PROJECT NO: ZMA-3-20

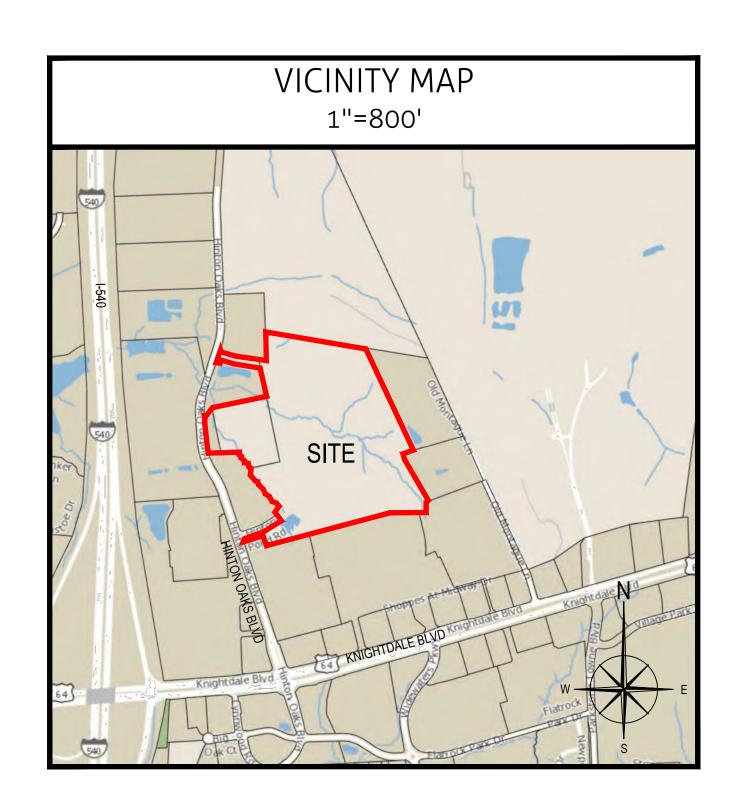
SITE MASTER PLAN FOR

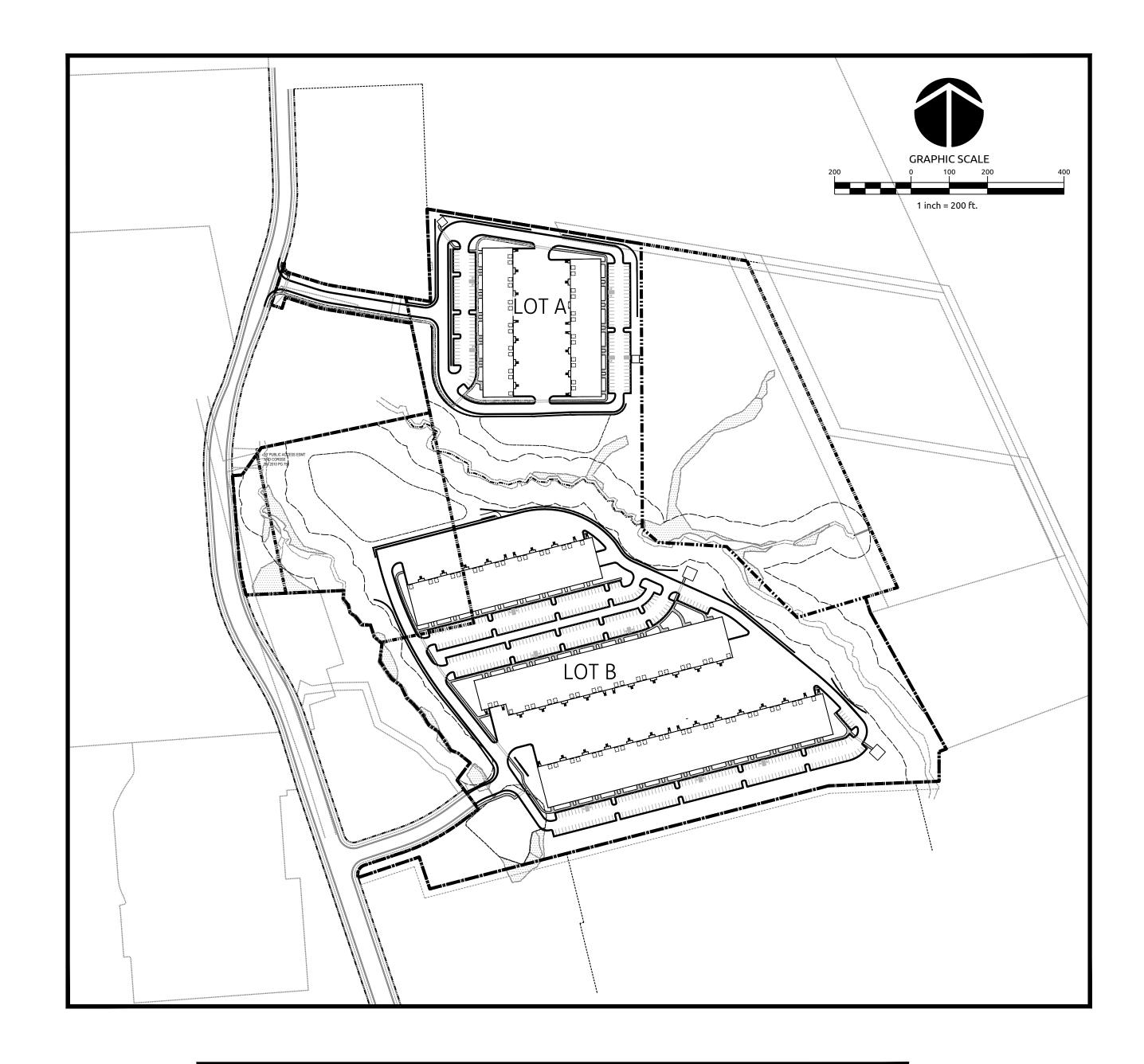
MERRITT HINTON OAKS BLVD

123 HINTON OAKS BLVD, KNIGHTDALE, NC

ST.MATTHEW'S TOWNSHIP

JULY 8, 2020





DEVELOPER/OWNER

MERRITT PROPERTIES, LLC 2066 LORD BALTIMORE DRIVE BALTIMORE, MD 21244

ATTN: NATHAN ROBB

PREPARED BY:

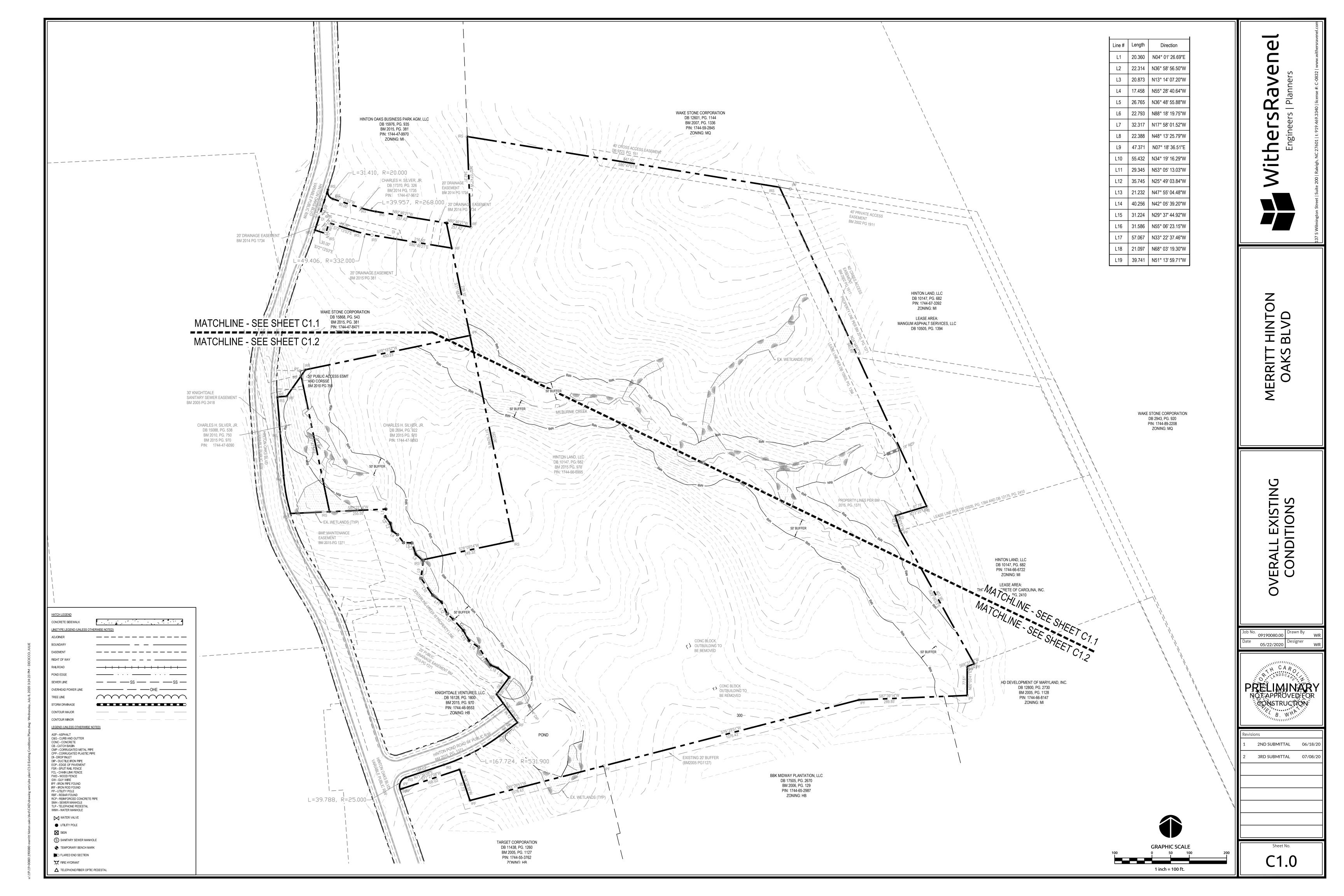


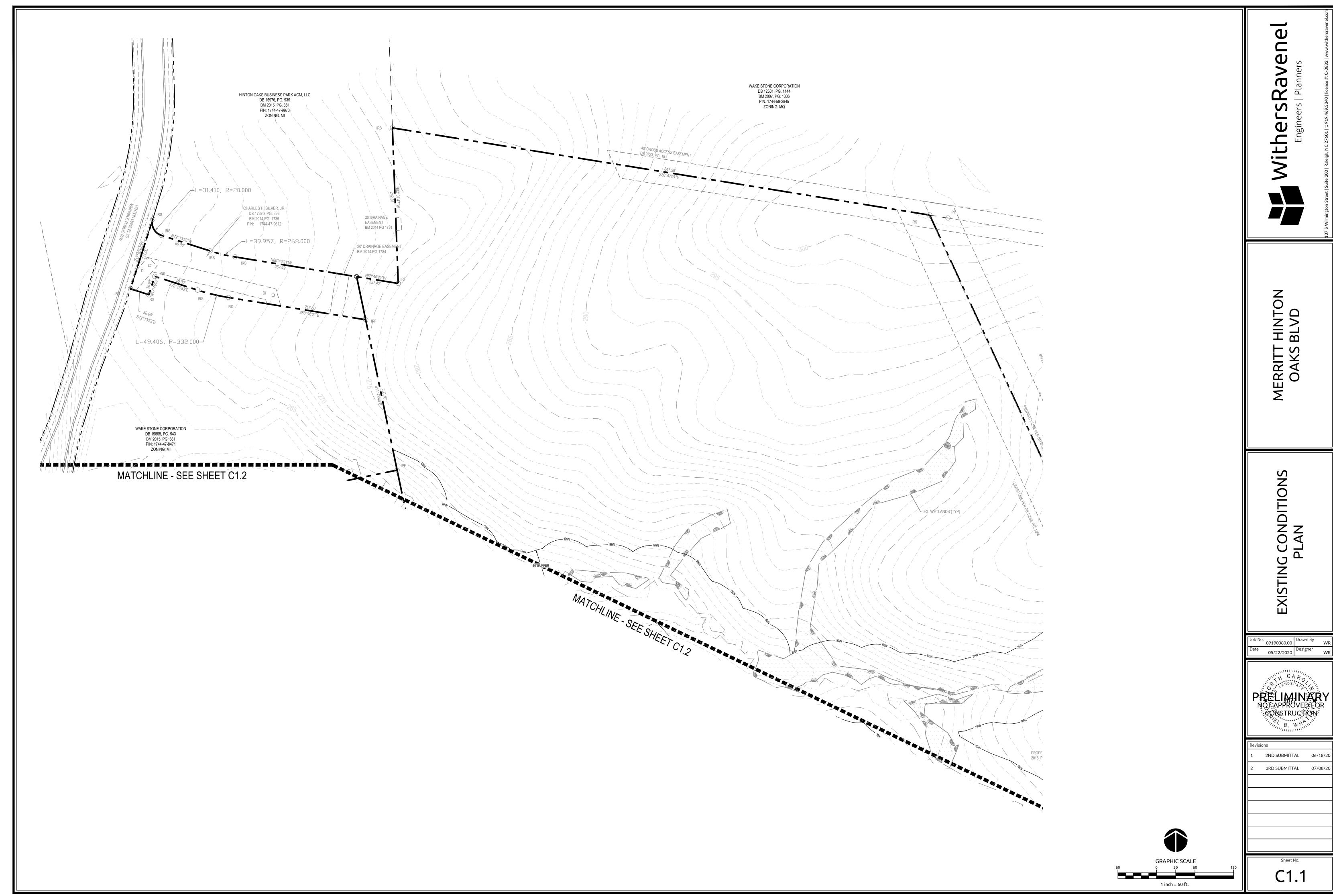
137 S Wilmington Street | Suite 200 | Raleigh, NC 27601 | t: 919.469.3340 | license #: C-0832 | www.withersravenel.com

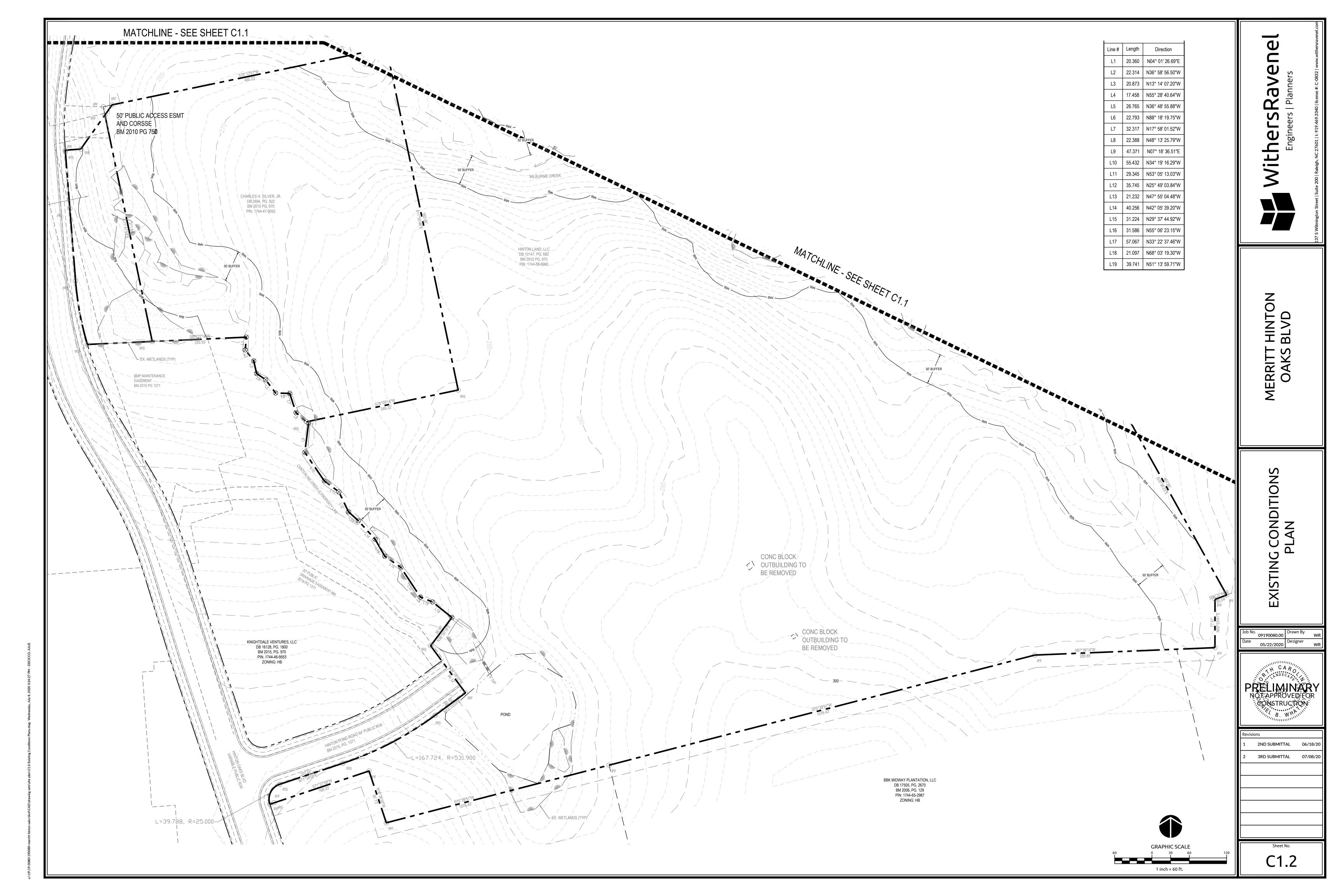
	Sheet List Table			
Sheet Number	Sheet Title			
C0.0	COVER			
C1.0	OVERALL EXISTING CONDITIONS			
C1.1	EXISTING CONDITIONS PLAN			
C1.2	EXISTING CONDITIONS PLAN			
C2.0	OVERALL SITE PLAN			
C2.1	SITE PLAN			
C2.2	SITE PLAN			
C3.0	OVERALL GRADING AND DRAINAGE PLAN			
C3.1	GRADING AND DRAINAGE PLAN			
C3.2	GRADING AND DRAINAGE PLAN			
C4.0	OVERALL UTILITY PLAN			
C4.1	UTILITY PLAN			
C4.2	UTILITY PLAN			
L1.0	OVERALL LANDSCAPE PLAN			
L1.1	LANDSCAPE PLAN			
L1.2	LANDSCAPE PLAN			
L2.0	LANDSCAPE DETAILS			
SL1.0	LIGHTING PLAN			
NCG01	NCG01			

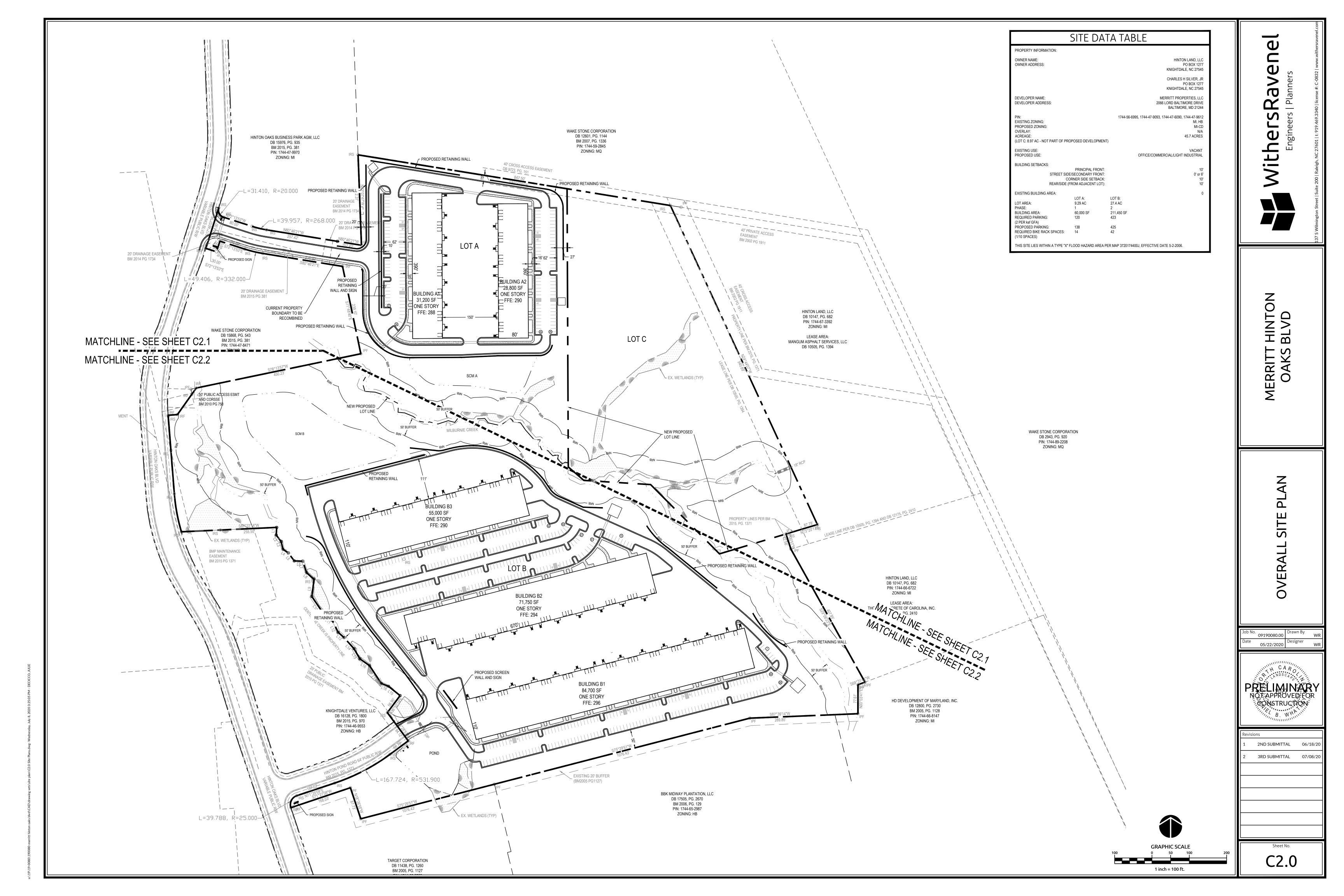
	SITE DA	ATA TABLE
PROPERTY INFORMATION:		
OWNER NAME: OWNER ADDRESS:		HINTON LAND, LLC PO BOX 1277 KNIGHTDALE, NC 27545
		CHARLES H SILVER, JR PO BOX 1277 KNIGHTDALE, NC 27545
DEVELOPER NAME: DEVELOPER ADDRESS:		MERRITT PROPERTIES, LLC 2066 LORD BALTIMORE DRIVE BALTIMORE, MD 21244
PIN: EXISTING ZONING: PROPOSED ZONING: OVERLAY: ACREAGE: (LOT C: 8.97 AC - NOT PART OF PRO	DPOSED DEVELOPME	1744-56-6995, 1744-47-9093, 1744-47-6090, 1744-47-9612 MI, HB MI-CD N/A 45.7 ACRES
EXISTING USE: PROPOSED USE:		VACANT OFFICE/COMMERCIAL/LIGHT INDUSTRIAL
BUILDING SETBACKS:		
CC	PRINCIPAL FRON E/SECONDARY FRON DRNER SIDE SETBAC FROM ADJACENT LOT	T: 0' or 6' K: 10'
EXISTING BUILDING AREA:		0
LOT AREA: PHASE: BUILDING AREA: REQUIRED PARKING:	LOT A: 9.29 AC 1 60,000 SF 120	LOT B: 27.4 AC 2 211,450 SF 423
(2 PER ksf GFA) PROPOSED PARKING: REQUIRED BIKE RACK SPACES: (1/10 SPACES)	138 14	425 42
THIS SITE LIES WITHIN A TYPE "X"	FLOOD HAZARD AREA	A PER MAP 3720174400J, EFFECTIVE DATE 5-2-2006.

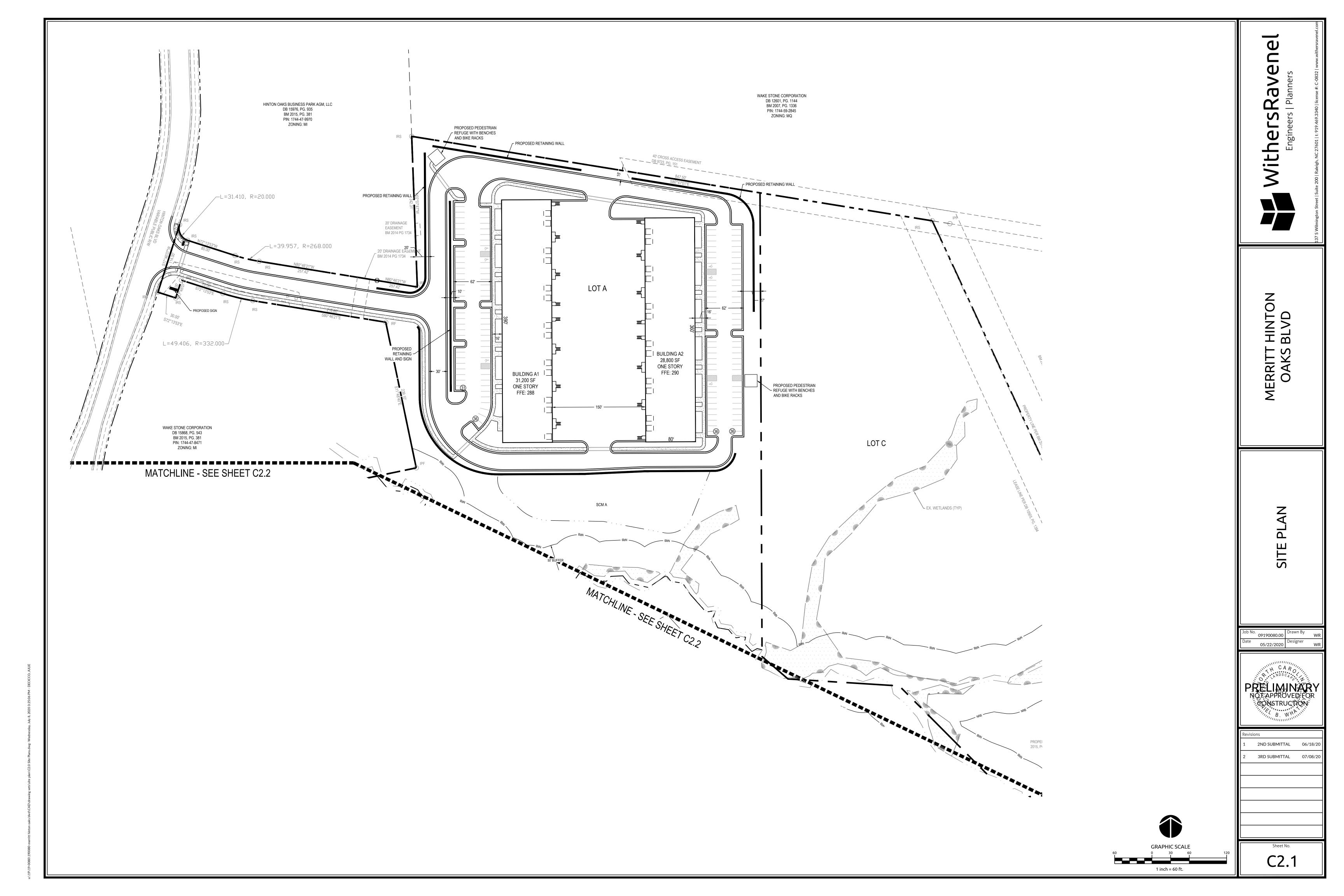


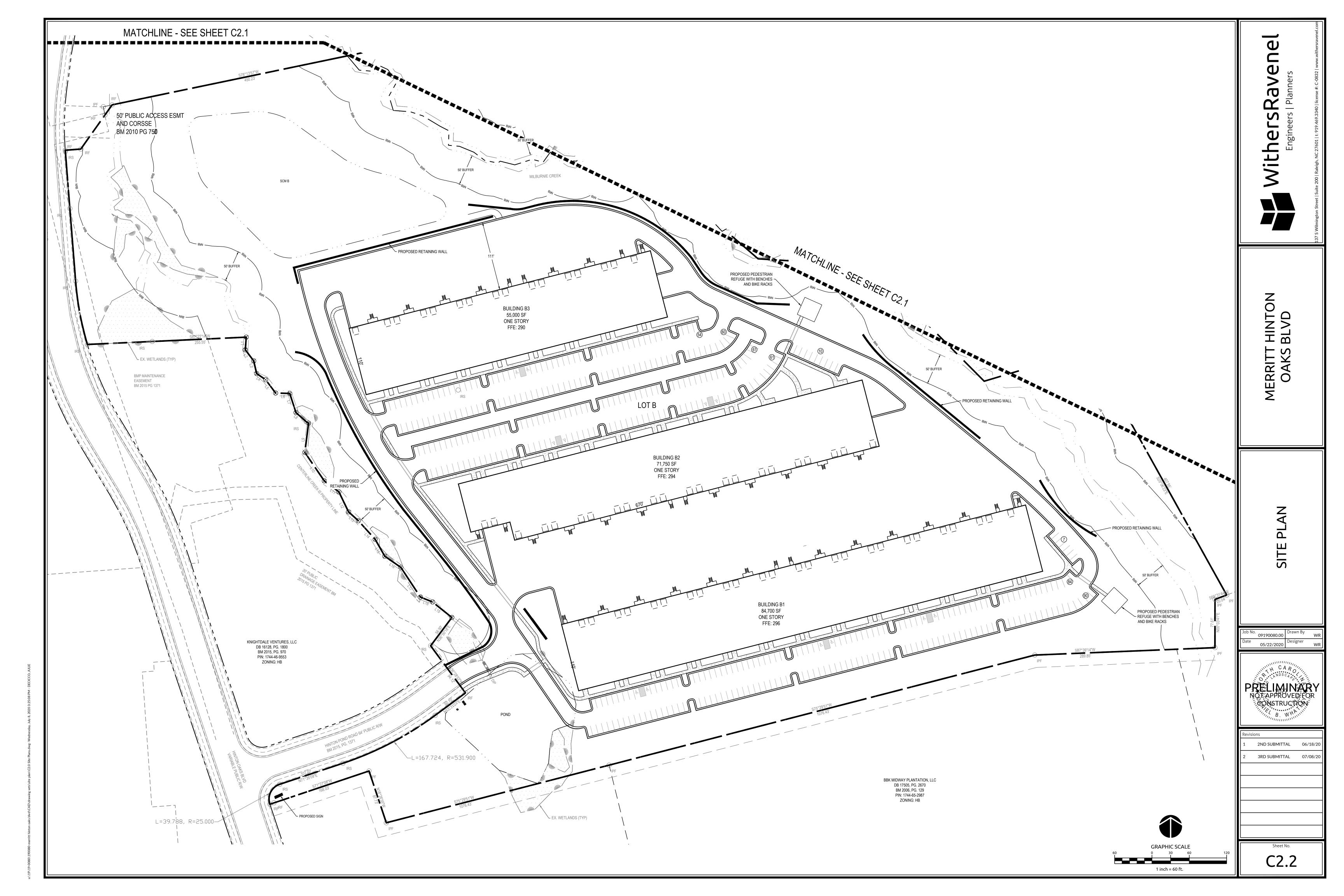


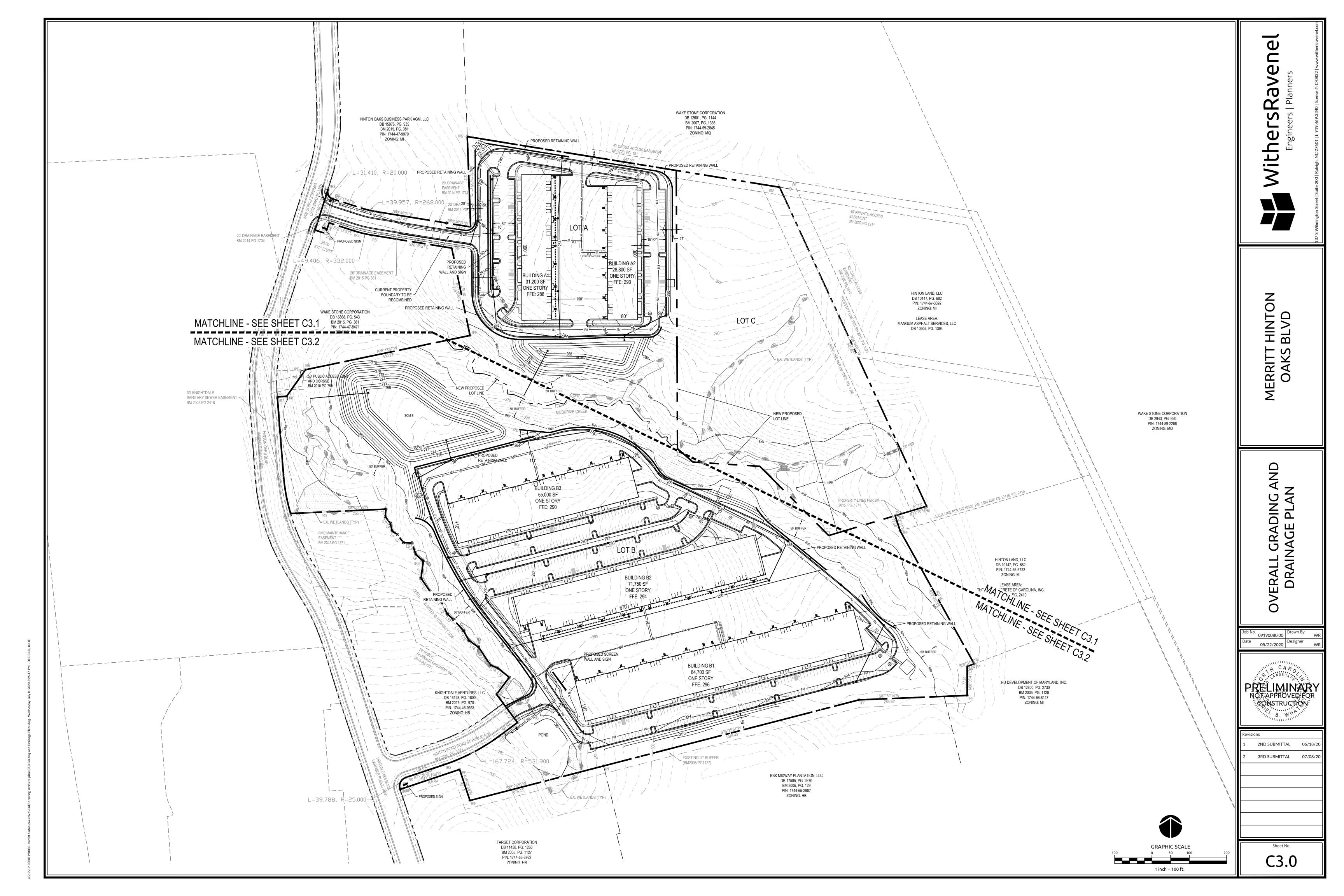


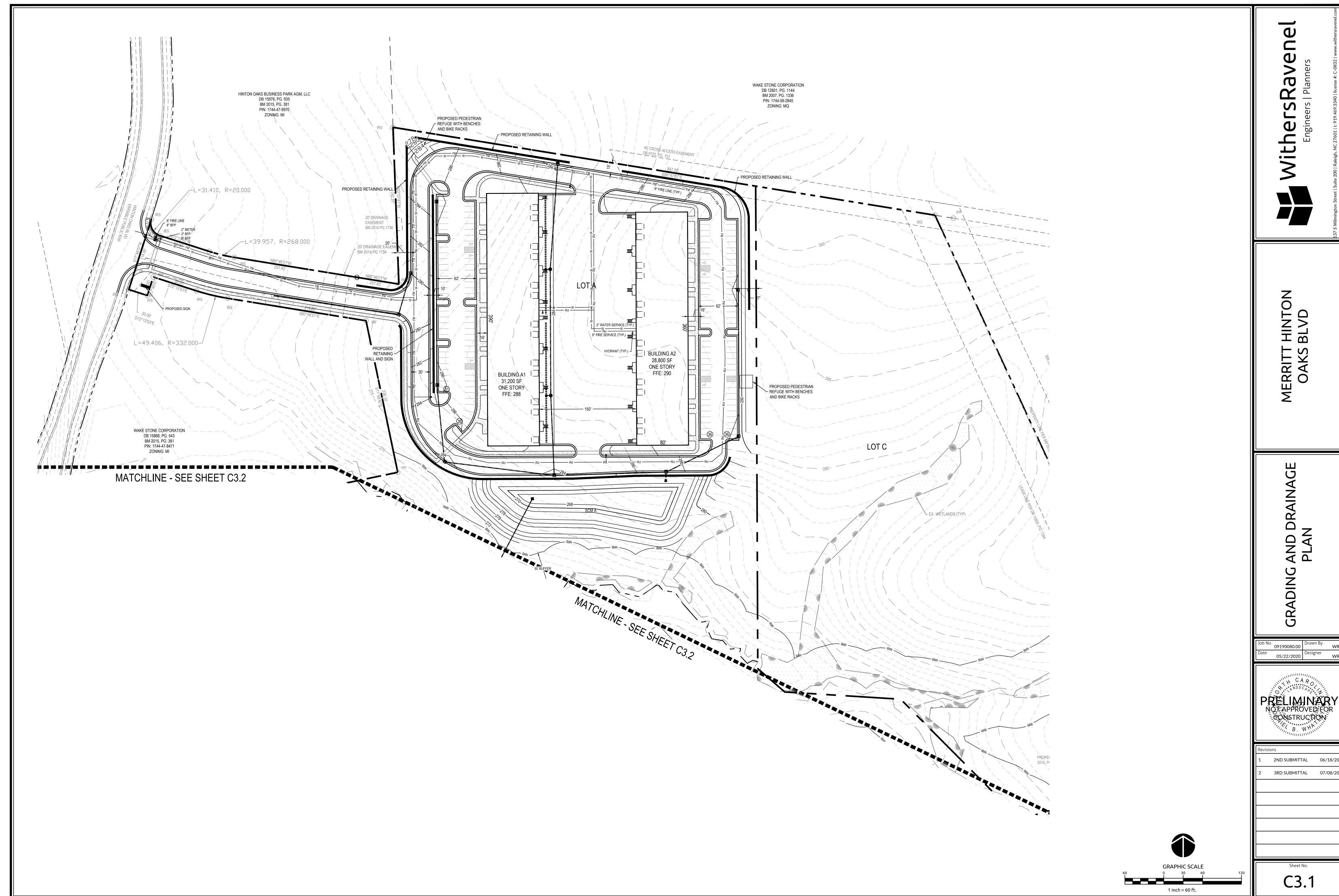


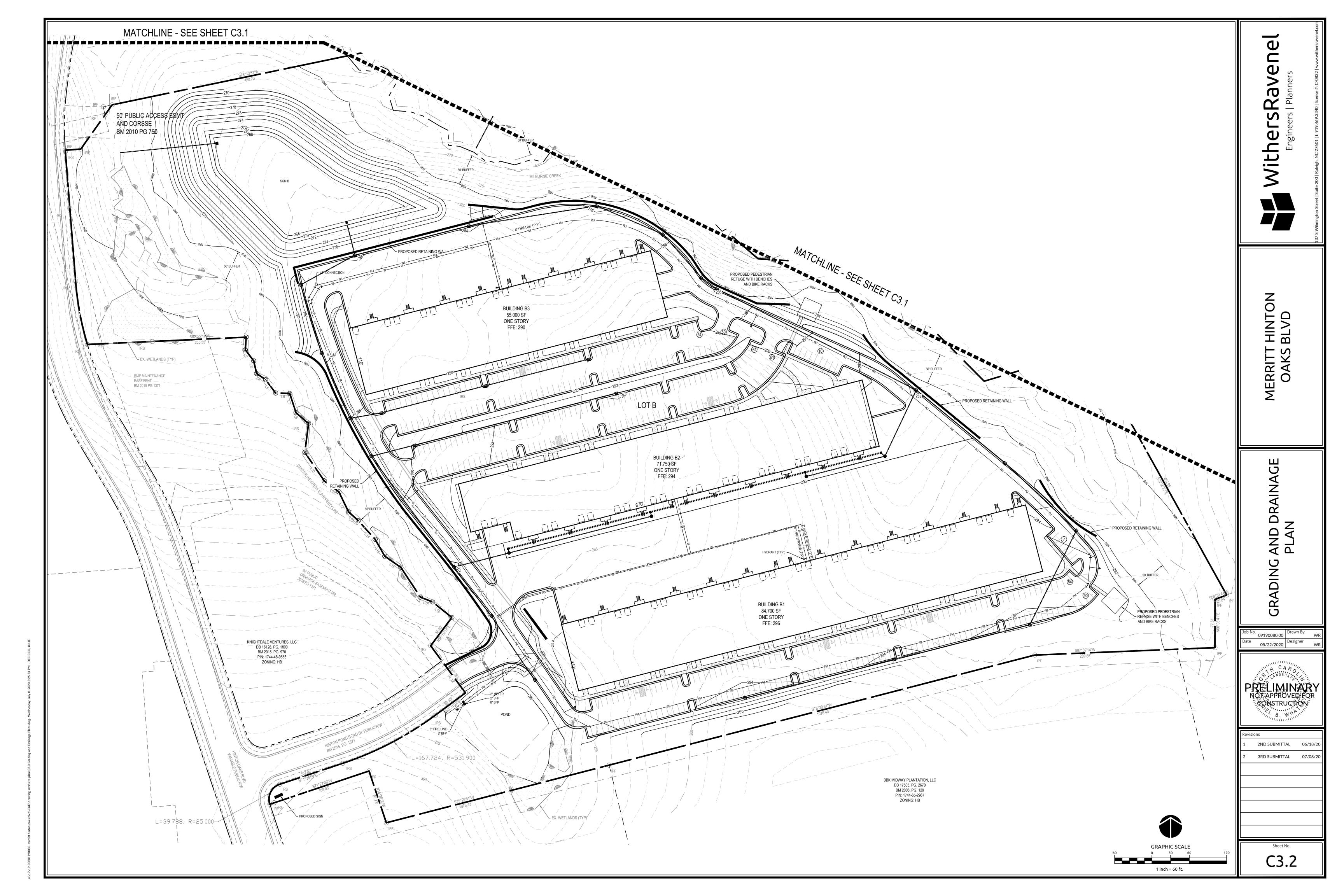


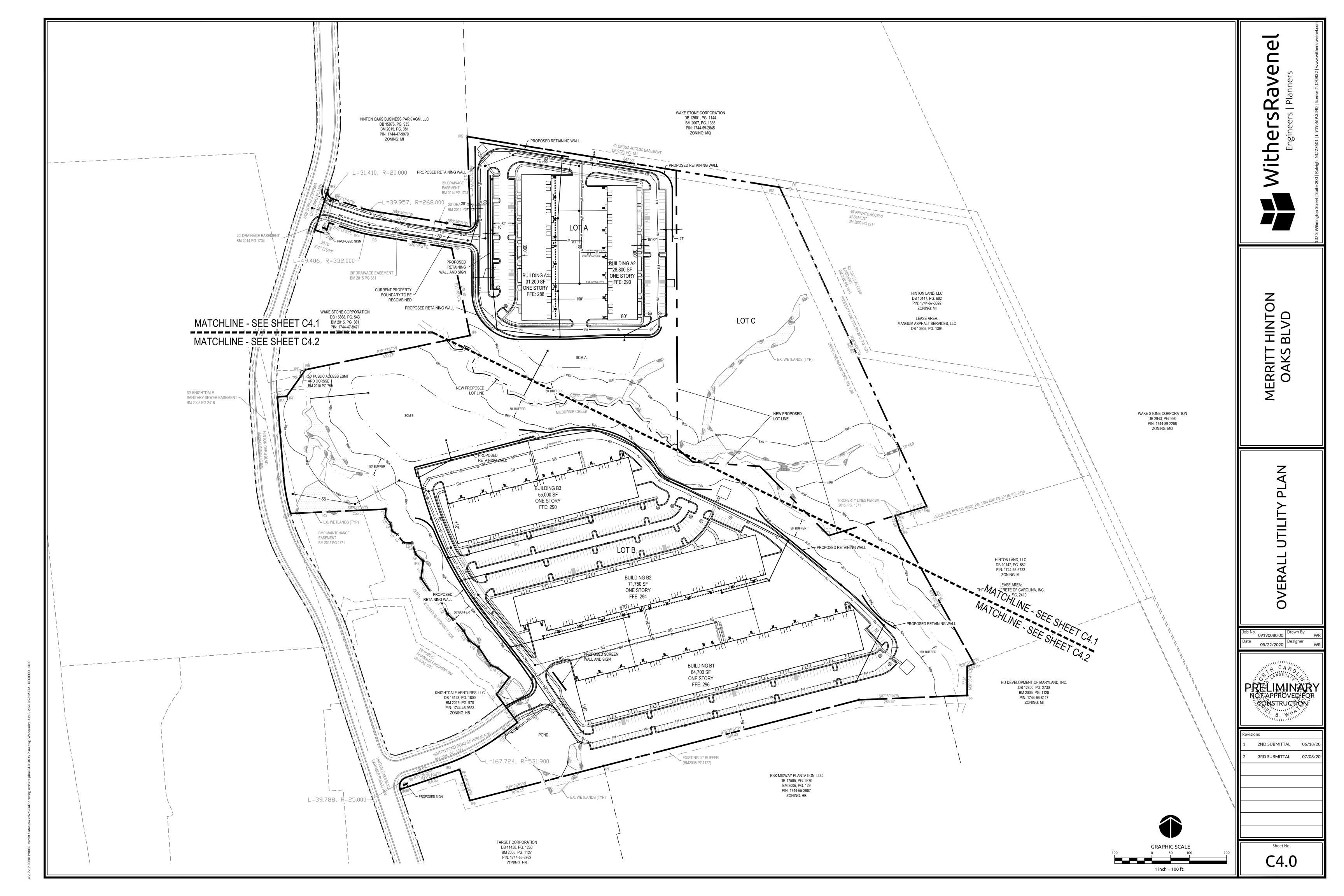


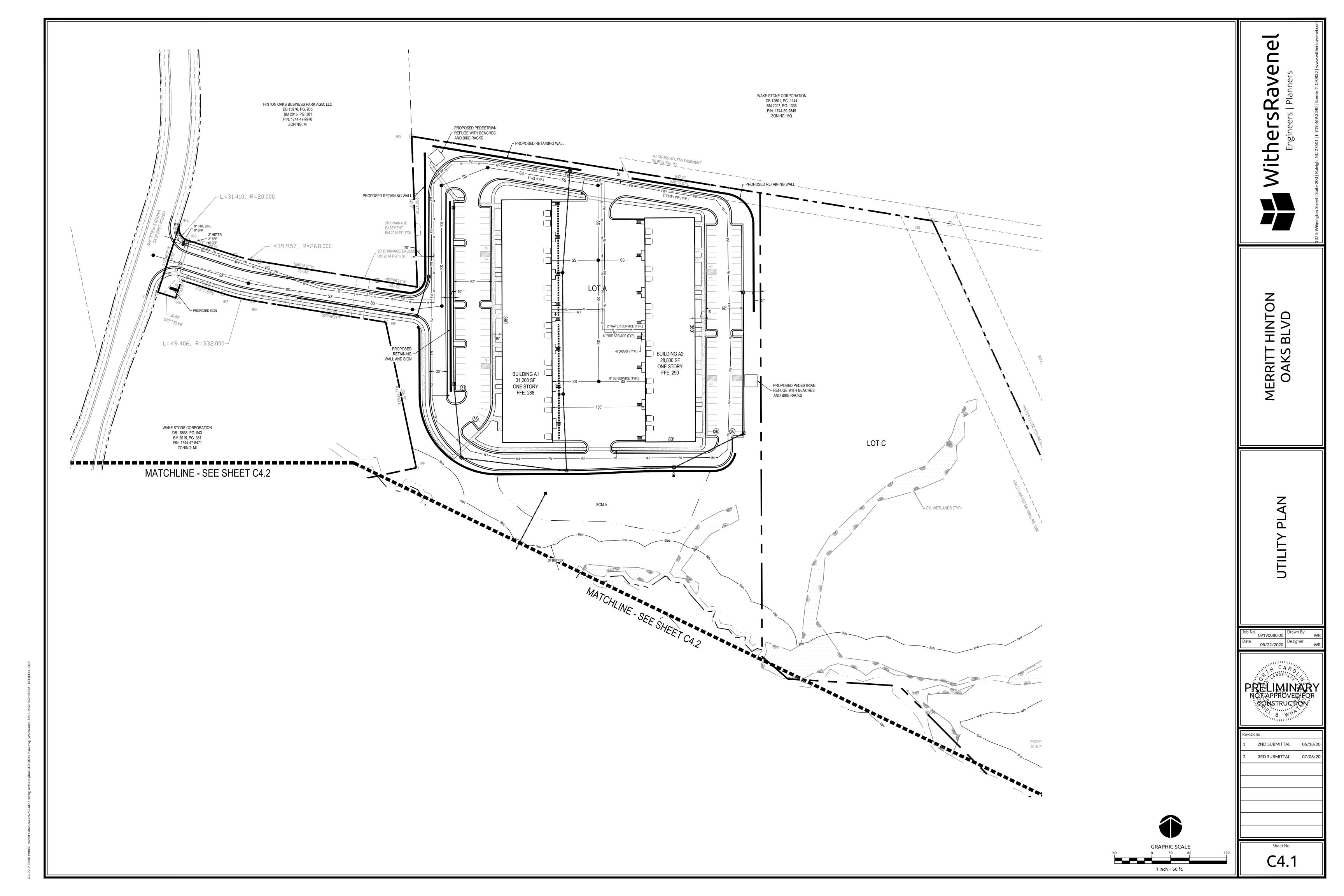


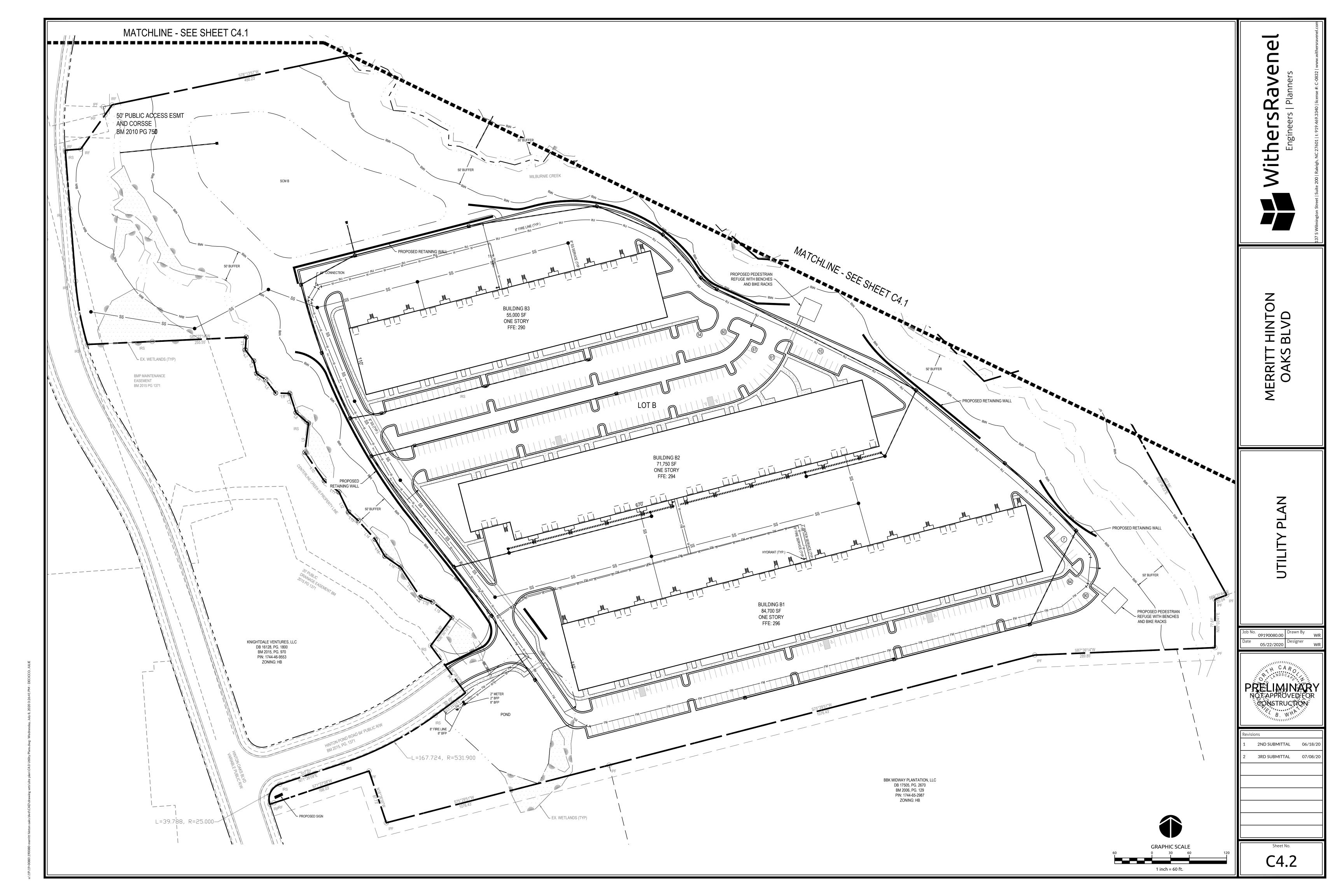


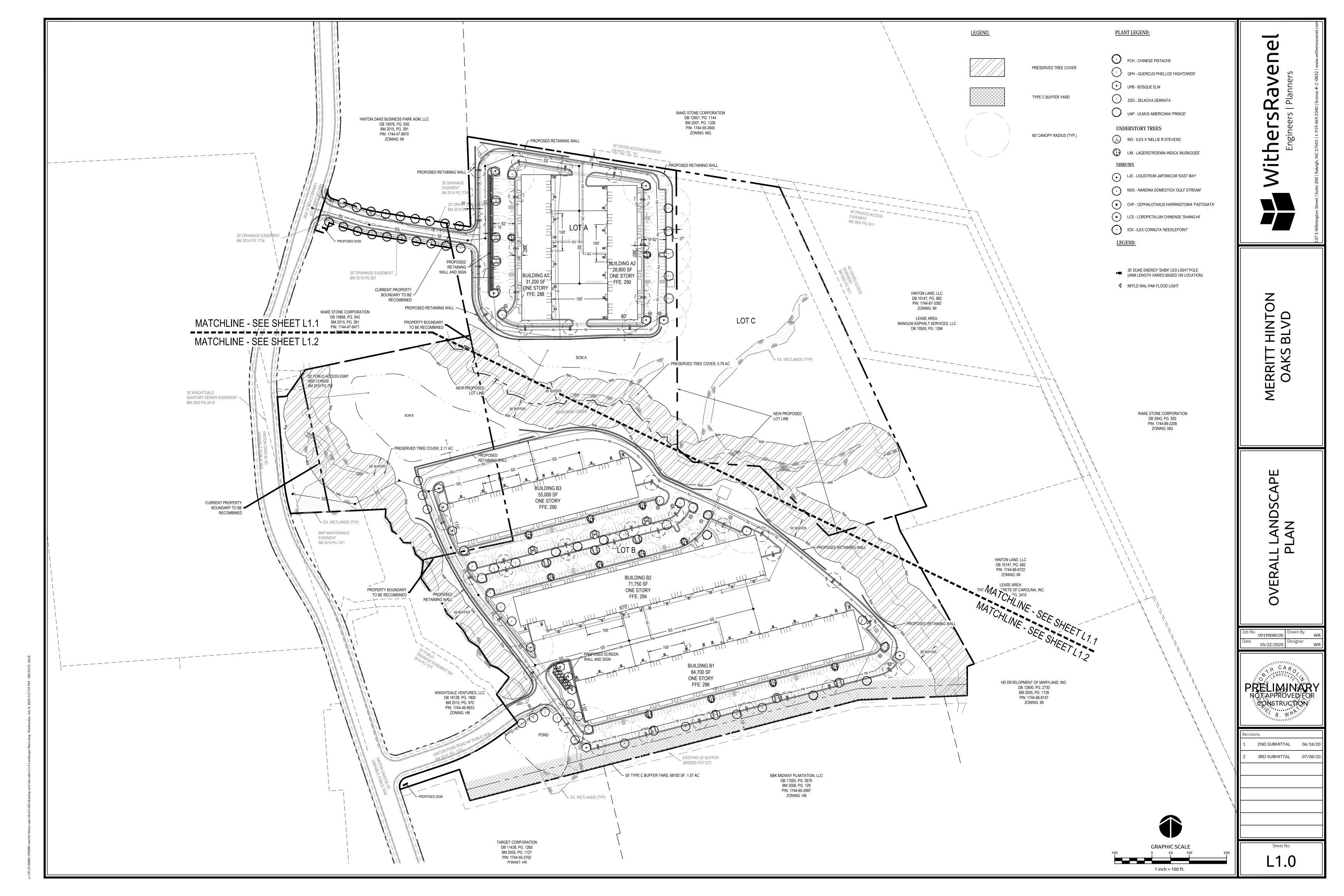


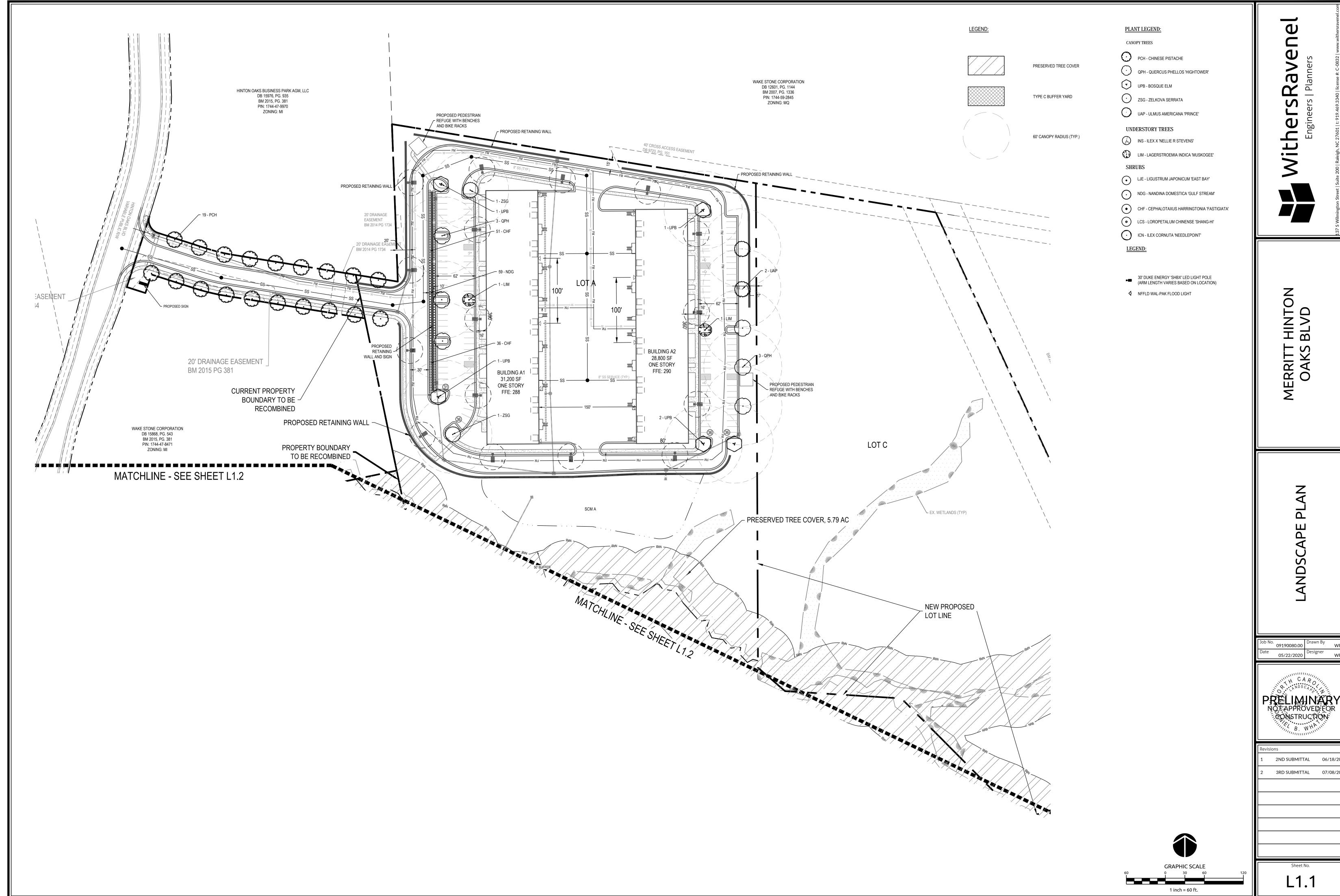


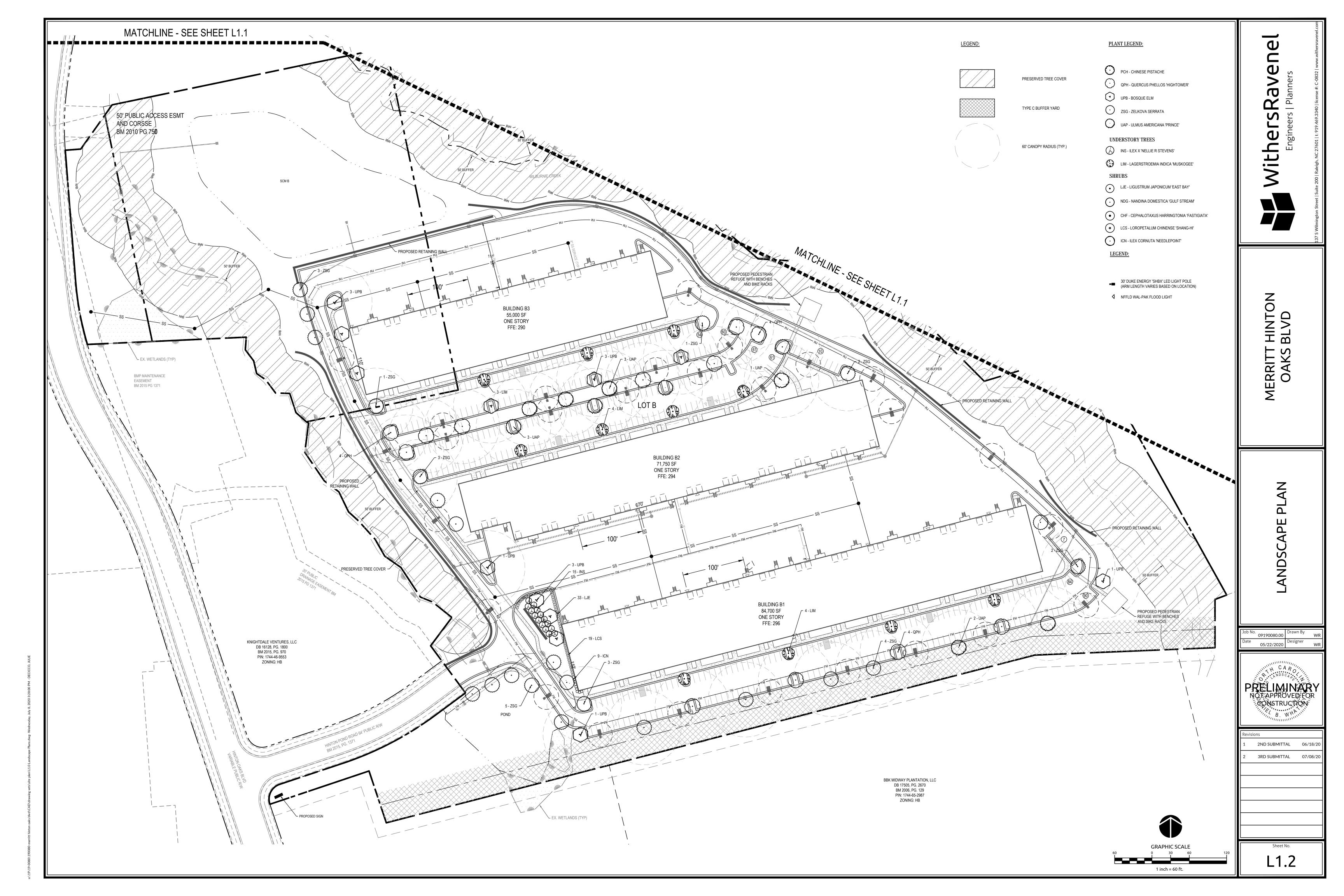












- 1. LANDSCAPED AREAS SHALL NOT CONTAIN ANY DEVELOPMENT, IMPERVIOUS SURFACES OR SITE FEATURES THAT DO NOT FUNCTION TO MEET THE APPLICABLE STANDARDS FOR THAT AREA OR THAT REQUIRE REMOVAL OF EXISTING SIGNIFICANT
- 2. NO GRADING, DEVELOPMENT OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN AREA BUFFER YARDS IF FOREST CANOPY, SPECIMEN TREES OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE ADMINISTRATOR. IF GRADING WITHIN A BUFFER YARD IS PROPOSED, SLOPES 3:1 OR LESS ARE ENCOURAGED TO ENSURE
- PROPER TRANSITION OF GRADES TO THE ADJACENT PROPERTY AND TO FACILITATE LANDSCAPING AND MAINTENANCE. 3. PERMANENT OFF-SITE LANDSCAPE EASEMENTS MAY BE USED TO MEET REQUIRED BUFFER YARDS PROVIDED THAT THE SIZE OR SHAPE OF THE PARCEL SIGNIFICANTLY RESTRICTS THE ABILITY TO REASONABLY USE THE PROPERTY AND MEET THE
- OF THE SITE OR SUBDIVISION PLAN. 4. NEW PLANT MATERIAL SHOULD COMPLIMENT EXISTING VEGETATION NATIVE TO THE SITE. THE USE OF DROUGHT TOLERANT, INDIGENOUS, NATIVE AND/OR REGIONALLY GROWN SPECIES OF TREES, SHRUBS AND GROUNDCOVERS ARE ENCOURAGED IN

BUFFER YARD REQUIREMENTS. THESE EASEMENTS MUST BE RECORDED PRIOR TO OR IN CONJUNCTION WITH THE APPROVAL

- ORDER TO MAKE PLANTED AREAS COMPATIBLE WITH EXISTING NATIVE HABITATS AND TO REDUCE DEPENDENCY ON 5. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH TOWN OF KNIGHTDALE STANDARD SPECIFICATIONS & DETAIL MANUAL.
- 6. LANDSCAPING SHOULD BE OF SUFFICIENT SIZE SO THAT MATURE APPEARANCE WILL BE ACHIEVED WITHIN (3) YEARS OF INSTALLATION FOR SHRUBS AND WITHIN (5) YEARS OF INSTALLATION FOR TREES. WHERE THE MINIMUM SIZE REQUIREMENTS
- OVERLAP, THE HIGHER STANDARD SHALL PREVAIL. 7. EACH CANOPY TREE SHALL BE PROVIDED WITH A MINIMUM PERVIOUS GROUND AREA OF 300 SF FOR ROOT GROWTH (EXCEPTION: STREET TREES) AND SHOULD BE PLANTED ON SLOPES NOT TO EXCEED 1:4 VERTICAL TO HORIZONTAL DISTANCE. 8. GROUNDCOVER MUST BE PLANTED WITH ON-CENTER SPACING EQUIVALENT TO THE AVERAGE MATURE SPREAD FOR EACH
- PARTICULAR SPECIES. 9. ALL NEW PLANT MATERIAL SHALL BE OF GOOD QUALITY, FREE FROM DISEASE, INSTALLED IN SOUND MANNER, MULCHED (3-4" LAYER) AND MEET STANDARDS SET FORTH IN THE AMERICAN STANDARD FOR NURSERY STOCK BY AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA). THE SELECTION OF PLANTS, PLANTING METHODS, MINIMUM HEIGHT, ROOT BALL AND CONTAINER SIZE, NUMBER OF BRANCHES AND WIDTH, SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE ANLA FOR THAT TYPE OF TREE OR SHRUB AT THE TIME OF INSTALLATION.
- 10. ALL NEW TREES SHALL ALSO BE PROPERLY GUYED AND STAKED AT THE TIME OF PLANTING. 11. ADEQUATE DRAINAGE AND MULCHING SHALL BE PROVIDED IN ALL CASES, PARTICULARLY FOR MEDIANS AND ISLANDS. 12. INSTALLATION PRACTICES SHALL BE UTILIZED WHICH PRESERVE AND REPLACE EXISTING TOPSOIL OR AMEND THE SOIL TO
- 13. ALL PORTIONS OF A LANDSCAPED AREA NOT PLANTED WITH SHRUBS AND TREES OR COVERED BY A WALL OR OTHER SCREENING DEVICE SHALL BE PLANTED WITH GROUND COVER AND/OR GRASS, OR COVERED WITH NATURAL MULCH WITH A MINIMUM DEPTH OF 2"
- 14. WHERE A CANOPY TREE IS REQUIRED AND OVERHEAD UTILITY LINES EXIST, (2) UNDERSTORY TREES SHALL BE SUBSTITUTED WITH THE APPROVAL OF THE ADMINISTRATOR.
- 15. NOTHING SHALL BE PLANTED OR INSTALLED WITHIN AN UNDERGROUND OR OVERHEAD UTILITY EASEMENT OR DRAINAGE EASEMENT WITHOUT THE CONSENT OF THE TOWN AND THE EASEMENT HOLDER AT THE TIME OF MASTER PLAN APPROVAL. 16. CONTRACTOR SHALL WARRANT ALL NEW PLANT MATERIAL FOR (1) YEAR FROM TIME OF INSTALLATION.
- 17. ALL LANDSCAPING, MULCHING AND SEEDING SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SITE PLAN AND THE STANDARDS OF THIS CHAPTER PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY. REQUESTS FOR A DELAY IN COMPLYING WITH THIS REQUIREMENT WILL BE CONSIDERED FOLLOWING A WRITTEN REQUEST DIRECTED TO THE ADMINISTRATOR. SUCH REQUEST FOR A DELAY SHALL NOTE THE TIMEFRAME DURING WHICH THE PLANTING SHALL BE COMPLETED. CERTIFICATES OF OCCUPANCY WILL BE ISSUED WITH THE APPROVAL OF A REQUEST FOR PLANTING DELAY, IF
- 18. THE TOWN MAY ISSUE A TEMPORARY CERTIFICATE OF OCCUPANCY FOR A PERIOD OF 30-180 DAYS, RELATIVE TO THE NEXT PLANTING SEASON; WHILE THE TOWN OF KNIGHTDALE MAY ALSO ISSUE A TEMPORARY CERTIFICATE OF OCCUPANCY FOR A PERIOD NOT TO EXCEED 30 DAYS.
- 19. WHERE SIGHT TRIANGLES FOR DRIVES OR STREETS OVERLAP SCREENING, GROUND COVER VEGETATION SHALL BE USED EXCLUSIVELY (EXCEPTION: SINGLE-FAMILY DWELLINGS & DUPLEXES). 20. ALL SIDES OF PARKING LOTS SHALL BE SCREENED WITH A TYPE 'A' BUFFER YARD. SIDES ADJACENT TO AN ARTERIAL SHALL BE
- SCREENED WITH A TYPE 'B' BUFFER YARD. OTHER VEHICLE ACCOMMODATION AREAS SHALL BE SCREENED FROM OFF-SITE VIEW WITH A TYPE 'B' BUFFER YARD. 21. ABOVE GROUND UTILITIES AND ENCLOSED CONTAINMENT AREAS FOR TRASH AND RECYCLABLES SHALL BE SCREENED BY ELEMENTS OF A TYPE 'B' BUFFER YARD THAT PERTAIN TO SEMI-OPAQUE SCREENS UP TO 6' IN HEIGHT OR THE HEIGHT OF THE UTILITY OR ENCLOSURE, WHICHEVER IS LESS.

BERMS WITH A FENCE OR WALL

- 1. ALL BERMS SHALL NOT EXCEED A SLOPE WITH MAXIMUM RISE OF 1' TO A RUN OF 2', A MAXIMUM HEIGHT OF 4' AND A MAXIMUM WIDTH OF 40% OF THE REQUIRED BUFFER WIDTH.
- 2. BERMS SHALL BE STABILIZED WITH A GROUND COVER OR OTHER SUITABLE VEGETATION OR PERMANENT SLOPE RETENTION DEVICE. BERMS TALLER THAN 4' SHALL BE APPROVED BY THE ADMINISTRATOR ON A CASE BY CASE BASIS, BUT SHALL CONFORM TO THE SLOPE AND WIDTH RESTRICTIONS AS PREVIOUSLY DETAILED.

MAINTENANCE:

- 1. THE OWNER(S) OF THE PROPERTY SHALL BE RESPONSIBLE FOR ALL NATURAL AND PHYSICAL FEATURES REQUIRED BY THE LANDSCAPE SECTION OF THE UDO AND SHALL PRESERVE AND MAINTAIN THESE FEATURES IN HEALTHY GROWING CONDITIONS, REPLACE THEM WHEN NECESSARY, AND KEEP THE AREAS AROUND THEM FREE OF REFUSE AND DEBRIS IN A MANNER THAT PREVENTS REFUSE AND DEBRIS FROM WASHING ONTO PUBLIC RIGHTS-OF-WAY. 2. THE USE OF IRRIGATION IS PERMITTED IN ALL REQUIRED LANDSCAPING AREAS AS REQUIRED BY THE LANDSCAPING SECTION OF THE UDO AND MAY CONNECT TO THE PUBLIC WATER SYSTEM SUBJECT TO THE REQUIREMENTS OF THE TOWN'S
- STANDARDS SPECIFICATIONS AND DETAILS MANUAL AND OTHER APPLICABLE TOWN ORDINANCES OR POLICIES. THE USE OF MOISTURE METERING DEVICES AND AUTOMATIC TIMERS WITH ANY IRRIGATION SYSTEM IS REQUIRED. THE USE OF XERISCAPE PRACTICES AND DRIP IRRIGATION IS ALSO ENCOURAGED. UNLESS OTHERWISE REQUIRED. 3. ALL VEGETATION SHOULD BE ALLOWED TO REACH AND BE MAINTAINED AT ITS MATURE SIZE.
- 4. TREE 'TOPPING' (THE REMOVAL OF MORE THAN 25% OF A TREE'S CANOPY) IS CONSIDERED TO BE DAMAGE AND MIS-CONFIGUREMENT AND SHALL BE PROHIBITED ON ALL TREES ON PUBLIC PROPERTY, PUBLIC RIGHT-OF-WAY, REQUIRED TREE SAVE AREAS AND PARKING LOT LANDSCAPING AREAS UNLESS OTHERWISE APPROVED BY THE LAND USE REVIEW BOARD (LURB). TREES LOCATED WHERE PROPER PRUNING PRACTICES ARE IMPRACTICAL MAY BE EXEMPTED FROM THIS
- ARTICLE AT THE DETERMINATION OF THE ADMINISTRATOR. 5. THE OWNER OF ANY TREE OR SHRUB ON PRIVATE PROPERTY THAT OVERHANGS ANY PUBLIC RIGHT-OF-WAY WITHIN THE TOWN SHALL PRUNE THE BRANCHES SO THAT SUCH BRANCHES SHALL NOT OBSTRUCT THE LIGHT FROM ANY STREET LAMP OR OBSTRUCT THE VIEW OF ANY STREET INTERSECTION AND SO THAT THERE SHALL BE A CLEAR SPACE OF 8' ABOVE THE
- SURFACE OF THE STREET OR SIDEWALK 6. THE TOWN OF KNIGHTDALE PUBLIC WORKS DIRECTOR IS AUTHORIZED TO PRUNE TREES AND SHRUBS FROM PUBLIC PROPERTIES AND PUBLIC RIGHTS-OF-WAY.
- 7. THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) IS AUTHORIZED TO PRUNE TREES AND SHRUBS IN THE PUBLIC RIGHTS-OF-WAY OWNED BY THE STATE OF NORTH CAROLINA.
- 8. THE REMOVAL BY ANY ENTITY OF A TREE OR SHRUB THAT IS DEAD. INFECTED BY DISEASE, OR DETERMINED TO BE A HAZARD TO PUBLIC SAFETY AND WELFARE AND SUBSEQUENT REPLACEMENT MAY BE APPROVED BY THE ADMINISTRATOR. TREES REMOVED MUST BE REPLACED IN ACCORDANCE WITH THE REPLACEMENT PROVISIONS OF THE UDO.
- 9. OWNERS SHALL REMOVE ALL DEAD, DISEASED OR HAZARDOUS TREES AND SHRUBS AS WELL AS ANY BROKEN OR DECAYED LIMBS WHICH CONSTITUTE A MENACE TO THE SAFETY OF THE PUBLIC. THE TOWN SHALL HAVE THE RIGHT TO CAUSE THE REMOVAL OF ANY DEAD OR DISEASED TREES AND SHRUBS ON PRIVATE PROPERTY WHEN SUCH TREE OR SHRUB CONSTITUTES A HAZARD TO LIFE AND PROPERTY, OR HARBOR INSECTS OR DISEASE WHICH CONSTITUTES A POTENTIAL THREAT TO OTHER VEGETATION IN THE TOWN. THE ADMINISTRATOR WILL NOTIFY PROPERTY OWNER(S) OF THE REQUIREMENT TO REMOVE SUCH TREES, SHRUBS OR LIMBS. REMOVAL SHALL BE DONE AT THE OWNER(S) EXPENSE WITHIN 60 DAYS AFTER THE DATE OF SERVICE OF THE WRITTEN NOTICE. FAILURE TO COMPLY WITH SUCH PROVISIONS SHALL CONSTITUTE A VIOLATION OF THE TOWN OF KNIGHTDALE ORDINANCE AND SHALL BE SUBJECT TO THE APPLICABLE PROCEDURES AND PENALTIES
- 10. WHEN REMOVING TREES AND SHRUBS, STUMPS SHALL BE REMOVED OR GROUND TO A MINIMUM DEPTH OF 4". 11. IN THE EVENT THAT ANY REQUIRED VEGETATION IS SEVERELY DAMAGED DUE TO AN UNUSUAL WEATHER OCCURRENCE OR NATURAL DISASTER, THE OWNER SHALL HAVE (1) GROWING SEASON TO REPLACE OR REPLANT FOLLOWING THE EVENT OR FOLLOWING THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR ANY EVENT-RELATED SITE RECONSTRUCTION,
- WHICHEVER IS LATER. 12. VEGETATION WITHIN A REQUIRED TREE PROTECTION OR LANDSCAPED AREA THAT DIES WITHIN (1) YEAR OF CONSTRUCTION COMPLETION SHALL BE REMOVED AND REPLACED WITH NEW VEGETATION OF EQUAL OR GREATER SIZE BY THE CONTRACTOR PROVIDING THE WARRANT. SHOULD ANY VEGETATION REQUIRED IN A TREE PROTECTION OR LANDSCAPED AREA DIE AFTER THE EXPIRATION OF THE WARRANTY, THE PROPERTY OWNER SHALL REPLACE IT WITHIN 180 DAYS WITH VEGETATION OR
- EQUAL OR GREATER SIZE. 13. A PLAN DENOTING THE PROPOSED LOCATION AND SPECIES OF REPLACEMENTS SHALL BE SUBMITTED TO THE TOWN OF
- KNIGHTDALE FOR APPROVAL. THE ADMINISTRATOR MAY ELECT TO PRESENT THE PLAN TO THE LURB FOR FINAL APPROVAL.
- 14. ALL VEGETATION SHALL BE REPLACED IN A MANNER THAT SATISFIES THE APPLICABLE TYPE, AMOUNT AND PERFORMANCE CRITERIA REQUIRED BY THE TOWN OF KNIGHTDALE UDO. 15. THE ADMINISTRATOR MAY INSPECT THE SITE ONCE A YEAR AFTER THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY IN ORDER TO ENSURE COMPLIANCE WITH THE APPROVED SITE PLAN AND TO ENSURE THAT THE VEGETATION AND LANDSCAPING

THE KNIGHTDALE ORDINANCE IF WARRANTED UPON AN INSPECTION.

IS PROPERLY MAINTAINED. THE ADMINISTRATOR MAY ISSUE A NOTICE OF VIOLATION TO COMPLY WITH THE PROVISIONS OF

LANDSCAPE CALCULATIONS

- PARKING LOTS WITH MORE THAN 16 PARKING SPACES SHALL BE LANDSCAPED.
- NO PARKING SPACE SHALL BE 60' FROM THE BASE OF A CANOPY TREE. MINIMUM PERVIOUS AREA OF 300 SF (18" STANDARD CURB & GUTTER).
- A PLANTING STRIP (MIN. WIDTH OF 5'). WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES

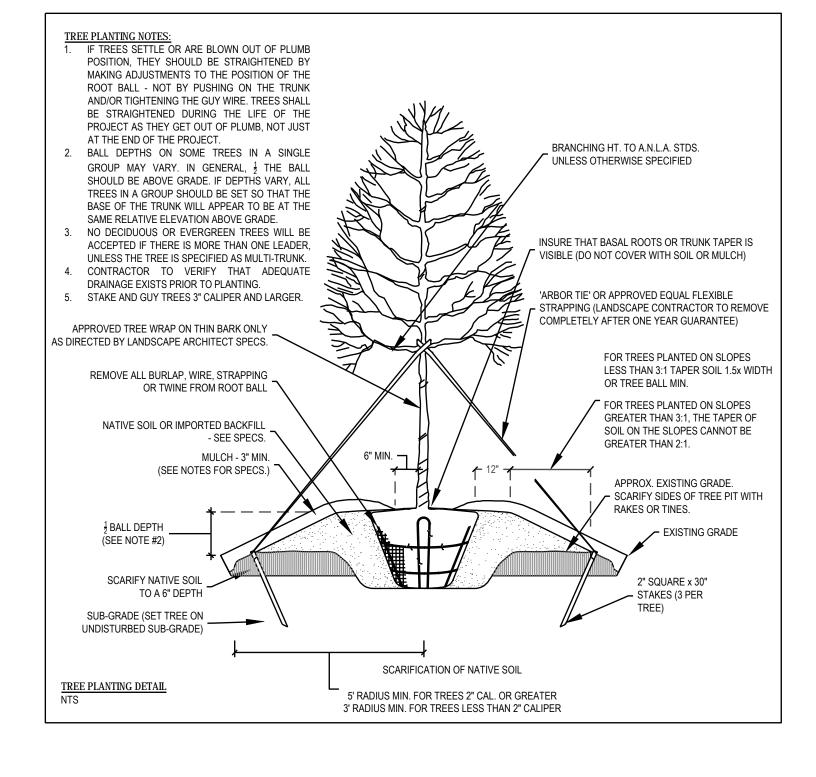
CANOPY TREES TO BE INSTALLED AT A MINIMUM AVERAGE DISTANCE OF 40' O.C. IN

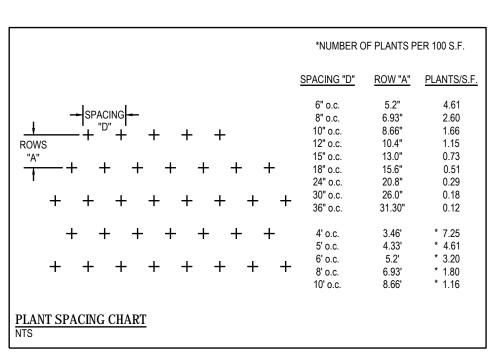
- MAY BE SUBSTITUTED STREET TREES SHALL BE PLACED AT LEAST 10' FROM LIGHT POLES AND 12' FROM
- ELECTRICAL TRANSFORMERS IN ORDER TO ALLOW THESE UTILITIES TO BE SAFELY SERVICES (UNDERSTORY TREES MAY BE PLACED WITHIN 5' OF SUCH DEVICES). STREET TREES SHALL BE DECIDUOUS HARDWOODS AND SHALL MEET THE CRITERIA SET FOR IN PREVIOUS NOTES/DETAILS.

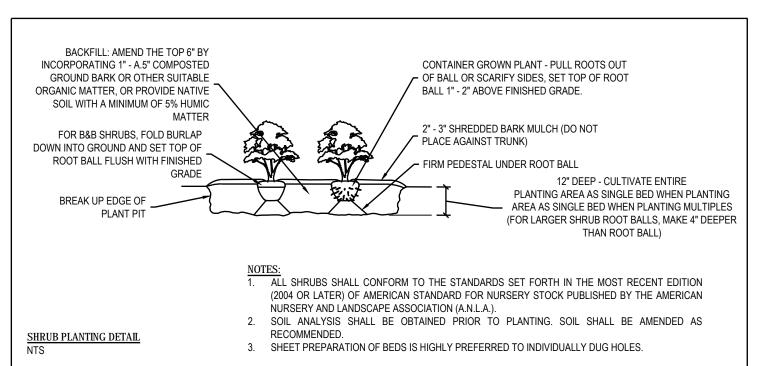
TREE COVER AREA:

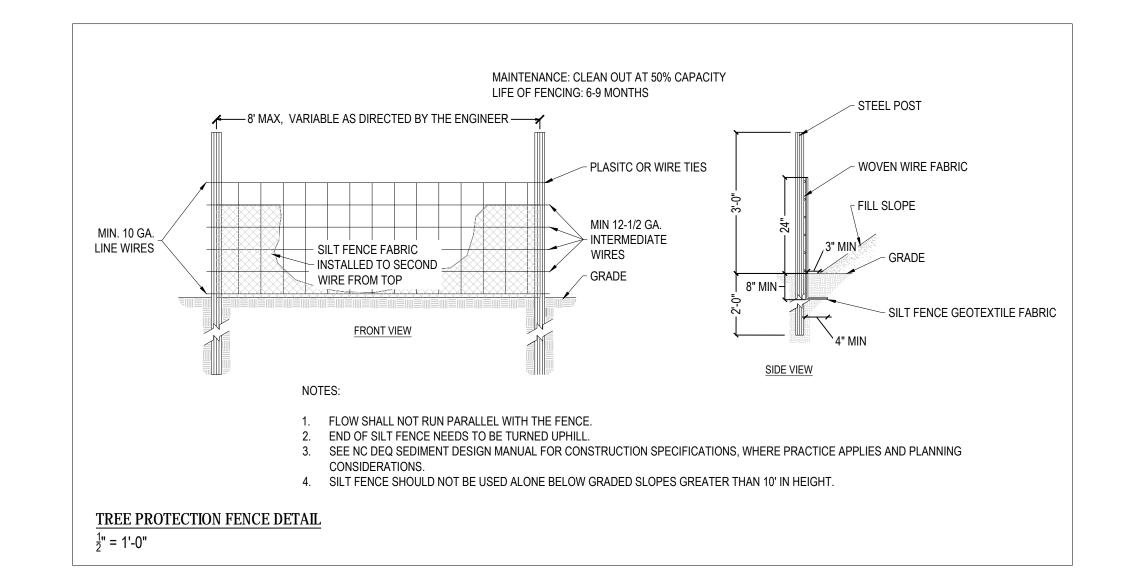
REQURIED TREE COVER: 3.65 ACRES

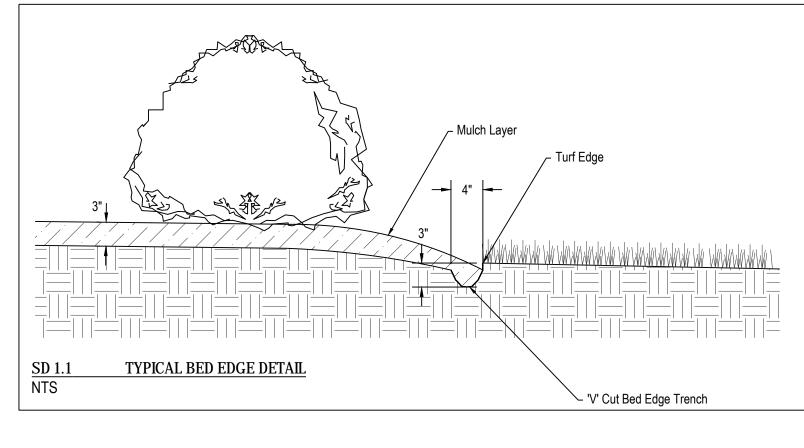
PRESERVED TREE COVER: 8.47 ACRES

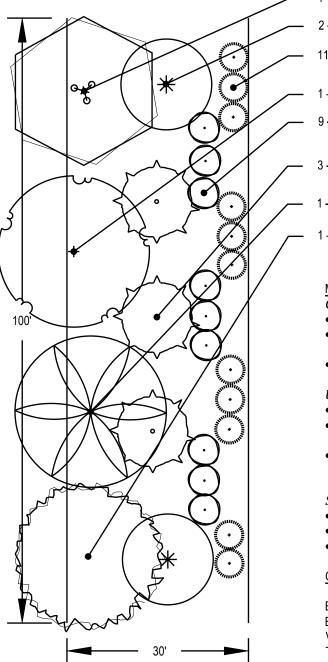












1 - PINUS TAEDA (EVERGREEN)

2 - CHIONANTHUS RETUSUS (DEC.)

11 - ILEX CORNUTA 'NEEDLEPOINT' (EVERGREEN)

1 - QUERCUS LYRATA (DEC.)

— 9 - LOROPETALUM CHINENSE 'SHANG-HI' (EVERGREEN)

3 - ILEX X 'NELLIE R STEVENS' (EVERGREEN)

— 1 - MAGNOLIA GRANDIFLORA (EVERGREEN)

1 - PISTACIA CHINENSIS (DEC.)

MINIMUM PLANTING REQUIREMENTS CANOPY TREES

- (4) TREES / 100 LF (MAX. 30' O.C.) AT LEAST 40% BUT NO MORE THAN 60% OF CANOPY TREES SHALL BE EVERGREEN
- INSTALLED SIZE: 2" CAL.

UNDERSTORY (5) UNDERSTORY / 100 LF (MAX. 10' O.C.)

- AT LEAST 40% BUT NO MORE THAN 60% OF
- UNDERSTORY TREES SHALL BE EVERGREEN INSTALLED SIZE: 2" CAL.

(20) SHRUBS / 100 LF

 AT LEAST 80% OF SHRUBS SHALL BE EVERGREEN MATURE HEIGHT: 3'; INSTALLED SIZE: 24" MIN.

GENERAL NOTE:

BUFFER MAY INCLUDE A WALL, FENCE, LANDSCAPED EARTHEN BERM, PLANTED VEGETATION, EXISTING VEGETATION, OR ANY APPROPRIATE COMBINATION OF THESE ELEMENTS.

5' O.C. SPACING

QTY	KEY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	HEIGHT	NOTES
CANOPY	TREES					•	
14	MGL	Magnolia grandiflora	Southern Magnolia	B&B	2" CAL. MIN.	8' HT. MIN	MATCHED
14	PTA	Pinus taeda	Loblolly Pine	B&B	2" CAL. MIN.	8' HT. MIN	MATCHED
28	PCH	Pistacia chinensis	Chinese Pistache	B&B	2" ÇAL. MIN.	8' HT. MIN	MATCHED
14	QUL	Querous ly rata	Overcup Oak	B&B	2" CAL, MIN.	8' HT. MIN	MATCHED
18	QPH	Quercus phellos 'Hightower'	High Tower Oak	B&B	2" CAL. MIN.	8' HT. MIN	MATCHED
11	ŲA₽	Ulmus americana 'Princeton'	American Elm	B&B	2" ÇAL. MIN.	8' HT. MIN	MATCHED
17	UPB	Ulmus parv iflora 'Bosque'	Chinese Elm	B&B	2" CAL, MIN.	8' HT. MIN	MATCHED
26	ZSG	Zelkov a serrata	Japanese Zelkova	B&B	2" CAL. MIN.	8' HT. MIN	MATCHED
UNDERST	ORY TRE	ES				,	
28	CHR	Chionanthus retusus	Fringe Tree	B&B	1" ÇAL. MIN.	6' HT. MIN	MATCHED
56	INS	llex x 'Nellie R Stevens'	Nellie Steviens Holly	B&B	1" CAL. MIN.	6' HT. MIN	MATCHED
13	LIM	Lagerstroemia indica 'Muskogee'	Crape Myrtle	B&B	1" CAL. MIN.	6' HT. MIN	MATCHED
SHRUBS						L .	
33	LJE	Ligustrum japonicum 'East Bay'	East Bay Ligustrum	CONT.	3 GAL. MIN.	18" Ht. MIN.	5' O.C. SPACIN
160	ICN	llex cornuta 'Needlepoint'	Needlepoint Holly	CONT.	3 GAL. MIN.	18" Ht. MIN.	5' O.C. SPACING

Loropetalum chinense 'Shang-hi' Purple diamond Loropetalum CONT. 3 GAL. MIN. 18" Ht. MIN. 5' O.C. SPACING

Nandina domestica 'Gulf Stream' | Gulf Stream Heavenly Bamboo | CONT. | 3 GAL. MIN. | 18" Ht. MIN. |

Cephalotax us harringtonia 'Fastigiata' Upright Japanese Plum Yew CONT. 3 GAL. MIN.



0 ERRI'

09190080.00 05/22/202



2ND SUBMITTAL 06/18/2 3RD SUBMITTAL 07/08/2

SECTION E: GROUND STABILIZATION

and the delegated authority having jurisdiction.

Required Ground Stabilization Timeframes				
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	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		
(d) Slopes 3:1 to 4:1	14	-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 -10 days for Falls Lake Watershed		
(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
 Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	 Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

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.
- 4. Provide ponding area for containment of treated Stormwater before discharging offsite. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

QUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment. 3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- 4. 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.
- 3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. 4. 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
- 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.
- 3. Dispose waste off-site at an approved disposal facility. 9. 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.
- alternatives are reasonably available.
- . Contain liquid wastes in a controlled area. 4. Containment must be labeled, sized and placed appropriately for the needs of site.

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.

Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other

5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

- 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 unit.

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 Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of
- . 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

- 1. 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 inlet(s) 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.
- Remove leavings 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.
- 10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. fill pit, it applicable, and stabilize any disturbance caused by removal ot washou

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.
- 4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- 2. Place hazardous waste containers under cover or in secondary containment. 3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER HIGH SANDBAGS (TYP.) COHESIVE & OR STAPLES LOW FILTRATION SANDBAGS (TYP.) SOIL BERM COHESIVE & OR STAPLES PLASTIC LINING LOW FILTRATION SOIL BERM OR STAPLES SIDE SLOPE SANDBAGS (TYP.) 1. ACTUAL LOCATION DETERMINED IN FIELD - CLEARLY MARKED SIGNAGE SECTION A-A NOTING DEVICE (18"X24" MIN.) CONCRETE 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE NOTES: 1. ACTUAL LOCATION DETERMINED IN FIELD WASHOUT CLEARLY MARKED SIGNAGE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES NOTING DEVICE (18"X24" MIN.) 75% OF THE STRUCTURES CAPACITY TO PROVIDE CONCRETE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 WASHOUT 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE INCHES OF FREEBOARD. MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY. 3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE. 3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE. ABOVE GRADE WASHOUT STRUCTURE BELOW GRADE WASHOUT STRUCTURE

NCGO1-SELF INSPECTION, RECORDKEEPING & REPORTING

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 (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	 Identification of the measures inspected, Date and time of the inspection, Name of the person performing the inspection, Indication of whether the measures were operating properly, Description of maintenance needs for the measure, Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	 Identification of the discharge outfalls inspected, Date and time of the inspection, Name of the person performing the inspection, Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, Indication of visible sediment leaving the site, Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	 The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

 $\label{eq:NOTE:the} \mbox{NOTE: The rain inspection resets the required 7 calendar day inspection requirement.}$

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING 1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept onsite and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements	
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.	
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC 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&SC Plan.	Initial and date a copy of the approved E&SC 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&SC Measures have been performed.	Complete, date and sign an inspection report.	
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.	

2. Additional Documentation to be Kept Onsite In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This general permit as well as the certificate of coverage, after it is received.
- (b) Records of inspections made during the previous twelve months. 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.
- 3. Documentation to be Retained for Three Years All data used to complete the e-NOI and all 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 (a) Visible sediment deposition in a stream or wetland.

- (b) Oil spills if:
- 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).
- (c) 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.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee 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

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements		
(a) Visible sediment deposition in a stream or wetland	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, 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. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions. 		
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	 Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release. 		
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	 A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass. 		
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass. 		
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(I)(7)]	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(I)(6). Division staff may waive the requirement for a written report on a case-by-case basis. 		

PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria

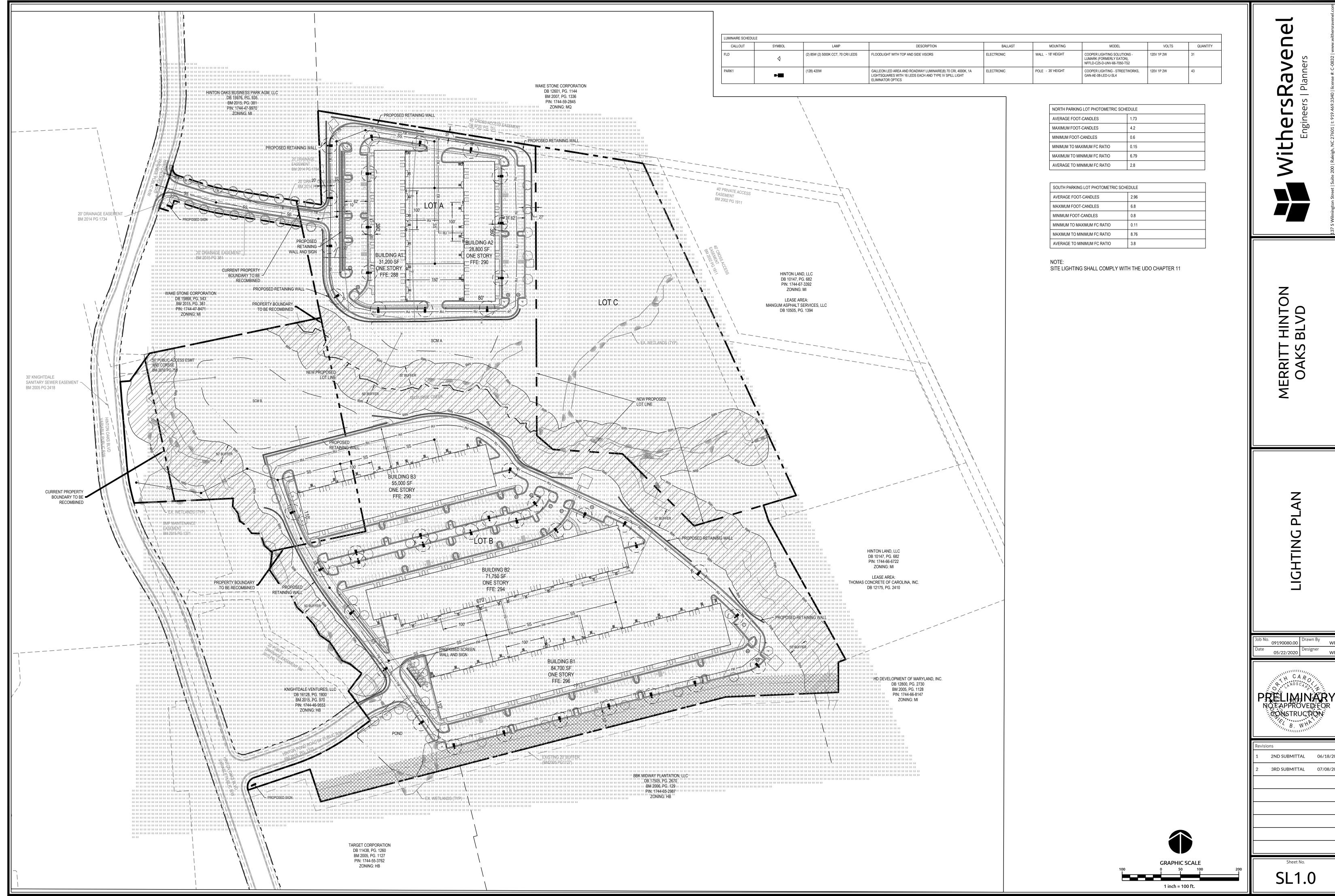
- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items, (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems, (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,

Section C, Item (2)(c) and (d) of this permit,

discharge points of all dewatering devices, and (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

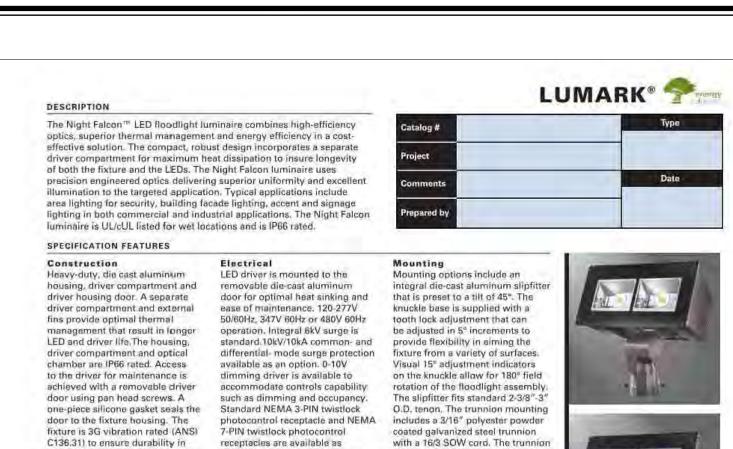
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the

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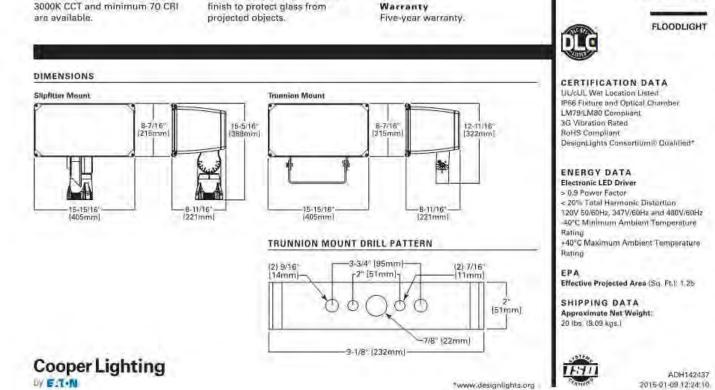
3RD SUBMITTAL 07/08/20



with a 16/3 SOW cord. The trunnion area and site lighting applications. options. Suitable for ambient mount uses an interlocking slide temperatures from -40°C to 40°C. adjustment that is locked into place Optional 50°C HA (high ambient) with a set screw. greater than 50,000 hours per Housing and cast parts finished IESNA TM-21. in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal Heavy-duty steel top and side thickness for superior protection visors control glare and spill light. against fade and wear. Standard color is carbon bronze. Additional 1/8" thick UV stabilized vandal guard shields glass lens from colors available in summit white. NFFLD impact when mounted at low grey and black. Consult your NIGHT FALCON silicone gasket protects the optics levels. Easy to install wire guard Eaton's Cooper Lighting business

selection of standard colors.

Solid State LED



The LED chamber incorporates

illumination. Optics are precisely designed to shape the wide

NEMA type 6H x 6V distribution,

a vacuum metalized reflector

that provides high-efficiency

maximizing efficiency and

glass tempered lens with full

circumference form-in-place

from damage. Offered standard in features a heavy-gauge welded

70 CRI, Optional 5700K CCT and resistant polyester powder coat

4000K (+/- 275K) CCT and minimum construction with corrosion

application spacing. Clear

