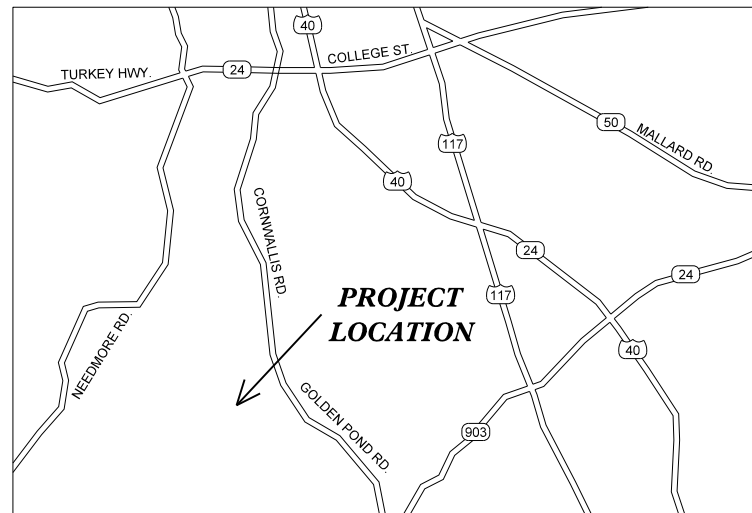


KCI JOB# : 20122905
KCI JOB# : 20145090

CONTRACT #: NORMAN'S PASTURE = 005010
NORMAN'S PASTURE II = 005787



VICINITY MAP
NOT TO SCALE

NCDEQ DIVISION OF MITIGATION SERVICES

NORMAN'S PASTURE / NORMAN'S PASTURE II RESTORATION SITES

SAMPSON COUNTY, NORTH CAROLINA
CAPE FEAR RIVER BASIN

STEWARTS CREEK LOCAL WATERSHED
03030006110040

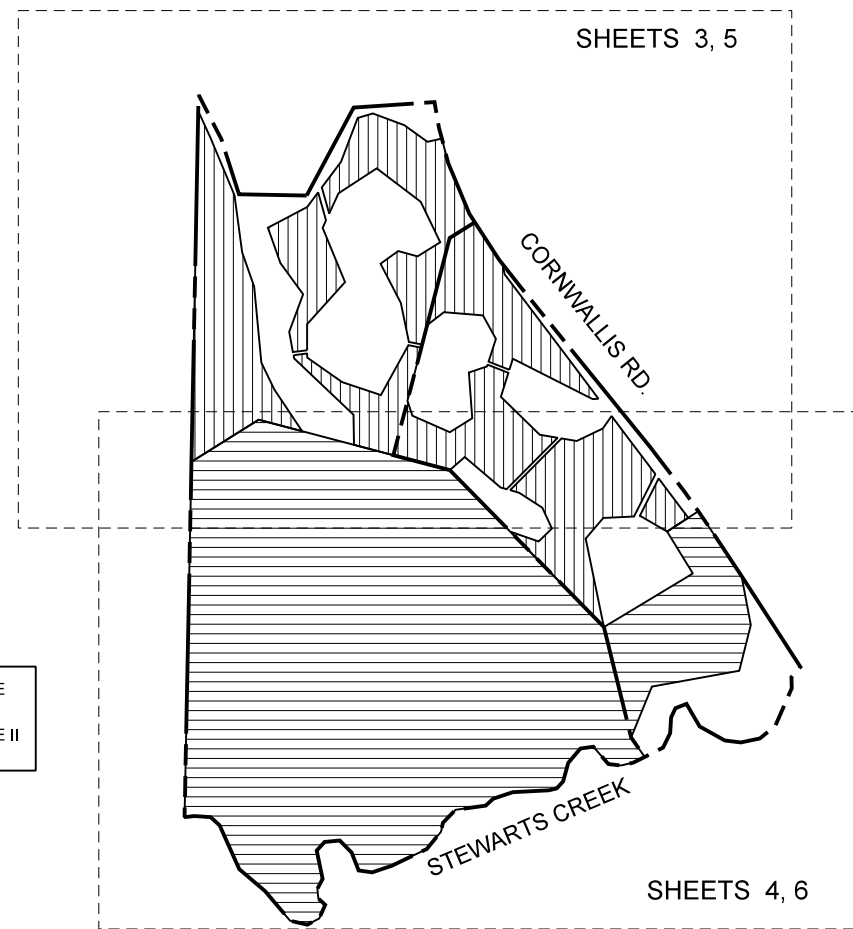
STATE	DMS PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
N.C.	NORMAN'S PASTURE=95717 NORMAN'S II=96310	1	7

REVISIONS	DATE
REVISED PER DMS COMMENTS	05-31-2016

INDEX OF SHEETS

1	TITLE SHEET
2	GENERAL NOTES & PROJECT LEGEND
3-4	AS-BUILT SITE PLAN
5-6	PLANTING PLAN
7	MITIGATION CLASSIFICATION

	NORMAN'S PASTURE EASEMENT
	NORMAN'S PASTURE II EASEMENT



AS-BUILT PLANS

DIRECTIONS

FROM RALEIGH TAKE I-40 EAST TOWARDS WILMINGTON. FOLLOW I-40 FOR 65 MILES. TAKE EXIT 356 AND TURN RIGHT ONTO NC-24 WEST. IN ABOUT A MILE, TAKE A LEFT ONTO CARROLS ROAD. TAKE THE FIRST RIGHT ONTO BLANCHARD ROAD. MERGE SLIGHTLY TO THE RIGHT TO STAY ON CORNWALLIS ROAD AND FOLLOW FOR 6 MILES. THE SITE WILL BE ON THE RIGHT, JUST PAST A WHITE HOUSE.

PROJECT DATA

	WETLAND REESTABLISHMENT (1:1)	WETLAND REHABILITATION (1.5:1)	WETLAND PRESERVATION (NO CREDIT)	STREAM ENHANCEMENT II (2.5:1)
NORMANS PASTURE CREDITS	15.5 AC./ 15.5 CR.	0.7 AC./ 0.5 CR.	9.0 AC./ 0 CR.	-
NORMANS PASTURE II CREDITS	8.8 AC./ 8.8 CR.	1.4 AC./ 0.9 CR.	0.8 AC./ 0 CR.	843 L.F./ 337 CR.

Prepared in the Office of:



KCI Associates
of North Carolina, P.A.
SUITE 220 LANDMARK CENTER II, 4601 SIX FORKS RD., RALEIGH, NC 27609
ENGINEERS • PLANNERS • ECOLOGISTS

GARY M. MRYNCZA, P.E.
PROJECT ENGINEER

JOSEPH PFEIFFER
WETLAND DESIGN

PROJECT ENGINEER



SIGNATURE:

P.E.



GENERAL NOTES:

DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.





THE BASIS OF THE MERIDIANS AND COORDINATES FOR THIS PLAT IS THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD 83). ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.

NO UNDERGROUND UTILITY LOCATING PERFORMED DURING THE COURSE OF THIS SURVEY.

CONTROL POINTS:

	NORTHING	EASTING	ELEVATION
KCI#1	421327.02	2255180.03	84.25
KCI#2	420802.02	2255524.70	80.44
KCI#3	421074.48	2254096.57	77.81
KCI#4	420719.93	2254192.33	78.53
KCI#5	420159.95	2254533.95	76.72
KCI#6	420020.91	2253983.21	75.53
KCI#7	420589.61	2254676.16	76.12
KCI#8	420347.62	2255065.72	77.47
KCI#9	420497.08	2255378.18	77.48
KCI#10	421978.76	2254649.55	95.68
KCI#11	423050.98	2254450.09	115.17
KCI#12	420425.44	2253972.07	75.46
KCI#13	420267.67	2254832.42	76.59
KCI#14	421456.93	2254046.76	86.27
KCI#15	421798.55	2253885.11	88.59
KCI#16	421588.92	2253884.54	85.93
KCI#17	421943.33	2253888.17	91.11
KCI#18	422093.54	2253839.07	96.46

PROJECT LEGEND:

- Filled Ditches 
- Ditch Plugs 
- Stabilized Drainage Outfall 
- Seep Enhancement 

- Existing Woods Line 
- Minor Contour Line 
- Major Contour Line 
- Overhead Utilities 

NO.	DATE	REVISIONS

NCDEQ DIVISION OF
MITIGATION SERVICES

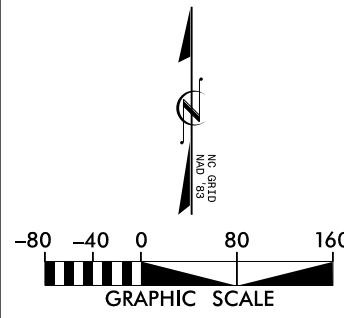
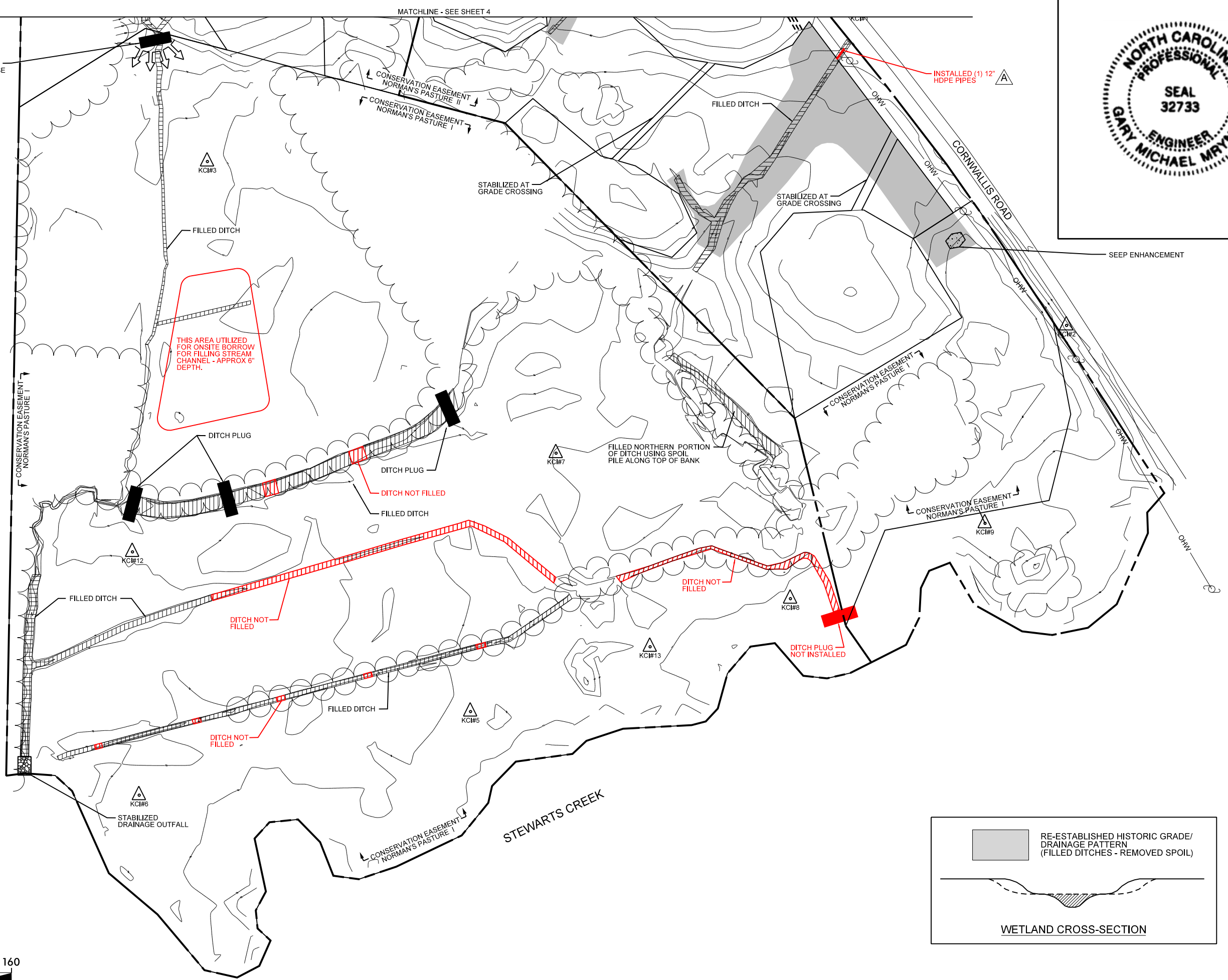
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4601 SIX FORKS ROAD, SUITE 220
RALEIGH, NORTH CAROLINA 27609

NORMAN'S PASTURE & NORMAN'S PASTURE II
RESTORATION SITES
SAMPSON COUNTY, NORTH CAROLINA

DATE: FEB 2016
SCALE: N.T.S.
GENERAL NOTES & PROJECT LEGEND
SHEET 2 OF 7

INSTALLED DITCH PLUG.
RE-GRADED TO DISPERSE
FLOW THROUGHOUT
FLOODPLAIN.

MATCHLINE - SEE SHEET 4



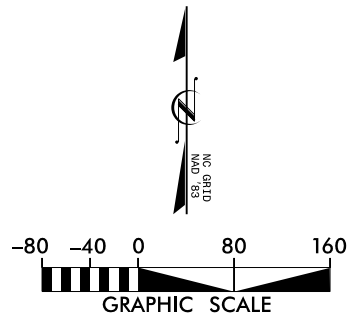
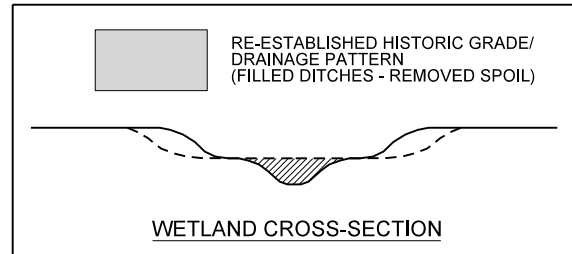
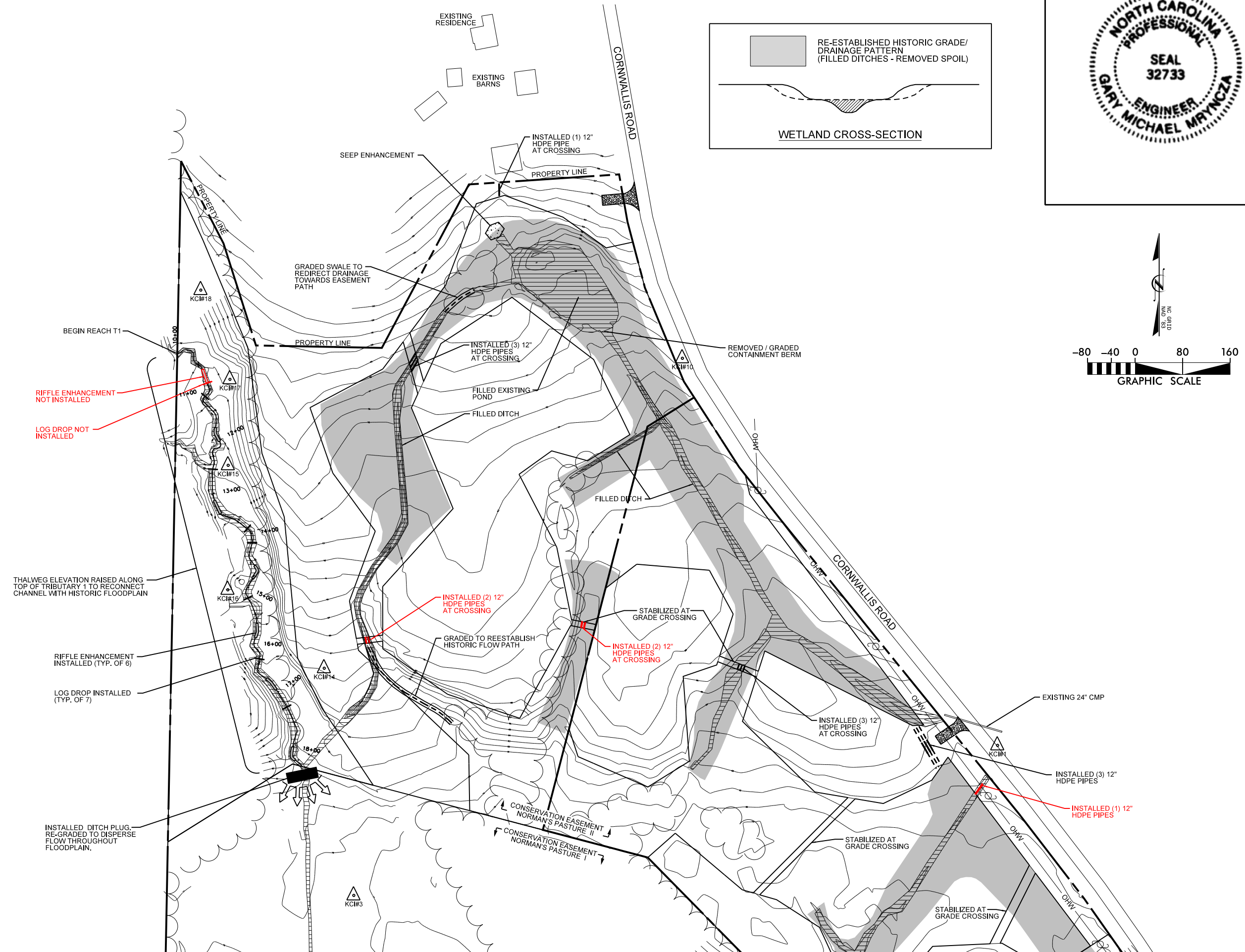
05-31-2016
REVISOR
DATE
REVISIONS
REVISED PER DWS COMMENTS

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 RALEIGH, NORTH CAROLINA 27609

**NORMAN'S PASTURE & NORMAN'S PASTURE II
 RESTORATION SITES**
 SAMPSON COUNTY, NORTH CAROLINA

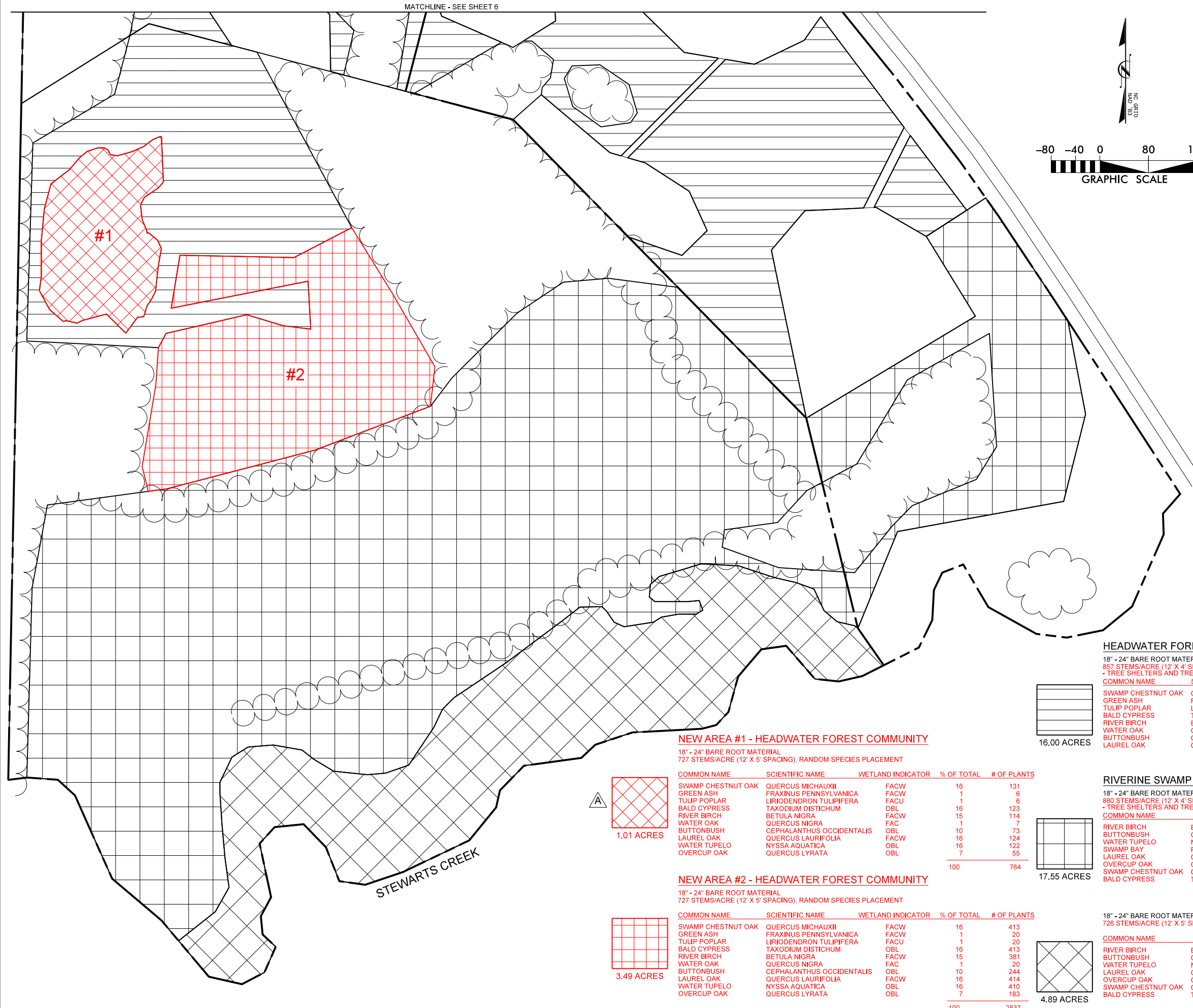
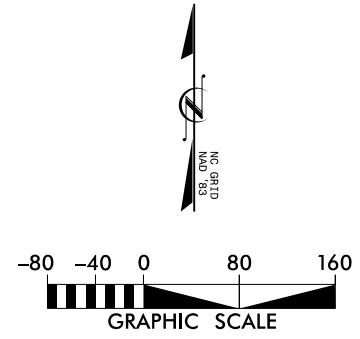
DATE: FEB 2016
 SCALE: GRAPHIC
 AS-BUILT
 SITE PLAN
 SHEET 3 OF 7



DATE	
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NORMAN'S PASTURE & NORMAN'S PASTURE II RESTORATION SITES SAMPSON COUNTY, NORTH CAROLINA	
DATE: FEB 2016	SCALE: GRAPHIC
AS-BUILT SITE PLAN	
SHEET 4	OF 7

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 6



NEW AREA #1 - HEADWATER FOREST COMMUNITY

18" - 24" BARE ROOT MATERIAL
727 STEMS/ACRE (12' X 5' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	WETLAND INDICATOR	% OF TOTAL	# OF PLANTS
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW	16	131
GREEN ASH	FRAXINUS PENNSYLVANICA	FACW	1	6
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	1	6
BALD CYPRESS	TAXODIUM DISTICHUM	OBL	16	123
RIVER BIRCH	BETULA NIGRA	FACW	15	114
WATER OAK	QUERCUS NIGRA	FAC	1	7
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	10	73
LAUREL OAK	QUERCUS LAURIFOLIA	FACW	16	124
WATER TUPELO	NYSSA AQUATICA	OBL	16	122
OVERCUP OAK	QUERCUS LYRATA	OBL	7	55
			100	764



NEW AREA #2 - HEADWATER FOREST COMMUNITY

18" - 24" BARE ROOT MATERIAL
727 STEMS/ACRE (12' X 5' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	WETLAND INDICATOR	% OF TOTAL	# OF PLANTS
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW	16	413
GREEN ASH	FRAXINUS PENNSYLVANICA	FACW	1	20
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	1	20
BALD CYPRESS	TAXODIUM DISTICHUM	OBL	16	413
RIVER BIRCH	BETULA NIGRA	FACW	15	381
WATER OAK	QUERCUS NIGRA	FAC	1	20
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	10	244
LAUREL OAK	QUERCUS LAURIFOLIA	FACW	16	414
WATER TUPELO	NYSSA AQUATICA	OBL	16	410
OVERCUP OAK	QUERCUS LYRATA	OBL	7	183
			100	2537



HEADWATER FOREST COMMUNITY

18" - 24" BARE ROOT MATERIAL
857 STEMS/ACRE (12' X 4' SPACING), RANDOM SPECIES PLACEMENT
- TREE SHELTERS AND TREE MATS INSTALLED EVERY 8TH TREE -

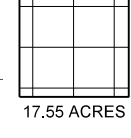
COMMON NAME	SCIENTIFIC NAME	WETLAND INDICATOR	% OF TOTAL	# OF PLANTS
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW	14	1974
GREEN ASH	FRAXINUS PENNSYLVANICA	FACW	14	1874
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FACU	14	1974
BALD CYPRESS	TAXODIUM DISTICHUM	OBL	12	1579
RIVER BIRCH	BETULA NIGRA	FACW	14	1876
WATER OAK	QUERCUS NIGRA	FAC	14	1974
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	2	296
LAUREL OAK	QUERCUS LAURIFOLIA	FACW	15	2073
			100	13,721



RIVERINE SWAMP FOREST

18" - 24" BARE ROOT MATERIAL
880 STEMS/ACRE (12' X 4' SPACING), RANDOM SPECIES PLACEMENT
- TREE SHELTERS AND TREE MATS INSTALLED EVERY 8TH TREE -

COMMON NAME	SCIENTIFIC NAME	WETLAND INDICATOR	% OF TOTAL	# OF PLANTS
RIVER BIRCH	BETULA NIGRA	FACW	5	827
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	6	918
WATER TUPELO	NYSSA AQUATICA	OBL	27	4133
SWAMP BAY	PERSEA PALUSTRIS	FACW	11	1653
LAUREL OAK	QUERCUS LAURIFOLIA	FACW	11	1653
OVERCUP OAK	QUERCUS LYRATA	OBL	10	1561
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW	11	1653
BALD CYPRESS	TAXODIUM DISTICHUM	OBL	30	4684
			100	15,428



18" - 24" BARE ROOT MATERIAL
726 STEMS/ACRE (12' X 5' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	WETLAND INDICATOR	% OF TOTAL	# OF PLANTS
RIVER BIRCH	BETULA NIGRA	FACW	23	804
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	13	469
WATER TUPELO	NYSSA AQUATICA	OBL	9	335
LAUREL OAK	QUERCUS LAURIFOLIA	FACW	21	737
OVERCUP OAK	QUERCUS LYRATA	OBL	6	201
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW	23	804
BALD CYPRESS	TAXODIUM DISTICHUM	OBL	6	201
			100	3550



05-31-2016

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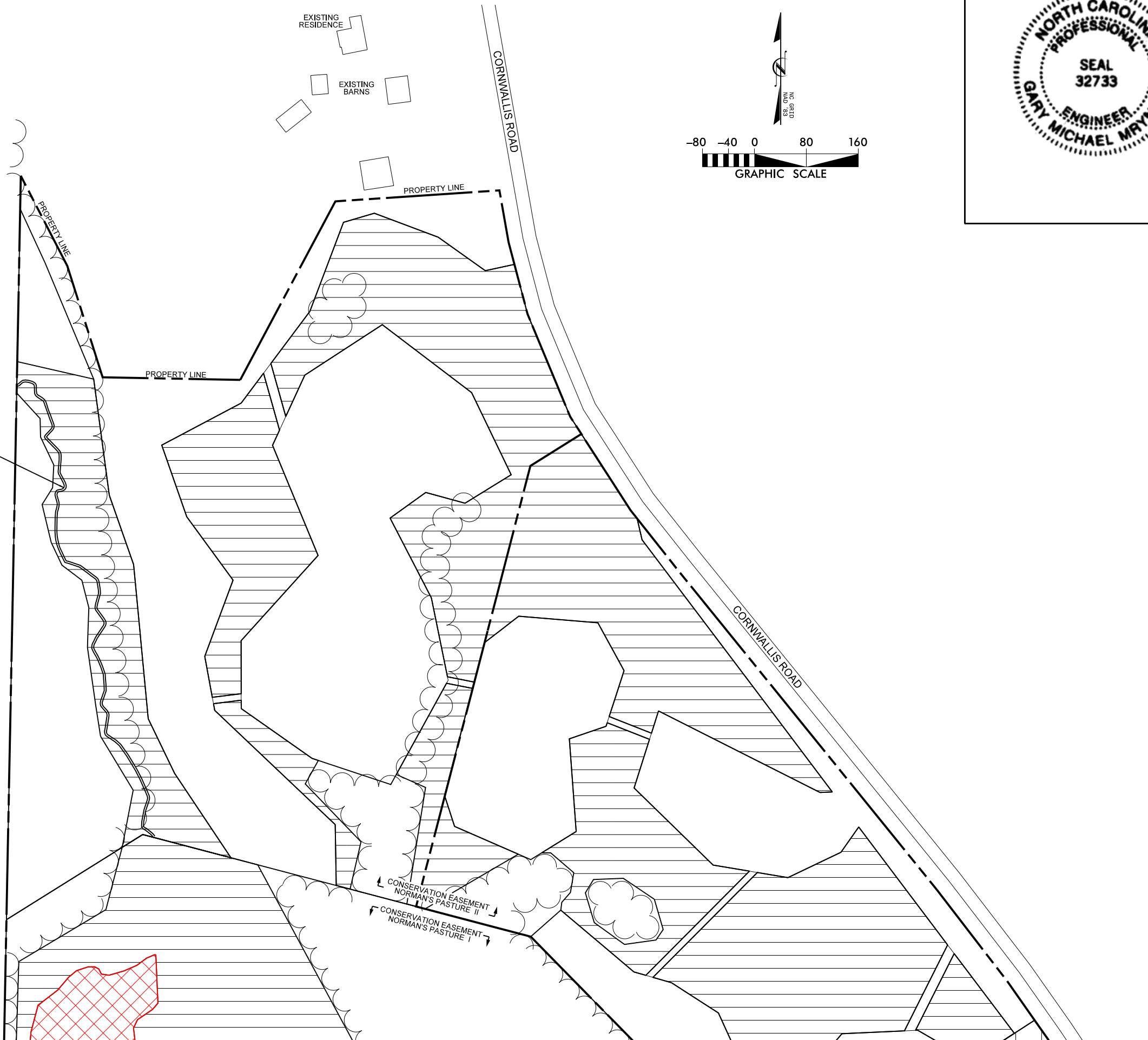
NORMAN'S PASTURE & NORMAN'S PASTURE II RESTORATION SITES
SAMPSON COUNTY, NORTH CAROLINA

DATE: FEB 2016
SCALE: GRAPHIC

PLANTING PLAN

SHEET 5 OF 7

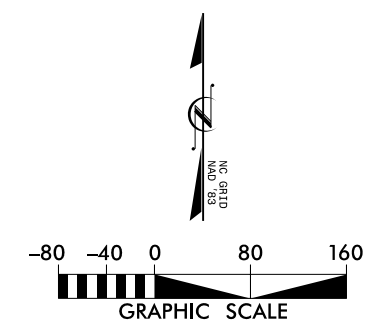
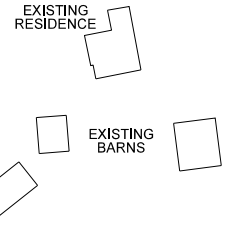
REVISIONS




STREAM ZONE PLANTING:

LIVE STAKES: 1.5' TO 2' LENGTHS, 1/2" TO 2" DIAMETER, 1 ROW AT 3' CENTER SPACING (EACH BANK), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME
BLACK WILLOW	SALIX NIGRA
SILKY WILLOW	SALIX SERICEA
SILKY DOGWOOD	CORNUS AMOMUM
ELDERBERRY	SAMBUCUS CANADENSIS



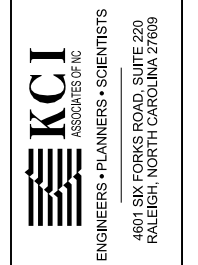
DATE	REVISIONS
NCDEQ DIVISION OF MITIGATION SERVICES	
 KCI ASSOCIATES, INC. ENGINEERS • PLANNERS • SCIENTISTS 4601 SIX FORKS ROAD, SUITE 220 RALEIGH, NORTH CAROLINA 27609	
NORMAN'S PASTURE & NORMAN'S PASTURE II RESTORATION SITES SAMPSON COUNTY, NORTH CAROLINA	
DATE: FEB 2016	
SCALE: GRAPHIC	
PLANTING PLAN	
SHEET 6	OF 7

MATCHLINE - SEE SHEET 5



NO.	DESCRIPTION	DATE

NCDEQ DIVISION OF
MITIGATION SERVICES

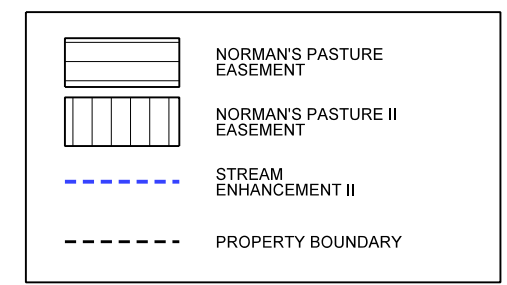
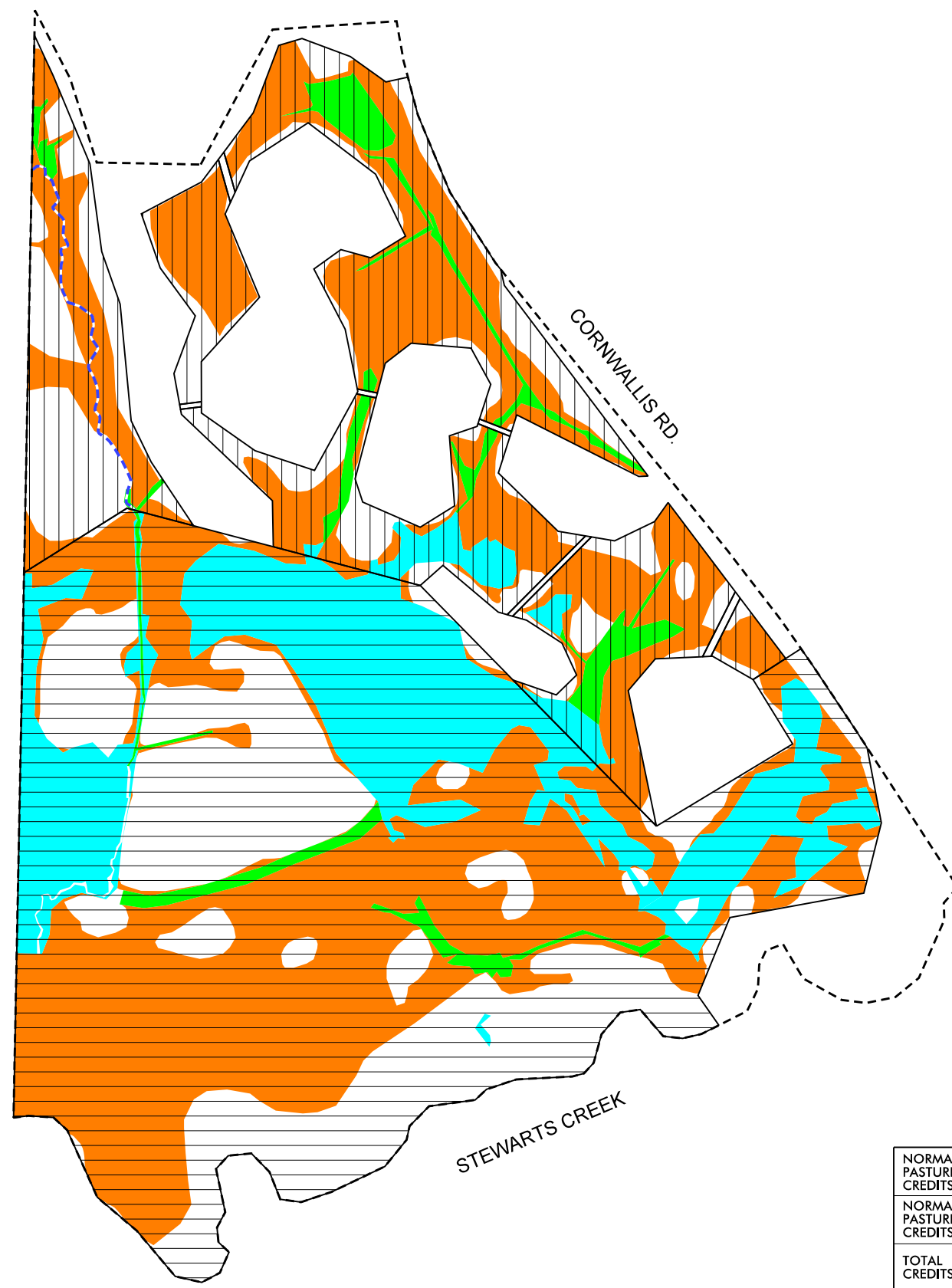


NORMAN'S PASTURE & NORMAN'S PASTURE II RESTORATION SITES
SAMPSON COUNTY, NORTH CAROLINA

DATE: FEB 2016
SCALE: GRAPHIC

MITIGATION CLASSIFICATION

SHEET 7 OF 7



	WETLAND REESTABLISHMENT (1:1)	WETLAND REHABILITATION (1.5:1)	WETLAND PRESERVATION (NO CREDIT)	STREAM ENHANCEMENT II (2.5:1)
NORMAN'S PASTURE CREDITS	15.5 AC./ 15.5 CR.	0.7 AC./ 0.5 CR.	9.0 AC./ 0 CR.	-
NORMAN'S PASTURE II CREDITS	8.8 AC./ 8.8 CR.	1.4 AC./ 0.9 CR.	0.8 AC./ 0 CR.	843 L.F./ 337 CR.
TOTAL CREDITS	24.3 AC./ 24.3 CR.	2.1 AC./ 1.4 CR.	9.8 AC./ 0 CR.	843 L.F./ 337 CR.

