

STATE	CONTRACT NUMBER	SHEET NO.	TOTAL SHEETS
N.C.	7910	1	10

REVISIONS	SEPTEMBER 2022

NCDEQ DIVISION OF MITIGATION SERVICES

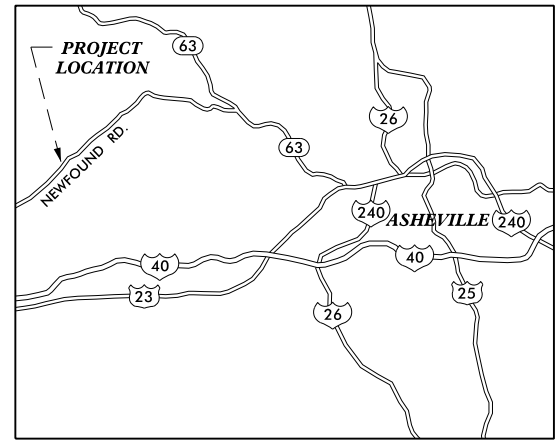
DALE'S CREEK RESTORATION SITE

BUNCOMBE COUNTY, NORTH CAROLINA
 FRENCH BROAD RIVER BASIN
 CATALOGING UNIT 06010105
 (LAT 35.5970 / LON -82.7427)

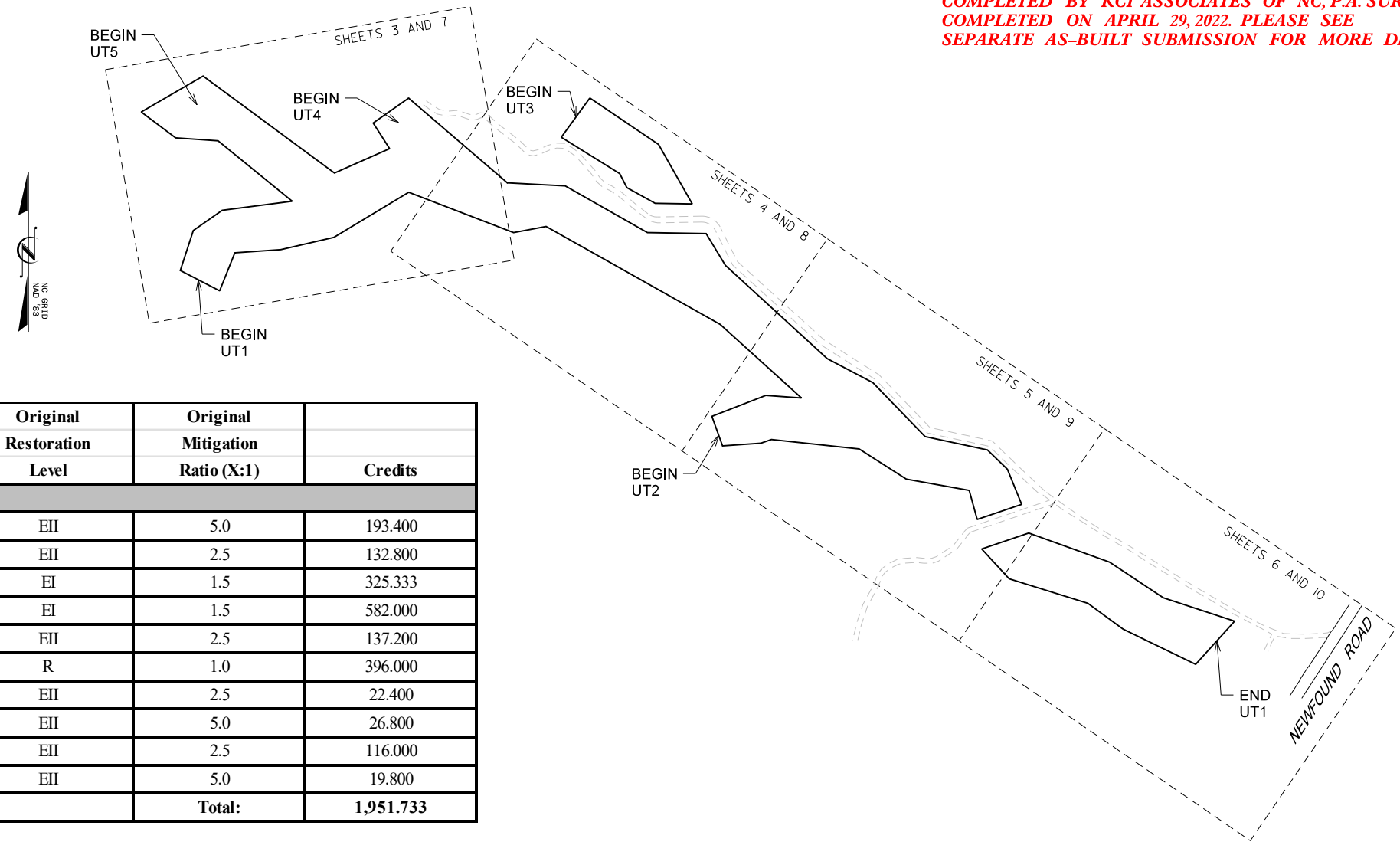
RECORD DRAWINGS

AS-BUILT DATA TAKEN FROM AS-BUILT SURVEY COMPLETED BY KCI ASSOCIATES OF NC, P.A. SURVEYING COMPLETED ON APRIL 29, 2022. PLEASE SEE SEPARATE AS-BUILT SUBMISSION FOR MORE DETAILS.

KCI JOB# : 161904754



VICINITY MAP
NOT TO SCALE



PROJECT DATA:

Project Segmen	Original Mitigation Plan Ft/Ac	As-Built Ft/ Ac	Original Mitigation Category	Original Restoration Level	Original Mitigation Ratio (X:1)	Credits
Stream						
UT1 Reach 1	967	967	Cool	EII	5.0	193.400
UT1 Reach 2	332	332	Cool	EII	2.5	132.800
UT1 Reach 3	488	478	Cool	EI	1.5	325.333
UT1 Reach 4	873	869	Cool	EI	1.5	582.000
UT2	343	343	Cool	EII	2.5	137.200
UT3	396	388	Cool	R	1.0	396.000
UT4 Reach 1	56	58	Cool	EII	2.5	22.400
UT4 Reach 2	134	134	Cool	EII	5.0	26.800
UT5 Reach 1	290	290	Cool	EII	2.5	116.000
UT5 Reach 2	99	99	Cool	EII	5.0	19.800
Total:						1,951.733

CONTRACT #: 7910

DIRECTIONS TO SITE

FROM ASHEVILLE, TAKE U.S. 74 ATL. USE THE TWO RIGHT LANES TO TAKE A RIGHT ONTO NC-63 WEST. TURN LEFT ONTO NEWFOUND ROAD. AFTER 6 MILES, THE STREAM PROJECT ENTRANCE WILL BE ON ON THE RIGHT ,JUST BEFORE THE DRIVEWAY AT 1281 NEWFOUND RD.

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 GENERAL NOTES & PROJECT LEGEND
- 3-6 SITE PLAN
- 7-10 PLANTING PLAN



Prepared for:
HARRY TSOIMIDES
DMS PROJECT MANAGER

Prepared by:
KRISTIN E. KNIGHT, PE
PROJECT ENGINEER
ALEX FRENCH
PROJECT DESIGNER

PROJECT ENGINEER

SIGNATURE: P.E.

GENERAL NOTES:

BEARINGS AND DISTANCES:
 ALL BEARINGS ARE NAD 1983 GRID BEARINGS.
 ALL DISTANCES AND COORDINATES SHOWN ARE HORIZONTAL
 (GROUND) VALUES.

DEVIATIONS, ADDITIONS, AND SUBTRACTIONS TO ORIGINAL CONSTRUCTION
 PLANS AND ANY ADDITIONAL NOTES ARE MARKED IN RED.

CONTROL POINTS:

POINT	NORTHING	EASTING	ELEV.
101	693167.61	887709.51	2229.57
102	692666.28	887349.42	2242.21
103	693239.58	887436.71	2239.08
104	693185.23	887309.98	2264.79
105	693421.72	887149.68	2259.88
106	693407.22	886967.13	2279.77
107	693511.76	887037.65	2267.77
108	693624.14	886950.28	2275.15
109	693715.56	886844.99	2282.49
110	693790.30	886620.74	2306.39
111	693884.84	886706.61	2301.23
112	694034.92	886498.46	2320.02
113	694128.04	886509.55	2334.48
114	694260.40	886359.34	2353.97
117	693817.87	887511.07	2316.43
118	693750.94	887696.20	2307.26
119	692919.62	887227.77	2259.50



09-29-2022

PROJECT LEGEND:

Designed Thalweg w/Approximate Bankfull Limits		Vegetation Plot	
As-Built Thalweg w/Approximate Bankfull Limits		Photo Point	
Installed Riffle Enhancement		Stream Gauge	
Installed Riffle Grade Control		Cross-section	
Installed Cascade Riffle		Minor Contour Line (1ft.)	
Installed Step Pool		Major Contour Line (5ft.)	
Installed Live Lift		Overhead Utility	
Filled Existing Channel		Installed Fencing	
		Installed Drinkers	

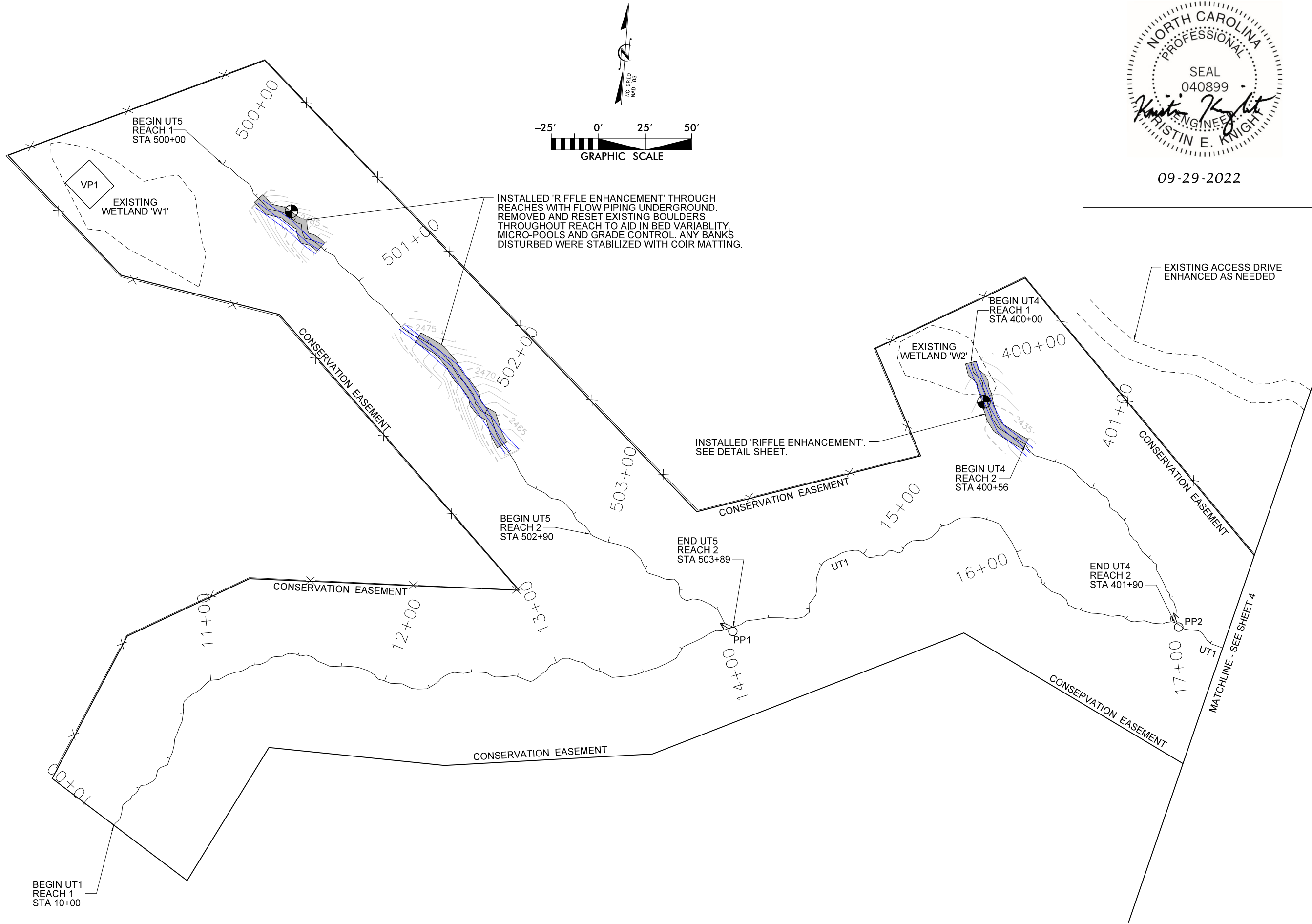
REVISED PER DIS COMMENTS	SYMBOL	DESCRIPTION	DATE



DALE'S CREEK
 RESTORATION SITE
Record Drawings
 BUNCOMBE COUNTY, NORTH CAROLINA

DATE: MAY 2022
 SCALE: N.T.S.

GENERAL
 NOTES &
 PROJECT
 LEGEND



INSTALLLED 'RIFFLE ENHANCEMENT' THROUGH REACHES WITH FLOW PIPING UNDERGROUND. REMOVED AND RESET EXISTING BOULDERS THROUGHOUT REACH TO AID IN BED VARIABILITY. MICRO-POOLS AND GRADE CONTROL. ANY BANKS DISTURBED WERE STABILIZED WITH COIR MATTING.

INSTALLLED 'RIFFLE ENHANCEMENT'. SEE DETAIL SHEET.

EXISTING ACCESS DRIVE ENHANCED AS NEEDED



09-29-2022

REVISED PER DIS COMMENTS	SYMBOL	DESCRIPTION	DATE
A			SEP 2022



KCI
ASSOCIATES OF NC
ENGINEERS • PLANNERS • SCIENTISTS
4505 FALLS OF NEUSE ROAD, SUITE 400
RALEIGH, NORTH CAROLINA 27609

DALE'S CREEK
RESTORATION SITE
Record Drawings
BUNCOMBE COUNTY, NORTH CAROLINA

DATE: MAY 2022
SCALE: GRAPHIC

SITE PLAN

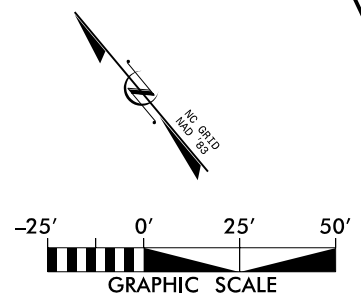
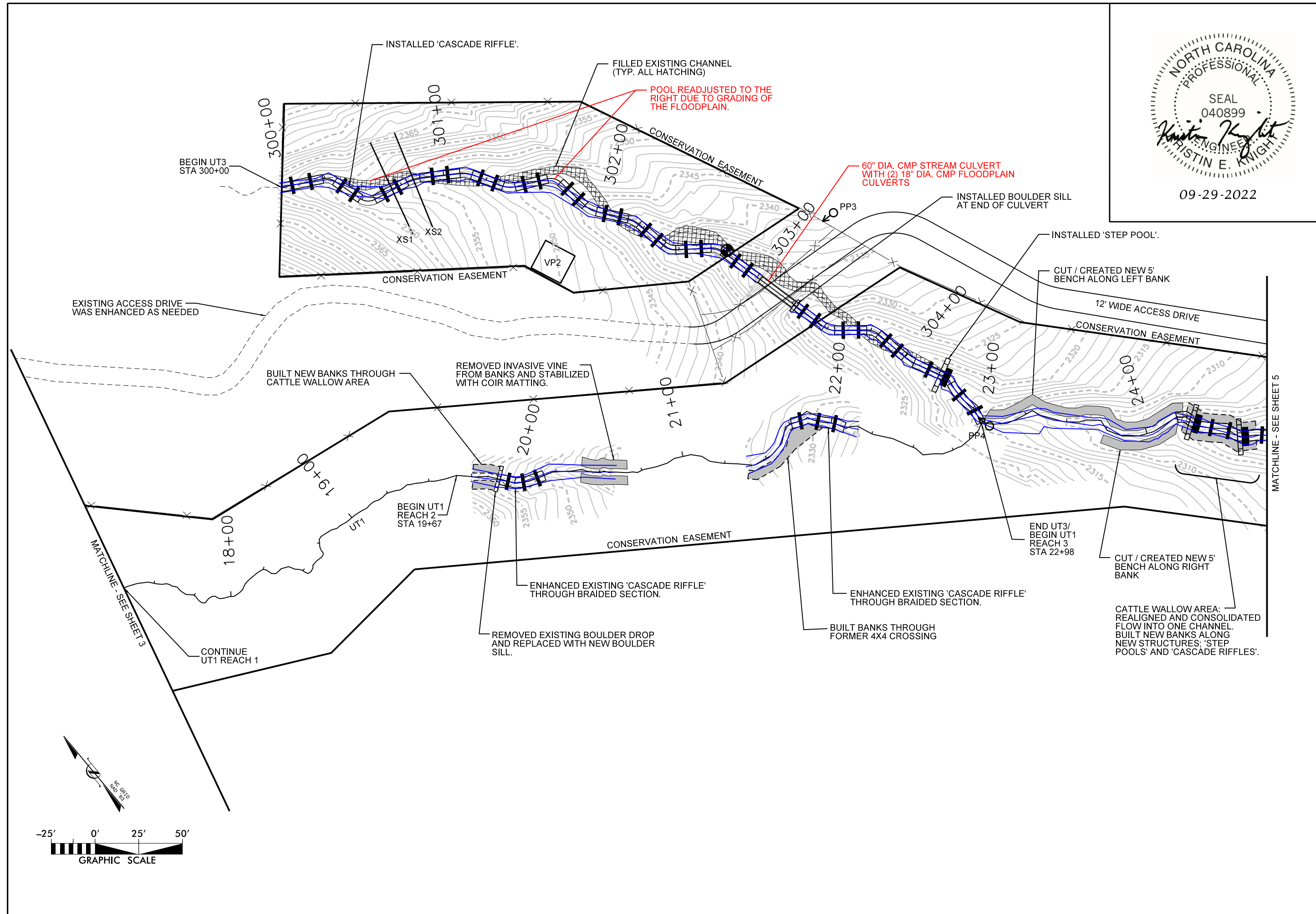


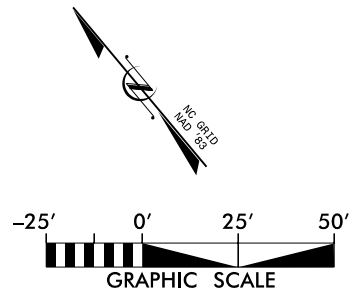
NO.	REVISIONS	DATE



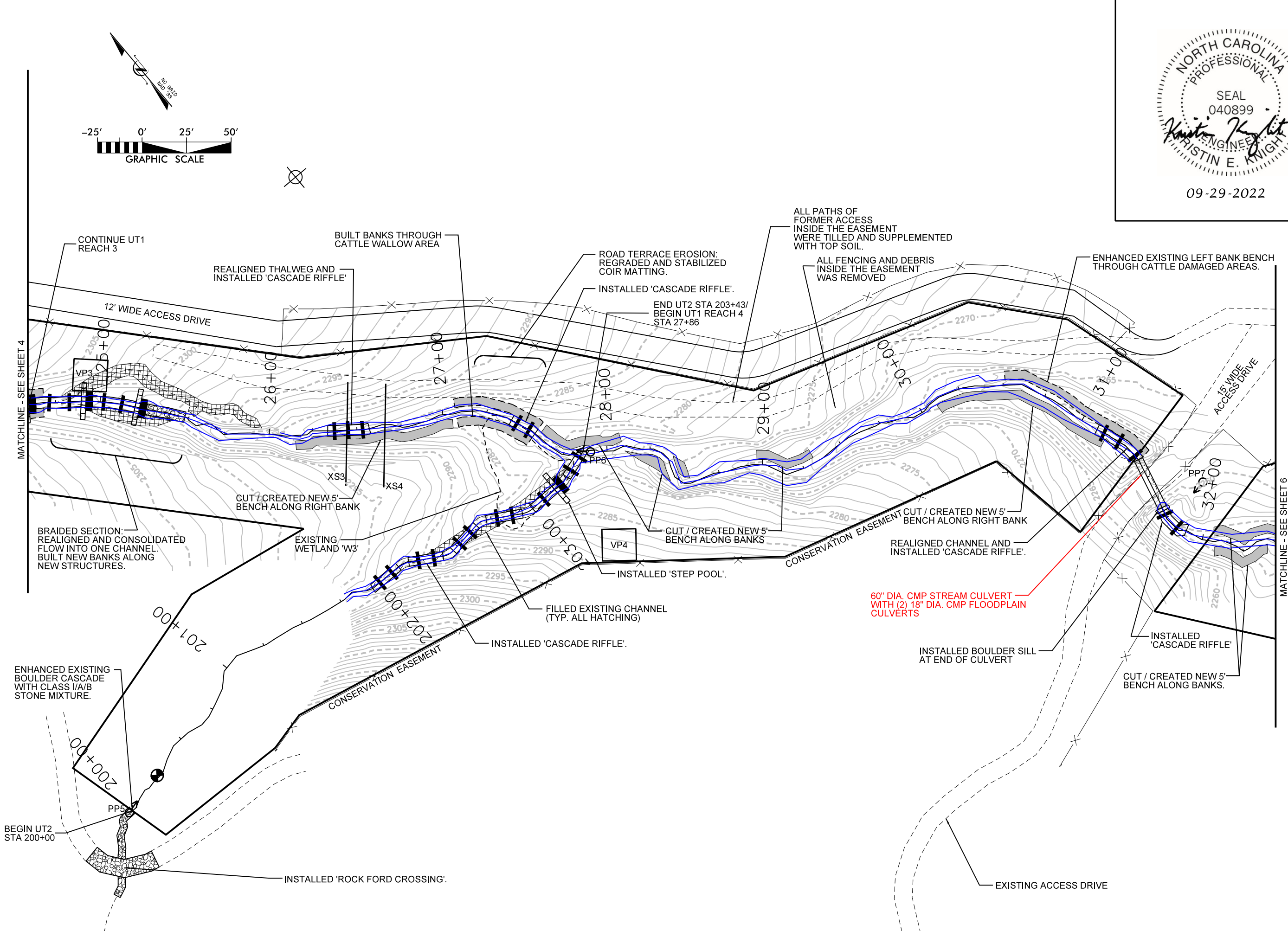
DALE'S CREEK RESTORATION SITE
Record Drawings
 BUNCOMBE COUNTY, NORTH CAROLINA

DATE: MAY 2022
 SCALE: GRAPHIC
 SHEET 4 OF 10





REVISED PER DMS COMMENTS	SYMBOL	DESCRIPTION	DATE

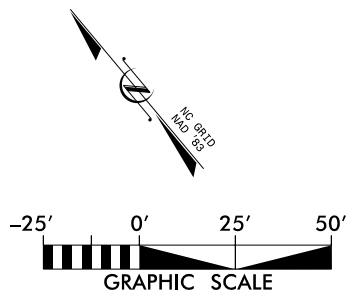
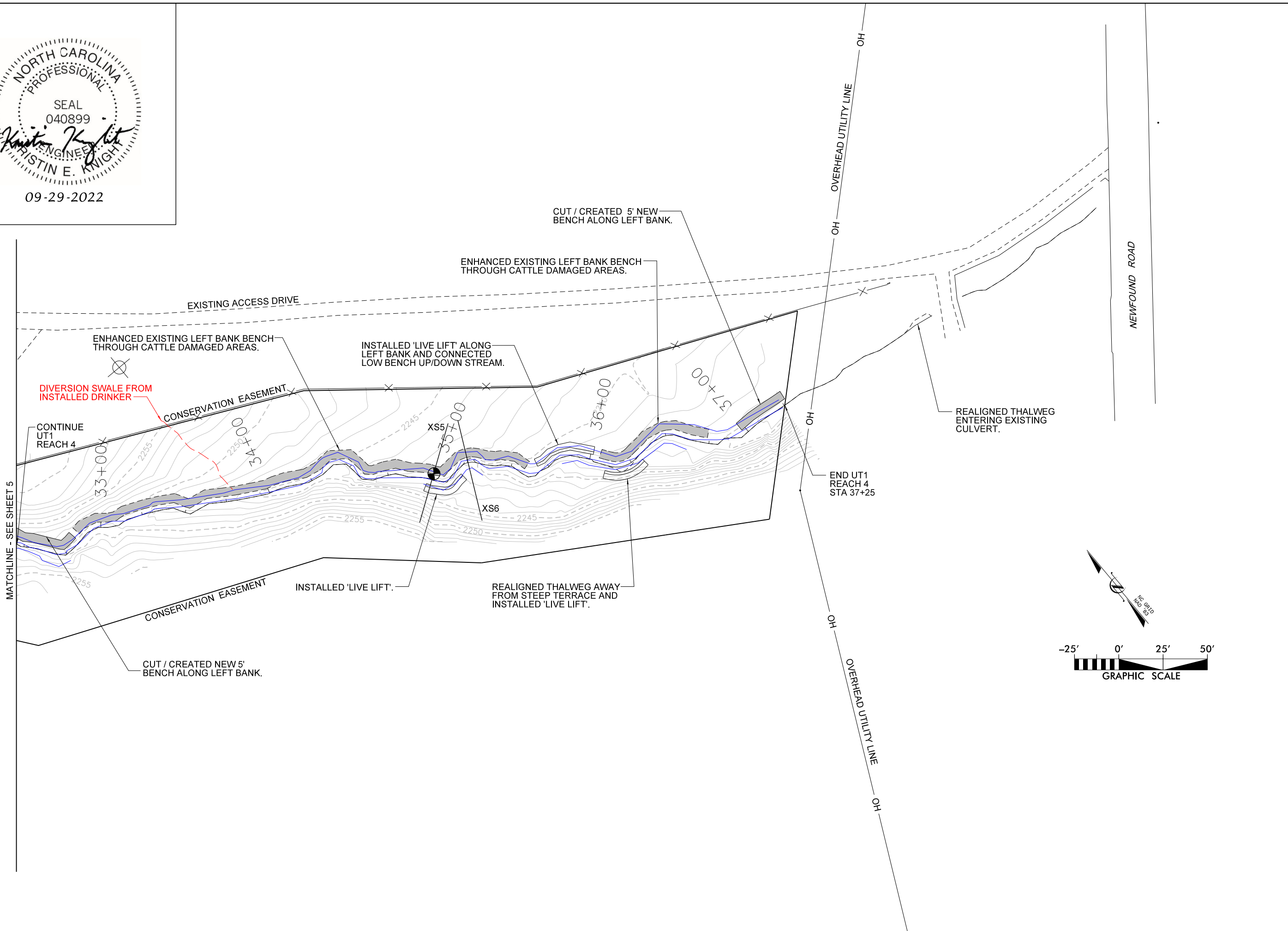


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DALE'S CREEK RESTORATION SITE
Record Drawings
BUNCOMBE COUNTY, NORTH CAROLINA

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SITE PLAN



SEP 2022	REVISED PER DMS COMMENTS	SYMBOL	DESCRIPTION	DATE
A				
REVISIONS				

KCI
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 4505 FALLS OF NEUSE ROAD, SUITE 400
 RALEIGH, NORTH CAROLINA 27609

NC
 NCDEQ - DIVISION OF
 MITIGATION SERVICES

**DALE'S CREEK
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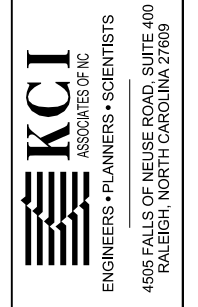
**SITE
 PLAN**

SHEET 6 OF 10



09-29-2022

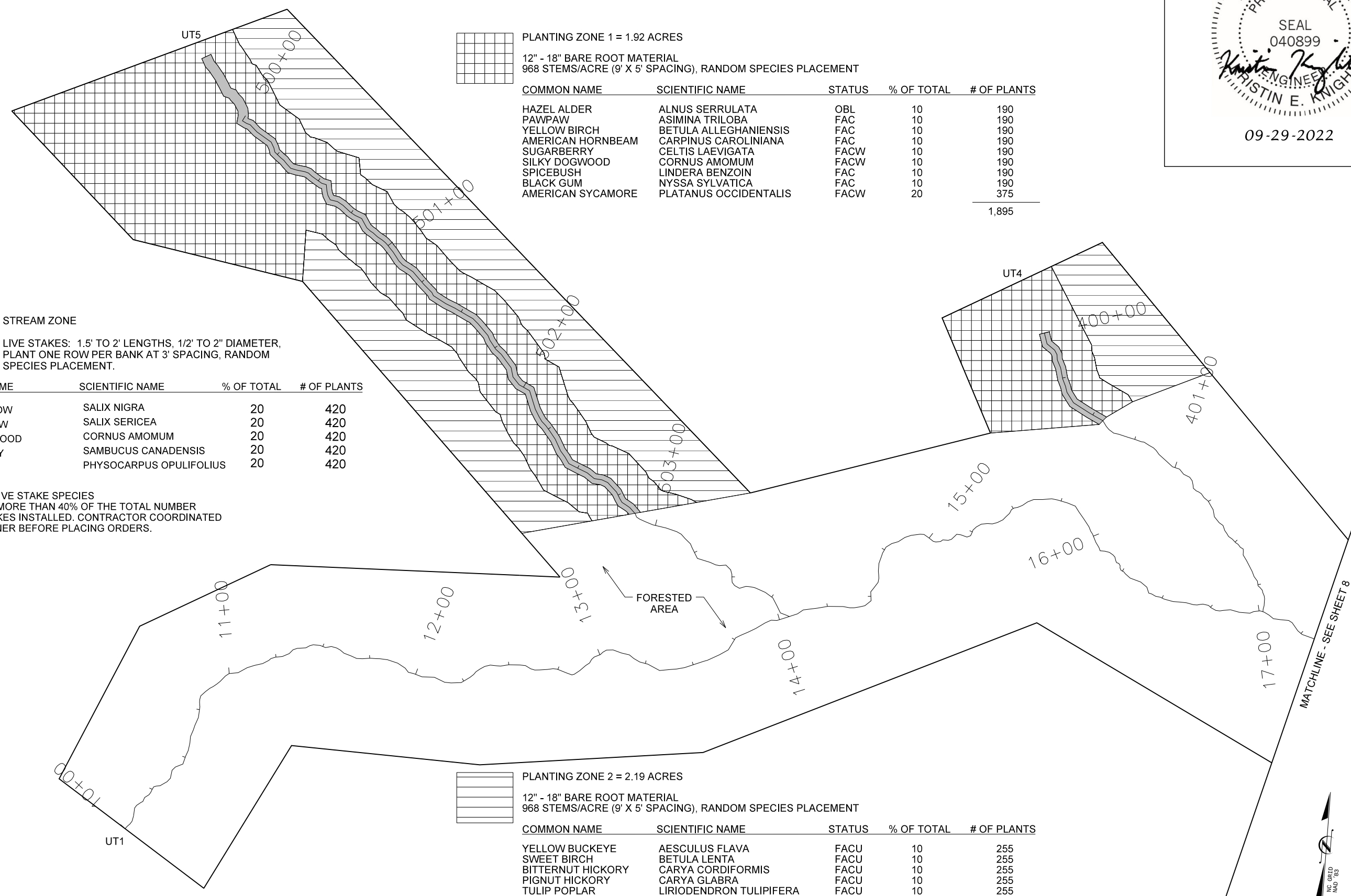
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DALE'S CREEK RESTORATION SITE
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PLANTING PLAN
 SHEET 7 OF 10



PLANTING ZONE 1 = 1.92 ACRES
 12" - 18" BARE ROOT MATERIAL
 968 STEMS/ACRE (9' X 5' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	STATUS	% OF TOTAL	# OF PLANTS
HAZEL ALDER	ALNUS SERRULATA	OBL	10	190
PAWPAW	ASIMINA TRILOBA	FAC	10	190
YELLOW BIRCH	BETULA ALLEGHANIENSIS	FAC	10	190
AMERICAN HORNBEAM	CARPINUS CAROLINIANA	FAC	10	190
SUGARBERRY	CELTIS LAEVIGATA	FACW	10	190
SILKY DOGWOOD	CORNUS AMOMUM	FACW	10	190
SPICEBUSH	LINDERA BENZOIN	FAC	10	190
BLACK GUM	NYSSA SYLVATICA	FAC	10	190
AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	FACW	20	375
				1,895

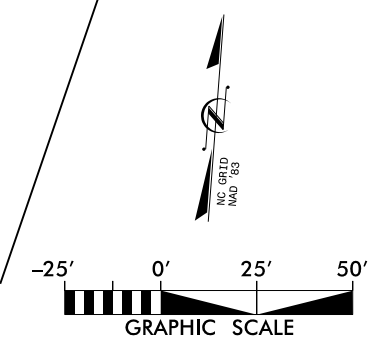
STREAM ZONE
 LIVE STAKES: 1.5' TO 2' LENGTHS, 1/2" TO 2" DIAMETER,
 PLANT ONE ROW PER BANK AT 3' SPACING, RANDOM SPECIES PLACEMENT.

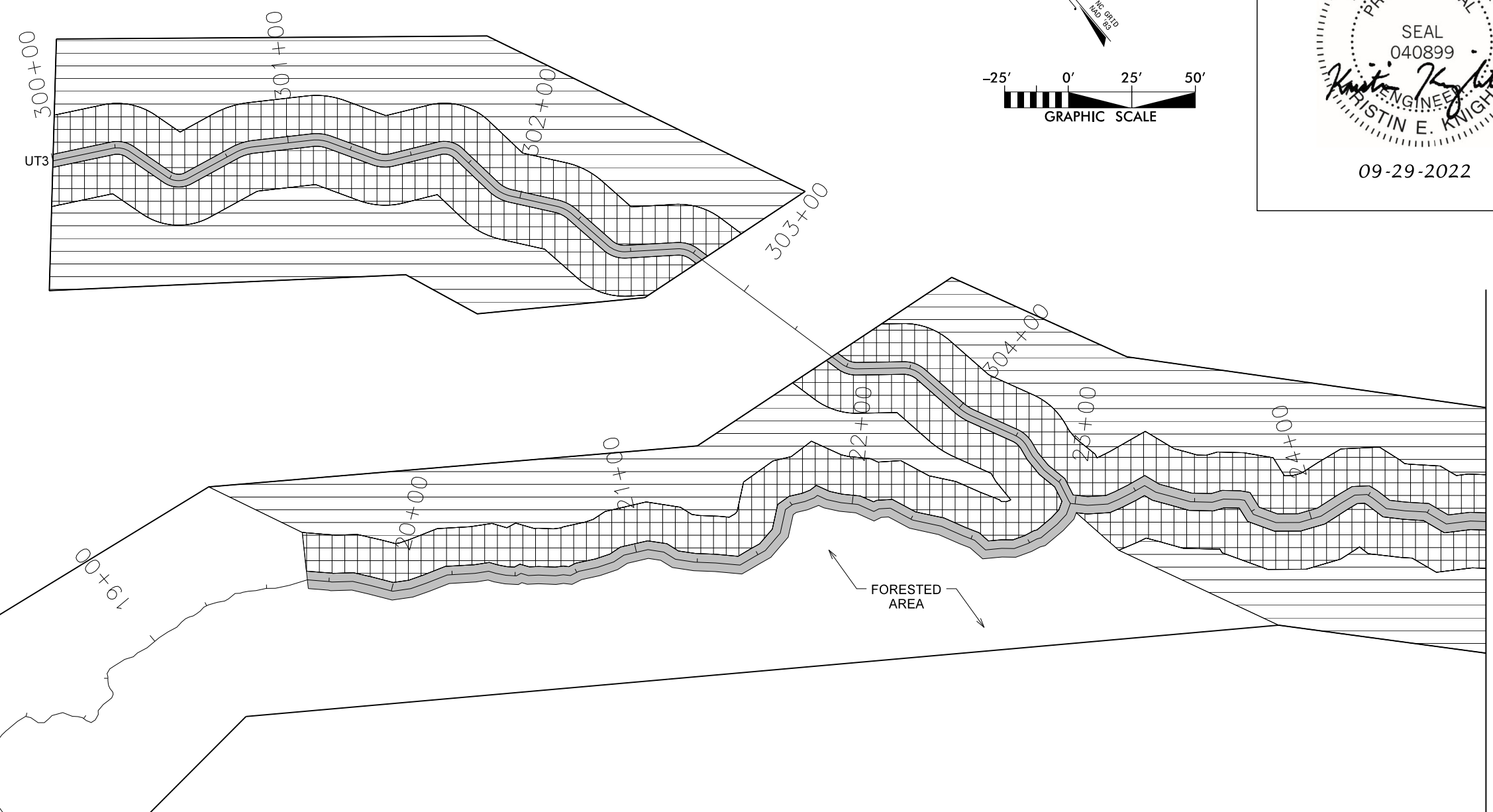
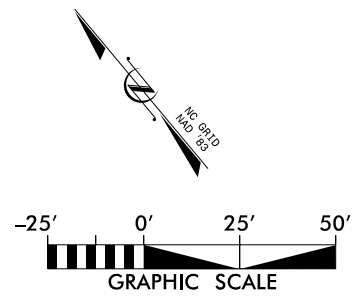
COMMON NAME	SCIENTIFIC NAME	% OF TOTAL	# OF PLANTS
BLACK WILLOW	SALIX NIGRA	20	420
SILKY WILLOW	SALIX SERICEA	20	420
SILKY DOGWOOD	CORNUS AMOMUM	20	420
ELDERBERRY	SAMBUCUS CANADENSIS	20	420
NINEBARK	PHYSOCARPUS OPULIFOLIUS	20	420

NO SINGLE LIVE STAKE SPECIES COMPOSED MORE THAN 40% OF THE TOTAL NUMBER OF LIVE STAKES INSTALLED. CONTRACTOR COORDINATED WITH DESIGNER BEFORE PLACING ORDERS.

PLANTING ZONE 2 = 2.19 ACRES
 12" - 18" BARE ROOT MATERIAL
 968 STEMS/ACRE (9' X 5' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	STATUS	% OF TOTAL	# OF PLANTS
YELLOW BUCKEYE	AESCULUS FLAVA	FACU	10	255
SWEET BIRCH	BETULA LENTA	FACU	10	255
BITTERNUT HICKORY	CARYA CORDIFORMIS	FACU	10	255
PIGNOT HICKORY	CARYA GLABRA	FACU	10	255
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	10	255
AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	FACW	10	255
WHITE OAK	QUERCA ALBA	FACU	10	255
SOUTHERN RED OAK	QUERCUS FALCATA	FACU	10	255
CHESTNUT OAK	QUERCUS MONTANA	UPL	10	255
NORTHERN RED OAK	QUERCUS RUBRA	FACU	10	255
				2,550



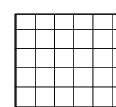
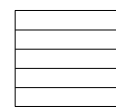
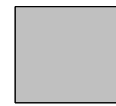


MATCHLINE - SEE SHEET 7
CONTINUE UT1

FORESTED AREA

FORESTED AREA

MATCHLINE - SEE SHEET 9

-  PLANTING ZONE 1
-  PLANTING ZONE 2
-  STREAM ZONE

* NOTE: SEE SHEET 7 FOR PLANTING QUANTITIES

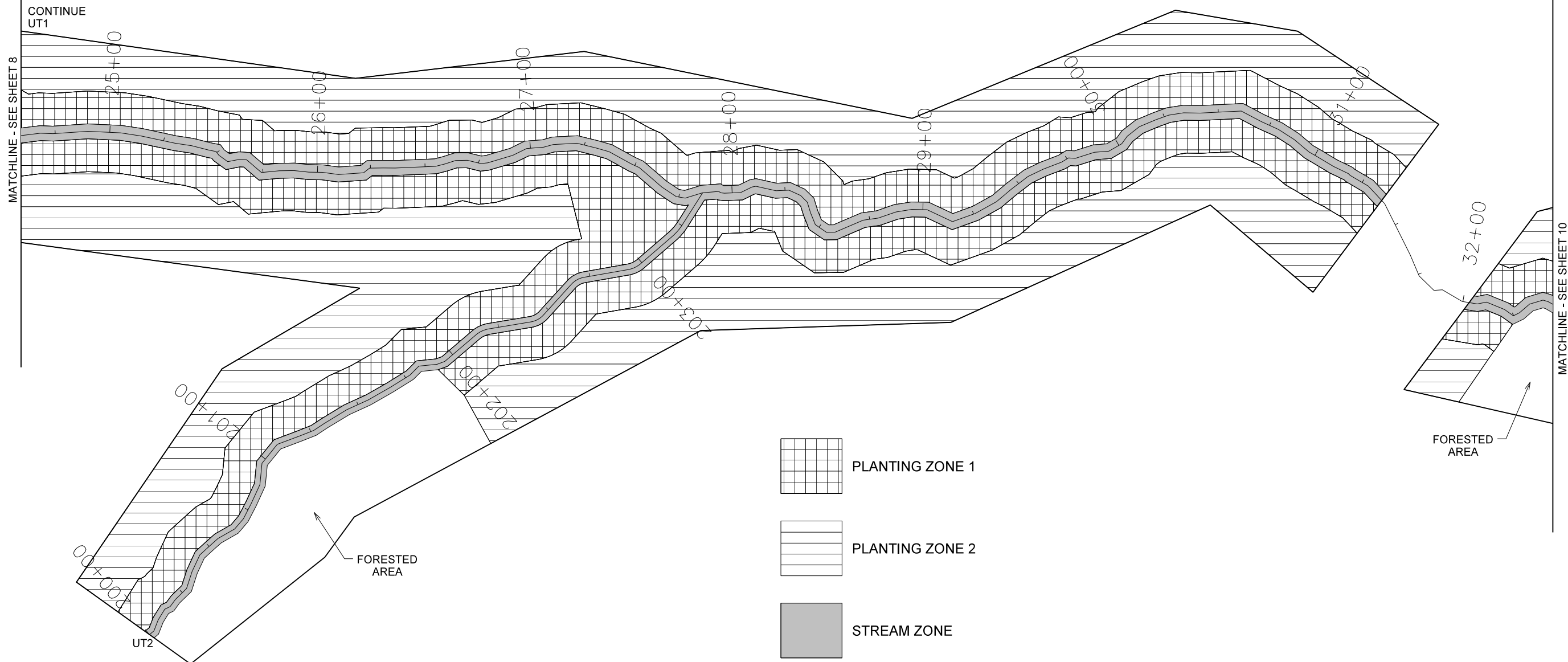
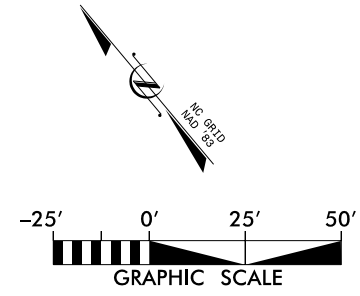
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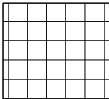
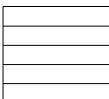



DALE'S CREEK
RESTORATION SITE
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BUNCOMBE COUNTY, NORTH CAROLINA

DATE: MAY 2022
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PLANTING
PLAN



-  PLANTING ZONE 1
-  PLANTING ZONE 2
-  STREAM ZONE

* NOTE: SEE SHEET 7 FOR PLANTING QUANTITIES

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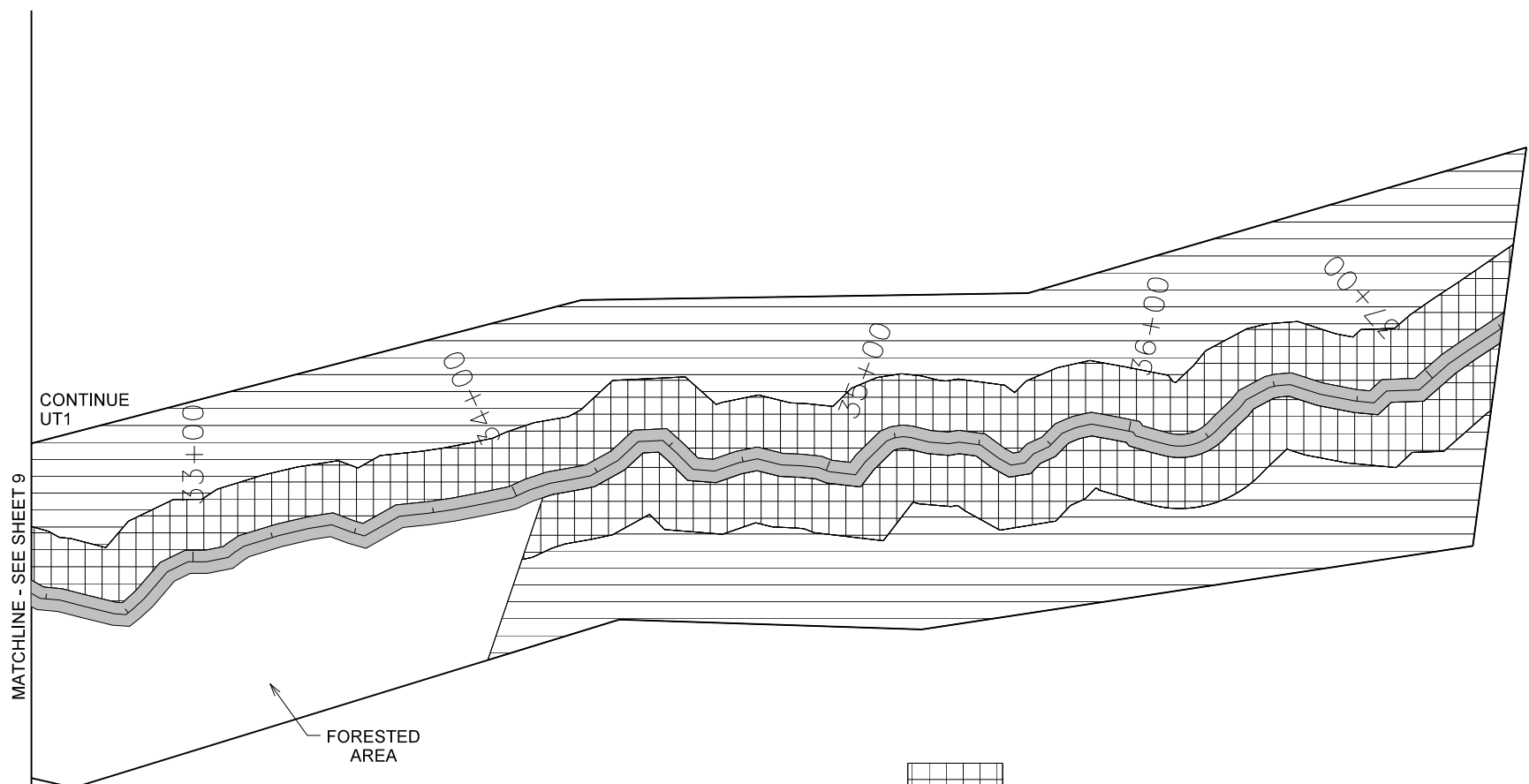
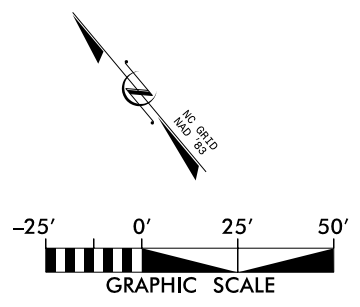
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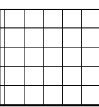
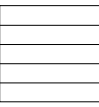

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PLANTING PLAN



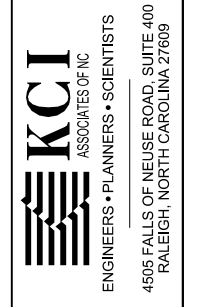
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-  PLANTING ZONE 1
-  PLANTING ZONE 2
-  STREAM ZONE

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