



US Army Corps  
Of Engineers  
Wilmington District

# PUBLIC NOTICE

Issue Date: September 27, 2021  
Comment Deadline: October 12, 2021  
Corps Action ID Number: SAW-2019-01155

The Wilmington District, Corps of Engineers (Corps) received a request from the Town of Sunset Beach seeking to modify their April 14, 2021 Department of the Army (DA) authorization to conduct dredging operations within South Jinks Creek, several finger canals, and the “Bay Area” and to place the beach compatible dredge material in the nearshore waters of the Atlantic Ocean. The permit modification request consists of reconfiguring the dredge footprint within the “Bay Area” from one channel to two separate channels and to install a temporary ramp for the unloading of the incompatible beach material to an upland disposal site.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at:

<https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Public-Notices/>

**Applicant:** Town of Sunset Beach  
Attn: Ms. Lisa Anglin  
700 Sunset Blvd. North  
Sunset Beach, NC 28468

**AGENT (if applicable):** Moffatt & Nichol  
Attn: Mr. Sam Morrison  
4700 Falls of Neuse Rd., Suite 300  
Raleigh, NC 27609

## Authority

The Corps evaluates this application and decides whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of the following Statutory Authorities:

- ☒ Section 404 of the Clean Water Act (33 U.S.C. 1344)
- ☒ Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- ☐ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

## Location

**Location Description:** The proposed project modification area is located within and adjacent to the eastern end of Sunset Beach, near Tubbs Inlet in Brunswick County, North Carolina. The Bay Area Channel is located in the southeast portion of the overall project area and it connected to south Jinks Creek.

**Project Area (acres):** Bay Area Impacts increasing from 2.0 to 2.3 acres

**Nearest Town:** Sunset Beach

**Nearest Waterway:** Jinks Creek      **River Basin:** Pee Dee (03040208)

**Latitude and Longitude:** 33.872730 N, -78.494286 W

## Existing Site Conditions

The proposed project areas are comprised of 4 man-made canals that connect to a Feeder Channel and a Bay Area to the south (see figure 1 below). Both the Feeder Channel and the Bay Area connect to South Jinks Creek. The Bay Area is stabilized primarily by bulkheads, with some rip rap and sparse vegetation including Sea Ox-eye and Salt Marsh Cordgrass. The Bay Area extends 2,200 linear ft. to the east with widths ranging from 130 ft. to 470 ft. nearest the confluence with Jinks Creek. Both the Feeder Channel and the Bay Area connect to the 1,700 linear ft. South Jinks Creek project to the east, which transitions into the Atlantic Ocean through Tubbs Inlet to the south and to the AIWW to the north. An Individual Permit was authorized for this project on April 14, 2021.

There are no previous permits on file for the dredging of the Bay Area prior to the April 14, 2021 authorization, but the application states that it was previously dredged (pre-CAMA) in the early 1970's.

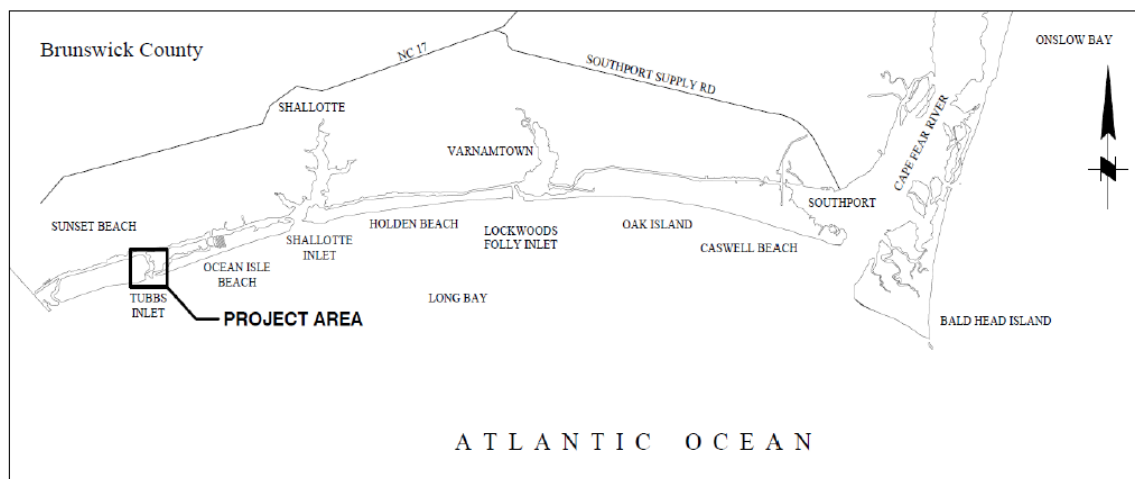


Figure 1. Project Vicinity Map

## **Applicant's Stated Purpose**

The previously permitted Bay Area channel helps to address the long-term erosion patterns threatening recreational navigation access to the residential system. However, the previous alignment does not consider the unintended impacts of the additional dredging necessary for the local homeowners to access the newly dredged channel from their individual docks.

## **Project Description**

The currently permitted dredge template for the Bay Area currently extends through the approximate middle of the water body and terminates at the south Jinks Creek confluence with an 80-ft width. The modification request realigns the channel terminus from one (1) wide channel to two (2) narrower channels comprising a primary and secondary navigation route. The primary channel extends along the southern Bay Area shoreline and maintains a 50-ft to 55-ft width (top cut), while the secondary channel follows the northern shoreline at a 40-ft to 45-ft width (top cut). The maximum dredge depth remains -6-ft MLW (-5+1) with 3:1 channel side slopes. Similar to the original alignment, the average depth in the Bay Area system will be increased from approximately -2-ft to -3-ft MLW to -6-ft (-5+1) MLW.

Figure 2 shows a plan view comparison of the currently permitted alignment and the proposed realignment for the Bay Area and Tab E attachment provides the permit design drawings. The realignment extends the Bay Area primary channel by approximately 200-ft by following the southern shoreline until the template joins with south Jinks Creek. Overall, the realignment initiates at station 12+00 from the original template and terminates at approximate station 24+00 at the south Jinks Creek confluence. The impact area for the original alignment equaled approximately 2.0 acres (86,277-ft<sup>2</sup>) and the realigned channel covers approximately 2.3 acres (101,176 ft<sup>2</sup>), inclusive of both the primary and secondary channels. The dredge volume would increase from 12,200 CY (original channel) to 16,894 CY with the new alignment.

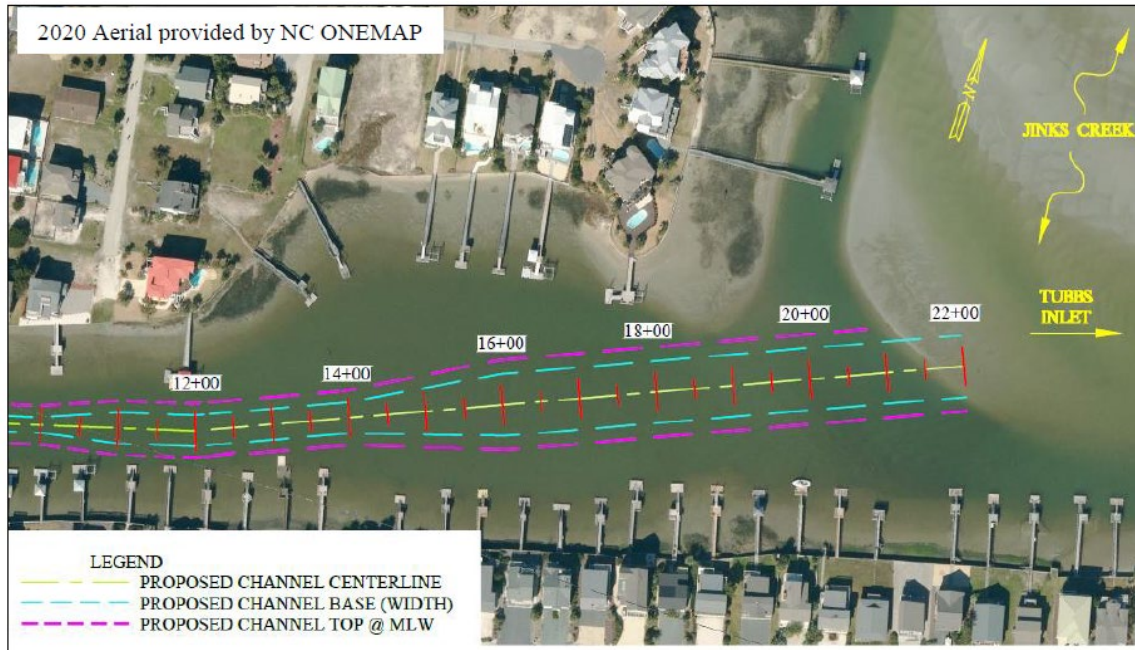


Figure 2. (a) Bay Area Currently Permitted Alignment

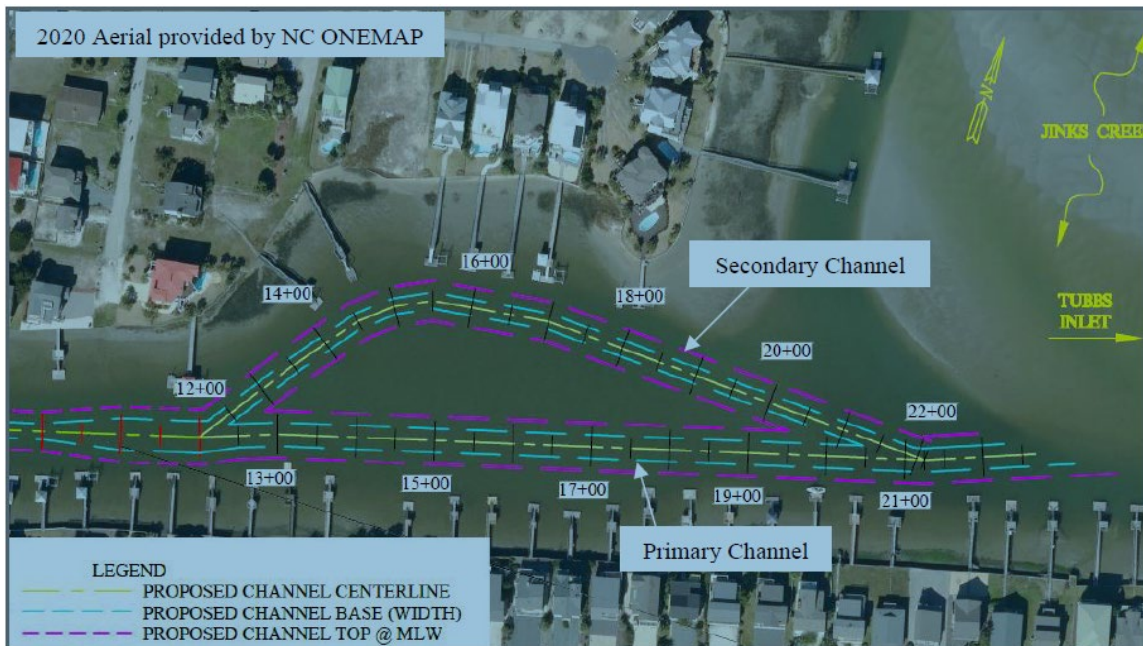


Figure 2. (b) Bay Area Proposed Realignment

Table 1 provides a summary of the proposed channel templates including the dredge volumes categorized for the primary and secondary channel. The modification request does not change the material placement site or dredging methodology. The Bay Area will be mechanically dredged with material placement occurring in an upland landfill facility.



**Table 1 – Dredge Template Description**

Channel	Existing Avg. Depth (MLW-ft)	Proposed Depth (MLW-ft)	Length (ft)	Width (ft)	Side Slope (H:V)	Est. Volume (CY)	Placement Location
Primary	-2 MLW	-6 (-5+1) MLW	1,200	30 (base) 50-55 (top)	3:1	13,141	Landfill
Secondary	-2 MLW	-6 (-5+1) MLW	1,000	20 (base) 40-45 (top)	3:1	3,753	Landfill
TOTAL			2,200	Varies	3:1	16,894	Landfill

The dredge material from the Bay Area will be truck hauled to a previously approved upland placement facility along Georgetown Road for final placement due to the content and grain size. The material composition contains approximately 90% fines (>230Φ) and therefore is not compatible for beach placement.

### Offloading Sites

**Seaside Road (Primary Offloading Site)** – A new offloading site is proposed to be constructed at the end of Seaside Road, along the Atlantic Intracoastal Waterway (See Figure 3). This offload site would handle non-beach compatible materials resulting from the dredging of the Bay Area, South Jinks Creek, the feeder canal and finger canals. It is anticipated that disposal barges will be able to traverse North Jinks Creek at and around high tide to reach the site.

There is currently an unvegetated beach at the site (see Figure 4). In order to allow for land-based equipment to be able to access barges containing spoil material, a temporary 100' by 24' gabion offloading ramp will be constructed in this location. The temporary gabion ramp will be placed on a geotextile grid and filter fabric to limit vertical movement. All materials will be fully removed following project completion.

The construction of the temporary gabion ramp would impact 2,400 square feet of bottom habitat. No coastal wetlands would be filled by the construction of the temporary ramp.



**Figure 3. Seaside Road Material Offloading Site**



**Figure 4. Seaside Road Material Offloading Site**

**Cobia Street** - This previously approved contingency offload site would only be utilized if the primary offload site is unable to be utilized due to logistical consideration. A temporary bulkhead would be installed within the Feeder Channel at the terminus of Cobia Street (Figure 5). This temporary bulkhead would help to ensure that the existing bulkhead at this location would not be structurally compromised as a result of heavy equipment operation. The bulkhead would be comprised of a 36' by 6' gabion wall backfilled with a 36' by 1' placement of DOT #57 stone to stabilize the existing vinyl sheetpile wall. Figure 6 provides a ground level photograph of the existing sheetpile wall. The gabion filled structure would extend approximately 7-ft seaward of the existing wall and would be placed on a geotextile grid and filter fabric to limit vertical movement. All materials would be fully removed following project completion.



**Figure 5 Cobia Street Material Offloading Site**





**Figure 6. Existing Vinyl Sheetpile Wall (Cobia Street)**

The gabion wall would be placed below MHW in the Feeder Channel. The footprint of the proposed gabion wall with backfill would be 252 square feet. To minimize the potential for shellfish impacts, any shellfish within the footprint of the temporary structure would be relocated prior to the bulkhead installation. The shellfish relocation would be conducted in conjunction with the relocation efforts already required for the dredge footprint in the Feeder Channel.

### **Avoidance and Minimization**

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment: The dredging operations will be conducted between October 1st and March 31st to reduce the potential for environmental impacts. In addition, the dredge footprint will provide a minimum 10-ft buffer from any area of coastal wetland identified at the time of construction. *Spartina alterniflora* exist along the intertidal and supratidal regions of the Feeder Channel and Bay Area. As shown in Tab G (Marsh Habitat Boundary), coastal wetlands have encroached within or close to the anticipated dredge area of the Bay Area but have not established near the Cobia Street terminus material off-loading site. Therefore, to minimize potential impacts to the marsh grass, no dredging will take place within 10 feet of any area of coastal wetlands. The 10-



ft buffer should allow the channel adequate space to equilibrate without eroding the coastal marshes. During construction, the dredge equipment shall be prohibited from entering the buffer zone. Shellfish would be re-located in the Feeder Channel if the Cobia Street offload site is utilized.

### **Compensatory Mitigation**

The applicant has not offered a mitigation plan to offset potential unavoidable functional loss to the aquatic environment: The project as proposed will have no direct or indirect effects on wetlands or other special aquatic sites.

### **Essential Fish Habitat**

Based on the EFH consultation efforts for the April 14, 2021 DA authorization, the Corps' initial determination is that the proposed project modification may affect but is not likely to adversely affect EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service. All the initial conservation measures recommended by National Marine Fisheries Service-Habitat Conservation Division (NMFS-HCD) will remain as part of the original permit conditions. But, as a result of this notice, the Corps is seeking additional comments from NMFS-HCD to the proposed modification of dredging in the Bay Area.

☒ The Corps will consult under the Magnuson-Stevens Act and will not make a permit decision until the consultation process is complete.

### **Cultural Resources**

Pursuant to Section 106 of the National Historic Preservation Act of 1966, Appendix C of 33 CFR Part 325, and the 2005 Revised Interim Guidance for Implementing Appendix C, the District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

☒ No historic properties, nor properties eligible for inclusion in the National Register, are present within the Corps' permit area; therefore, there will be no historic properties affected. The Corps subsequently requests concurrence from the SHPO (or THPO). During our coordination efforts with the NC SHPO for the original permit and by their October 3, 2017 correspondence, the agency stated they have no knowledge of historic resources that would be affected by the project and no comment on the project was submitted.

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.

### **Endangered Species**

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information:

☒ The Corps determines that the proposed modified project may affect federally listed endangered or threatened species or their formally designated critical habitat.

☒ By copy of this public notice, the Corps initiates informal consultation under Section 7 of the ESA and will not make a permit decision until the consultation process is complete. The Corps is evaluating the continued applicability of the dredging modification proposal to the U.S. Fish and Wildlife (USFWS) August 28, 2017 State Programmatic Biological Opinion for North Carolina Beach Sand Placement (SPBO) for species and critical habitat managed by the USFWS and to the NMFS Protected Resource Division (PRD) 2020 South Atlantic Regional Biological Opinion (SARBO) for species and critical habitat managed by the NMFS PRD. The April 14, 2021 DA authorization is currently conditioned to implement all the terms and conditions of both the SPBO and the SARBO.

### **Other Required Authorizations**

The Corps forwards this notice and all applicable application materials to the appropriate State agencies for review.

### **North Carolina Division of Water Resources (NCDWR):**

☒ The Corps will generally not make a final permit decision until the NCDWR issues, denies, or waives the state Certification as required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice, combined with the appropriate application fee, at the NCDWR Central Office in Raleigh constitutes initial receipt of an application for a 401 Certification. Unless NCDWR is granted a time review extension, a waiver will be deemed to occur if the NCDWR fails to act on this request for certification within sixty days of the date of this public notice. Additional information regarding the 401 Certification may be reviewed at the NCDWR Central Office, 401 and Buffer Permitting Unit, 512 North Salisbury Street, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the

application for a 401 Certification should do so, in writing, by October 12, 2021 to:

NCDWR Central Office  
Attention: Rick Trone, 401 and Buffer Permitting Unit  
(USPS mailing address): 1617 Mail Service Center, Raleigh, NC 27699-1617

Or,

(physical address): 512 North Salisbury Street, Raleigh, North Carolina 27604

**North Carolina Division of Coastal Management (NCDCM):**

- ☒ The application did not include a certification that the proposed work complies with and would be conducted in a manner that is consistent with the approved North Carolina Coastal Zone Management Program. Pursuant to 33 CFR 325.2 (b)(2) the Corps cannot issue a Department of Army (DA) permit for the proposed work until the applicant submits such a certification to the Corps and the NCDCM, and the NCDCM notifies the Corps that it concurs with the applicant's consistency certification. As the application did not include the consistency certification, the Corps will request, upon receipt, concurrence or objection from the NCDCM.

**Section 408**

There are no Corps Civil Works project(s) within or in the vicinity of the applicant's proposed project.

**Evaluation**

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. 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 proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal 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 (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of

the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

### **Commenting Information**

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. 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 (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing will be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

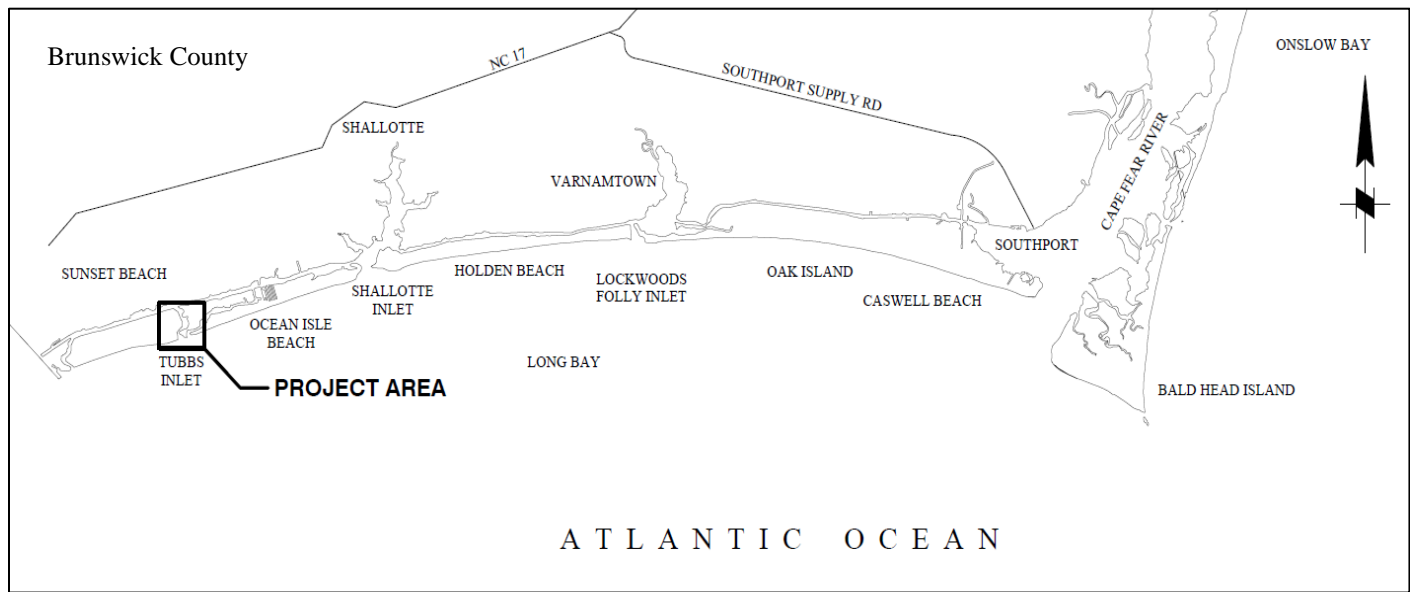
The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, October 12, 2021. Comments should be submitted to Mr. Greg Currey, Wilmington Regulatory Field Office, 69 Darlington Avenue, Wilmington, NC 28403 at (910) 523-1151 or at [gregory.e.currey@usace.army.mil](mailto:gregory.e.currey@usace.army.mil).



Town of Sunset Beach Navigation Project  
Bay Area Realignment & Temporary Bulkhead  
Project Narrative  
August 17, 2021

## INTRODUCTION

The Town of Sunset Beach (Town) wishes to modify CAMA Permit No. 79-19, U.S. Army Corps of Engineers Permit No. SAW-2019-01155, and State Water Quality Certification No. 2002-158 to conduct navigational dredging in the water body known as the Bay Area. Sunset Beach lies in Brunswick County, along the southern coastal border of North Carolina, adjacent to Ocean Isle Beach. The proposed project will occur along the eastern border of Sunset Beach, within the interior waters of Tubbs Inlet. Figure 1 shows the proposed project area in relation to Brunswick County.



**Figure 1. Project Vicinity Map**

The requested modification requests a change to the authorized template for the Bay Area maintenance dredging. The Town also requests authorization to construct a temporary offloading ramp at the terminus of Seaside Drive. Finally, authorization is requested to install a temporary bulkhead to aid in stabilizing the material offloading site at the previously authorized Cobia Street offloading site. The Town intends to offer both of these sites to the selected dredging contractor for their use. The contractor may choose either one or both of these sites for offloading.

## PROJECT PURPOSE AND NEED

The previously permitted Bay Area channel helps to address the long-term erosion patterns threatening recreational navigation access to the residential system. However, the previous alignment does not consider the unintended impacts of the additional dredging necessary for the local homeowners to access the newly dredged channel from their individual docks. The proposed realignment strives to

minimize the potential impacts of the additional dredging by considering a strategic channel design that addresses the long-term sediment infilling and residential access requirements.

## PROPOSED MODIFICATION

### Bay Area Dredge Template

The currently permitted dredge template for the Bay Area currently extends through the approximate middle of the water body and terminates at the south Jinks Creek confluence with an 80-ft width. The modification request realigns the channel terminus from one (1) wide channel to two (2) narrower channels comprising of a primary and secondary navigation route. The primary channel extends along the southern Bay Area shoreline and maintains a 50-ft to 55-ft width (top cut), while the secondary channel follows the northern shoreline at a 40-ft to 45-ft width (top cut). The maximum dredge depth remains -6-ft MLW (-5+1) with 3:1 channel side slopes. Similar to the original alignment, the average depth in the Bay Area system will be increased from approximately -2-ft to -3-ft MLW to -6-ft (-5+1) MLW.

Figure 2 shows a plan view comparison of the currently permitted alignment and the proposed realignment for the Bay Area and Tab E provides the permit drawings. The realignment extends the Bay Area primary channel by approximately 200-ft by following the southern shoreline until the template joins with south Jinks Creek. Overall, the realignment initiates at station 12+00 from the original template and terminates at approximate station 24+00 in the south Jinks Creek confluence. The impact area for the original alignment equaled approximately 2.0 acres (86,277-ft<sup>2</sup>) and the realigned channel covers approximately 2.3 acres (101,176 ft<sup>2</sup>), inclusive of both the primary and secondary channels. As shown above, the dredge volume increased from 12,200 CY (original channel) to 16,894 CY with the new alignment.

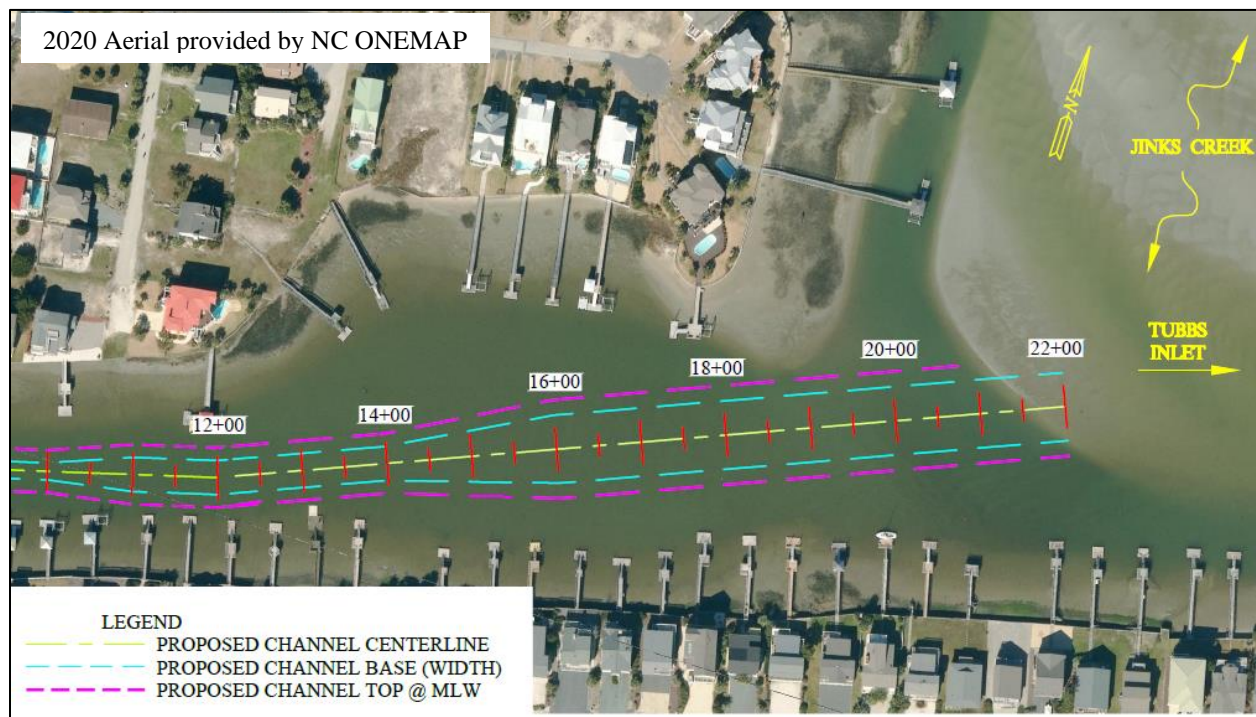
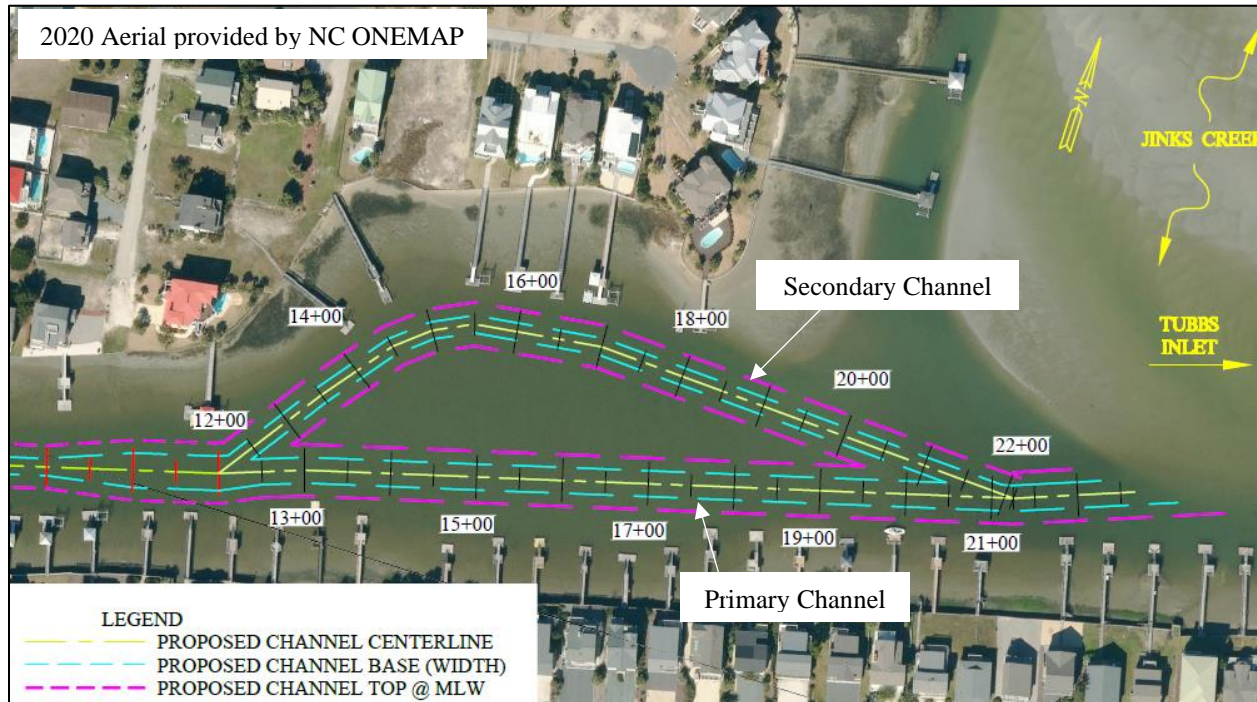


Figure 2. (a) Bay Area Currently Permitted Alignment



**Figure 2. (b) Bay Area Proposed Realignment**

Table 1 provides a summary of the proposed channel templates including the dredge volumes categorized for the primary and secondary channel. The modification request does not change the material placement site or dredging methodology. The Bay Area will be mechanically dredged with material placement occurring in an upland landfill facility.

The dredging operations will be conducted between October 1<sup>st</sup> and March 31<sup>st</sup> to reduce the potential for environmental impacts. In addition, the dredge footprint will provide a minimum 10-ft buffer from any area of coastal wetland identified at the time of construction. These items are a few of the precautions proposed to help minimize the potential for environmental impacts on this project.

**Table 1 – Dredge Template Description**

Channel	Existing Avg. Depth (MLW-ft)	Proposed Depth (MLW-ft)	Length (ft)	Width (ft)	Side Slope (H:V)	Est. Volume (CY)	Placement Location
Primary	-2 MLW	-6 (-5+1) MLW	1,200	30 (base) 50-55 (top)	3:1	13,141	Landfill
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TOTAL			2,200	Varies	3:1	16,894	Landfill

The dredge material from the Bay Area will be truck hauled to a previously approved upland placement facility along Georgetown Road for final placement due to the content and grain size. The material composition contains approximately 90% fines (>230 $\Phi$ ) and therefore is not compatible for beach placement. Tab F provides the sediment analysis results for the realigned channel.



*Spartina alterniflora* exist along the intertidal and supratidal regions of the Feeder Channel and Bay Area. As shown in Tab G (Marsh Habitat Boundary), coastal wetlands have encroached within or close to the anticipated dredge area of the Bay Area but have not established near the Cobia Street terminus material off-loading site. Therefore, to minimize potential impacts to the marsh grass, no dredging will take place within 10 feet of any area of coastal wetlands. The 10-ft buffer should allow the channel adequate space to equilibrate without eroding the coastal marshes. During construction, the dredge equipment shall be prohibited from entering the buffer zone.

### Offloading Sites

As was stated above, the Town intends to offer two offload sites to the chosen dredging contractor for their use. The contractor may choose to utilize either one or both of these sites for material offloading.

**Cobia Street** - This contingency offload site will only be utilized if the primary offload site is unable to be utilized due to logistical consideration. A temporary bulkhead will be installed within the Feeder Channel at the terminus of Cobia Street (Figure 3). This temporary bulkhead will help to ensure that the existing bulkhead at this location will not be structurally compromised as a result of heavy equipment operation. The bulkhead will be comprised of a 36' by 6' gabion wall backfilled with a 36' by 1' placement of DOT #57 stone to stabilize the existing vinyl sheetpile wall. Figure 4 provides a ground level photograph of the existing sheetpile wall. The gabion filled structure will extend approximately 7-ft seaward of the existing wall and will be placed on a geotextile grid and filter fabric to limit vertical movement. All materials will be fully removed following project completion.



**Figure 3. Cobia Street Material Offloading Site**





**Figure 4. Existing Vinyl Sheetpile Wall (Cobia Street)**

The gabion wall will be placed below MHW in the Feeder Channel. The footprint of the proposed gabion wall with backfill will be 252 sf. To minimize the potential for shellfish impacts, any shellfish within the footprint of the temporary structure will be relocated prior to the bulkhead installation. The shellfish relocation will be conducted in conjunction with the relocation efforts already required for the dredge footprint in the Feeder Channel.

[Seaside Road \(Primary Offloading Site\)](#) – An offloading site will be constructed at the end of Seaside Road, along the Atlantic Intracoastal Waterway (See Figure 5). This offload site will handle non-beach compatible materials resulting from the dredging of the Bay Area, South Jinks Creek, the feeder canal and finger canals. It is anticipated that disposal barges will be able to traverse North Jinks Creek at and around high tide.

There is currently an unvegetated beach at the site (see Figure 6). In order to allow for land-based equipment to be able to access barges containing spoil material, a temporary 100' by 24' gabion offloading ramp will be constructed in this location. The temporary gabion ramp will be placed on a geotextile grid and filter fabric to limit vertical movement. All materials will be fully removed following project completion.

The construction of the temporary gabion ramp will impact 2,400 sf of bottom habitat. No coastal wetlands will be filled by the construction of the temporary ramp.



Figure 5. Seaside Road Material Offloading Site



Figure 6. Seaside Road Material Offloading Site

## ADDITIONAL ENVIRONMENTAL CONCERNS

As part of the previously permitted components of this project, the applicant conducted studies to evaluate potential impacts to managed or endangered species that may occur as a result of the overall project. While these reports were completed as part of the original permit submittals, the findings should reasonably be expected to apply to the proposed realigned channel. Tab H provides an Essential Fish Habitat (EFH) assessment and Tab I provides a Biological Assessment (BA) for the project. Generally, the referenced reports support the project should not adversely impact any threatened or managed species. Additional precautions proposed for the maintenance project include following U.S. Fish and

Wildlife Service (USFWS) recommended guidelines for avoiding impacts to West Indian Manatee and recommendations provided by the National Marine Fisheries Service (NMFS) to help protect sea turtles and smalltooth sawfish. Tab J (Manatee Avoidance Guidelines) shows the manatee guidelines while Tab K (NMFS Recommendations) provides the sea turtle and smalltooth sawfish precautions.

## HISTORIC RESOURCES

The applicant has also contacted the State Historic Preservation Office (SHPO) as part of the original permit submittals to inquire on any known historic resources in the area such as shipwrecks or archeological artifacts. These inquiries did not identify any known resources with the potential to be impacted by the project. Tab L (SHPO Resource Review) provides the written response from SHPO. It is again reasonably expected that these findings may be also be applied to proposed project modification.

## SUMMARY

The Town of Sunset Beach requests a permit modification to realign the proposed Bay Area channel, install a temporary bulkhead at the Cobia Street terminus, and construct a temporary offloading ramp at Seaside Road to support material offloading efforts. The Bay Area realignment will assist in reducing future dredging impacts anticipated by property owners requesting personal access to the navigation channel. These modifications will provide a viable plan for completing the dredging efforts with minimal environmental impacts. The project provides a key element for the Town and residents to manage the established navigation corridors on the east end of Sunset Beach.

The project will help restore navigation access to the waterway systems on the east end of Sunset Beach while maintaining a buffer zone between the work area and any coastal marsh or wetland habitat. The project will also relocate shellfish located near the temporary bulkhead installation to reduce the potential for impacts. All materials installed as part of the temporary bulkhead will be removed at the completion of work. The work will also follow additional guidelines and recommendations provided by USFWS and NMFS to further minimize the potential for environmental impacts during construction. The project will adhere to environmental moratoria design to protect juvenile fish and shellfish. Additionally, the project will follow construction guidelines designed to protect manatee, sea turtle, and smalltooth sawfish.

## ADDITIONAL ITEMS RELATED TO CAMA PERMIT APPLICATION PACKAGE

### State Environmental Policy Act (SEPA) Compliance

§ 113A-12(6) states that the preparation of an environmental document shall not be required for projects that require a Coastal Area Management Act major permit. Therefore, no SEPA document will be prepared for the proposed project modification.

### Application Fee

A permit application processing fee of \$475 will be provided separately.

#### N.C. Division of Water Resources (NCDWR) Pre-Filing Notification

In accordance with the federal Clean Water Act (CWA), a pre-filing notification was filed on Jul 2, 2021. A copy of the returned email resulting from that submission is also included as a part of this CAMA permit application (Tab M).

The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

#### Letters of Authorization to Utilize Seaside Road Offload Site

An authorization letter from the owners of the Seaside Road offload site is included in Tab N of this application package.

#### Adjacent Riparian Property Owner Notifications

At the advice of NCDWM staff, adjacent riparian property owner notifications were mailed (certified mail, return receipt requested) to the riparian properties immediately adjacent to the two offload sites, as well as the properties immediately adjacent to the primary and secondary channels. A copy of the letter submitted, as well as a listing of notified property owners are attached in Tab O.



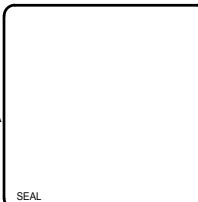
## List of Tabs

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Tab B	CAMA Major Permit Form MP2
Tab C	Agent Authorization
Tab D	Project Narrative
Tab E	Permit Drawings
Tab F	Sediment Analysis for Realigned Channel
Tab G	Marsh Habitat Boundary Survey
Tab H	EFH Assessment
Tab I	Biological Assessment
Tab J	Manatee Avoidance Guidelines
Tab K	NMFS Recommendations
Tab L	SHPO Resource Review
Tab M	401 Water Quality Certification Pre-Filing Notification
Tab N	Authorization letter for the Seaside Road Offload Site
Tab O	Adjacent Riparian Property Owner Notifications

# A

1

Sheet  
Reference No.  
**G-001**  
INDEX: 1 OF 6



	Mark	Description	Date	Appr.
File: Q: RA 9269 9269--04 20 CADD	Active	Boy Area Amended -Sunset Beach 2020-2021 Permit	8/17/2021 10:55 AM by MORAN, NEKOI	Saved: 8/17/2021 10:31 AM by NMORAN
		MUFFATT & NICHOL		
		FULL SOURCE 1:1 (UJ CREC)		

GENERAL NOTES:

1. THE BATHYMETRY PRESENTED IS BASED ON A SURVEY CONDUCTED BY GEODYNAMICS LLC DATED AUGUST 2020 AND CAN ONLY BE CONSIDERED AS REPRESENTATIVE AT THAT TIME.
2. PLAN COORDINATES AND WORK POINTS ARE BASED ON THE NORTH CAROLINA STATE PLANE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD 83).
3. ALL ELEVATIONS SHOWN ARE REFERENCED TO MEAN LOW WATER (MLW).
4. ALL DREDGING SHALL BE PERFORMED WITHIN THE LIMITS OF THE PERMITTED DREDGE AREA AS SHOWN ON THE DRAWINGS WITH AN ALLOWABLE OVER-DEPTH OF ONE FOOT.
5. THE CONTRACTOR SHALL PLACE THE PERMIT PLACARDS ON THE JOB SITE AND SHALL COMPLY WITH ALL TERMS OF THE PERMITS PERTAINING TO THE PERFORMANCE OF THE WORK. SEE THE TECHNICAL SPECIFICATIONS.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY OWNER OF DISCREPANCIES.
7. ALL SAFETY REGULATIONS ARE TO BE STRICTLY FOLLOWED. METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL ARE THE CONTRACTORS RESPONSIBILITY.
8. THE AERIAL IMAGERY PRESENTED ON THE PLANS IS A NC ONE MAP FROM 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THE TIME.
9. THE MEAN HIGH WATER ELEVATION AND MEAN LOW WATER ELEVATION SHOWN ON THE DRAWINGS AND BELOW ARE BASED ON NOAA TIDAL DATUMS AT THE SUNSET BEACH (STATION #8659897) AND VDATUM VERTICAL TRANSFORMATION.  
  
MHW.....4.95 FT  
NAVD.....2.86 FT  
MTL.....2.47 FT  
MLW.....0.00 FT  
MLLW.....-0.19 FT
10. SURVEY BENCHMARK IS NGS MARKER "SEASIDE RESET" NAVD88 EL 42.06-FT.
11. SLOPES CALLED OUT ON PLANS HORIZONTAL: VERTICAL

PERMITS:

1. IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE CODES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER.
2. IT IS THE INTENT OF THESE PLANS AND THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE ENVIRONMENTAL PERMITS ISSUED FOR THIS PROJECT, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE AND GOVERN HIMSELF BY ALL PROVISIONS OF THESE PERMITS. SEE THE TECHNICAL SPECIFICATIONS.

## MAIN CHANNEL VOLUME TABLE

STATION	CUMULATIVE DESIGN DREDGE VOLUME (CY)	CUMULATIVE DREDGE VOLUME INCLUDING OVERDEPTH (CY)
12+00.00	0	0
12+50.00	295	426
13+00.00	593	853
13+50.00	820	1178
14+00.00	1055	1511
14+50.00	1291	1844
15+00.00	1527	2178
15+50.00	1769	2518
16+00.00	2016	2865
16+50.00	2267	3214
17+00.00	2514	3560
17+50.00	2759	3904
18+00.00	3000	4243
18+50.00	3239	4581
19+00.00	3487	4930
19+50.00	3741	5285
20+00.00	4043	5729
20+50.00	4326	6165
21+00.00	4486	6431
21+50.00	4568	6595
22+00.00	4598	6672
22+50.00	4598	6693
23+00.00	4599	6719
23+50.00	4612	6758
24+00.00	4625	6782

\* STATION -0.50+00 THROUGH STATION 12+00.00  
PREVIOUSLY PERMITTED.

### SECONDARY CHANNEL VOLUME TABLE

STATION	CUMULATIVE DESIGN DREDGE VOLUME (CY)	CUMULATIVE DREDGE VOLUME INCLUDING OVERDEPTH (CY)
13+00.00	0	0
13+50.00	165	242
14+00.00	348	504
14+50.00	543	781
15+00.00	746	1068
15+50.00	951	1359
16+00.00	1150	1641
16+50.00	1337	1907
17+00.00	1514	2163
17+50.00	1675	2401
18+00.00	1819	2618
18+50.00	1950	2820
19+00.00	2093	3036
19+50.00	2253	3273
20+00.00	2422	3518
20+50.00	2582	3753


ABBREVIATIONS:

APPROX	APPROXIMATE
AVE	AVENUE
CIR	CIRCLE
CL	CENTERLINE
DR	DRIVE
E	EAST OR EASTING
EXIST.	EXISTING
PROP	PROPOSED
TYP	TYPICAL
MLW	MEAN LOW WATER
N	NORTH OR NORTHING
NAD 83	NORTH AMERICAN DATUM OF 1983
PL	PLACE
S	SOUTH
ST	STREET
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
&	AND

[illegible]

**NAME OF SUNSET BEACH NAVIGATION PROJECT:**  
**MAINTENANCE DREDGING OF BAY AREA**  
**REALIGNMENT & OFFLOADING SITES**

## GENERAL NOTES

 4700 FALLS OF NEUSE RD, SUITE 300 Raleigh, NC 27609 919-781-4626 NC FIRM NO. F-0105	Designed by: B. GRANT		Date:	2021-08-17	Rev.
	Dwn by: VNMH	Cdd by: SMI	M&N Project No. 9269		
	Reviewed by: P. GRANEY		Drawing code:		
	Submitted by: MOFFATT & NICHOL		Drawing Scale: AS SHOWN (Plot scale: 1:1 (0 SHEET))		



SEAL

Sheet  
Reference No.

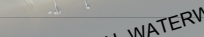
INDEX: 2 OF 6

ISSUED FOR PERMIT  
ISSUED: 2021-08-17  
NOT TO BE USED FOR CONSTRUCTION





SEASIDE ACCESS TEMPORARY PIER &  
OFFLOADING AREA, SEE SHEET S-502



INTRACOASTAL WATERWAY

COBIA STREET TEMPORARY  
BULKHEAD, SEE SHEET S-501

BAY AREA RE-ALIGNMENT  
DESIGN DREDGE

TUBBS INLET

ATLANTIC OCEAN




TOWN OF  
SUNSET BEACH



SCALE: 1"=500'

ISSUED FOR PERMIT  
ISSUED: 2021-08-17  
NOT TO BE USED FOR CONSTRUCTION

[illegible]

**TOWN OF SUNSET BEACH NAVIGATION PROJECT:  
MAINTENANCE DREDGING OF BAY AREA  
REALIGNMENT & OFFLOADING SITES**

## SITE PLAN

Designed by: B. GRANT	Date: 2021-08-17		Rev.
	Dan by: VNM	Chd by: SM	
Reviewed by: P. GRANEY			Drawing code:
Submitted by:			Drawing Scale: AS SHOWN Plot scale: 1:1 (0 SHEET)

**McClafferty & McElroy**  
4700 FALLS OF NEUSE RD, SUITE 300  
RALEIGH, NC 27609  
919-781-4626  
NC FIRM NO. F-0105

SEAL

Sheet  
Reference No.

**C-101**

INDEX: 3 OF 6

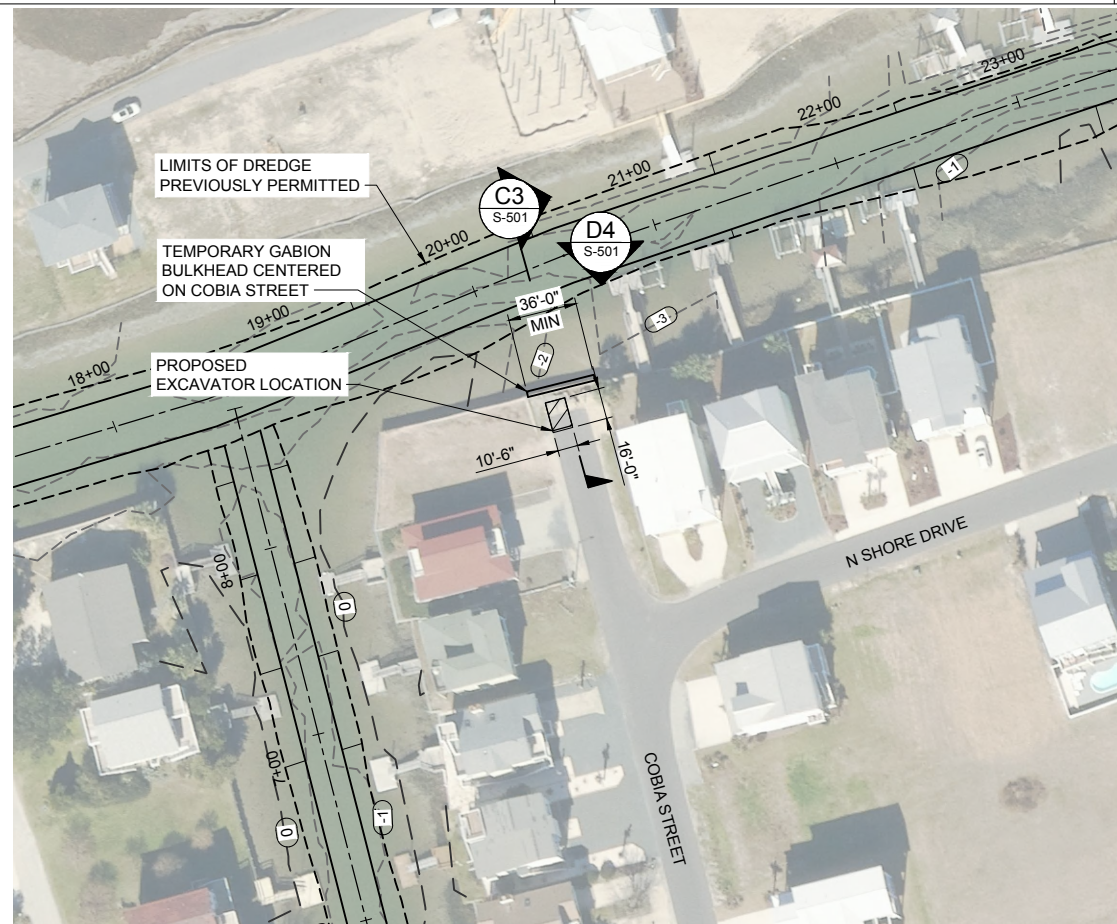
[illegible]

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING









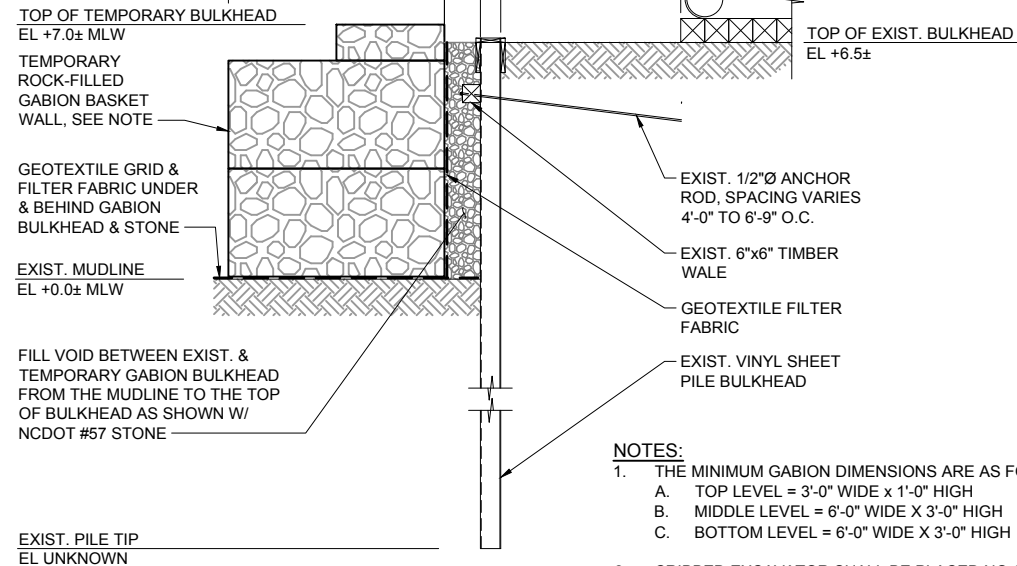
**C1** PLAN - TEMPORARY BULKHEAD  
C-101 SCALE: 1"=50"

- GENERAL NOTES:

1. SURVEY AND HYDROGRAPHIC DATA AT THE PROJECT SITE IS UNAVAILABLE. LOCATIONS AND DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE DETERMINED BY THE CONTRACTOR.
2. PROVIDE CRIBBING UNDER EXCAVATOR AS NEEDED TO NOT EXCEED THE UNIFORM DISTRIBUTED LIVE LOAD DURING OPERATION OF THE EXCAVATOR.
3. WRAP #57 STONE FILL WITH GEOTEXTILE FILTER FABRIC TO PREVENT LOSS OF FILL AT ENDS OF GABION WALL.
4. CONTRACTOR SHALL COMPLETELY REMOVE ALL ITEMS ASSOCIATED WITH THE TEMPORARY BULKHEAD AT COMPLETION OF THE PROJECT.

### WIRE MESH GABIONS:

1. GABION BASKETS SHALL BE MANUFACTURED FROM WELDED WIRE FABRIC, IN ACCORDANCE WITH ASTM A974, OR DOUBLE TWISTED HEXAGONAL WOVEN STEEL WIRE MESH, IN ACCORDANCE WITH ASTM A975.
2. SUBMIT MANUFACTURER'S PRODUCT DATA SHEETS SHOWING THAT GABION BASKETS COMPLY WITH THE NOTED REQUIREMENTS.
3. GABIONS SHALL BE DELIVERED WITH ALL COMPONENTS MECHANICALLY CONNECTED AT THE PRODUCTION FACILITY. ALL GABIONS ARE SUPPLIED IN THE COLLAPSED FORM. BUNDLES SHALL BE LABELED TO SHOW THE DIMENSIONS OF THE GABIONS INCLUDED, THE NUMBER OF PIECES, AND THE COLOR CODE.
4. WIRE MESH AND WELDED WIRE FABRIC SHALL BE MADE FROM ZINC COATED WIRES.
5. FOR GABIONS, THE ABILITY TO FUNCTION PROPERLY DEPENDS UPON THEIR STABILITY, WHICH IS PARTLY DEPENDENT UPON THE ROCKS FILLING THEM.
6. ROCK SIZES SHALL BE CHOSEN TO PREVENT THEM FROM FALLING THROUGH THE MESH OF THE GABIONS. ROCK TO FILL GABIONS SHALL BE DURABLE AND OF SUITABLE QUALITY TO ENSURE PERMANENCE IN THE STRUCTURE AND CLIMATE IN WHICH IT IS TO BE USED. ROCK SHALL BE DELIVERED TO THE WORK SITE IN A MANNER TO MINIMIZE ITS REDUCTION IN SIZES (BREAKDOWN) DURING THE HANDLING OF THE ROCK, AND BE PLACED AND SECURED WITHIN THE ASSEMBLED AND INTERCONNECTED GABION.
7. THE INCLUSION OF MORE THAN 5% BY WEIGHT OF DIRT, SAND, CLAY, AND ROCK FINES WILL NOT BE PERMITTED. ROCK MAY BE OF A NATURAL DEPOSIT OF THE REQUIRED SIZES, OR MAY BE CRUSHED ROCK PRODUCED BY ANY SUITABLE METHOD AND BY THE USE OF ANY DEVICE THAT YIELDS THE REQUIRED SIZE LIMITS OF 4-8 INCHES.
8. ROCKS SHALL BE HARD, ANGULAR TO ROUND, DURABLE AND OF SUCH QUALITY THAT THEY SHALL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING DURING THE LIFE OF THE STRUCTURE.
9. STONE FILL AND CRUSHED STONE SHALL MEET THE QUALITY REQUIREMENTS OF ASTM C33.
10. SUBMIT CERTIFICATES SHOWING THAT ROCK FILL COMPLIES WITH THE NOTED REQUIREMENTS.
11. BEFORE INSTALLATION OF WIRE MESH GABIONS, CONTRACTOR SHALL LEVEL GABION WALL EXTENTS AND INSTALL A GEOTEXTILE GRID AND GETOTEXTILE FILTER FABRIC UNDER THE GABION WALL.
12. GABIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
13. INSTALL GABIONS FROM BARGE ON WATERSIDE OF EXISTING BULKHEAD.



**C3** SECTION - TEMPORARY BULKHEAD  
S-501 SCALE: 3/8"=1'-0"

- NOTES:

1. THE MINIMUM GABION DIMENSIONS ARE AS FOLLOWS:
  - A. TOP LEVEL = 3'-0" WIDE X 1'-0" HIGH
  - B. MIDDLE LEVEL = 3'-0" WIDE X 3'-0" HIGH
  - C. BOTTOM LEVEL = 6'-0" WIDE X 3'-0" HIGH
2. CRIBBED EXCAVATOR SHALL BE PLACED NO CLOSER TO EXISTING VINYL SHEET PILE BULKHEAD THAN DIMENSION SHOWN.



**D4** PHOTOGRAPH - TEMPORARY BULKHEAD  
S-501 SCALE: NTS

GEOTEXTILE:

1. PROVIDE GEOTEXTILE THAT IS A WOVEN PERVIOUS SHEET OF PLASTIC YARD AS DEFINED BY ASTM D123 MATCHING OR EXCEEDING THE MINIMUM AVERAGE ROLL VALUES LISTED BELOW. STRENGTH VALUES INDICATED ARE FOR THE WEAKER PRINCIPLE DIRECTION.

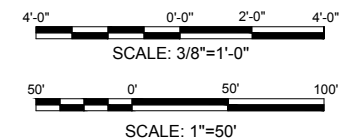
A. GRAB STRENGTH.....	200 LBS (ASTM D4632)
B. SEAM STRENGTH.....	180 LBS (ASTM D4632)
C. PUNCTURE.....	80 LBS (ASTM D6241)
D. TRAPEZOID TEAR.....	70 LBS (ASTM D4533)
E. APPARENT OPENING SIZE.....	40 US SIEVE (ASTM D4751)
F. PERMITTIVITY.....	0.05 SEC-1 (ASTM D4491)
G. ULTRAVIOLET DEGREDAION.....	50% AT 500 HOURS (ASTM D4355)

2. FIBERS USED IN THE MANUFACTURING OF THE GEOTEXTILE SHALL CONSIST OF A LONG-CHAIN SYNTHETIC POLYMER COMPOSED OF AT LEAST 85 PERCENT BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES. ADD STABILIZERS AND/OR INHIBITORS TO THE BASE POLYMER, IF NECESSARY TO MAKE THE FILAMENTS RESISTANT TO DETERIORATION CAUSED BY ULTRAVIOLET LIGHT AND HEAT EXPOSURE. RECLAIMED OR RECYCLED FIBERS OR POLYMER SHALL NOT BE ADDED TO THE FORMULATION. GEOTEXTILE SHALL BE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER, INCLUDING THE EDGES. FINISH THE EDGES OF THE GEOTEXTILE TO PREVENT THE OUTER FIBER FROM PULLING AWAY FROM THE GEOTEXTILE.
3. SEW THE SEAMS OF THE GEOTEXTILE WITH THREAD OF A MATERIAL MEETING THE CHEMICAL REQUIREMENTS GIVEN ABOVE FOR GEOTEXTILE YARN OR BOND THE SEAMS BY CEMENTING OR BY HEAT. TEST SEAMS IN ACCORDANCE WITH METHOD ASTM D4884/D4884M. THE STRENGTH OF THE SEAM SHALL BE NOT LESS THAN 90 PERCENT OF THE REQUIRED GRAB TENSILE STRENGTH OF THE UNAGED GEOTEXTILE IN ANY PRINCIPAL DIRECTION.

4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. SUBMIT MANUFACTURER'S PRODUCT DATA SHEETS SHOWING THAT GEOTEXTILES COMPLY WITH THE NOTED REQUIREMENTS.

DESIGN CRITERIA:

1. CODES & REFERENCES AS APPLICABLE:  
A. ASCE-7 (AMERICAN SOCIETY OF CIVIL ENGINEERS - 2016)  
B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS - 2021)  
C. 2018 NORTH CAROLINA STATE BUILDING CODE
2. GRAVITY LOADS:  
A. UNIFORM DISTRIBUTED LIVE LOAD:  
400 PSF @ PROPOSED EXCAVATOR LOCATION ONLY
3. DESIGN DREDGE DEPTH. ....EXISTING
4. GEOTECHNICAL PROPERTIES NOT AVAILABLE, ASSUMED SOIL PARAMETERS:  
A. EXISTING SOIL TYPE. ....SAND  
B. EXISTING SOIL UNIT WEIGHT. .... 120 PCF  
C. EXISTING SOIL FRICTION ANGLE. .... 26°  
D. GABION CELL FILL UNIT WEIGHT. .... 100 PCF
5. SEISMIC DESIGN NOT CONSIDERED FOR TEMPORARY CONDITION



ISSUED FOR PERMIT  
ISSUED: 2021-08-17  
NOT TO BE USED FOR CONSTRUCTION

[illegible]

**TOWN OF SUNSET BEACH NAVIGATION PROJECT:  
MAINTENANCE DREDGING OF BAY AREA  
REALIGNMENT & OFFLOADING SITES**

## TEMPORARY BULKHEAD DETAILS & NOTES

Designed by: D. JACOBSON	Date: 2021-08-17		Rev.
	Drawn by: WBT	Sld by: MEW	
Reviewed by: P. GRANEY			Drawing code:
Submitted by:			Drawing Scale: AS SHOWN
MOFFATT & NICHOL			Plot scale: 1:1 (0.5000)



SEAL

Sheet  
Reference No.

**S-501**

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TOWN OF SUNSET BEACH  
NAVIGATION PROJECT  
BAY AREA MARSH EXTENTS  
PLAN VIEW