Ample Storage Center 6839 Knightdale Blvd Knightdale, NC 27545 Proposed Indoor Self Storage

Proposed +/-28,800 SF, 3-Story Indoor Self-Storage Building
Sketch Plan Submittal
Comprehensive Plan Consistency
July 28, 2023

General Narrative

Ample Storage Center, located at 6839 Knightdale Blvd, desires to expand their existing facility on the north end of their property (Parcel # 1744868623). Enclosed is the Sketch Plan for review.

The existing facility was developed in two phases. Phase 1 is located at and includes the more traditional one-story exterior storage units. Phase 2 is located at 6839 Knightdale Blvd and includes a multi-story mini-storage building. The proposed development will be the construction of one 29,280 sf, 3-story indoor mini-storage facility (87,840 sf total floor area) at the rear of the property, abutting TRW Electric Supply and the Wake Stone Corporation quarry.

The project area is currently wooded. No other environmental features are present on site. Proposed development is consistent with the existing development on the same parcel. The project area is bounded on two sides by the existing quarry and a third side by the existing on-site development. The final side adjoins TRW Electric Supply and will include preservation of the existing wooded area as part of the requisite screening buffer. The existing and proposed tree lines are shown on the Natural Resources Sketch Plan.

The proposed development will be accessed via the existing Phase 1 entrance at the end of Great Falls Ct. The proposed use will likely not increase traffic demand along the street significantly, and will not require any additional public infrastructure outside of fire protection.

Given that the proposed development matches the existing development on site, and given the adjacent land use and site location, the proposed indoor mini-storage facility fits within the spirit of the Knightdale Comprehensive Plan. Detailed reasonings are discussed below.

Growth Framework Map Consistency

The site is located within existing town limits. The project area is described as a 2-acre section of a 7-acre parcel (zoned MI). Existing development on the property includes 95,600 sf of self-storage (Mini-Warehouses).

Growth & Conservation Map Consistency

The site is located within a Retail place type category. Adjacent land uses, along with the designated place type from the published map are as follows:

- Site: Ample Storage (Retail)
- North & West: Wake Stone Corporation Knightdale Quarry (Heavy Industrial).
- Northeast: TRW Electric and Supply Company (Retail).
- East: Auto DRS (Light Industrial)
 Tractor Supply Company (Retail)
- Southeast: Knightdale Pediatrics (Retail).

The growth map designates the property for commercial development (retail). The proposed development is allowed under the UDO zoning and is consistent with existing development.

Given the location and surrounding uses, the proposed office development is consistent with and promotes the vision of the Growth & Conservation Map.

Trails & Greenways Map Consistency

The site is not located adjacent to any existing or proposed trails, greenways, bicycle routes, parks or open space located within or adjacent to the site, it is consistent with the Trails & Greenways Map.

Street Network Map Consistency

Existing development abuts Knightdale Blvd (NCDOT arterial) and Great Falls Ct. Development will be accessed via the exiting driveway at the end of the cul-de-sac on Great Falls Ct (city). The proposed development (mini-warehouses) will not significantly increase the number of trips along Great Falls Ct. Due to the nature of both the existing and proposed development, pedestrian and bike traffic will be very minimal, if ever. Any increase in vehicular traffic will not pose any risks to either group. The proposed development is consistent with the street network plan.

Transit Network

The project area is not located along any planned transit route. As noted above, demand for transit use will be virtually non-existent for either the existing or proposed uses along Great Falls Ct. The proposed development fits the overall transit network plan.

Focus Area Studies

The project area is not located within any existing Focus Area Study.

Water Allocation

As the proposed development is an expansion of the existing mini-storage facility, no new office/residential facilities are included. Customers will have access to bathroom facilities in the Phase 2 building. No water connections will be used to provide any janitorial services. Submitted plans show only a fire line as part of development. No water demand will be needed to be allocated for the proposed development.

CIVIL ENGINEER

Rivers & Associates, INC. Greenville, NC



107 East Second Street Greenville, NC 27858 (252) 752-4135

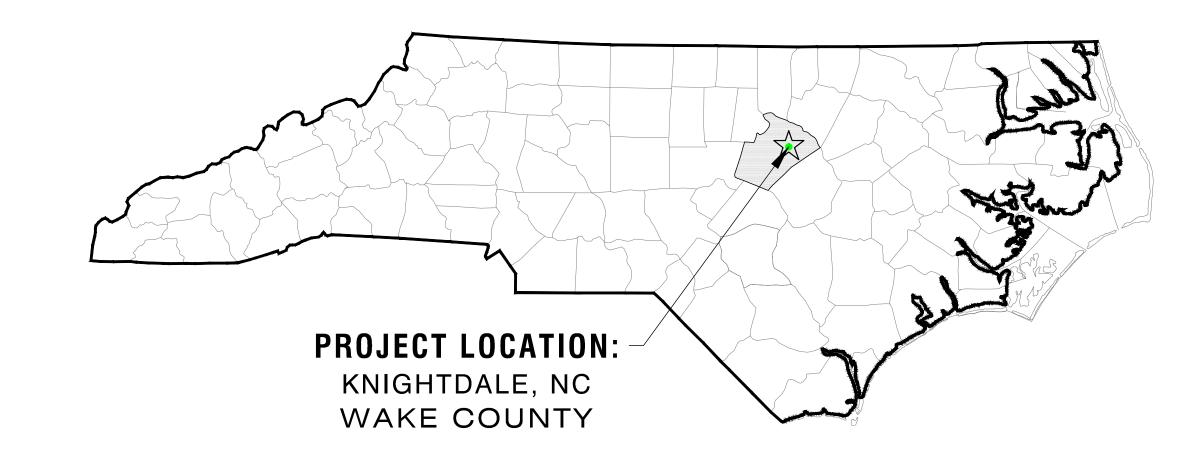
Contact: MATTHEW J. PROKOP, PE mprokop@riversandassociates.com

OWNER/DEVELOPER

AMPLE STORAGE LAKE WORTH LLC

P.O. BOX 608 SMITHFIELD, NC 27577-0608

Contact:





NC License: F-0334

NC License: F-0334

& ASSOCIATES, INC.

ociates.com Since 1918

Freet

Engineers
Planners

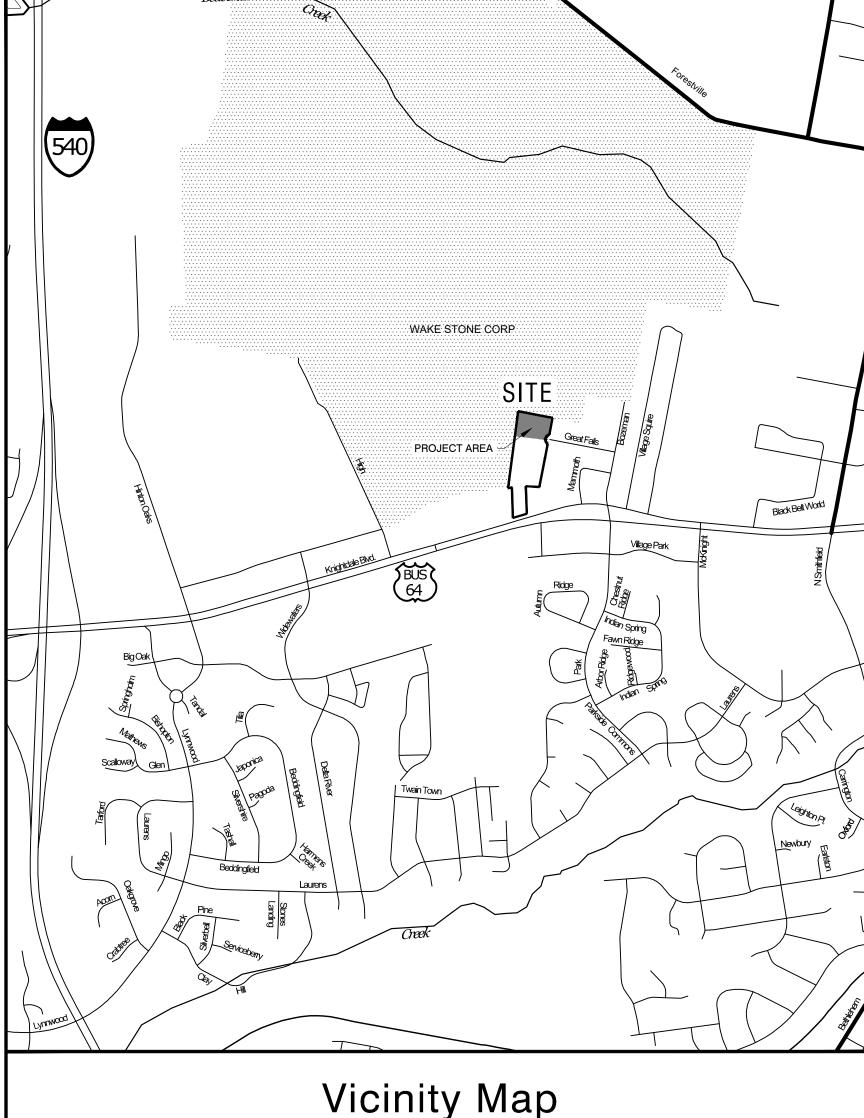
riversandassoo 107 East Second Stree Greenville, NC 27858 (252) 752-4135



REVISIONS:

AMPLE STORAGE EXPANSION

SITE DATA 1107 GREAT FALLS COURT KNIGHTDALE. NORTH CAROLINA 27545 SITE ADDRESS PHASE 2: 6839 KNIGHTDALE BLVD. KNIGHTDALE, NORTH CAROLINA 27545 MUNICIPALITY: ST. MATTHEWS PARCEL NO.: 1744868623 DEED REFERENCE: DB 15706, PG 63 AREA IN SITE: 6.98 ACRES (+/- 303,818 SF) ZONING / LAND USE CLASSIFICATION : GENERAL COMMERCIAL - HB & MI EXISTING/PROPOSED USE: MINI-WAREHOUSES WATERSHED: 27-29: BEAVERDAM CREEK RECEIVING STREAM: C, NSW TOTAL BUILDING SQUARE FOOTAGE: 95,640 SF EXIST + 87,840 NEW = 183,480 TOTAL SF BUILDING HEIGHT: EXISTING = 1 @ 30' (3-STORY), 7 @ 10' (1-STORY) PROPOSED = 30' (3 STORY **TOTAL NUMBER OF STORAGE UNITS:** EXISTING = ~750 PROPOSED = 977 **IMPERVIOUS AREA** EXISTING BUILDINGS FOOTPRINT: 62,611 SF EXISTING CONCRETE: 4,197 SF EXISTING ASPHALT PARKING: 87,965 SF TOTAL EXISTING IMPERVIOUS AREA: 154,773 SF (3.55 ACRE) EXISTING: 50.9 % PROPOSED BUILDING FOOTPRINT: 29,280 SF PROPOSED CONCRETE: 15,752 SF TOTAL PROPOSED IMPERVIOUS AREA: 45,032SF (1.03ACRES) TOTAL IMPERVIOUS AREA: 199,805 SF (4.59 ACRES) **TOTAL POST DEVELOPMENT:** 65.8 % **PARKING SUMMARY** EXISTING REQUIREMENTS | MAXIMUM - .25 PER 1,000 SF(95,645 SF) = 23.9 SPACES MINI-STORAGE: MINIMUM - $\frac{1}{2}$ OF MAXIMUM() = 12 SPACES PROPOSED REQUIREMENTS | MAXIMUM - .25 PER 1,000 SF(87,840 SF) = 22 SPACES MINI-STORAGE: MINIMUM - $\frac{1}{2}$ OF MAXIMUM() = 11 SPACES TOTAL PARKING SPACES REQUIRED: 23 TOTAL EXISTING PARKING SPACES: 12 NEW PARKING SPACES REQUIRED: 11 NEW PARKING SPACES PROVIDED: 16 TOTAL PARKING SPACES PROVIDED: EXISTING H/C PARKING SPACES: H/C PARKING SPACES REQUIRED: TOTAL H/C PARKING SPACES PROVIDED: TOTAL BICYCLEPARKING REQUIRED TOTAL BICYCLEPARKING PROVIDED:



Sheet Number	Sheet Title
C1.01	COVER SHEET
C1.11	BOUNDARY SURVEY
C1.12	NATURAL RESOURCES SKETCH PLAN
C1.21	EXISTING CONDITIONS OVERALL
C1.22	EXISTING CONDITIONS - PROJECT AREA
C2.01	SKETCH PLAN OVERALL
C2.10	SKETCH PLAN - PROJECT AREA
C2.51	SITE DETAILS
C2.52	BUILDING ELEVATIONS
C3.01	FIRE PREVENTION PLAN
C4.01	GRADING & DRAINAGE PLAN
C5.01	SEDIMENTATION & EROSION CONTROL PLAN – PH 1
C5.02	SEDIMENTATION & EROSION CONTROL PLAN – PH 2
C5.11	SEDIMENTATION & EROSION CONTROL NOTES
C5.21	SEDIMENTATION & EROSION CONTROL DETAILS
C5.22	SEDIMENTATION & EROSION CONTROL DETAILS
C6.41	PAVEMENT MARKING & SIGNAGE PLAN
L1.01	LANDSCAPING PLAN
L2.01	LANDSCAPING DETAILS
SL1.01	SITE LIGHTING PLAN - OVERALL

SHEET INDEX

GENERAL NOTES:

- PROPOSED USE (MINI-WAREHOUSES) WILL REQUIRE CONDITIONAL DISTRICT REZONING PER UDO SECTION 3.1.C.6.I
 NO CHANGES TO ANY ASPECT OF THIS SITE PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING OR UTILITIES WILL BE MADE WITHOUT THE APPROVAL OF THE TOWN OF KNIGHTDALE AND THE
- ENGINEER.

 3. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF KNIGHTDALE STANDARDS AND SPECIFICATIONS.

 4. CONTRACTOR MUST NOTICE ONE CALL CENTER INC. (NC ONE CALL) 1 800 623 4040 AT LEAST 73 HOURS PRIOR TO THE START OF
- CONTRACTOR MUST NOTIFY ONE CALL CENTER, INC (NC ONE CALL) 1-800-632-4949 AT LEAST 72 HOURS PRIOR TO THE START OF EXCAVATION OR TRENCHING TO HAVE ALL UNDERGROUND UTILITIES LOCATED.
 CONTACT TOWN OF KNIGHTDALE AT 919-217-2255 TO SCHEDULE PRE-CONSTRUCTION MEETING WITH GRADING CONTRACTOR,
- EROSION CONTROL ADMINISTRATOR, PROJECT ENGINEER AND OWNER. NO PERSON MAY INITIATE A LAND DISTURBING ACT BEFORE NOTIFYING ALL APPROPRIATE AUTHORITIES TO THE DATE OF SAID ACTIVITY.

 6. THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY THE FEDERAL EMERGENCY
- MANAGEMENT AGENCY (FEMA). THIS PROPERTY IS LOCATED IN ZONE X, AS SHOWN ON FIRM PANEL NUMBER 3720174400K, DATED JULY 19, 2022.

 7. WETLANDS AND PONDS, IF PRESENT, ARE DENOTED ON THE SURVEY. NO IMPACTS TO WETLANDS ARE ANTICIPATED.
- 8. PLEASE BE ADVISED TO OF THE RULES WHICH PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE AND TAR/PAMLICO RIVER BASINS. THIS RULE IS ENFORCED BY THE DIVISION OF WATER QUALITY (DWQ). DIRECT ANY QUESTIONS ABOUT THE APPLICABILITY OF THIS RULE TO THE RALEIGH REGIONAL OFFICE. (919) 791-4200
- NEW BUILDINGS MUST COMPLY WITH NC FIRE CODE SECTION 510 -- EMERGENCY RESPONDER RADIO COVERAGE. FIRE DEPARTMENT VEHICULAR ACCESS TO ALL STRUCTURES UNDER CONSTRUCTION SHALL BE PROVIDED AT ALL TIMES.
 CONTRACTOR TO FURNISH ALL PAVEMENT MARKINGS AS SHOWN.
- 11. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE POINTS.
 12. SITE LIGHTING IS TO BE INSTALLED WITH COORDINATION BETWEEN CONTRACTOR, OWNER/DEVELOPER AND DUKE ENERGY
- SITE LIGHTING IS TO BE INSTALLED WITH COORDINATION BETWEEN CONTRACTOR, OWNER/DEVELOPER AND DUKE ENERGY.
 COPIES OF ALL PERMITS AND APPROVED PLANS MUST BE KEPT ON SITE IN A PERMIT BOX THAT IS CONSPICUOUSLY LOCATED AND EASILY ACCESSIBLE DURING CONSTRUCTION. THIS INCLUDES APPROVED CONSTRUCTION PLANS, APPROVED EROSION CONTROL PLANS, ENCROACHMENT AGREEMENTS, DRIVEWAY PERMITS, WATER/S.S. PERMITS, ETC.
- 14. OUTDOOR STORAGE IS PROHIBITED PER UDO SECTTION 5.7.G.1.



Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: ______ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: ______ Date: _____

IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THESE CONSTRUCTION DRAWINGS AND THE TOWN OF KNIGHTDALE'S APPROVED STANDARDS FOR THIS PROJECT, THE APPROVED STANDARDS SHALL CONTROL. TOWN OF KNIGHTDALE APPROVED STANDARDS SHALL MEAN ALL DEVELOPMENT DOCUMENTS NECESSARY FOR APPROVAL FOR THE PROPERTY INCLUDING, BUT NOT LIMITED TO, ANY SPECIAL USE PERMIT, SUBDIVISION PLAN, SITE PLAN, SUBDIVISION PLAT(S), PHASING SCHEDULE, DEVELOPMENT AGREEMENT, UTILITY ALLOCATION AGREEMENT, ANNEXATION AGREEMENT, THE TOWN OF KNIGHTDALE STANDARD SPECIFICATION AND DETAILS MANUAL AND APPLICABLE PROVISIONS OF THE NORTH CAROLINA STATE BUILDING

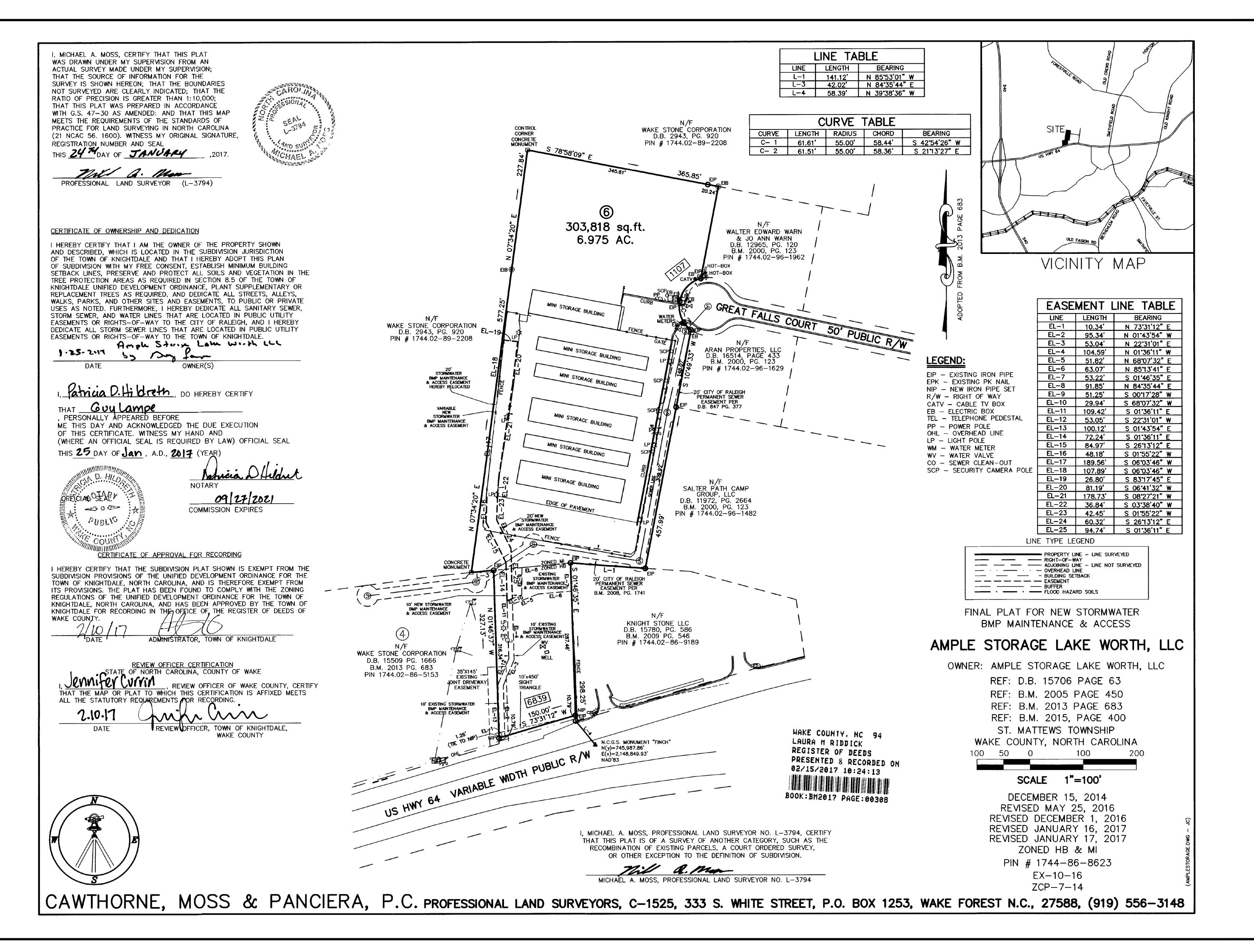
Professional Design Engineer Certification. These improvements shall constructed in accordance with the following drawings and with the Standard Specifications of the Town of Knightdale.

I, _________, PE, certify that the Standard Specifications of the Town of Knightdale have been thoroughly checked and found to be

I, _________, PE, certify that the Standard Specifications of the Town of Knightdale have been thoroughly checked and found to be applicable to this project. All exceptions to the applicable Town standards have been previously approved by the Town of Knightdale and said exceptions are shown on Sheet(s) _______ of these drawings.

Seal By: _______, PE

			701		
		DATE:			
		AUGUS	ST 1	1, 2	023
	1	DESIGNED BY:			MJF
		DRAWN BY:			EDN
ll be		CHECKED BY:			JSJ
lard		PROJECT No.		202	3008
e		DRAWING No.	W-	407	3-SK
		SCALE:		1"	= 20
S		SHEET No.			

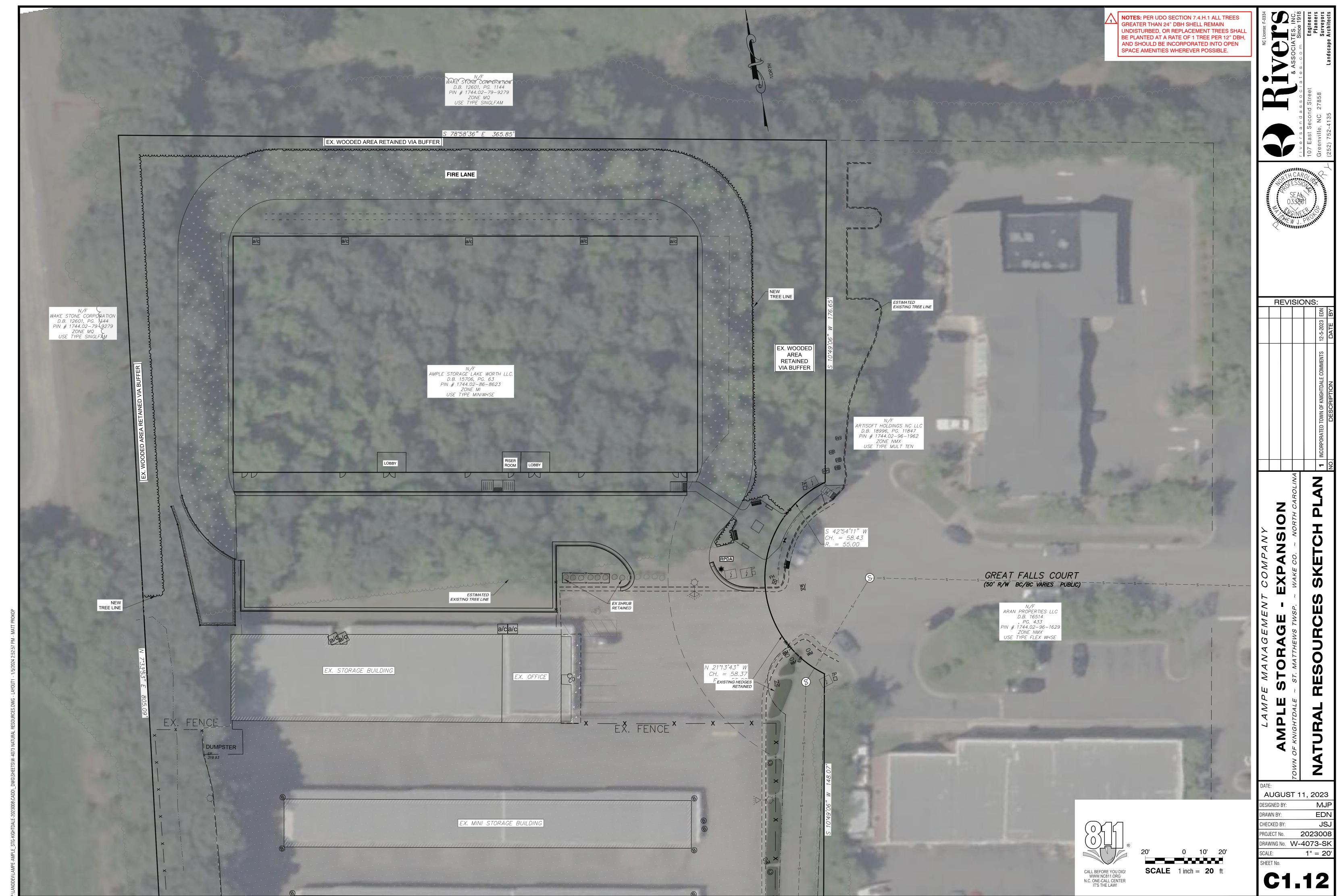


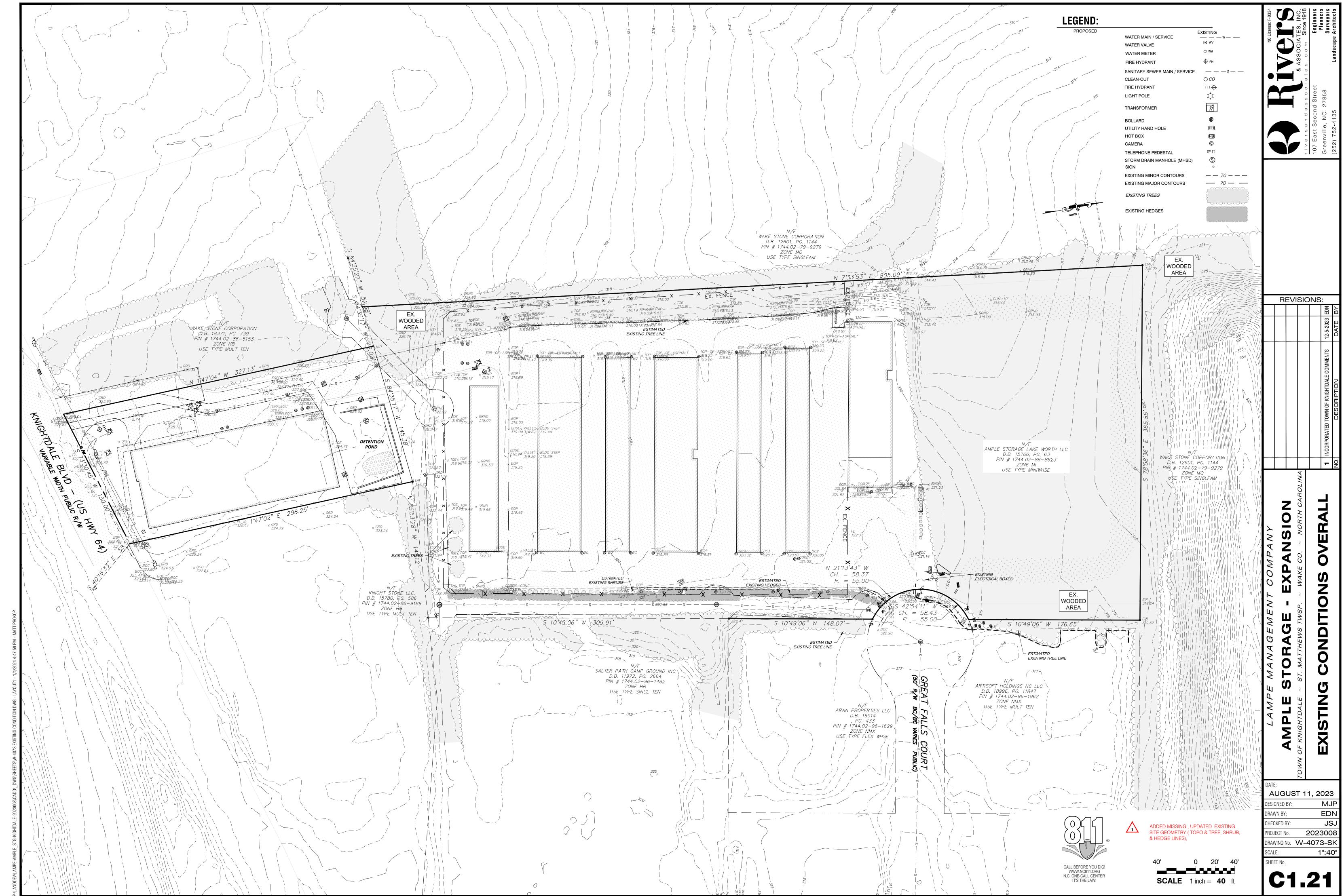
REVISIONS:

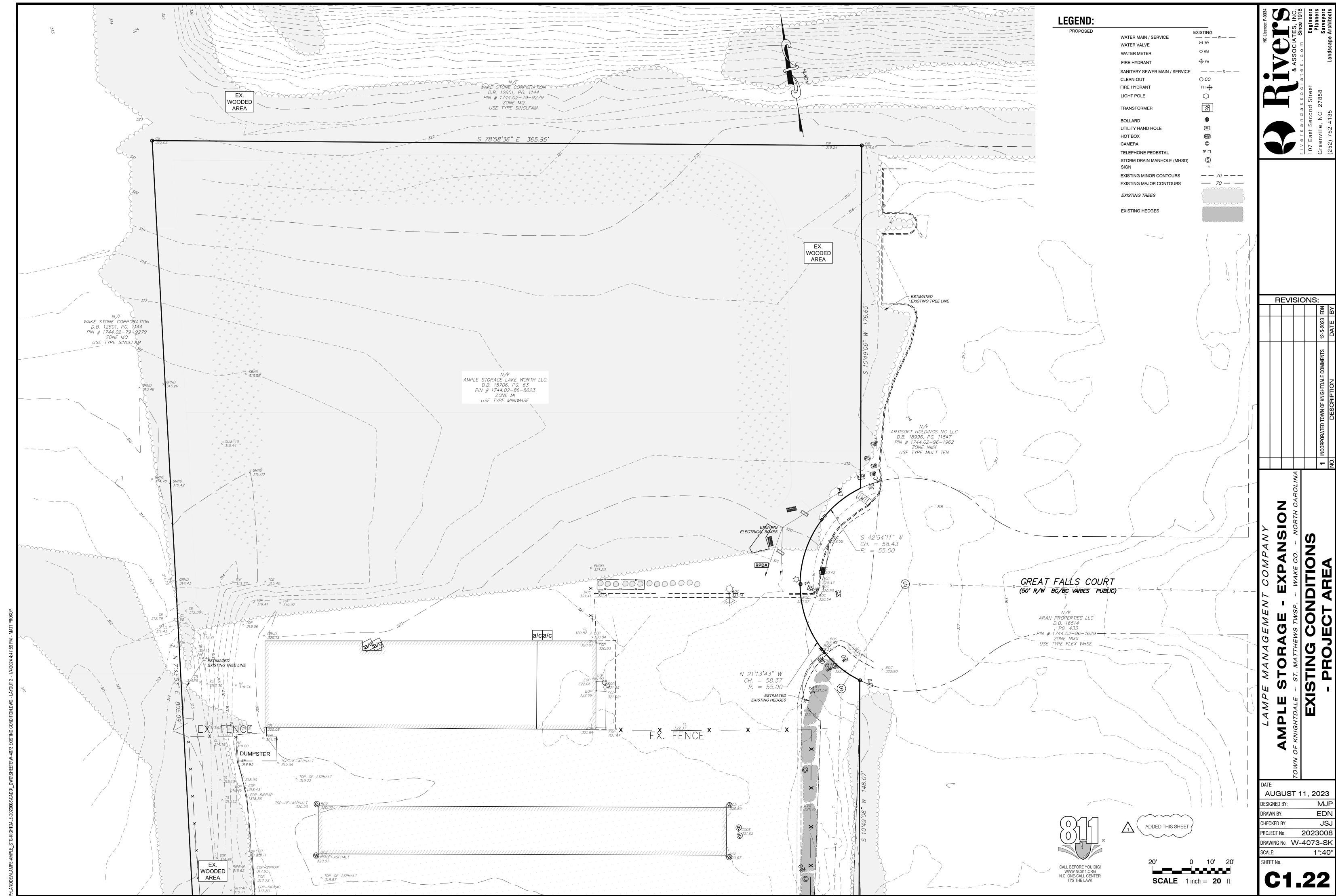
AUGUST 11, 2023 CHECKED BY: 2023008 RAWING No. W-4073-SK

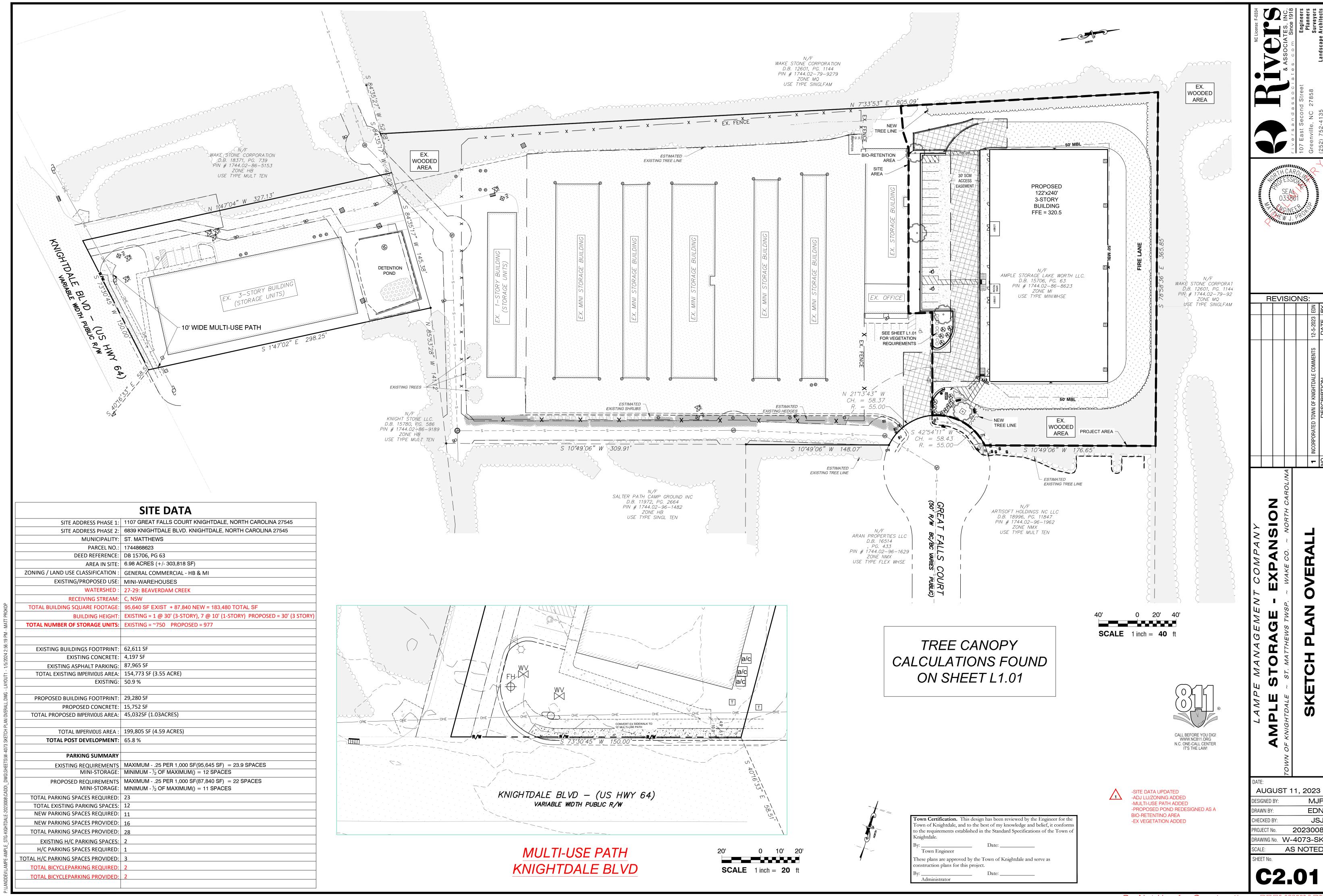
C1.11

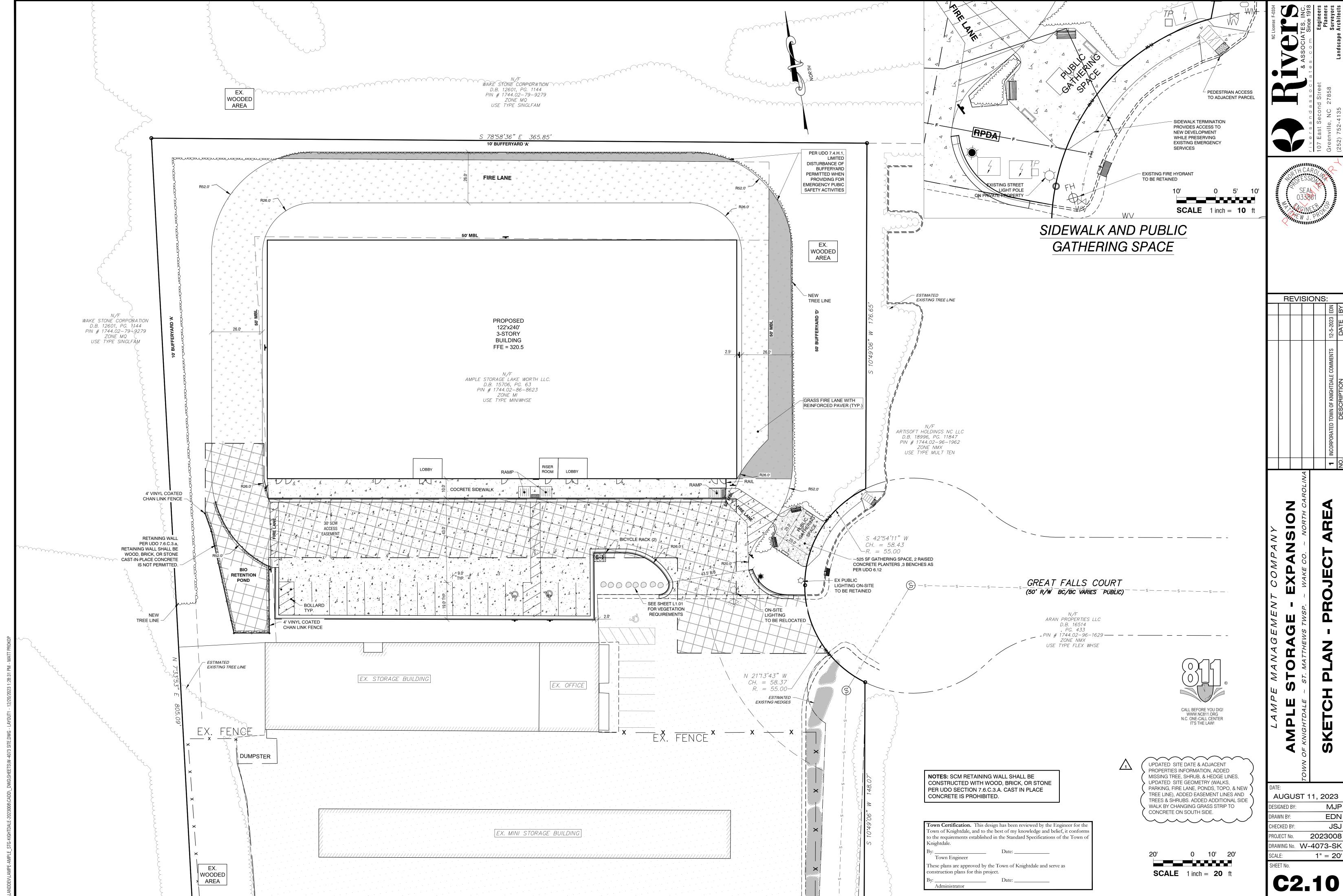
SCALE: NOT TO SCALE



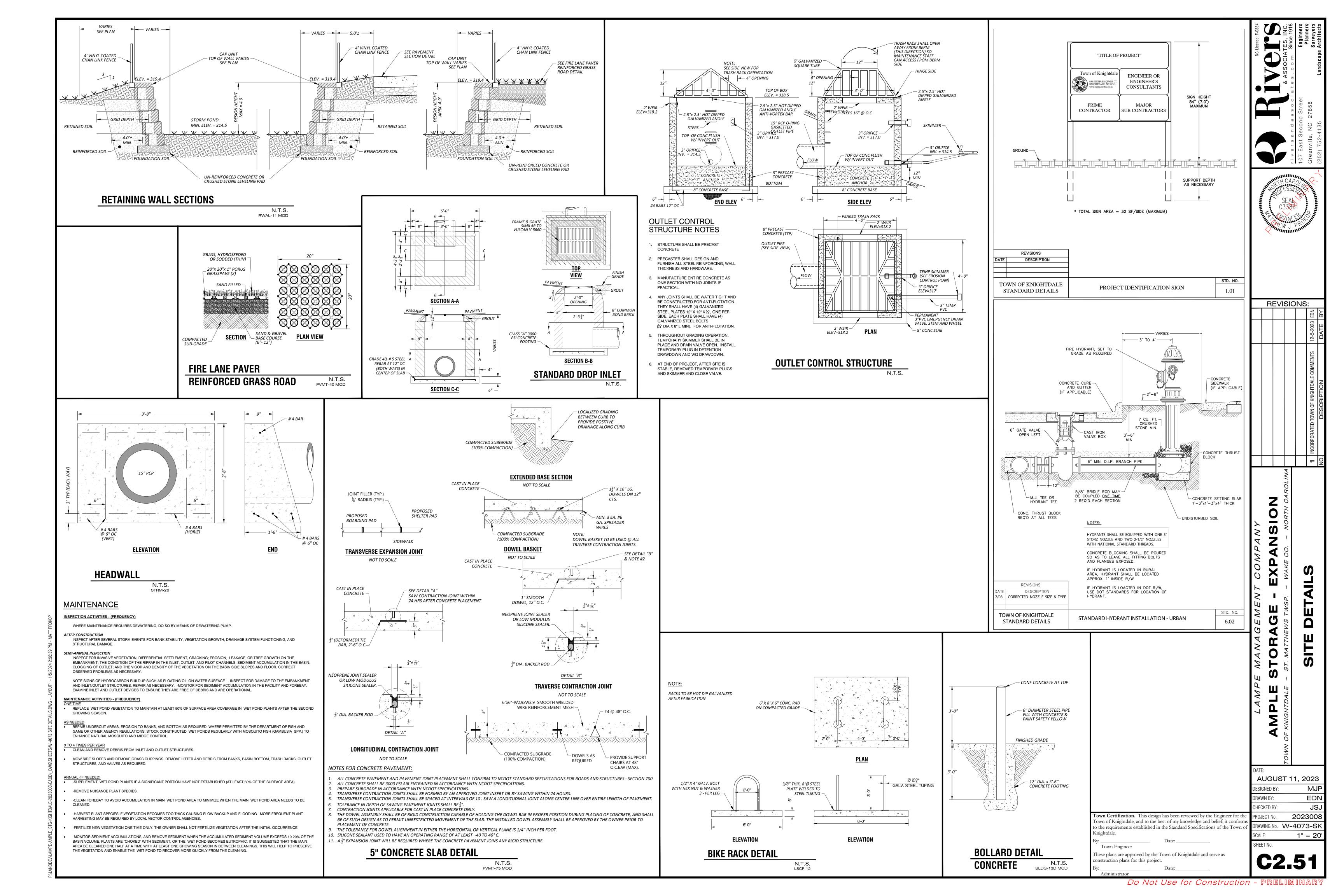






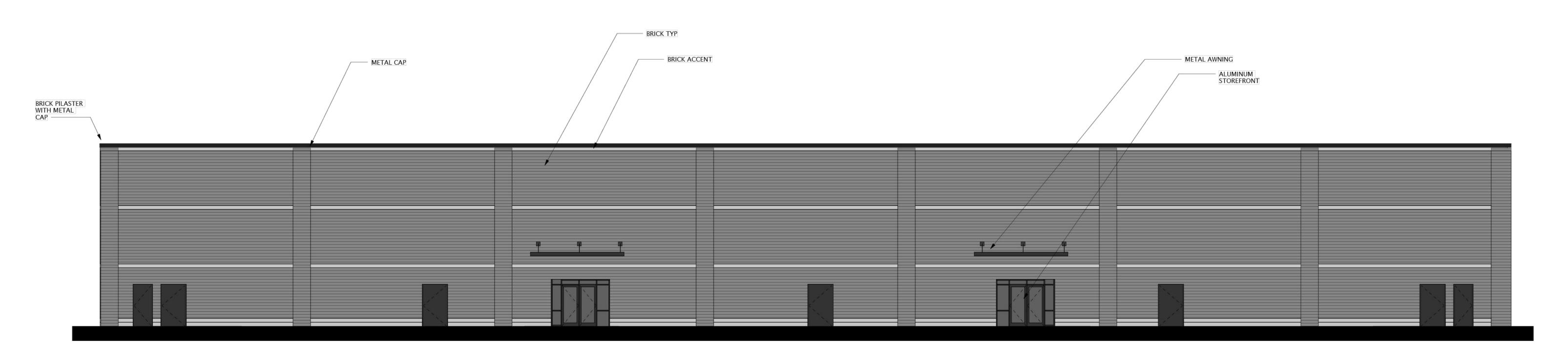


Do Not Use For Construction - PRELIMINARY DEDAWNDIGUSE DRAWN Corsets uctions +NEGRASIMINARY





2 SIDE ELEVATION FACING CUL-DE-SAC



1/8" = 1'-0"

Ample Storage Knightdale

I BL

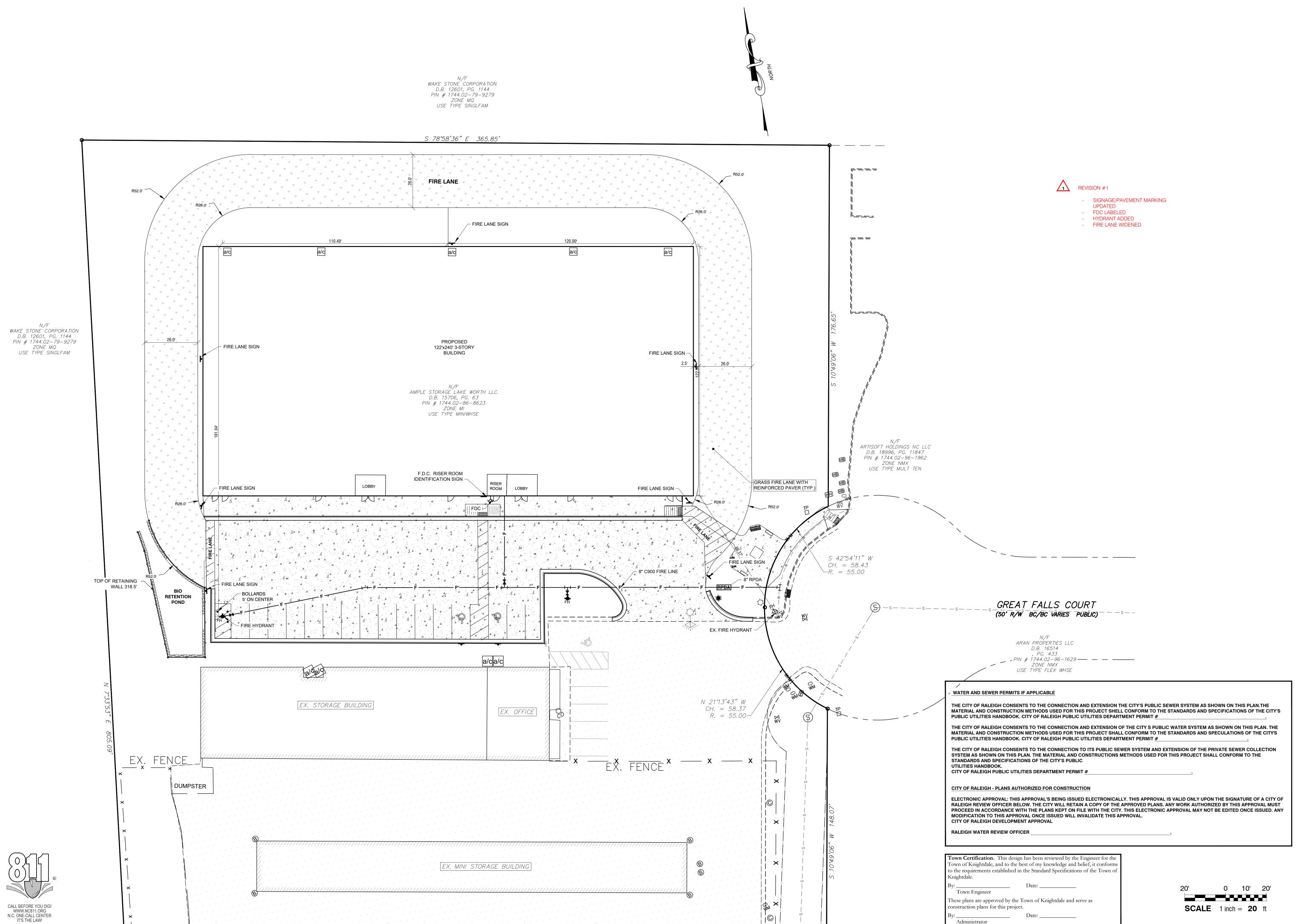
BUILDING ELEVATIONS

Scale As indicated

RND Project No. 2118



Date 6.29.23



dassociates.com Since 1918

cond Street

Engineers





REVISIONS:

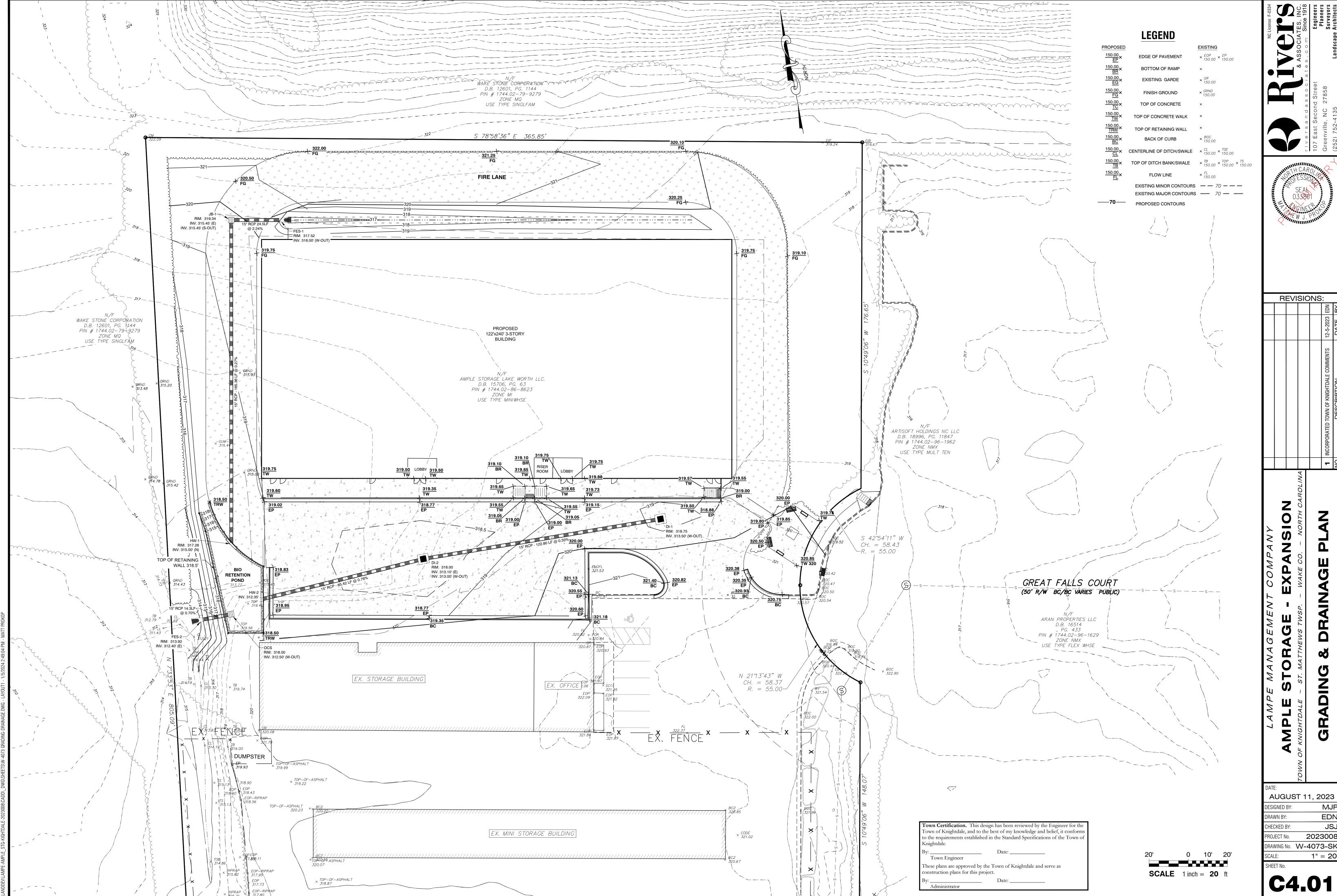
KE CO. ~ NORTH CAROLINA				
LAN	l	1 INCORPORATED TOWN OF KNIGHTDALE COMMENTS 12-5-2023	12-5-2023	В
	NO.	DESCRIPTION	DATE	ш

THE SIOKAGE - EXPANS

IGHTDALE ~ ST. MATTHEWS TWSP. ~ WAKE CO. ~ A

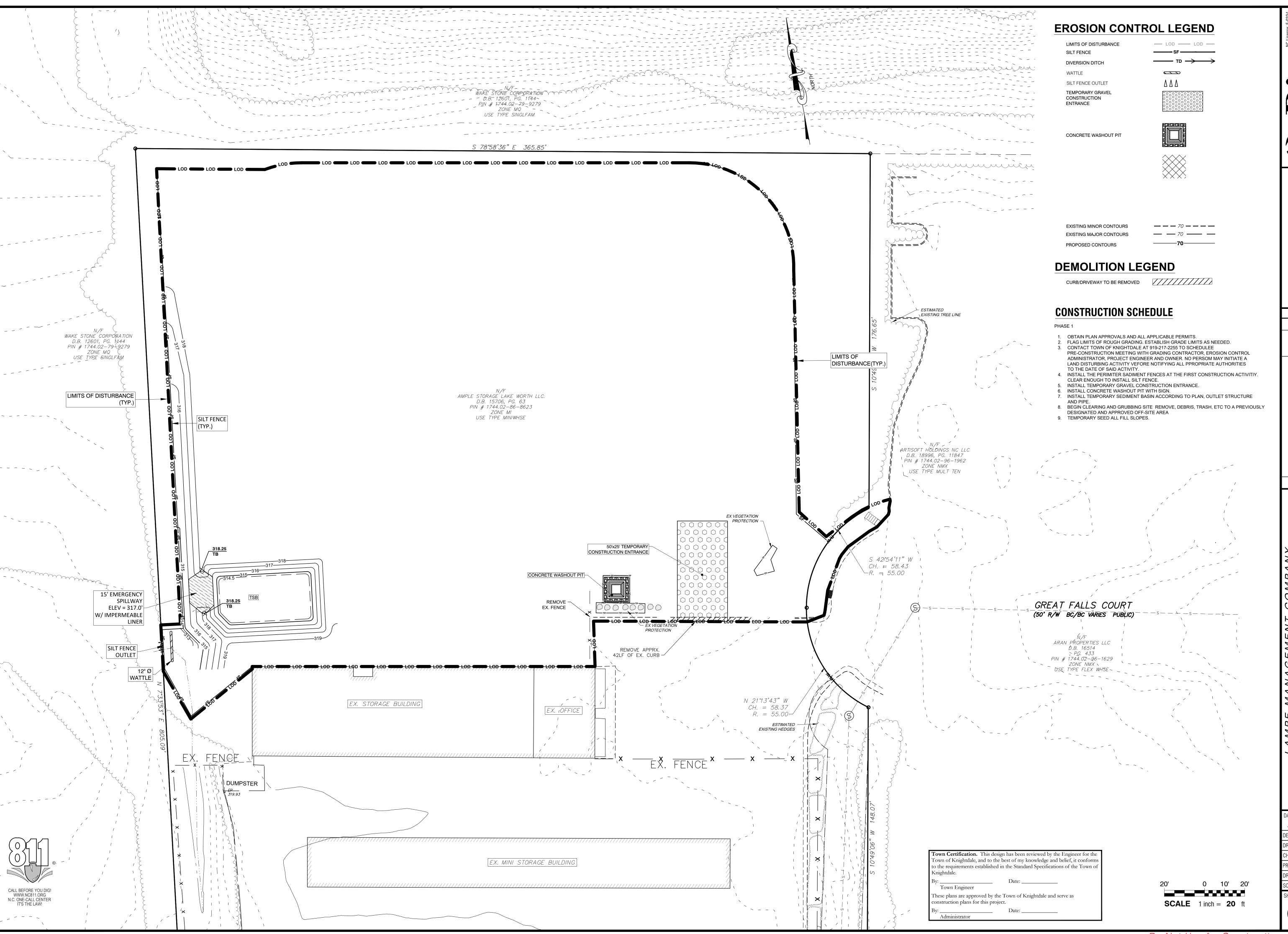
FIRE PREVENTION PLAN

	101
DATE:	
AUGUS	ST 11, 2023
DESIGNED BY:	MJF
DRAWN BY:	EDN
CHECKED BY:	JSJ
PROJECT No.	2023008
DRAWING No.	W-4073-SK
SCALE:	1" = 20





EDN 2023008 1" = 20



22 I/NA

I INCORPORATED TOWN OF KNIGHTDALE COMMENTS 12

NO. DESCRIPTION

REVISIONS:

TORAGE - EXPANSION

7. MATTHEWS TWSP. ~ WAKE CO. ~ NORTH CAROLINA
INTATION & EROSION
TROI DIAN - DH 1

DATE:

AUGUST 11, 2023

DESIGNED BY:

DRAWN BY:

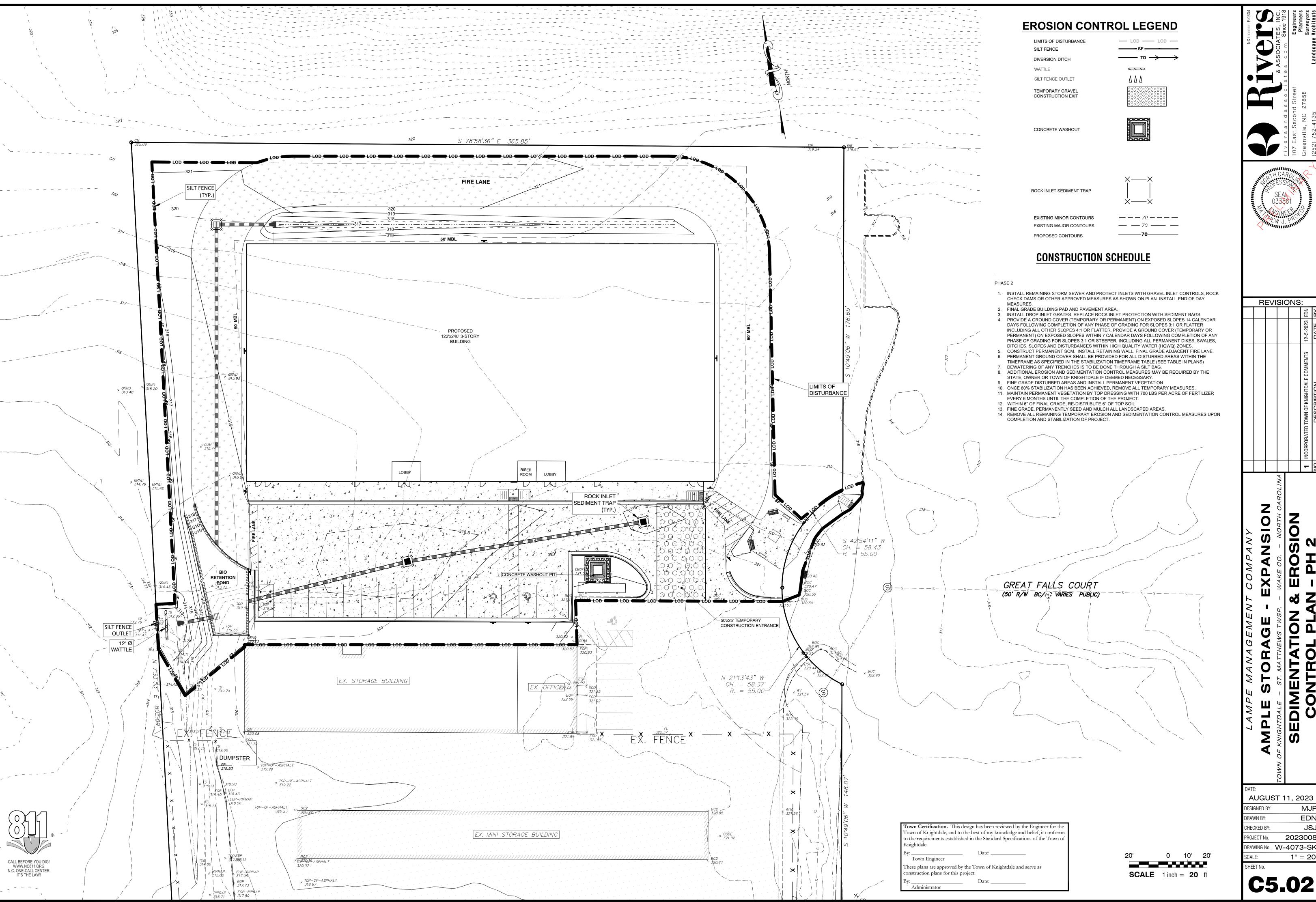
CHECKED BY:

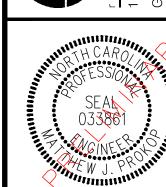
PROJECT No.

2023008

PROJECT No. 2023008DRAWING No. W-4073-SKSCALE: 1" = 20

C5.01





REVISIONS:

AUGUST 11, 2023 DESIGNED BY: EDN DRAWN BY: CHECKED BY: 2023008 PROJECT No. DRAWING No. W-4073-SK

1" = 20

sections of the NCG01 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: CROLIND STARILIZATION

Required Ground Stabilization Timeframes						
Si	ite 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 feet 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, ditcher perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope 			

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: Permanent Stabilization **Temporary Stabilization** ermanent grass seed covered with straw Temporary grass seed covered with straw or

or other mulches and tackifiers other mulches and tackifiers. Geotextile fabrics such as permanent soil Hvdroseedina reinforcement matting Rolled erosion control products with or

without temporary grass seed Appropriately applied straw or other mulch
 Shrubs or other permanent plantings Plastic sheeting

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

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 offsite. 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

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.

ITTER, 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, sized and placed appropriately for the needs of site. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from

PORTABLE TOILETS

construction sites.

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

EARTHEN STOCKPILE MANAGEMENT

properly operating unit.

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 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.

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.

STRUCTURE WITH LINER 1. ACTUAL LOCATION DETERMINED 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID ND/OR SOLID REACHES 75% OF 3.CONCRETE WASHOUT RUCTURE NEEDS TO BE CLEAR SECTION A-A BELOW GRADE WASHOUT STRUCTURE ARKED WITH SIGNAGE NOTING

NOTES:
1. ACTUAL LOCATION DETERMINED

TRUCTURES SHALL BE MAINTA WHEN THE LIQUID AND/OR SOLID

REACHES 75% OF THE STRUCTURE
CAPACITY TO PROVIDE ADEQUATE

OLDING CAPACITY WITH A MINIMU

CONCRETE WASHOUT STRUCTUR

NEEDS TO BE CLEARY MARKED WIT

2 THE CONCRETE WASHOUT

ONSITE CONCRETE WASHOUT

OR STAPLES

SECTION B-B ABOVE GRADE WASHOUT STRUCTURE

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 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 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.

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

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 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.

NCG-01 GROUND COVER & MATERIALS HANDLING

NORTH CAROLINA

FFFCTIVE DATE: 11/12/2020

Environmental Quality

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 have been met:

(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,

The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit, (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

SELF-INSPECTION, RECORDKEEPING AND REPORTING

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 on site and available for inspection at

Document Requirements

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. Thi

after initial installation.

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.

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.

Complete, date and sign an inspection report.

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.

documentation is required upon the initial

nstallation of the E&SC measures are modified

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,

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

SECTION B: RECORDKEEPING

all times during normal business hours.

Item to Document

I. E&SC Plan Documentation

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.

Inspection records must include:

	(during normal				L
(1) Rain gauge maintained in good working order	business hours) Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend on holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (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		(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.	
(2) E&SC Measures	calendar days and	device approved by the Division. 1. Identification of the measures inspected 2. Date and Time of the inspection		(b) A phase of grading has been completed.	
	a rain event ≥ 1.0 inch in 24 hours.	3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken		(c) Ground cover is located and installed in accordance with the approved E&SC plan.	
(3) Stormwater discharge outfalls(SDOs)	,	 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 		(d) The maintenance and repair requirements for all E&SC measures have been performed.	
(4) Perimeter of Site		6. Description, Evidence, and date corrective actions taken If visible Sedimentation is found outside site limits, then record		(e) Corrective actions have been taken to E&SC measures.	
(5) Streams or	a rain event ≥ 1.0 inch in 24 hours. At least once per 7	Description, Evidence and date of corrective actions taken An explanation as to the actions taken to control future releases If the stream or wetland has increased visible sedimentation or		Additional Documentation to be Kept on Sit In addition to the E&SC plan documents above site and available for inspectors at all times dul Division provides a site-specific exemption bas	e, t rin
		[[]	1 II		

within 24 hours of a record of the following shall be made:

NOTE: The rain inspection resets the required 7 calendar day inspection requiremen

inch in 24 hours. 2)Records of required reports to the appropriate Division

egional Office per Part III, Section C, Item(2)(a) of this permit

The phase of grading (installation of perimeter E&SC

measures, clearing and grubbing, installation of storm

2. Documentation that the required ground stabilization

drainage facilities, completion of all land-disturbing activity

construction or redevelopment, permanent ground cover).

measures have been provided within the required timeframe

or assurance that they will be provided as soon as possible.

Additional Documentation to be Kept on Site calendar days and has visible increased turbidity from the construction activity, then offsite (where | a rain event ≥ 1.0 | 1) Description, Evidence and date of corrective actions taken

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for 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.

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]

SELF-INSPECTION, RECORDKEEPING AND REPORTING SECTION C: REPORTING . 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). 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.

(e) Noncompliance with the conditions of this permit that may endanger health or the

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 Department's Environmental Emergency Center personnel at (800) 858-0368. Reporting Timeframe (After Discovery) and Other Requirements ccurrence · Within 24 hours, an oral or electronic notification. • Within 7 Calendar Days, a report that contains a description of the deposition in a sediment and actions taken to address the cause of the deposition. stream or wetland Division staff may waive the requirement for a written report on a caseby-case basis. If the stream is named on the NC 303(d) list as impaired for sedimentrelated caused, 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 • Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location hazardous of the spill or release. substances per item 1(b)-(c) abo A report at least ten days before the date of the bypass, if possible. ypasses [40 CFR The report shall include an evaluation of the anticipated quality and 122.41(m)(3)] effect of the bypass. Within 24 Hours, an oral or electronic notification ypasses [40 CFR • Within 7 calendar days, a report that includes an evaluation of the

122.41(m)(3)1 quality and effect of the bypass. (e) Noncompliance Within 24 Hours, an oral or electronic notification with the conditions • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including of this permit that 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-

health or the

environment [4]

CFR 122.41(I)(7)]

NEW STABILIZATION TIMEFRAMES SITE AREA DESCRIPTION TIMEFRAME EXCEPTIONS F SLOPES ARE 10' OR LESS IN LENGTH AND ARE PERIMETER DIKES, SWALES, DITCHES, SLOPES NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED HIGH QUALITY WATER (HQW) ZONES DAYS FOR SLOPES GREATER THAN 50' IN LENGTH SLOPES STEEPER THAN 3:1 NONE EXCEPT FOR PERIMETER AND HQW ZONES SLOPES 3:1 OR FLATTER 14 DAYS ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 NONE

CONSTRUCTION SCHEDULE

1. OBTAIN PLAN APPROVALS AND ALL APPROVALS AND ALL APPLICABLE PERMITS.

FLAG LIMITS OF ROUGH GRADING. 3. HOLD PRE-CONSTRUCTION MEETING WITH GRADING CONTRACTOR, EROSION CONTROL ADMINISTRATOR (252-329-4886) PROJECT ENGINEER AND OWNER BEFORE WORK BEGINS.

4. INSTALL THE PERIMETER SEDIMENT FENCES AS THE FIRST CONSTRUCTION ACTIVITY.

INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE. 6. INSTALL CONCRETE WASHOUT PIT WITH SIGN.

7. INSTALL TEMPORARY SEDIMENT TRAP AND TEMPORARY DIVERSION SWALE PER PLAN. 8. BEGIN CLEARING AND GRUBBING SITE IN DESIGNATED AREAS AND STOCKPILE IN DESIGNATED

PHASE 2

PHASE 1

PAGE:

PAGE:

INSTALL STORM DRAINAGE PIPING AND END OF DAY MEASURES.

10. INSTALL HARDWARE CLOTH AND INLET PROTECTION AROUND ALL INLET CATCH BASINS. 11. BEGIN IMPORTING FILL FOR THE CONSTRUCTION OF THE BUILDING PAD AND DRIVE AREAS.

12. FINAL GRADE THE BUILDING PAD, FINE GRADE AND POUR SIDEWALK AND LAY DOWN GRAVEL. 13. INSTALL DROP INLETS AND GRATES. REPLACE ROCK INLET PROTECTION WITH SEDIMENT

14. PROVIDE A GROUND COVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES 14 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING FOR SLOPES 3:1 OR FLATTER INCLUDING ALL OTHER SLOPES 4:1 OR FLATTER. PROVIDE A GROUND COVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN 7 CALENDAR DAYS FOLLOWING

COMPLETION OF ANY PHASE OF GRADING FOR SLOPES 3:1 OR STEEPER. CONSTRUCT PERMANENT SCM.

STATE, OWNER, OR CITY ENGINEER IF DEEMED NECESSARY 17. AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES, FINE GRADE DISTURBED

AREAS, AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS. 18. MAINTAIN PERMANENT VEGETATION BY TOP DRESSING WITH 700 LBS PER ACRE OF FERTILIZER EVERY 6 MONTHS UNTIL COMPLETION OF THE PROJECT.

16. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED BY THE

19. WITHIN 6" OF FINAL GRADE, RE-DISTRIBUTE 6" OF TOP SOIL

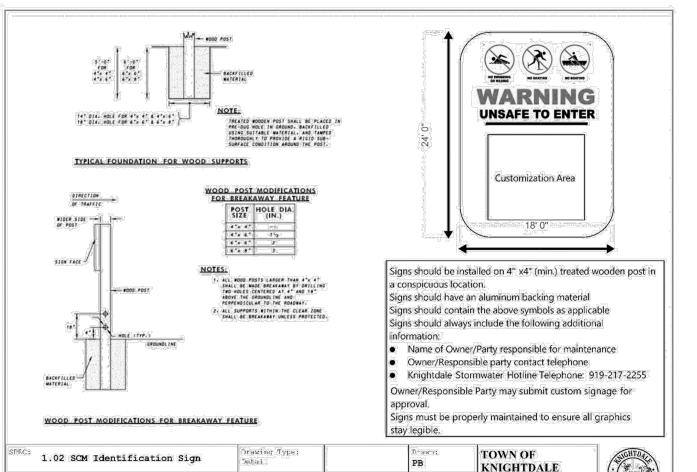
20. FINE GRADE, PERMANENTLY SEED AND MULCH ALL-LANDSCAPED AREAS. 21. TEMPORARY EROSION CONTROL MEASURES TO REMAIN IN PLACE UNTIL +/- 80% STABILIZATION

EROSION CONTROL NOTES:

ALL WORK WILL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES. NO LAND DISTURBING ACTIVITY BEYOND THAT REQUIRED TO INSTALL THE APPROPRIATE EROSION CONTROL MEASURE MAY PROCEED UNTIL MEASURES ARE INSPECTED AND APPROVED. FOLLOWING STRIPPING OF SITE, ALL STORM DRAINAGE STRUCTURES SHALL BE INSTALLED. SILT FENCES SHALL BE PLACED ALONG PROPERTY LINES AS INDICATED ON PLANS TO PROTECT ADJACENT DEVELOPMENTS. ROCK INLET SEDIMENT TRAPS SHALL BE INSTALLED AROUND ALL DRAINAGE STRUCTURES TO COLLECT SURFACE RUNOFF AND CONTROL SILTATION AND RELEASE WATER AT A GRADUAL RATE. ALL DISTURBED AREAS WILL BE GRADED, SEEDED AND MULCHED

ALL SHOULDERS SHALL BE SEEDED TO STABILIZE THE SOIL. SEED BED PREPARATION SHALL BE CONDUCTED ACCORDING TO NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (NCDOT). THE GROUND SURFACE SHALL BE CLEARED OF STUMPS, STONES, ROOTS, CABLES, WIRE, GRADE STAKES, AND OTHER MATERIALS THAT MIGHT HINDER PROPER GRADING. TILLAGE, SEEDING OR SUBSEQUENT MAINTENANCE OPERATIONS. GRADES ON THE AREA TO BE SEEDED SHALL BE MAINTAINED IN A TRUE AND EVEN CONDITION. MAINTENANCE SHALL INCLUDE ANY NECESSARY REPAIRS TO PREVIOUSLY GRADED AREAS. ALL GRADED AREAS SHALL BE THOROUGHLY TILLED TO A DEPTH OF AT LEAST FOUR (4) INCHES BY PLOWING, DISKING, HARROWING, OR OTHER APPROVED METHODS UNTIL THE CONDITION OF THE SOIL IS ACCEPTABLE. ON SITES WHERE SOIL CONDITIONS ARE SUCH THAT HIGH CLAY CONTENT AND EXCESSIVE COMPACTION CAUSE DIFFICULTY IN GETTING CLODS AND LUMPS EFFECTIVELY PULVERIZED, THE CONTRACTOR SHALL USE THE ROTARY TILLAGE MACHINERY UNTIL THE MIXING OF THE SOIL IS ACCEPTABLE AND NO CLODS OR CLUMPS REMAIN LARGER THAN 1 1/2 INCHES IN DIAMETER. A FIRM AND COMPACT SEED BED IS REQUIRED AND AFTER BEING GRADED. THE SEED BED SHALL BE LIGHTLY COMPACTED WITH A LAND ROLLER, SUCH AS A CULTIPACKER, BEFORE AND AFTER SEEDING. LIMESTONE SHALL BE DOLOMITIC AGRICULTURE GROUND LIMESTONE CONTAINING NOT LESS THAN 10 PERCENT MAGNESIUM OXIDE. LIME SHALL BE UNIFORMLY APPLIED AT THE RATE OF 2 TONS PER ACRE AS TESTING REQUIRES PER THE SPECIFICATIONS. IF REQUIRED PER SPECIFICATIONS, FERTILIZER SHALL BE INCORPORATED INTO THE UPPER THREE OR FOUR INCHES OF PREPARED SEED BED JUST PRIOR TO THE LAST TILLAGE OPERATION, BUT IN NO CASE SHALL IT BE APPLIED MORE THAN THREE DAYS PRIOR TO SEEDING. FERTILIZER SHALL BE USED IMMEDIATELY AFTER DELIVERY OR STORED IN A MANNER THAT WILL NOT PERMIT IT TO HARDEN OR DESTROY ITS EFFECTIVENESS.

NEW STABILIZATION TIMEFRAMES				
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS		
PERIMETER DIKES, SWALES, DITCHES, SLOPES	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED		
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH		
SLOPES STEEPER THAN 3:1	7 DAYS	NONE EXCEPT FOR PERIMETER AND HQW ZONES		
SLOPES 3:1 OR FLATTER	14 DAYS	NONE		
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE		



Stormwater Control Measure

Signage Detail

STANDARD

DETAILS

	SEEDING SCHEDULE IAXIMUM SLOPE 3:1	
SEEDING PERIOD	SEEDING TYPE	APPLICATION RAT
AUGUST 15 - NOVEMBER 01	TALL FESCUE	300
NOTE A STATE OF	TALL FESCUE AND	300
NOVEMBER 01 - MARCH 01	ABRUZZI RYE	25
MARCH 01 - APRIL 15	TALL FESCUE	300
APRIL 15 - JUNE 30	HULLED COMMON BERMUDAGRASS	25
	TALL FESCUE AND	120
JULY 01 - AUGUST 15	*BROWNTOP MILLET OR	35
	*SORGHUM-SUDAN HYBRIDS	30
S	SLOPES 2:1 TO 3:1	
MARCH 01 - JUNE 01	SERICEA LESPEDEZA (SCARIFIED) AND	50
MARCH 01 - APRIL 15	TALL FESCUE OR	120
MARCH 01 - JUNE 30	WEEPING LOVEGRASS OR	10
MARCH UI - JUNE 30	HULLED COMMON BERMUDAGRASS	25
	*TALL FESCUE AND	120
JUNE 01 - SEPTEMBER 01	*BROWNTOP MILLET OR	35
	*SORGHUM-SUDAN HYBRIDS	30
SEPTEMBER 01 — MARCH 01	SERICEA LESPEDEZA (UNHULLED, USCARIFIED) AND	70
	TALL FESCUE OR	120
NOVEMBER 01 - MARCH 01	ABRUZZI RYE	25
*TEMPORARY — RESEED ACCORDING TO VEGETATION. DO NOT ALLOW TEMPORA MOWING, OTHERWISE FESCUE MAY BE S SOIL CONSERVATION SERVICE FOR ADDI FOR VEGETATION OF DENUDED AREAS. WELL UNDER LOCAL CONDITIONS; OTHE	ARY COVER TO GROW OVER 12" IN HISHADED OUT. CONSULT CONSERVATION INFORMATION CONCERNING OF THE ABOVE VEGETATION RATES AR	IEIGHT BEFORE IN ENGINEER OR ITHER ALTERNATIVE IE THOSE WHICH DO

REVISIONS DESCRIPTION TOWN OF KNIGHTDALE SEEDING SCHEDULE STANDARD DETAILS 2.01

GROUND COVER - WHEREVER LAND DISTURBING ACTIVITY IS UNDERTAKEN ON A TRACT

GRADED SLOPES AND FILLS - WITHIN 15 WORKING DAYS OR 30 CALENDAR DAYS, OR COMPLETION OF ANY PHASE OF GRADING, WHICHEVER PERIOD IS SHORTER, SLOPÉS SHALL BE

PLANTED OR OTHERWISE PROVIDED WITH GROUND COVER, DEVICES, OR STRUCTURES

SUFFICIENT TO RESTRAIN EROSION.

Town Certification. This design has been reviewed by the Engineer for the

own of Knightdale, and to the best of my knowledge and belief, it conform

o the requirements established in the Standard Specifications of the Town of

These plans are approved by the Town of Knightdale and serve as

Town Engineer

onstruction plans for this project.

COMPRISING MORE THAN ONE (1) ACRE. A GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE PLANTED OR PROVIDÈD WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS.

> ESIGNED BY)RAWN BY CHECKED BY:

AUGUST 11, 2023 2023008 RAWING No. W-4073-SK

REVISIONS:

Do Not Use for Construction - PRELIMINA

NORTH CAROLINA Environmental Quality EFFECTIVE DATE: 11/12/2020

onsite or

accessible)

(6) Ground

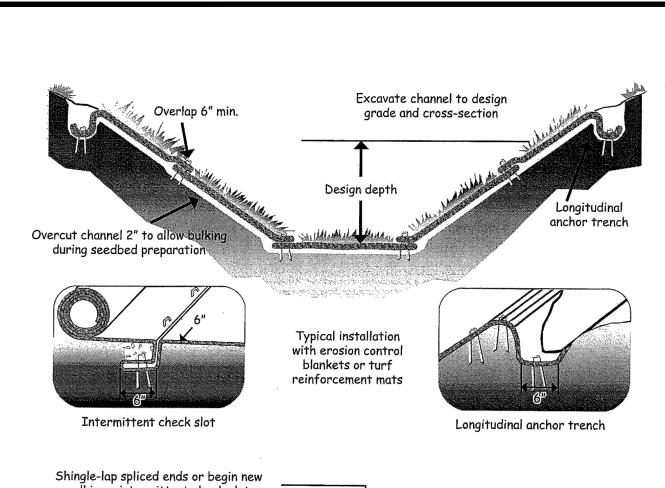
Measures

Stabilization

After each phase

of grading.

NCG01- SELF INSPECTION



RECP DETAIL

N.T.S.

1. Check slots to be constructed per manufacturers specifications. 2. Staking or stapling layout per manufacturers specifications.

Slope surface shall be smooth before placement for proper soil contact.

Do not stretch blankets/matting tight-allow

the rolls to conform to any irregularities.

For slopes less than 3H:1V, rolls

may be placed in horizontal strips.

Stapling pattern as

per manufacturers recommendations.

Terminal slope and

Intermittent

check slot

Anchor in 6"x6" min. Trench

and staple at 12" intervals.

Bring material down to a level area,

turn the end under 4" and staple at 12"

If there is a berm at the top of

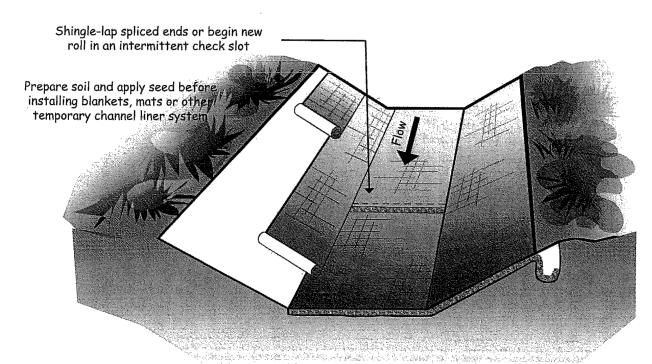
slope, anchor upslope of the berm.

max. 5" spacing.

Lime, fertilize, and seed before installation. Planting

of shrubs, trees, etc. should occur after installation.

hannel anchor trench



1. Design velocities exceeding 2 ft/sec require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established. 2. Grass-lined channels with design velocities exceeding 6 ft/sec should include turf reinforcement

EVEN IF PROPERLY DESIGNED, IF NOT PROPERLY INSTALLED, RECP'S WILL PROBABLY NOT FUNCTION AS DESIRED. PROPER INSTALLATION IS IMPERATIVE. EVEN IF PROPERLY INSTALLED, IF NOT PROPERLY TIMED AND NOURISHED, VEGETATION WILL PROBABLY NOT GROW AS DESIRED. PROPER SEED/VEGETATION SELECTION IS ALSO IMPERATIVE.

GRADE THE SURFACE OF INSTALLATION AREAS SO THAT THE GROUND IS SMOOTH AND LOOSE. WHEN SEEDING PRIOR TO INSTALLATION, FOLLOW THE STEPS FOR SEED BED PREPARATION, SOIL AMENDMENTS, AND SEEDING IN SURFACE STABILIZATION, 6.1. ALL GULLIES, RILLS, AND ANY OTHER DISTURBED AREAS MUST BE FINE GRADED PRIOR TO INSTALLATION. SPREAD SEED BEFORE RECP INSTALLATION. (IMPORTANT: REMOVE ALL LARGE ROCKS, DIRT CLODS, STUMPS, ROOTS, GRASS CLUMPS, TRASH, AND OTHER OBSTRUCTIONS FROM THE SOIL SURFACE TO ALLOW FOR DIRECT CONTACT BETWEEN THE SOIL SURFACE AND THE RECP).

TERMINAL ANCHOR TRENCHES ARE REQUIRED AT RECP ENDS AND INTERMITTENT TRENCHES MUST BE CONSTRUCTED ACROSS CHANNELS AT 25-FOOT INTERVALS. TERMINAL ANCHOR TRENCHES SHOULD BE A MINIMUM OF 12 INCHES IN DEPTH AND 6 INCHES IN WIDTH, WHILE INTERMITTENT TRENCHES NEED BE ONLY 6 INCHES DEEP AND 6 INCHES WIDE.

INSTALLATION FOR SLOPES - PLACE THE RECP 2-3 FEET OVER THE TOP OF THE SLOPE AND INTO AN EXCAVATED END TRENCH MEASURING APPROXIMATELY 12 INCHES DEEP BY 6 INCHES WIDE. PIN THE RECP AT 1 FOOT INTERVALS ALONG THE BOTTOM OF THE TRENCH, BACKFILL, AND COMPACT. UNROLL THE RECP DOWN (OR ALONG) THE SLOPE MAINTAINING DIRECT CONTACT BETWEEN THE SOIL AND THE RECP. OVERLAP ADJACENT ROLLS A MINIMUM OF 3 INCHES. PIN THE RECP TO THE GROUND USING STAPLES OR PINS IN A 3 FOOT CENTER-TO-CENTER PATTERN. LESS FREQUENT STAPLING/PINNING

INSTALLATION IN CHANNELS - EXCAVATE TERMINAL TRENCHES (12 INCHES DEEP AND 6 INCHES WIDE) ACROSS THE CHANNEL AT THE UPPER AND LOWER END OF THE LINED CHANNEL SECTIONS. AT 25-FOOT INTERVALS ALONG THE CHANNEL, ANCHOR THE RECP ACROSS THE CHANNEL FITHER IN 6 INCH BY 6 INCH TRENCHES OR BY INSTALLING TWO CLOSELY SPACED ROWS OF ANCHORS. EXCAVATE LONGITUDINAL TRENCHES 6 INCHES DEEP AND WIDE ALONG CHANNEL EDGES (ABOVE WATER LINE) IN WHICH TO BURY THE OUTSIDE RECP EDGES. PLACE THE FIRST RECP AT THE DOWNSTREAM END OF THE CHANNEL. PLACE THE END OF THE FIRST RECP IN THE TERMINAL TRENCH AND PIN IT AT 1 FOOT INTERVALS ALONG THE BOTTOM OF THE TRENCH.

NOTE: THE RECP SHOULD BE PLACED UPSIDE DOWN IN THE TRENCH WITH THE ROLL ON THE DOWNSTREAM SIDE OF THE BENCH.

ONCE PINNED AND BACKFILLED, THE RECP IS DEPLOYED BY WRAPPING OVER THE TOP OF THE TRENCH AND UNROLLING UPSTREAM. IF THE CHANNEL IS WIDER THAN THE PROVIDED ROLLS, PLACE ENDS OF ADJACENT ROLLS IN THE TERMINAL TRENCH, OVERLAPPING THE ADJACENT ROLLS A MINIMUM OF 3 INCHES. PIN AT 1 FOOT INTERVALS, BACKFILL, AND COMPACT. UNROLL THE RECP IN THE UPSTREAM DIRECTION UNTIL REACHING THE FIRST INTERMITTENT TRENCH. FOLD THE RECP BACK OVER ITSELF, POSITIONING THE ROLL ON THE DOWNSTREAM SIDE OF THE TRENCH, AND ALLOWING THE

THEN PIN THE RECP (TWO LAYERS) TO THE BOTTOM OF THE TRENCH, BACKFILL, AND COMPACT. CONTINUE UP THE CHANNEL (WRAPPING OVER THE TOP OF THE INTERMITTENT TRENCH) REPEATING THIS STEP AT OTHER INTERMITTENT TRENCHES, UNTIL REACHING THE UPPER TERMINAL TRENCH.

AT THE UPPER TERMINAL TRENCH, ALLOW THE RECP TO CONFORM TO THE TRENCH, SECURE WITH PINS OR STAPLES, BACKFILL, COMPACT AND THEN BRING THE MAT BACK OVER THE TOP OF THE TRENCH AND ONTO THE EXISTING MAT (2 TO 3 FEET OVERLAP IN THE DOWNSTREAM DIRECTION), AND PIN A 1 FOOT INTERVALS ACROSS THE RECP. WHEN STARTING INSTALLATION OF A NEW ROLL, BEGIN IN A TRENCH OR SHINGLE-LAP ENDS OF ROLLS A MINIMUM OF 1 FOOT WITH UPSTREAM RECP ON TOP TO PREVENT UPLIFTING. PLACE THE OUTSIDE EDGES OF THE RECP(S) IN LONGITUDINAL TRENCHES, PIN,

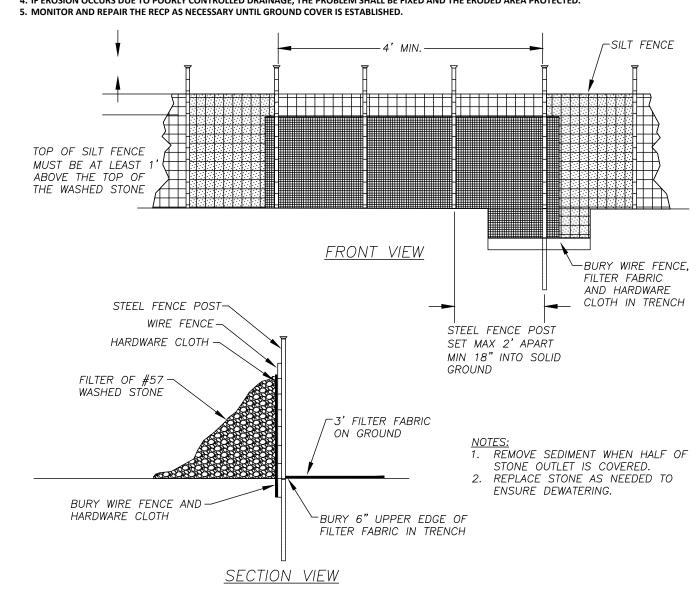
ANCHORING DEVICES - 11 GAUGE, AT LEAST 6 INCHES LENGTH BY 1 INCH WIDTH STAPLES OR 12 INCH MINIMUM LENGTH WOODEN STAKES ARE RECOMMENDED FOR ANCHORING THE RECP TO THE

DRIVE STAPLES OR PINS SO THAT THE TOP OF THE STAPLE OR PIN IS FLUSH WITH THE GROUND SURFACE. ANCHOR EACH RECP EVERY 3 FEET ALONG ITS CENTER. LONGITUDINAL OVERLAPS MUST BE SUFFICIENT TO ACCOMMODATE A ROW OF ANCHORS AND UNIFORM ALONG THE ENTIRE LENGTH OF OVERLAP AND ANCHORED EVERY 3 FEET ALONG THE OVERLAP LENGTH. ROLL ENDS MAY BE SPLICED BY OVERLAPPING 1 FOOT (IN THE DIRECTION OF WATER FLOW), WITH THE UPSTREAM/UNSLOPE MAT PLACED ON TOP OF THE DOWNSTREAM/DOWNSLOPE RECP. THIS OVERLAP SHOULD BE ANCHORED AT 1 FOOT SPACING ACROSS THE RECP. WHEN INSTALLING MULTIPLE WIDTH MATS HEAT SEAMED IN THE FACTORY, ALL FACTORY SEAMS AND FIELD OVERLAPS SHOULD BE SIMILARLY ANCHORED.

1. INSPECT ROLLED EROSION CONTROL PRODUCTS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAIN FALL EVENT REPAIR IMMEDIATELY.

3. ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.

2. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED. AND EROSION MUST NOT OCCUR BENEATH THE RECP. 4. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.



STANDARD SILT FENCE OUTLET

SILT FENCE

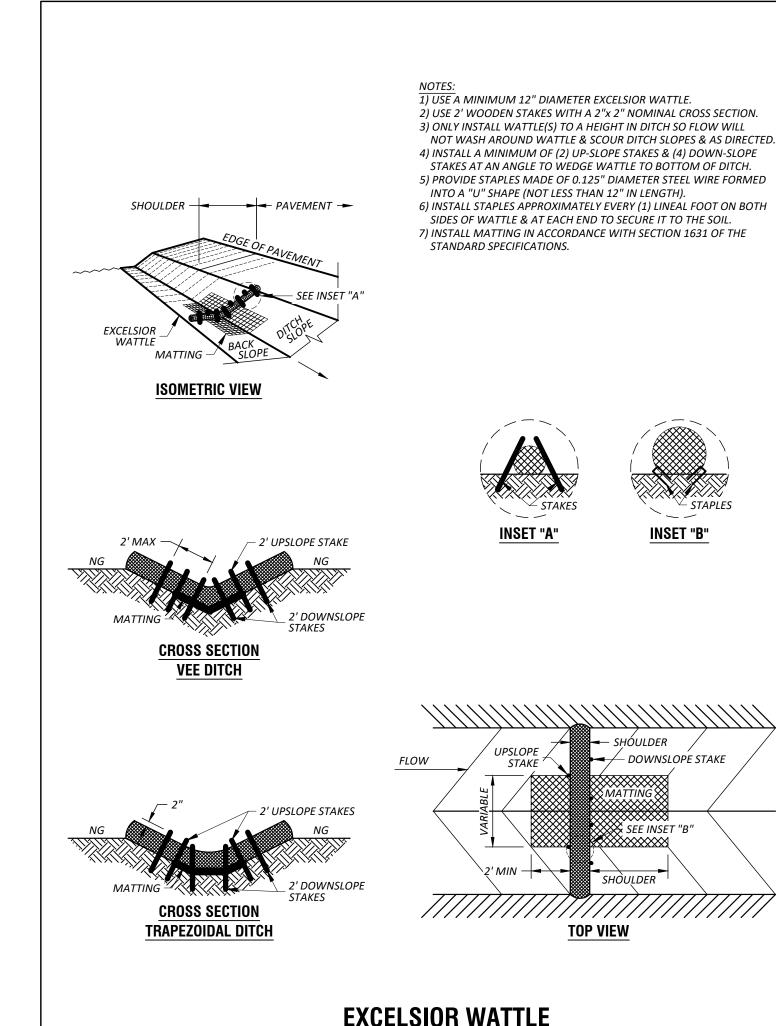
MAINTENANCE

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL, MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

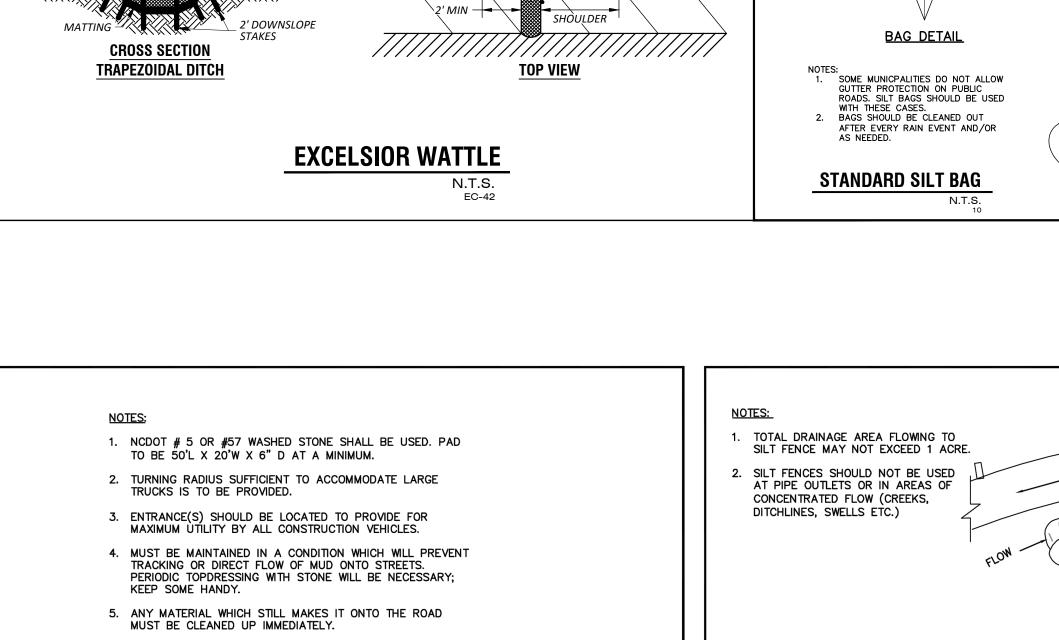
REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

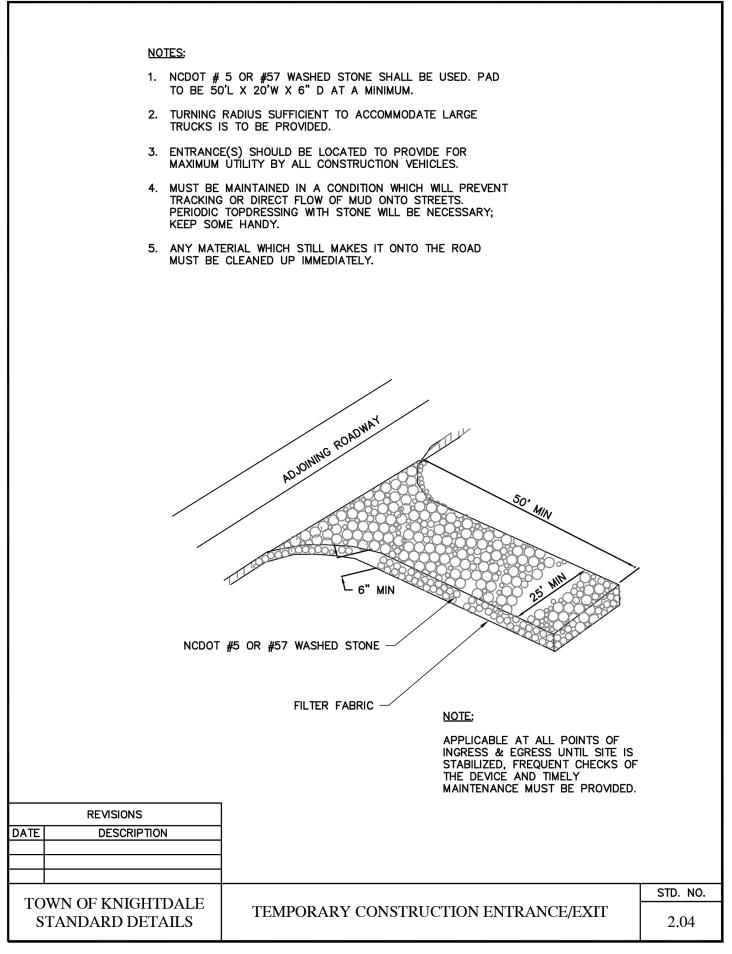
REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

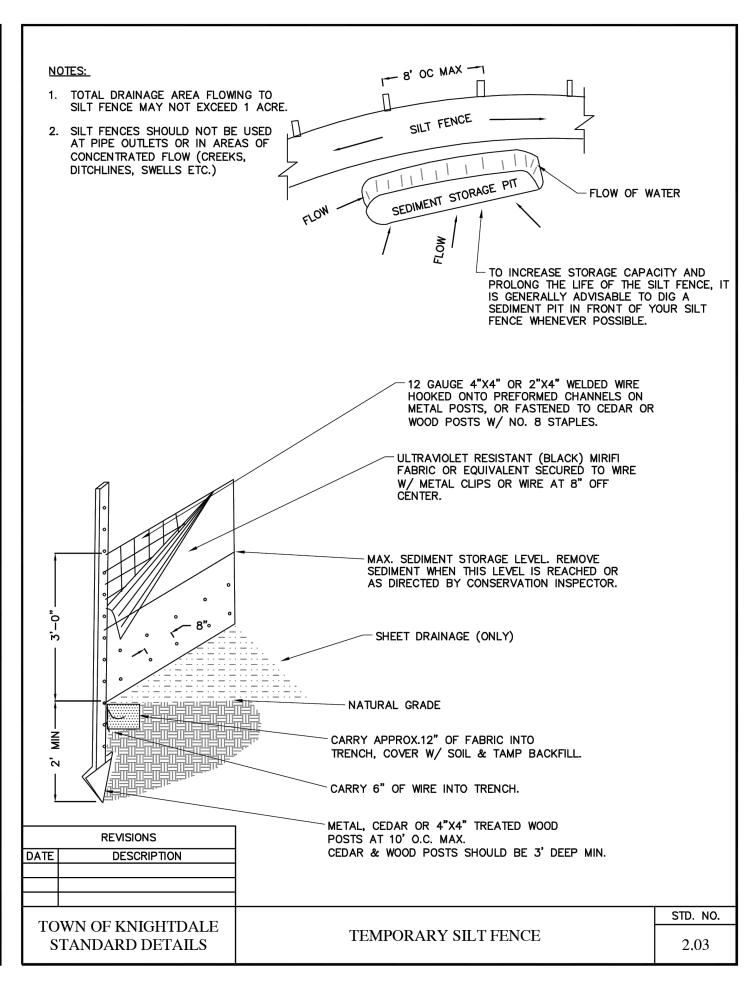


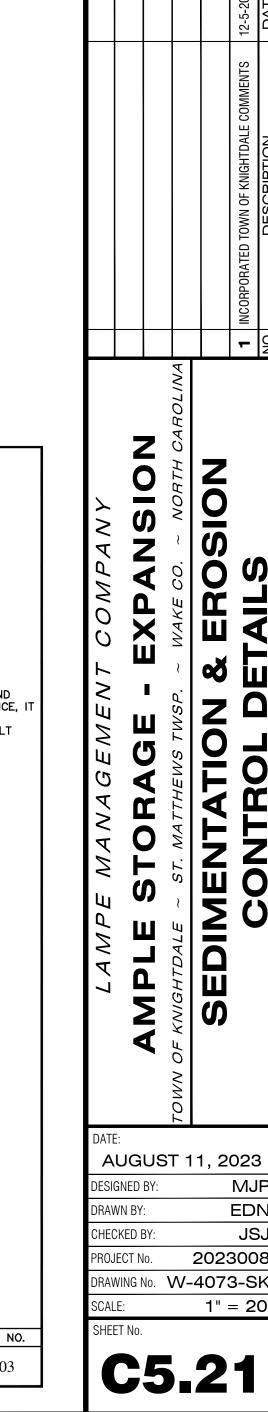
BAG REMOVAL FORM INLET INSTALLATION DETAIL XPANSION RESTRAINT -(1/4" NYLON ROPE, 2" FLAT WASHERS) DUMP STRAPS BAG DETAIL SOME MUNICPALITIES DO NOT ALLOW GUTTER PROTECTION ON PUBLIC
ROADS. SILT BAGS SHOULD BE USED
WITH THESE CASES.

2. BAGS SHOULD BE CLEANED OUT
AFTER EVERY RAIN EVENT AND/OR STANDARD SILT BAG

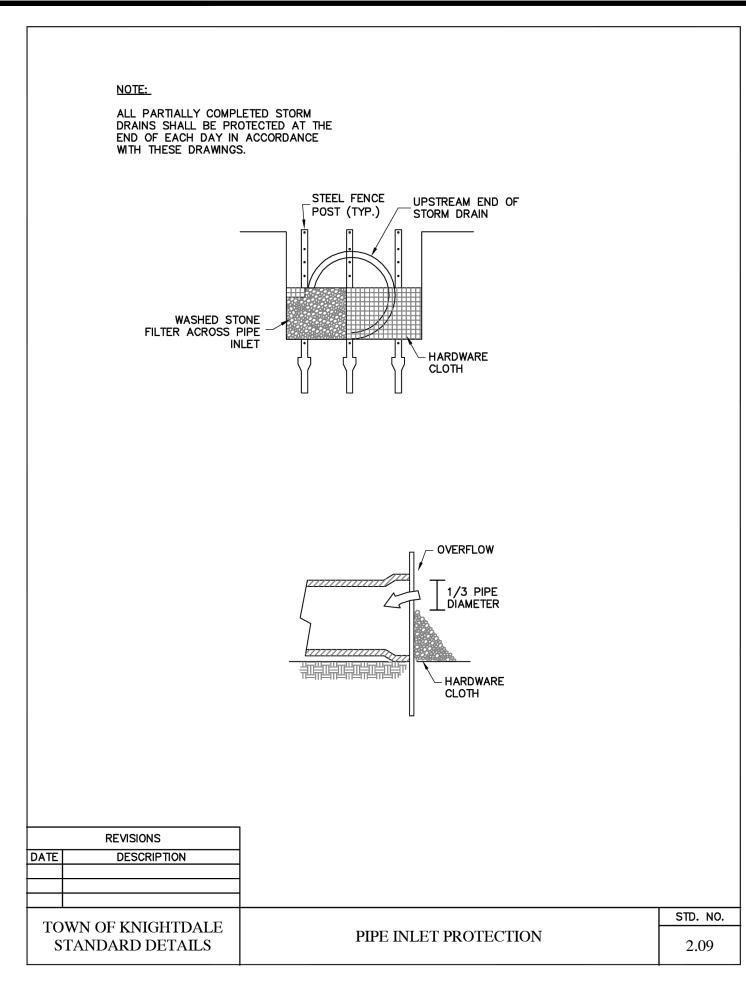


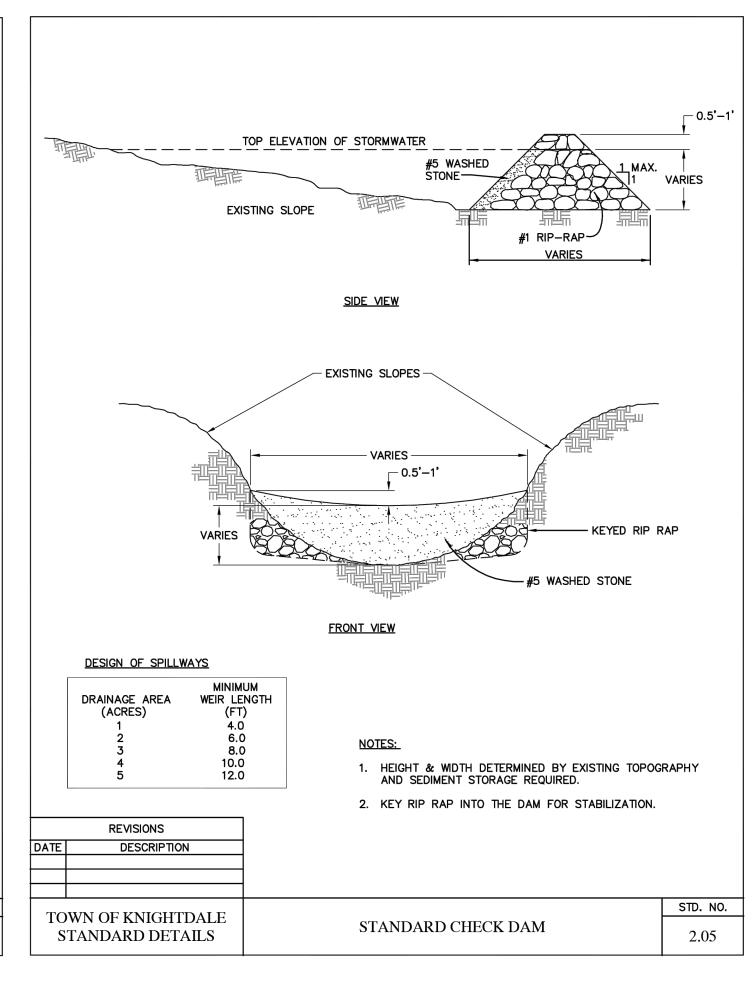


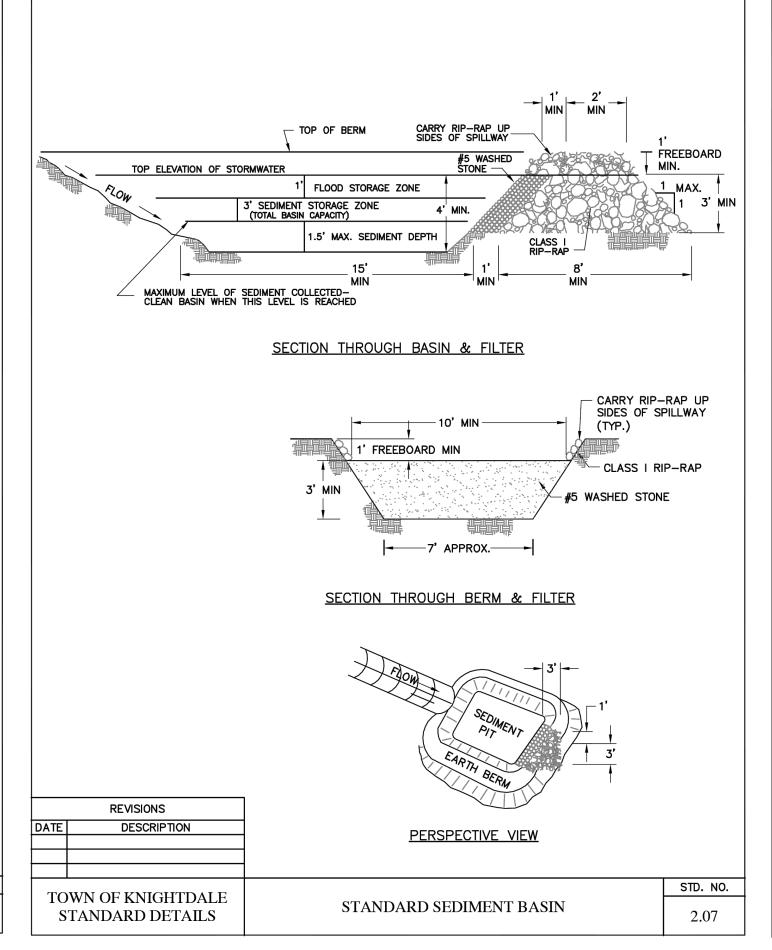


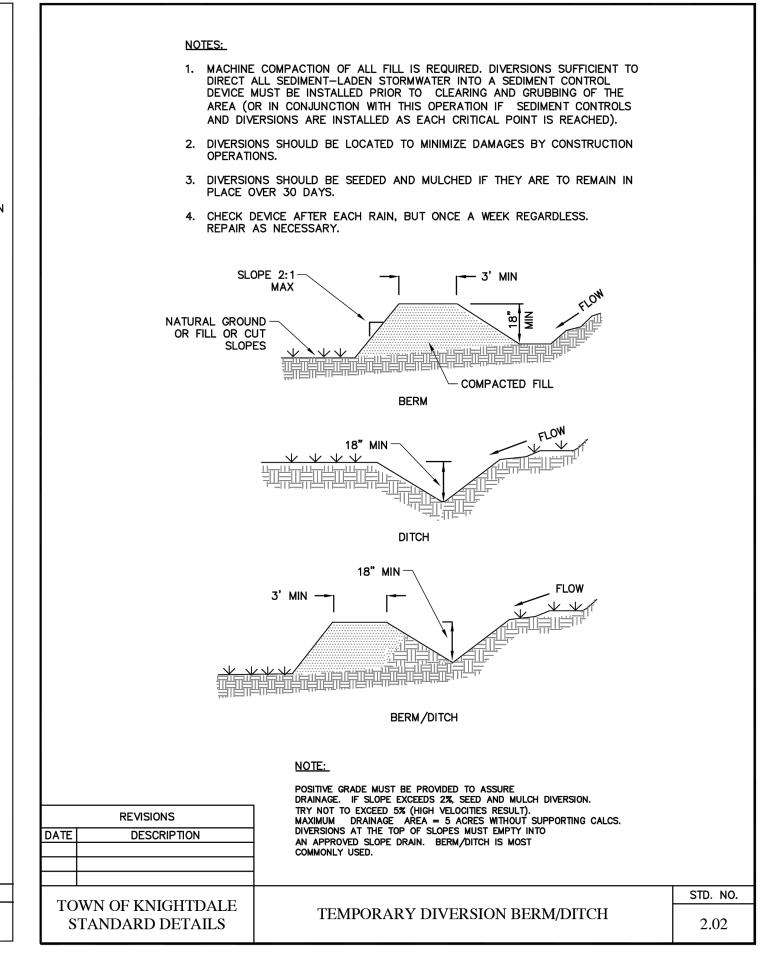


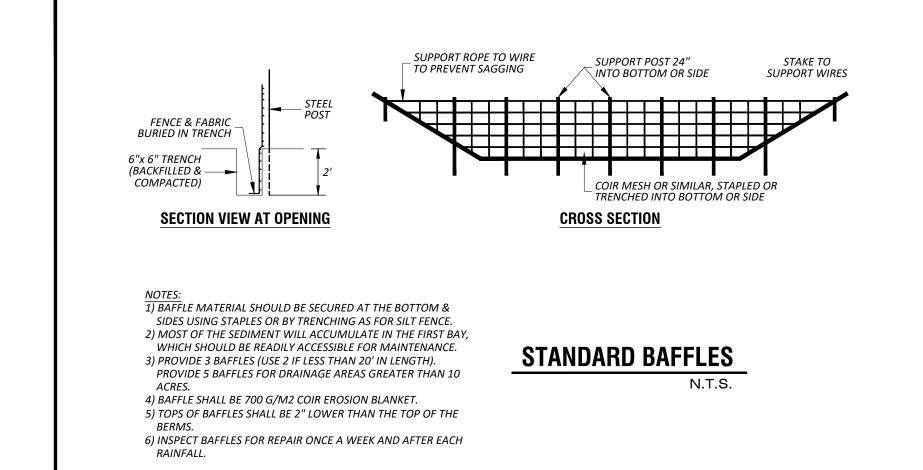
REVISIONS:

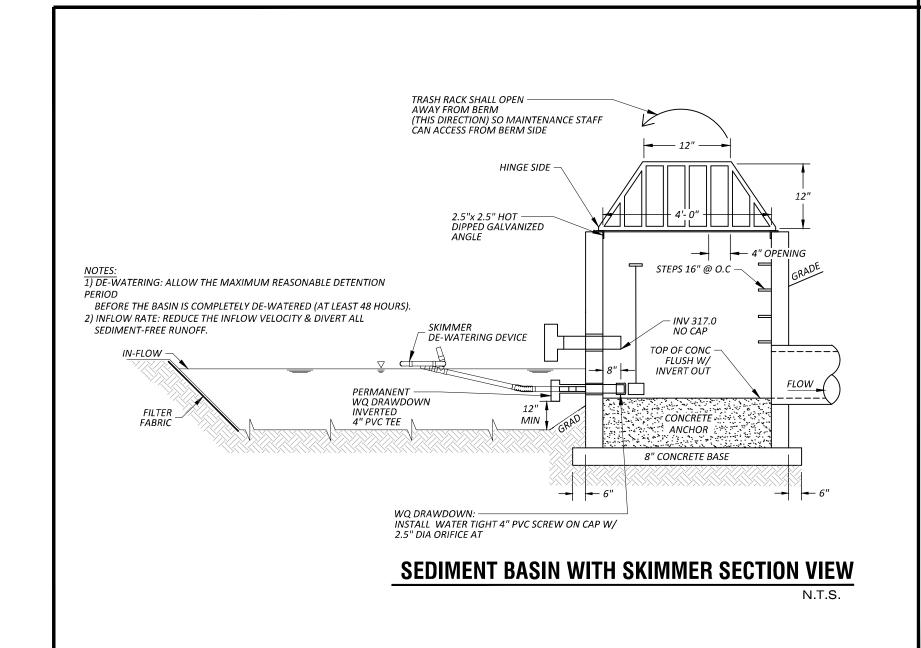












T 0 10 1 TI	
	design has been reviewed by the Engineer for the the best of my knowledge and belief, it conforms
to the requirements establish	ned in the Standard Specifications of the Town of
Knightdale.	
Ву:	Date:
Town Engineer	
These plans are approved by construction plans for this p	y the Town of Knightdale and serve as project.
Ву:	Date:
Administrator	

AMPLE STORAGE - EXPANSION

NOF KNIGHTDALE ~ ST. MATTHEWS TWSP. ~ WAKE CO. ~ NORTH CAROLINA

SEDIMENTATION & EROSION

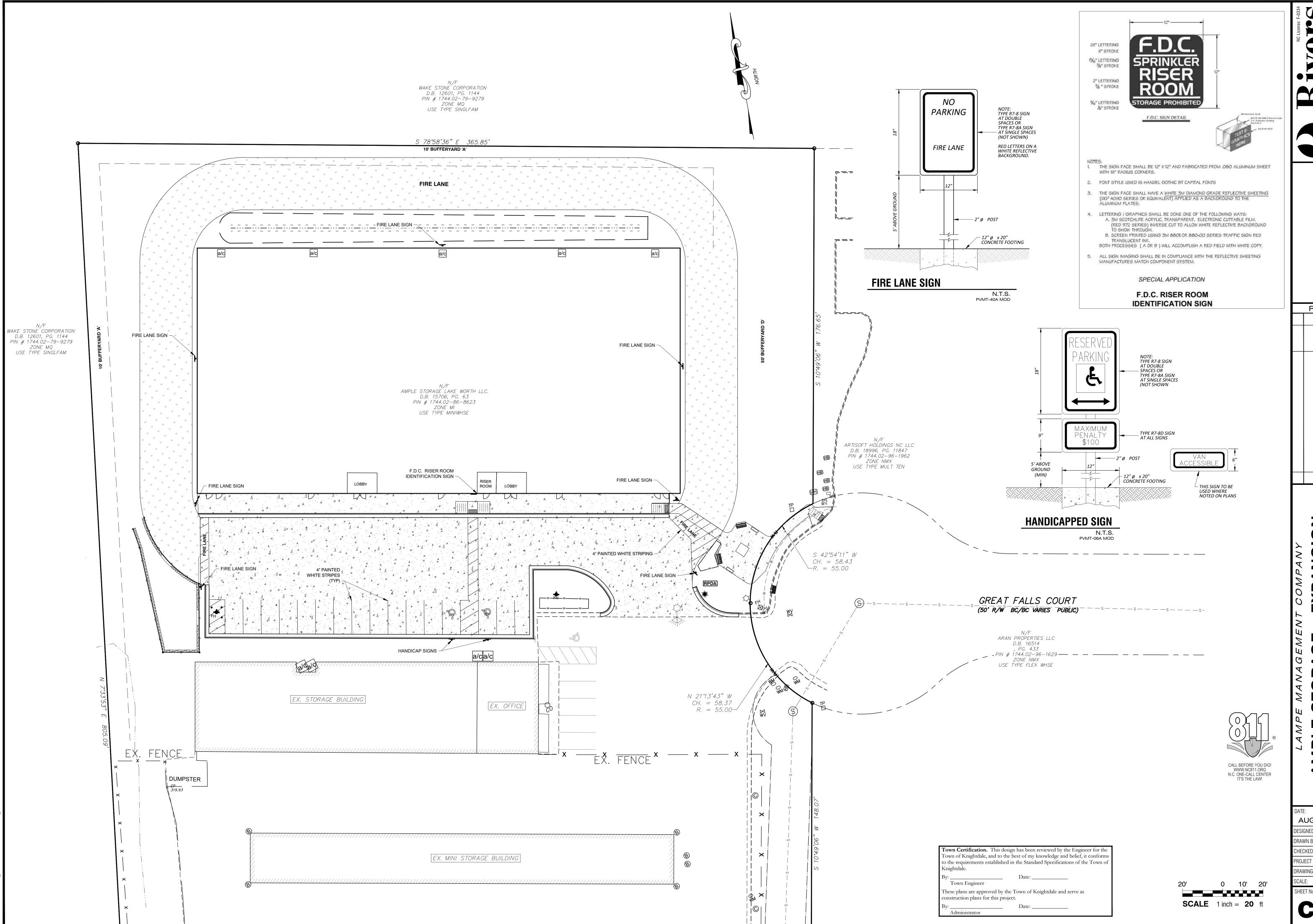
AUGUST 11, 2023

DRAWING No. W-4073-SK

2023008

DRAWN BY:
CHECKED BY:

REVISIONS:



* ASSOCIATES, INC.

riversandass
107 East Second Str
Greenville, NC 2788

riverse 107 East 9 Greenville

N OF KNIGHTDALE COMMENTS 12-5-2023 EDN SCRIPTION DATE BY

CORAGE - EXPANSION

MATTHEWS TWSP. ~ WAKE CO. ~ NORTH CAROLL

EMENT MARKING

IGUST 11, 2023

DATE:

AUGUST 11, 2023

DESIGNED BY: MJP

DRAWN BY: EDN

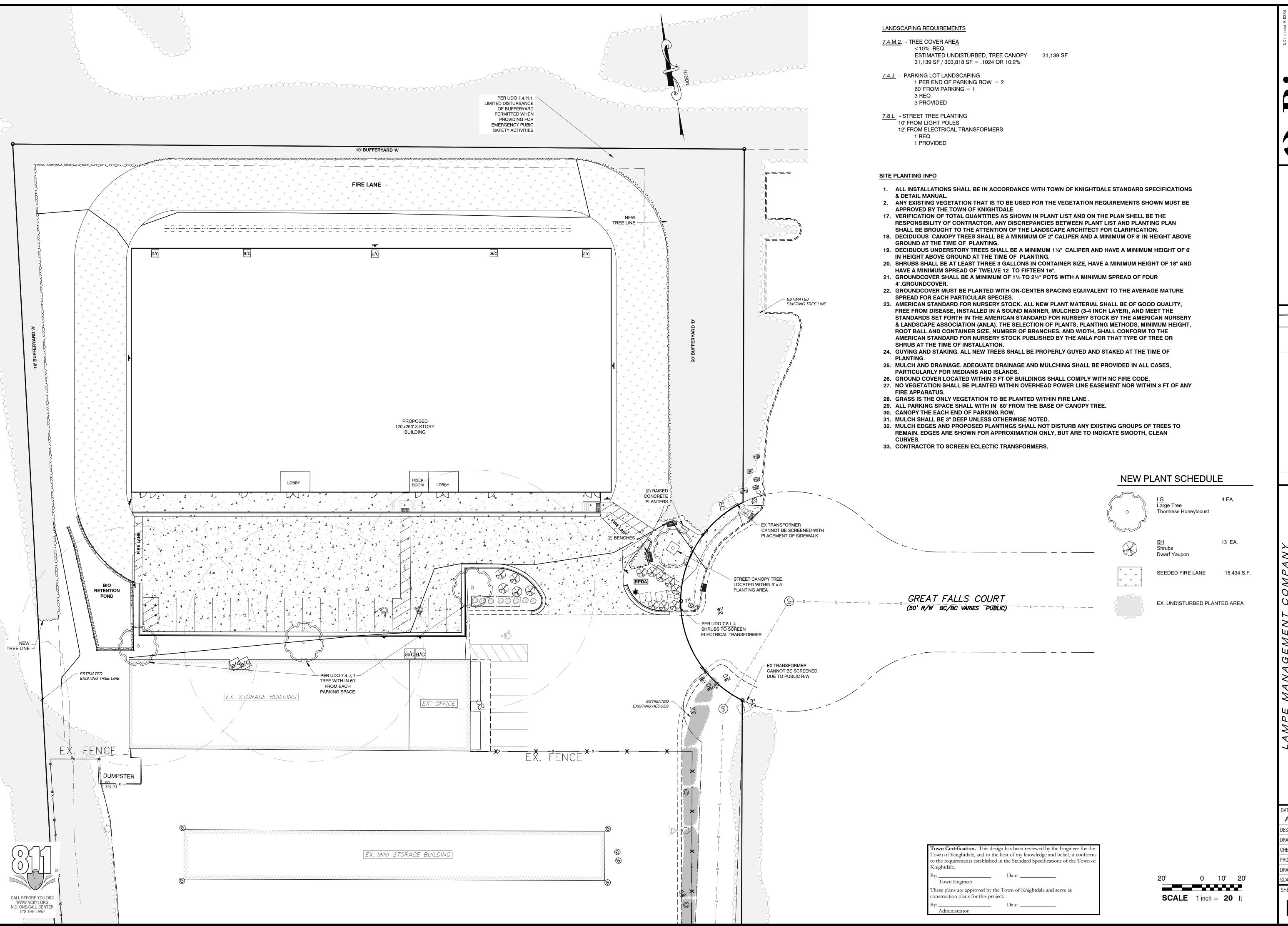
CHECKED BY: JSJ

PROJECT No. 2023008

DRAWING No. W-4073-SK

SCALE: 1" = 20'

SHEET No. **C6.41**



Note the second and a second at the standard as second and a second and a second at the second and a second at the second at the

TORAGE - EXPANSION
T. MATTHEWS TWSP. ~ WAKE CO. ~ NORTH CAROL

DSCAPING PLAN

AMPLE

TOWN OF KNIGHTDALE

TOWN OF KNIGHTDALE

TOWN OF KNIGHTDALE

TOWN OF KNIGHTDALE

DATE:

AUGUST 11, 2023

DESIGNED BY: MJF

DRAWN BY: EDN

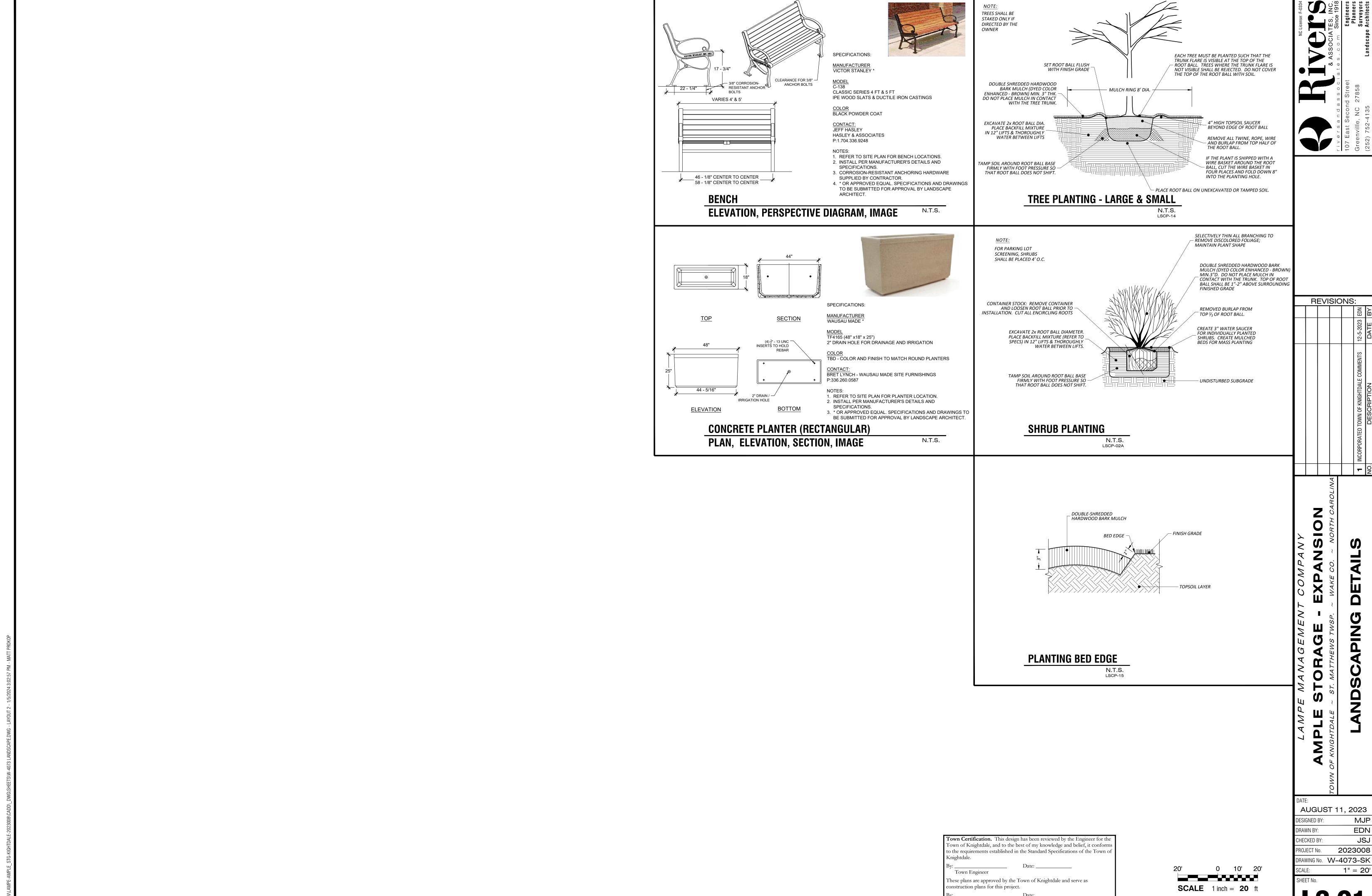
CHECKED BY: JS.

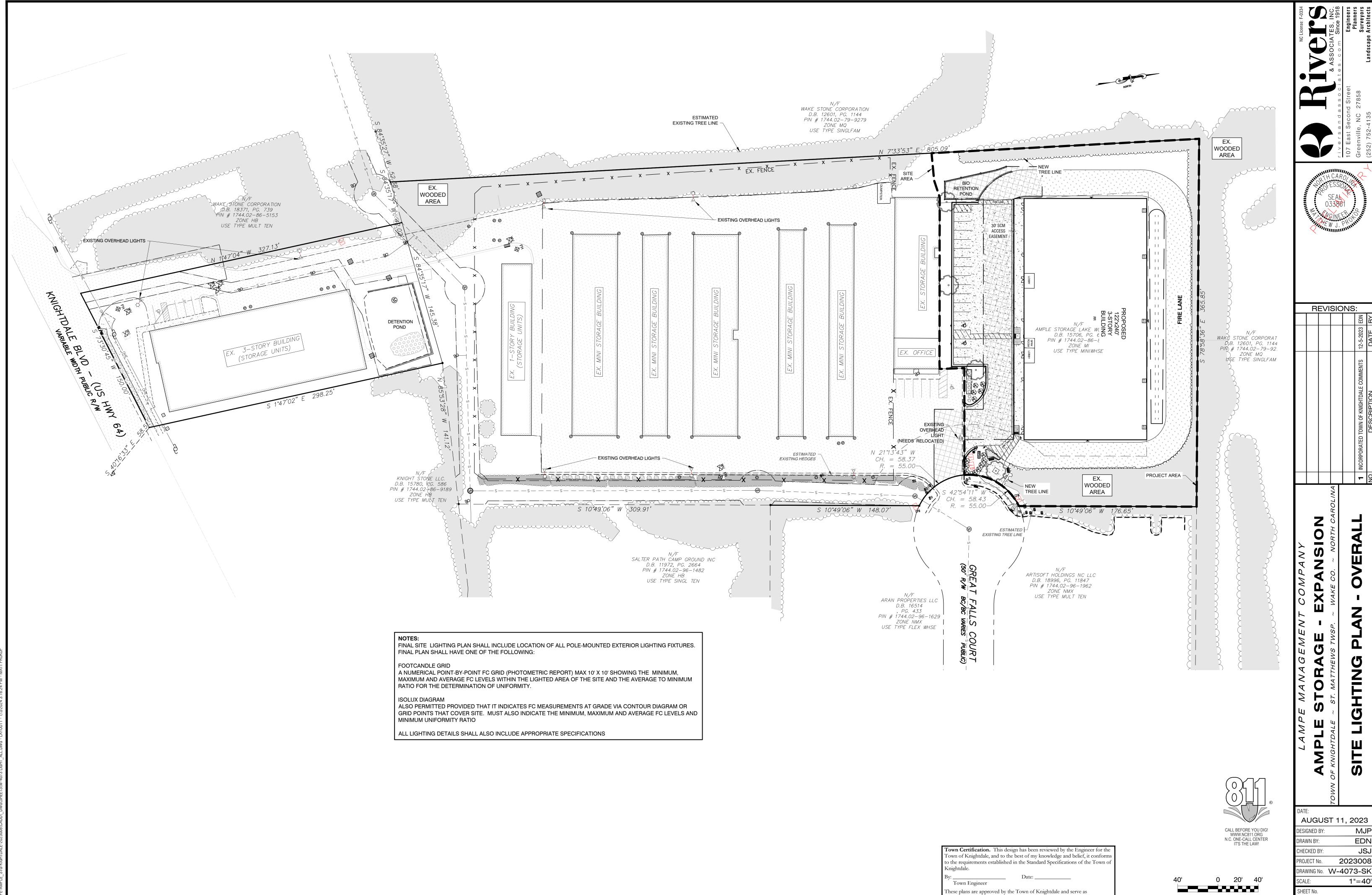
PROJECT No. 2023008

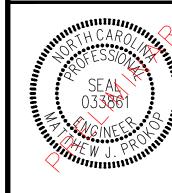
DRAWING No. W-4073-SK

_E: 1" = 20 ET No.

L1.01







REVISIONS:

AUGUST 11, 2023 MJP DESIGNED BY: DRAWN BY: CHECKED BY: 2023008

SCALE 1 inch = 40 ft

construction plans for this project.