

**PRELIMINARY SITE PLANS FOR:  
UNIVERSITY STORAGE LLC.  
ERWIN SELF-STORAGE BUILDING**

MASONIC RD.  
DUKE TOWNSHIP  
HARNETT COUNTY  
NORTH CAROLINA

**OWNER / DEVELOPER:**  
T&L COATS, LLC  
165 SOMMERVILLE PARK RD.  
RALEIGH, NC 27603

SHEET INDEX

- S-1 COVER
- S-2 PRELIMINARY SITE PLAN
- S-3 GRADING PLAN
- S-4 LANDSCAPE PLAN
- S-5 STORMWATER PLAN



As the owner of record, I hereby formally consent to the proposed development shown on this site plan and all regulations and requirements of the Harnett County ordinances.

Sign \_\_\_\_\_ Date \_\_\_\_\_



**DESIGNED BY:** **E**noch  
Engineers, P.A.  
CONSULTING ENGINEERS & SURVEYORS  
1403 NC Highway 50 South - Benson, NC 27504  
Phone: (919) 894-7765 Fax: (919) 894-8190  
E-mail: general@enochengineers.com  
N.C. Firm License #C-2061

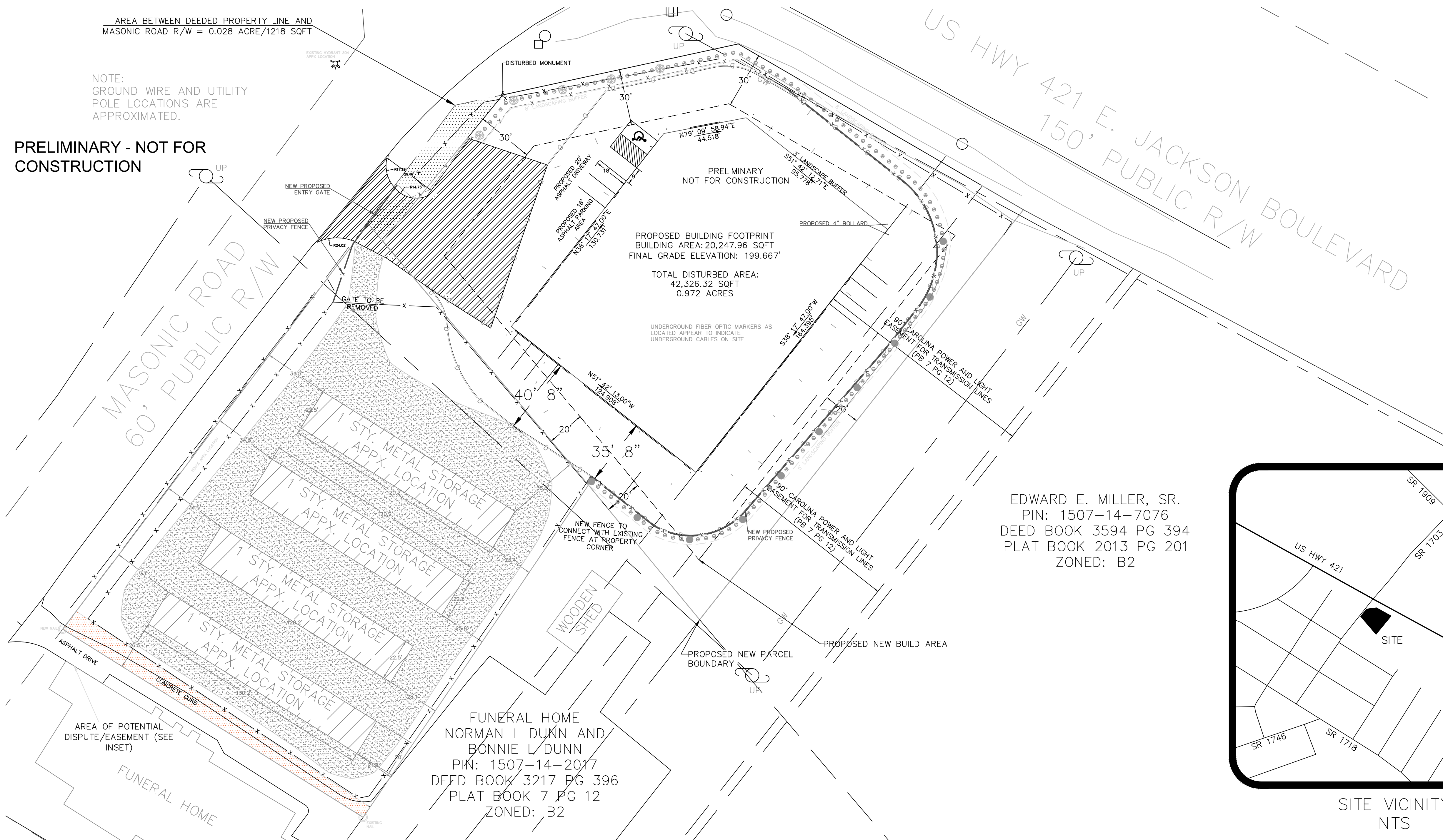
**DATE:** November 18, 2021  
**PROJECT NO.:** 5145  
**REVISED:**



AREA BETWEEN DEEDED PROPERTY LINE AND MASONIC ROAD R/W = 0.028 ACRE/1218 SQFT

NOTE: GROUND WIRE AND UTILITY POLE LOCATIONS ARE APPROXIMATED.

PRELIMINARY - NOT FOR CONSTRUCTION



EDWARD E. MILLER, SR.  
PIN: 1507-14-7076  
DEED BOOK 3594 PG 394  
PLAT BOOK 2013 PG 201  
ZONED: B2



SITE VICINITY NTS

OWNED BY:  
UNIVERSITY STORAGE LLC.  
165 SOMMERVILLE PARK RD.  
RALEIGH, NC 27603-4757  
ROBERT BAREFOOT (910)-890-3256 wrbarefoot@yahoo.com  
PIN: 1507-14-3421  
PID: 061507 0295  
DEED BOOK 4017 PAGE 319  
ZONED: B2  
LAND USE: HIGHWAY BUSINESS  
LAND USE CLASSIFICATION: WAREHOUSE SELF-STORAGE  
AREA: 1.281 ACRES/55,801 SQFT (EXCLUDES AREA BETWEEN DEEDED PROPERTY LINE AND MASONIC ROADWAY)

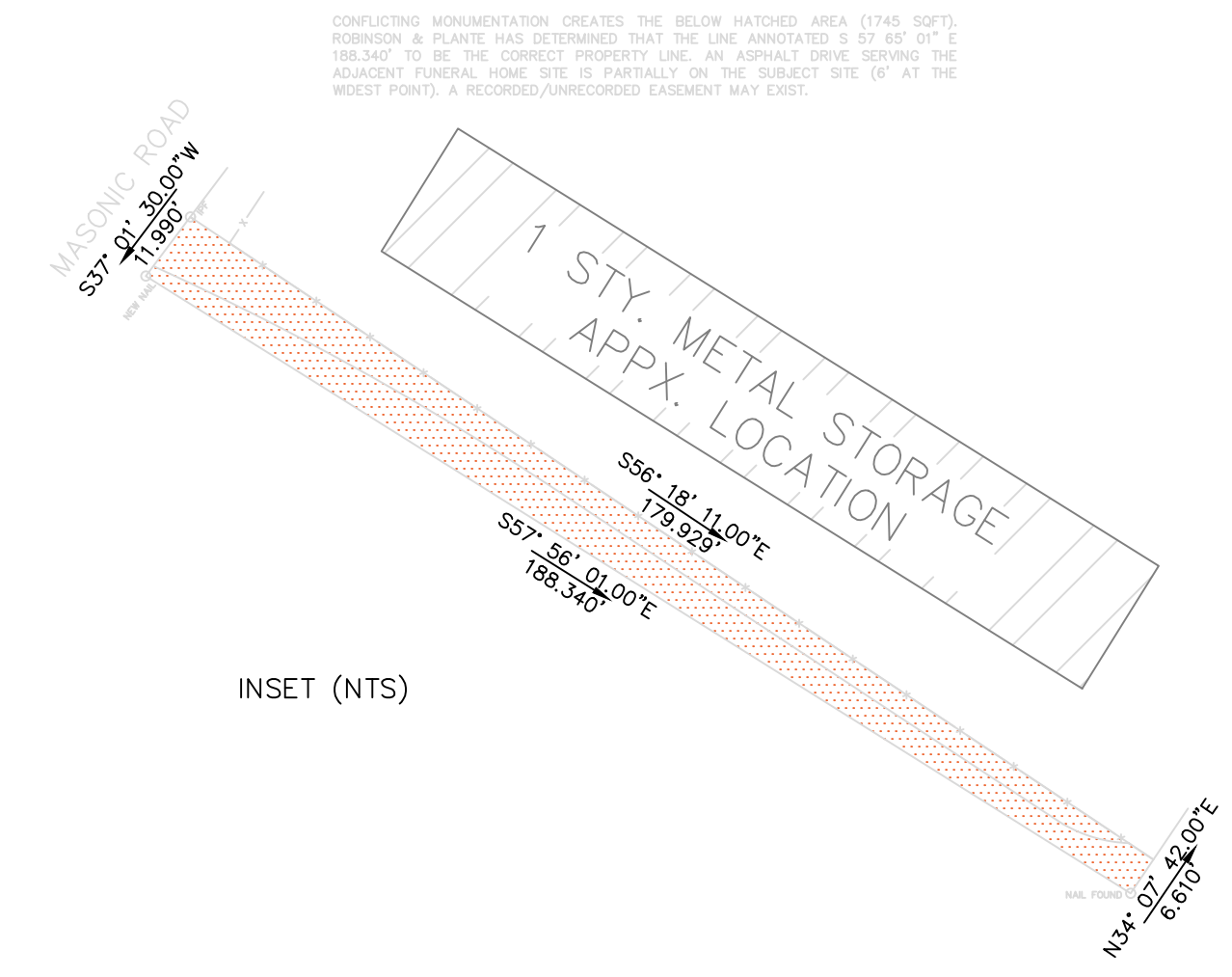
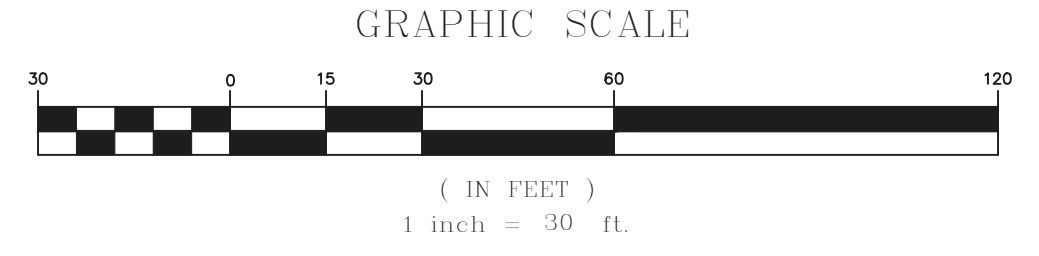
ADJACENT OWNED PROPERTY:  
PIN: 1507-14-0199  
PID: 061507 0296  
PLAT BOOK 7 PAGE 12 (LOTS 67-70)  
AREA: 1.008 ACRES/43,925 SQFT

SURVEY CONDUCTED BY ROBINSON AND PLANTE, P.C.

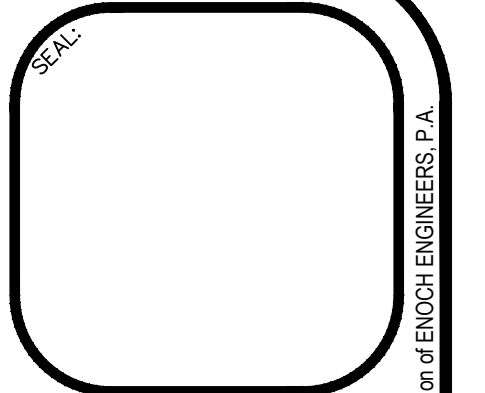
FLOOD ZONE: ZONE X  
FLOOD PLAIN MAP 3720150600J EFFECTIVE 10/3/2006  
WATERSHED DISTRICT: LOWER BLACK RIVER  
NOT LOCATED IN PROTECTED WATERSHED DISTRICT  
TOTAL AREA: 1.28 ACRES, 55800.39 SQFT  
SETBACKS  
FRONT-30' SIDE-20' BACK-20'

SITE IS LOCATED WITHIN 1 MILE OF AGRICULTURAL DISTRICT  
NO WATER OR SEWER TO SITE  
CLIMATE CONTROL SYSTEM TO BE PLACED ON ROOF

FIRE CODE:  
48' OUTER RADIUS SUITABLE FOR FIRE APPARATUS



CONFLICTING MONUMENTATION CREATES THE BELOW HATCHED AREA (1745 SQFT). ROBINSON & PLANTE HAS DETERMINED THAT THE LINE HATCHED IS 5' 37" 85" OFF E 180.840' TO BE THE CORRECT PROPERTY LINE. AN ASPHALT DRIVE SERVING THE ADJACENT FUNERAL HOME SITE IS PARTIALLY ON THE SUBJECT SITE. OF AT THE WIDEST POINT, A RECORDED/UNRECORDED EASEMENT MAY EXIST.



**Enoch Engineers, P.A.**  
CONSULTING ENGINEERS & SURVEYORS  
1403 NC Highway 40 South, Benson, NC 27504  
Phone: (919) 894-7765 Fax: (919) 894-8190  
Email: enoch@enochengineers.com

PLAN INFORMATION:			
DESIGNED BY:	HORIZONTAL SCALE:	VERTICAL SCALE:	
EE, P.A.	1"=50'	1"=50'	
DRAWN BY:	CHECKED BY:	DATE CREATED:	
EE, P.A.	BH	11-18-2021	
SURVEY INFORMATION:			
Revisions			

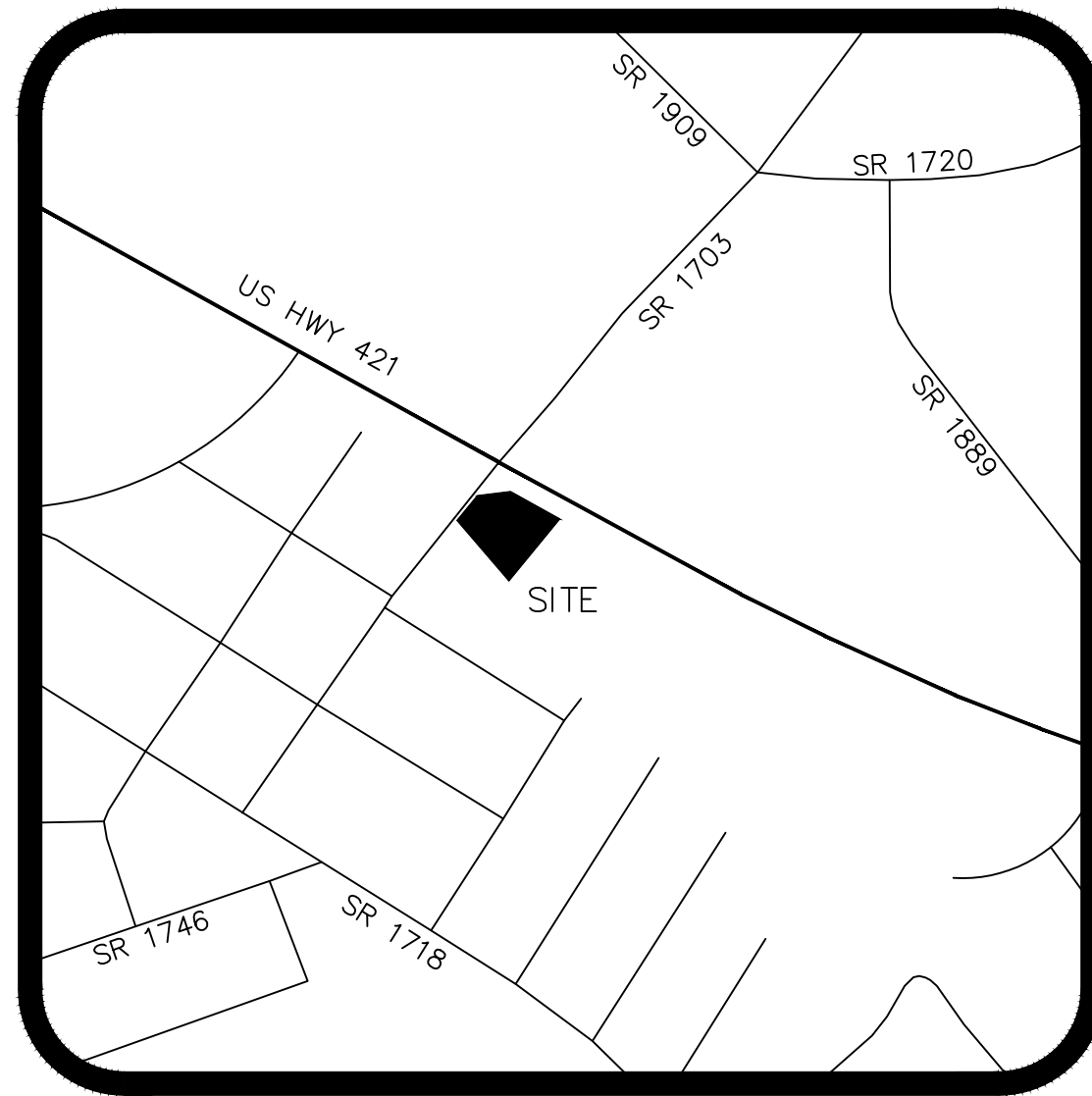
LOCATION: 305 MASONIC RD. ERWIN, NORTH CAROLINA DUNE TOWNSHIP HARRETT COUNTY

PROPERTY DEVELOPER(S): UNIVERSITY STORAGE LLC. 165 SOMMERVILLE PARK RD. RALEIGH, NC 27603

PRELIMINARY SITE PLAN FOR UNIVERSITY STORAGE LLC. ERWIN SELF-STORAGE BUILDING

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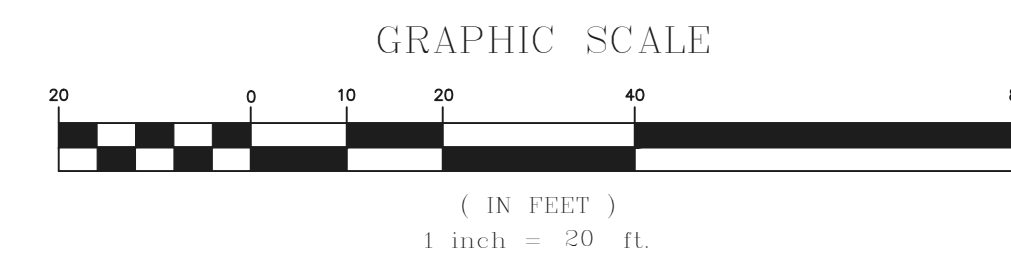
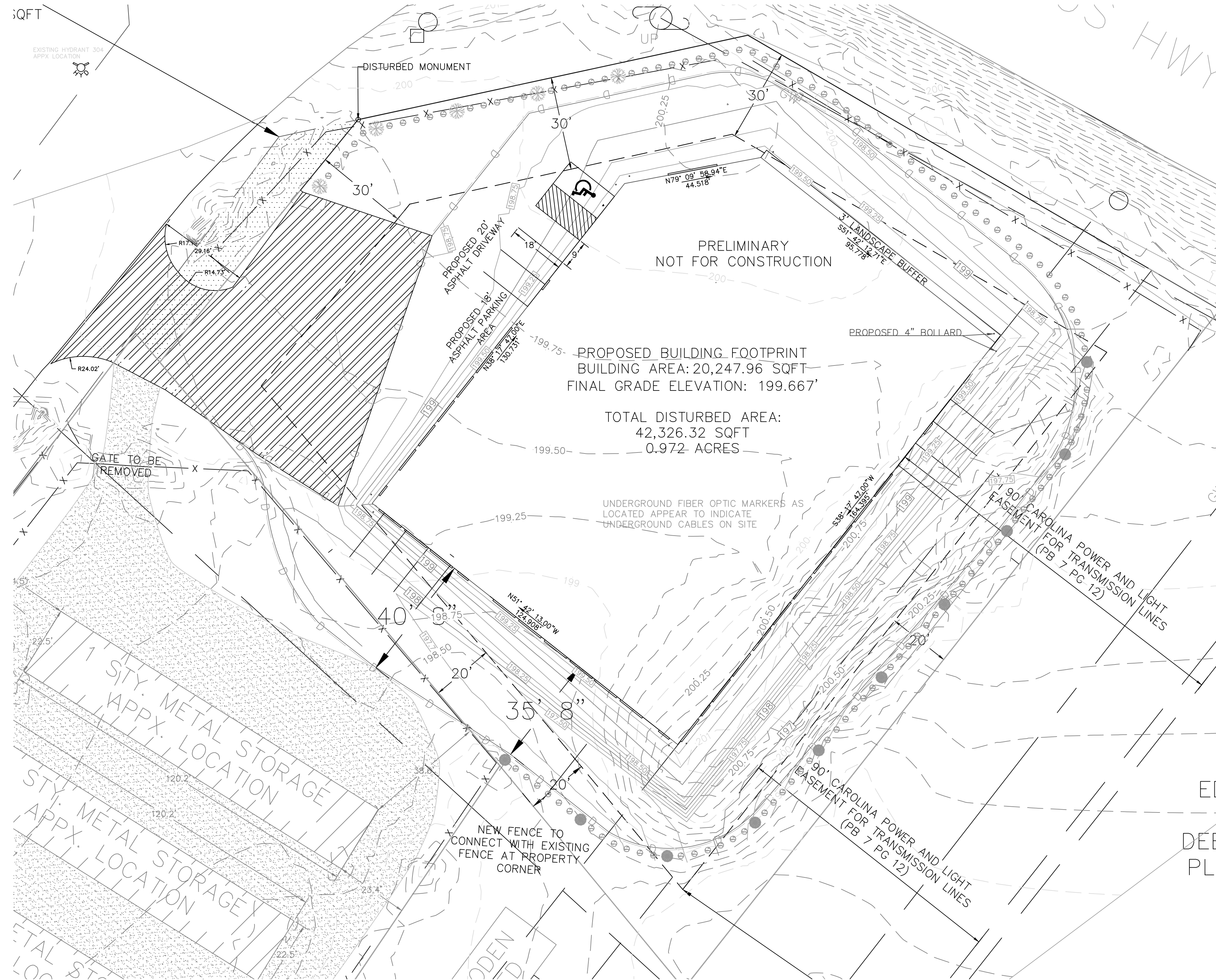


SITE VICINITY MAPS



- CONSTRUCTION SEQUENCE**
- 1) INSTALL EROSION CONTROL MEASURES AS SHOWN ON PLANS.
  - 2) COMPLETE INSTALLATION OF SITE DRAINAGE NETWORKS AND SITE SWALES WITH ASSOCIATED EROSION CONTROL PROTECTION BEFORE BEGINNING SITE GRADING.
  - 3) STRIP TOPSOIL.
  - 4) GRADE SITE.
  - 5) GRASS AREAS THAT WILL NOT BE DISTURBED.
  - 6) PLACE BASE-COURSE.
  - 7) SEED AND MULCH ALL AREAS TO PROVIDE PERMANENT GROUND COVER WITHIN 14 WORKING DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING, AND WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS, WHICHEVER PERIOD IS SHORTER, FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
  - 8) MAINTAIN ALL TEMPORARY MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
  - 9) NO SEDIMENT OR EROSION CONTROL MEASURES ARE TO BE REMOVED WITHOUT THE APPROVAL OF AN NCDEQ INSPECTOR.

NOTE: EX. UTILITY & ACCESS EASEMENT IS NOT TO BE OBSTRUCTED AT ANY POINT DURING OR AFTER CONSTRUCTION



PLAN INFORMATION:	
DESIGNED BY: EE, P.A.	HORIZONTAL SCALE: 1"=20'
DRAWN BY: EE, P.A.	VERTICAL SCALE: 1"=20'
CHECKED BY: BH	DATE CREATED: 11-18-2021
SURVEY INFORMATION:	

**PRELIMINARY GRADING FOR UNIVERSITY STORAGE LLC. ERWIN SELF-STORAGE BUILDING**

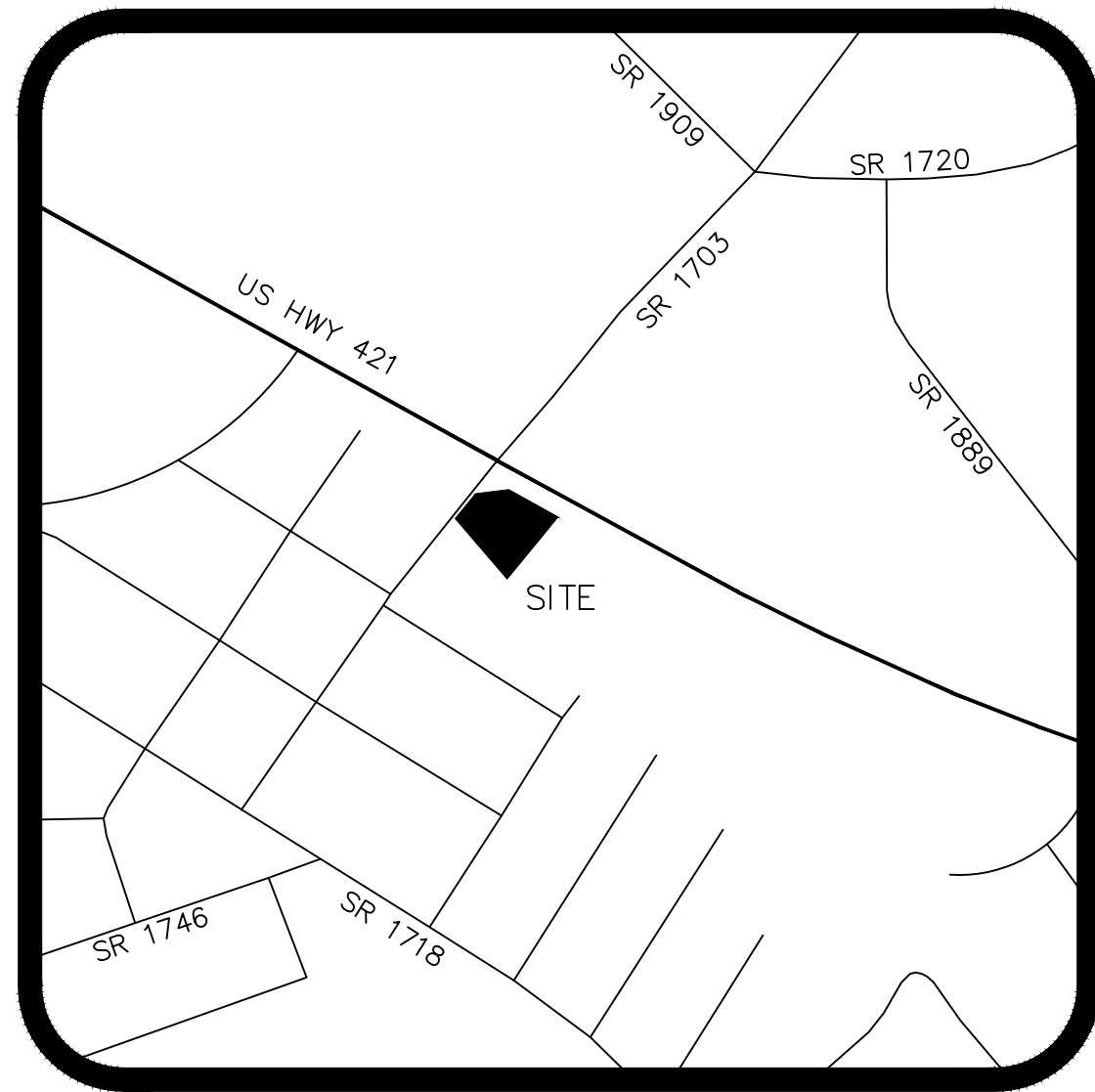
LOCATION:  
305 HUSON RD.  
ERWIN, NORTH CAROLINA  
DUKE TOWNSHIP  
HARRETT COUNTY

PROPERTY DEVELOPERS:  
UNIVERSITY STORAGE LLC.  
165 SOMMERVILLE PARK RD.  
RALEIGH, NC 27603

EE PROJECT: 5145  
**S - 3**  
of 4

**Enoch Engineers, P.A.**  
CONSULTING ENGINEERS & SURVEYORS  
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Phone: (919) 894-7765 Fax: (919) 894-8190  
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SITE VICINITY  
NTS

BUFFER LENGTH: ~583' 8 SHRUBS, 1 TREE PER 40'

- - SHRUBS - 117
- - SHADE TREES - 5
- - SHADE/ORNAMENTAL TREES - 10
- BUFFER

NO EXISTING TREES OR SHRUBS TO BE PRESERVED. GRASS WILL BE PRESERVED AS POSSIBLE BY MINIMIZING THE DISTURBED AREA.

TREES ADJACENT TO THE RIGHT-OF-WAY MUST BE SHADE TREES. TREES NOT ADJACENT TO THE RIGHT-OF-WAY CAN BE SHADE OR ORNAMENTAL TREES

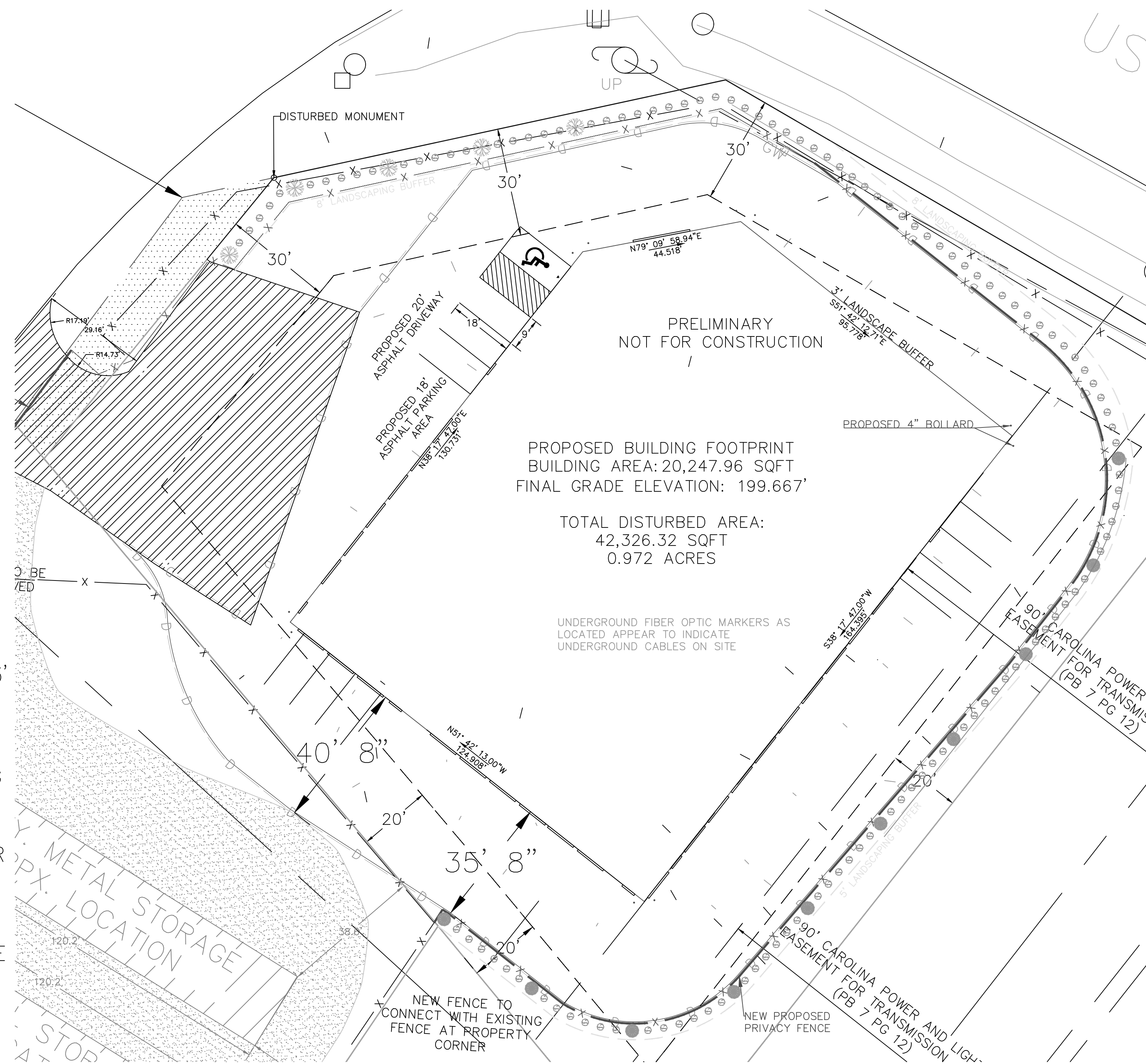
ORNAMENTAL TREES CAN BE SUBSTITUTED FOR SHADE TREES AT 1:1 RATIO WHEN PLANTING NEAR OVERHEAD UTILITY WIRES

SHRUBS MUST BE EVERGREEN AND HAVE A MINIMUM HEIGHT OF 3' AND VOLUME OF 3 GALLONS WHEN PLANTING

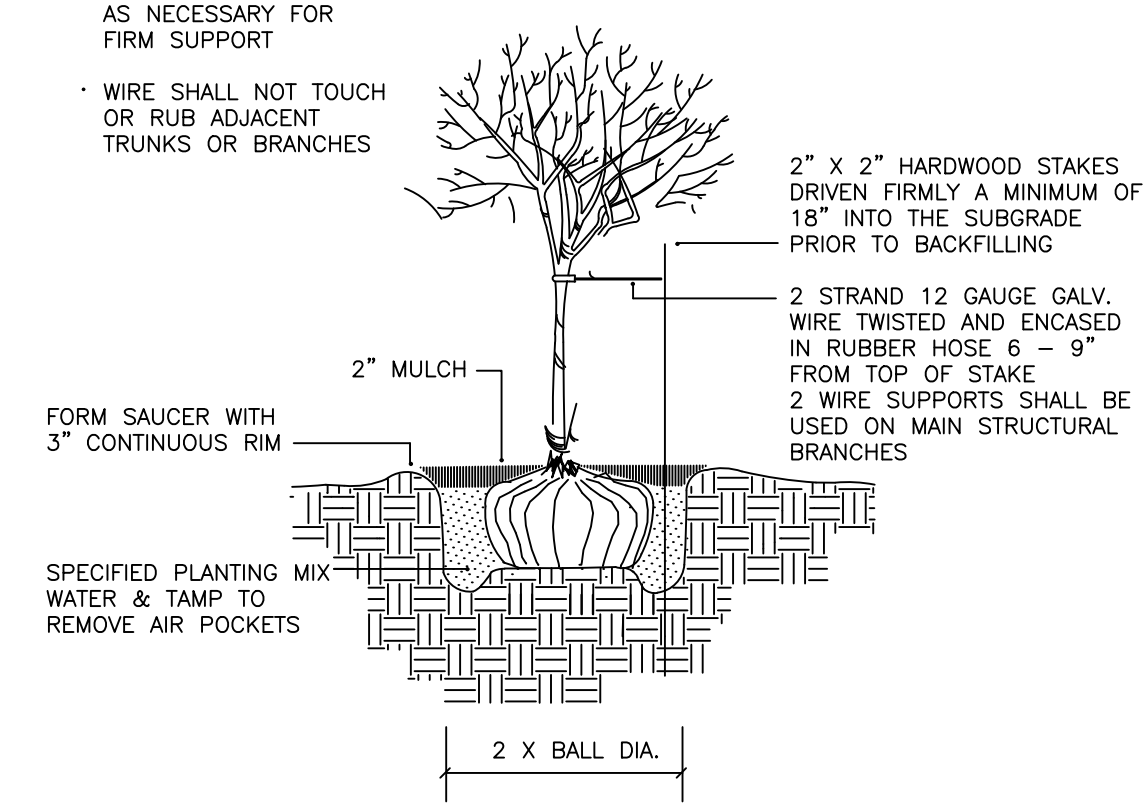
SHADE TREE - DECIDUOUS/LEAF BEARING, IN EXCESS OF 40' WHEN FULLY MATURED, 2" CALIPER OR 8' HEIGHT WHEN PLANTING

ORNAMENTAL TREE - DECIDUOUS/EVERGREEN, ORNAMENTAL PATTERN, LESS THAN 40' WHEN FULLY MATURED, 1.5" CALIPER OR 6' HEIGHT WHEN PLANTING

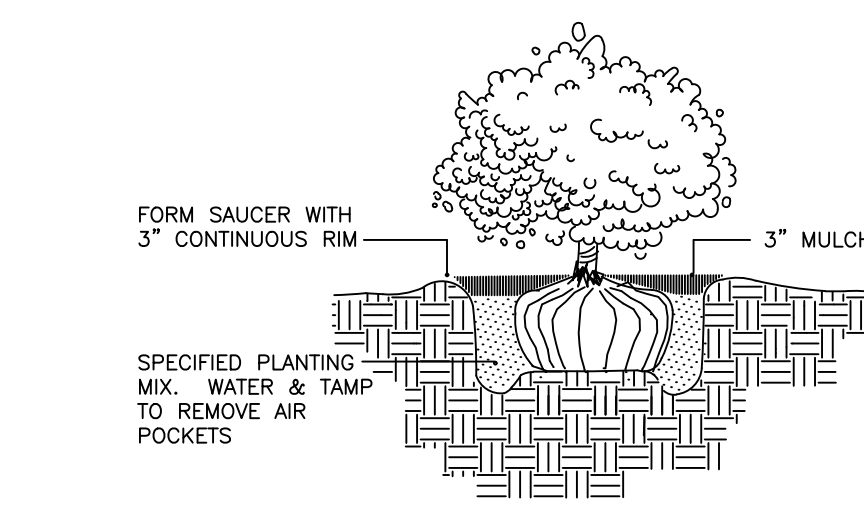
EXACT PLANT SPECIES WILL BE LEFT TO OWNER DISCRETION. RECOMMENDED PLANTS BY TYPE CAN BE FOUND IN CITY OF ERWIN CODE OF ORDINANCE ARTICLE XV SECTION 36-436 PART 18



**NOTE:**  
 · STAKE TO FIRST BRANCHES AS NECESSARY FOR FIRM SUPPORT  
 · WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES

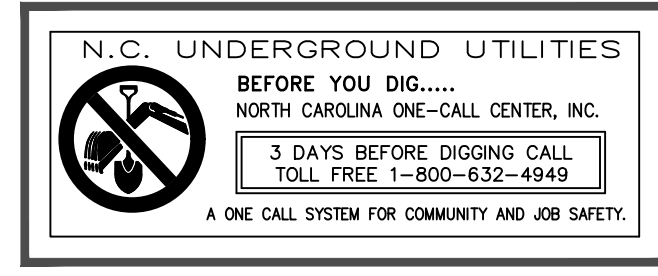


TREE PLANTING  
SCALE: NOT TO SCALE



SHRUB PLANTING  
SCALE: NOT TO SCALE

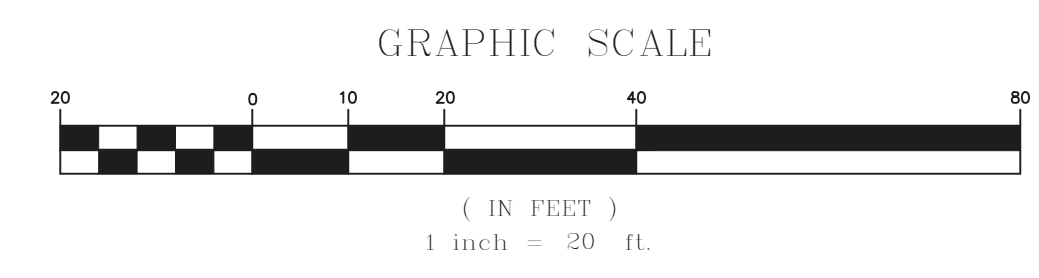
\*\*\*CAUTION\*\*\*



\*\*\* CAUTION \*\*\*  
 THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

**LANDSCAPING NOTES**

1. Exact location of underground utilities shall be verified in the field by the Contractor. Plantings shall be adjusted as necessary to avoid conflict with utilities.
2. Subsoil conditions and additional subsurface drainage requirements shall be verified in the field by the Contractor. Any conditions detrimental to the growth and health of proposed plant materials shall be brought to the attention of the Engineer prior to planting.
3. Plant material shall be planted so as to bear the same relationship to grade as in the field or container it was grown in.
4. Mulch all disturbed areas with a minimum of 3 inch deep layer of shredded pine bark mulch, or pine straw as shown on plans. All disturbed soil surfaces shall be covered either with grass, plants, or mulch.
5. Bed lines shall conform to configuration shown on the plans. Bed lines shall meet curbs, walks, buildings, retaining wall coping etc., at right angles unless shown otherwise.
6. All plant material to meet AAN standards for size and quality. Contractor is responsible for all plants shown on the plans.



DESIGNED BY: EE, P.A.	HORIZONTAL SCALE: 1"=20'
	VERTICAL SCALE: 1"=20'
DRAWN BY: EE, P.A.	DATE CREATED: 11-18-2021
CHECKED BY: BH	SURVEY INFORMATION:

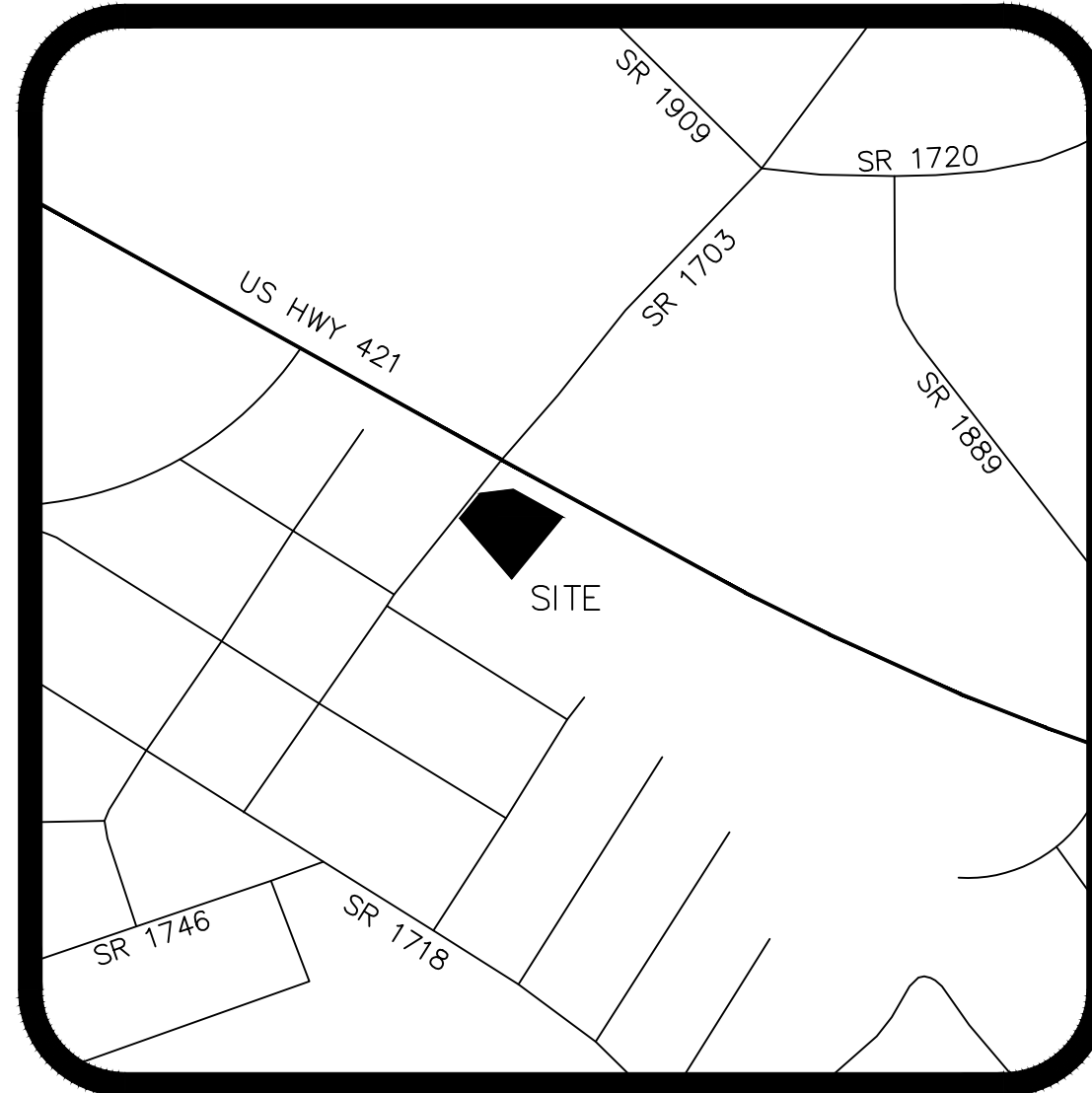
LANDSCAPE PLAN FOR UNIVERSITY STORAGE LLC, ERWIN SELF-STORAGE BUILDING

LOCATION: 505 HUSONIC RD, ERWIN, NORTH CAROLINA, DUKE TOWNSHIP, HARRETT COUNTY

PROPERTY DEVELOPERS: UNIVERSITY STORAGE LLC, 165 SOMMERVILLE PARK RD., RALEIGH, NC 27603

Enoch Engineers, P.A. CONSULTING ENGINEERS & SURVEYORS 1403 NC Highway 50 South, Benson, NC 27504 Phone: (919) 894-7765 Fax: (919) 894-8190  
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SITE VICINITY  
NTS

PRE-/POST DEVELOPMENT RUNOFF CALCULATIONS  
RATIONAL METHOD Q=CIA

DRAINAGE AREA (A):  
DITCH (PRE-DEVELOPMENT): ~20597.62 SQFT; 0.473 ACRES  
DITCH (POST-DEVELOPMENT): ~33286.68 SQFT; 0.764 ACRES  
BUFFER (PRE-DEVELOPMENT): ~N/A RUNOFF DRAINS TO SOUTHWEST PROPERTIES, NOT HELD  
BUFFER (POST-DEVELOPMENT): ~35904.28 SQFT; 0.824 ACRES

NOTE: ALL DRAINAGE AREAS ARE APPROXIMATIONS BASED ON THE AUTOCAD WATER DROP ANALYSIS TOOL.

STORMWATER INTENSITY (I)  
FROM NOAA ATLAS 14  
5 YR 24 HR DURATION: 0.198 IN/HR  
10 YR 24 HR DURATION: 0.223 IN/HR  
25 YR 24 HR DURATION: 0.281 IN/HR

RUNOFF COEFFICIENT (C)  
SOIL ON SITE IS PREDOMINATELY GRASSED M6a (MARLBORO SANDY LOAM W/ 0%-2% SLOPES)

ACCORDING TO NCDQ STORMWATER DESIGN MANUAL PART B, TABLE 1  
LAWN, SANDY SOIL, FLAT (<2%): C=0.10  
LAWN, SANDY SOIL, STEEP (>2%): C=0.20  
ASPHALT C=0.95  
FLAT ROOF C=0.90

C (DITCH, PRE): 171.10 SQFT CONCRETE IN PRE-DEVELOPMENT DRAINAGE AREA  
~13769.14 SQFT STEEP SLOPE LAWN  
6637.38 SQFT SHALLOW SLOPE LAWN  
 $C = ((0.95 \times 171.10) + (0.20 \times 13769.14) + (0.10 \times 6637.38)) / 20597.62$   
C=0.174

20043.96 SQFT AREA OF ROOF; ASSUMING EQUAL AREA DRAINS TO NORTHWEST AND SOUTHEAST;  
4167.73 SQFT TO DITCH  
15876.23 SQFT TO BUFFER

C (DITCH, POST): 2250.95 SQFT ROOF  
7672.17 SQFT ASPHALT  
~17601.29 SQFT STEEP SLOPE LAWN  
5762.27 SQFT FLAT LAWN  
 $C = ((0.90 \times 2250.95) + (0.95 \times 7672.17) + (0.20 \times 17601.29) + (0.10 \times 5762.27)) / 33286.68$   
C=0.403

C (BUFFER, POST): 15051.76 SQFT ROOF  
15509.06 SQFT ASPHALT  
~581.37 SQFT STEEP SLOPE LAWN  
4762.09 SQFT FLAT LAWN  
 $C = ((0.90 \times 15051.76) + (0.95 \times 15509.06) + (0.20 \times 581.37) + (0.10 \times 4762.09)) / 35904.28$   
C=0.804

RUNOFF RATE (Q):

DITCH  
5 YEAR, 24 HOUR STORM  
BEFORE:  $Q=CIA=(0.174)(0.198)(0.473)=0.016$  CUFT/S  
AFTER:  $Q=CIA=(0.403)(0.198)(0.764)=0.061$  CUFT/S  
10 YEAR, 24 HOUR STORM  
BEFORE:  $Q=CIA=(0.174)(0.223)(0.473)=0.018$  CUFT/S  
AFTER:  $Q=CIA=(0.403)(0.223)(0.764)=0.068$  CUFT/S  
25 YEAR, 24 HOUR STORM  
BEFORE:  $Q=CIA=(0.174)(0.281)(0.473)=0.023$  CUFT/S  
AFTER:  $Q=CIA=(0.403)(0.281)(0.764)=0.087$  CUFT/S

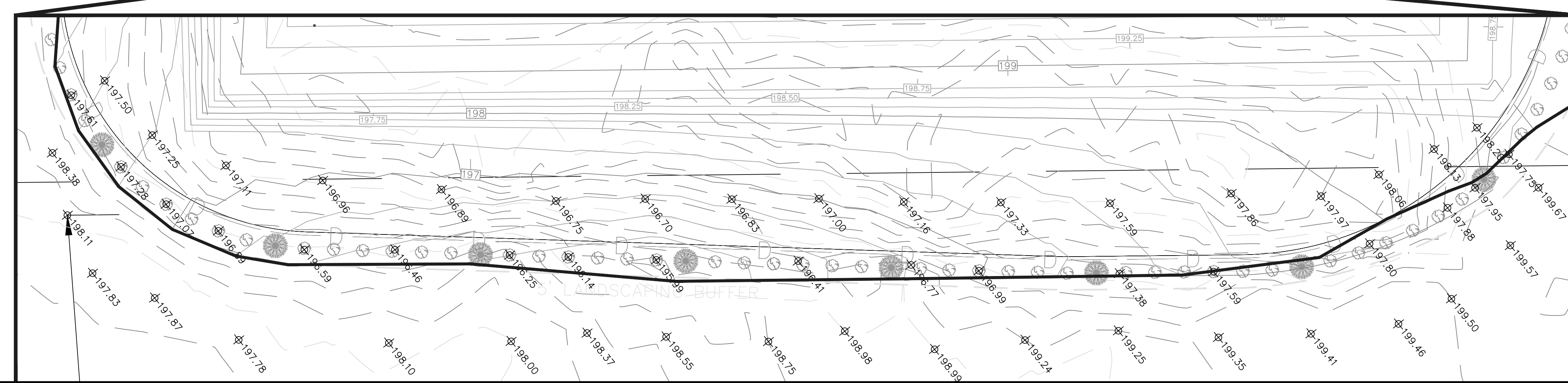
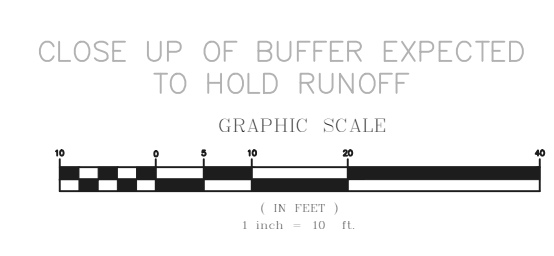
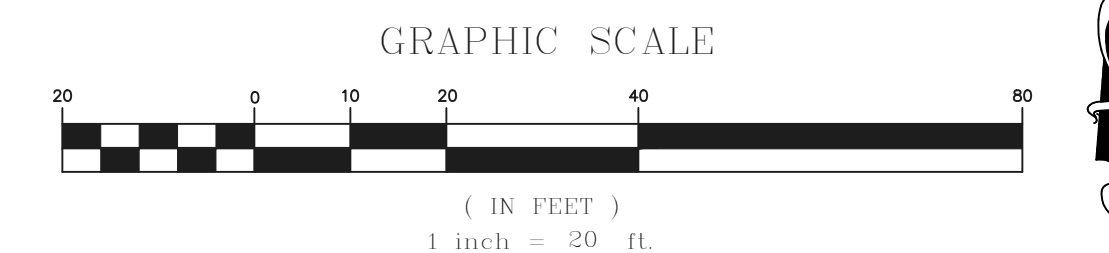
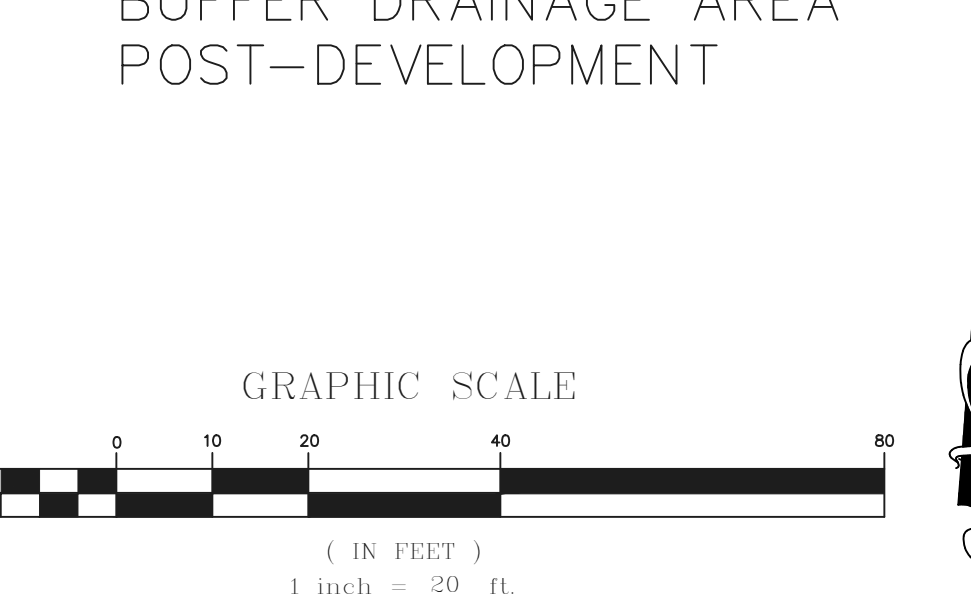
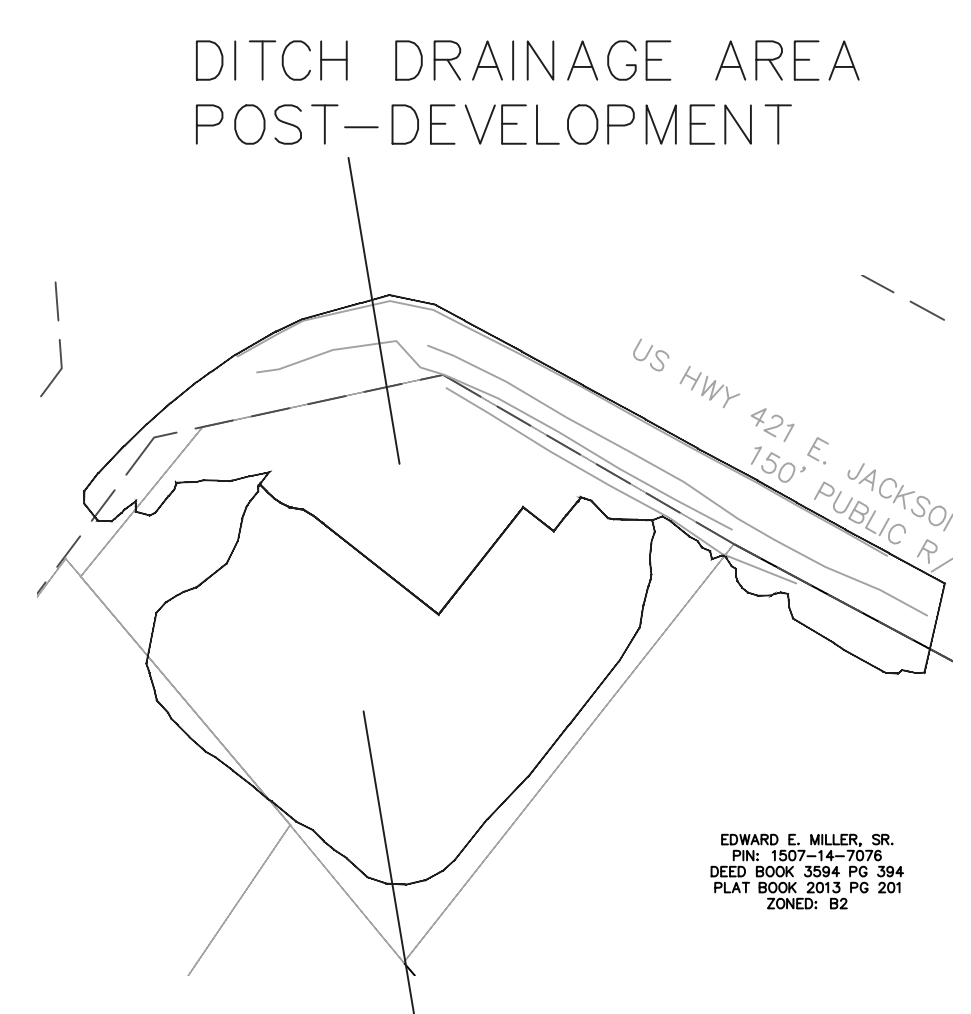
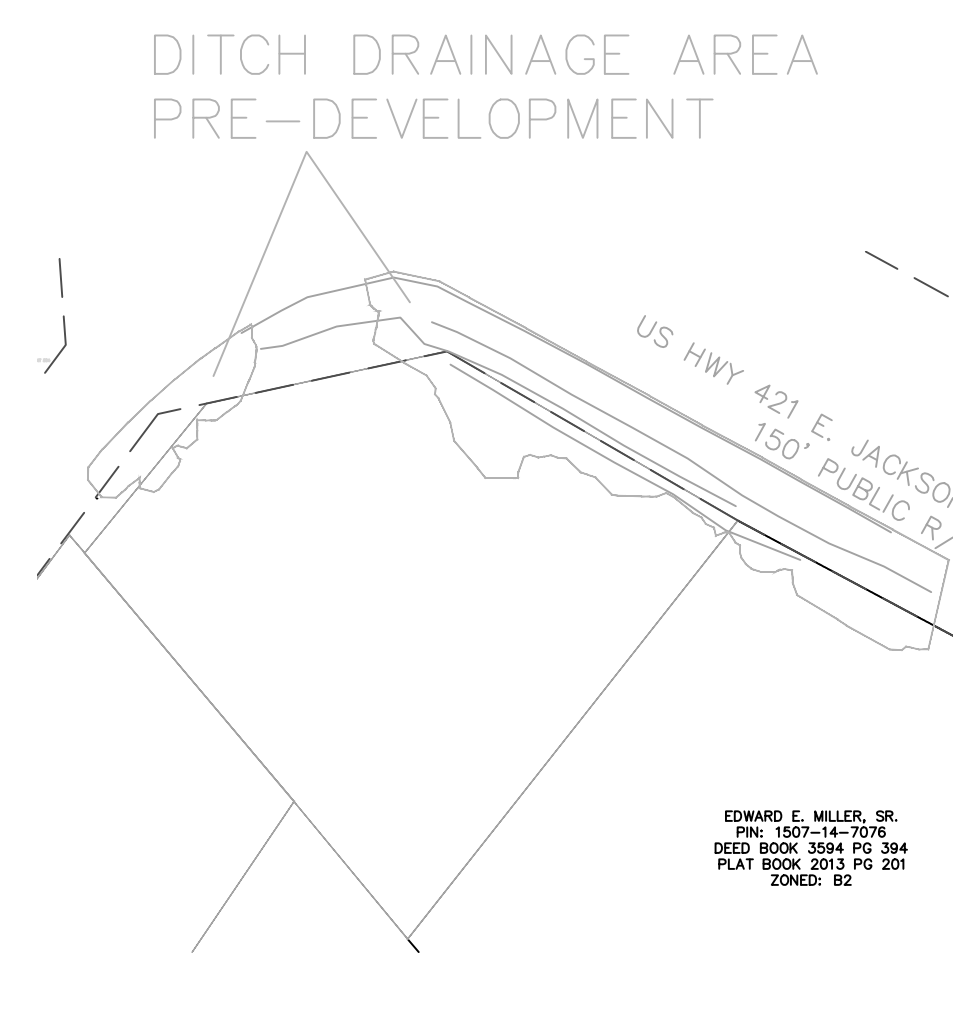
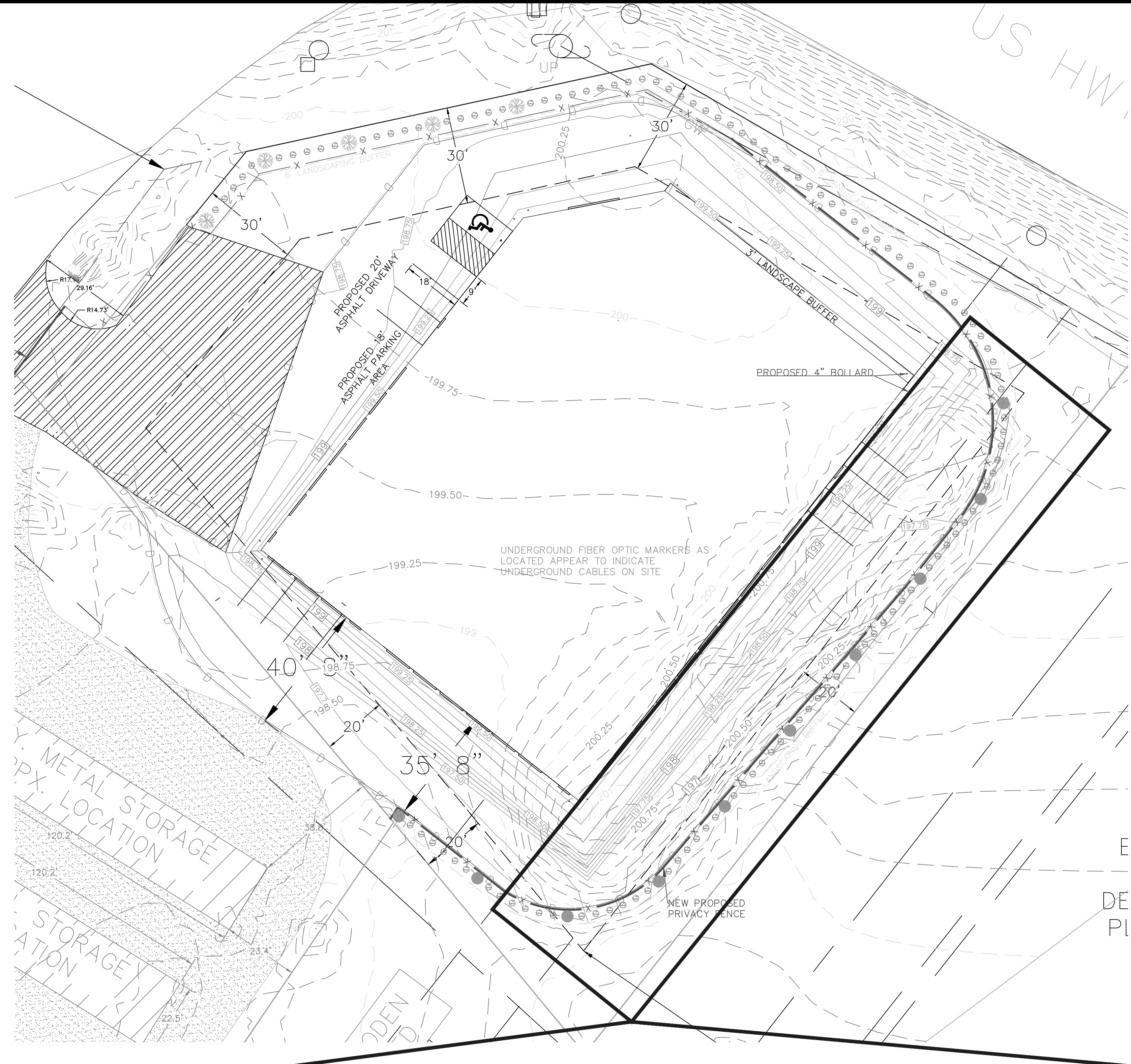
BUFFER  
5 YEAR, 24 HOUR STORM  
BEFORE N/A  
AFTER:  $Q=CIA=(0.804)(0.198)(0.824)=0.131$  CUFT/S  
10 YEAR, 24 HOUR STORM  
BEFORE N/A  
AFTER:  $Q=CIA=(0.804)(0.223)(0.824)=0.148$  CUFT/S  
25 YEAR, 24 HOUR STORM  
BEFORE N/A  
AFTER:  $Q=CIA=(0.804)(0.281)(0.824)=0.186$  CUFT/S

2 DRIVEWAY CULVERTS ON ADJACENT PROPERTY W/ P.L.N. 1507-14-7076 ALONG NC HWY 421  
USING AUTOCAD LAUNCH EXPRESS TOOL, CHANNELS TAB, CIRCULAR CROSS-SECTION

CULVERT 1  
1.25 FT DIAMETER  
INVERT ELEVATION=0.01 FT,  
1.03% SLOPE  
CONCRETE ROUGHNESS N=0.013  
USING Q=0.087 CUFT/S CALCULATED ABOVE, EXPECTED WATER LEVEL IN CULVERT = 0.14 FT  
USING SUM OF DITCH AND BUFFER EXPECTED POST-DEVELOPMENT RUNOFF  
Q=0.087+0.186=0.273 CUFT/S; MAX WATER LEVEL IN CULVERT = 0.24 FT

CULVERT 2  
1.25 FT DIAMETER  
INVERT ELEVATION=0.01 FT,  
1.79% SLOPE  
CONCRETE ROUGHNESS N=0.013  
USING Q=0.087 CUFT/S CALCULATED ABOVE, EXPECTED WATER LEVEL IN CULVERT = 0.12 FT  
USING SUM OF DITCH AND BUFFER EXPECTED POST-DEVELOPMENT RUNOFF  
Q=0.273 CUFT/S; MAX WATER LEVEL IN CULVERT = 0.21 FT

THE EXISTING CULVERTS ARE SUFFICIENT AS NEITHER THE EXPECTED OR MAXIMUM RUNOFF CAUSED BY THE DEVELOPMENT IS CAPABLE OF OVERFLOWING THE CULVERT



PLAN INFORMATION:			
DESIGNED BY:	EE: P.A.	HORIZONTAL SCALE:	1"=20'
DRAWN BY:	EE: P.A.	VERTICAL SCALE:	
CHECKED BY:	BH	DATE CREATED:	11-18-2021
SURVEY INFORMATION:			

STORMWATER PLAN  
FOR  
UNIVERSITY STORAGE LLC.  
ERWIN SELF-STORAGE BUILDING

LOCATION:  
305 HUSONIC RD.  
ERWIN, NORTH CAROLINA  
DUKE TOWNSHIP  
HARRITT COUNTY

PROPERTY DEVELOPERS:  
UNIVERSITY STORAGE LLC.  
165 SOMMERVILLE PARK RD.  
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