

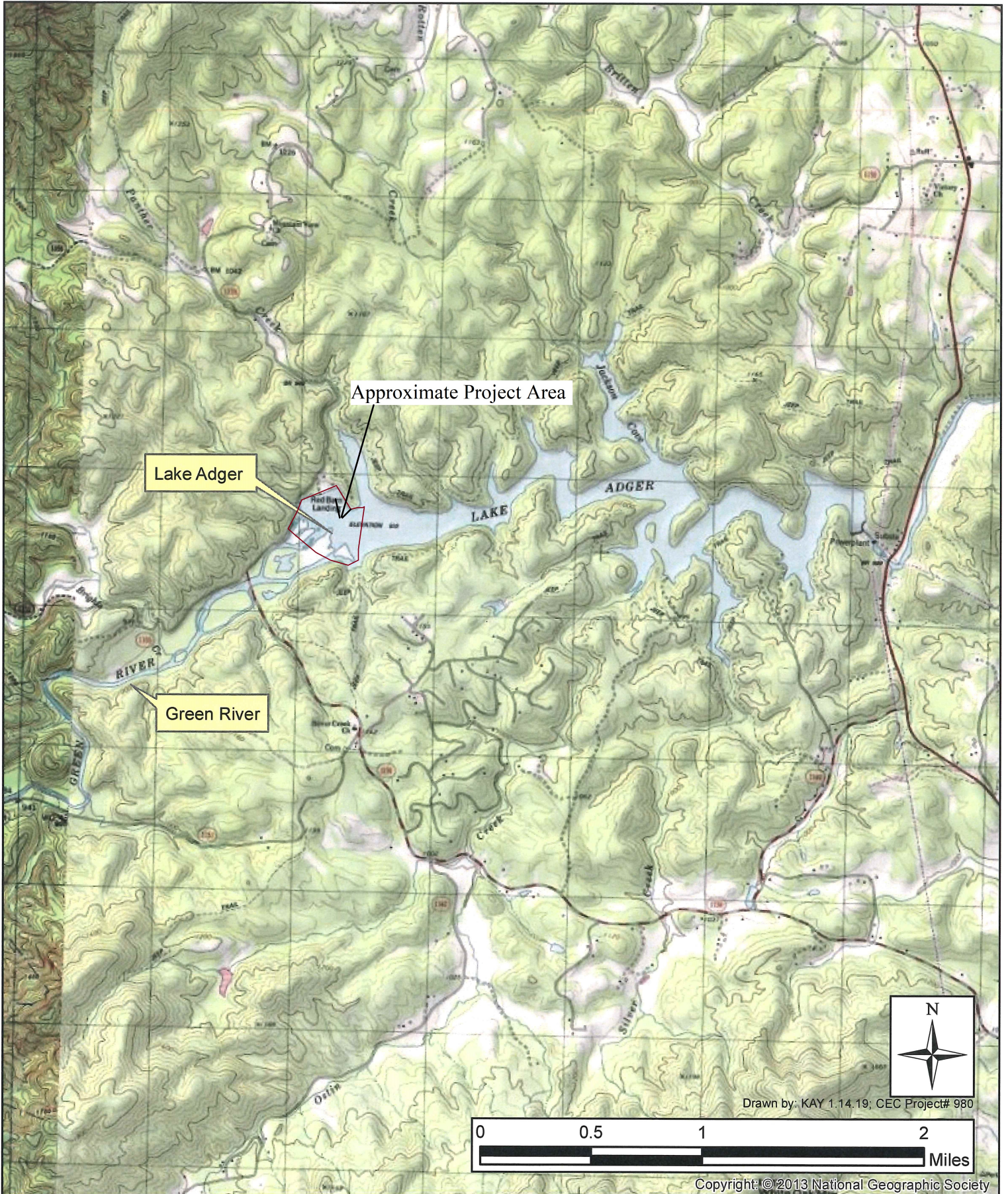
Lake Adger



Polk County,
North Carolina

Site Vicinity
Figure 1

Lake Adger



Polk County,
North Carolina

USGS Topographic Map
Mill Spring Quad
Figure 2

Lake Adger



Polk County,
North Carolina

Aerial Photograph
NCCGIA (2015)
Figure 3

Lake Adger

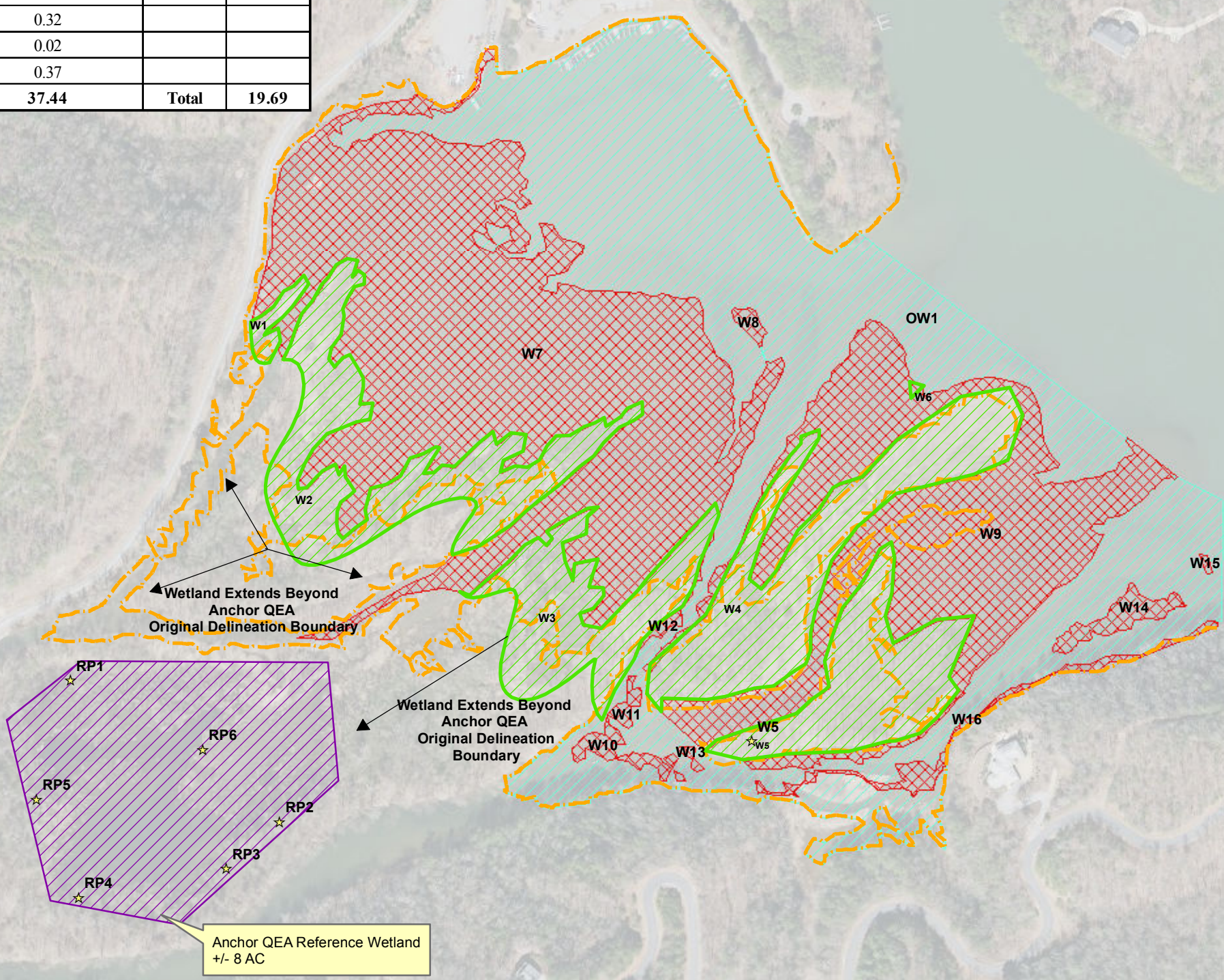
Potentially Jurisdictional Water			
Wetland (AC)		Open Water (AC)	
W1	0.21	OW1	19.69
W2	3.56		
W3	2.48		
W4	3.88		
W5	2.53		
W6	0.01		
W7	15.55		
W8	0.08		
W9	8.05		
W10	0.20		
W11	0.08		
W12	0.07		
W13	0.03		
W14	0.32		
W15	0.02		
W16	0.37		
Total	37.44	Total	19.69

Jurisdictional wetlands and waters identified on this map have been located within sub-meter accuracy utilizing a Trimble mapping grade Global Positioning System (GPS) and the subsequent differential correction of that data. GPS points may demonstrate uncorrectable errors due to topography, vegetative cover, and/or multipath signal error.

Note: The illustrated wetland and stream locations are approximate. These areas have been flagged in the field; however, they have not been surveyed. Although ClearWater Environmental Consultants, Inc. (CEC) is confident in our assessment, the US Army Corps of Engineers (Corps) is the only agency that can make final decisions regarding jurisdictional wetland and waters of the US delineations. Therefore, all preliminary determinations are subject to change until written verification is obtained. CEC strongly recommends that written verification be obtained from the Corps prior to closing on the property, beginning any site work, or making any legal reliance on this determination.

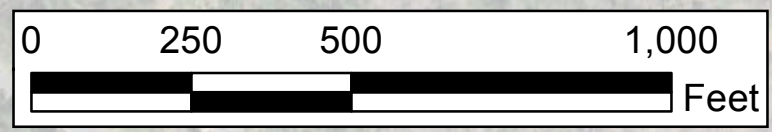
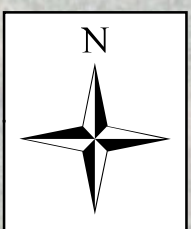
This map was prepared by CEC using the best information available to CEC at the time of production. This map is for informational purposes only and should not be used to determine precise boundaries, roadways, property boundary lines, nor legal descriptions. This map shall not be construed to be an official survey of any data depicted.

Source Data: Delineation Boundary and Reference Wetland provided by Anchor QEA of NC, PLLC. Edge of Lake Full Pool and Potential Wetland Enhancement Area is based on survey data provided by Anchor QEA of NC. Aerial Imagery NCCGIA (2015).



Legend

- ★ Data Form
- Edge of Lake Full Pool (911.61')
- Anchor QEA Reference Wetland - (+/- 8AC)
- Wetland (+/- 12.67 AC)
- Potential Wetland Enhancement Area -3ft (+/- 24.8 AC)
- Open Water (+/- 19.69 AC)



Drawn by: KAY 1.11.19; Updated 1.24.19; Project# 980

NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board

Polk County,
North Carolina

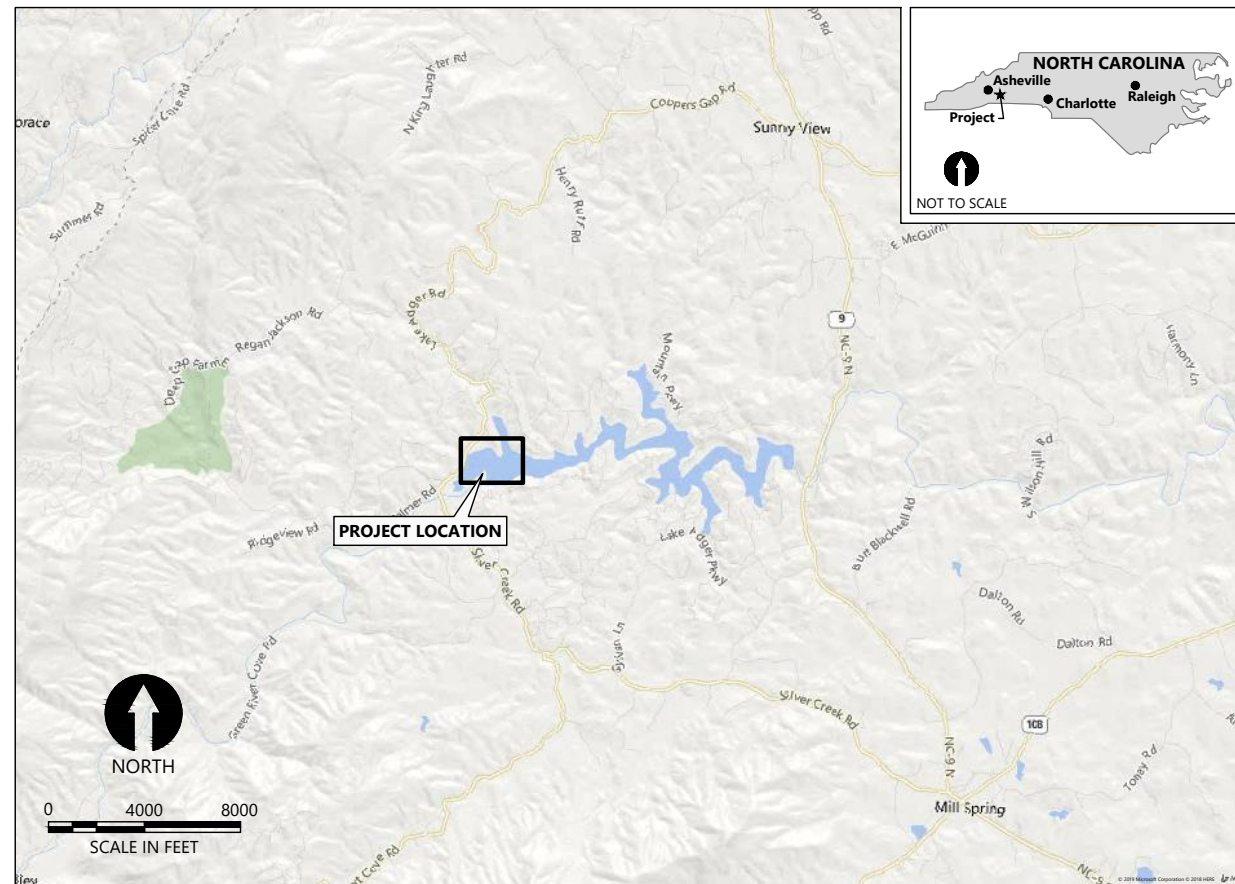
32 Clayton Street
Asheville, North Carolina 28801

Stream & Wetland
Delineation Map
Delineated August 21-22, 2018
Revised January 11, 2019
Figure 5

30% DESIGN SUBMITTAL

LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING

NORTH CAROLINA WILDLIFE RESOURCES COMMISSION



SOURCE: ©2019 Microsoft Corporation ©2018 HERE

VICINITY MAP

DRAWING INDEX		
SHT #	DWG #	TITLE
1	G1	TITLE SHEET
2	G2	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
3	E1	EXISTING CONDITIONS
4	C1	DREDGE PLAN
5	C2	PROFILE
6	C3	SECTIONS
7	C4	DREDGED MATERIAL PLACEMENT LAYOUT
8	C5	IMPACTED AREAS
9	C6	DETAILS
10	C7	VEGETATION PLANTING DETAILS

K:\Projects\1713-NC Wildlife Resources Commission\Lake Adger Design\Construction Plans\1713-PL-G-SERIES.dwg G1

Jan 11, 2020 2:02pm dholmer

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
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DRAFT-NOT FOR CONSTRUCTION

			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS					REV	DATE	BY	APP'D	DESCRIPTION																										DESIGNED BY: <u>CORK, R.</u> DRAWN BY: <u>HOLMER, D.</u> CHECKED BY: <u>REEMTS, M.</u> APPROVED BY: <u>DINICOLA, W.</u> SCALE: <u>AS NOTED</u> DATE: <u>JUNE 2020</u>	NORTH CAROLINA WILDLIFE RESOURCES COMMISSION LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING	G1
			REVISIONS																																						
REV	DATE	BY	APP'D	DESCRIPTION																																					
TITLE SHEET					SHEET # 1 OF 10																																				

GENERAL NOTES FOR MAINTENANCE DREDGING

- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE BEGINNING CONSTRUCTION AND WILL IMMEDIATELY INFORM THE SERVICE OF ANY DISCREPANCIES FOUND BETWEEN THE PROJECT PLANS AND CONTRACT SPECIFICATIONS PRIOR TO PROCEEDING WITH THE WORK.
- CONTRACTOR SHALL STRICTLY ENFORCE ALL APPLICABLE HEALTH AND SAFETY LAWS (I.E. OSHA) AND MAINTAIN SITE SECURITY.
- CONSTRUCTION KICK-OFF MEETING WITH THE NORTH CAROLINA WILDLIFE RESOURCES COMMISSION, THE ENGINEER AND OTHER RELEVANT STAKEHOLDERS IDENTIFIED IS REQUIRED PRIOR TO ANY ONSITE WORK.
- CONTRACTOR SHALL PROVIDE A SEQUENCE OF CONSTRUCTION TO BE APPROVED BY THE NORTH CAROLINA WILDLIFE RESOURCES COMMISSION, AND THE ENGINEER PRIOR TO SITE MOBILIZATION.
- CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS WITHIN THE LIMITS OF WORK AND WILL BE RESPONSIBLE FOR DETERMINING APPROPRIATE QUANTITIES AND REQUIRED MATERIALS TO COMPLETE THE WORK.
- CLEARING TO BE LIMITED TO THE LIMIT OF DISTURBANCE AS SHOWN ON THE PLANS. WORK SHOULD LIMIT TREE REMOVAL BY WORKING AROUND EXISTING TREES AS POSSIBLE. CONTRACTOR MUST RECEIVE APPROVAL FROM THE SERVICE PRIOR TO REMOVAL OF ANY TREES.
- THE HORIZONTAL DATUM SHALL BE BASED ON NORTH CAROLINA STATE PLANE, NAD83, U.S. SURVEY FEET. THE VERTICAL DATUM SHALL BE BASED ON NAVD88. THE HYDROGRAPHIC SURVEY WAS COMPLETED BY HAYES, JAMES & ASSOCIATES, INC., IN OCTOBER 2018.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR SIX (6) INCHES, WHICHEVER IS LESS, CONTACT THE SERVICE IMMEDIATELY.
- CALL "NORTH CAROLINA 811" AT 811 OR 1-800-632-4949 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION OR DREDGING TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
- ADDITIONAL UNDERWATER UTILITIES MAY EXIST ELSEWHERE WITHIN THE PROJECT EXTENTS. CONTRACTOR SHALL FIELD VERIFY ANY IN-WATER UTILITIES, CROSSINGS OR POTENTIAL IMPEDIMENTS TO THE WORK AND TAKE ADEQUATE PRECAUTIONS TO AVOID THEM.
- REPAIR TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE CONTINUING WITH CONSTRUCTION.
- ANY DAMAGES THAT MAY OCCUR TO REAL PROPERTY OR EXISTING IMPROVEMENTS SHALL BE RESTORED BY THE CONTRACTOR TO AT LEAST THE SAME CONDITION THAT THE REAL PROPERTY OR EXISTING IMPROVEMENTS WERE IN PRIOR TO THE DAMAGES. THIS RESTORATION SHALL BE SUBJECT TO THE OWNER'S APPROVAL; MOREOVER, THIS RESTORATION SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR. RESTORATION SHALL INCLUDE, BUT NOT BE LIMITED TO, REGRASSING, REVEGETATION, REPLACING FENCES, REPLACING TREES, ETC.
- ALL UPLAND GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
- DISTURBED UPLAND AREAS SHALL BE GRADED AND RESTORED TO ORIGINAL CONDITIONS. DISTURBED AREAS ADJACENT TO ESTABLISHED LAWNS SHALL BE SODDED. OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED. ALL DISTURBED AREAS ARE TO BE STABILIZED AND SEEDED WITHIN 14 DAYS OF DISTURBANCE UNLESS OTHERWISE NOTED. SLOPES STEEPER THAN 3:1 MUST BE STABILIZED IN 7 DAYS. INSTALL TEMPORARY SEEDING ON ALL AREAS THAT WILL BE LEFT IDLE FOR MORE THAN 14 DAYS. HARD WOOD MULCH IS AN ACCEPTABLE TEMPORARY COVER BUT MAY NOT BE BLENDED INTO THE SUBGRADE AND WILL BE REQUIRED TO BE REMOVED PRIOR TO CONTINUATION OF THE WORK. STRAW MULCH AND TALL FESCUE SHOULD NOT BE USED IN RIPARIAN AREAS.
- THE CONTRACTOR SHALL PROTECT ALL UTILITIES, AND EXISTING INFRASTRUCTURE DURING CONSTRUCTION, AND ALL WETLANDS DURING CONSTRUCTION OPERATIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE WETLAND BOUNDARIES ARE UNDERSTOOD PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL OBEY ALL COUNTY HEIGHT, WEIGHT AND UNDERCLEARANCE RESTRICTIONS. THE CONTRACTOR SHALL OBEY ALL APPLICABLE NOISE RESTRICTIONS.
- ALL SITE ACTIVITIES INCLUDING BUT NOT LIMITED TO CLEARING, WATER LEVEL DRAWDOWN, DREDGING, DEWATERING, WATER TREATMENT, TRANSPORTATION, AND DISPOSAL, SHALL FOLLOW ALL APPLICABLE PERMITS AND CONTRACT DOCUMENTS.
- VEHICLES TRANSPORTING DEWATERED MATERIAL FROM THE STAGING AREA TO THE FINAL SELECTED AND APPROVED LOCATION MUST FOLLOW POSTED SPEED LIMITS, TRAFFIC SIGNS AND SIGNALS, AND ALL COUNTY HEIGHT, WEIGHT AND UNDERCLEARANCE RESTRICTIONS. CONTRACTOR SHALL NOT TRACK OR DISCHARGE SEDIMENT ONTO ROADS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY FOR CONSTRUCTION NOT SUPPLIED BY THE WILDLIFE RESOURCES COMMISSION. THIS MAY INCLUDE BUT NOT BE LIMITED TO: ANY REQUIRED EROSION CONTROL OR LAND DISTURBANCE PERMITS, ARMY CORP OF ENGINEERS PERMITS, STORMWATER PERMITS, NPDES, CITY OR COUNTY BUILDING PERMITS, OR ROADWAY PERMITS. THE COSTS FOR ADDITIONAL PERMITS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT IMPACT THE PROJECT SCHEDULE.
- CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENT CONTROL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY TO COMPLY WITH COUNTY, STATE, AND FEDERAL LAWS AND REGULATIONS. ANY SEDIMENT CONTROL MEASURES DISTURBED BY CONSTRUCTION WILL BE REPAIRED THE SAME DAY.
- CONTRACTOR SHALL SUBMIT CONSTRUCTION WORK PLAN AND ANCILLIARY WORK PLANS IN ACCORDANCE WITH THE SPECIFICATIONS.
- STOCKPILES MAY ONLY BE PLACED IN APPROVED LOCATIONS. ALL STOCKPILES LEFT AT THE END OF THE DAY NEED TO BE STABILIZED UNTIL THE NEXT DISTURBANCE.
- BARRICADING AND TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE NCDOT STANDARD SPECIFICATIONS AND DRAWINGS. PEDESTRIAN AND VEHICULAR TRAFFIC FLOW SHALL BE MAINTAINED DURING ALL PHASES OF THE CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC SAFETY MEASURES FOR WORK ON PROJECT.
- WHERE EXISTING GRADE EXCEEDS 5:1 (HORIZONTAL:VERTICAL) AND THE DEPTH OF FILL EXCEEDS 5 FEET, BENCHING SHALL BE PROVIDED. A 2-FOOT DEEP BY 10-FOOT WIDE KEY SHALL BE PROVIDED AT THE TOE OF THE FILL SLOPE. REFER TO NC BUILDING CODE SECTION 107 FOR ADDITIONAL DETAIL.
- CERTIFICATION OF CUT AND FILL SLOPES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE BY A GEOTECHNICAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NORTH CAROLINA. UNLESS OTHERWISE NOTED, ALL CUT AND FILL SLOPES PROPOSED BY THESE PLANS SHALL BE 2:1 (HORIZONTAL:VERTICAL) OR FLATTER.
- CUT AND FILL SLOPES (EMBANKMENTS) SHALL BE CONSTRUCTED IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATION SECTION 235 OR THE GEOTECHNICAL (SOILS) REPORT RECOMMENDATIONS, WHICHEVER IS MORE RESTRICTIVE. AT A MINIMUM, ALL FILL SLOPES SHALL BE PLACED IN 10-INCH MAXIMUM LIFTS COMPACTED TO NOT LESS THAN 95 PERCENT DENSITY (STANDARD PROCTOR). CONTRACTOR SHALL ARRANGE FOR INDEPENDENT COMPACTION TESTING RESULTS TO BE PAID FOR BY THE OWNER/DEVELOPER.
- NO GRADING OR FILL SHALL OCCUR WITHIN 2 FEET OF A PROPERTY LINE WITHOUT WRITTEN PERMISSION FROM THE ADJACENT PROPERTY OWNER.
- UNLESS OTHERWISE INDICATED IN THESE PLANS TERRACES SHALL BE PROVIDED AS FOLLOWS: WHERE GRADES EXCEED 3:1 (HORIZONTAL:VERTICAL), TERRACES AT LEAST 6 FEET IN WIDTH SHALL BE CONSTRUCTED AT NOT MORE THAN 30-FOOT VERTICAL INTERVALS ON ALL CUT OR FILL SLOPES. SWALES SHALL BE PROVIDED ON TERRACES IN ACCORDANCE WITH NC BUILDING CODE SECTION J109.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE WORK DOES NOT RESULT IN UNACCEPTABLE INCREASES IN TURBIDITY WITHIN THE LAKE OR SURROUNDING STREAMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING MEASURES TO CONTROL TURBIDITY AS NEEDED.
- ALL MECHANIZED EQUIPMENT OPERATED NEAR SURFACE WATERS SHOULD BE INSPECTED AND MAINTAINED REGULARLY TO PREVENT CONTAMINATION OF STREAM WATERS FROM FUELS, LUBRICANTS, HYDRAULIC FLUIDS OF OTHER TOXIC MATERIALS.
- DISCHARGING HYDROSEED MIXTURES AND WASHING OUT HYDROSEEDERS AND OTHER EQUIPMENT IN OR ADJACENT TO SURFACE WATERS IS PROHIBITED.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED DAILY AND AFTER ANY RAINFALL. DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY. A DAILY RECORD SHALL BE MAINTAINED ON THE SITE BY THE CONTRACTOR. PROJECT SITE CONDITIONS MAY REQUIRE INSTALLATION OF ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES. EROSION CONTROL MEASURES AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL MANUAL.
- CONTRACTOR WILL MAINTAIN PUBLIC ACCESS TO BOAT RAMP AND FACILITIES AT ALL TIMES, OR LIMIT BLOCKING OF ACCESS WITH ADVANCED NOTICE TO THE PUBLIC.

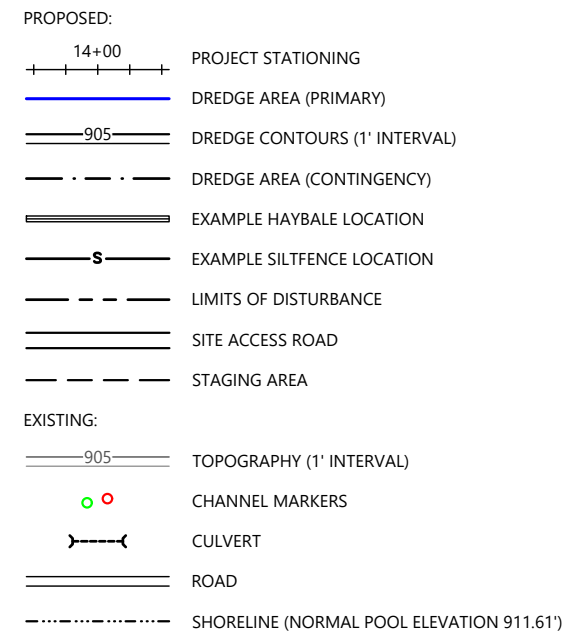
DATUMS:

- HORIZONTAL DATUM: NORTH CAROLINA, NORTH AMERICAN DATUM (NAD83), U.S. SURVEY FEET
- VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), FEET

SOURCES:

- AERIAL PHOTOGRAPH ©2019 MICROSOFT CORPORATION ©2019 DIGITALGLOBE ©CNES (2019) DISTRIBUTION AIRBUS DS
- TOPOGRAPHIC SURVEY BY HAYES/JAMES DATED AUGUST 27, 2018.

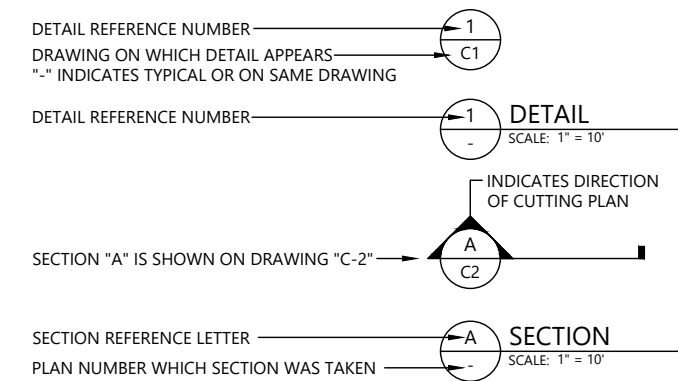
GENERAL LEGEND:



ABBREVIATIONS:

'	FEET, MINUTES
"	INCHES, SECONDS
°	DEGREES
∅	DIAMETER
#	NUMBER
APPROX	APPROXIMATE
CONC	CONCRETE
CY	CUBIC YARDS
DIA	DIAMETER
DWG	DRAWING
E	EAST, EASTING
ELEV	ELEVATION
EX	EXISTING
FG	FINISHED GRADE
FL	FLOW LINE
GALV	GALVANIZED
HOR	HORIZONTAL
L	LENGTH
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
N	NORTH, NORTHING
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
P.E.A.	PROFESSIONAL ENGINEER
R, RAD	RADIUS
REINF	REINFORCED, REINFORCEMENT
ROW	RIGHT-OF-WAY
S	SLOPE, SOUTH
STA	STATION
SY	SQUARE YARD
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
W	WEST, WATER
W/	WITH
WSEL	WATER SURFACE ELEVATION

DETAIL AND SECTION REFERENCING:



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K:\Projects\1713-NC Wildlife Resources Commission\Lake Adger Design\Construction Plans\1713-PL-G-SERES.dwg G2
Jan 11, 2020 2:02pm dholmer



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: CORK, R.
 DRAWN BY: HOLMER, D.
 CHECKED BY: REEMTS, M.
 APPROVED BY: DINICOLA, W.
 SCALE: AS NOTED
 DATE: JUNE 2020

**NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING**

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

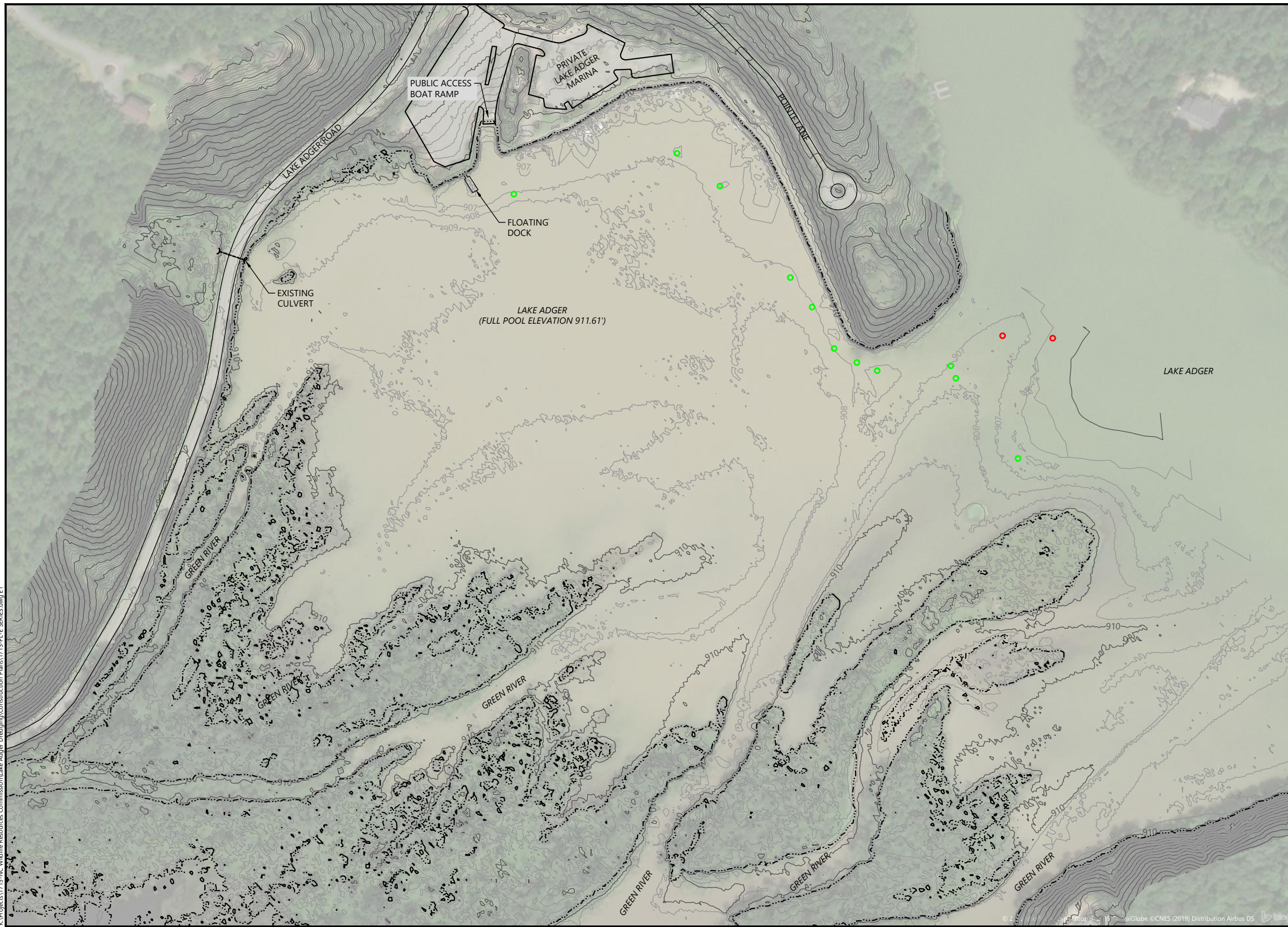
G2

SHEET # 2 OF 10

PLAN INTENDED TO BE VIEWED IN COLOR. ADJACENT BLOCK IS "BLUE" INCH SCALE ACCORDINGLY

K:\Projects\1713-NC Wildlife Resources Commission\Lake Adger Dredging\Construction Plans\1713-PL-E-SERIES.dwg E1

Jun 11, 2020 2:02pm dholmer



- LEGEND:
- 905 EXISTING TOPOGRAPHY (1' INTERVAL)
 - SHORELINE (NORMAL POOL ELEVATION 911.61')
 - CHANNEL MARKERS – SUMMER 2019



0 100 200
SCALE IN FEET

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PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"

ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



REVISIONS				
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**NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING**

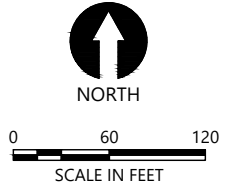
EXISTING CONDITIONS

E1

SHEET # 3 OF 10



- LEGEND:
- 14+00 PROJECT STATIONING
 - NAVIGATION CHANNEL DREDGE AREA APPROXIMATE EXTENTS
 - MITIGATION DREDGE AREA APPROXIMATE EXTENTS
 - APPROXIMATE LIMITS OF DISTURBANCE - DREDGING AREA
 - WETLAND DELINEATION
 - SHORELINE (NORMAL POOL ELEVATION 911.61')



- NOTES:
- HORIZONTAL DATUM: NORTH CAROLINA, NORTH AMERICAN DATUM (NAD83), U.S. SURVEY FEET
 - VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), FEET
- SOURCES:
- AERIAL PHOTOGRAPH ©2019 MICROSOFT CORPORATION ©2019 DIGITALGLOBE ©CNSS (2019) DISTRIBUTION AIRBUS DS
 - TOPOGRAPHIC SURVEY BY HAYES/JAMES DATED AUGUST 27, 2018.

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Jun 11, 2020 2:03pm dholmer



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: CORK, R.
 DRAWN BY: HOLMER, D.
 CHECKED BY: REEMTS, M.
 APPROVED BY: DINICOLA, W.
 SCALE: AS NOTED
 DATE: JUNE 2020

**NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
 LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING**

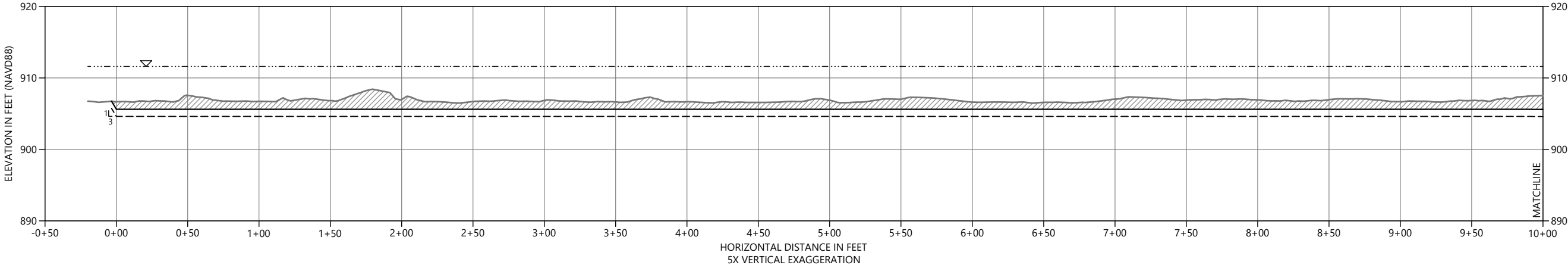
DREDGE PLAN

C1

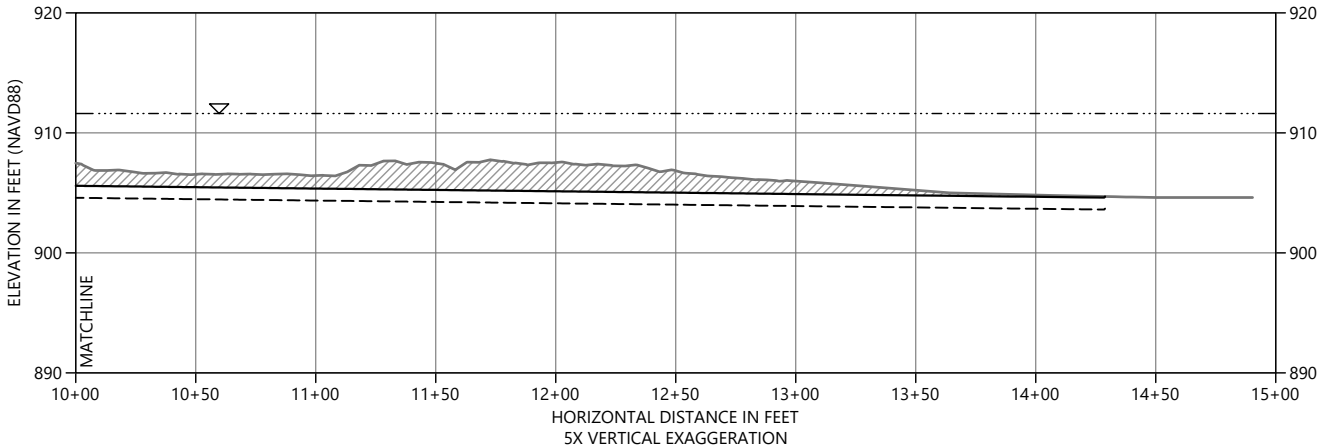
SHEET # **4** OF **10**

PLAN INTENDED TO BE VIEWED IN COLOR. ADJACENT BLOCK IS "BLUE" INCH SCALE ACCORDINGLY

LAKE ADGER CHANNEL CENTERLINE



LAKE ADGER CHANNEL CENTERLINE



LEGEND:

- EXISTING MUDLINE
- DESIGN DREDGE ELEVATION
- 1' ALLOWABLE OVERDEPTH
- DREDGED MATERIAL TO BE REMOVED
- LAKE ADGER FULL POOL ELEVATION 911.61'

NOTE: ALL DESIGN SLOPES ARE 3H:1V UNLESS OTHERWISE NOTED.

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Jun 11, 2020 2:03pm dholmer



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: CORK, R.
 DRAWN BY: HOLMER, D.
 CHECKED BY: REEMTS, M.
 APPROVED BY: DINICOLA, W.
 SCALE: AS NOTED
 DATE: JUNE 2020

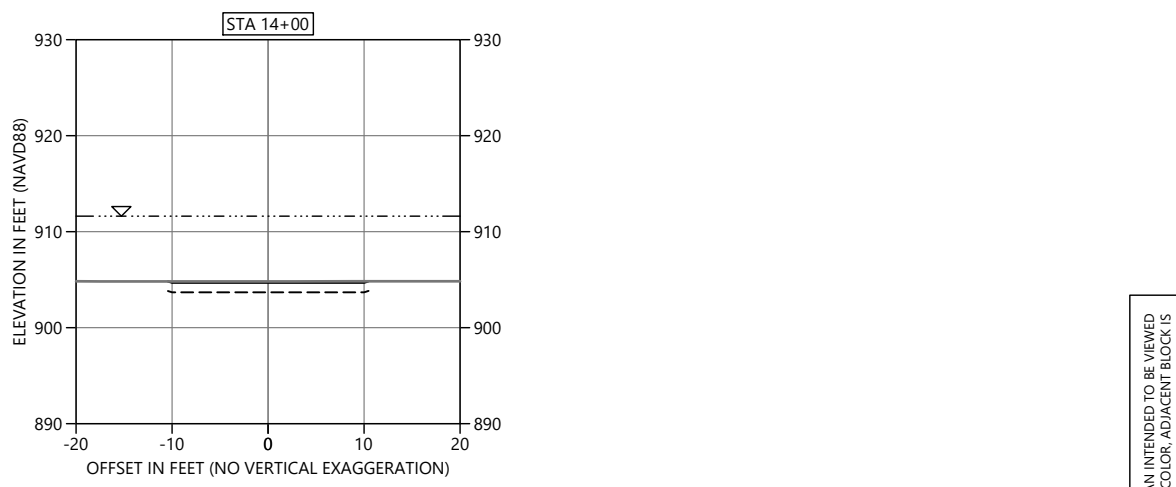
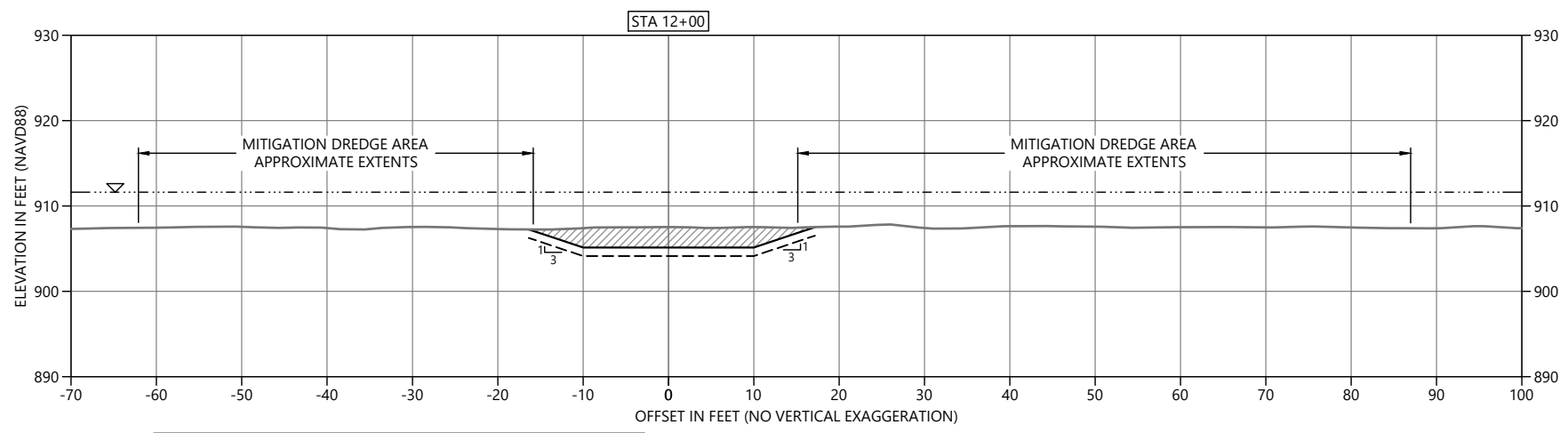
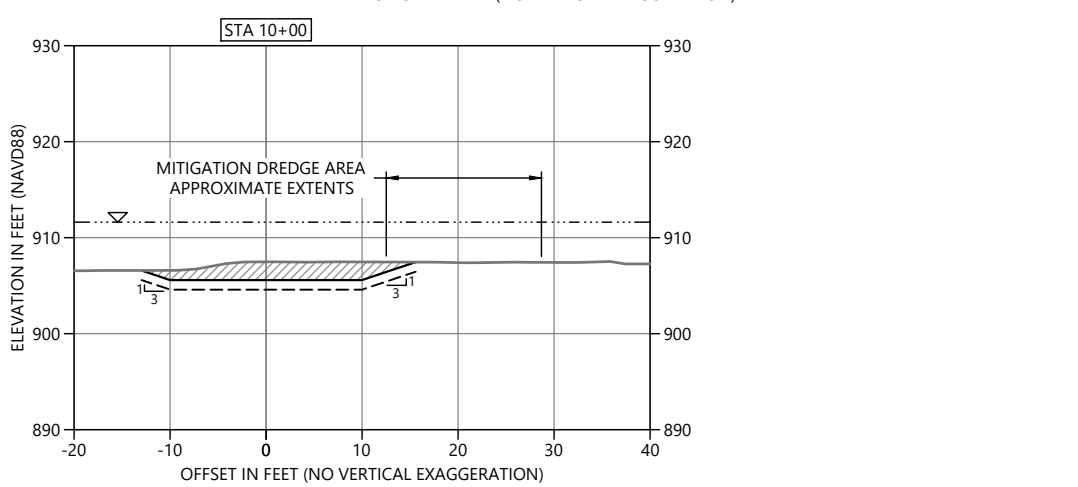
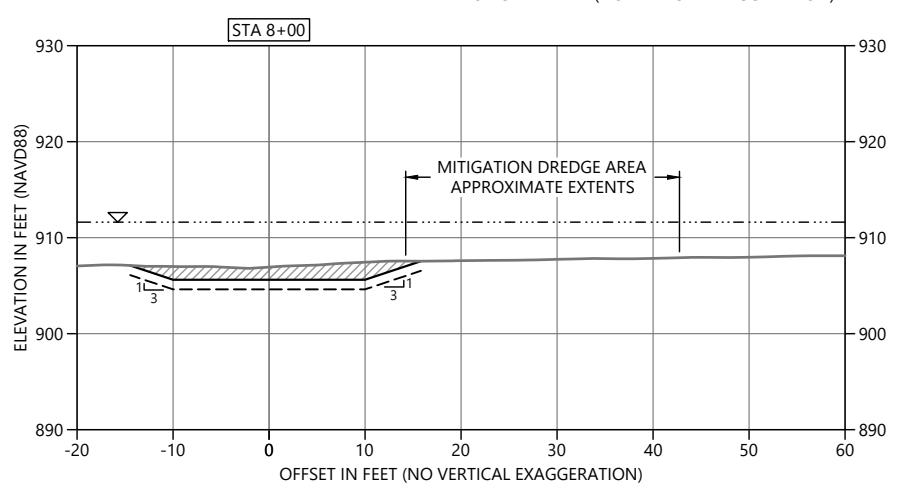
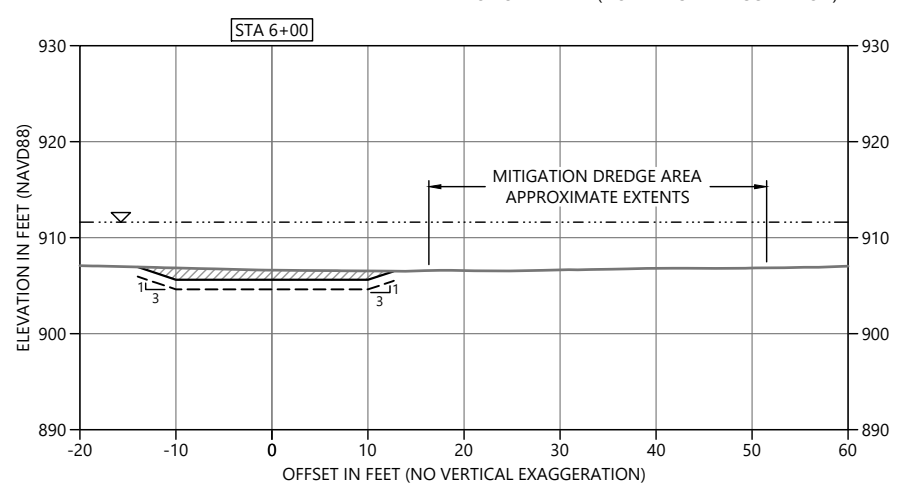
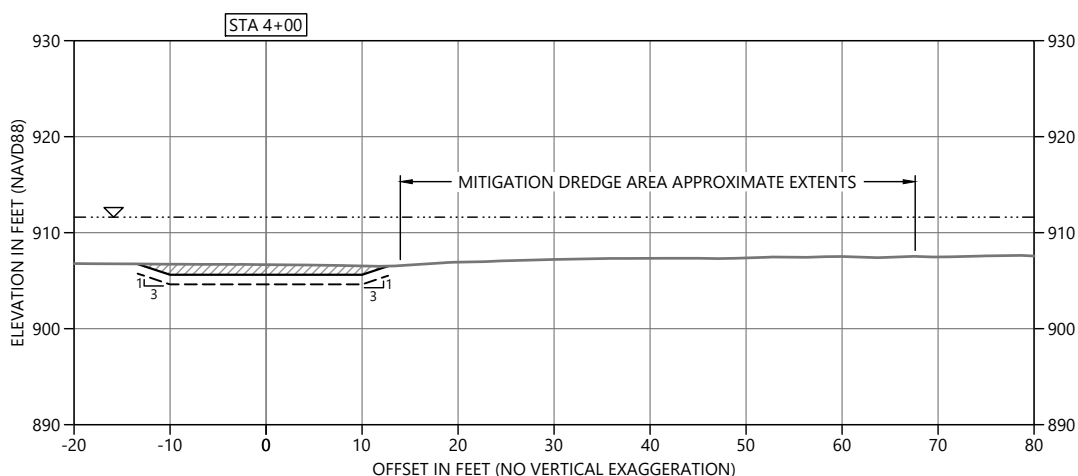
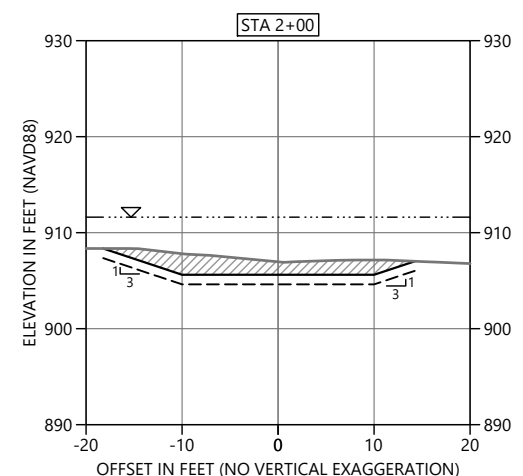
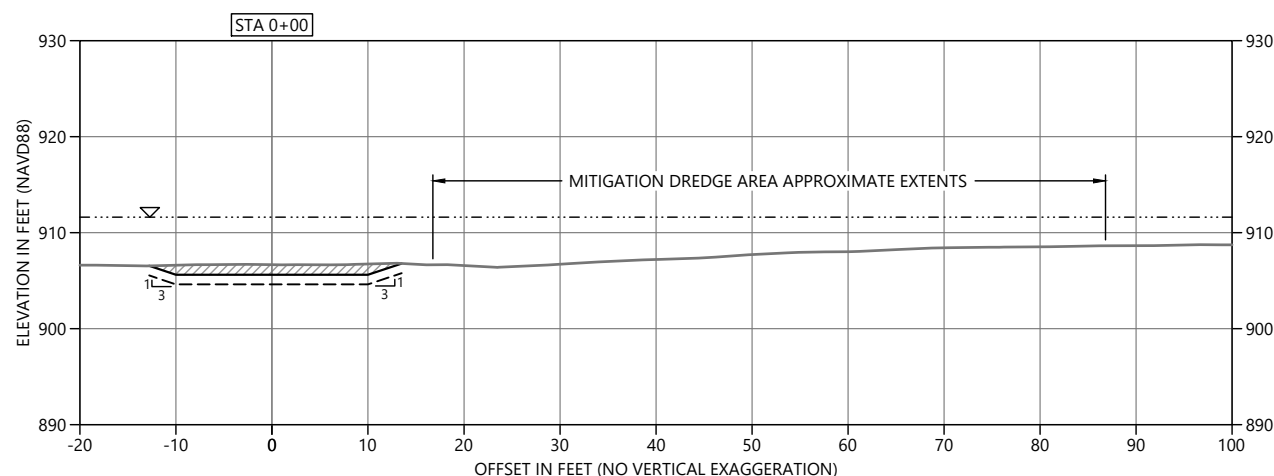
**NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
 LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING**

PROFILE

C2
 SHEET # **5** OF **10**

PLAN INTENDED TO BE VIEWED
 IN COLOR. ADJACENT BLOCK IS
 "BLUE"
 ONE INCH
 AT FULL SIZE. IF NOT ONE
 INCH SCALE ACCORDINGLY

K:\Projects\1713-NC Wildlife Resources Commission\Lake Adger Designing\Construction Plans\1713-PL-C-SERIES.dwg C3
 Jun 11, 2020 2:03pm dholmer



LEGEND:

- EXISTING MUDLINE
- DESIGN DREDGE ELEVATION
- 1' ALLOWABLE OVERDEPTH
- DREDGED MATERIAL TO BE REMOVED
- LAKE ADGER FULL POOL ELEVATION 911.61'

NOTE: ALL DESIGN SLOPES ARE 3H:1V UNLESS OTHERWISE NOTED.

PLAN INTENDED TO BE VIEWED
 IN COLOR. ADJACENT BLOCK IS
 "BLUE"
 ONE INCH
 AT FULL SIZE. IF NOT ONE
 INCH SCALE ACCORDINGLY

DRAFT-NOT FOR CONSTRUCTION



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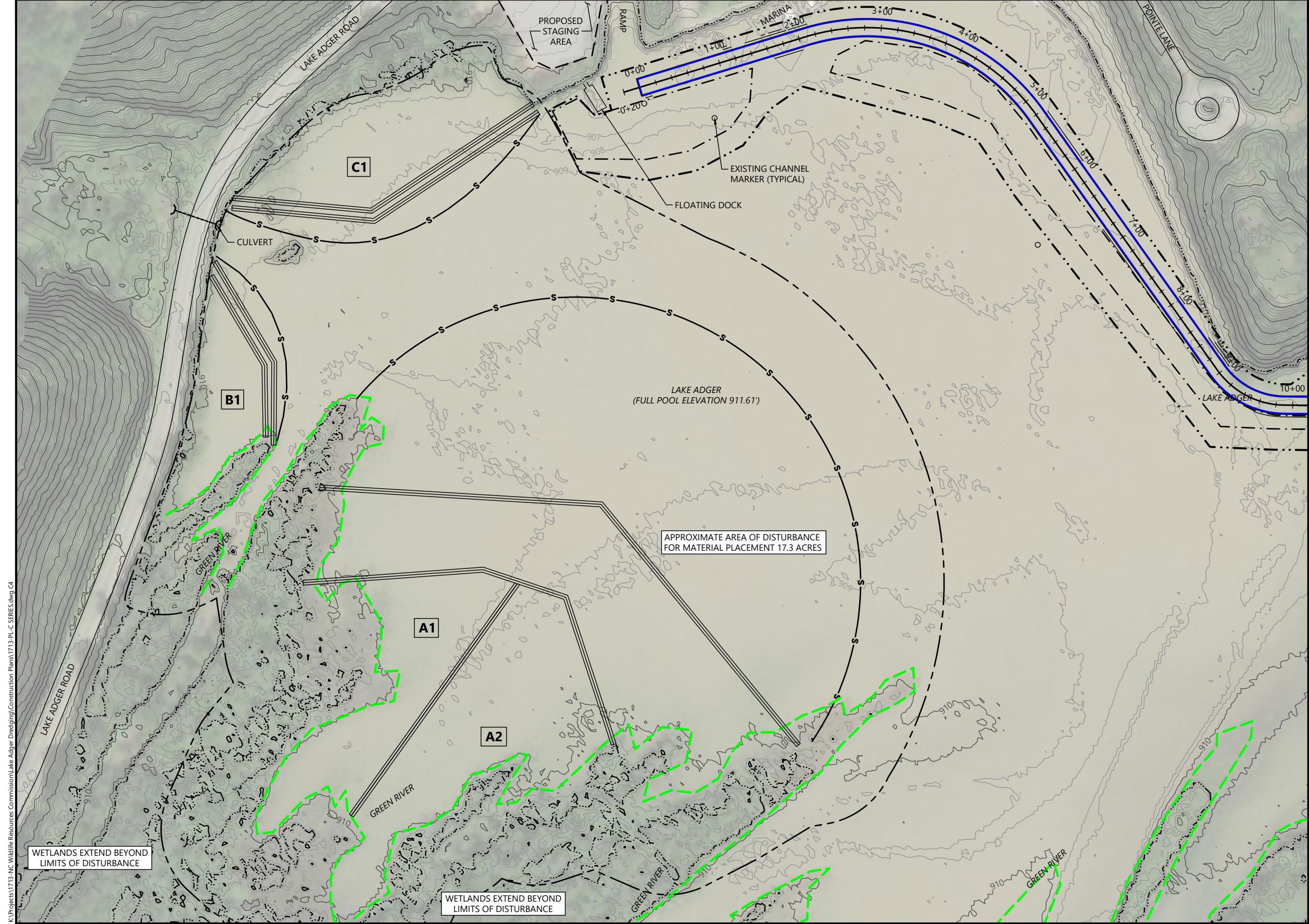
DESIGNED BY: CORK, R.
 DRAWN BY: HOLMER, D.
 CHECKED BY: REEMTS, M.
 APPROVED BY: DINICOLA, W.
 SCALE: AS NOTED
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 LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING**

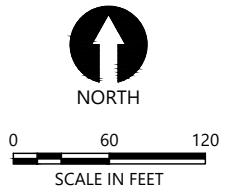
SECTIONS

C3

SHEET # **6** OF **10**



- LEGEND:
- A1** PROPOSED DREDGED MATERIAL PLACEMENT AREA DESIGNATION
 - S— EXAMPLE HAYBALE LOCATION
 - S— EXAMPLE SILT FENCE LOCATION
 - - - - - APPROXIMATE LIMITS OF DISTURBANCE - PLACEMENT AREA
 - 14+00 PROJECT STATIONING
 - (Blue) — NAVIGATION CHANNEL DREDGE AREA APPROXIMATE EXTENTS
 - . - . - MITIGATION DREDGE AREA APPROXIMATE EXTENTS
 - . . - . APPROXIMATE LIMITS OF DISTURBANCE - DREDGING AREA
 - (Green) — WETLAND DELINEATION
 - - - - - SHORELINE (NORMAL POOL ELEVATION 911.61')



- NOTES:
1. PLACEMENT AREAS ARE APPROXIMATE. CONTRACTOR TO INSTALL SEDIMENT CONTROL FEATURES AS NEEDED TO CONTAIN SEDIMENT WITHIN TARGET AREAS TO THE ELEVATIONS SHOWN.
 2. CONTRACTOR TO UTILIZE COMBINED HAYBALES, SILT CURTAINS, OR OTHER CONTROL STRUCTURES TO MANAGE SEDIMENTS WITHIN PLACEMENT AREA EXTENTS.
 3. CONTRACTOR MAY ADJUST ALIGNMENTS AS NEEDED TO BALANCE PLACEMENT OPERATIONS AND SEQUENCE THE WORK.
 4. CONTRACTOR SHALL NOT BLOCK FLOW FROM CULVERT AND GREEN RIVER BRANCHES DURING MATERIAL PLACEMENT OPERATIONS.
 5. ONLY BIODEGRADABLE FEATURES MAY BE LEFT IN PLACE FOLLOWING MATERIAL PLACEMENT. ANY SILT CURTAINS, ANCHORS, METAL STAKING, OR OTHER INSTALLED ITEMS MUST OTHERWISE BE REMOVED.
 6. CONTRACTOR MATERIAL TRANSPORT LINE SHOULD BE ROUTED THROUGH WORK AREAS IDENTIFIED WHERE POSSIBLE.
- SOURCES:
1. AERIAL PHOTOGRAPH ©2019 MICROSOFT CORPORATION ©2019 DIGITALGLOBE ©CNSS (2019) DISTRIBUTION AIRBUS DS
 2. TOPOGRAPHIC SURVEY BY HAYES/JAMES DATED AUGUST 27, 2018.

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PLAN INTENDED TO BE VIEWED IN COLOR. ADJACENT BLOCK IS "BLUE" SCALE ACCORDINGLY



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NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING

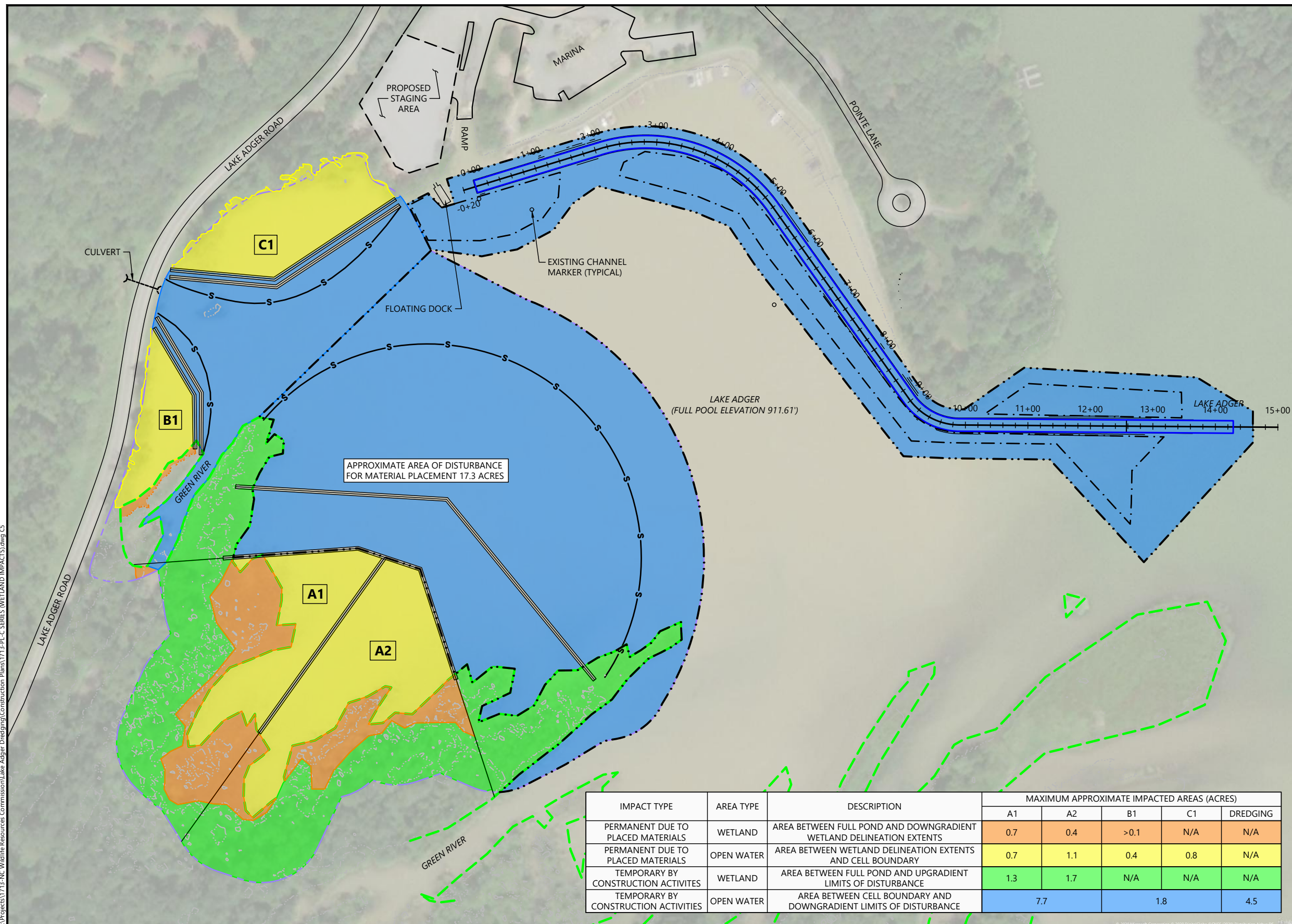
DREDGED MATERIAL PLACEMENT LAYOUT

C4

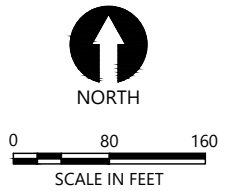
SHEET # **7** OF **10**

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Jun 11, 2020 2:03pm dholmer



- LEGEND:
- A1** PROPOSED DREDGED MATERIAL PLACEMENT AREA DESIGNATION
 - ===== EXAMPLE HAYBALE LOCATION
 - s— EXAMPLE SILT FENCE LOCATION
 - APPROXIMATE LIMITS OF DISTURBANCE - PLACEMENT AREA
 - 14+00 PROJECT STATIONING
 - NAVIGATION CHANNEL DREDGE AREA APPROXIMATE EXTENTS
 - - - MITIGATION DREDGE AREA APPROXIMATE EXTENTS
 - APPROXIMATE LIMITS OF DISTURBANCE
 - WETLAND DELINEATION



- NOTES:
1. PLACEMENT AREAS ARE APPROXIMATE. CONTRACTOR TO INSTALL SEDIMENT CONTROL FEATURES AS NEEDED TO CONTAIN SEDIMENT WITHIN TARGET AREAS TO THE ELEVATIONS SHOWN.
 2. CONTRACTOR TO UTILIZE COMBINED HAYBALES, SILT CURTAINS, OR OTHER CONTROL STRUCTURES TO MANAGE SEDIMENTS WITHIN PLACEMENT AREA EXTENTS.
 3. CONTRACTOR MAY ADJUST ALIGNMENTS AS NEEDED TO BALANCE PLACEMENT OPERATIONS AND SEQUENCE THE WORK.
 4. CONTRACTOR SHALL NOT BLOCK FLOW FROM CULVERT AND GREEN RIVER BRANCHES DURING MATERIAL PLACEMENT OPERATIONS.
 5. ONLY BIODEGRADABLE FEATURES MAY BE LEFT IN PLACE FOLLOWING MATERIAL PLACEMENT. ANY SILT CURTAINS, ANCHORS, METAL STAKING, OR OTHER INSTALLED ITEMS MUST OTHERWISE BE REMOVED.
 6. CONTRACTOR MATERIAL TRANSPORT LINE SHOULD BE ROUTED THROUGH WORK AREAS IDENTIFIED WHERE POSSIBLE.

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IMPACT TYPE	AREA TYPE	DESCRIPTION	MAXIMUM APPROXIMATE IMPACTED AREAS (ACRES)				
			A1	A2	B1	C1	DREDGING
PERMANENT DUE TO PLACED MATERIALS	WETLAND	AREA BETWEEN FULL POND AND DOWNGRADIENT WETLAND DELINEATION EXTENTS	0.7	0.4	>0.1	N/A	N/A
PERMANENT DUE TO PLACED MATERIALS	OPEN WATER	AREA BETWEEN WETLAND DELINEATION EXTENTS AND CELL BOUNDARY	0.7	1.1	0.4	0.8	N/A
TEMPORARY BY CONSTRUCTION ACTIVITIES	WETLAND	AREA BETWEEN FULL POND AND UPGRADIENT LIMITS OF DISTURBANCE	1.3	1.7	N/A	N/A	N/A
TEMPORARY BY CONSTRUCTION ACTIVITIES	OPEN WATER	AREA BETWEEN CELL BOUNDARY AND DOWNGRADIENT LIMITS OF DISTURBANCE	7.7		1.8		4.5

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PLAN INTENDED TO BE VIEWED IN COLOR. ADJACENT BLOCK IS "BLUE" INCH SCALE ACCORDINGLY



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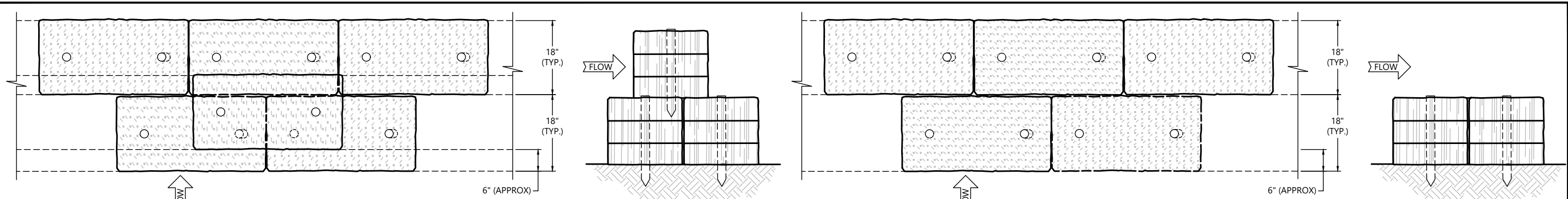
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**NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING**

IMPACTED AREAS

C5

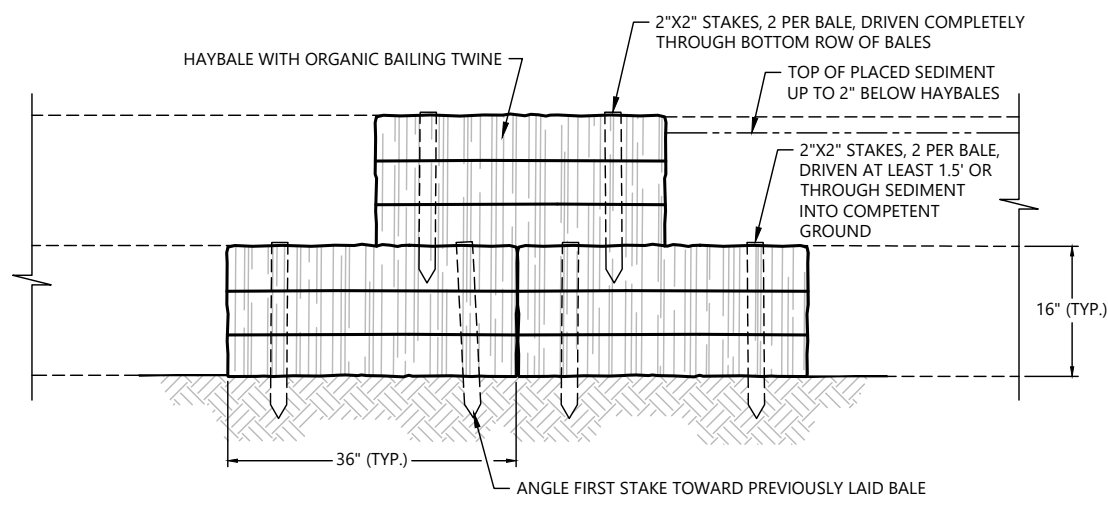
SHEET # **8** OF **10**



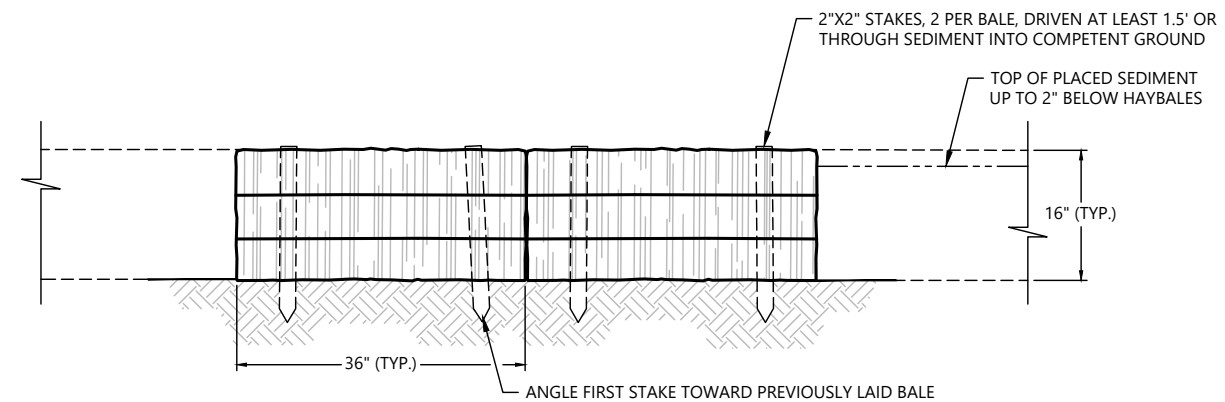
SIDE VIEW

TOP VIEW

SIDE VIEW



FRONT VIEW

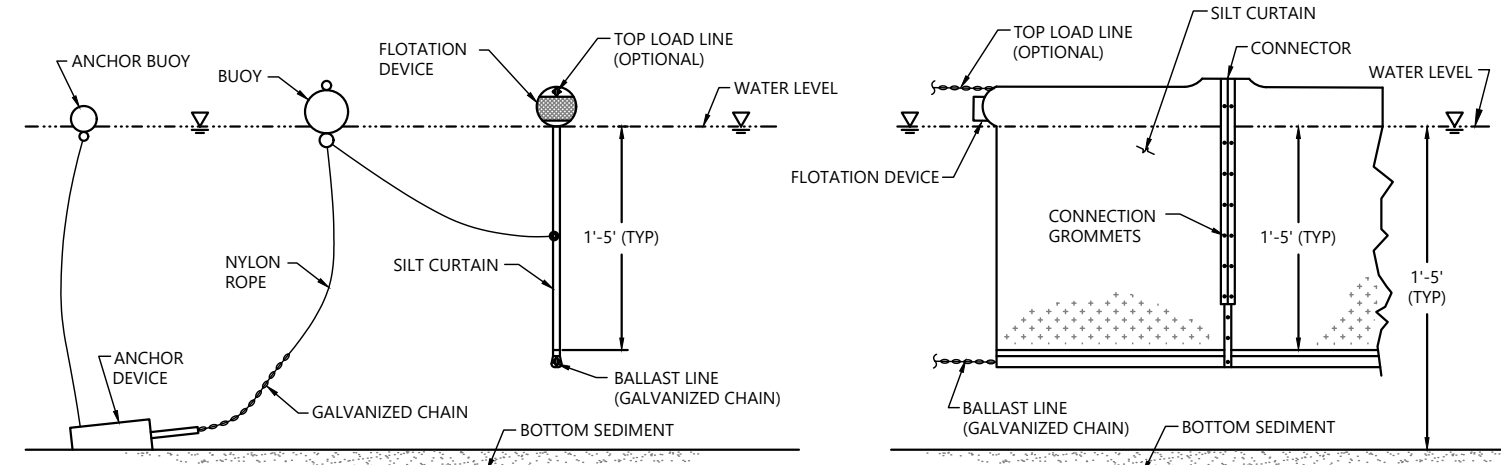


FRONT VIEW

1 TYPICAL SINGLE STACK HAYBALE DETAIL
C05 NOT TO SCALE

1 TYPICAL DOUBLE STACK HAYBALE DETAIL
C05 NOT TO SCALE

- NOTES:
- HAYBALES SHALL BE PLACED AS SHOWN ON DRAWING C4, AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT HAYBALES. HAYBALES SHALL BE USED WITH SILT FENCES AS SHOWN IN HAYBALES AND SILT FENCE DETAIL UNLESS OTHERWISE INDICATED ON DRAWING C4.
 - EACH HAYBALE SHALL BE PLACED SO THE BINDINGS ARE HORIZONTAL.
 - HAYBALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO STAKES DRIVEN THROUGH THE HAYBALE. THE FIRST STAKE IN EACH HAYBALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID HAYBALE AT AN ANGLE TO FORCE THE HAYBALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE HAYBALE.
 - INSPECTION SHALL BE DAILY AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 - HAYBALES SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
 - KEY HAYBALES 6" INTO SOFT SEDIMENT.



SIDE VIEW

SECTION VIEW

2 TYPICAL SILT CURTAIN DETAIL
C05 NOT TO SCALE

PLAN INTENDED TO BE VIEWED IN COLOR. ADJACENT BLOCK IS "BLUE" INCH SCALE ACCORDINGLY

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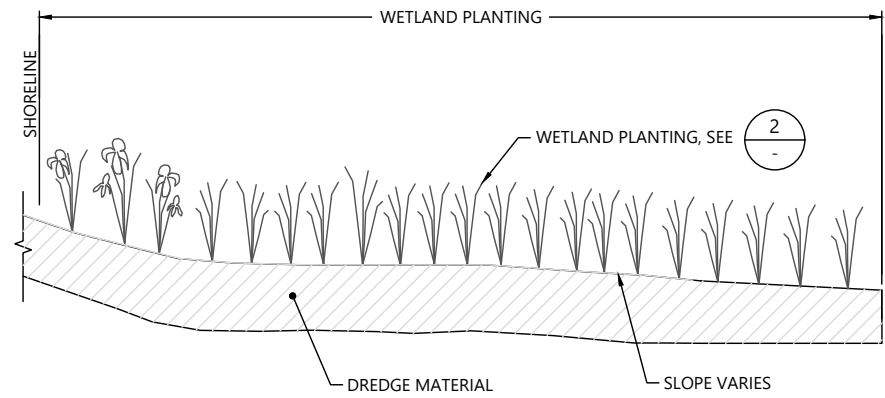
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**NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
 LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING**

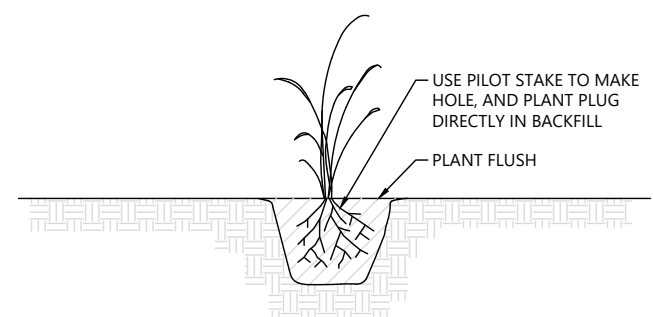
DETAILS

C6

SHEET # 9 OF 10



1 TYPICAL EMERGENT WETLAND CONSTRUCTION CROSS SECTION
NOT TO SCALE



2 WETLAND PLANTING DETAIL
NOT TO SCALE

TABLE 1: EMERGENT VEGETATION SPECIES

Common Name	Scientific Name
Broadleaf cattail	<i>Typha latifolia</i>
Common arrowhead	<i>Sagittaria latifolia</i>
Wool grass	<i>Scirpus cyperinus</i>
Soft stem bulrush	<i>Schoenoplectus tabernaemontani</i>
Fringed sedge	<i>Carex crinita</i>
Pickerelweed	<i>Pontederia cordata</i>
Soft rush	<i>Juncus effusus</i>
Water Willow	<i>Justicia Americana</i>

- NOTES:
- ALL LISTED PLANTS ARE OBLIGATED WETLAND PLANTS. PLANTS SHALL BE 2-INCH PLUGS AND PLANTED AT A DENSITY OF 10,900 (2-FOOT SPACING) PER ACRE.
 - SIMILAR SPECIES CAN BE SUBSTITUTED BASED ON SITE CONDITIONS WITH APPROVAL OF THE CONSTRUCTION MANAGER.
 - A 1-YEAR WARRANTY SHALL APPLY TO ALL EMERGENT VEGETATION SPECIES. AT THE END OF 1-YEAR, ANY EMERGENT SPECIES THAT DOES NOT SURVIVE SHALL BE REPLACED BY THE CONTRACTOR WITH A SPECIES PERFORMING WELL AT THE SITE.

TABLE 2: WETLAND SEED MIX

Common Name	Scientific Name
Common Water Plantain	<i>Alisma subcordatum</i>
Swamp Milkweed	<i>Asclepias incarnata</i>
Common Hop Sedge	<i>Carex lupulina</i>
Lance-Fruited Oval Sedge	<i>Carex scoparia</i>
Brown Fox Sedge	<i>Carex vulpinoidea</i>
Turtlehead	<i>Chelone glabra</i>
Common Wood Reed	<i>Cinna arundinacea</i>
Flat-Top Aster	<i>Doellingeria umbellata</i>
Virginia Wild Rye	<i>Elymus virginicus</i>
Common Boneset	<i>Eupatorium perfoliatum</i>
Hollow Joe-Pye Weed	<i>Eutrochium fistulosum</i>
Sneezeweed	<i>Helenium autumnale</i>
False Sunflower	<i>Heliopsis helianthoides</i>
Common Rush	<i>Juncus effusus</i>
Great Blue Lobelia	<i>Lobelia siphilitica</i>
Monkey Flower	<i>Mimulus ringens</i>
Ditch Stonecrop	<i>Penthorum sedoides</i>
Dark Green Rush	<i>Scirpus atrovirens</i>
Wool Grass	<i>Scirpus cyperinus</i>
Side-Flowering Aster	<i>Symphotrichum lateriflorum</i>
New England Aster	<i>Symphotrichum novae-angliae</i>
Marsh Shield Fen	<i>Thelypteris palustris</i>
Blue Vervain	<i>Verbena hastata</i>
Boneset	<i>Eupatorium perfoliatum</i>

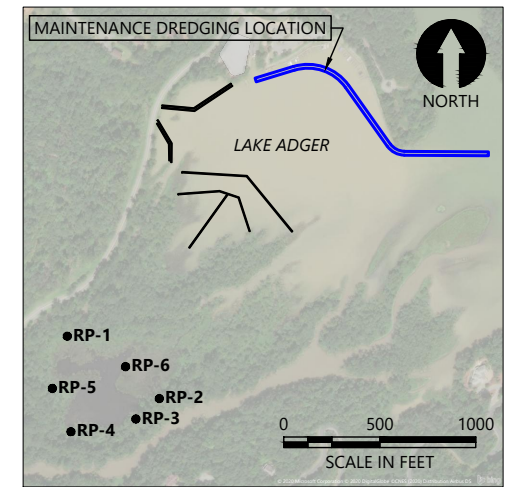
NOTE:
A 1-YEAR WARRANTY SHALL APPLY TO ALL SEEDING AREAS. AT THE END OF 1-YEAR, ANY BARE AREAS GREATER THAN 5 SQUARE FEET SHALL BE RESEEDDED BY THE CONTRACTOR WITH A SPECIES PERFORMING WELL AT THE SITE.

TABLE 3: TREE AND SHRUB SPECIES

Common Name	Scientific Name
Trees	
American elm	<i>Ulmus americana</i>
River birch	<i>Betula nigra</i>
Black willow	<i>Salix nigra</i>
Red maple	<i>Acer rubrum</i>
Box elder	<i>Acer negundo</i>
American sycamore	<i>Plantanus occidentalis</i>
Shrubs	
Spicebush	<i>Lindera benzoin</i>
Smooth alder	<i>Alnus serrulata</i>
Silky dogwood	<i>Comus amomun</i>

- NOTES:
- TREES SHALL BE 5-GALLON CONTAINER AND INSTALLED ON 25 FT CENTERS.
 - SHRUBS SHALL BE 1-GALLON CONTAINER AND INSTALLED ON 10 FT CENTERS.
 - A 1-YEAR WARRANTY SHALL APPLY TO ALL TREES AND SHRUBS. AT THE END OF 1 YEAR, ANY TREE OR SHRUB THAT DOES NOT SURVIVE SHALL BE REPLACED BY THE CONTRACTOR WITH A SPECIES PERFORMING WELL AT THE SITE.

REFERENCE WETLAND DATA LOCATIONS



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LEGEND:
●RP-1 REFERENCE WETLAND DATA LOCATION AND DESIGNATION

NOTE:
VEGETATION SPECIES AND WETLAND SEED MIXES LISTED IN TABLES 1 AND 2 ARE GENERALLY BASED ON THE INFORMATION COLLECTED DURING THE REFERENCE WETLAND SURVEY COMPLETED BY CLEARWATER ENVIRONMENTAL CONSULTANTS, INC., ON AUGUST 21-22, 2018.

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LAKE ADGER NAVIGATION CHANNEL MAINTENANCE DREDGING

VEGETATION PLANTING DETAILS

C7
SHEET # 10 OF 10

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