J O I N T
P U B L I C N O T I C E

CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
Charleston, SC 29403-5107
and
THE S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Office of Ocean and Coastal Resource Management
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

REGULATORY DIVISION
Refer to: P/N SAC-2012-01069 December 27, 2016

Pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Sections 401 and 404 of the Clean Water Act (33 U.S.C. 1344), and the South Carolina Coastal Zone Management Act (48-39-10 et.seq.), an application has been submitted to the Department of the Army and the S.C. Department of Health and Environmental Control by

Mr. Wells Whaley
Paul and Dalton, LLC
c/o Mr. Malcolm Baldwin
Ducks Unlimited, Inc.
North Charleston, South Carolina 29418

for a permit to excavate and place fill material into wetlands and waters associated with the

COMBAHEE RIVER

within existing managed tidal impoundments at Paul and Dalton Plantation located at 3220 Wiggins Road in Green Pond, Colleton County, South Carolina (Latitude: 32.61392 °N, Longitude: -80.642816 °W) (White Hall Quad).

In order to give all interested parties an opportunity to express their views

N O T I C E

is hereby given that written statements regarding the proposed work will be received by the **Corps** until

15 Days from the Date of this Notice,

and **SCDHEC** will receive written statements regarding the proposed work until

30 Days from the Date of this Notice

from those interested in the activity and whose interests may be affected by the proposed work.

Note: A public notice was previously issued for this project on November 1, 2012. A Corps permit was not issued for the project and the project was not constructed. Only comments received in response to this public notice will be considered.

The proposed work consists of the excavation of material from 20.81 acres of wetlands and waters, the discharge of excavated material into 19.26 acres of wetlands and waters to create 13,352 linear feet of new interior field embankments and perform 4,065 linear feet of berm enhancement, as well as the installation of fourteen (14) new rice trunks and the construction of 540 linear feet of bulkhead, to subdivide a 171.4-acre and a 324.6-acre managed tidal impoundment fields into smaller fields. In detail, the proposed work consists of the following:

1) New Embankment (Levee) A: The construction of new interior Embankment A involves the excavation of approximately 11,444.8 cubic yards of material from 2.34 acres of wetlands and waters to create two (2) approximate 2,457 linear foot interior canals and the discharge of the excavated material into 2.53 acres of wetlands and waters to create one (1) approximate 2,457 linear foot field-dike. One canal will be located on each side of the field-dike. The new field-dike will have a top-width of 16' with 3:1 sides slopes. The two (2) canals will be approximately 20' wide and will be excavated approximately 12' from the either toe of the field-dike to establish a 12' berm that will be at the existing grade of the impoundment field. Included in this new embankment A will be one (1) new 18" X 5' X 32' wooden rice trunk with a flash board riser, two (2) 16' bulkheads and 8' wing walls on both sides. Total impacts associated with the construction of Embankment A will be approximately 4.87 acres of wetlands and waters.

2) New Embankment (Levee) B: The construction of new interior Embankment B involves the excavation of approximately 22,233.3 cubic yards of material from 4.31 acres of wetlands and waters to create two (2) approximate 4,775 linear foot interior canals and the discharge of the excavated material into 4.92 acres of wetlands and waters to create one (1) approximate 4,775 linear foot field-dike. One canal will be located on each side of the field-dike. The new field-dike will have a top-width of 16' with 3:1 side slopes. The two (2) canals will be approximately 20' wide and will be excavated approximately 12' from the either toe of the field-dike to establish a 12' berm that will be at the existing grade of the impoundment field. Included in this new Embankment B will be one (1) new 18" X 5' X 32' wooden rice trunk with a flash board riser, two (2) 16' bulkheads and 8' wing walls on both sides. Total impacts associated with the construction of Embankment B will be approximately 9.23 acres of wetlands and waters.

3) New Embankment (Levee) C: The construction of new interior Embankment C involves the excavation of approximately 5,622.2 cubic yards of material from 1.71 acres of wetlands and waters to create two (2) approximate 1,092 linear foot interior canals and the discharge of the excavated material into 1.24 acres of wetlands and waters to create one (1) approximate 1,092 linear foot field-dike. One canal will be located on each side of the field-dike. The new field-dike will have a top-width of 16' with 3:1 side slopes. The two (2) canals will be approximately 20' wide and will be excavated approximately 12' from the either toe of the field-dike to establish a 12' berm that will be at the existing grade of the impoundment field. Included in this new Embankment C will be one (1) new 18" X 5' X 32' wooden rice trunk with a flash board riser, two (2) 16' bulkheads and 8' wing walls on both sides. Total impacts associated with the construction of Embankment C will be approximately 2.95 acres of wetlands and waters.

4) New Embankment (Levee) D: The construction of new interior Embankment D involves the excavation of approximately 3,043.9 cubic yards of material from 0.93 acres of wetlands and waters to create two (2) approximate 578 linear foot interior canals and the discharge of the excavated material into 0.67 acres of wetlands and waters to create one (1) approximate 578 linear foot field-dike. One canal will be located on each side of the field-dike. The new field-dike will have a top-width of 16' with 3:1 side slopes. The two (2) canals will be approximately 20' wide and will be excavated approximately 12' from the either toe of the field-dike to establish a 12' berm that will be at the existing grade of the impoundment field. Included in this new Embankment D will be one

(1) new 18" X 5' X 32' wooden rice trunk with a flash board riser, two (2) 16' bulkheads and 8' wing walls on both sides. Total impacts associated with the construction of Embankment D will be approximately 1.6 acres of wetlands and waters.

5) New Embankment (Levee) E: The construction of new interior Embankment E involves the excavation of approximately 9,972.2 cubic yards of material from 3.73 acres of wetlands and waters to create two (2) approximate 2,162 linear foot interior canals and the discharge of the excavated material into 2.21 acres of wetlands and waters to create one (1) approximate 2,162 linear foot field-dike. One canal will be located on each side of the field-dike. The new field-dike will have a top-width of 16' with 3:1 side slopes. The two (2) canals will be approximately 20' wide and will be excavated approximately 12' from the either toe of the field-dike to establish a 12' berm that will be at the existing grade of the impoundment field. Included in this new Embankment E will be one (1) new 18" X 5' X 32' wooden rice trunk with a flash board riser, two (2) 16' bulkheads and 8' wing walls on both sides. Total impacts associated with the construction of Embankment E will be approximately 5.94 acres of wetlands and waters.

6) New Embankment (Levee) F: The construction of new interior Embankment F involves the excavation of approximately 10,091.4 cubic yards of material from 3.55 acres of wetlands and waters to create two (2) approximate 2,188 linear foot interior canals and the discharge of the excavated material into 2.23 acres of wetlands and waters to create one (1) approximate 2,188 linear foot field-dike. One canal will be located on each side of the field-dike. The new field-dike will have a top-width of 16' with 3:1 side slopes. The two (2) canals will be approximately 20' wide and will be excavated approximately 12' from the either toe of the field-dike to establish a 12' berm that will be at the existing grade of the impoundment field. Included in this new Embankment F will be one (1) new 18" X 5' X 32' wooden rice trunk with a flash board riser, two (2) 16' bulkheads and 8' wing walls on both sides. Total impacts associated with the construction of Embankment F will be approximately 5.75 acres of wetlands and waters.

7) Interior Canal Relocation to Establish a Berm: The Interior Canal Relocation includes the excavation of approximately 11,281.7 cubic yards of material from 4.17 acres of wetlands and waters. The new canal will be approximately 4,065 linear feet and will have a width of approximately 50 feet. The excavated material will be used to fill in the existing 50 foot wide interior canal thus establishing a berm. The berm will be located between the perimeter river-dike and the newly excavated canal and will help stabilize the perimeter river-dike. The discharge of the excavated material to establish the berm will impact approximately 5.32 acres of wetlands and waters. Total impacts associated the Interior Canal Relocation is 9.49 acres.

8) Other New Structures: The proposed project also includes the installation of an additional seven (7) 18" x 5' x 32' wooden rice trunks with flash board risers within existing embankments. Each new trunk will also include the construction of 16' bulkheads and 8' wing walls on both sides of the embankments. The impacts associated with the new rice trunks, wing walls, and bulkheads are 0.08 acres of wetlands and waters as a result of excavation and 0.02 acres of wetlands and waters as a result of the discharge of the excavated material.

9) Vinyl Bulkhead: The proposed project also includes the installation of 540 lf of vinyl sheet piling bulkhead on the existing embankment along the Combahee River. Impacts associated with the vinyl bulkhead include 0.1 acres of wetlands and waters with 333 cubic yards of fill material.

Project Purpose: The proposed project will subdivide a 171.4-acre (Field A) and a 324.6-acre (Field B) managed tidal impoundment field into smaller fields. Field A will be subdivided into two (2) new fields that are 73.4 acres (Field A3) and 97.1 acres (Field A2) in size. Field B will be subdivided into four (4) new fields that are 69.9 acres (Field B5), 105.6 acres (Field B4), 99.5 acres (Field B3), and 28.9 acres (Field B2) in size.

As stated by the applicant,

"The overall project purposes include enhancement of water circulation capability, improvement and diversification of habitats within the managed tidal impoundment for wildlife species, maximizing the potential management opportunities within the managed tidal impoundments, and minimizing the potential negative impact that would result if the perimeter embankment were lost due to a major storm or climate change and/or sea level rise. The proposed new embankment and water control structures will allow the larger managed tidal impoundment fields to be managed as smaller units with varying habitat types and water management strategies. The planned central canal will give the ability to operate each unit independently, thus resulting in a more diverse vegetation and wildlife management plan. Water delivery will be enhanced to these habitats by addressing elevation differences and topography challenges in regards to water circulation capabilities. The proposed project will also minimize impacts to the entire wetland complex should one portion of the perimeter field embankment be impacted by a major storm or by long-term implications of climate change. The proposed cross field-embankments will help compartmentalize areas of similar elevation and the addition of water control structures will enhance delivery to these areas. This similarity in elevation across a managed impoundment will better help manage for plants valuable to wildlife and manage for migrating shorebirds in fall and spring.

The proposed project will create multiple different managed tidal impoundment fields where water levels can be controlled independently, thus resulting in different water management regimes. Consequently, a variety of management strategies will be used in the resulting water units. Some tidal impoundment fields will be managed to promote brackish-management species while others will be managed for fresh water moist-soil species. Flooding during peak availability of young fishes form the Combahee River is expected to result in productive fishery within a managed tidal impoundment field. This will provide excellent habitat for bald eagles, endangered wood storks and osprey. Success of this project will result in more available habitat over a more diverse time period for these species. Managing multiple tidal impoundment fields with a variety of water levels will also benefit migrating shorebirds. During spring and fall migrations, numerous bi-polar shore bird species pass through the Ace Basin. They obtain high-energy foods required for migration from recently exposed mud flats in these managed tidal impoundment fields. By having multiple units, managers are able to stagger mud flat exposure, and thereby access to food resources over a longer period of time. These higher elevation beds within a managed tidal impoundment fields are generally difficult to flood and are often monocultures of Spartina spp., their value to migrating shorebirds is minimal. The ability to flood different units to elevations that can set back plant succession to mud flats, affect vegetation density and species diversity will be of great conservation utility for plantation managers."

Avoidance and Minimization: As stated by the applicant,

"Avoidance strategies are few for the proposed work. New embankment locations were selected to strategically utilize remnant embankments within the wetland complex. We have minimized impacts by restoring portions of the original layout of the managed tidal

impoundment fields. The proposed central canal nearly relocates the canal that once occurred within the project area during rice culture. The tidal impoundments were initially managed using similar layout and it can be assumed that they functioned properly. Not performing the proposed work would not meet the stated goal of improving water circulation capability and enhancing wildlife habitat value if no work were [to occur]. Additional impacts to wetlands and waters will be avoided by minimizing the width and height of the proposed field embankments to dimensions that are sufficient for access with traditional agricultural equipment and implements. To further minimize impacts, all proposed work will occur in the dry after the managed tidal impoundment fields have been drained in later winter and early spring. Also, all fill material needed for the proposed work will be obtained from within the managed tidal impoundment fields. The proposed field embankment construction and canal excavation activities will occur simultaneously so no materials will be double handled. The proposed work will be completed with a long-reach excavator on tracks using wooden mats for stability if required. As the excavator proceeds down the length of the proposed field embankment and canal, the operator will simultaneously excavate the new canal and use the excavated material (fill) to construct the field embankment. The machinery will start at one end of a proposed field embankment/canal and continue until one section is completed. The new wooded rice trunks will be installed as the proposed embankments are constructed. Also, bulkheads will be constructed on either side of the newly installed spillway boxes to provide stability for the portion of the field embankment that crosses the spillway box. By conducted all of the work simultaneously, the amount of traffic traveling across the beds of the managed tidal impoundment fields will be minimized. The newly constructed field-embankments will be vegetated by broadcast seeding of fast growing herbaceous species (e.g. brown top millet). Based on previous experience, this area will be vegetated in the first season [from] native plant species already established in the tidal impoundment."

Compensatory Mitigation: As stated by the applicant,

"We have not developed a compensatory mitigation plan for the proposed project for several reasons. The proposed [project aids in the management of a more diverse set of habitats by allowing multiple water management regimes within a fully-functioning tidal impoundment. Construction of new field embankments is the only practical way to allow the property owner to achieve his goals of increased water circulation capability, enhanced wildlife habitat quality, improved vegetation management ability, flood retention and climate change resiliency. The proposed activity is in line with traditional activities within managed tidal impoundments in the ACE and Santee Basins. Another motivation of this project is to protect the majority of the managed tidal impoundment fields if one portion of the perimeter embankment were to fail. Recent permitting history demonstrates that sections of perimeter river field-embankment are under extreme stresses and that the correction of a failure is an expensive and difficult project. Construction of the proposed interior field embankments will limit the impact to habitat if perimeter embankment breaches to a minor portion of the managed tidal impoundment field rather than allowing it to impact a majority of a field. The proposed project is consistent with the past stewardship of Paul and Dalton Plantation. The project has secured funding through a grant from the North American Wetland Conservation Act (NAWCA) and the project is consistent with the habitat goals for the North American Waterfowl Management Plan, South Atlantic Migratory Bird Initiative and the Atlantic Coast Joint Venture. Lastly, Paul and Dalton Plantation is protected under a conservation easement with Lowcountry Open Land Trust. Based on these reasons, we believe that compensatory mitigation is not required for the proposed project."

NOTE: This public notice and associated plans are available on the Corps' website at: http://www.sac.usace.army.mil/Missions/Regulatory/PublicNotices .

The District Engineer has concluded that the discharges associated with this project, both direct and indirect, should be reviewed by the South Carolina Department of Health and Environmental Control in accordance with provisions of Section 401 of the Clean Water Act. As such, this notice constitutes a request, on behalf of the applicant, for certification that this project will comply with applicable effluent limitations and water quality standards. The work shown on this application must also be certified as consistent with applicable provisions of the Coastal Zone Management Program (15 CFR 930). This activity may also require evaluation for compliance with the S. C. Construction in Navigable Waters Permit Program. State review, permitting and certification is conducted by the S. C. Department of Health and Environmental Control. The District Engineer will not process this application to a conclusion until such certifications are received. The applicant is hereby advised that supplemental information may be required by the State to facilitate the review.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Implementation of the proposed project would impact 40.07 acres of estuarine substrates and emergent wetlands utilized by various life stages of species comprising the shrimp, and snapper-grouper management complexes. The District Engineer's initial determination is that the proposed action would not have a substantial individual or cumulative adverse impact on EFH or fisheries managed by the South Atlantic Fishery Management Council and the National Marine Fisheries Service (NMFS). The District Engineer's final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

Pursuant to the Section 7 of the Endangered Species Act of 1973 (as amended), the Corps has reviewed the project area, examined all information provided by the applicant, and the District Engineer has determined, based on the most recently available information that the project will have no effect on any Federally endangered, threatened, or proposed species and will not result in the destruction or adverse modification of designated or proposed critical habitat. This public notice serves as a request to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for any additional information they may have on whether any listed or proposed endangered or threatened species or designated or proposed critical habitat may be present in the area which would be affected by the activity.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), this public notice also constitutes a request to Indian Tribes to notify the District Engineer of any historic properties of religious and cultural significance to them that may be affected by the proposed undertaking.

In accordance with Section 106 of the NHPA, the District Engineer has consulted South Carolina ArchSite (GIS), for the presence or absence of historic properties (as defined in 36 C.F.R. 800.16)(*l*)(1)), and has initially determined that there are historic properties present, but there will be no adverse effect on Paul and Dalton Plantation. (Please note that this determination was previously made by the State Historic Preservation Office in a letter dated November 19, 2012.) To ensure that other historic properties that the District Engineer is not aware of are not overlooked, this public notice also serves as a request to the State Historic Preservation Office and other interested parties to provide any information they may have with regard to historic properties. This public notice serves as a request for concurrence within 30

days from the SHPO (and/or Tribal Historic Preservation Officer).

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state, with particularity, the reasons for holding a public hearing.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest and will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency (EPA), under authority of Section 404(b) of the Clean Water Act and, as appropriate, the criteria established under authority of Section 102 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the project must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the project will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. A permit will be granted unless the District Engineer determines that it would be contrary to the public interest. In cases of conflicting property rights, the Corps cannot undertake to adjudicate rival claims.

The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity. **Please submit comments in writing, identifying the project of interest by public notice number, to the following address:**

U.S. Army Corps of Engineers
ATTN: REGULATORY DIVISION
69A Hagood Avenue
Charleston, SC 29403-5107

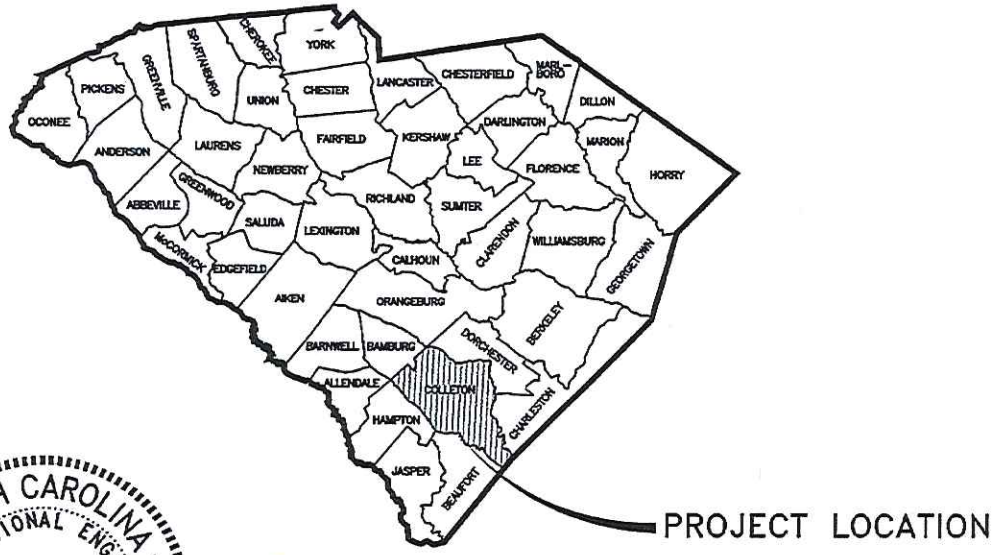
If there are any questions concerning this public notice, please contact Tracy D. Sanders, Project Manager, at (843) 329-8190 or toll free at 1-866-329-8187.

DUCKS UNLIMITED

DUCKS UNLIMITED, INC.

PAUL AND DALTON PLANTATION NAWCA PROJECT

COLLETON COUNTY
IN COOPERATION WITH
WELLS WHALEY



SOUTH CAROLINA
DUCKS UNLIMITED INC.
No.C02504
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No.19049
MALCOLM M. BALDWIN

12/15/16

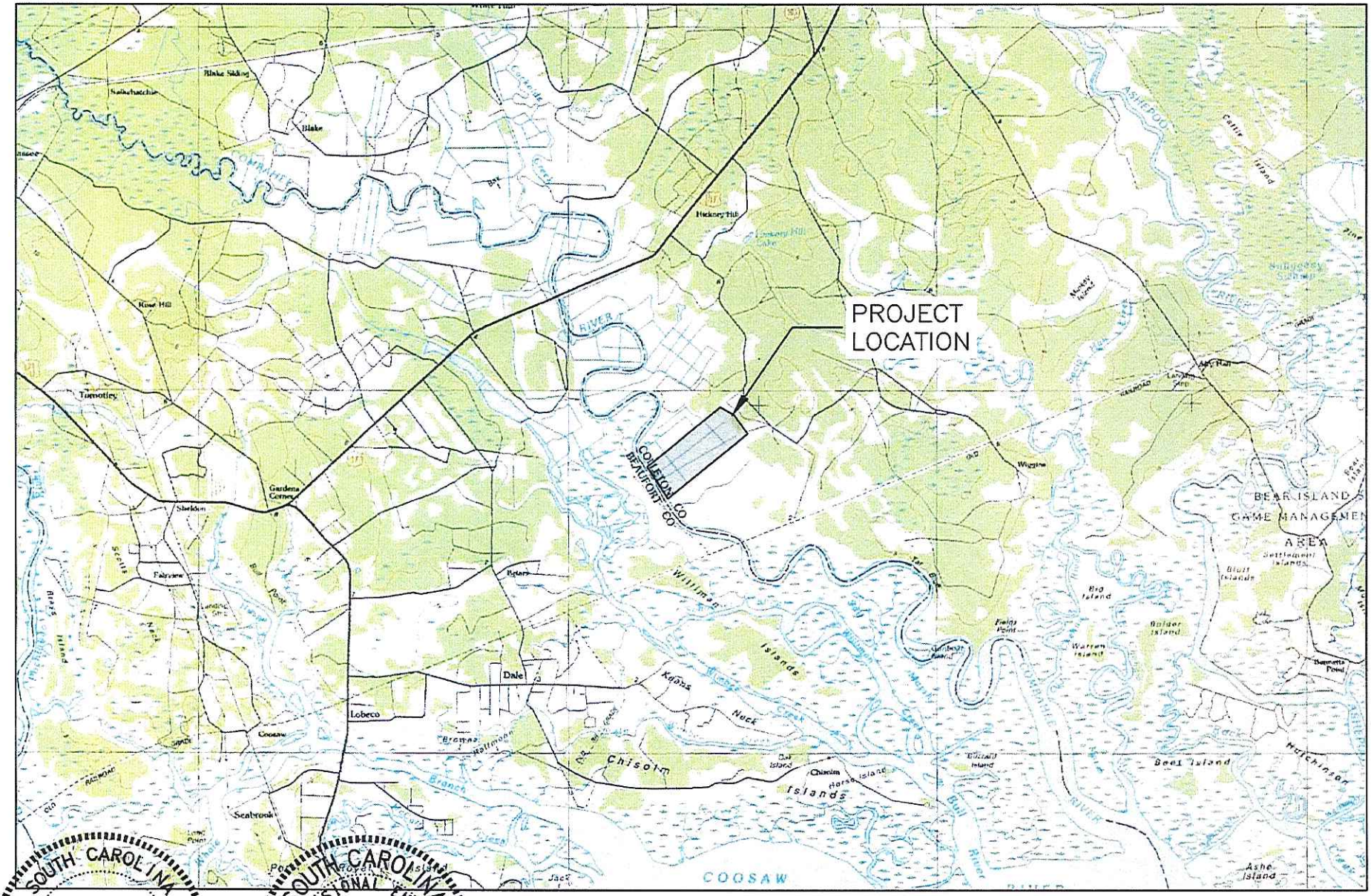
CAUTION
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

APPLICATION NUMBER:	
PROPOSED ACTIVITY:	NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS
DATE:	09-01-16
COUNTY:	COLLETON

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive; Suite E
Ridgeland, MS 39157
Certificate Of Authorization No. C02504

APPLICANT: WELLS WHALEY

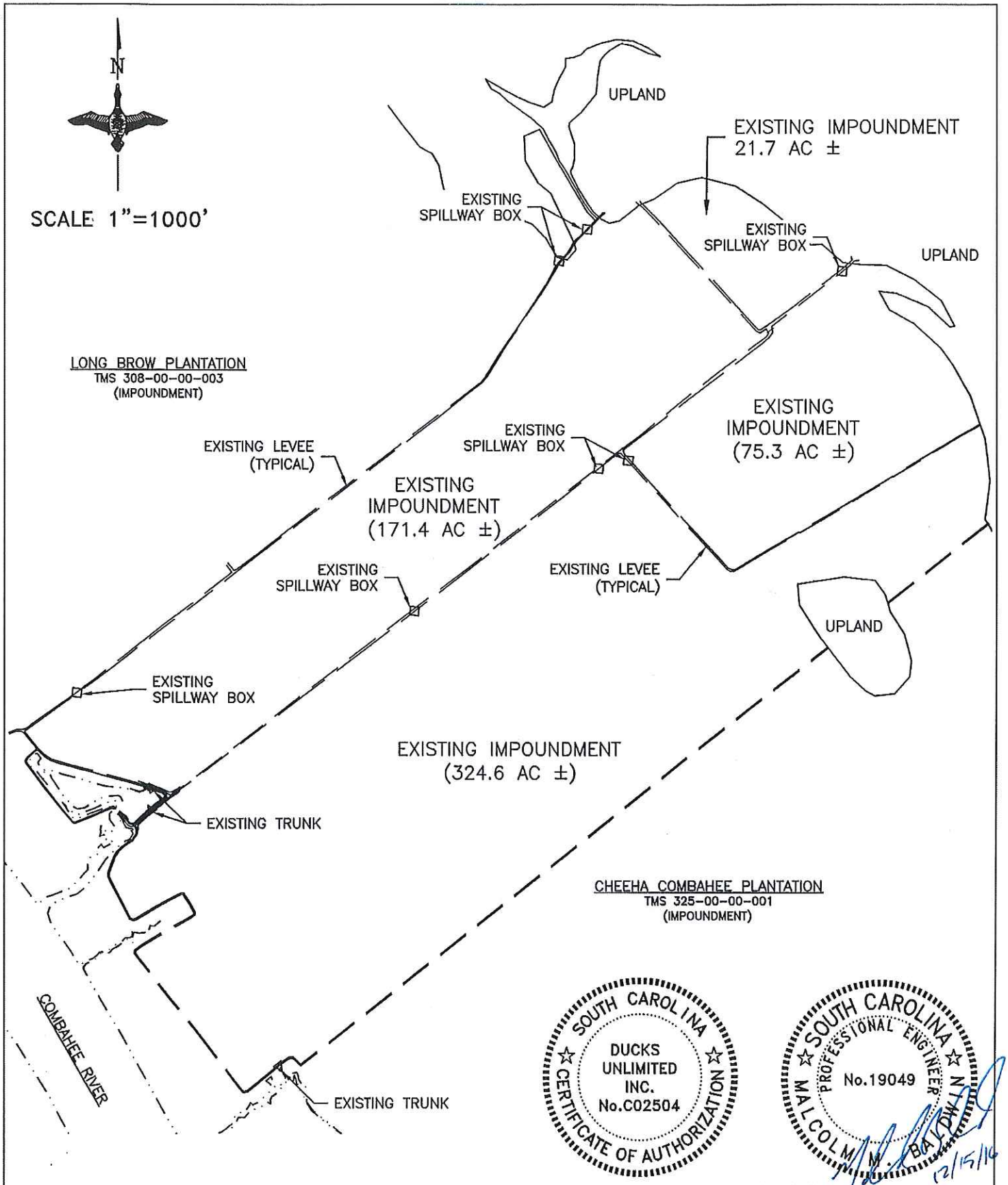
PROJECT NO.:	DU-SC-1-51
PROJECT TITLE:	PAUL AND DALTON PLANTATION
SHEET TITLE:	COVER SHEET
LATITUDE/LONGITUDE:	32.6162°/ 80.6414°
AGENT: MALCOLM BALDWIN	SHEET 1 OF 15



SOUTH CAROLINA
DUCKS UNLIMITED INC.
No.C02504
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No.19049
MALCOLM M. BALDWIN
12/15/16

APPLICATION NUMBER:	DUCKS UNLIMITED INC. SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	PROJECT NO.:	DU-SC-1-51
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS		PROJECT TITLE:	PAUL AND DALTON PLANTATION
DATE: 09-01-16		SHEET TITLE:	LOCATION MAP
COUNTY: COLLETON		LATITUDE/LONGITUDE:	32.6162° / 80.6414°
	WELLS WHALEY APPLICANT:	MALCOLM BALDWIN AGENT:	SHEET 2 OF 15



SOUTH CAROLINA
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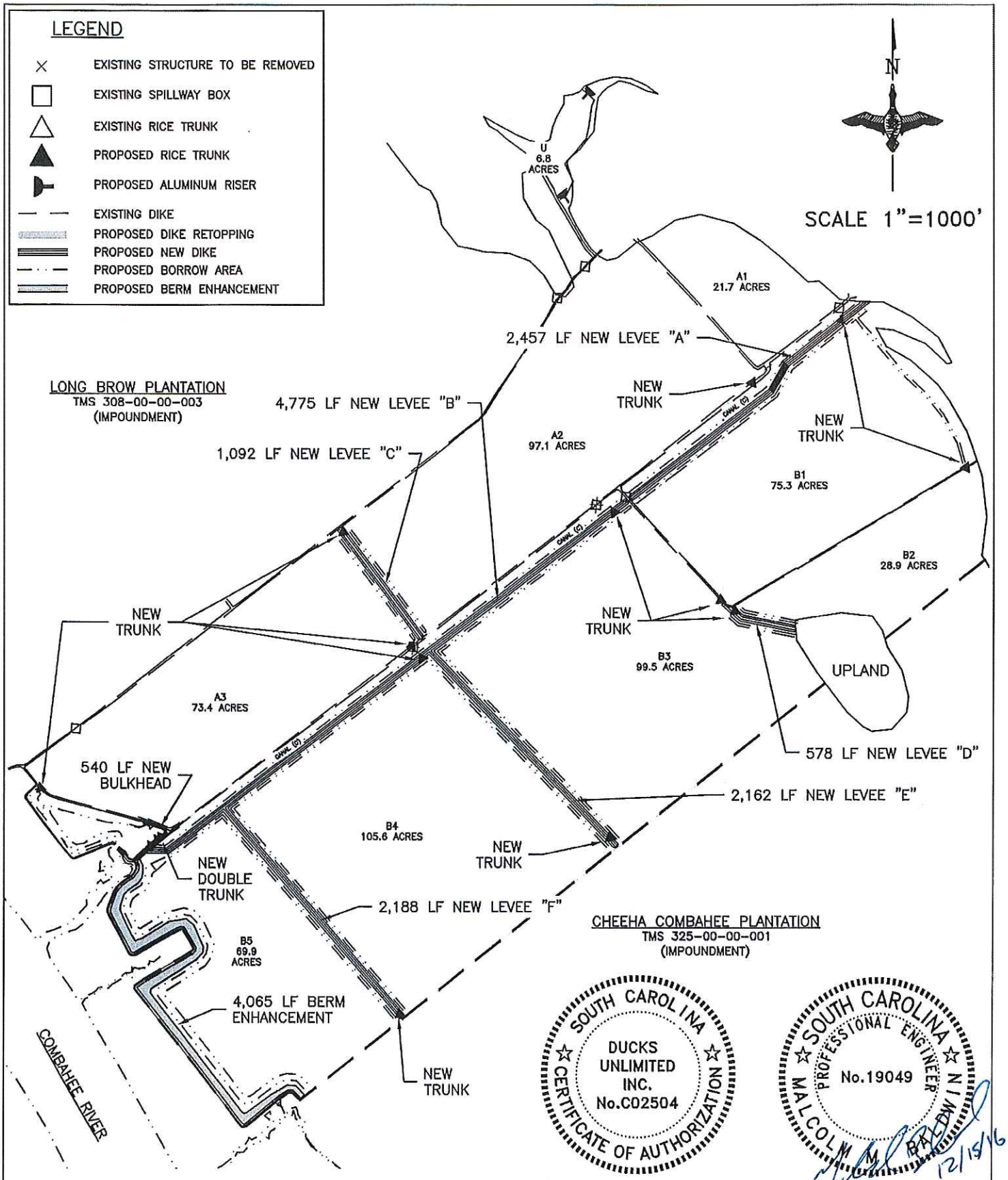
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No.19049
MALCOLM M. BALDWIN
12/15/16

APPLICATION NUMBER:	DUCKS UNLIMITED INC.	PROJECT NO.: DU-SC-1-51
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS		PROJECT TITLE: PAUL AND DALTON PLANTATION
DATE: 09-01-16	SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	SHEET TITLE: EXISTING CONDITIONS
COUNTY: COLLETON		LATITUDE/LONGITUDE: 32.6162°/ 80.6414°
	APPLICANT: WELLS WHALEY	AGENT: MALCOLM BALDWIN — SHEET 3 OF 15



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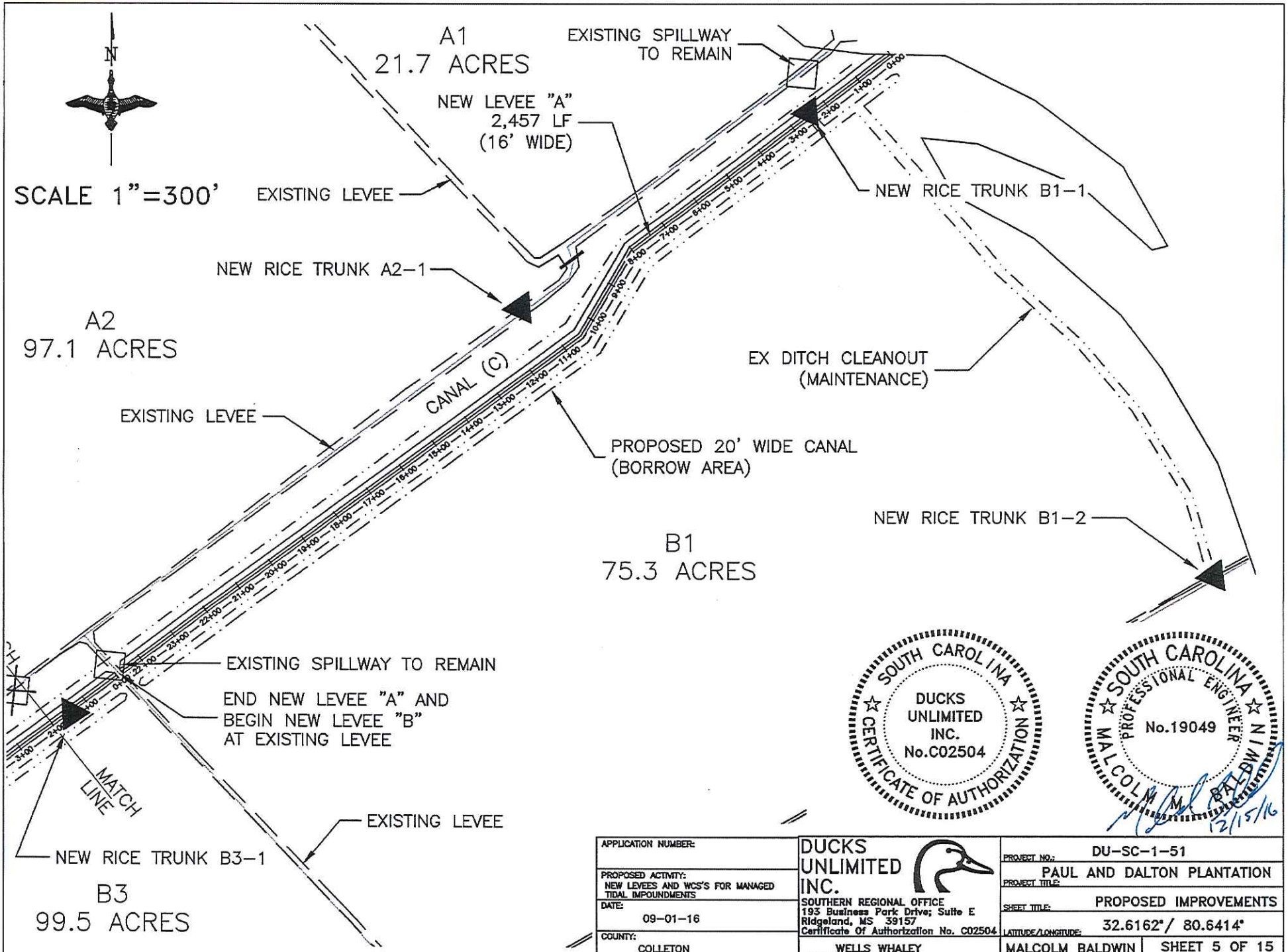
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS	
DATE: 09-01-16	
COUNTY: COLLETON	
DUCKS UNLIMITED INC. SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	
APPLICANT: WELLS WHALEY	
PROJECT NO.: DU-SC-1-51	
PROJECT TITLE: PAUL AND DALTON PLANTATION	
SHEET TITLE: OVERALL MAP	
LATITUDE/LONGITUDE: 32.6162°/ 80.6414°	
AGENT: MALCOLM BALDWIN	SHEET 4 OF 15

12/15/16



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SOUTHERN REGIONAL OFFICE
193 Business Park Drive; Suite E
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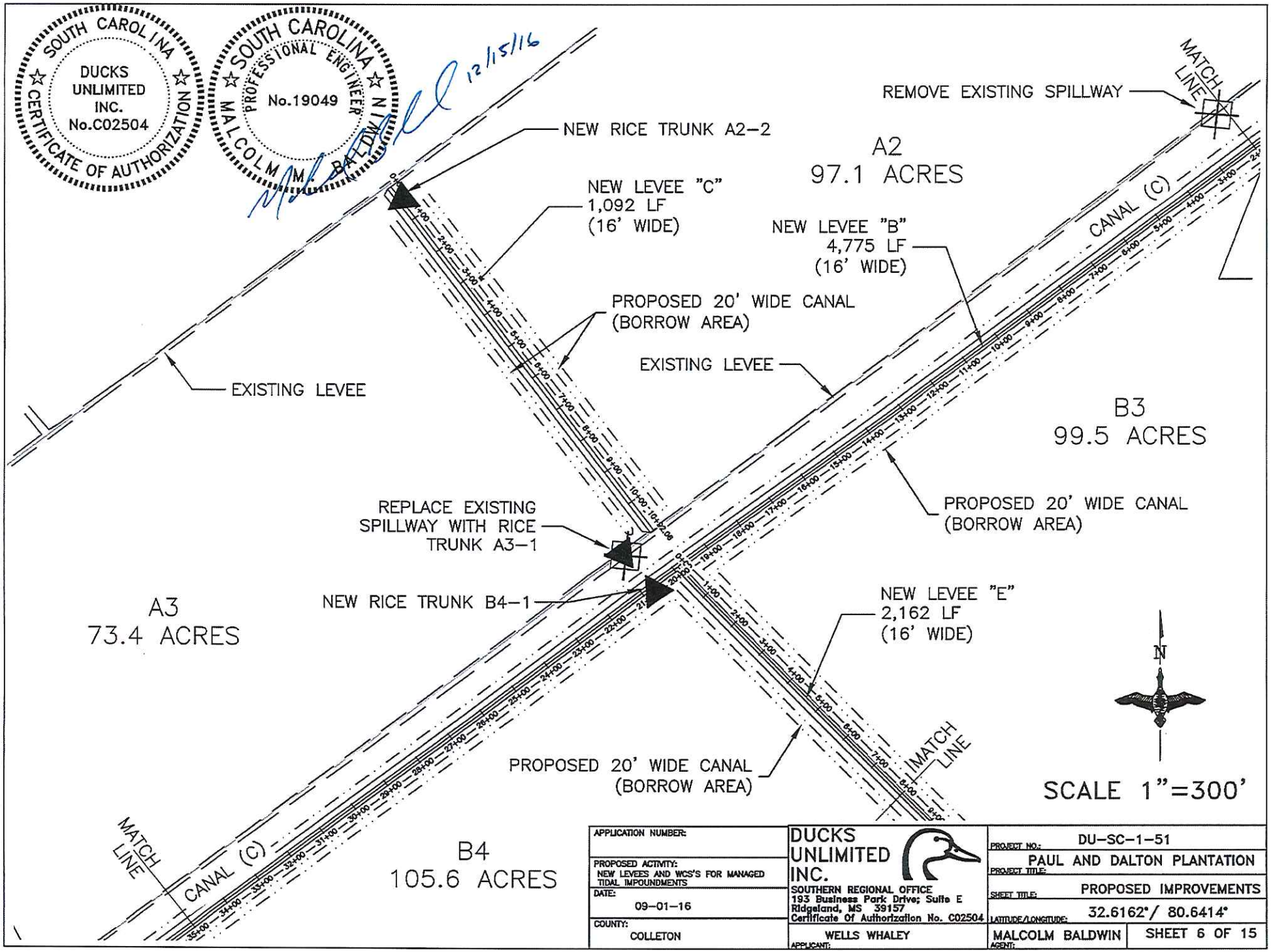
Certificate Of Authorization No. C02504

APPLICANT: WELLS WHALEY

PROJECT NO.:	DU-SC-1-51
PROJECT TITLE:	PAUL AND DALTON PLANTATION
SHEET TITLE:	PROPOSED IMPROVEMENTS
LATITUDE/LONGITUDE:	32.6162°/ 80.6414°
AGENT:	MALCOLM BALDWIN
	SHEET 5 OF 15


SOUTH CAROLINA
DUCKS UNLIMITED INC.
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CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA
PROFESSIONAL ENGINEER
No.19049
MALCOLM M. BALDWIN
12/15/16
NEW RICE TRUNK A2-2
NEW LEVEE "C"
1,092 LF
(16' WIDE)
A2
97.1 ACRES
REMOVE EXISTING SPILLWAY
MATCH LINE
NEW LEVEE "B"
4,775 LF
(16' WIDE)
CANAL (C)
PROPOSED 20' WIDE CANAL
(BORROW AREA)
EXISTING LEVEE
EXISTING LEVEE
B3
99.5 ACRES
REPLACE EXISTING
SPILLWAY WITH RICE
TRUNK A3-1
PROPOSED 20' WIDE CANAL
(BORROW AREA)
A3
73.4 ACRES
NEW RICE TRUNK B4-1
NEW LEVEE "E"
2,162 LF
(16' WIDE)
N
PROPOSED 20' WIDE CANAL
(BORROW AREA)
MATCH LINE
SCALE 1"=300'
MATCH LINE
CANAL (C)
B4
105.6 ACRES
APPLICATION NUMBER:
PROPOSED ACTIVITY:
NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS
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09-01-16
COUNTY:
COLLETON
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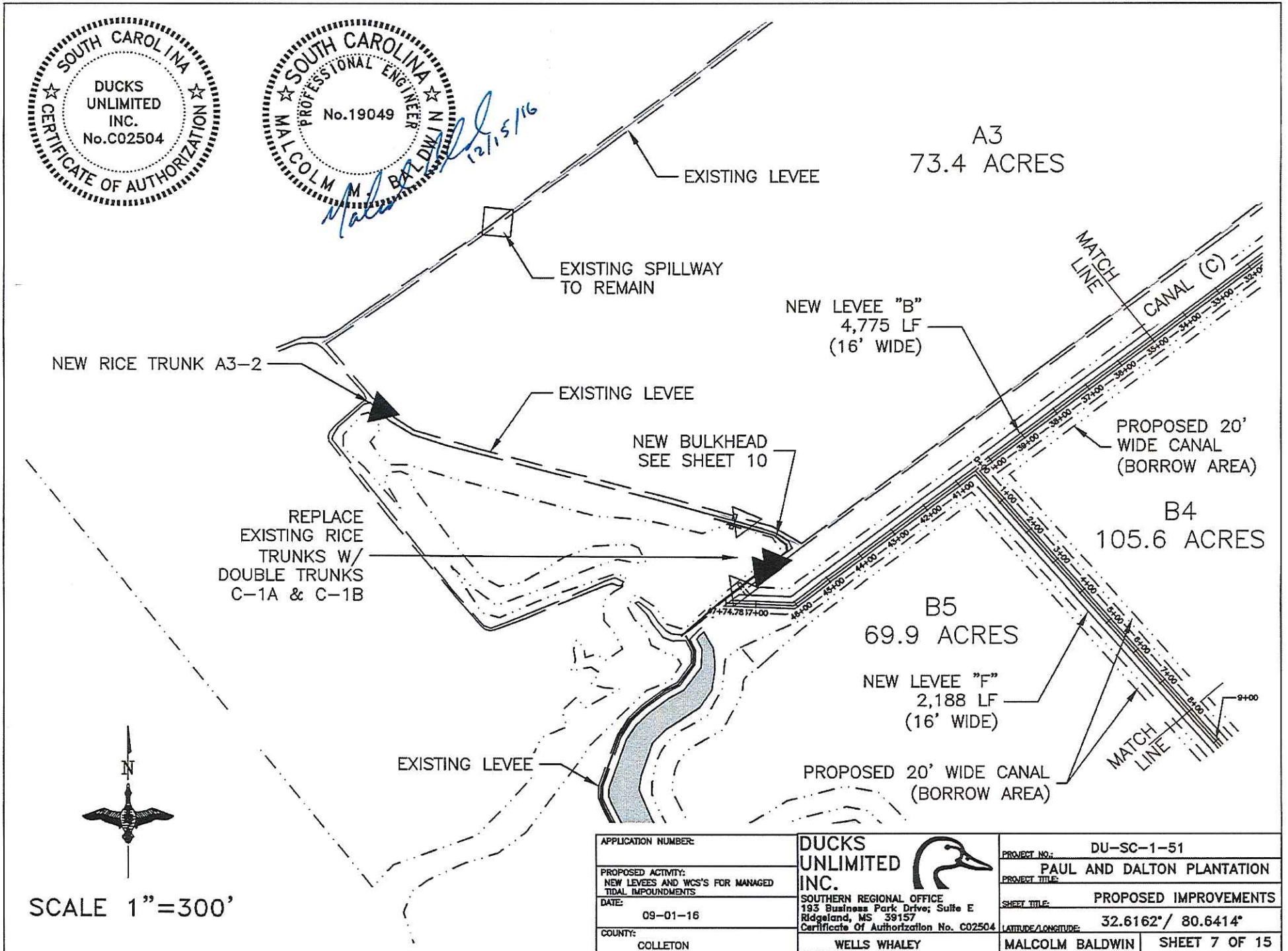
PROJECT NO.: DU-SC-1-51
PROJECT TITLE: PAUL AND DALTON PLANTATION
SHEET TITLE: PROPOSED IMPROVEMENTS
LATITUDE/LONGITUDE: 32.6162°/ 80.6414°
MALCOLM BALDWIN
AGENT:
SHEET 6 OF 15

SOUTH CAROLINA
DUCKS UNLIMITED INC.
No.C02504
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No.19049
MALCOLM M. BALDWIN
12/5/16

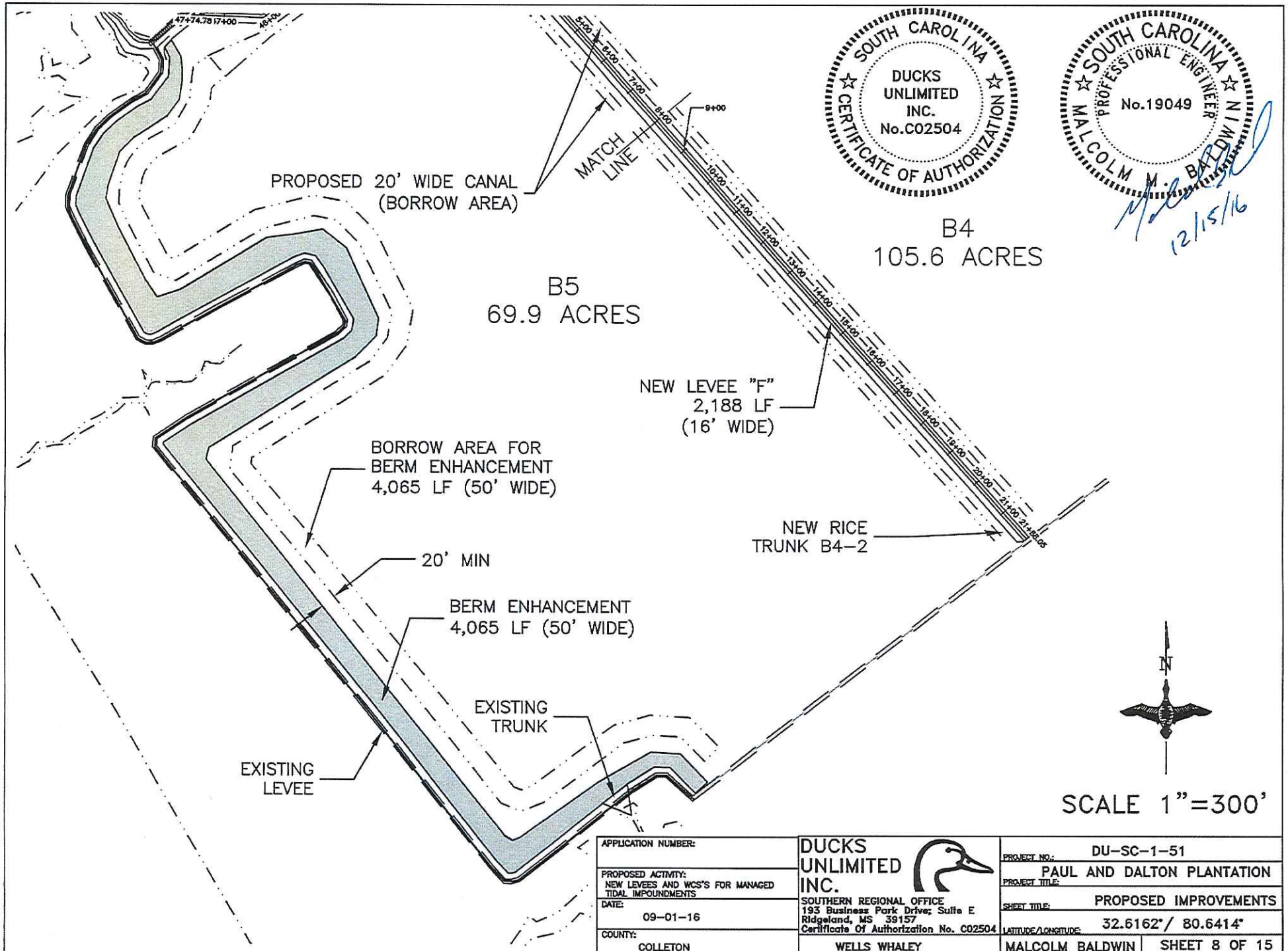


APPLICATION NUMBER:	
PROPOSED ACTIVITY:	NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS
DATE:	09-01-16
COUNTY:	COLLETON

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive; Suite E
Ridgeland, MS 39157
Certificate Of Authorization No. C02504

APPLICANT: WELLS WHALEY

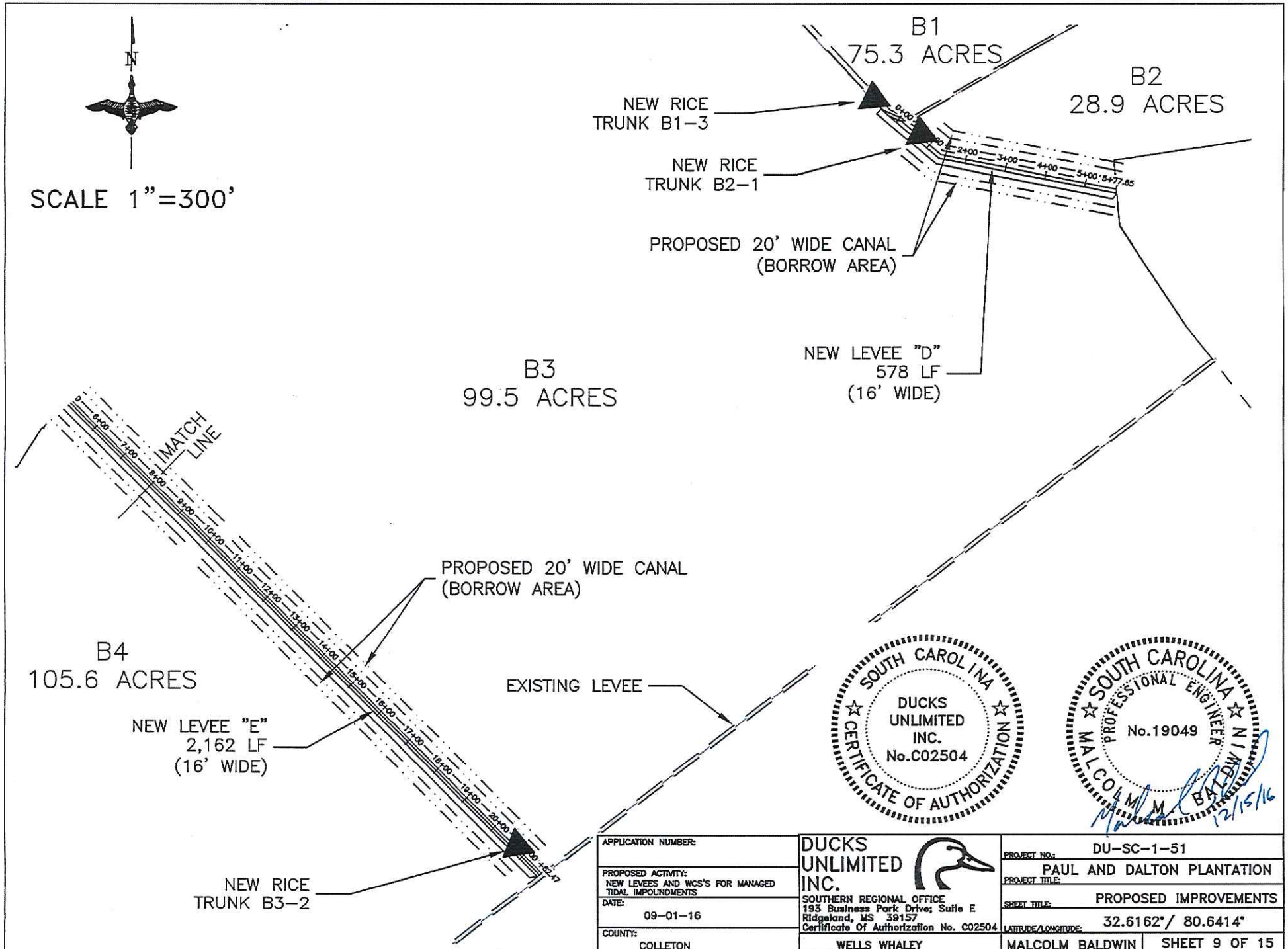
PROJECT NO.:	DU-SC-1-51
PROJECT TITLE:	PAUL AND DALTON PLANTATION
SHEET TITLE:	PROPOSED IMPROVEMENTS
LATITUDE/LONGITUDE:	32.6162°/ 80.6414°
AGENT:	MALCOLM BALDWIN
	SHEET 7 OF 15



SOUTH CAROLINA
CERTIFICATE OF AUTHORIZATION
DUCKS UNLIMITED INC.
No.C02504

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No.19049
MALCOLM M. BALDWIN
12/15/16

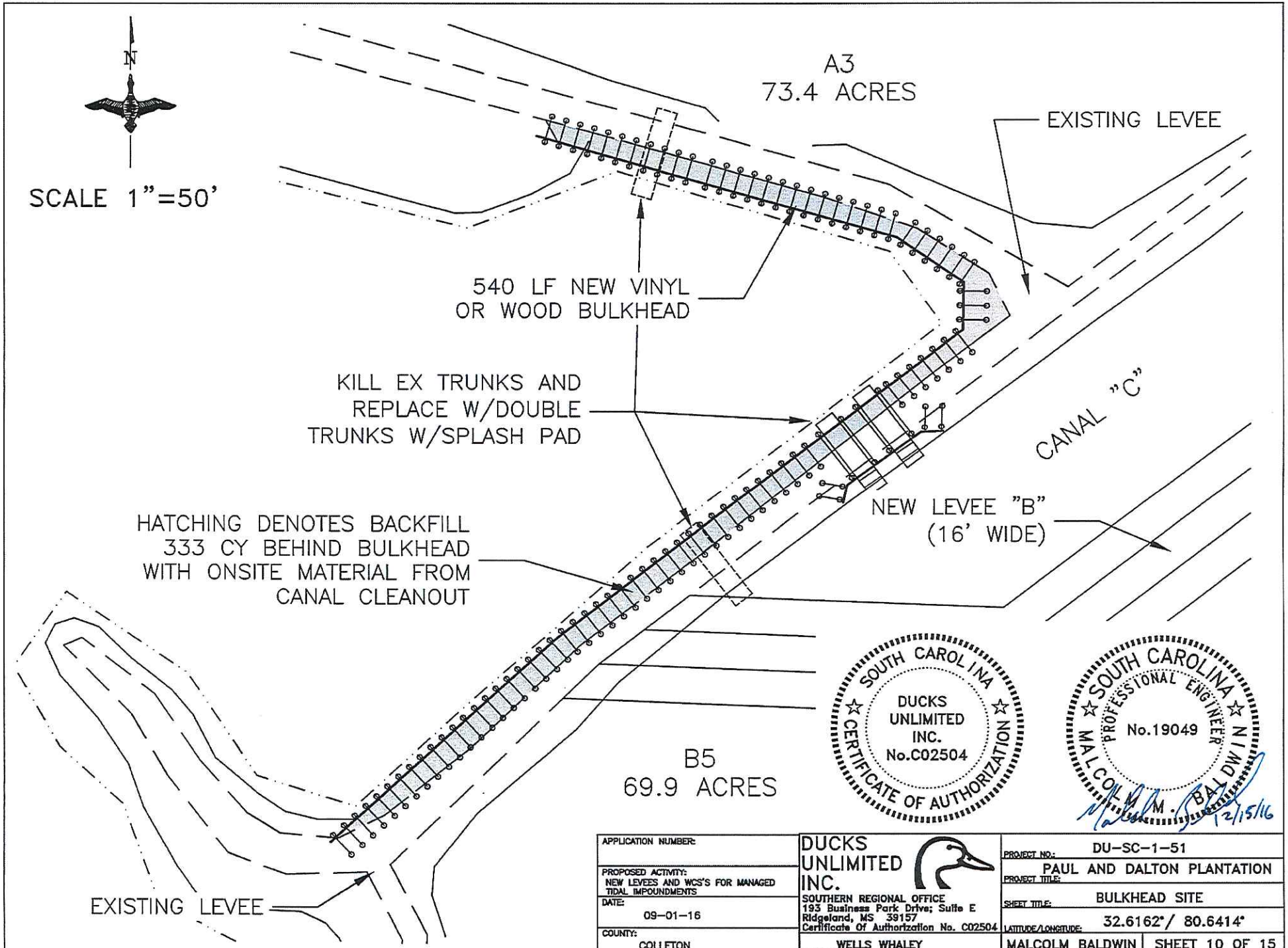
APPLICATION NUMBER:	DUCKS UNLIMITED INC.	PROJECT NO.: DU-SC-1-51
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS	SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	PROJECT TITLE: PAUL AND DALTON PLANTATION
DATE: 09-01-16		SHEET TITLE: PROPOSED IMPROVEMENTS
COUNTY: COLLETON		LATITUDE/LONGITUDE: 32.6162° / 80.6414°
	APPLICANT: WELLS WHALEY	AGENT: MALCOLM BALDWIN — SHEET 8 OF 15



APPLICATION NUMBER:	
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS	
DATE: 09-01-16	
COUNTY: COLLETON	
APPLICANT: WELLS WHALEY	
AGENT: MALCOLM BALDWIN	SHEET 9 OF 15

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive; Suite E
Ridgeland, MS 39157
Certificate Of Authorization No. C02504

PROJECT NO.:	DU-SC-1-51
PROJECT TITLE:	PAUL AND DALTON PLANTATION
SHEET TITLE:	PROPOSED IMPROVEMENTS
LATITUDE/LONGITUDE:	32.6162°/ 80.6414°



APPLICATION NUMBER:	
PROPOSED ACTIVITY:	NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS
DATE:	09-01-16
COUNTY:	COLLETON

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive; Suite E
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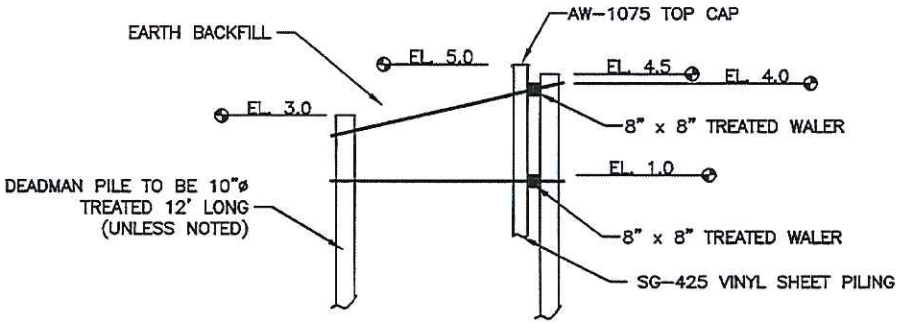
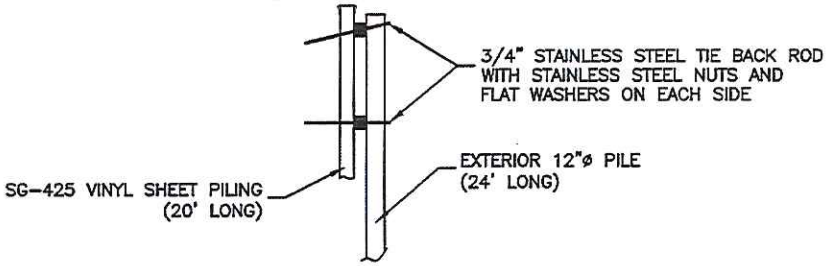
Certificate Of Authorization No. C02504

APPLICANT: WELLS WHALEY

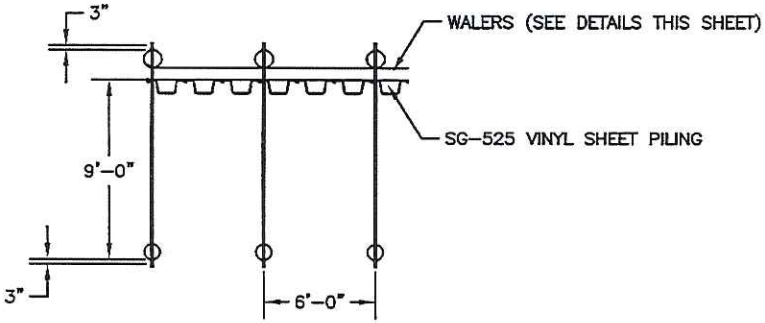
PROJECT NO.:	DU-SC-1-51
PROJECT TITLE:	PAUL AND DALTON PLANTATION
SHEET TITLE:	BULKHEAD SITE
LATITUDE/LONGITUDE:	32.6162°/ 80.6414°
AGENT:	MALCOLM BALDWIN
	SHEET 10 OF 15



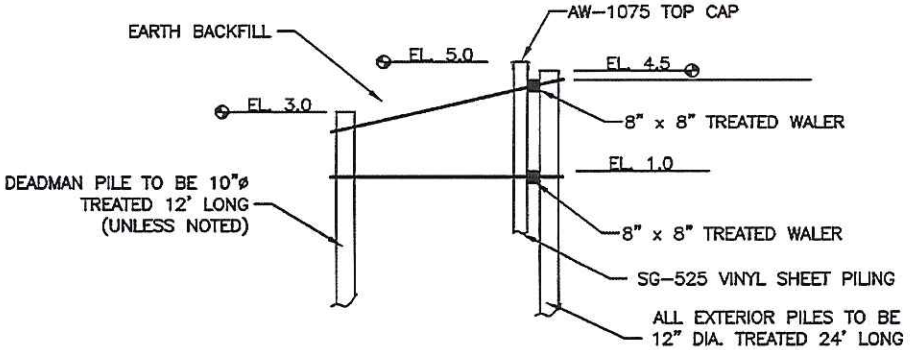


TYPICAL DETAILS OF 25' VINYL SHEET PILING & CORNER TIE BACKS

NOT TO SCALE



NOTE: TIE BACK POST VARY IN DISTANCE, NORMALLY 6'.



DEADMAN TIE BACK DETAILS FOR 20' VINYL SHEET PILING & CORNER TIE BACKS

SCALE: 1" = 5'

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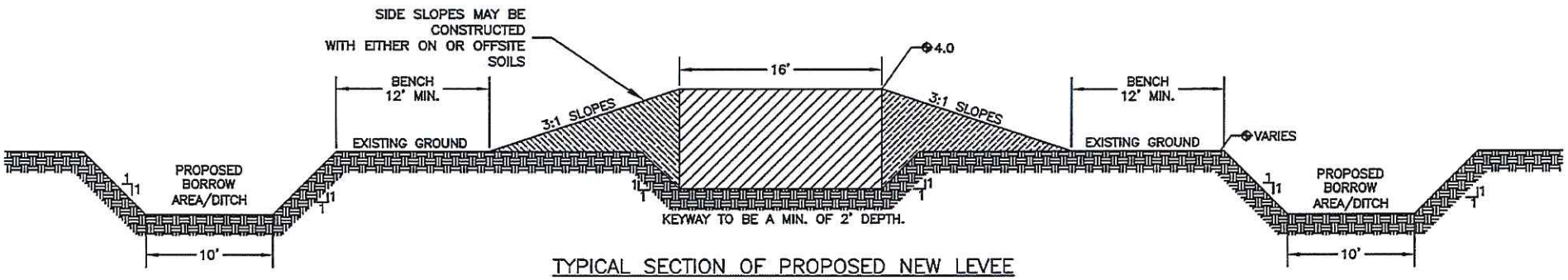
SOUTH CAROLINA
PROFESSIONAL ENGINEER
No.19049
MALCOLM BALDWIN
12/15/16

APPLICATION NUMBER:	
PROPOSED ACTIVITY:	NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS
DATE:	09-01-16
COUNTY:	COLLETON

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive; Suite E
Ridgeland, MS 39157
Certificate Of Authorization No. C02504

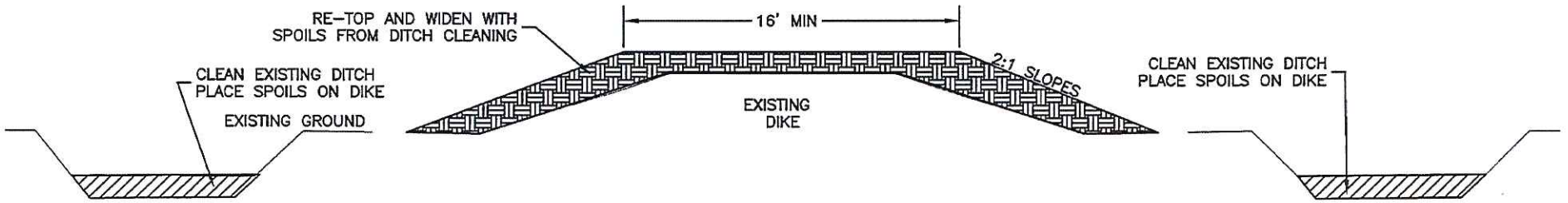
WELLS WHALEY
APPLICANT:

PROJECT NO.:	DU-SC-1-51
PROJECT TITLE:	PAUL AND DALTON PLANTATION
SHEET TITLE:	BULKHEAD DETAIL
LATITUDE/LONGITUDE:	32.6162°/ 80.6414°
AGENT:	MALCOLM BALDWIN
	SHEET 11 OF 15



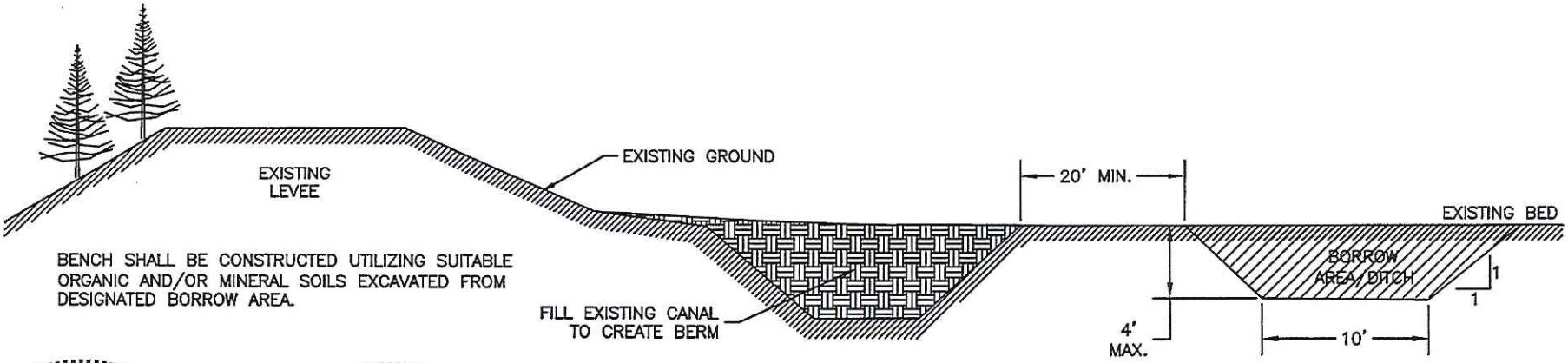
TYPICAL SECTION OF PROPOSED NEW LEVEE

NOT TO SCALE



TYPICAL SECITON OF EXISTING LEVEE RETOPPING

NOT TO SCALE



TYPICAL SECITON OF BERM ENHANCEMENT

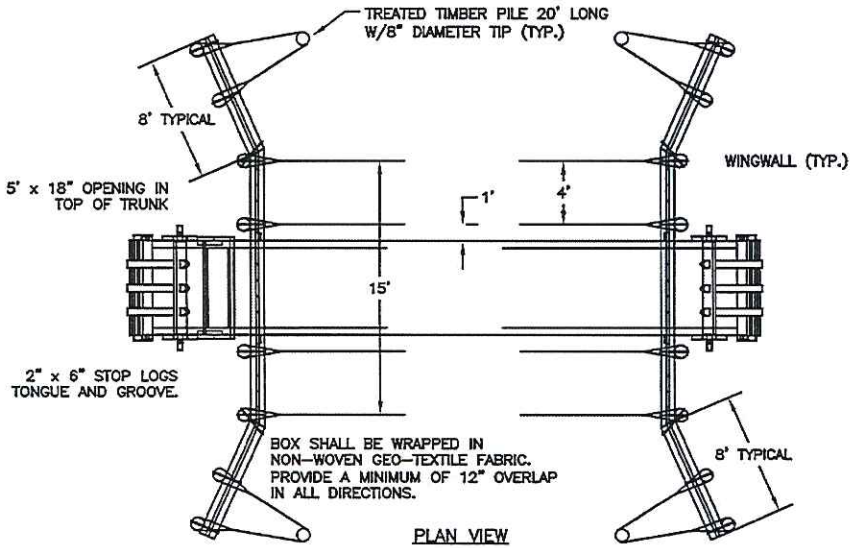
NOT TO SCALE

SOUTH CAROLINA ☆ CERTIFICATE OF AUTHORIZATION ☆ DUCKS UNLIMITED INC. No.C02504

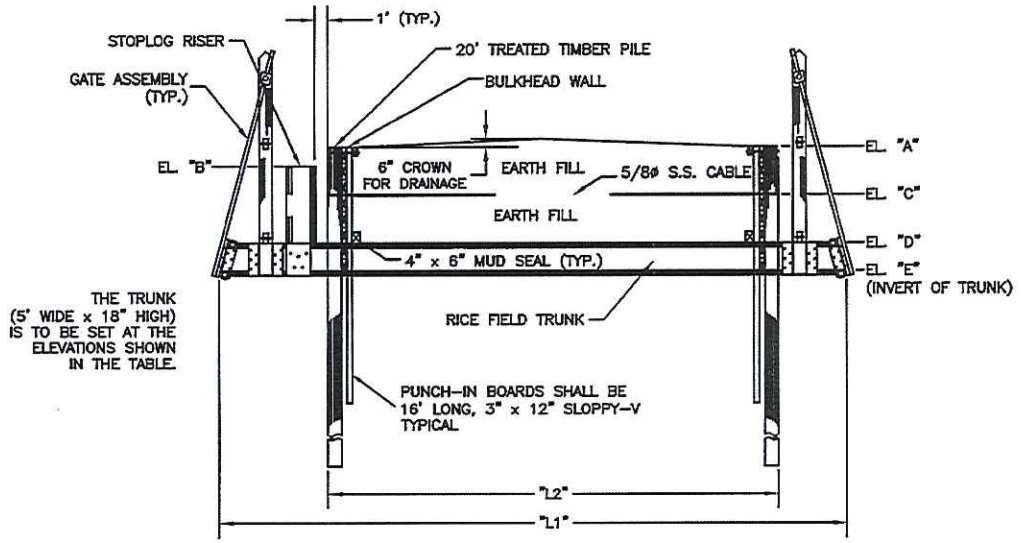
SOUTH CAROLINA ☆ PROFESSIONAL ENGINEER ☆ No.19049 MALCOLM M. BALDWIN

12/15/16

APPLICATION NUMBER:	DUCKS UNLIMITED INC.	PROJECT NO.:	DU-SC-1-51
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS	SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	PROJECT TITLE:	PAUL AND DALTON PLANTATION
DATE: 09-01-16		SHEET TITLE:	EARTHWORK DETAILS
COUNTY: COLLETON	WELLS WHALEY (APPLICANT:)	LATITUDE/LONGITUDE:	32.6162° / 80.6414°
		AGENT:	MALCOLM BALDWIN — SHEET 12 OF 15



PLAN VIEW

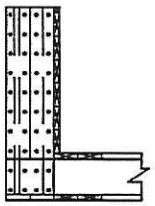


ELEVATION

RICE TRUNK DETAILS

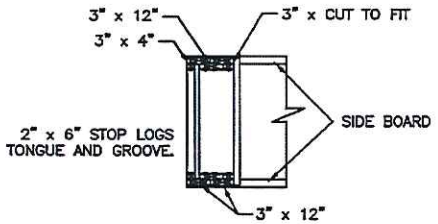
NOT TO SCALE

NOTE: BULKHEAD WINGWALLS & SPLASH PAD NOT SHOWN FOR CLARITY CONTRACTOR TO INSTALL SPLASH PAD UNDER TRUNK ON EXTERIOR SIDE ONLY. (SEE BULKHEAD WINGWALL DETAILS – SHEET 6, & SPLASH PAD DETAILS – SHEET 7)



SPILLWAY BOX RISER
SIDE VIEW

NOT TO SCALE



SPILLWAY BOX RISER
PLAN VIEW

NOT TO SCALE

NOTE:
ALL HARDWARE SHALL BE GRADE 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.

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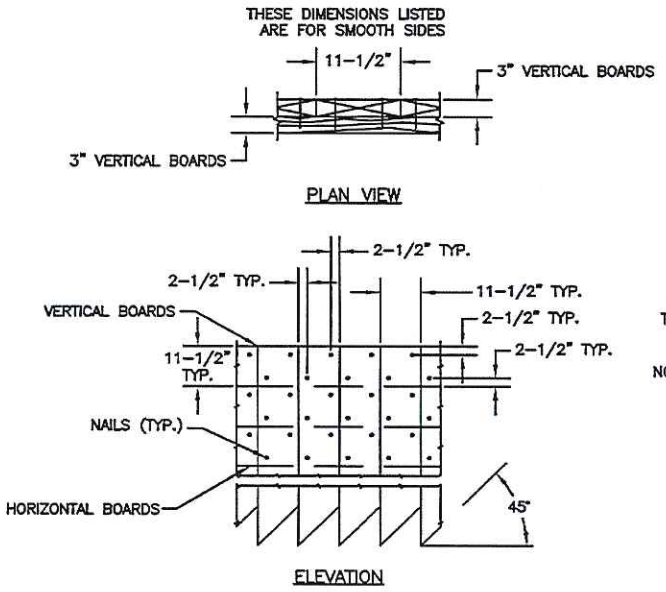
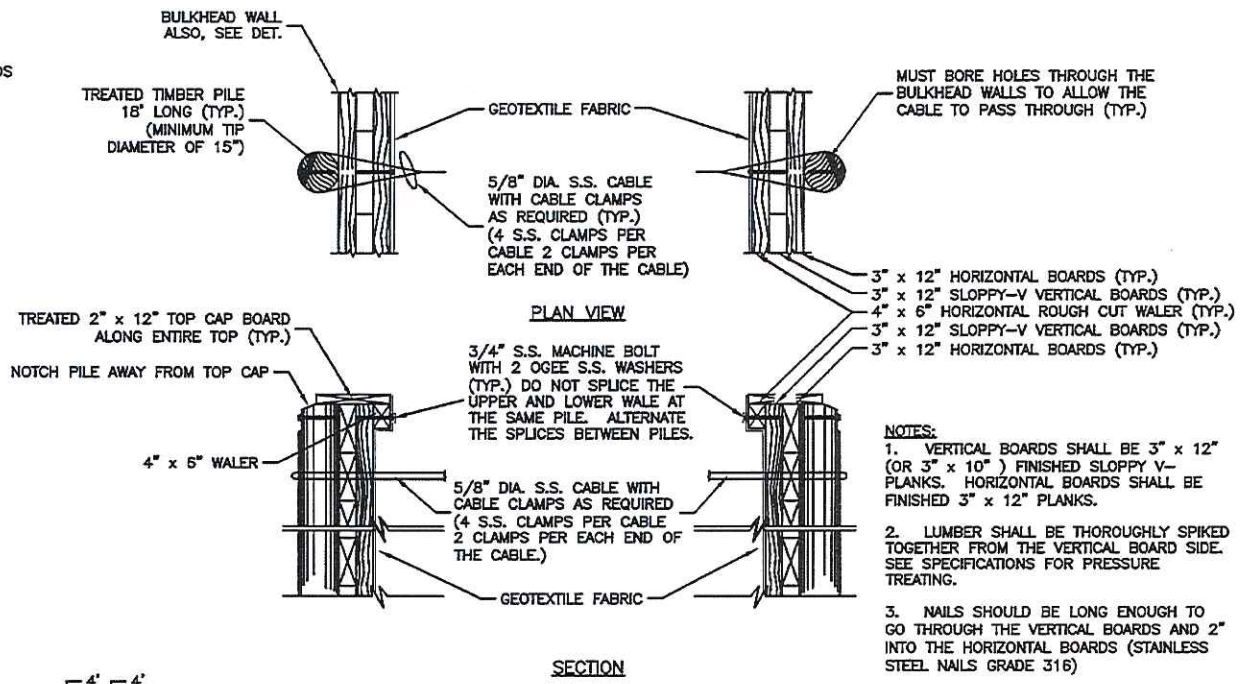
SOUTH CAROLINA ☆ PROFESSIONAL ENGINEER ☆
No.19049
MALCOLM M. BALDWIN
12/15/16

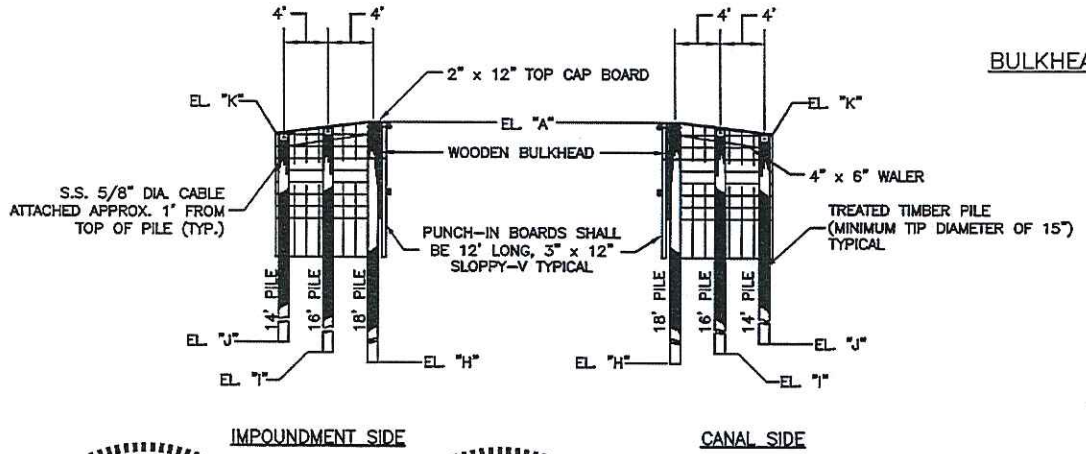
APPLICATION NUMBER:	DUCKS UNLIMITED INC.	PROJECT NO.: DU-SC-1-51
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS	SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	PROJECT TITLE: PAUL AND DALTON PLANTATION
DATE: 09-01-16		SHEET TITLE: TRUNK DETAILS
COUNTY: COLLETON	APPLICANT: WELLS WHALEY	LATITUDE/LONGITUDE: 32.6162°/ 80.6414°
		AGENT: MALCOLM BALDWIN — SHEET 13 OF 15



BULKHEAD WALL PILE BRACING DETAILS
NOT TO SCALE

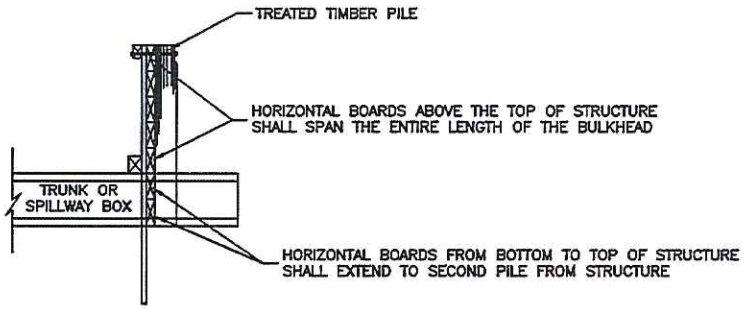


NOTES:
1. VERTICAL BOARDS SHALL BE 3" x 12" (OR 3" x 10") FINISHED SLOPPY V-PLANKS. HORIZONTAL BOARDS SHALL BE FINISHED 3" x 12" PLANKS.
2. LUMBER SHALL BE THOROUGHLY SPIKED TOGETHER FROM THE VERTICAL BOARD SIDE. SEE SPECIFICATIONS FOR PRESSURE TREATING.
3. NAILS SHOULD BE LONG ENOUGH TO GO THROUGH THE VERTICAL BOARDS AND 2" INTO THE HORIZONTAL BOARDS (STAINLESS STEEL NAILS GRADE 316)



BULKHEAD WINGWALL DETAILS
NOT TO SCALE

BULKHEAD WALL PILE BRACING DETAILS
NOT TO SCALE



HORIZONTAL BOARD PLACEMENT FOR BULKHEAD WALL
NOT TO SCALE

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
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SOUTH CAROLINA PROFESSIONAL ENGINEER
No.19049
MALCOLM M. BALDWIN
12/15/16

APPLICATION NUMBER:	DUCKS UNLIMITED INC.	PROJECT NO.: DU-SC-1-51
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS	SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	PROJECT TITLE: PAUL AND DALTON PLANTATION
DATE: 09-01-16		SHEET TITLE: TRUNK DETAILS
COUNTY: COLLETON		LATITUDE/LONGITUDE: 32.6162°/ 80.6414°
APPLICANT: WELLS WHALEY		AGENT: MALCOLM BALDWIN — SHEET 14 OF 15

IMPACT SUMMARY:

IMPACT ASSOCIATED WITH FILL = 838,961 SF, (19.26 AC), 74,121.5 CY

LEVEE A: AREA	=	110,350	SF, 2.53	AC, VOLUME	=	11,444.8 CY
LEVEE B: AREA	=	214,391	SF, 4.92	AC, VOLUME	=	22,233.3 CY
LEVEE C: AREA	=	54,214	SF, 1.24	AC, VOLUME	=	5,622.2 CY
LEVEE D: AREA	=	29,352	SF, 0.67	AC, VOLUME	=	3,043.9 CY
LEVEE E: AREA	=	96,160	SF, 2.21	AC, VOLUME	=	9,972.2 CY
LEVEE F: AREA	=	97,309	SF, 2.23	AC, VOLUME	=	10,091.4 CY
BERM ENHANCEMENT	=	231,735	SF, 5.32	AC, VOLUME	=	11,291.7 CY

NEW TRUNKS: (A2-1, A2-2, A3-2, B1-1, B1-2, B1-3, B2-1, B3-1, B3-2, B4-1, B4-2)

AREA (IN EXISTING LEVEES)	=	950	SF, 0.02	AC, VOLUME	=	90.0 CY
BULKHEAD:	=	4,500	SF, 0.10	AC, VOLUME	=	333.0 CY

IMPACT ASSOCIATED WITH EXCAVATION = 906,633 SF, (20.81 AC), 73,788.5 CY

BORROW AREA A: AREA	=	101,906	SF, 2.34	AC, VOLUME	=	11,444.8 CY
BORROW AREA B: AREA	=	187,559	SF, 4.31	AC, VOLUME	=	22,233.3 CY
BORROW AREA C: AREA	=	74,483	SF, 1.71	AC, VOLUME	=	5,622.2 CY
BORROW AREA D: AREA	=	40,305	SF, 0.93	AC, VOLUME	=	3,043.9 CY
BORROW AREA E: AREA	=	162,374	SF, 3.73	AC, VOLUME	=	9,972.2 CY
BORROW AREA F: AREA	=	154,697	SF, 3.55	AC, VOLUME	=	10,091.4 CY
BERM ENHANCEMENT	=	181,709	SF, 4.17	AC, VOLUME	=	11,291.7 CY

NEW TRUNKS: (A2-1, A2-2, A3-2, B1-1, B1-2, B1-3, B2-1, B3-1, B3-2, B4-1, B4-2)

AREA (IN EXISTING LEVEES)	=	3,600	SF, 0.08	AC, VOLUME	=	90.0 CY

TOTAL AREA IMPACTED = 1,745,594 SF = 40.07 AC

ADDITIONAL MAINTENANCE UNDER MTI-GP:

REPLACE TRUNKS A3-1, C1-1A & B
REPLACE ALUM HALF ROUNDS U1 AND U2
RETOP 23189 LF EXISTING LEVEES
CLEAR AND ENHANCE 1035 LF EX LEVEE
CLEAN EX DITCH 1440 LF

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12/15/16

APPLICATION NUMBER:	DUCKS UNLIMITED INC.	PROJECT NO.:	DU-SC-1-51
PROPOSED ACTIVITY: NEW LEVEES AND WCS'S FOR MANAGED TIDAL IMPOUNDMENTS	SOUTHERN REGIONAL OFFICE 193 Business Park Drive; Suite E Ridgeland, MS 39157 Certificate Of Authorization No. C02504	PROJECT TITLE:	PAUL AND DALTON PLANTATION
DATE: 09-01-16		SHEET TITLE:	IMPACT SUMMARY
COUNTY: COLLETON		LATITUDE/LONGITUDE:	32.6162°/ 80.6414°
	APPLICANT: WELLS WHALEY	AGENT:	MALCOLM BALDWIN — SHEET 15 OF 15