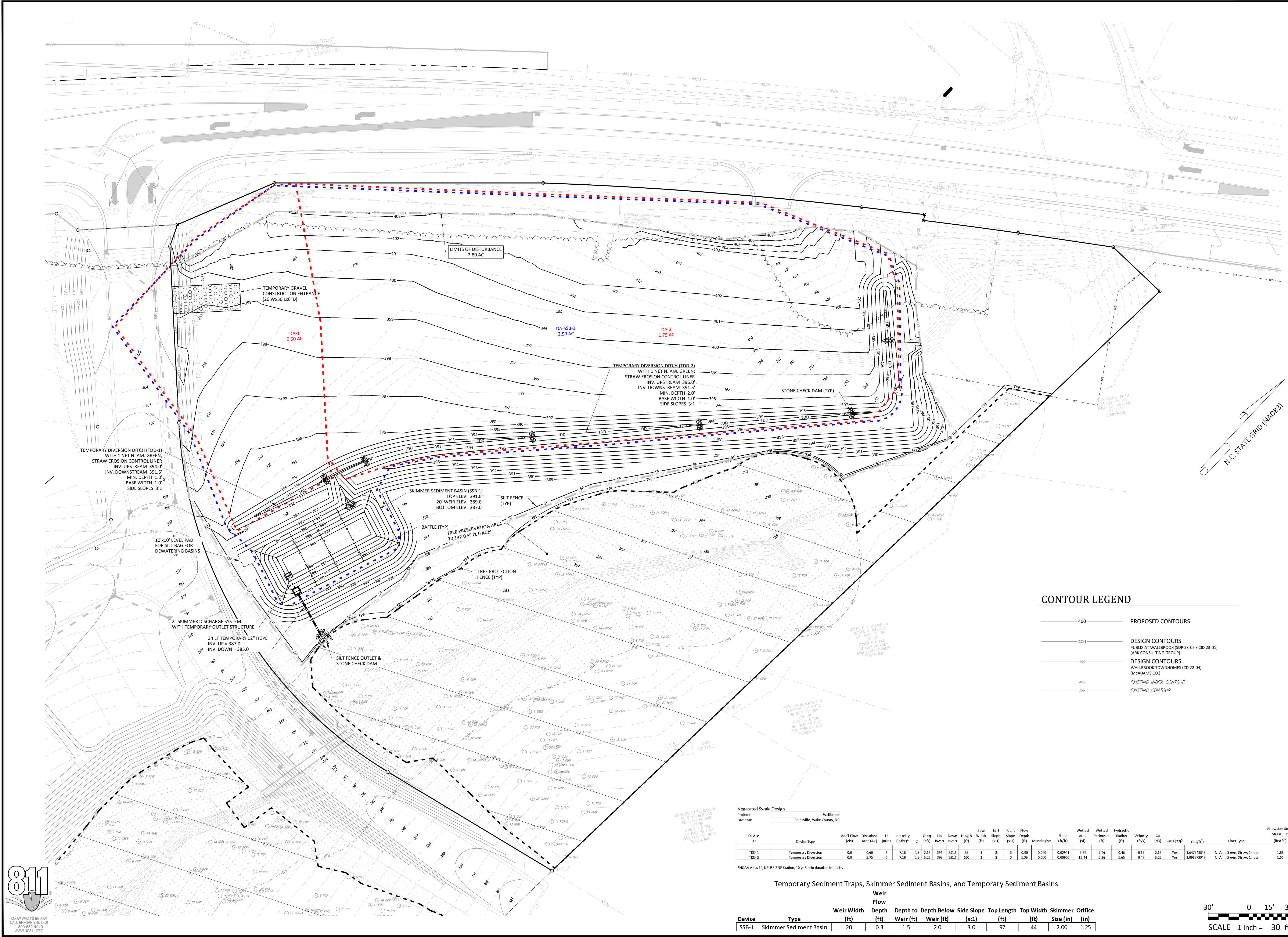
Project Manager:	BCF
Drawn By:	DLC
Checked By:	TN
Project Number:	21089
Drawing Number:	D-1472

C1.1

Project Manager: BCF  
 Drawn By: DLC  
 Checked By: TN  
 Project Number: 21089  
 Drawing Number: D-1472

Date: April 1, 2024





**CONTOUR LEGEND**

- 400 — PROPOSED CONTOURS
- 400 — DESIGN CONTOURS (PUB/AT WALLBROOK (SDP 23-05 / CID 23-01) (ARK CONSULTING GROUP))
- 400 — DESIGN CONTOURS (WALLBROOK TOWNHOMES (CD 22-04) (MCADAMS CO.))
- - - 400 - - - EXISTING INDEX CONTOUR
- - - 399 - - - EXISTING CONTOUR

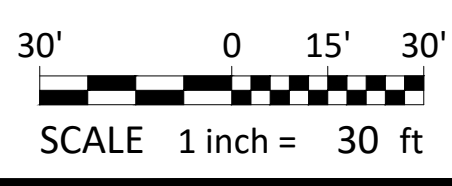
Vegetated Swale Design  
 Project: Wallbrook  
 Location: Raleigh, Wake County, NC

Device ID	Device Type	Adff Flow (cfs)	Disturbed Area (Ac)	Tc (min)	Intensity (in/hr)	Qreq C (cfs)	Qreq I (cfs)	Invert (ft)	Down Length (ft)	Base Width (ft)	Left Slope (ft)	Right Slope (ft)	Flow Depth (ft)	Manning's (ft/s)	Slope (ft/ft)	Wetted Area (sq ft)	Wetted Perimeter (ft)	Hydraulic Radius (ft)	Velocity (ft/s)	Qa (cfs)	Qa-Qreq?	T (hr)	Liner Type	Allowable Shear Stress (lb/ft <sup>2</sup> )	
TDD-1	Temporary Diversion	0.0	0.60	5	7.18	0.5	2.15	394	391.5	85	1	3	3	0.90	0.020	0.0294	3.32	2.36	0.46	0.65	2.15	Yes	1.64774845	N. Am. Green; Straw; 1 nets	1.55
TDD-2	Temporary Diversion	0.0	1.75	5	7.18	0.5	6.28	396	391.5	500	1	3	3	1.96	0.020	0.00900	13.84	9.36	1.65	0.47	6.28	Yes	1.696772947	N. Am. Green; Straw; 1 nets	1.55

\*NOAA Atlas 14, NEURIS 2NE Station, 30 yr 5 min duration intensity

Temporary Sediment Traps, Skimmer Sediment Basins, and Temporary Sediment Basins

Device	Type	Weir		Depth	Side Slope	Top Length	Top Width	Skimmer Orifice	
		Width (ft)	Flow Depth (ft)					Weir (ft)	Size (in)
SSB-1	Skimmer Sediment Basin	20	0.3	1.5	2.0	3.0	97	44	2.00 1.25



**- Final Drawing -**  
 Issued for Permit  
 Review Purposes Only

1.1 APPR.24  
 # DATE  
 # DESCRIPTION



**EROSION CONTROL PHASE 2 & MASS GRADING PLAN**

**WALLBROOK - LOT 8**

**MASS GRADING / EROSION CONTROL**

Town of Rolesville Project No. CID 24-  
 S Main St. / US-401 Business & Wall Creek Drive  
 Rolesville, Wake County, North Carolina

NC License: P-1129

**ARK CONSULTING GROUP PLLC**  
 ENGINEERS & PLANNERS

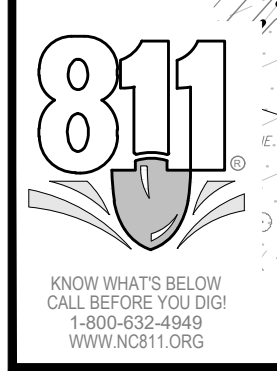
2755-B Charles Blvd.  
 Raleigh, NC 27608  
 (919) 878-0888  
 www.arkconsultinggroup.com

Professional Engineer  
 License No. 31970  
 Date: 4/1/2024

Project Manager: BCF  
 Drawn By: DLC  
 Checked By: TN  
 Project Number: 21089  
 Drawing Number: D-1472

**C1.2**

Date: April 1, 2024







**GENERAL NOTES:**

- THIS ALTA/NSPS LAND TITLE SURVEY WAS PREPARED FOR THE BENEFIT OF WALLBROOK LANDCO, LLC, ITS SUCCESSORS AND/OR ASSIGNS AS THEIR INTERESTS MAY APPEAR, AND INVESTORS TITLE INSURANCE COMPANY.
- THE PROPERTY AS SHOWN HEREON IS BASED ON A FIELD-RUN BOUNDARY SURVEY WITH A REW CLOSURE OF 1:34,600.
- THE IMPROVEMENTS SHOWN HEREON ARE BASED ON A FIELD-RUN PLANIMETRIC SURVEY PERFORMED BY JOHNSON, MIRMIRAN & THOMPSON FROM DECEMBER 2019 THROUGH MARCH 2020 AND REFLECTS SITE CONDITIONS AS OF THAT DATE.
- ELEVATIONS ARE BASED ON NAVD88 DATUM.
- THE SURVEY IS REFERENCED TO THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM (NCSPCS), NORTH AMERICAN DATUM, 1983, 2001 ADJUSTMENT, NAD83(2001).
- THE USE OF THE WORD CERTIFY OR CERTIFICATION CONSTITUTES AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THOSE FACTS OR FINDINGS WHICH ARE THE SUBJECT OF THE UNDERSIGNED PROFESSIONAL'S KNOWLEDGE, INFORMATION AND BELIEF, AND IN ACCORDANCE WITH THE COMMONLY ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE EITHER EXPRESSED OR IMPLIED.
- THE SUBJECT PROPERTY IS LOCATED IN FLOOD ZONE X, AREA OF MINIMAL FLOODING, AS SHOWN ON NATIONAL FLOOD INSURANCE RATE MAP (FIRM), WAKE COUNTY, NORTH CAROLINA, PANEL 1758, MAP NO. 3720175800J, EFFECTIVE DATE: MAY 2, 2006.
- AT THE TIME OF THE SURVEY, THERE WERE NO PARKING SPACES.
- AT THE TIME OF THE SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF THE SITE BEING USED AS A SOLID WASTE DUMP, SUMP OR LANDFILL.
- AT THE TIME OF THE SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF A CEMETERY.
- AT THE TIME OF THE SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF BUILDING CONSTRUCTION OR BUILDING ADDITIONS.

**AREA TABULATION**

PARCEL	PIN#	NET (AC.)	GROSS (AC.)
A	1758-48-9229	0.828	0.828
B	1758-58-2090	10.742	11.168
C	1758-56-8976	42.324	44.100
D	1758-45-8905	15.024	15.024
TOTALS:		68.918	71.120

**RECORD LEGAL DESCRIPTIONS FOR TAX PARCELS 1758-48-9229 & 1758-58-2090:**

PER INVESTORS TITLE INSURANCE COMPANY, TITLE COMMITMENT NO. 201800776CA2, WITH AN EFFECTIVE DATE OF SEPTEMBER 14, 2018 AT 5:00 P.M.

IN THE STATE OF NC, COUNTY OF WAKE,

PARCEL ONE (REID #: 0224145) (PIN #1758-58-2090) (PARCEL 'B'):

BEING LOT 2-3, CONTAINING 10.723 NET ACRES, AS THE SAME IS SHOWN ON THAT PLAT RECORDED IN BOOK OF MAPS 1996, PAGE 1582, WAKE COUNTY REGISTRY.

PARCEL TWO (REID #: 0092211) (PIN #1758-48-9229) (PARCEL 'A'):

BEING THAT PARCEL DESCRIBED AS FOLLOWS:

BEGINNING AT A STAKE IN THE EDGE OF THE ROLESVILLE-WALKERS CROSSROAD ROAD, CORNER OF O. V. WIGGINS, THENCE IN A SOUTHWESTERN DIRECTION ABOUT 300 FEET TO A STAKE AND W. H. MARSHALL'S LINE; THENCE IN A NORTHWESTERN DIRECTION 246 FEET WITH MARSHALL'S LINE TO THE EDGE OF THE ROAD; THENCE IN AN EASTERN DIRECTION WITH SAID ROAD ABOUT 410 FEET TO THE POINT OF BEGINNING, CONTAINING  $\frac{1}{8}$  OF AN ACRE BY ESTIMATION. BEING A PART OF THE LAND FORMERLY OWNED BY JAMES WALL.

**RECORD LEGAL DESCRIPTIONS FOR TAX PARCELS 1758-56-8976 & 1758-45-8905:**

PER INVESTORS TITLE INSURANCE COMPANY, TITLE COMMITMENT NO. 201800751CA2, WITH AN EFFECTIVE DATE OF SEPTEMBER 10, 2018 AT 5:00 P.M.

IN THE STATE OF NC, COUNTY OF WAKE,

TRACT 1 (PIN #1758-56-8976) (PARCEL 'C'):

BEING ALL OF TRACT 2A (2.894 ACRES) AND TRACT 3 (41.221 ACRES) AS SHOWN ON PLAT ENTITLED "RECOMBINATION SURVEY FOR TOMMY TWITTY," DATED NOVEMBER 17, 1995, PREPARED BY W. GRAHAM CAWTHORNE, JR., RLS AND RECORDED IN BOOK OF MAPS 1995, PAGE 2034, WAKE COUNTY REGISTRY.

LESS AND EXCEPT FROM TRACT 1 THAT 0.175 ACRE PORTION AS CONVEYED TO THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION IN DEED RECORDED IN BOOK 14395, PAGE 2080, WAKE COUNTY REGISTRY.

TRACT 2 (PIN #1758-45-8905) (PARCEL 'D'):

BEING ALL OF TRACT 2 (15.057 ACRE) AS SHOWN ON PLAT ENTITLED "RECOMBINATION MAP OF BOBBY L. MURRAY TRUST, TRACTS 1 & 2" DATED NOVEMBER 7, 2002, PREPARED BY MICHAEL D. GOODFRED, RLS, AND RECORDED IN BOOK OF MAPS 2005, PAGES 1195 AND 1196, WAKE COUNTY REGISTRY.

LESS AND EXCEPT FROM TRACT 2 THAT 0.03 ACRE PORTION AS CONVEYED TO CARLTON GROUP OF NORTH CAROLINA, LLC IN DEED RECORDED IN BOOK 13993, PAGE 2591, WAKE COUNTY REGISTRY.

**SCHEDULE B, PART II EXCEPTIONS:**

PER INVESTORS TITLE INSURANCE COMPANY, TITLE COMMITMENT NO. 201800776CA2, WITH AN EFFECTIVE DATE OF SEPTEMBER 14, 2018 AT 5:00 P.M.

1. (ITEM 3) MATTERS SHOWN ON RECORDED BOOK OF MAPS 1996 AT PAGE 1582 SHOWS THE FOLLOWING LOCATED ON THE LAND:

- OVERHEAD LINES [PLOTTED HEREON]
- POWER POLE [PLOTTED HEREON]
- RIGHT OF WAY FOR U.S. HWY 401 LOUISBURG ROAD [PLOTTED HEREON]

2. (ITEM 4) EASEMENT(S) AND/OR RIGHT(S) OF WAY RECORDED IN BOOK 3868 AT PAGE 917 (PARCEL ONE). [PLOTTED HEREON]

**SCHEDULE B, PART II EXCEPTIONS:**

PER INVESTORS TITLE INSURANCE COMPANY, TITLE COMMITMENT NO. 201800751CA2, WITH AN EFFECTIVE DATE OF SEPTEMBER 10, 2018 AT 5:00 P.M.

3. (ITEM 2) TITLE TO THAT PORTION OF THE LAND WITHIN THE RIGHT-OF-WAY OF U.S. HIGHWAY 401 (LOUISBURG ROAD). [PLOTTED HEREON]

4. (ITEM 3) RIGHTS OF OTHERS THERETO ENTITLED IN AND TO THE CONTINUED UNINTERRUPTED FLOW OF THE CREEK, LOCATED ON THE LAND. [CREEK LOCATION PLOTTED HEREON]

5. (ITEM 4) ELECTRIC LINE RIGHT-OF-WAY EASEMENT TO WAKE ELECTRIC MEMBERSHIP CORPORATION RECORDED IN BOOK 3868 AT PAGE 917. [PLOTTED HEREON]

AS TO TRACT 1 ONLY (PIN #1758-56-8976):

6. (ITEM 8) SUBJECT TO MATTERS SHOWN ON RECORDED BOOK OF MAPS 1995 AT PAGE 2034 SHOWS THE FOLLOWING LOCATED ON THE LAND:

- OVERHEAD LINE [PLOTTED HEREON]
- POWER POLE [PLOTTED HEREON]

7. (ITEM 9) EASEMENT(S) TO WAKE ELECTRIC MEMBERSHIP CORPORATION RECORDED IN BOOK 863 AT PAGES 211 AND 212. [BLANKET EASEMENT - EXISTING ELECTRIC LINES PLOTTED HEREON]

8. (ITEM 10) RURAL LINE PERMIT TO CAROLINA TELEPHONE AND TELEGRAPH COMPANY RECORDED IN BOOK 1338 AT PAGES 143 AND 145. [LOCATIONS CANNOT BE DETERMINED FROM THE RECORD DOCUMENT, EXISTING POLES AND GUY WIRES PLOTTED HEREON]

9. (ITEM 11) SLOPE EASEMENT RECORDED IN BOOK 14395 AT PAGE 2087 AS SHOWN ON PLAT RECORDED IN BOOK OF MAPS 2011 AT PAGE 383. [PLOTTED HEREON]

AS TO TRACT 2 ONLY (PIN #1758-45-8905):

10. SUBJECT TO MATTERS SHOWN ON RECORDED BOOK OF MAPS 2005 AT PAGES 1195 AND 1196 SHOWS THE FOLLOWING LOCATED ON THE LAND:

- UNDERGROUND SEWER MAIN MARKER [NOT FOUND]
- POWER BOX [NOT FOUND]
- RIGHTS OF OTHERS IN AND TO THE USE OF THE SOIL PATH (TO BE ABANDONED) [PATH NO LONGER VISIBLE]

11. (ITEM 13) DEED OF EASEMENT WITH GENERAL WARRANTY FOR WATERLINE EASEMENT TEMPORARY CONSTRUCTION EASEMENT RECORDED IN BOOK 16679 AT PAGE 132. [WATERLINE EASEMENT PLOTTED HEREON, TEMPORARY CONSTRUCTION EASEMENT NOT PLOTTED]

12. (ITEM 14) SANITARY SEWER EASEMENT RECORDED IN BOOK 10071 AT PAGE 2179 AS SHOWN ON PLAT RECORDED IN BOOK OF MAPS 2003 AT PAGE 647. [PLOTTED HEREON]

13. (ITEM 15) RESERVATION OF EASEMENT RECORDED IN BOOK 13993 AT PAGE 2591. [PLOTTED HEREON]

14. (ITEM 16) TITLE TO THAT PORTION OF THE LAND WITHIN THE RIGHT-OF-WAY OF S.R. 2226. [RIGHT OF WAY OF S.R. 2226 PLOTTED HEREON - PROPERTY DOES NOT EXTEND INTO RIGHT OF WAY]

15. (ITEM 17) RIGHT OF WAY AGREEMENT TO STATE HIGHWAY COMMISSION RECORDED IN BOOK 2052 AT PAGE 545. [RIGHT OF WAY OF S.R. 2226 PLOTTED HEREON]

16. (ITEM 18) RIGHTS OF OTHERS THERETO ENTITLED IN AND TO THE CONTINUED UNINTERRUPTED FLOW OF BRANCH/CREEK, LOCATED ON THE LAND. [BRANCH/CREEK LOCATION PLOTTED HEREON]

**CURRENT ZONING SETBACK REQUIREMENTS:**

TAX PARCEL 1758-48-9229: R-1 (SINGLE FAMILY RESIDENTIAL)  
 TAX PARCEL 1758-58-2090: R-1-SUD (SINGLE FAMILY RESIDENTIAL SPECIAL USE DISTRICT)  
 TAX PARCEL 1758-56-8976: CO-SUD (COMMERCIAL OUTLYING SPECIAL USE DISTRICT)  
 TAX PARCEL 1758-45-8905: CO-SUD

	FRONT	SIDE	CORNER	REAR
R-1	30'	12'	22'	25'
CO	20'	15'	25'	35'

(SETBACKS INCLUDE SPECIAL USE DISTRICTS)

NOTE: ZONING INFORMATION BASED ON INFORMATION AS PROVIDED BY CURRENT COUNTY ZONING DEPARTMENT, NO ZONING REPORT OR LETTER WAS PROVIDED TO SURVEYOR AT TIME OF SURVEY.

**NEW LEGAL DESCRIPTIONS**

**PARCEL 'A'** (PIN #1758-48-9229)

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE TOWN OF ROLESVILLE, COUNTY OF WAKE, STATE OF NORTH CAROLINA, DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND IRON PIPE MARKING THE NORTHWEST CORNER OF LOT 2-3 AS SAID LOT IS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "RECOMBINATION SURVEY FOR TOMMY TWITTY, TRACTS 2-2 & 2-3, TWITTY PROP.", BY W. GRAHAM CAWTHORNE, JR., RLS, DATED NOVEMBER 17, 1995, REVISED JANUARY 12, 1996 AND RECORDED IN BOOK OF MAPS 1996, PAGE 1582, WAKE COUNTY RECORDS, SAID PIPE ALSO BEING ON THE EAST LINE OF TRACT #3 AS SAID TRACT IS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "W. H. MARSHALL ESTATE", BY C. W. RUSSUM, RLS, DATED JULY, 1961 AND RECORDED IN BOOK OF MAPS 1961, PAGE 97, WAKE COUNTY RECORDS; THENCE ALONG SAID EAST LINE OF TRACT 3 N01°11'04"W 240.24' TO AN IRON PIPE ON THE SOUTHWEST RIGHT OF WAY LINE OF BURLINGTON MILLS ROAD (S.R. 2051); THENCE ALONG SAID SOUTHWEST RIGHT OF WAY LINE THE FOLLOWING FOUR COURSES: (1) S47°12'51"E 130.81'; (2) ALONG THE ARC OF A TANGENT CURVE TO THE LEFT, CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 600.00', THROUGH A CENTRAL ANGLE OF 26°22'04", AN ARC LENGTH OF 276.12' AND BEING SUBTENDED BY A CHORD BEARING S60°23'53"E 273.69'; (3) S75°02'10"E 50.12'; AND (4) S77°31'31"E 22.85' TO THE NORTH LINE OF AFORESAID LOT 2-3; THENCE ALONG SAID NORTH LINE OF LOT 2-3 N89°45'02"W 399.74' TO THE POINT OF BEGINNING.

CONTAINING 0.828 ACRES, MORE OR LESS.

**PARCEL 'B'** (PIN #1758-58-2090)

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE TOWN OF ROLESVILLE, COUNTY OF WAKE, STATE OF NORTH CAROLINA, DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND IRON PIPE MARKING THE SOUTHWEST CORNER OF PARCEL 2 AS SAID PARCEL IS DESCRIBED IN DEED BOOK 15498, PAGE 1302, WAKE COUNTY RECORDS; THENCE ALONG THE SOUTH LINE OF SAID PARCEL 2 S89°45'02"E 399.74' TO THE SOUTHWEST RIGHT OF WAY LINE OF BURLINGTON MILLS ROAD (S.R. 2051); THENCE CONTINUING S89°45'02"E 200.72' TO THE NORTHWEST CORNER OF LOT 2-4 AS SAID LOT IS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "RECOMBINATION SURVEY FOR TOMMY TWITTY, TRACTS 2-2 & 2-3, TWITTY PROP.", BY W. GRAHAM CAWTHORNE, JR., RLS, DATED NOVEMBER 17, 1995, REVISED JANUARY 12, 1996 AND RECORDED IN BOOK OF MAPS 1996, PAGE 1582, WAKE COUNTY RECORDS; THENCE ALONG THE SOUTHWEST LINE OF SAID LOT 2-4 S37°53'38"E 39.01' TO A FOUND BENT IRON PIPE AT AN ANGLE POINT IN THE SOUTH RIGHT OF WAY LINE OF BURLINGTON MILLS ROAD; THENCE CONTINUING S37°53'38"E 454.70' TO A FOUND IRON PIPE AT AN ANGLE POINT IN THE NORTHWEST RIGHT OF WAY LINE OF LOUISBURG ROAD (U.S. 401); THENCE CONTINUING S37°53'38"E 45.31' TO THE CENTERLINE OF LOUISBURG ROAD; THENCE ALONG THE CENTERLINE OF SAID ROAD, ALONG THE ARC OF A CURVE TO THE LEFT, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 3,750.00', THROUGH A CENTRAL ANGLE OF 08°13'06", AN ARC LENGTH OF 537.89' AND BEING SUBTENDED BY A CHORD BEARING S41°12'09"W 537.43'; THENCE LEAVING SAID CENTERLINE, ALONG THE NORTHEAST LINE OF LOTS 1 AND 2 AS SAID LOTS ARE SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "SURVEY FOR GRAND PARK PROPERTIES, LOTS 1 AND 2", BY CAWTHORNE, MOSS & PANCIERA, P.C., DATED OCTOBER 7, 1998 AND RECORDED IN BOOK OF MAPS 1999, PAGE 1039, WAKE COUNTY RECORDS, N49°16'09"W 479.09' TO A FOUND IRON PIPE MARKING AN ANGLE POINT IN SAID LOT 2; THENCE CONTINUING ALONG THE NORTHEAST LINE OF SAID LOT 2 N66°40'58"W 215.40' TO A FOUND IRON PIPE AT THE NORTHWEST CORNER THEREOF, SAID PIPE ALSO BEING ON THE EAST LINE OF TRACT #3 AS SAID TRACT IS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "W. H. MARSHALL ESTATE", BY C. W. RUSSUM, RLS, DATED JULY, 1961 AND RECORDED IN BOOK OF MAPS 1961, PAGE 97, WAKE COUNTY RECORDS; THENCE ALONG SAID EAST LINE OF TRACT 3 N01°36'18"W 428.68' TO THE POINT OF BEGINNING.

THIS PARCEL IS THE SAME AS LOT 2-3 AS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "RECOMBINATION SURVEY FOR TOMMY TWITTY, TRACTS 2-2 & 2-3, TWITTY PROP.", BY W. GRAHAM CAWTHORNE, JR., RLS, DATED NOVEMBER 17, 1995, REVISED JANUARY 12, 1996 AND RECORDED IN BOOK OF MAPS 1996, PAGE 1582, WAKE COUNTY RECORDS.

CONTAINING 11.168 ACRES, MORE OR LESS.

**NEW LEGAL DESCRIPTIONS**

**PARCEL 'C'** (PIN #1758-56-8976)

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE TOWN OF ROLESVILLE, COUNTY OF WAKE, STATE OF NORTH CAROLINA, DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND IRON PIPE MARKING THE NORTHEAST CORNER OF TRACT 2 AS SAID TRACT IS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "RECOMBINATION MAP OF BOBBY L. MURRAY TRUST, TRACTS 1+2", BY KENNETH CLOSE, INC., DATED NOVEMBER 7, 2002 AND RECORDED IN BOOK OF MAPS 2005, PAGES 1195 AND 1196, WAKE COUNTY RECORDS; THENCE ALONG THE NORTH LINE OF SAID TRACT 2 N75°27'01"W 704.12' TO A FOUND IRON PIPE ON THE SOUTHEAST RIGHT OF WAY LINE OF LOUISBURG ROAD (U.S. 401); THENCE CONTINUING N75°27'01"W 32.34' TO THE CENTERLINE OF LOUISBURG ROAD; THENCE ALONG THE CENTERLINE OF SAID ROAD N36°33'22"E 1,116.98'; THENCE CONTINUING ALONG SAID CENTERLINE, ALONG THE ARC OF A TANGENT CURVE TO THE RIGHT, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 3,750.00', THROUGH A CENTRAL ANGLE OF 18°18'05", AN ARC LENGTH OF 1,197.82' AND BEING SUBTENDED BY A CHORD BEARING N45°42'25"E 1,192.73'; THENCE LEAVING SAID CENTERLINE S89°44'38"E 134.33' TO AN ANGLE POINT IN THE SOUTHWEST LINE OF THAT CERTAIN PARCEL DESCRIBED IN DEED BOOK 6821, PAGE 005, WAKE COUNTY RECORDS; THENCE ALONG THE SOUTHWEST LINE OF SAID PARCEL AND ALONG THE WEST LINE OF WALL CREEK SUBDIVISION, PHASES 2, 4 AND 5-A AS RECORDED IN BOOK OF MAPS 1997, PAGE 1162, BOOK OF MAPS 2001, PAGE 628 AND BOOK OF MAPS 2002, PAGE 825, WAKE COUNTY RECORDS, S03°05'32"W 2,131.93' TO A POINT ON THE NORTH LINE OF CARLTON POINTE SUBDIVISION, PHASE I AS RECORDED IN BOOK OF MAPS 2008, PAGES 5 TO 10, WAKE COUNTY RECORDS; THENCE ALONG SAID NORTH LINE OF CARLTON POINTE SUBDIVISION N75°27'01"W 852.86' TO THE POINT OF BEGINNING.

THIS PARCEL IS THE SAME AS TRACTS 2A AND 3 AS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "RECOMBINATION SURVEY FOR TOMMY TWITTY", BY W. GRAHAM CAWTHORNE, JR., RLS, DATED NOVEMBER 17, 1995 AND RECORDED IN BOOK OF MAPS 1995, PAGE 2034, WAKE COUNTY RECORDS.

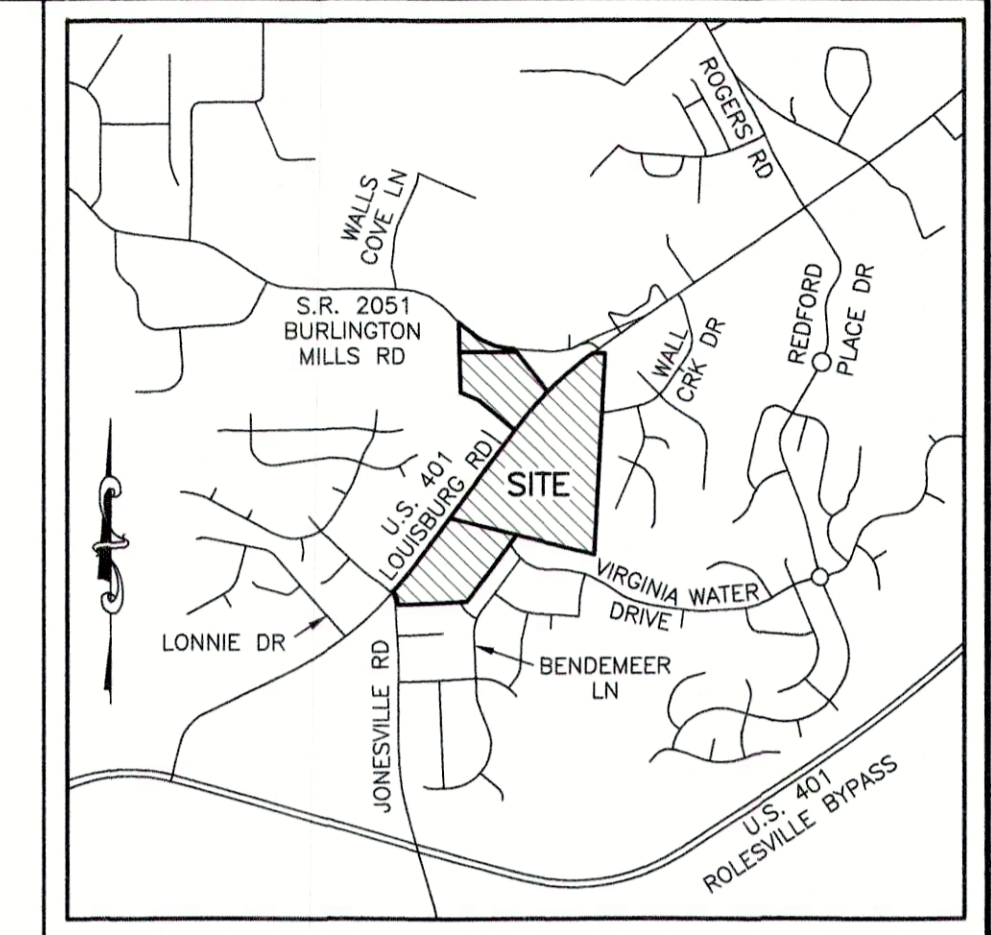
CONTAINING 44.100 ACRES, MORE OR LESS.

**PARCEL 'D'** (PIN #1758-45-8905)

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE TOWN OF ROLESVILLE, COUNTY OF WAKE, STATE OF NORTH CAROLINA, DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND IRON PIPE ON THE SOUTH LINE OF TRACT 3 AS SAID TRACT IS SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "RECOMBINATION SURVEY FOR TOMMY TWITTY", BY W. GRAHAM CAWTHORNE, JR., RLS, DATED NOVEMBER 17, 1995 AND RECORDED IN BOOK OF MAPS 1995, PAGE 2034, WAKE COUNTY RECORDS, SAID PIPE ALSO BEING AN ANGLE POINT IN THE NORTHWEST LINE OF CARLTON POINTE SUBDIVISION, PHASE I AS RECORDED IN BOOK OF MAPS 2008, PAGES 5 TO 10, WAKE COUNTY RECORDS; THENCE ALONG THE NORTHWEST LINE OF SAID CARLTON POINTE SUBDIVISION S36°44'45"W 877.98' TO AN ANGLE POINT; THENCE CONTINUING ALONG SAID NORTHWEST LINE AND ALONG THE NORTH LINE OF LOTS 1, 2 AND 3 AS SAID LOTS ARE SHOWN AND SO DESIGNATED ON THAT CERTAIN PLAT ENTITLED "SUBDIVISION PLAT FOR BARRETT VENTURES, LLC", BY CAWTHORNE, MOSS & PANCIERA, P.C., DATED APRIL 4, 2007 AND RECORDED IN BOOK OF MAPS 2008, PAGE 702, WAKE COUNTY RECORDS, S87°10'58"W 737.24' TO AN ANGLE POINT IN THE EAST RIGHT OF WAY LINE OF JONESVILLE ROAD (S.R. 2226) AND THE SOUTHEAST CORNER OF THAT CERTAIN PARCEL DESCRIBED IN DEED BOOK 13993, PAGE 2591, WAKE COUNTY RECORDS; THENCE ALONG THE EAST LINE OF SAID PARCEL N02°07'15"W 48.32'; THENCE CONTINUING ALONG SAID EAST LINE, ALONG THE ARC OF A CURVE TO THE LEFT, CONCAVE TO THE WEST, HAVING A RADIUS OF 123.92', THROUGH A CENTRAL ANGLE OF 30°27'05", AN ARC LENGTH OF 65.86' AND BEING SUBTENDED BY A CHORD BEARING N17°21'49"W 65.09' TO THE EAST RIGHT OF WAY LINE OF JONESVILLE ROAD; THENCE ALONG SAID EAST RIGHT OF WAY LINE N03°10'03"W 17.67' TO THE SOUTHEAST RIGHT OF WAY LINE OF LOUISBURG ROAD (U.S. 401); THENCE ALONG SAID SOUTHEAST RIGHT OF WAY LINE THE FOLLOWING EIGHT COURSES: (1) N41°10'16"E 41.30'; (2) N40°37'47"E 49.15'; (3) N39°31'43"E 50.83'; (4) N38°52'58"E 49.80'; (5) N38°22'04"E 50.40'; (6) N37°17'31"E 50.37'; (7) N36°44'45"E 304.20'; AND (8) N36°27'57"E 396.53' TO A FOUND IRON PIPE ON THE SOUTH LINE OF THE AFORESAID TRACT 3; THENCE ALONG SAID SOUTH LINE OF TRACT 3 S75°27'01"E 704.12' TO THE POINT OF BEGINNING.

CONTAINING 15.024 ACRES, MORE OR LESS.



**VICINITY MAP**  
SCALE: 1"=2000'

**LEGEND**

- (1) = RECORD DATA PER BM 1996 PG 1582
- (2) = RECORD DATA PER BM 2011 PG 383
- (3) = RECORD DATA PER BM 1995 PG 2034
- (4) = RECORD DATA PER BM 2002 PG 825
- (5) = RECORD DATA PER BM 2005 PG 1195-1196
- (6) = RECORD DATA PER DB 13993 PG 2591
- = FOUND MONUMENT AS NOTED
- = SET IRON PIN
- △ = NCOS MONUMENT
- ◆ = DIMENSION POINT (NOTHING SET)
- R = PROPERTY LINE
- R/W = RIGHT OF WAY
- C&G = CURB AND GUTTER
- DI = CABLE TV PEDESTAL
- DI = DROP INLET
- ELEC = ELECTRIC BOX
- EM = ELECTRIC METER
- F/O = FIBER OPTIC
- FH = FIRE HYDRANT
- GV = GAS VALVE
- H = HAND BOX
- LP = LIGHT POLE
- PP = POWER POLE
- ← = GUY WIRE
- RCP = REINFORCED CONCRETE PIPE
- S.F. = SQUARE FEET (AREA)
- = SIGN
- = TRAFFIC SIGNAL POLE
- = SANITARY SEWER MANHOLE
- = SANITARY SEWER FORCE MAIN VALVE
- = STORM DRAIN MANHOLE
- = TELEPHONE PEDESTAL
- = TRAFFIC BOX
- = WATER BOX
- WM = WATER METER
- WMH = WATER MANHOLE
- WV = WATER VALVE
- W = WELL
- X-WALK = PEDESTRIAN X-WALK POLE
- = ELECTRIC LINE
- = SANITARY SEWER FORCE MAIN
- = FIBER OPTIC LINE
- = GAS LINE
- = OVERHEAD ELECTRIC LINE
- = SANITARY SEWER LINE
- = TELEPHONE LINE
- = CABLE TV LINE
- = WATER LINE

**SURVEYOR'S CERTIFICATION:**

TO WALLBROOK LANDCO, LLC, ITS SUCCESSORS AND/OR ASSIGNS AS THEIR INTERESTS MAY APPEAR, AND INVESTORS TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6A, 7A, 7B1, 8, 9, 11, 13, 16 AND 17 OF TABLE "A" THEREOF. THE FIELDWORK WAS COMPLETED ON MARCH 6, 2020.

*William T. Robbins, II*  
 WILLIAM T. ROBBINS, II DATE 10/1/2020  
 P.L.S. #L-4192



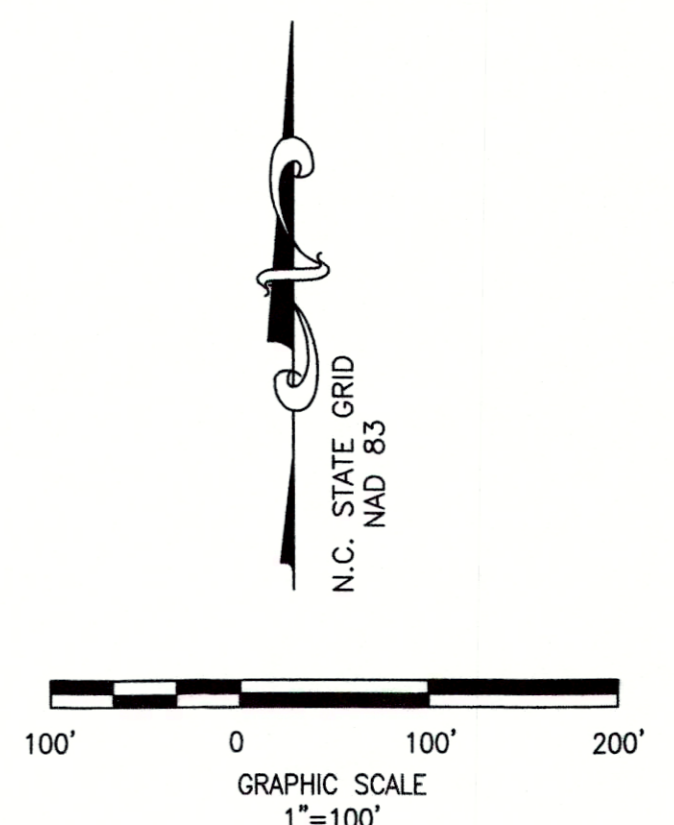
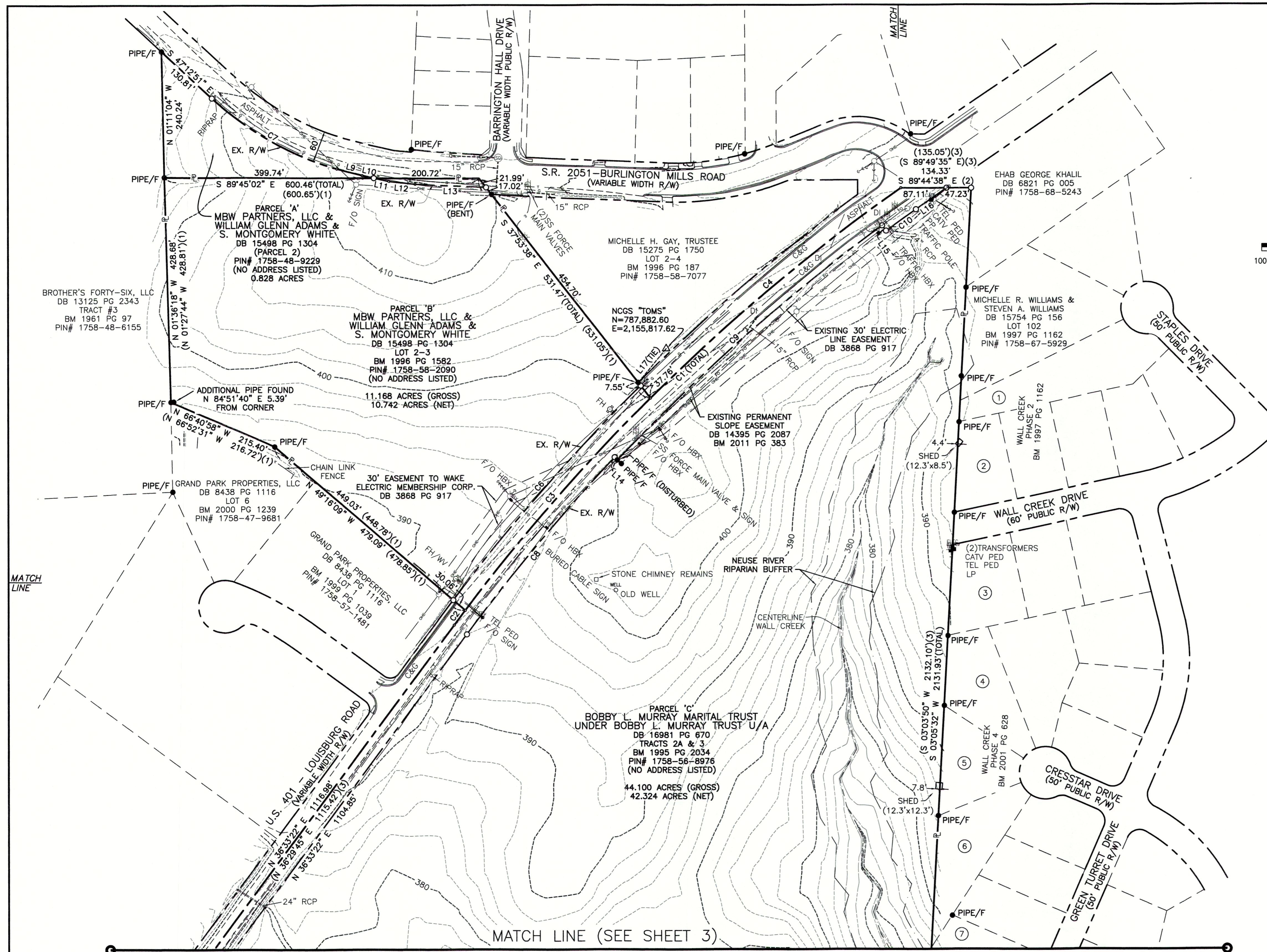
**JOHNSON, MIRMIRAN & THOMPSON**  
 Engineering A Brighter Future®  
 9201 Arboretum Parkway, Suite 310 Richmond, Virginia 23236  
 PHONE: (804)-323-9900 FAX: (804)-323-0596  
 EMAIL: jmtvo@jmt-engineering.com

REVISION #	DATE	REASON FOR REVISION
1	10/01/2020	ADDED RIPARIAN BUFFER ALONG WALL CREEK

**ALTA/NSPS LAND TITLE SURVEY**  
 PREPARED FOR  
 WALLBROOK LANDCO, LLC  
 WAKE FOREST TOWNSHIP  
 TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

DRAWN BY: JSZ PROJECT#: \_\_\_\_\_  
 CHECKED BY: WTR CONTRACT#: \_\_\_\_\_ JMT#: 17-10946-001  
 DATE: 03/25/2020 SCALE: 1"=100' SHEET 1 OF 3





**ADJOINING PROPERTY OWNERS**

- ① RODERICK BLACKWELL & CHRISTINE BLACKWELL  
DB 8769 PG 1894  
LOT 101  
BM 1997 PG 1162  
PIN# 1758-67-6836
- ② CHARLES CULBERTSON & TERESA CULBERTSON  
DB 17393 PG 896  
LOT 96  
BM 1997 PG 1162  
PIN# 1758-67-4619
- ③ ANTONIO G. CATTARUZZA & SHEILA B. CATTARUZZA  
DB 8149 PG 422  
LOT 92  
BM 1997 PG 1162  
PIN# 1758-67-4416
- ④ JOHN DANIEL BONO, III & SABRINA MICHELE BONO  
DB 13369 PG 2170  
LOT 85  
BM 2001 PG 628  
PIN# 1758-67-4204
- ⑤ RONALD G. PATTERSON & LAURA A. PATTERSON  
DB 10087 PG 2409  
LOT 84  
BM 2001 PG 628  
PIN# 1758-67-4100
- ⑥ MICHAEL A. HADDER & JENNIFER H. HADDER  
DB 16143 PG 2477  
LOT 83  
BM 2001 PG 628  
PIN# 1758-66-3984
- ⑦ JOSEPH L. KEELEY, III & SARAH E. KEELEY  
DB 10496 PG 1314  
LOT 79  
BM 2002 PG 825  
PIN# 1758-66-4723

- LEGEND**
- (1) = RECORD DATA PER BM 1996 PG 1582
  - (2) = RECORD DATA PER BM 2011 PG 383
  - (3) = RECORD DATA PER BM 1995 PG 2034
  - (4) = RECORD DATA PER BM 2002 PG 825
  - (5) = RECORD DATA PER BM 2005 PG 1195-1196
  - (6) = RECORD DATA PER DB 13993 PG 2591
  - = FOUND MONUMENT AS NOTED
  - = SET IRON PIN
  - △ = NCGS MONUMENT
  - = DIMENSION POINT (NOTHING SET)
  - ℙ = PROPERTY LINE
  - R/W = RIGHT OF WAY

- C&G = CURB AND GUTTER
- CAV = CABLE TV PEDESTAL
- DI = DROP INLET
- ELEC = ELECTRIC BOX
- EM = ELECTRIC METER
- F/O = FIBER OPTIC
- FH = FIRE HYDRANT
- GV = GAS VALVE
- HBX = HAND BOX
- LP = LIGHT POLE
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- S.F. = SQUARE FEET (AREA)
- SIGN = SIGN
- TRAFFIC SIGNAL POLE = TRAFFIC SIGNAL POLE
- SANITARY SEWER MANHOLE = SANITARY SEWER MANHOLE
- SANITARY SEWER FORCE MAIN VALVE = SANITARY SEWER FORCE MAIN VALVE
- STORM DRAIN MANHOLE = STORM DRAIN MANHOLE
- TELEPHONE PEDESTAL = TELEPHONE PEDESTAL
- TRAFFIC BOX = TRAFFIC BOX
- WATER BOX = WATER BOX
- WM = WATER METER
- WMH = WATER MANHOLE
- WV = WATER VALVE
- WELL = WELL
- PEDESTRIAN X-WALK POLE = PEDESTRIAN X-WALK POLE
- e — = ELECTRIC LINE
- fm — = SANITARY SEWER FORCE MAIN
- fo — = FIBER OPTIC LINE
- g — = GAS LINE
- oeh — = OVERHEAD ELECTRIC LINE
- s — = SANITARY SEWER LINE
- t — = TELEPHONE LINE
- tv — = CABLE TV LINE
- w — = WATER LINE

LINE	BEARING	DISTANCE
L1	N 02°07'15" W	48.32
L2	N 03°10'03" W	17.67
L3	N 41°10'16" E	41.30
L4	N 40°37'47" E	49.15
L5	N 39°31'43" E	50.83
L6	N 38°52'58" E	49.80
L7	N 38°22'04" E	50.40
L8	N 37°17'31" E	50.37
L9	S 75°02'10" E	50.12
L10	S 77°31'31" E	22.85
L11	S 77°31'31" E	29.16
L12	S 84°03'28" E	50.67
L13	S 87°10'20" E	135.52
L14	S 46°39'44" E	7.50
L15	S 36°12'58" E	12.50
L16	N 55°13'38" E	70.99
L17	N 39°21'58" E	83.92

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	1197.82	3750.00	18°18'05"	S 45°42'25" W	1192.73
C2	35.15	3750.00	0°32'13"	S 36°49'29" W	35.15
C3	537.89	3750.00	8°13'06"	S 41°12'09" W	537.43
C4	624.78	3750.00	9°32'45"	S 50°05'04" W	624.06
C5	65.86	123.92	30°27'05"	S 17°21'49" E	65.09
C6	543.86	3780.00	8°14'37"	S 41°14'38" W	543.40
C7	276.12	800.00	26°22'04"	N 60°23'53" W	273.69
C8	440.32	3720.00	6°46'55"	S 39°56'50" W	440.07
C9	675.86	3712.50	10°25'52"	S 48°33'13" W	674.95
C10	70.31	3700.00	1°05'20"	S 54°18'48" W	70.31

(R=3750.00', L=1199.06')(3)

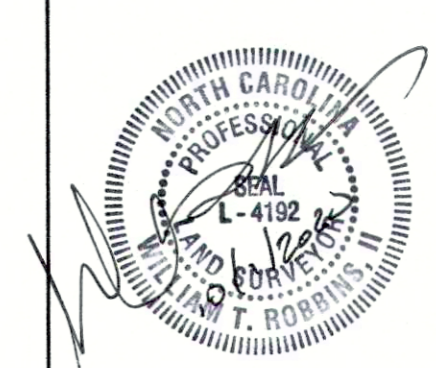
(2)

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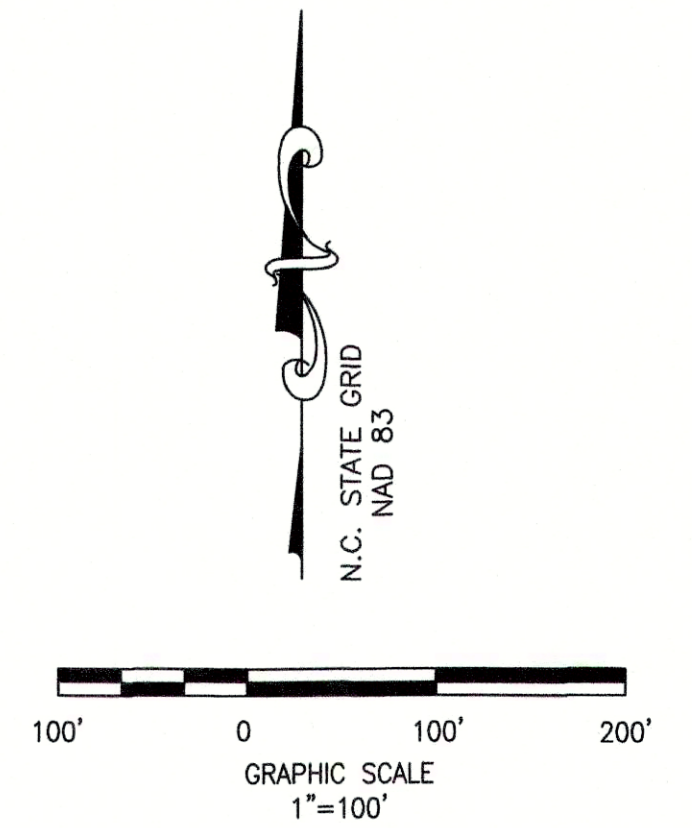
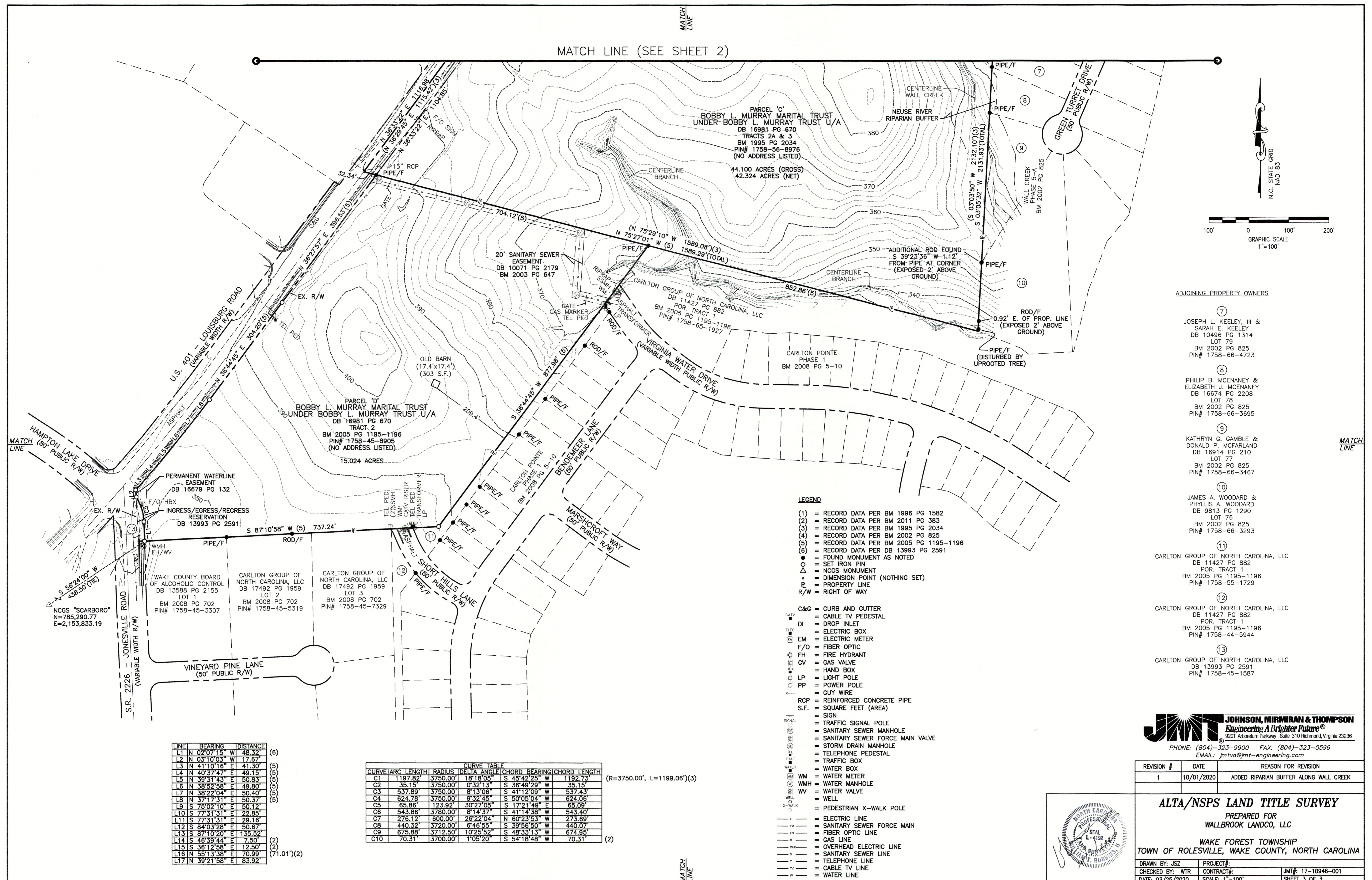
REVISION #	DATE	REASON FOR REVISION
1	10/01/2020	ADDED RIPARIAN BUFFER ALONG WALL CREEK

**ALTA/NSPS LAND TITLE SURVEY**  
 PREPARED FOR  
**WALLBROOK LANDCO, LLC**  
 WAKE FOREST TOWNSHIP  
 TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

DRAWN BY: JSZ PROJECT#: JMT# 17-10946-001  
 CHECKED BY: WTR CONTRACT#: SHEET 2 OF 3  
 DATE: 03/25/2020 SCALE: 1"=100'



MATCH LINE (SEE SHEET 2)



ADJOINING PROPERTY OWNERS

- 7 JOSEPH L. KEELEY, III & SARAH E. KEELEY  
DB 10496 PG 1314  
LOT 79  
BM 2002 PG 825  
PIN# 1758-66-4723
- 8 PHILIP B. MCENANEY & ELIZABETH J. MCENANEY  
DB 16674 PG 2208  
LOT 78  
BM 2002 PG 825  
PIN# 1758-66-3695
- 9 KATHRYN G. GAMBLE & DONALD P. MCFARLAND  
DB 16914 PG 210  
LOT 77  
BM 2002 PG 825  
PIN# 1758-66-3467
- 10 JAMES A. WOODARD & PHYLLIS A. WOODARD  
DB 9813 PG 1290  
LOT 76  
BM 2002 PG 825  
PIN# 1758-66-3293
- 11 CARLTON GROUP OF NORTH CAROLINA, LLC  
DB 11427 PG 882  
POR. TRACT 1  
BM 2005 PG 1195-1196  
PIN# 1758-55-1729
- 12 CARLTON GROUP OF NORTH CAROLINA, LLC  
DB 11427 PG 882  
POR. TRACT 1  
BM 2005 PG 1195-1196  
PIN# 1758-44-5944
- 13 CARLTON GROUP OF NORTH CAROLINA, LLC  
DB 13993 PG 2591  
PIN# 1758-45-1587

LEGEND

- (1) = RECORD DATA PER BM 1996 PG 1582
- (2) = RECORD DATA PER BM 2011 PG 383
- (3) = RECORD DATA PER BM 1995 PG 2034
- (4) = RECORD DATA PER BM 2002 PG 825
- (5) = RECORD DATA PER BM 2005 PG 1195-1196
- (6) = RECORD DATA PER DB 13993 PG 2591
- = FOUND MONUMENT AS NOTED
- = SET IRON PIN
- △ = NCGS MONUMENT
- = DIMENSION POINT (NOTHING SET)
- ▭ = PROPERTY LINE
- R/W = RIGHT OF WAY

- C&G = CURB AND GUTTER
- DI = DROP INLET
- ELEC = ELECTRIC BOX
- EM = ELECTRIC METER
- F/O = FIBER OPTIC
- FH = FIRE HYDRANT
- GV = GAS VALVE
- HB = HAND BOX
- LP = LIGHT POLE
- PP = POWER POLE
- GUY = GUY WIRE
- RCP = REINFORCED CONCRETE PIPE
- S.F. = SQUARE FEET (AREA)
- SIGN = SIGN
- TS = TRAFFIC SIGNAL POLE
- SSM = SANITARY SEWER MANHOLE
- SSFMV = SANITARY SEWER FORCE MAIN VALVE
- SDM = STORM DRAIN MANHOLE
- TP = TELEPHONE PEDESTAL
- TB = TRAFFIC BOX
- WB = WATER BOX
- WM = WATER METER
- WMH = WATER MANHOLE
- WV = WATER VALVE
- WELL = WELL
- X-WALK = PEDESTRIAN X-WALK POLE
- E = ELECTRIC LINE
- FM = SANITARY SEWER FORCE MAIN
- FO = FIBER OPTIC LINE
- G = GAS LINE
- OHE = OVERHEAD ELECTRIC LINE
- S = SANITARY SEWER LINE
- T = TELEPHONE LINE
- TV = CABLE TV LINE
- W = WATER LINE

LINE	BEARING	DISTANCE	
L1	N 02°07'15" W	48.32'	(6)
L2	N 03°10'03" W	17.67'	(5)
L3	N 41°10'16" E	41.30'	(5)
L4	N 40°37'47" E	49.15'	(5)
L5	N 39°31'43" E	50.83'	(5)
L6	N 38°52'58" E	49.80'	(5)
L7	N 38°22'04" E	50.40'	(5)
L8	N 37°17'31" E	50.37'	(5)
L9	S 75°02'10" E	50.12'	(5)
L10	S 77°31'31" E	22.85'	(2)
L11	S 77°31'31" E	29.16'	(2)
L12	S 84°03'28" E	50.67'	(2)
L13	S 87°10'20" E	135.52'	(2)
L14	S 46°39'44" E	7.50'	(2)
L15	S 36°12'58" E	12.50'	(2)
L16	N 55°13'38" E	70.99'	(2)
L17	N 39°21'58" E	83.92'	(2)

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	1197.82'	3750.00'	18°18'05"	S 45°42'25" W	1192.73'
C2	35.15'	3750.00'	0°32'13"	S 36°49'29" W	35.15'
C3	537.89'	3750.00'	8°13'06"	S 41°12'09" W	537.43'
C4	624.78'	3750.00'	9°32'45"	S 50°05'04" W	624.06'
C5	65.86'	123.92'	30°27'05"	S 17°21'49" E	65.09'
C6	543.86'	3780.00'	8°14'37"	S 41°14'38" W	543.40'
C7	276.12'	600.00'	26°22'04"	N 60°23'53" W	273.69'
C8	440.32'	3720.00'	6°46'55"	S 39°56'50" W	440.07'
C9	675.88'	3712.50'	10°25'52"	S 48°33'13" W	674.95'
C10	70.31'	3700.00'	1°05'20"	S 54°18'48" W	70.31'

(R=3750.00', L=1199.06')(3)

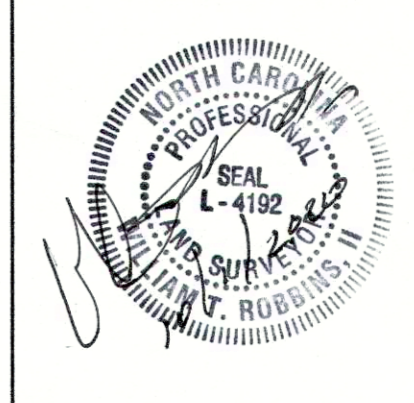
(2)

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 PHONE: (804)-323-9900 FAX: (804)-323-0596  
 EMAIL: jmtvo@jmt-engineering.com

REVISION #	DATE	REASON FOR REVISION
1	10/01/2020	ADDED RIPARIAN BUFFER ALONG WALL CREEK

**ALTA/NSPS LAND TITLE SURVEY**  
 PREPARED FOR  
**WALLBROOK LANDCO, LLC**  
 WAKE FOREST TOWNSHIP  
 TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

DRAWN BY: JSZ PROJECT#: \_\_\_\_\_  
 CHECKED BY: WTR CONTRACT#: \_\_\_\_\_ JMT#: 17-10946-001  
 DATE: 03/25/2020 SCALE: 1"=100' SHEET 3 OF 3



TREE PRESERVATION AREA			
Wallbrook	Area (SF)	Acres	
Lot 1A (Publix)	289,488.0	6.65	
Lot 1B	100,018.8	2.30	
Lot 1C	82,590.5	1.90	
Lot 2	74,702.8	1.71	
Lot 3	47,515.5	1.09	
Lot 4	78,725.4	1.81	
Lot 5 (Boat Tract)	220,767.8	5.07	
Lot 6 (Townhomes)	876,206.2	20.11	
Lot 7	119,306.6	2.74	
Lot 8	232,868.9	5.35	
Right-of-Way (Future)	290,799.5	6.68	
WALLBROOK GROSS ACREAGE		55.39	
TREE PRESERVATION AREA	368,616.2	8.46	15.28%
QUALIFYING REPLACEMENT DECIDUOUS			12
QUALIFYING REPLACEMENT EVERGREEN			8

Paris Tract	Area (SF)	Acres	
Lot 9	86,013.5	1.97	
Lot 10	136,382.3	3.13	
Lot 11	70,406.6	1.62	
Right-of-Way (Future)	13,978.4	0.32	
PARIS TRACT GROSS ACREAGE		7.04	
TREE PRESERVATION AREA	16,399.5	0.38	5.35%
QUALIFYING REPLACEMENT DECIDUOUS			2
QUALIFYING REPLACEMENT EVERGREEN			0

MBW Tract	Area (SF)	Acres	
Lot 12	223,658.5	5.13	
Lot 13	60,807.1	1.40	
Lot 14	17,893.2	0.41	
MBW GROSS ACREAGE		6.94	
TREE PRESERVATION AREA	0.0	0.00	0.00%
QUALIFYING REPLACEMENT DECIDUOUS			1
QUALIFYING REPLACEMENT EVERGREEN			0

TREE REPLACEMENT - WALLBROOK						
Date	ToR Project #	Project Description	Deciduous	Total Provided / Required	Evergreen	Total Provided / Required
18-AUG-23	SOP 23-05	Publix at Wallbrook	12	12 / 12	8	8 / 8

TREE REPLACEMENT - PARIS						
Date	ToR Project #	Project Description	Deciduous	Total Provided / Required	Evergreen	Total Provided / Required
				0 / 2	0	n/a

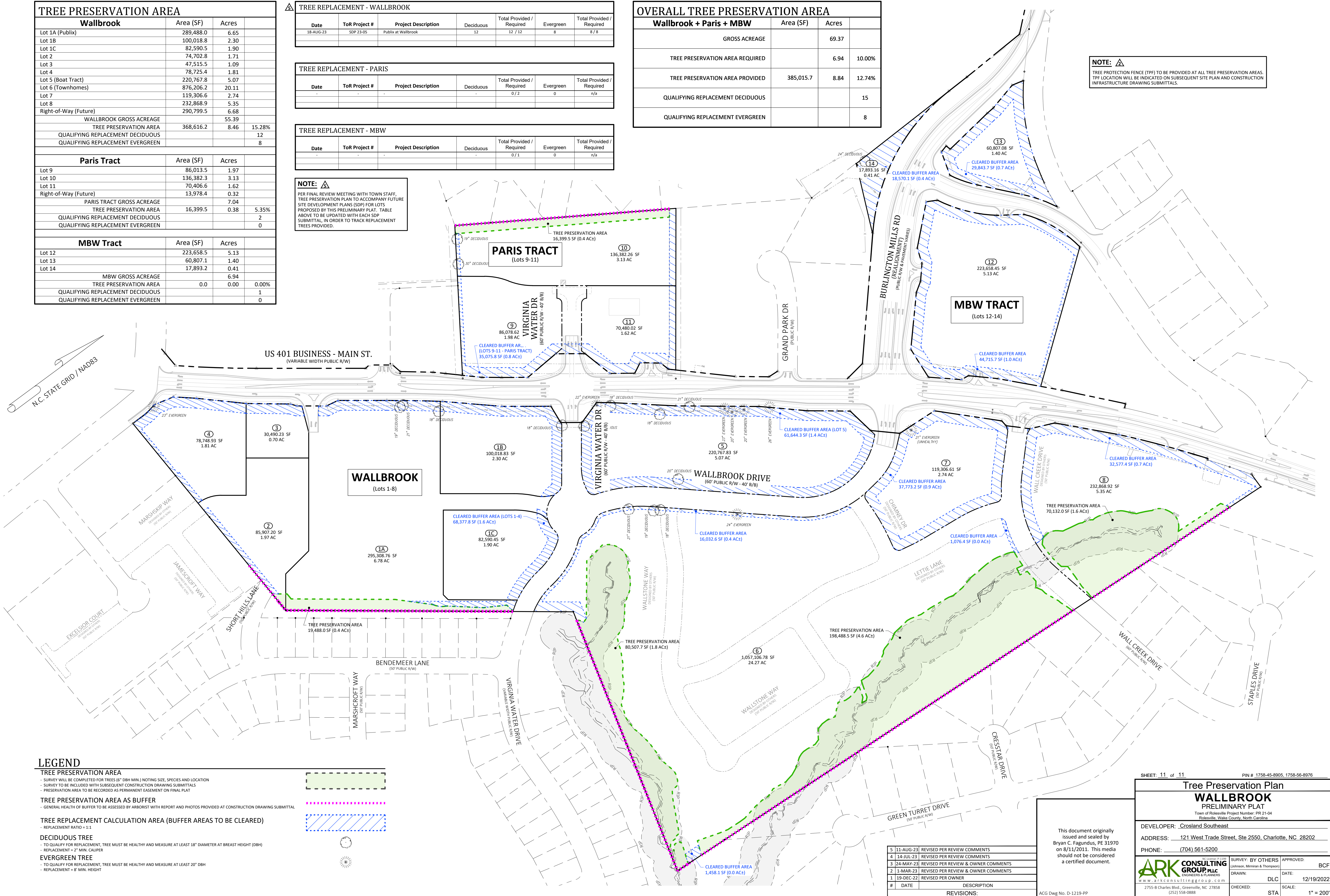
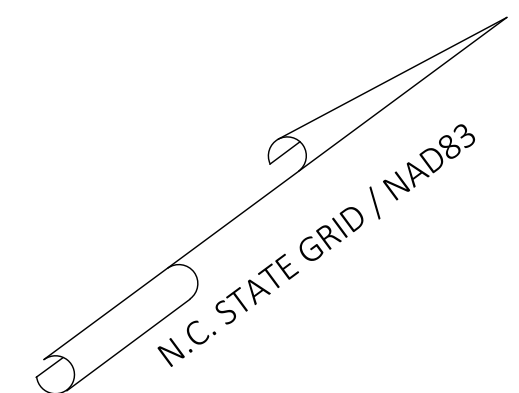
  

TREE REPLACEMENT - MBW						
Date	ToR Project #	Project Description	Deciduous	Total Provided / Required	Evergreen	Total Provided / Required
				0 / 1	0	n/a

**NOTE:** PER FINAL REVIEW MEETING WITH TOWN STAFF, TREE PRESERVATION PLAN TO ACCOMPANY FUTURE SITE DEVELOPMENT PLANS (SDP) FOR LOTS PROPOSED BY THIS PRELIMINARY PLAT. TABLE ABOVE TO BE UPDATED WITH EACH SDP SUBMITTAL, IN ORDER TO TRACK REPLACEMENT TREES PROVIDED.

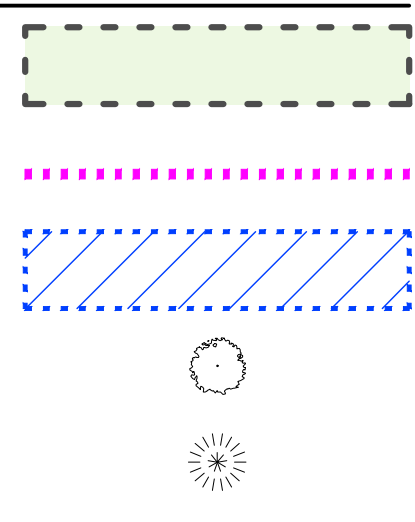
OVERALL TREE PRESERVATION AREA			
Wallbrook + Paris + MBW	Area (SF)	Acres	
GROSS ACREAGE		69.37	
TREE PRESERVATION AREA REQUIRED		6.94	10.00%
TREE PRESERVATION AREA PROVIDED	385,015.7	8.84	12.74%
QUALIFYING REPLACEMENT DECIDUOUS			15
QUALIFYING REPLACEMENT EVERGREEN			8

**NOTE:** TREE PROTECTION FENCE (TPF) TO BE PROVIDED AT ALL TREE PRESERVATION AREAS. TPF LOCATION WILL BE INDICATED ON SUBSEQUENT SITE PLAN AND CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTALS.



**LEGEND**

- TREE PRESERVATION AREA**
  - SURVEY WILL BE COMPLETED FOR TREES (6" DBH MIN.) NOTING SIZE, SPECIES AND LOCATION
  - SURVEY TO BE INCLUDED WITH SUBSEQUENT CONSTRUCTION DRAWING SUBMITTALS
  - PRESERVATION AREA TO BE RECORDED AS PERMANENT EASEMENT ON FINAL PLAT
- TREE PRESERVATION AREA AS BUFFER**
  - GENERAL HEALTH OF BUFFER TO BE ASSESSED BY ARBORIST WITH REPORT AND PHOTOS PROVIDED AT CONSTRUCTION DRAWING SUBMITTAL
- TREE REPLACEMENT CALCULATION AREA (BUFFER AREAS TO BE CLEARED)**
  - REPLACEMENT RATIO = 1:1
- DECIDUOUS TREE**
  - TO QUALIFY FOR REPLACEMENT, TREE MUST BE HEALTHY AND MEASURE AT LEAST 18" DIAMETER AT BREAST HEIGHT (DBH)
  - REPLACEMENT = 2" MIN. CALIPER
- EVERGREEN TREE**
  - TO QUALIFY FOR REPLACEMENT, TREE MUST BE HEALTHY AND MEASURE AT LEAST 20" DBH
  - REPLACEMENT = 8" MIN. HEIGHT



#	DATE	DESCRIPTION
5	11-AUG-23	REVISED PER REVIEW COMMENTS
4	14-JUL-23	REVISED PER REVIEW COMMENTS
3	24-MAY-23	REVISED PER REVIEW & OWNER COMMENTS
2	1-MAR-23	REVISED PER REVIEW & OWNER COMMENTS
1	19-DEC-22	REVISED PER OWNER

This document originally issued and sealed by Bryan C. Fagundus, PE 31970 on 8/11/2011. This media should not be considered a certified document.

SHEET: 11 of 11      PIN # 1758-45-8905, 1758-56-8976

**Tree Preservation Plan**  
**WALLBROOK**  
PRELIMINARY PLAT

DEVELOPER: Crosland Southeast  
ADDRESS: 121 West Trade Street, Ste 2550, Charlotte, NC 28202  
PHONE: (704) 561-5200

2795-B Charles Blvd., Greenville, NC 27858  
(252) 558-0888

APPROVED: BCF  
DATE: 12/19/2022  
SCALE: 1" = 200'

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