NEPA/Section 404 Merger

Concurrence Point 2A Bridging Decisions and Alignment Review

Proposed Carolina Bays Parkway Extension from SC 9 in Horry County, South Carolina to US 17 Shallotte Bypass in Brunswick County, North Carolina

NCDOT Project R-5876 SCDOT Project P029554

Carolina Bays
Parkway Extension
North Carolina + South Carolina

September 30, 2021 | 1:00 p.m. – 4:00 p.m.
Online Meeting

See Calendar Invitation for Online Meeting Link & Call-in Number

Bridging Decisions and Alignment Review

Carolina Bays Parkway (SC 31) Extension from SC 9 in Horry County, South Carolina to US 17 Shallotte Bypass in Brunswick County, North Carolina

NCDOT Project R-5876
SCDOT Project P029554

September 30, 2021

Meeting Agenda

1. Sign-in and Introductions
2. Purpose of Meeting
3. Project Status
4. Roadway Design Components
5. Potential Environmental Effects
6. Major Hydraulic Structures
7. Jurisdictional Streams, Wetlands, and Ponds
8. Concurrence Point 2A Signature Form Review

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1.0 MEETING PURPOSE

The purpose of today's meeting is to review Detailed Study Alternatives for the proposed Carolina Bays Parkway Extension project and reach concurrence on bridging decisions and alignment, or to identify major hydraulic crossing sites that need further review at subsequent field meetings. Map figures and tables will be presented to provide an overview of recommendations for functional roadway designs, major hydraulic structures, and preliminary project impacts. Formal concurrence on NEPA / Section 404 Merger Concurrence Point 2A will be requested during this meeting or, if necessary, during subsequent field review meetings. Field review meetings are currently scheduled for October 7-8, 2021 for the North Carolina portion of the project and October 13, 2021 for the South Carolina portion.

2.0 PROJECT STATUS

2.1 Project Summary

The South Carolina Department of Transportation (SCDOT) State Transportation Improvement Program (STIP) Project P029554 proposes to extend Carolina Bays Parkway (SC-31) from its current terminus at SC 9 in Horry County, South Carolina to the North Carolina state line. The North Carolina Department of Transportation (NCDOT) STIP Project R-5876 proposes to extend Carolina Bays Parkway from the South Carolina state line to US 17 Shallotte Bypass in Brunswick County, North Carolina. The project vicinity is shown in Figure 1 in Appendix A.

The project is a joint effort between the two states, with NCDOT serving as the lead for environmental review. Because the two projects represent one single and complete project, they will be addressed in a single Environmental Impact Statement. The proposed project is anticipated to involve the construction of a multilane, full control of access freeway, part on new location.

2.2 Project Schedule and Cost

The proposed project is funded for planning and environmental studies in the NCDOT 2020-2029 Current STIP (August 2021). Neither right of way acquisition nor construction are currently funded. The SCDOT 2021-2027 STIP includes funding for right of way acquisition in Fiscal Year (FY) 2022 and construction in FY 2025. The schedule for preparation of environmental documentation is as follows:

- Draft Environmental Impact Statement (DEIS) – Spring 2022
- Public Hearings – Summer 2022
- Concurrence on Least Environmentally Damaging Practicable Alternative (CP 3) – Summer 2022
- Final Environmental Impact Statement/Record of Decision – Spring 2023

Cost estimates as provided by the NCDOT 2020-2029 Current STIP (August 2021) and SCDOT 2021-2027 STIP are provided in Table 1 below. Detailed right of way, utilities, and construction cost estimates are being prepared for each Detailed Study Alternative and will be provided in the DEIS.

Table 1. Carolina Bays Parkway Extension STIP Estimated Costs

Source	Right of Way Acquisition	Utility Relocations[1]	Construction	Total
NCDOT STIP	$128.6M	$5.3M	$232.8M	$366.7M
SCDOT STIP	$10.0M	-	$160.0M	$170.0M
Total	**$138.6M**	**$5.3M**	**$392.8M**	**$536.7M**

[1] Utility Relocation costs not provided in SCDOT STIP.

2.3 Concurrence Point 1

The NEPA/Section 404 Merger Team concurred on the purpose and need for the project at their March 19, 2019 Concurrence Point 1 (CP1) meeting.

Purpose of the Proposed Action: The primary purpose of the project is to improve the transportation network in the study area by enhancing mobility and connectivity for traffic moving in and through the project area.

Mobility refers to the movement of people or goods. Potential measures of performance for evaluating an improvement in mobility in the project area are travel time, travel speed and level of service (LOS). SCDOT has established the LOS goal of C for their state roads while NCDOT has established the target goal of LOS D for system level planning analysis.

Connectivity refers to the density of connections in road networks and the directness of links. Potential measures of performance for evaluating improvements in connectivity are reduced travel times and enhanced route options for travelers, service providers, and the transport of goods.

Summary of Need for the Proposed Action: Many intersections and roadway segments in the study area are expected to either approach or exceed the roadway capacity limits in 2040. The population within Horry and Brunswick counties has steadily increased, and is expected to continue to increase, along with the number of tourists to the area. Growth in population, tourism, and supporting services has resulted in an increase in mixed-purpose traffic on area roads.

2.4 Concurrence Point 2

The Concurrence Point 2 (Detailed Study Alternatives Carried Forward) meeting was held on May 4, 2020. The purpose of the meeting was to discuss and reach formal concurrence on the alternatives to carry forward for detailed study in the DEIS for the project.

As a result of a proposal from Sunset Beach and associated public comments, the project team explored three options to determine what would best address the request to increase the amount of proposed Carolina Bays Parkway Extension on new location in North Carolina inland from US 17, minimize impacts to both the human and natural environment, and meet the purpose and need. The resultant alignment creates alternates to each of Concepts 1 and 4 that are identified as Concept 1A and Concept 4A.

It was also discussed that to accommodate the study corridor footprint at some proposed interchanges and after receiving and responding to public and local officials' input at the public meetings, expanding the previously approved project study area is recommended. The proposed revised study area will allow consideration of alignments suggested during the public input process for alternatives that could achieve the project's purpose and satisfy specific transportation needs while minimizing potential impacts to important environmental features. Formal concurrence from the Merger Team on proposed changes to the project study area was also requested.

Following detailed discussion of the potential impacts of the eleven Build alternatives to the natural, human, and physical environments, as well as the public input received at the public meetings, the Merger Team agreed to retain Alternatives 1, 1A, 2, 4, 4A, 7, and 8 for detailed study in the DEIS. It was also agreed to eliminate Alternatives 3, 5, 6, and 9 from further study. Based on recommendations from the NCDOT and SCDOT, the Merger Team also agreed to eliminate the No Build, Transportation System Management (TSM), Transportation Demand Management (TDM), and Mass Transit alternatives as viable alternatives to accomplish the purpose of the project. The No Build alternative will be retained in the DEIS to provide a baseline for comparison of the Detailed Study Alternatives. The Merger Team also concurred on the revised study area.

2.5 Public Involvement

As previously outlined in the May 2020 Concurrence Point 2 Meeting Packet, ongoing project coordination has occurred with federal, state, and local regulatory and resource agencies, as well as the general public, beginning in late 2016. A brief review of public involvement activities to date includes the following:

- **December 2018 – First Carolina Bays Parkway Extension Project Newsletter.** The first Carolina Bays Parkway Extension project newsletter was mailed to citizens and other stakeholders within the project area in December 2018. The purpose of the first newsletter was to introduce the local community to the project and provide general information about the planning process, as well as to request community input on the project's draft purpose and need and area transportation needs.

- **December 3 and 4, 2019 – Open House Public Meetings.** NCDOT and SCDOT conducted two open house public meetings for the Carolina Bays Parkway Extension project in December 2019. One meeting was held on December 3rd in Sunset Beach, NC and the second was held on December 4th in Little River, SC. The informal public meetings gave the public the opportunity to view project information, ask questions, provide comments, and discuss various aspects of the project with the project team. An online version of the meetings was hosted through PublicInput.com, which gave users an opportunity to review the same information provided during the meeting, prioritize the nine corridor concepts in order of preference, and leave comments. A total of 553 individuals signed-in to the North Carolina meeting, and 467 individuals signed-in to the South Carolina meeting. More than 1,800 comments were received, with approximately 77 percent submitted via the project's public input website.

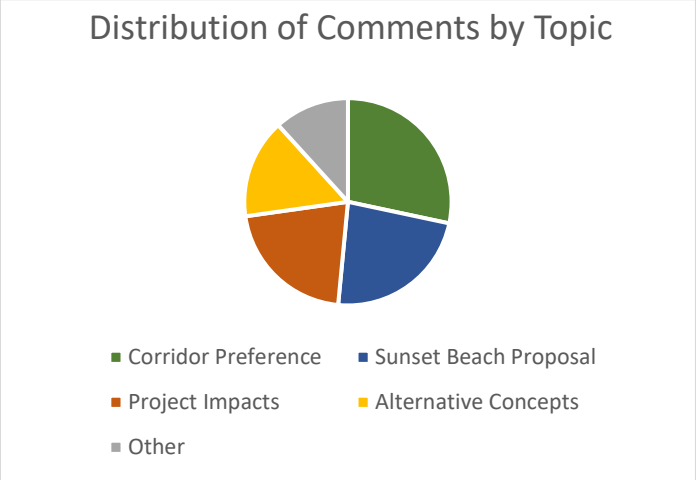


Exhibit 1. Distribution of Public Comments by Topic

As shown in Exhibit 1, the most prevalent topics addressed in public comments include corridor concept preference, support for an alternate concept proposed by Sunset Beach, potential impacts, and alternative concepts.

Interested public were able to rank the nine corridor concepts in order of preference through a poll on the project's Public Input website (www.publicinput.com/Carolina-bays-pkwy). The results are shown in Exhibit 2 below. In addition, approximately 768 of the comments received related to a commenter's preference on which corridor concepts to select or avoid. While each of the nine concepts received some level of support and opposition, most of the comments in this category were categorized as "Favor Concept 1" or "Favor Concept 4"; more commenters expressed their support for these two concepts than all other concepts combined. An additional 590 comments were in support of an alignment proposed by the Town of Sunset Beach. The Sunset Beach proposal would extend Concept 1 inland and parallel to US 17 from Pea Landing Road NW to US 17 north of Shallotte.

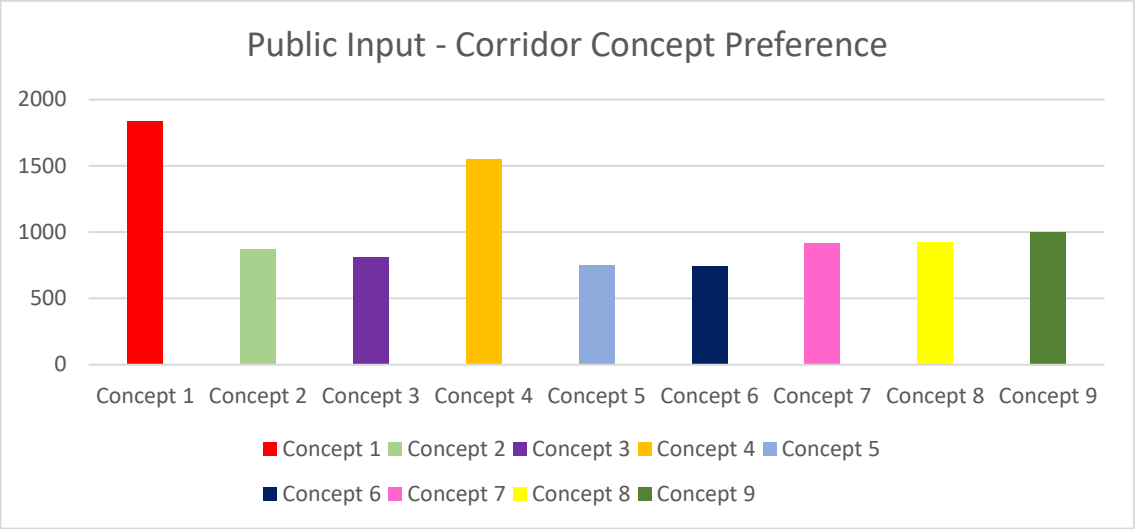


Exhibit 2. Corridor Concept Ranking Results from Public Input Website

The public submitted 576 comments regarding the potential impacts various corridor concepts may have to homes, businesses, farmland, cemeteries, and the environment throughout the project study area. Many of these comments relate to specific neighborhood concerns. Approximately 62 comments and one petition with 270 typed names were received regarding the preservation of Indigo Farms, a multi-generational organic farm in northeastern Horry County, South Carolina with a market across the North Carolina border in Brunswick County. All corridor concepts except 7, 8, and 9 would likely impact Indigo Farms in some capacity.

Approximately 420 comments were received that voiced a need for or suggestions to alternative concepts from the nine presented at the public meetings. Examples of these alternative concept suggestions include:

- Run the Parkway further inland, parallel to US 17 before tying in with the Shallotte Bypass
- Connect the Parkway to US 17 north of Shallotte
- Connect the Parkway to NC 211 beyond Shallotte and north of Supply
- Connect to I-140
- Connect to US 74
- Connect to I-40 north of Wilmington

Other less frequent comment topics included: increased traffic and safety; potential for increased flooding; additional evacuation route needed; project schedule, cost and funding; and, opposition to the project.

Four local jurisdictions submitted comments:

- The Town of Shallotte submitted a letter voicing their support of the project, specifically Corridor Concepts 1 and 2. They also noted a concern about the project's design at the south end of Main Street, where the Town feels an interchange is necessary for emergency service accessibility.
- A resolution submitted by the Town of Sunset Beach voiced opposition to all nine corridor concepts due to anticipated community impacts associated with utilizing existing US 17, because none of the concepts would provide an alternate evacuation route, and all of the concepts

would utilize US 17 between NC 904 and NC 130 in Shallotte. The Town submitted an alternative corridor concept that would extend Concept 1 inland and parallel to US 17 from Pea Landing Road NW to US 17 north of Shallotte.

- A resolution submitted by the Town of Calabash expressed concern that the proposed project would impact businesses and neighborhoods in the project study area regardless of which concept is selected. While the Town formally endorsed Corridor Concept 6, they also recommend the project team explore a tenth alternative similar to the proposal submitted by the Town of Sunset Beach to further minimize impacts to the area's residents.
- A resolution submitted by the Town of Carolina Shores expressed concern and opposition to any of the corridor concepts that would impact an existing, established neighborhood. Therefore, the Town submitted their support for Corridor Concepts 1 or 4.

A toll-free project information line and project email address were established in 2018 to receive project comments and questions. A project website was also developed in 2018 to make project mapping, newsletters, and other project information available to the public. In addition, the website provides contact information for the NCDOT and SCDOT project representatives. The website link and project representative contact information was also provided in project newsletters and handouts.

3.0 ROADWAY DESIGN COMPONENTS

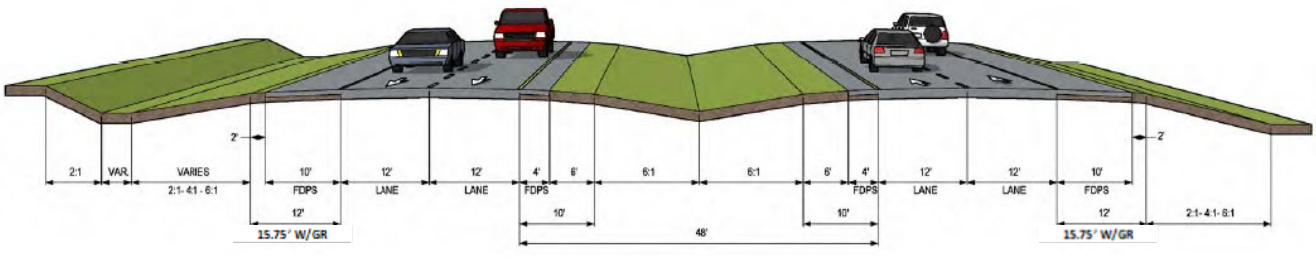
3.1 Proposed Typical Sections

South Carolina

Through the South Carolina portion of the project, the proposed facility would be primarily a four-lane median-divided facility; though six lane section is recommended south of the SC 9 interchange to match the existing Carolina Bays Parkway typical section. Both options would contain 12-foot travel lanes, 12-foot outside shoulders (10-foot paved), 10-foot inside shoulders (4-foot paved), and a 48-foot median.

- ***SCDOT Typical Section 1*** – *Four-lane median-divided*: The four-lane median-divided option would have a total cross-section width of 190 feet and a total pavement width of 76 feet (38 feet in each direction).
- ***SCDOT Typical Section 2*** – *Six-lane median-divided*: The six-lane median-divided option would have a total cross-section width of 388 feet and a total pavement width of 100 feet (50 feet in each direction). Note this section matches the existing Carolina Bays Parkway/SC-31 cross-section.

SCDOT Typical Section 1
Four-Lane Median-Divided Freeway



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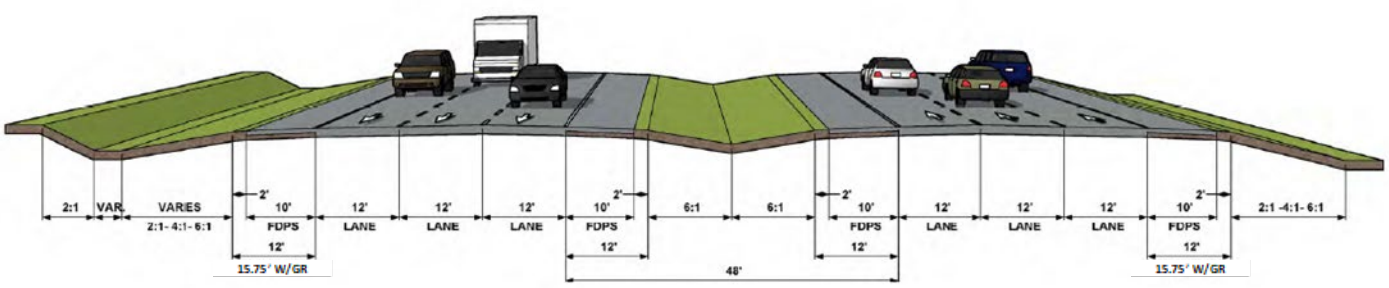
SCDOT Typical Section 2
Six-Lane Median-Divided Freeway



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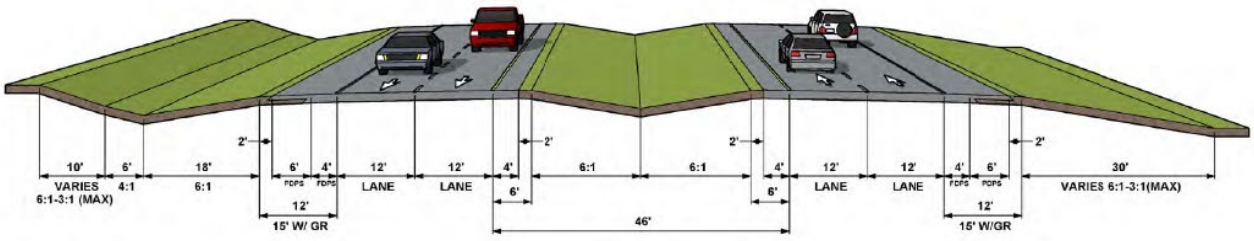
North Carolina

All of the Details Study Alternative segments through the North Carolina portion of the project contain a combination of both new and existing location segments.

- ***NCDOT Typical Section 1*** *– Four-lane median-divided:* The four-lane median-divided option would include a total cross-section width of 188 feet and a total pavement width of 76 feet (38 feet in each direction). This option would include 12-foot travel lanes, 12-foot outside shoulders (10-foot paved), 6-foot inside shoulders (4-foot paved), and a 46-foot median.
- ***NCDOT Typical Section 2*** *– Four-lane median-divided with service roads:* The four-lane median-divided service road option would include frontage roads along each side of the mainline. In some locations, the frontage road is needed only along one side of the mainline. The total existing location cross-section width would be 346 feet with a total pavement width of 124 feet (38 feet in each direction along the mainline, 24 feet in each direction along frontage roads). Typical Section 2 would contain the same dimensional elements for the mainline as those proposed for Typical Section 1. Frontage roads would carry two undivided travel lanes (12-foot) with unpaved shoulders.

NCDOT Typical Section 1
Four-Lane Median-Divided Freeway



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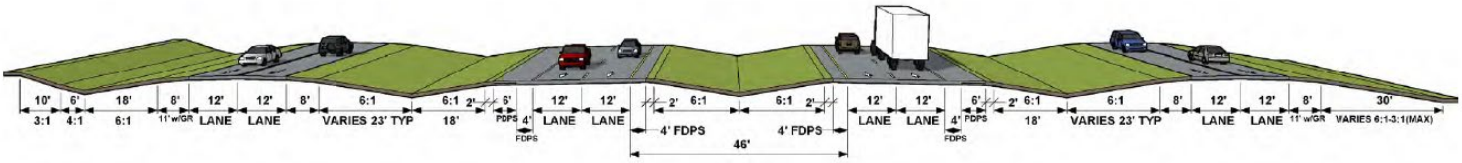
NCDOT Typical Section 2
Four-Lane Median-Divided Freeway with Frontage Roads



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3.2 Detailed Study Alternatives

A total of seven build alternatives have been selected by NCDOT and SCDOT for detailed study. Although there is considerable overlap in the segments utilized under each of the alternative corridors, there are generally four unique alternative corridor segments in Horry County, SC and five unique alternative corridor segments in Brunswick County, NC. Functional roadway designs have been developed for the seven Detailed Study Alternatives and a brief overview of each alternative is provided below. The proposed centerline alignment for each Detailed Study Alternative is shown on Figures 2A-2G in Appendix A.

Alternative 1

Alternative 1 (formerly Corridor Concept 1) extends to the east from the SC 9 interchange before turning north to cross Wampee Road (S-57) near its intersection with Little River Road (S-111). An interchange is proposed with Wampee Road/Little River Road in this location. The new location alignment then runs generally north of and parallel to Wampee Road for approximately 2.3 miles to the North Carolina State Line. Just north of the state line, an interchange is proposed to connect Hickman Road to the east and a new location extension of Wortham's Cutoff Road to the west. Alternative 1 continues east on new location and turns north to parallel Ash Little River Road before its intersection with Number 5 School Road, where an interchange is proposed. The alignment then runs east, crossing sections of Ash Little River Road, Gwynn Road, and Bland Road. Additional interchanges are proposed at Pea Landing Road and north of the US 17/NC 904 intersection where Alternative 1 alignment ties back into existing US 17 alignment.

Alternative 1A

Alternative 1A (formerly Corridor Concept 1A) follows the same alignment as Alternative 1 from the SC 9 interchange to Pea Landing Road interchange. From here, Alternative 1A crosses Pea Landing Road and continues on new location to the east with an interchange at NC 904 near the Russtown Road intersection. The route runs generally north of and parallel to Old Shallotte Road before crossing McMilly Road and turning northeast to tie into the US 17 Shallotte Bypass just west of the existing NC 130 interchange.

Alternative 1A was developed in response to public comments, as well as an alternative corridor concept submitted by the Town of Sunset Beach. The Town's corridor concept extended Corridor Concept 1 inland and parallel to US 17 from Pea Landing Road to US 17 north of Shallotte. The Town of Calabash also supported developing an alternative similar to the concept submitted by the Town of Sunset Beach.

Alternative 2

Alternative 2 (formerly Corridor Concept 2) follows the same alignment as Alternatives 1 and 1A from the SC 9 interchange to the North Carolina State Line. In North Carolina, the new location alignment includes a new interchange with Ash Little River Road and traverses approximately 1.5 miles on new location before tying into Hickman Road near its intersection with Shingletree Road. Alternative 2 follows Hickman Road and US 17 along existing location for the remainder of its length (approximately 11.9 miles). Additional interchanges are proposed along US 17 at Hickman Road, Pea Landing Road/Thomasboro Road, NC 904, Ocean Isle Beach Road, Old Shallotte Road, and NC 130.

Alternative 4

Alternative 4 (formerly Corridor Concept 4) would follow a more southerly new location alignment from SC 9, with a proposed interchange with Little River Road then curving back to the north with an interchange at Hickman Road just north/east of the state line. From here, Alternative 4 would follow the same alignment as Alternative 1 through the remainder of North Carolina.

Alternative 4A

As with Alternative 1A, Alternative 4A (formerly Corridor Concept 4A) was also developed after the December 2019 public meetings based on public comments, as well as the alternative corridor concept submitted by the Town of Sunset Beach. It follows the same route as Alternative 4 from the SC 9 interchange through Pea Landing Road. Alternative 4A then follows the same route as Alternative 1A to the existing US 17 Shallotte Bypass just west of NC 130.

Alternative 7

Alternative 7 (formerly Corridor Concept 7) uses the same alignment as Alternatives 4 and 4A from the SC 9 interchange to the proposed Little River Road interchange. Alternative 7 continues to the northeast on new location, but follows a more southerly route into North Carolina than alternatives 1, 1A, 2, 4, and 4A. Alternative 7 is the only option to cross McLamb Road in North Carolina and includes the only proposed interchange at Calabash Road. The alignment would then continue northeast, crossing Shingletree Road and tie into existing US 17 with a new interchange near Hickman Road. Alternative 7 would use existing location US 17 for the remainder of its length (approximately 10.2 miles).

Alternative 8

Alternative 8 (formerly Corridor Concept 8) follows the southernmost alignment of all alternatives. From the SC 9 interchange, the corridor runs on new location to the northeast and includes proposed interchanges at Little River Road and Mineola Avenue in South Carolina. The alignment curves to the northeast at Mineola Avenue, traversing on new location across the North Carolina State Line and tying into existing US 17 just north of its intersection with Calabash Road. Alternative 8 uses existing US 17 for the remainder of its length, or approximately 12.6 miles.

4.0 POTENTIAL ENVIRONMENTAL EFFECTS

4.1 Detailed Study Alternative Impacts

Potential environmental effects were evaluated for each of the seven Detailed Study Alternatives using the functional designs shown on Figure 3, Map Sheets 1 - 46. Proposed slope stake limits were buffered by 40 feet to calculate potential natural and human environmental project impacts for each alternative (see Table 2 below). The impact categories for delineated streams, wetlands, ponds, HQW, known federally protected species, potential historic resources, and geoenvironmental sites are based on field investigations. All other impact categories are based on available desktop GIS data and will be further refined as additional technical reports are completed for the Carolina Bays Parkway Extension. Additional information about jurisdictional stream and wetland resources, along with detailed project impact comparisons, is provided in Section 6.

Table 2. Potential Environmental Effects by Detailed Study Alternative

Impact Category[1,2]	Measure	Detailed Study Alternative													
		1		1A		2		4		4A		7		8	
		Total		Total		Total		Total		Total		Total		Total	
		SC	NC	SC	NC	SC	NC	SC	NC	SC	NC	SC	NC	SC	NC
Length (L-line)	Miles	22.0		21.3		20.4		21.9		21.2		19.7		20.1	
		5.6	16.4	5.6	15.7	5.6	14.8	5.5	16.4	5.5	15.7	5.4	14.3	6.1	14.0
Proposed Interchanges	No.	9		6		9		9		6		8		9	
		2	7	2	4	2	7	2	7	2	4	2	6	3	6
Proposed Major Hydraulic Sites	No.	21		21		15		21		21		12		15	
		4	17	4	17	4	11	4	17	4	17	3	9	4	11
Natural Resource Impacts															
Delineated Wetlands (Jurisdictional)	Acres	140.9		193.9		146.9		152.1		205.1		140.1		141.9	
		48.4	92.5	48.4	145.5	48.4	98.5	61.1	91.0	61.1	144.0	54.2	85.9	42.2	99.7
Delineated Streams (Jurisdictional)	Linear Feet	12,260		9,780		7,070		11,850		9,370		7,100		10,820	
		2,300	9,960	2,300	7,480	2,300	4,770	2,160	9,690	2,160	7,210	2,310	4,790	3,990	6,830
Delineated Tributary Waters (Non-Jurisdictional)	Linear Feet	16,730		15,900		13,000		16,510		15,670		9,340		9,230	
		1,340	15,390	1,340	14,560	1,340	11,660	2,070	14,440	2,070	13,600	1,930	7,410	1,920	7,310
Delineated Ponds (Jurisdictional)	Acres	12.4		22.7		13.0		10.6		20.9		14.1		12.3	
		7.8	4.6	7.8	14.9	7.8	5.2	6.9	3.7	6.9	14.0	7.7	6.4	8.0	4.3
Delineated High Quality Waters (HQW)	Linear Feet	4,200		2,690		1,910		4,200		2,690		1,910		1,910	
		0	4,200	0	2,690	0	1,910	0	4,200	0	2,690	0	1,910	0	1,910
Essential Fish Habitat[3]	Acres	0		0		0		0		0		0		2.08	
		0	0	0	0	0	0	0	0	0	0	0	0	0.0	2.1
Known Federally Protected Species[4]	No. Occurrences	0		0		0		1		1		2		2	
		0	0	0	0	0	0	1	0	1	0	1	1	0	2
100-Year Floodplain	Acres	83.1		51.5		149.0		83.0		51.5		78.6		99.4	
		0	83.1	0	51.5	0	149.0	0	83.0	0	51.5	0	78.6	0	99.4
Floodway	Acres	0.3		0.4		0.3		0.3		0.4		0.3		0.3	
		0	0.3	0	0.4	0	0.3	0	0.3	0	0.4	0	0.3	0	0.3
Human Environment Impacts															
Residential – Single Family / Mobile Home	No. Structures	82		110		127		58		86		108		166	
		33	49	33	77	33	94	4	54	4	82	4	104	30	136
Residential – Apartment / Condominium[5]	No. Structures	0		3		0		0		3		6		3	
		0	0	0	3	0	0	0	0	0	3	0	6	0	3
Commercial / Industrial[6]	No. Structures	70		23		77		71		24		68		80	
		17	53	17	6	17	60	14	57	14	10	14	54	14	66
Potential Historic Resource[7]	No. Sites	0		0		1		0		0		1		1	
		0	0	0	0	0	1	0	0	0	0	0	1	0	1

Impact Category[1,2]	Measure	Detailed Study Alternative													
		1		1A		2		4		4A		7		8	
		Total		Total		Total		Total		Total		Total		Total	
		SC	NC	SC	NC	SC	NC	SC	NC	SC	NC	SC	NC	SC	NC
EMS / Fire Station	No. Structures	0		1		0		0		1		0		0	
		0	0	0	1	0	0	0	0	0	1	0	0	0	0
Physical Environment Impacts															
Geoenvironmental Sites	No. Sites	12		3		17		12		3		15		18	
		1	11	1	2	1	16	0	12	0	3	0	15	0	18
Communication Tower	No. Structures	1		1		1		1		1		1		1	
		0	1	0	1	0	1	0	1	0	1	0	1	0	1
Water Tower	No. Structures	1		1		1		0		0		0		0	
		1	0	1	0	1	0	0	0	0	0	0	0	0	0
Wastewater Treatment Plant	No. Sites	1		1		1		0		0		0		0	
		1	0	1	0	1	0	0	0	0	0	0	0	0	0
NPDES Stormwater Permit	No. Sites	0		0		1		0		0		1		1	
		0	0	0	0	0	1	0	0	0	0	0	1	0	1

[1] Impacts based on functional design slope stake limits plus 40-foot buffer. Linear feet calculations rounded to nearest 10 feet and acreage calculations rounded to nearest tenth acre.
[2] Potential impacts are not anticipated for the following resource categories, which have been removed from the table: Designated Shellfish Harvest Areas, SC Critical Area, NC Anadromous Fish Spawning Areas, NC Primary Nursery Areas, NC Natural Heritage Areas, public water supply wells, 303(d) waters, private conservation easements, hospitals, public parks, schools, and electrical substations.
[3] Essential Fish Habitat for Coastal Migratory Pelagics, Snapper, and Grouper located within the study area. Habitat Area of Particular Concern for Penaeid Shrimp also located within study area.
[4] Field investigations identified occurrences of Wood Stork (Threatened), Red-Cockaded Woodpecker (Endangered), and American Alligator (Similarity of Appearance, Threatened) within the 1,000-foot Detailed Study Alternative corridors. All potentially impacted occurrences (i.e., within slope stake limits plus 40-foot buffer) involve Red-Cockaded Woodpecker in South Carolina (Alts. 4, 4A, and 7) and American Alligator in North Carolina (Alts. 7 and 8).
[5] Structure count only – apartment and condominium buildings within the same complex are counted individually.
[6] Structure count only - multiple businesses may be located within a structure.
[7] Historic Resource impacts based on preliminary eligibility analysis by NV5 architectural historians. Determinations are based on initial coordination with NCDOT/SCDOT resource experts and are subject to change.

5.0 MAJOR HYDRAULIC STRUCTURES

A Draft Hydraulic Planning Report was completed for the project in September 2021 and recommended a total of 43 major hydraulic sites among the seven Detailed Study Alternatives. Major hydraulic sites are defined as those with recommended drainage structure(s) that are 72 inches or greater in diameter. A total of 11 major hydraulic sites are located in the South Carolina portion of the project (Pee Dee River Basin) and 32 are located in North Carolina (Lumber River Basin). Structure site numbers correspond to sites identified in the Draft Hydraulics Planning Report. These major hydraulic structure recommendations are reviewed below in Table 3 shown on Figure 3, Map Sheets 1 – 46.

Table 3. Recommended Major Hydraulic Sites

Site #[1]	Detailed Study Alternative	Map Sheet	State	Stream / Pond / Wetland ID[2]	Stream Name	FEMA Study Type	Drainage Area (mi²)	Existing Structure	Recommended Structure[3]	Stream / Pond / Wetland Feature (Alternatives): Potential Impact
6	1, 1A, 2, 4, 4A, 7	2	SC	SHAB	UT to Intracoastal Waterway/Little River	None	0.50	None	1 @ 8'x7' RCBC	**SHAB** *(Alts 1, 1A, 2):* 320 lf; *(Alts 4, 4A, 7):* 300 lf
7	1, 1A, 2	3	SC	SHED	UT to Waccamaw River	None	0.41	None	84" Pipe	**SHED** *(Alts 1, 1A, 2):* 410 lf
8	8	2	SC	SHAB	UT to Intracoastal Waterway/Little River	None	0.49	None	1 @ 7'x8' RCBC	**SHAB** *(Alt 8):* 250 lf
10	1, 1A, 2	4, 5	SC	SHIC	Bellamy Branch	None	1.75	None	1 @ 12'x8' RCBC	**SHIC** *(Alts 1, 1A, 2):* 290 lf
11	4, 4A, 7, 8	24	SC	SHEE	Bellamy Branch	None	0.73	None	1 @ 7'x8' RCBC	**SHEE** *(Alts 4, 4A, 7):* 300 lf
12	1, 1A, 2	6	SC	WP	N/A (Indigo Branch)	None	2.91	None	2 @ 11'x7' RCBC	**WP** *(Alts 1, 1A, 2):* 2.3 ac. **PAF** *(Alts 1,1A, 2):* 0.1 ac.
13	4, 4A	25	SC	WHCM	N/A (Trib to Indigo Branch)	None	0.48	None	1 @ 7'x7' RCBC	**WHCM** *(Alts 4, 4A):* 10.7 ac.
14	4, 4A	25	SC	WHCM	N/A (Indigo Branch)	None	2.33	None	2 @ 10'x7' RCBC	**WHCM** *(Alts 4, 4A):* 10.7 ac.
15	7	25	SC	SHQA	Indigo Branch	None	1.70	None	1 @ 11'x9' RCBC	**SHQA** *(Alt 7):* 270 lf
16	1, 1A, 2, 4, 4A	7	NC	Hickman's Branch	Hickman's Branch	None	1.09	None	1 @ 8'x9' RCBC	**Hickman's Branch** *(Alts 1, 1A):* 460 lf; *(Alts 4, 4A):* 450 lf; *(Alt 2):* 430 lf **WY** *(Alts 1, 1A, 4, 4A):* 0.9 ac.; *(Alt 2): 0.6 ac.* **WDA** *(Alts 1, 1A, 4, 4A): 0.1 ac.; (Alt 2): 0.5 ac.*
17	8	42, 43	SC	SHAF	Mullet Creek	None	0.28	None	1 @ 7'x8' RCBC	**SHAF** *(Alt 8):* 1,030 lf
18	8	42, 43	SC	SHAF	Mullet Creek	None	0.46	None	1 @ 8'x10' RCBC	**SHAF** *(Alt 8):* 1,030 lf **WHBX** *(Alt 8):* 1.2 ac.
21	1, 1A, 4, 4A	8	NC	Cawcaw Swamp, Shingletree Swamp	Cawcaw Swamp, Shingletree Swamp	Limited Detailed	33.8	None	Bridge (275') - Mainline Bridge (370') - Service Road	**Cawcaw Swamp, Shingletree Swamp** *(Alts 1, 1A, 4, 4A)***:** 0 lf **WBF** *(Alts 1A, 4, 4A):* 15.8 ac. **WBE** *(Alts 1A, 4, 4A):* 0.4 ac.
22	1, 1A, 4, 4A	8	NC	SBB	UT to Earnest Branch	None	0.27	None	1 @ 8'x7' RCBC	**SBB** *(Alts 1, 1A, 4, 4A)*: 570 lf
23	2	9	NC	Shingletree Swamp	Shingletree Swamp	Limited Detailed	8.25	None	Bridge (110')	**Shingletree Swamp** *(Alt 2): 0 lf* **WDF** *(Alt 2):* 11.5 ac.

Site #[1]	Detailed Study Alternative	Map Sheet	State	Stream / Pond / Wetland ID[2]	Stream Name	FEMA Study Type	Drainage Area (mi²)	Existing Structure	Recommended Structure[3]	Stream / Pond / Wetland Feature (Alternatives): Potential Impact
26	1, 1A, 4, 4A	11	NC	PCM	N/A (Earnest Branch)	None	0.29	None	1 @ 7'x7' RCBC	**PCM** *(Alts 1, 1A, 4, 4A):* 0.4 ac. **WBJ** *(Alts 1, 1A, 4, 4A):* 0.1 ac.
29	7	27, 28	NC	SHUC	Shingletree Swamp	Limited Detailed	6.46	None	Bridge (110')	**SHUC** *(Alt 7)*: 0 lf **WHQE** *(Alt 7):* 1.5 ac. **PHQN** *(Alt 7): 0.3 ac.;* **PHQP** *(Alt 7): 0.1 ac.*
31	1, 1A, 4, 4A	11	NC	TAO	N/A (Trib to Standland Branch)	None	0.45	None	1 @ 7'x7' RCBC	**TAO** *(Alts 1, 1A, 4, 4A):* 370 lf **WAY** *(Alts 1, 1A, 4, 4A):* 0.2 ac.
32	8	44	NC	SHIG, SHIM	UT to Persimmon Swamp	None	0.83	None	1 @ 8'x8' RCBC	**SHIG** *(Alt 8):* 590 lf **SHIM** *(Alt 8):* 210 lf
35	2	29	NC	SAP	UT to Little Cawcaw Swamp	None	0.31	3 @ 30" RCP	84" RCP	**SAP** *(Alt 2):* 340 lf **PS** *(Alt 2):* 0.1 ac.
36	8	46	NC	SHIH	Shingletree Swamp	Limited Detailed	5.80	2 @ 10'x7' RCBC	2 @ 10'x11' RCBC	**SHIH** *(Alt 8)*: 460 lf **WHIV** (*Alt 8):* 0.7 ac.; **WHIQ** *(Alt 8)*: 0.4 ac; **WHIP** *(Alt 8):* < 0.1 ac.
37	1, 1A, 4, 4A	12	NC	SAB	UT to Cawcaw Swamp	None	0.49	None	1 @ 7'x7' RCBC	**SAB** *(Alts 1, 1A, 4, 4A):* 330 lf **WDI** *(Alts 1, 1A, 4, 4A):* 1.6 ac.
38	2, 8	30	NC	Little Cawcaw Swamp	Little Cawcaw Swamp	Limited Detailed	4.20	3 @ 72" RCP	2 @ 10'x9' RCBC	**Little Cawcaw Swamp** *(Alt 2):* 380 lf; *(Alt 8):* 2,020 lf **WAZ** *(Alt 2):* < 0.1 ac.
39	7, 8	30	NC	Little Cawcaw Swamp	Little Cawcaw Swamp	Limited Detailed	4.15	None	2 @ 8'x10' RCBC	**Little Cawcaw Swamp** *(Alt 7):* 960 lf; *(Alt 8):* 2,020 lf
40	2, 7, 8	30	NC	Little Cawcaw Swamp	Little Cawcaw Swamp	Limited Detailed	4.09	2 @ 84" CMP	2 @ 8'x10' RCBC	**Little Cawcaw Swamp** (Alt 2): 380 lf; *(Alt 7):* 960 lf; *(Alt 8):* 2,020 lf **WZI** *(Alt 2):* 0.4 ac., *(Alt 7):* 0.3 ac.; *(Alt 8);* 0.6 ac. **WAV** *(Alt 8):* 0.4 ac.
41	1, 1A, 4, 4A	13	NC	Cawcaw Swamp	Cawcaw Swamp	Limited Detailed	11.7	None	Bridge (150')	**Cawcaw Swamp** *(Alts 1, 1A, 4, 4A): 0 lf* **WDM** *(Alts 1, 1A, 4, 4A):* 2.3 ac.
43	1, 1A, 4, 4A	14	NC	SCF	UT to Cawcaw Swamp	None	0.27	None	1 @ 13'x7' RCBC	**SCF (Perennial)** *(Alts 1, 4):* 1,830 lf; *(Alts 1A, 4A):* 520 lf **SCF (Intermittent)** *(Alts 1, 4): 260 lf* **WCM** *(Alts 1, 4):* 1.2 ac.; *(Alts 1A, 4A):* < 0.1 ac.
46	1, 1A, 4, 4A	14	NC	TBD	N/A (Trib to Cawcaw Swamp)	N/A	0.43	None	1 @ 7'x7' RCBC	**TBD** *(Alts 1, 4):* 490 lf; *(Alts 1A, 4A):* 460 lf
48	1, 4	16	NC	SVBH	UT to Shallotte River	None	0.35	None	1 @ 12'x7' RCBC	**SVBH** *(Alts 1, 4)*: 460 lf
49	1A, 4A	15	NC	WVCJ	N/A (Shallotte River)	None	0.28	None	78" Pipe	**WVCJ** *(Alts 1A, 4A):* 19.6 ac. **SVAO** *(Alts 1A, 4A)*: 370 lf

Site #[1]	Detailed Study Alternative	Map Sheet	State	Stream / Pond / Wetland ID[2]	Stream Name	FEMA Study Type	Drainage Area (mi²)	Existing Structure	Recommended Structure[3]	Stream / Pond / Wetland Feature (Alternatives): Potential Impact
51	1, 4	16	NC	SVAI, SBH	UT to Shallotte River	None	0.66	None	1 @ 12'x7' RCBC	**SVAI**: *(Alts 1, 4):* 240 lf; **SBH (Perennial)** *(Alts 1, 4):* 1,670 lf **WCC** *(Alts 1, 4)*: 0.1 ac.
53	1A, 4A	17	NC	SVAN	UT to Shallotte River	None	0.49	None	1 @ 7'x8' RCBC	**SVAN**: *(Alts 1A, 4A):* 510 lf **WVCK** *(Alts 1A, 4A):* 15.4 ac.
54	1, 2, 4, 7, 8	34	NC	SVAH	Shallotte River	None	4.57	2 @ 8'x6' RCBC	3 @ 10'x7' RCBC	**SVAH** *(Alts 1, 4):* 330 lf; *(Alts 2, 7, 8):* 260 lf; **SVBE** *(Alts 1, 2, 4, 7, 8):* 170 lf **SVAG** *(Alts 1, 4):* 330 lf; *(Alts 2, 7, 8):* 300 lf **WVCB** *(Alts 1, 4): 7.3 ac.; (Alts 2, 7, 8):* 3.4 ac.
55	1A, 4A	18	NC	SVBI	Cool Run	None	1.79	None	2 @ 8'x8' RCBC	**SVBI** *(Alts 1A, 4A):* 460 lf **WVBY** *(Alts 1A, 4A):* 3.0 ac.; **PVAZ** *(Alts 1A, 4A):* 2.8 ac.
56	1A, 4A	18	NC	SVBJ	UT to Cool Run	None	0.25	None	1 @ 12'x7' RCBC	**SVBJ** *(Alts 1A, 4A)*: 100 lf **WVBZ** *(Alts 1A, 4A):* 1.3 ac.**;** **WVDA** *(Alts 1A, 4A):* < 0.1 ac. **PVAB** *(Alts 1A, 4A):* 0.6 ac; **PVAC** *(Alts 1A, 4A):* 1.5 AC.
57	1, 2, 4, 7, 8	35	NC	SVAE	Cool Run	None	3.33	3 @ 5'x7' RCBC	2 @ 9'x9' RCBC	**SVAE** *(Alts 1, 2, 4, 7, 8):* 260 lf **WVAR** *(Alts 1, 2, 4, 7, 8):* 2.4 ac.; **WVBJ** *(Alts 1, 2, 4 7, 8)*: 0.2 ac.
59	1, 2, 4, 7, 8	36, 37	NC	SVAB, SVAC	UT to Cool Run	None	0.37	42" RCP	1 @ 8'x7' RCBC	**SVAB** *(Alts 1, 2, 4, 7, 8):* 280 lf **SVAC *(Perennial)*** *(Alts 1, 2, 4, 7, 8):* 30 lf; **SVAC (Intermittent)** *(Alts 1, 2, 4, 7, 8):* 190 lf **WVAJ** *(Alts 1, 2, 4, 7, 8):* 0.3 ac.; **WVAK** *(Alts 1, 2, 4, 7, 8):* 0.4 ac.
60	1A, 4A	19	NC	McMilly Swamp	McMilly Swamp	None	1.36	None	2 @ 7'x7' RCBC	**McMilly Swamp** *(Alts 1A, 4A):* 420 lf **WZK** *(Alts 1A, 4A):* 7.8 ac.; **PEC** *(Alts 1A, 4A):* 0.1 ac.
61	1A, 4A	20	NC	SBT	UT to McMilly Swamp	None	0.55	None	1 @ 7'x12' RCBC	**SBT** *(Alts 1A, 4A):* 520 lf **WEJ** *(Alts 1A, 4A):* 1.7 ac.; **SDJ** *(Alts 1A, 4A):* 550 lf
62	1, 2, 4, 7, 8	38, 39	NC	McMilly Swamp	McMilly Swamp	None	2.70	4 @ 6'x5' RCBC	4 @ 10'x7' RCBC	**McMilly Swamp** *(Alts 1, 2, 4, 7, 8):* 540 lf **WM** *(Alts 1, 2, 4, 7, 8):* 10.6 ac.
64	All Alts	21	NC	Lookout Branch	Lookout Branch	Detailed	1.93	4 @ 10'x7' RCBC	4 @ 10'x7' RCBC (Retain and Extend)	**Lookout Branch** *(Alts 1, 2, 4, 7, 8):* 70 lf; *(Alts 1A, 4A):* 90 lf **WAH** *(Alts 1, 2, 4, 7, 8):* 0.4 ac.; *(Alts 1A, 4A):* 3.0 ac. **WH** *(Alts 1, 2, 4, 7, 8):* 0.3 ac.; *(Alts 1A, 4A):* 0.6 ac.
65	All Alts	22	NC	SAA	Mulberry Branch	Detailed	5.33	3 @ 12'x8' RCBC	3 @ 12'x8' RCBC (Retain and Extend)	**SAA** *(Alts 1, 2, 4, 7, 8):* 120 lf; *(Alts 1A, 4A):* 130 lf **WAA** *(Alts 1, 2, 4, 7, 8):* 0.9 ac.; *(Alts 1A, 4A):* 2.4 ac. **WC** *(Alts 1, 2, 4, 7, 8):* 0.3 ac.; *(Alts 1A, 4A):* 0.2 ac.

[1] Sites #1-5, 9, 19, 20, 24, 25, 27, 28, 30, 33, 34, 42, 44, 45, 47, 50, 52, 58, & 63 were determined during evaluations and analysis to be sites that did not qualify as major structures (i.e., less than 72" diameter); therefore these sites are not included in the table.
[2] Delineated stream/wetland/pond IDs correspond to those assigned as part of natural resource fieldwork and described in Section 6.0 and shown on Figure 3, Map Sheets 1 – 46. Several major hydraulic sites do not convey a delineated jurisdictional stream and are instead associated with a jurisdictional wetland, pond, or non-jurisdictional tributary water.
[3] RCBC = Reinforced Concrete Box Culvert. All Recommended RCBC to be buried 1'.

6.0 STREAMS, WETLANDS, AND PONDS

Jurisdictional areas identified during field investigations of the North Carolina portion of the project study area were verified by Brad Shaver of the U.S. Army Corps of Engineers (USACE) and Joanne Steenhuis of the NC Division of Water Resources (NCDWR) during numerous field visits held between July 23, 2020 and April 15, 2021. Jurisdictional areas identified during field investigations of the South Carolina portion of the project study area were verified by Ivan Fannin III of the U.S. Army Corps of Engineers (USACE) on July 13, 2021.

Field investigations were conducted within 1,000-foot corridors that correspond to each of the seven Detailed Study Alternatives. These corridors, along with all delineated stream, wetland, and pond features are shown on Figure 3, Map Sheets 1 – 46.

In addition to the jurisdictional features described in Sections 6.1 – 6.4 below, a total of 35 non-jurisdictional tributary waters were identified in the South Carolina portion of the project and a total of 156 were identified in the North Carolina portion. A high-level review of impacts to non-jurisdictional tributary waters by Detailed Study Alternative is provided in Table 2.

6.1 Jurisdictional Streams

Within the South Carolina portion of the 1,000-foot Detailed Study Alternative corridors, a total of 35 jurisdictional streams (22 intermittent and 13 perennial) were identified. In the North Carolina portion of the 1,000-foot corridors, a total of 78 jurisdictional streams (20 intermittent and 58 perennial) were identified. A detailed overview of jurisdictional streams and potential project impacts in South Carolina and North Carolina is provided below in Tables 4 and 5, respectively.

Table 4. Jurisdictional Stream Features in South Carolina

Map ID	Stream Name	Map Sheet	Classification[1]	Bank Height (ft)	Bank Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity	Length[2] (ft)	Jurisdictional Classification	Impacts[3] (lf)						
												Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
SHAA	UT to Intracoastal Waterway/Little River	1, 2	SA	2	5	6	Sand	Moderate	Clear	1,310	Intermittent	340	340	340	330	330	330	340
SHAB	UT to Intracoastal Waterway/Little River	2	SA	12	10	10	Sand	Moderate	Slightly Turbid	2,380	Intermittent	320	320	320	300	300	300	250
SHAC	UT to Intracoastal Waterway/Little River	23, 40	SA	2	5	8	Sand	No Flow	Clear	280	Intermittent	-	-	-	-	-	-	-
SHAD	UT to Intracoastal Waterway/Little River	23, 40	SA	3	6	22	Sand	No Flow	Clear	2,070	Intermittent	-	-	-	-	-	-	310
SHAE	UT to Bellamy Branch	24, 41	FW	4	6	12	Sand	Moderate	Slightly Turbid	1,850	Perennial	-	-	-	-	-	-	1,300
SHAF	Mullet Creek	42, 43	SA	6	8	10	Sand	Moderate	Slightly Turbid	4,240	Perennial	-	-	-	-	-	-	1,030
SHAG	UT to Mullet Creek	42, 43	SA	3	6	3	Sand	Fast	Clear	50	Intermittent	-	-	-	-	-	-	-
SHAH	UT to Mullet Creek	42, 43	SA	3	6	6	Sand	Fast	Clear	70	Intermittent	-	-	-	-	-	-	-
SHAI	UT to Mullet Creek	43	SA	2	5	8	Sand	Moderate	Clear	1,650	Perennial	-	-	-	-	-	-	280
SHAJ	UT to Mullet Creek	43	SA	2	6	12	Sand	Fast	Clear	80	Perennial	-	-	-	-	-	-	-
SHAK	UT to Mullet Creek	43	SA	2	5	10	Sand	Moderate	Clear	670	Intermittent	-	-	-	-	-	-	350
SHAL	UT to Mullet Creek	43	SA	1	4	3	Sand	Fast	Clear	400	Perennial	-	-	-	-	-	-	30
SHAM	UT to Mullet Creek	43	SA	2	3	1	Sand	Fast	Clear	50	Intermittent	-	-	-	-	-	-	-
SHAN	UT to Mullet Creek	44	SA	2	5	4	Sand	No Flow	Clear	620	Intermittent	-	-	-	-	-	-	-
SHAO	UT to Indigo Branch	25	FW	2	15	24	Sand	Slow	Clear	350	Perennial	-	-	-	-	-	-	-
SHEA	UT to Waccamaw River	2	FW	5	11	6	Sand	Slow	Clear	580	Intermittent	-	-	-	-	-	-	-
SHEB	UT to Waccamaw River	2, 3, 23, 40	FW	2	5	2	Sand, Mud	Slow	Clear	2,110	Intermittent	250	250	250	360	360	360	-
SHEC	UT to Waccamaw River	3	FW	2	5	2	Sand	Moderate	Clear	50	Intermittent	-	-	-	-	-	-	-
SHED	UT to Waccamaw River	3, 23	FW	3	13	5	Sand	Slow	Clear	1,040	Intermittent	410	410	410	-	-	-	-
SHEE	Bellamy Branch	24	FW	6	12	18	Sand	Moderate	Slightly Turbid	1,350	Perennial	-	-	-	300	300	300	-
SHEF	UT to Bellamy Branch	24	FW	4	10	40	Sand	Fast	Clear	40	Perennial	-	-	-	-	-	-	-
SHIA	UT to Bellamy Branch	4, 5	FW	4	7	13	Silt	Slow	Slightly Turbid	2,170	Intermittent	-	-	-	-	-	-	-
SHIB	UT to Bellamy Branch	5	FW	3	4	10	Sand	Slow	Slightly Turbid	60	Intermittent	-	-	-	-	-	-	-
SHIC	Bellamy Branch	4, 5	FW	6	12	18	Sand	Moderate	Slightly Turbid	1,760	Perennial	290	290	290	-	-	-	-

Map ID	Stream Name	Map Sheet	Classification[1]	Bank Height (ft)	Bank Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity	Length[2] (ft)	Jurisdictional Classification	Impacts[3] (lf)						
												Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
SHID	UT to Bellamy Branch	4, 5	FW	4	4	10	Sand	Slow	Slightly Turbid	1,750	Intermittent	-	-	-	-	-	-	-
SHIE	UT to Bellamy Branch	4, 5	FW	3	4	8	Sand	Slow	Slightly Turbid	890	Intermittent	170	170	170	-	-	-	-
SHIF	UT to Bellamy Branch	4, 5	FW	5	4	8	Sand	Moderate	Slightly Turbid	1,790	Intermittent	420	420	420	60	60	60	-
SHMA	UT to Waccamaw River	2	FW	8	10	8	Sand	Moderate	Slightly Turbid	770	Intermittent	100	100	100	100	100	100	100
SHMB	UT to Waccamaw River	23, 40	FW	4	10	2	Silt	Slow	Turbid	1,250	Intermittent	-	-	-	340	340	340	-
SHMC	UT to Waccamaw River	3, 23	FW	6	8	6	Sand	Slow	Slightly Turbid	860	Intermittent	-	-	-	250	250	250	-
SHQA	Indigo Branch	25	FW	4	10	3	Silt	Slow	Turbid	3,700	Intermittent	-	-	-	-	-	270	-
SG	Indigo Branch	6	FW	4	15	12	Sand	Moderate	Slightly Turbid	230	Perennial	-	-	-	100	100	-	-
SP	UT to Indigo Branch	6	FW	4	12	10	Sand	Moderate	Slightly Turbid	80	Perennial	-	-	-	-	-	-	-
SQ	UT to Indigo Branch	6	FW	5	9	14	Sand	Moderate	Slightly Turbid	30	Perennial	-	-	-	-	-	-	-
SR	UT to Indigo Branch	6	FW	4	10	9	Sand	Moderate	Slightly Turbid	1,520	Perennial	-	-	-	20	20	-	-
											South Carolina Total	**2,300**	**2,300**	**2,300**	**2,160**	**2,160**	**2,310**	**3,990**

[1] SA = Class SA (saltwaters). FW = Freshwaters.
[2] Stream length by linear feet within delineated corridors rounded to nearest 10 feet. For streams with two delineated banks, the longer of the bank measurements is provided.
[3] Calculated impacts to jurisdictional streams based on proposed slope stake limits plus 40-foot buffer and rounded to nearest 10 feet. For streams with two delineated banks, the longer of the bank impact measurements is provided.

Table 5. Jurisdictional Stream Features in North Carolina

Map ID	Stream Name	Map Sheet	Classification[1]	NCSAM Rating[2]	Bank Height (ft)	Bank Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity	Length[3] (ft)	Jurisdictional Classification	Impacts[3] (lf)						
													Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
Cawcaw Swamp	Cawcaw Swamp	8, 13	C;Sw	Low	5	16	18	Sand	Moderate	Slightly Turbid	2,860	Perennial	0	0	-	0	0	-	-
Earnest Branch	Earnest Branch	11	C;Sw	Medium	4	8	12	Sand	Moderate	Slightly Turbid	1,930	Perennial	20	20	-	20	20	-	-
Hickman's Branch	Hickman's Branch	7	C;Sw	Medium	4	8	12	Sand	Moderate	Slightly Turbid	1,690	Perennial	460	460	430	450	450	-	-
Little Cawcaw Swamp	Little Cawcaw Swamp	29, 30, 31	C;Sw	Medium	6	12	20	Silt	Moderate	Slightly Turbid	4,590	Perennial	-	-	380	-	-	960	2,020
Lookout Branch	Lookout Branch	21, 22	C;Sw,HQW	-	5	8	12	Silt	Moderate	Slightly Turbid	1,280	Perennial	70	90	70	70	90	70	70
McMilly Swamp	McMilly Swamp	19, 20, 38, 39	C;Sw	-	5	7	10	Silt	Moderate	Slightly Turbid	7,160	Perennial	540	420	540	540	420	540	540
SA (Intermittent)	UT to Mulberry Branch	22	C;Sw	-	2	3	2	Sand	Moderate	Slightly Turbid	640	Intermittent	80	80	80	80	80	80	80
SA (Perennial)	UT to Mulberry Branch	22	C;Sw	-	2	5	5	Sand	Moderate	Slightly Turbid	1,130	Perennial	-	-	-	-	-	-	-
SAA	Mulberry Branch	21, 22	C;Sw	-	1.5	7	10	Sand	Moderate	Slightly Turbid	1,480	Perennial	120	130	120	120	130	120	120
SAB	UT to Cawcaw Swamp	12	C;Sw	Low	1	4	6	Sand	Moderate	Slightly Turbid	1,530	Perennial	330	330	-	330	330	-	-
SAC	UT to Cawcaw Swamp	12	C;Sw	Low	1	3	4	Sand	Slow	Slightly Turbid	550	Perennial	120	120	-	120	120	-	-
SAD	UT to Lookout Branch	21, 22	C;Sw,HQW	-	1.5	4	5	Sand	Slow	Slightly Turbid	10	Intermittent	-	-	-	-	-	-	-
SAE	UT to Little Cawcaw Swamp	30	C;Sw	-	2	12	8	Silt	Slow	Turbid	690	Perennial	-	-	-	-	-	100	100
SAF (Intermittent)	UT to Lookout Branch	21	C;Sw,HQW	-	2	3	3	Sand	Fast	Clear	260	Intermittent	160	800	160	160	800	160	160
SAF (Perennial)	UT to Lookout Branch	21	C;Sw,HQW	-	2	3	3	Sand	Fast	Clear	1,410	Perennial	40	80	40	40	80	40	40
SAG	UT to Earnest Branch	10	C;Sw	Low	8	6	3	Silt	Slow	Slightly Turbid	570	Intermittent	260	260	-	260	260	-	-
SAJ	UT to Little Cawcaw Swamp	29	C;Sw	Low	6	4	10	Sand	Moderate	Clear	210	Perennial	-	-	-	-	-	-	-
SAK	UT to Earnest Branch	11	C;Sw	Low	6	4	3	Silt	Slow	Slightly Turbid	310	Intermittent	-	-	-	-	-	-	-
SAL	UT to Cawcaw Swamp	13	C;Sw	Low	6	2	2	Silt	Moderate	Clear	540	Intermittent	-	-	-	-	-	-	-
SAM	UT to Cawcaw Swamp	13	C;Sw	-	4	9	4	Sand	Fast	Clear	70	Perennial	-	-	-	-	-	-	-
SAN	UT to Cawcaw Swamp	13	C;Sw	-	6	8	4	Sand	Moderate	Light Tannic	390	Perennial	50	40	-	50	40	-	-
SAP	UT to Little Cawcaw Swamp	29	C;Sw	-	7	6	5	Sand	Fast	Clear	340	Intermittent	-	-	340	-	-	-	-
SB	UT to Little Cawcaw Swamp	30, 31	C;Sw	Low	9	6	3	Sand	Moderate	Slightly Turbid	770	Perennial	-	-	90	-	-	-	-
SBB	UT to Earnest Branch	8	C;Sw	Medium	5	10	6	Silt	Slow	Slightly Turbid	2,860	Perennial	570	570	-	570	570	-	-
SBH (Intermittent)	UT to Shallotte River	33	C;Sw,HQW	Low	5	6	3	Silt	Slow	Slightly Turbid	210	Intermittent	-	-	-	-	-	-	-
SBH (Perennial)	UT to Shallotte River	16, 33	C;Sw,HQW	Low	5	4	4	Sand	Moderate	Clear	3,130	Perennial	1,670	-	-	1,670	-	-	-

Map ID	Stream Name	Map Sheet	Classification[1]	NCSAM Rating[2]	Bank Height (ft)	Bank Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity	Length[3] (ft)	Jurisdictional Classification	Impacts[3] (lf)						
													Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
SBI	UT to McMilly Swamp	20, 38	C;Sw	-	4	7	2	Silt	Slow	Slightly Turbid	760	Intermittent	-	-	-	-	-	-	-
SBK	UT to Cawcaw Swamp	13	C;Sw	Medium	2	12	8	Silt	Slow	Turbid	1,480	Perennial	-	-	-	-	-	-	-
SBM (Intermittent)	UT to Cawcaw Swamp	14	C;Sw	Low	2	3	3	Silt	Moderate	Light Tannic	460	Intermittent	50	-	-	50	-	-	-
SBM (Perennial)	UT to Cawcaw Swamp	14	C;Sw	Low	2	4	4	Silt	Moderate	Light Tannic	470	Perennial	50	-	-	50	-	-	-
SBQ	UT to Lookout Branch	21	C;Sw,HQW	-	2	3	3	Sand	Fast	Clear	80	Intermittent	60	80	60	60	80	60	60
SBS	UT to McMilly Swamp	20	C;Sw	-	4	3	4	Silt	Slow	Turbid	360	Intermittent	-	60	-	-	60	-	-
SBT	UT to McMilly Swamp	20, 38	C;Sw	-	7	12	18	Sand	Moderate	Slightly Turbid	1,090	Perennial	-	520	-	-	520	-	-
SC	UT to Lookout Branch	21	C;Sw,HQW	High	2	3	3	Silt	Slow	Turbid	430	Intermittent	-	-	-	-	-	-	-
SCB	UT to McMilly Swamp	20	C;Sw	-	5	7	4	Sand	Fast	Slightly Turbid	230	Intermittent	-	-	-	-	-	-	-
SCC	UT to McMilly Swamp	19	C;Sw	-	1.5	2	3	Sand	Fast	Clear	410	Perennial	-	410	-	-	410	-	-
SCF (Intermittent)	UT to Cawcaw Swamp	14	C;Sw	Low	2	3	3	Silt	Moderate	Light Tannic	260	Intermittent	260	-	-	260	-	-	-
SCF (Perennial)	UT to Cawcaw Swamp	14	C;Sw	Low	2	3	3	Silt	Moderate	Light Tannic	2,960	Perennial	1,830	520	-	1,830	520	-	-
SCG	UT to Cawcaw Swamp	14	C;Sw	Low	2	4	4	Silt	Moderate	Light Tannic	220	Perennial	-	-	-	-	-	-	-
SD	UT to Lookout Branch	21	C;Sw,HQW	Low	3	3	3	Silt	Moderate	Light Tannic	780	Intermittent	-	-	-	-	-	-	-
SDA	UT to McMilly Swamp	38	C;Sw	Low	5	5	6	Sand	Fast	Clear	270	Perennial	-	-	-	-	-	-	-
SDD	UT to Lookout Branch	20, 21	C;Sw,HQW	Low	7	5	3	Sand	Fast	Clear	160	Intermittent	-	-	-	-	-	-	-
SDJ	UT to Lookout Branch	20	C;Sw,HQW	-	5	4	7	Sand	Moderate	Slightly Turbid	550	Perennial	-	550	-	-	550	-	-
SDK	UT to Shallotte River	39	C;Sw,HQW	Low	4	4	3	Sand	Fast	Clear	710	Perennial	480	-	480	480	-	480	480
SDM	UT to Earnest Branch	10	C;Sw	-	8	6	3	Silt	Slow	Slightly Turbid	870	Perennial	-	-	-	-	-	-	-
SE	UT to Shallotte River	21, 39	C;Sw,HQW	-	5	7	4	Sand	Moderate	Slightly Turbid	830	Perennial	-	-	-	-	-	-	-
SF	UT to Indigo Branch	7	C;Sw	Low	4	7	2	Silt	Slow	Slightly Turbid	540	Perennial	260	260	-	-	-	-	-
SHIG (Intermittent)	UT to Persimmon Swamp	45, 46	C;Sw	Low	3	6	6	Sand	Moderate	Clear	370	Intermittent	-	-	-	-	-	-	-
SHIG (Perennial)	UT to Persimmon Swamp	44, 45, 46	C;Sw	Low	3	6	6	Sand	Moderate	Clear	3,540	Perennial	-	-	-	-	-	-	590
SHIH	Shingletree Swamp	46	C;Sw	-	6	11	12	Sand	Moderate	Clear	2,240	Perennial	-	-	-	-	-	-	460
SHII	UT to Persimmon Swamp	46	C;Sw	Low	3	7	10	Sand	Moderate	Clear	140	Perennial	-	-	-	-	-	-	-
SHIJ	UT to Shingletree Swamp	46	C;Sw	-	3	6	10	Sand	Moderate	Clear	150	Perennial	-	-	-	-	-	-	-
SHIM	UT to Persimmon Swamp	44	C;Sw	Medium	3	7	9	Sand	Moderate	Clear	210	Perennial	-	-	-	-	-	-	210

Map ID	Stream Name	Map Sheet	Classification[1]	NCSAM Rating[2]	Bank Height (ft)	Bank Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity	Length[3] (ft)	Jurisdictional Classification	Impacts[3] (lf)						
													Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
Shingletree Swamp	Shingletree Swamp	8, 9	C;Sw	-	5	12	18	Sand	Moderate	Clear	1,520	Perennial	0	0	0	0	0	-	-
SHUB	UT to Shingletree Swamp	27, 28	C;Sw	-	6	6	1	Sand	Moderate	Slightly Turbid	250	Perennial	-	-	-	-	-	-	-
SHUC	Shingletree Swamp	27, 28	C;Sw	-	8	13	18	Sand	Moderate	Slightly Turbid	1,590	Perennial	-	-	-	-	-	0	-
SHUD	Hickman's Branch	26	C;Sw	-	8	13	16	Sand	Moderate	Slightly Turbid	1,430	Perennial	-	-	-	-	-	320	-
SVAB	UT to Cool Run	36, 37	C;Sw	-	6	8	10	Sand	Moderate	Slightly Turbid	2,930	Perennial	280	-	280	280	-	280	280
SVAC (Intermittent)	UT to Cool Run	36, 37	C;Sw	Medium	4	6	3	Sand	Moderate	Slightly Turbid	1,130	Intermittent	190	-	190	190	-	190	190
SVAC (Perennial)	UT to Cool Run	36, 37	C;Sw	Medium	5	7	9	Sand	Moderate	Slightly Turbid	30	Perennial	30	-	30	30	-	30	30
SVAD	UT to Shallotte River	36, 37	C;Sw,HQW	-	4	6	5	Sand	Moderate	Slightly Turbid	1,280	Perennial	70	-	70	70	-	70	70
SVAE	Cool Run	35	C;Sw	-	3	7	7	Sand	Moderate	Slightly Turbid	980	Perennial	260	-	260	260	-	260	260
SVAF	UT to Shallotte River	35	C;Sw,HQW	Medium	5	4	10	Sand	Moderate	Slightly Turbid	150	Perennial	-	-	-	-	-	-	-
SVAG	UT to Shallotte River	34	C;Sw,HQW	-	4	6	6	Sand	Moderate	Slightly Turbid	790	Perennial	330	-	300	330	-	300	300
SVAH	Shallotte River	16, 34	C;Sw,HQW	-	4	8	12	Sand	Moderate	Slightly Turbid	2,430	Perennial	330	-	260	330	-	260	260
SVAI	UT to Shallotte River	16	C;Sw,HQW	Medium	5	6	6	Sand	Moderate	Slightly Turbid	790	Perennial	240	-	-	240	-	-	-
SVAJ	UT to Shallotte River	36, 37	C;Sw,HQW	-	3	4	6	Sand	Moderate	Slightly Turbid	900	Perennial	-	-	-	-	-	-	-
SVAK	UT to Shallotte River	36, 37	C;Sw,HQW	-	3	6	8	Sand	Slow	Slightly Turbid	90	Perennial	-	-	-	-	-	-	-
SVAL	UT to Cawcaw Swamp	14, 15	C;Sw	-	3	7	10	Sand	Moderate	Clear	510	Perennial	-	30	-	-	30	-	-
SVAM	UT to Shallotte River	15, 16	C;Sw,HQW	-	3	6	10	Sand	Moderate	Slightly Turbid	780	Perennial	-	210	-	-	210	-	-
SVAN	UT to Shallotte River	15, 17	C;Sw,HQW	Low	3	7	9	Silt	Slow	Slightly Turbid	2,050	Intermittent	-	510	-	-	510	-	-
SVAO	UT to Shallotte River	15, 16	C;Sw,HQW	-	5	6	8	Sand	Moderate	Clear	1,650	Perennial	-	370	-	-	370	-	-
SVBE	UT to Shallotte River	34	C;Sw,HQW	-	3	4	6	Sand	Moderate	Slightly Turbid	460	Perennial	170	-	170	170	-	170	170
SVBF	UT to Shallotte River	33, 34	C;Sw,HQW	-	3	6	6	Silt	Slow	Slightly Turbid	630	Perennial	120	-	300	120	-	300	300
SVBH	UT to Shallotte River	16	C;Sw,HQW	Low	5	4	4	Sand	Moderate	Slightly Turbid	1,130	Perennial	460	-	-	460	-	-	-
SVBI	Cool Run	18	C;Sw	-	4	8	14	Sand	Moderate	Slightly Turbid	1,050	Perennial	-	460	-	-	460	-	-
SVBJ	UT to Cool Run	18	C;Sw	Medium	4	6	7	Sand	Moderate	Slightly Turbid	500	Perennial	-	100	-	-	100	-	-
SVZA	UT to Shallotte River	34	C;Sw,HQW	-	5	4	5	Sand	Moderate	Slightly Turbid	120	Perennial	-	-	-	-	-	-	-
												North Carolina Total	**9,960**	**7,480**	**4,650**	**9,690**	**7,210**	**4,790**	**6,790**

[1] C;Sw = Class C (Aquatic Life, Secondary Recreation, Fresh Water); Swamp Waters. HQW = High Quality Waters [2] NCSAM ratings are provided for degraded or low-quality streams where a lower mitigation ratio may be appropriate." [3] Stream length by linear feet within delineated corridors rounded to nearest 10 feet.
[3] Calculated impacts to jurisdictional streams based on proposed slope stake limits plus 40-foot buffer and rounded to nearest 10 feet. For streams with two delineated banks, the longer of the bank impact measurements is provided. Streams with 0 lf of impact will be bridged.

6.2 Jurisdictional Wetlands

Jurisdictional wetlands were also identified and delineated within the 1,000-foot Detailed Study Alternative corridors. Within these, a total of 130 jurisdictional wetlands resources were identified in the South Carolina portion of the project and a total of 219 wetlands were identified within the North Carolina portion. An overview of jurisdictional wetland resources in South Carolina and North Carolina is provided below in Tables 6 and 7, respectively.

Table 6. Jurisdictional Wetland Features in South Carolina

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WDB	5, 6	Bottomland Hardwood	Riverine	Medium	3.5	< 0.1	< 0.1	< 0.1	-	-	-	-
WDC	6	Bottomland Hardwood	Riverine	Low	1.0	-	-	-	-	-	-	-
WDD	6	Bottomland Hardwood	Riverine	High	6.4	2.0	2.0	2.0	-	-	-	-
WDE	6	Bottomland Hardwood	Riverine	High	0.2	-	-	-	-	-	-	-
WHAA	1	Headwater Forest	Riverine	Medium	9.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2
WHAB	1	Headwater Forest	Riverine	Medium	2.2	0.7	0.7	0.7	0.7	0.7	0.7	0.7
WHAC	1	Basin Wetland	Non-Riverine	Medium	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
WHAD	1	Basin Wetland	Non-Riverine	Low	< 0.1	-	-	-	-	-	-	-
WHAE	1	Basin Wetland	Non-Riverine	Low	0.1	-	-	-	-	-	-	-
WHAF	1	Headwater Forest	Riverine	Medium	0.1	-	-	-	-	-	-	-
WHAG	1	Basin Wetland	Non-Riverine	High	0.4	-	-	-	-	-	-	-
WHAH	1	Basin Wetland	Non-Riverine	Medium	0.2	-	-	-	-	-	-	-
WHAI	1 ,2	Non-Riverine Swamp	Non-Riverine	Medium	2.6	-	-	-	-	-	-	-
WHAJ	1 ,2	Non-Riverine Swamp	Non-Riverine	Medium	1.2	-	-	-	-	-	-	-
WHAK	2	Hardwood Flat	Non-Riverine	Medium	13.0	3.8	3.8	3.8	7.6	7.6	7.6	2.0
WHAL	2	Basin Wetland	Non-Riverine	High	0.1	-	-	-	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WHAM	2	Basin Wetland	Non-Riverine	High	0.1	-	-	-	-	-	-	-
WHAN	2 ,3	Basin Wetland	Non-Riverine	Medium	0.3	0.3	0.3	0.3	0.1	0.1	0.1	-
WHAO	23, 40	Pine Flat	Non-Riverine	Medium	1.7	-	-	-	-	-	-	0.8
WHAP	2	Basin Wetland	Non-Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHAQ	2,3	Basin Wetland	Non-Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHAR	2	Basin Wetland	Non-Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHAS	23, 40	Basin Wetland	Non-Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHAT	23, 40	Basin Wetland	Non-Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHAU	40	Basin Wetland	Non-Riverine	Medium	0.1	-	-	-	-	-	-	-
WHAV	23, 40	Basin Wetland	Non-Riverine	Low	0.2	-	-	-	-	-	-	-
WHAW	23, 40	Basin Wetland	Non-Riverine	Low	0.5	-	-	-	-	-	-	-
WHAX	23, 40	Basin Wetland	Non-Riverine	High	5.7	-	-	-	-	-	-	1.7
WHAY	23, 40	Pocosin	Non-Riverine	Medium	12.0	-	-	-	-	-	-	3.3
WHAZ	23, 40	Riverine Swamp	Riverine	High	0.5	-	-	-	-	-	-	0.4
WHBA	23, 40	Basin Wetland	Non-Riverine	High	0.3	-	-	-	-	-	-	0.3
WHBB	23 ,40	Basin Wetland	Non-Riverine	High	0.1	-	-	-	-	-	-	0.1
WHBC	40	Basin Wetland	Non-Riverine	High	0.7	-	-	-	-	-	-	-
WHBD	23, 40, 41	Non-Riverine Swamp	Non-Riverine	Medium	13.4	-	-	-	-	-	-	4.8
WHBE	40, 41	Headwater Forest	Riverine	High	0.7	-	-	-	-	-	-	-
WHBF	40, 41	Headwater Forest	Riverine	High	< 0.1	-	-	-	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WHBG	41	Headwater Forest	Riverine	Low	2.9	-	-	-	-	-	-	1.5
WHBH	41	Headwater Forest	Riverine	Low	0.8	-	-	-	-	-	-	-
WHBI	41	Headwater Forest	Riverine	Low	16.4	-	-	-	-	-	-	2.8
WHBJ	41	Headwater Forest	Riverine	Medium	2.1	-	-	-	-	-	-	-
WHBK	41	Headwater Forest	Riverine	Medium	0.2	-	-	-	-	-	-	-
WHBM	24, 41	Headwater Forest	Riverine	Medium	3.6	-	-	-	-	-	-	0.6
WHBN	41	Headwater Forest	Riverine	Low	4.6	-	-	-	-	-	-	0.1
WHBO	41	Headwater Forest	Riverine	Low	18.1	-	-	-	-	-	-	5.3
WHBP	41, 42	Headwater Forest	Riverine	High	13.1	-	-	-	-	-	-	2.4
WHBQ	41	Headwater Forest	Riverine	High	0.1	-	-	-	-	-	-	-
WHBR	41	Headwater Forest	Riverine	High	0.4	-	-	-	-	-	-	-
WHBS	42, 43	Headwater Forest	Riverine	High	6.1	-	-	-	-	-	-	2.8
WHBT	41	Basin Wetland	Non-Riverine	Medium	0.3	-	-	-	-	-	-	-
WHBV	42	Basin Wetland	Non-Riverine	Medium	0.1	-	-	-	-	-	-	-
WHBW	42, 43	Headwater Forest	Riverine	High	1.7	-	-	-	-	-	-	-
WHBX	42, 43	Headwater Forest	Riverine	High	5.0	-	-	-	-	-	-	1.2
WHBY	43	Headwater Forest	Riverine	High	0.1	-	-	-	-	-	-	< 0.1
WHBZ	43	Headwater Forest	Riverine	High	0.1	-	-	-	-	-	-	-
WHCA	42, 43	Headwater Forest	Riverine	Low	1.0	-	-	-	-	-	-	0.1
WHCB	43	Headwater Forest	Riverine	High	0.3	-	-	-	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WHCC	43	Headwater Forest	Riverine	High	3.3	-	-	-	-	-	-	-
WHCD	43	Headwater Forest	Riverine	High	0.3	-	-	-	-	-	-	0.1
WHCE	43	Headwater Forest	Riverine	Medium	1.5	-	-	-	-	-	-	1.0
WHCF	43	Headwater Forest	Riverine	Medium	2.2	-	-	-	-	-	-	0.1
WHCG	44	Basin Wetland	Non-Riverine	Medium	0.3	-	-	-	-	-	-	-
WHCH	43, 44	Headwater Forest	Riverine	High	5.1	-	-	-	-	-	-	0.7
WHCI	44	Basin Wetland	Non-Riverine	Low	0.5	-	-	-	-	-	-	0.2
WHCJ	44	Headwater Forest	Riverine	High	0.8	-	-	-	-	-	-	-
WHCM	6, 25	Headwater Forest	Riverine	High	31.4	-	-	-	10.7	10.7	2.5	-
WHCN	25	Headwater Forest	Riverine	High	0.1	-	-	-	-	-	-	-
WHEA	1, 2	Non-Tidal Freshwater	Riverine	Medium	0.4	-	-	-	-	-	-	-
WHEB	2, 3	Basin Wetland	Non-Riverine	Low	< 0.1	-	-	-	-	-	-	-
WHEC	2, 3, 23, 40	Pine Flat	Non-Riverine	Medium	29.3	3.4	3.4	3.4	4.3	4.3	4.3	-
WHED	3	Headwater Forest	Riverine	High	0.4	-	-	-	-	-	-	-
WHEE	2, 3	Pine Flat	Non-Riverine	Low	1.9	< 0.1	< 0.1	< 0.1	1.1	1.1	1.1	-
WHEF	3	Pine Flat	Non-Riverine	Low	0.9	0.4	0.4	0.4	-	-	-	-
WHEG	2, 3	Hardwood Flat	Non-Riverine	High	0.3	0.3	0.3	0.3	-	-	-	-
WHEH	3	Headwater Forest	Riverine	Low	1.5	-	-	-	-	-	-	-
WHEI	1	Non-Riverine Swamp	Non-Riverine	High	0.2	-	-	-	-	-	-	-
WHEJ	1	Pine Flat	Non-Riverine	Low	0.7	-	-	-	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WHEK	3, 23	Pine Flat	Non-Riverine	High	4.8	2.1	2.1	2.1	-	-	-	-
WHEL	3	Non-Riverine Swamp	Non-Riverine	High	1.9	1.3	1.3	1.3	-	-	-	-
WHEM	3, 4	Pine Flat	Non-Riverine	High	24.4	12.7	12.7	12.7	-	-	-	-
WHEN	3, 4	Pine Flat	Non-Riverine	High	0.3	-	-	-	-	-	-	-
WHEO	4	Pine Flat	Non-Riverine	High	14.6	6.6	6.6	6.6	-	-	-	-
WHEP	4	Pine Flat	Non-Riverine	Medium	0.7	0.5	0.5	0.5	-	-	-	-
WHEQ	4	Pine Flat	Non-Riverine	High	0.1	< 0.1	< 0.1	< 0.1	-	-	-	-
WHER	4	Pine Flat	Non-Riverine	Low	0.1	-	-	-	-	-	-	-
WHES	4, 5	Pine Flat	Non-Riverine	Low	0.5	0.2	0.2	0.2	-	-	-	-
WHEU	4	Pine Flat	Non-Riverine	Low	0.2	0.2	0.2	0.2	-	-	-	-
WHEV	4	Pine Flat	Non-Riverine	Low	2.7	0.8	0.8	0.8	0.1	0.1	0.1	-
WHEW	4	Pine Flat	Non-Riverine	Low	1.9	1.2	1.2	1.2	-	-	-	-
WHEX	4	Pine Flat	Non-Riverine	Medium	0.1	-	-	-	-	-	-	-
WHEY	4	Pine Flat	Non-Riverine	High	0.5	-	-	-	-	-	-	-
WHEZ	4	Pine Flat	Non-Riverine	Medium	1.2	< 0.1	< 0.1	< 0.1	-	-	-	-
WHFA	24	Pine Flat	Non-Riverine	Medium	0.5	-	-	-	-	-	-	-
WHFB	24, 25	Pine Flat	Non-Riverine	Medium	1.7	-	-	-	-	-	-	-
WHFC	24	Pine Flat	Non-Riverine	High	19.2	-	-	-	4.6	4.6	4.7	-
WHFD	24	Pine Flat	Non-Riverine	High	33.7	-	-	-	5.7	5.7	5.7	-
WHFE	24	Pine Flat	Non-Riverine	High	4.3	-	-	-	1.1	1.1	1.1	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WHFF	24	Basin Wetland	Non-Riverine	Medium	0.4	-	-	-	-	-	-	-
WHFG	25	Pine Flat	Non-Riverine	High	0.3	-	-	-	-	-	-	-
WHFH	25	Pine Flat	Non-Riverine	High	1.5	-	-	-	-	-	-	-
WHFI	25	Pine Flat	Non-Riverine	High	10.6	-	-	-	2.4	2.4	3.5	-
WHIA	5	Hardwood Flat	Non-Riverine	Medium	0.6	-	-	-	-	-	-	-
WHIB	5	Headwater Forest	Riverine	High	15.9	2.0	2.0	2.0	-	-	-	-
WHIC	4, 5	Headwater Forest	Riverine	Low	< 0.1	-	-	-	-	-	-	-
WHID	4, 5	Headwater Forest	Riverine	Low	< 0.1	-	-	-	-	-	-	-
WHIE	4, 5	Headwater Forest	Riverine	Low	0.2	-	-	-	-	-	-	-
WHIF	4, 5	Basin Wetland	Non-Riverine	Low	0.4	-	-	-	-	-	-	-
WHIG	4, 5	Basin Wetland	Non-Riverine	High	0.7	< 0.1	< 0.1	< 0.1	-	-	-	-
WHIH	4, 5	Riverine Swamp	Riverine	High	1.1	0.6	0.6	0.6	-	-	-	-
WHIJ	4, 5	Bottomland Hardwood	Riverine		0.2	-	-	-	-	-	-	-
WHIK	4	Headwater Forest	Riverine	High	0.9	< 0.1	< 0.1	< 0.1	-	-	-	-
WHMA	2	Non-Tidal Freshwater	Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHMB	2	Non-Tidal Freshwater	Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHMC	2	Headwater Forest	Riverine	Low	0.2	-	-	-	-	-	-	-
WHMD	1, 2	Headwater Forest	Riverine	Low	4.2	2.9	2.9	2.9	3.0	3.0	3.0	2.9
WHME	1	Non-Tidal Freshwater	Riverine	Medium	5.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0
WHMF	1, 2	Basin Wetland	Non-Riverine	High	2.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WHMH	2, 3, 23	Pine Flat	Non-Riverine	Medium	1.6	-	-	-	-	-	-	-
WHMI	3, 23, 40	Pine Flat	Non-Riverine	Low	0.5	-	-	-	< 0.1	< 0.1	< 0.1	-
WHMJ	23	Floodplain Pool	Riverine	Medium	0.1	-	-	-	0.1	0.1	0.1	-
WHMK	23, 40	Pine Flat	Non-Riverine	Low	0.1	-	-	-	-	-	-	-
WHML	23, 40	Pocosin	Non-Riverine	High	4.5	-	-	-	-	-	-	-
WHMM	23, 24	Pine Flat	Non-Riverine	Low	20.6	-	-	-	6.5	6.5	6.5	-
WHMN	23, 40	Hardwood Flat	Non-Riverine	High	0.7	-	-	-	-	-	-	-
WHMO	23, 24, 40, 41	Pocosin	Non-Riverine	High	27.4	-	-	-	8.9	8.9	8.9	2.1
WHMP	41	Pine Flat	Non-Riverine	Medium	0.1	-	-	-	-	-	-	0.1
WHQG	25, 26	Basin Wetland	Non-Riverine	Medium	0.7	-	-	-	-	-	0.2	-
WHQK	25	Basin Wetland	Non-Riverine	Medium	0.1	-	-	-	-	-	-	-
WP	6	Riverine Swamp	Riverine	High	4.9	2.3	2.3	2.3	0.1	0.1	-	-
WS	6	Floodplain Pool	Riverine	High	0.4	< 0.1	< 0.1	< 0.1	-	-	-	-
WW	6	Floodplain Pool	Riverine	Low	< 0.1	-	-	-	-	-	-	-
				South Carolina Total		**48.4**	**48.4**	**48.4**	**61.1**	**61.1**	**54.2**	**42.2**

[1] Calculated impacts to jurisdictional wetlands based on proposed slope stake limits plus 40-foot buffer and rounded to the tenth acre.

Table 7. Jurisdictional Wetland Features in North Carolina

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WA	22	Bottomland Hardwood	Riverine	High	2.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
WAA	21, 22	Bottomland Hardwood	Riverine	Low	11.7	0.9	2.4	0.9	0.9	2.4	0.9	0.9
WAB	22	Pine Flat	Non-Riverine	Low	< 0.1	-	-	-	-	-	-	-
WAC	22	Pine Flat	Non-Riverine	Low	0.2	-	-	-	-	-	-	-
WAD	22	Pine Flat	Non-Riverine	Low	0.3	-	-	-	-	-	-	-
WAE	21, 22	Headwater Forest	Riverine	Medium	0.3	-	-	-	-	-	-	-
WAG	21	Bottomland Hardwood	Riverine	Low	0.1	-	-	-	-	-	-	-
WAH	21, 22	Bottomland Hardwood	Riverine	Low	12.6	0.4	3.0	0.4	0.4	3.0	0.4	0.4
WAI	21	Bottomland Hardwood	Riverine	Low	0.1	-	0.1	-	-	0.1	-	-
WAJ	21, 22	Floodplain Pool	Riverine	Low	0.1	-	-	-	-	-	-	-
WAK	22	Bottomland Hardwood	Riverine	Low	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
WAL	38	Floodplain Pool	Riverine	Medium	0.2	-	-	-	-	-	-	-
WAM	9	Bottomland Hardwood	Riverine	High	8.2	-	-	3.8	-	-	-	-
WAO	28, 46	Pine Flat	Non-Riverine	High	6.0	-	-	1.6	-	-	-	1.7
WAP	29	Basin Wetland	Non-Riverine	Low	< 0.1	-	-	-	-	-	< 0.1	-
WAQ	28, 29, 46	Bottomland Hardwood	Riverine	Low	4.7	-	-	0.1	-	-	2.5	0.4
WAR	28, 29	Pine Flat	Non-Riverine	Low	28.6	-	-	15.3	-	-	4.8	-
WAS	38	Floodplain Pool	Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WAT	29, 30	Pine Flat	Non-Riverine	High	50.3	-	-	0.1	-	-	8.6	10.1
WAV	30	Bottomland Hardwood	Riverine	Medium	0.4	-	-	-	-	-	-	0.4

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WAW	29	Floodplain Pool	Riverine	Low	< 0.1	-	-	-	-	-	-	-
WAX	29	Floodplain Pool	Riverine	Low	0.1	-	-	< 0.1	-	-	-	-
WAY	11	Bottomland Hardwood	Riverine	Medium	1.0	0.2	0.2	-	0.2	0.2	-	-
WAZ	30, 31	Bottomland Hardwood	Riverine	Medium	0.2	-	-	< 0.1	-	-	-	-
WB	22	Bottomland Hardwood	Riverine	Medium	1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
WBA	33	Hardwood Flat	Non-Riverine	High	4.9	0.1	-	0.1	0.1	-	0.1	0.1
WBB	7, 8	Riverine Swamp	Riverine	Low	2.7	2.0	2.0	0.3	2.0	2.0	-	-
WBC	7, 8	Riverine Swamp	Riverine	Low	7.4	1.0	1.0	0.1	1.0	1.0	-	-
WBD	8	Bottomland Hardwood	Riverine	High	2.3	-	-	-	-	-	-	-
WBE	8	Bottomland Hardwood	Riverine	High	4.3	0.4	0.4	-	0.4	0.4	-	-
WBF	7, 8, 9	Bottomland Hardwood	Riverine	High	32.3	15.8	15.8	2.2	15.8	15.8	-	-
WBG	10, 11	Bottomland Hardwood	Riverine	Medium	8.3	-	-	-	-	-	-	-
WBH	10	Bottomland Hardwood	Riverine	High	2.8	0.2	0.2	-	0.2	0.2	-	-
WBI	11	Non-Tidal Freshwater	Riverine	Low	0.8	-	-	-	-	-	-	-
WBJ	11	Bottomland Hardwood	Riverine	Medium	0.3	0.1	0.1	-	0.1	0.1	-	-
WBK	29	Pine Flat	Non-Riverine	Low	1.6	-	-	1.6	-	-	-	0.1
WBL	11, 12	Pine Flat	Non-Riverine	High	5.4	2.7	2.7	-	2.7	2.7	-	-
WBM	14, 15	Floodplain Pool	Riverine	Low	0.2	-	< 0.1	-	-	< 0.1	-	-
WBN	13, 14	Pine Flat	Non-Riverine	Medium	12.2	2.7	0.8	-	2.7	0.8	-	-
WBO	14	Pine Flat	Non-Riverine	Medium	1.2	0.9	0.8	-	0.9	0.8	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WBQ	32	Pine Flat	Non-Riverine	Low	2.8	-	-	1.8	-	-	1.8	1.8
WBR	32	Pine Flat	Non-Riverine	Low	0.7	-	-	0.4	-	-	0.4	0.4
WBS	32	Pine Flat	Non-Riverine	Low	3.8	-	-	1.9	-	-	1.9	1.9
WBT	31, 32	Hardwood Flat	Non-Riverine	Low	2.5	-	-	1.5	-	-	1.4	1.5
WBU	31	Bottomland Hardwood	Riverine	Medium	25.6	-	-	1.1	-	-	0.1	0.2
WBVW	14	Floodplain Pool	Riverine	Low	8.6	2.6	-	-	2.6	-	-	-
WBX	31	Bottomland Hardwood	Riverine	High	1.3	-	-	0.5	-	-	-	-
WBY	31	Bottomland Hardwood	Riverine	Medium	0.1	-	-	-	-	-	-	-
WC	21, 22	Riverine Swamp	Riverine	High	2.4	0.3	0.2	0.3	0.3	0.2	0.3	0.3
WCC	16	Floodplain Pool	Riverine	Low	0.1	0.1	-	-	0.1	-	-	-
WCE	33	Bottomland Hardwood	Riverine	Medium	0.8	-	-	-	-	-	-	-
WCF	33	Bottomland Hardwood	Riverine	Medium	0.3	-	-	0.1	-	-	0.1	0.1
WCG	33	Bottomland Hardwood	Riverine	Medium	0.1	-	-	-	-	-	-	-
WCH	32, 33	Pocosin	Non-Riverine	High	29.1	-	-	11.7	-	-	11.7	11.7
WCK	19	Non-Tidal Freshwater	Riverine	High	0.2	-	0.1	-	-	0.1	-	-
WCL	14	Non-Tidal Freshwater	Riverine	Low	0.3	-	-	-	-	-	-	-
WCM	14	Bottomland Hardwood	Riverine	High	1.3	1.2	< 0.1	-	1.2	< 0.1	-	-
WCN	14	Bottomland Hardwood	Riverine	High	< 0.1	< 0.1	< 0.1	-	< 0.1	< 0.1	-	-
WCQ	20, 21	Pine Flat	Non-Riverine	Low	0.3	-	0.2	-	-	0.2	-	-
WCR	21	Pine Flat	Non-Riverine	Low	0.1	-	0.1	-	-	0.1	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WCS	21	Pine Flat	Non-Riverine	Low	0.6	-	-	-	-	-	-	-
WCT	21	Pine Flat	Non-Riverine	Low	0.3	-	0.1	-	-	0.1	-	-
WCU	21	Pine Flat	Non-Riverine	Low	0.1	-	0.1	-	-	0.1	-	-
WCV	20, 39	Headwater Forest	Riverine	High	1.3	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1
WCX	21, 39	Bottomland Hardwood	Riverine	High	0.6	-	< 0.1	-	-	< 0.1	-	-
WCZ	31	Bottomland Hardwood	Riverine	High	0.3	-	-	-	-	-	-	-
WD	14	Hardwood Flat	Non-Riverine	High	9.4	3.0	0.4	-	3.0	0.4	-	-
WDA	7	Bottomland Hardwood	Riverine	Medium	1.3	0.1	0.1	0.5	0.1	0.1		
WDF	8, 9	Bottomland Hardwood	Riverine	High	29.1	-	-	11.5	-	-	-	-
WDG	30, 31	Bottomland Hardwood	Riverine	Medium	0.1	-	-	-	-	-	-	-
WDH	30	Floodplain Pool	Riverine	Medium	0.1	-	-	-	-	-	-	0.1
WDI	12	Bottomland Hardwood	Riverine	Medium	4.1	1.6	1.6	-	1.6	1.6	-	-
WDJ	12, 13	Pine Flat	Non-Riverine	Low	10.5	4. 9	4. 9	-	4. 9	4. 9	-	
WDK	12	Pine Savanna	Non-Riverine	High	1.4	0.3	0.3	-	0.3	0.3	-	-
WDL	13	Non-Tidal Freshwater	Riverine	Low	0.1	-	-	-	-	-	-	-
WDM	13	Riverine Swamp	Riverine	High	12.4	2.3	2.3	-	2.3	2.3	-	-
WDO	13	Riverine Swamp	Riverine	High	0.1	-	-	-	-	-	-	-
WDP	13	Riverine Swamp	Riverine	High	0.2	-	-	-	-	-	-	-
WDQ	13	Riverine Swamp	Riverine	High	11.2	2.7	2.5	-	2.7	2.5	-	-
WDR	30, 31	Bottomland Hardwood	Riverine	Medium	< 0.1	-	-	< 0.1	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WDS	30, 31	Bottomland Hardwood	Riverine	Medium	0.1	-	-	0.1	-	-	-	-
WDT	30, 31	Bottomland Hardwood	Riverine	Medium	0.3	-	-	0.3	-		-	-
WDV	30, 31	Bottomland Hardwood	Riverine	Medium	0.1	-	-	< 0.1	-	-	-	-
WDW	13, 14	Non-Tidal Freshwater	Riverine	Low	4.2	0.4	0.8	-	0.4	0.8	-	-
WDX	33	Hardwood Flat	Non-Riverine	Medium	10.0	-	-	0.4	-	-	0.4	0.4
WDY	32	Basin Wetland	Non-Riverine	Low	0.4	-	-	0.1	-	-	0.1	0.1
WE	39	Bottomland Hardwood	Riverine	High	0.8	0.8	-	0.8	0.8	-	0.8	0.8
WEA	9	Bottomland Hardwood	Riverine	High	0.1	-	-	0.1	-	-	-	-
WEC	31	Bottomland Hardwood	Riverine	High	0.1	-	-	< 0.1	-	-	-	-
WED	32	Bottomland Hardwood	Riverine	High	4.1	-	-	-	-	-	-	-
WEE	20	Riverine Swamp	Riverine	High	0.7	-	-	-	-	-	-	-
WEF	32	Bottomland Hardwood	Riverine	High	1.0	-	-	-	-	-	-	-
WEG	32	Basin Wetland	Non-Riverine	Low	0.2	-	-	0.1	-	-	0.1	0.1
WEH	32	Bottomland Hardwood	Riverine	High	2.6	-	-	< 0.1	-	-	< 0.1	< 0.1
WEI	20	Pine Flat	Non-Riverine	High	0.5	-	-	-	-	-	-	-
WEJ	20, 38	Bottomland Hardwood	Riverine	High	7.6	-	1.7	-	-	1.7	-	-
WEK	20	Bottomland Hardwood	Riverine	High	5.8	-	1.9	-	-	1.9	-	-
WEN	39	Seep	Non-Riverine	Medium	0.5	-	-	-	-	-	-	-
WEP	38	Basin Wetland	Non-Riverine	Medium	0.4	0.4	-	0.4	0.4	-	0.4	0.4
WF	21	Riverine Swamp	Riverine	Medium	1.6	-	-	-	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WG	21	Bottomland Hardwood	Riverine	Low	0.2	-	-	-	-	-	-	-
WH	21	Bottomland Hardwood	Riverine	Low	4.5	0.3	0.6	0.3	0.3	0.6	0.3	0.3
WHCK	44	Basin Wetland	Non-Riverine	Medium	1.3	-	-	-	-	-	-	< 0.1
WHCL	44	Basin Wetland	Non-Riverine	Medium	0.4	-	-	-	-	-	-	0.4
WHIL	45	Riverine Swamp	Riverine	High	1.7	-	-	-	-	-	-	0.2
WHIM	45	Pine Flat	Non-Riverine	Medium	3.3	-	-	-	-	-	-	0.2
WHIN	45	Non-Tidal Freshwater	Riverine	Low	0.8	-	-	-	-	-	-	-
WHIO	46	Non-Tidal Freshwater	Riverine	Low	0.4	-	-	-	-	-	-	0.2
WHIP	46	Bottomland Hardwood	Riverine	Low	1.5	-	-	-	-	-	-	< 0.1
WHIQ	46	Bottomland Hardwood	Riverine	Medium	0.6	-	-	-	-	-	-	0.4
WHIR	46	Bottomland Hardwood	Riverine	Medium	0.7	-	-	-	-	-	-	-
WHIS	46	Bottomland Hardwood	Riverine	High	1.0	-	-	-	-	-	-	-
WHIT	46	Bottomland Hardwood	Riverine	High	0.7	-	-	-	-	-	-	-
WHIU	28, 46	Bottomland Hardwood	Riverine	Medium	0.1	-	-	-	-	-	-	< 0.1
WHIV	46	Riverine Swamp	Riverine	Medium	2.5	-	-	-	-	-	-	0.7
WHIW	46	Bottomland Hardwood	Riverine	High	2.0	-	-	-	-	-	-	-
WHIX	45, 46	Riverine Swamp	Riverine	High	7.7	-	-	-	-	-	-	-
WHIY	45, 46	Headwater Forest	Riverine	Medium	0.4	-	-	-	-	-	-	-
WHJA	45	Riverine Swamp	Riverine	Medium	2.1	-	-	-	-	-	-	2.1
WHJB	45	Riverine Swamp	Riverine	High	1.5	-	-	-	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WHJC	44, 45	Headwater Forest	Riverine	High	59.4	-	-	-	-	-	-	20.4
WHQA	28, 29, 46	Basin Wetland	Non-Riverine	High	3.0	-	-	0.2	-	-	-	0.6
WHQE	27, 28	Basin Wetland	Non-Riverine	High	6.3	-	-	-	-	-	1.5	-
WHQI	26	Basin Wetland	Non-Riverine	Medium	0.2	-	-	-	-	-	-	-
WHQJ	26	Basin Wetland	Non-Riverine	Medium	0.2	-	-	-	-	-	0.1	-
WHUB	27	Riverine Swamp	Riverine	High	19.5	-	-	-	-	-	6.4	-
WHUC	27	Riverine Swamp	Riverine	High	1.2	-	-	-	-	-	< 0.1	-
WHUD	27	Basin Wetland	Non-Riverine	High	5.7	-	-	-	-	-	2.6	-
WHUG	27, 28	Basin Wetland	Non-Riverine	Low	1.5	-	-	-	-	-	0.8	-
WHUH	27, 28	Basin Wetland	Non-Riverine	Low	0.1	-	-	-	-	-	-	-
WHUI	26, 27	Basin Wetland	Non-Riverine	Medium	< 0.1	-	-	-	-	-	-	-
WHUJ	26, 27	Seep	Non-Riverine	High	1.8	-	-	-	-	-	0.6	-
WHUL	44, 45	Basin Wetland	Non-Riverine	High	2.3	-	-	-	-	-	-	2.3
WHUM	26	Seep	Non-Riverine	High	0.8	-	-	-	-	-	0.8	-
WI	21, 39	Riverine Swamp	Riverine	Medium	6.4	0.3	0.1	0.3	0.3	0.1	0.3	0.3
WJ	39	Hardwood Flat	Non-Riverine	Low	1.2	-	-	-	-	-	-	-
WL	21	Floodplain Pool	Riverine	Low	0.1	< 0.1	0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1
WM	38, 39	Bottomland Hardwood	Riverine	High	60.9	10.6	-	10.6	10.6	-	10.6	10.6
WN	6, 7	Bottomland Hardwood	Riverine	Medium	0.5	0.5	0.5	0.5	0.1	0.1	-	-
WO	6, 7	Bottomland Hardwood	Riverine	Medium	1.6	0.6	0.6	< 0.1	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WQ	6	Floodplain Pool	Riverine	High	0.2	< 0.1	< 0.1	< 0.1	-	-	-	-
WR	6	Floodplain Pool	Riverine	High	0.5	-	-	-	-	-	-	-
WS	6	Floodplain Pool	Riverine	High	0.4	0.3	0.3	0.3	-	-	-	-
WT	7	Headwater Forest	Riverine	Low	0.2	0.2	0.2	0.2	0.1	0.1	-	-
WU	7	Floodplain Pool	Riverine	Low	0.2	< 0.1	< 0.1	-	-	-	-	-
WV	6	Floodplain Pool	Riverine	High	0.1	0.1	0.1	0.1	-	-	-	-
WVAA	19	Pocosin	Non-Riverine	High	1.3	-	0.3	-	-	0.3	-	-
WVAB	19	Pocosin	Non-Riverine	High	5.9	-	2.9	-	-	2.9	-	-
WVAD	36, 37	Headwater Forest	Riverine	Medium	1.2	-	-	-	-	-	-	-
WVAE	36, 37	Headwater Forest	Riverine	Medium	1.1	-	-	-	-	-	-	-
WVAF	36, 37	Headwater Forest	Riverine	Medium	6.1	0.4	-	0.4	0.4	-	0.4	0.4
WVAG	36, 37	Headwater Forest	Riverine	Medium	0.1	-	-	-	-	-	-	-
WVAH	36, 37	Headwater Forest	Riverine	Low	0.7	-	-	-	-	-	-	-
WVAI	36, 37	Headwater Forest	Riverine	Medium	1.7	-	-	-	-	-	-	-
WVAJ	36 ,37	Headwater Forest	Riverine	High	0.4	0.3	-	0.3	0.3	-	0.3	0.3
WVAK	36, 37	Headwater Forest	Riverine	Medium	0.4	0.4	-	0.4	0.4	-	0.4	0.4
WVAL	36, 37	Headwater Forest	Riverine	High	4.2	0.4	-	0.4	0.4	-	0.4	0.4
WVAM	36, 37	Headwater Forest	Riverine	High	1.9	-	-	-	-	-	-	-
WVAN	37	Headwater Forest	Riverine	High	1.9	-	-	-	-	-	-	-
WVAP	36, 37	Headwater Forest	Riverine	High	8.7	4.5	-	4.5	4.5	-	4.5	4.5

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WVAQ	36, 37	Basin Wetland	Non-Riverine	Medium	0.1	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1
WVAR	35	Riverine Swamp	Riverine	High	6.0	2.4	-	2.4	2.4	-	2.4	2.4
WVAS	35	Basin Wetland	Non-Riverine	Low	0.1	-	-	-	-	-	-	-
WVAT	35	Headwater Forest	Riverine	High	1.2	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1
WVAV	35	Basin Wetland	Non-Riverine	Medium	0.7	-	-	-	-	-	-	-
WVAW	35	Headwater Forest	Riverine	High	0.3	-	-	-	-	-	-	-
WVAY	34	Headwater Forest	Riverine	Low	0.2	-	-	-	-	-	-	-
WVAZ	34	Headwater Forest	Riverine	Low	0.1	-	-	-	-	-	-	-
WVBA	36, 37	Headwater Forest	Riverine	High	1.9	-	-	-	-	-	-	-
WVBC	36, 37	Headwater Forest	Riverine	High	0.3	-	-	-	-	-	-	-
WVBD	36, 37	Headwater Forest	Riverine	High	1.9	0.1	-	0.1	0.1	-	0.1	0.1
WVBE	36, 37	Headwater Forest	Riverine	High	3.4	0.3	-	0.3	0.3	-	0.3	0.3
WVBF	37	Headwater Forest	Riverine	High	1.0	-	-	-	-	-	-	-
WVBG	36, 37	Headwater Forest	Riverine	High	13.6	6.4	-	6.4	6.4	-	6.4	6.4
WVBH	37	Headwater Forest	Riverine	Low	0.1	-	-	-	-	-	-	-
WVBJ	35	Riverine Swamp	Riverine	High	2.3	0.2	-	0.2	0.2	-	0.2	0.2
WVBK	35	Headwater Forest	Riverine	High	2.7	-	-	-	-	-	-	-
WVBL	35	Headwater Forest	Riverine	High	1.4	-	-	-	-	-	-	-
WVBM	35	Headwater Forest	Riverine	High	0.8	-	-	-	-	-	-	-
WVBO	35	Headwater Forest	Riverine	High	0.1	-	-	-	-	-	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WVBP	34, 35	Headwater Forest	Riverine	Medium	0.2	-	-	-	-	-	-	-
WVBQ	34	Headwater Forest	Riverine	Medium	0.8	-	-	-	-	-	-	-
WVBR	34	Bottomland Hardwood	Riverine	High	3.5	0.1	-	0.1	0.1	-	0.1	0.1
WVBS	34	Headwater Forest	Riverine	Low	0.7	< 0.1	-		< 0.1	-	-	-
WVBT	34	Basin Wetland	Non-Riverine	High	0.6	0.6	-	0.6	0.6	-	0.6	0.6
WVBU	34	Basin Wetland	Non-Riverine	Low	0.2	< 0.1	-	0.2	< 0.1	-	0.2	0.2
WVBW	14, 15	Pine Savanna	Non-Riverine	High	17.4	3.2	7.1	-	3.2	7.1	-	-
WVBX	18	Headwater Forest	Riverine	High	0.1	-	-	-	-	-	-	-
WVBY	18	Bottomland Hardwood	Riverine	High	5.7	-	3.0	-	-	3.0	-	-
WVBZ	18	Headwater Forest	Riverine	High	5.7	-	1.3	-	-	1.3	-	-
WVCA	34	Headwater Forest	Riverine	High	0.2	-	-	-	-	-	-	-
WVCB	34	Bottomland Hardwood	Riverine	High	13.2	7.3	-	3.4	7.3	-	3.4	3.4
WVCC	34	Headwater Forest	Riverine	Low	0.5	0.5	-	< 0.1	0.5	-	< 0.1	< 0.1
WVCE	16	Bottomland Hardwood	Riverine	High	6.2	-	-	-	-	-	-	-
WVCG	16	Headwater Forest	Riverine	Low	0.4	-	-	-	-	-	-	-
WVCH	14, 15	Headwater Forest	Riverine	High	45.6	-	6.3	-	-	6.3	-	-
WVCI	16, 34	Headwater Forest	Riverine	Medium	9.9	7.6	-	1.6	7.6	-	1.6	1.6
WVCJ	15, 16, 17	Headwater Forest	Riverine	Low	89.5	-	19.6	-	-	19.6	-	-
WVCK	17	Headwater Forest	Riverine	Low	55.4	-	15.4	-	-	15.4	-	-
WVCL	17	Headwater Forest	Riverine	High	15.3	-	5.9	-	-	5.9	-	-

Map ID	Map Sheet	NCWAM Classification	Hydrologic Classification	NCWAM Rating	Wetland Area in Study Corridor (ac.)	Impacts (ac.)[1]						
						Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
WVCM	17	Headwater Forest	Riverine	High	1.4	-	0.5	-	-	0.5	-	-
WVDA	18	Basin Wetland	Non-Riverine	Low	< 0.1	-	< 0.1	-	-	< 0.1	-	-
WVDB	18, 19	Headwater Forest	Riverine	Low	77.1	-	28.9	-	-	28.9	-	-
WVDC	18	Pocosin	Non-Riverine	High	2.2	-	-	-	-	-	-	-
WVDD	19	Headwater Forest	Riverine	High	1.1	-	0.7	-	-	0.7	-	-
WX	7	Basin Wetland	Non-Riverine	Low	< 0.1	-	-	-	-	-	-	-
WY	7	Bottomland Hardwood	Riverine	Low	4.3	0.9	0.9	0.6	0.9	0.9	-	-
WZ	7, 8	Bottomland Hardwood	Riverine	Medium	0.3	-	-	-	-	-	-	-
WZB	9	Bottomland Hardwood	Riverine	Low	0.3	-	-	-	-	-	-	-
WZC	9	Bottomland Hardwood	Riverine	Low	0.2	-	-	-	-	-	-	-
WZD	9, 29	Bottomland Hardwood	Riverine	Medium	4.5	-	-	-	-	-	-	-
WZE	32, 33	Pocosin	Non-Riverine	High	22.8	-	-	1.7	-	-	1.7	1.7
WZF	30	Riverine Swamp	Riverine	High	8.3	-	-	0.8	-	-	1.1	2.9
WZG	30	Riverine Swamp	Riverine	High	0.7	-	-	-	-	-	-	-
WZH	30	Riverine Swamp	Riverine	High	1.1	-	-	-	-	-	-	-
WZI	30	Riverine Swamp	Riverine	High	0.6	-	-	0.4	-	-	0.3	0.6
WZJ	30	Basin Wetland	Non-Riverine	Low	0.2	-	-	-	-	-	-	-
WZK	19, 20	Bottomland Hardwood	Riverine	Medium	14.6	-	7.8	-	-	7.8	-	-
WZL	19	Riverine Swamp	Riverine	High	4.4	-	-	-	-	-	-	-
				North Carolina Total		**92.0**	**145.3**	**97.7**	**90.5**	**143.8**	**85.5**	**99.4**

[1] Calculated impacts to jurisdictional wetlands based on proposed slope stake limits plus 40-foot buffer and rounded to the tenth acre.

6.3 Jurisdictional Ponds

Jurisdictional ponds were also identified and delineated within the 1,000-foot Detailed Study Alternative corridors. Of these, a total of 46 are located in the South Carolina portion of the project and 177 located in North Carolina. A high-level review of impacts to jurisdictional ponds by Detailed Study Alternative is provided in Table 2. Jurisdictional pond resources are also shown on Figure 3, Map Sheets 1 – 46 in Appendix A.

6.4 Other Identified Jurisdictional Features in North Carolina

As previously discussed, jurisdictional stream, wetland, and pond resources were identified for the Carolina Bays Parkway Extension project within the 1,000-foot Detailed Study Alternative corridors. Within the North Carolina portion of these corridors, there are four additional NCDOT STIP Projects for which previously verified jurisdictional determinations have already occurred. In an effort to avoid duplication of verified areas, the resources identified for the Carolina Bays Parkway Extension and covered in Sections 6.1 – 6.3 did not include these previously verified areas under separate STIP projects.

Tables 8, 9, and 10 below provide an overview of project impacts to these additional jurisdictional stream, wetland, and pond features. These features are also shown on Figure 3, Map Sheets 1 – 46 in Appendix A. Most additional jurisdictional features are a continuation of a jurisdictional feature identified as part of the Carolina Bays Parkway Extension field verifications. It should be noted the overall jurisdictional impact calculations reported in Table 2 include the sum of the Carolina Bays Parkway Extension jurisdictional feature impacts reviewed in Sections 6.1 – 6.3 plus those that occur to the other identified jurisdictional features below.

Table 8. Additional Jurisdictional Stream Features

NCDOT STIP Project	Map ID	Class	Corresponding R-5876 Stream[1]	Map Sheet	Impacts (lf)[2]						
					Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
B-5996	B5996-S1	Perennial	Cawcaw Swamp	8	-	-	-	-	-	-	-
W-5703H	W5073H-S1	Perennial	Little Cawcaw Swamp	30, 31	-	-	120	-	-	-	40
				Total	**-**	**-**	**120**	**-**	**-**	**-**	**40**

[1] Feature is a continuation of corresponding stream verified as part of Project R-5876 (see Table 5).
[2] Calculated impacts to jurisdictional streams based on proposed slope stake limits plus 40-foot buffer and rounded to nearest 10 feet.

Table 9. Additional Jurisdictional Wetland Features

NCDOT STIP Project	Map ID	Corresponding R-5876 Wetland[1]	Map Sheet	Impacts (ac.)[2]						
				Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
B-5996	B5996-W1	WBF	8	0.1	0.1	-	0.1	0.1	-	-
B-5996	B5996W2	WBC	8	0.1	0.1	-	0.1	0.1	-	-

NCDOT STIP Project	Map ID	Corresponding R-5876 Wetland[1]	Map Sheet	Impacts (ac.)[2]						
				Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
B-5996	B5996-W3	WBE	8	-	-	-	-	-	-	-
B-5996	B5996-W4	WBD	8	-	-	-	-	-	-	-
R-5857A	R5857A_W1	WM	38, 39	0.3	-	0.3	0.3	-	0.3	0.3
R-5857A	R5857A_W2	WE	39	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1
R-5857A	R5857A_W3	WCV	39	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1
R-5857A	R5857A_W4	WI	39	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1
W-5601GA	W5601GA-W1	WDT	30, 31	-	-	0.3	-	-	0.1	-
W-5703H	W5703H-W1	WAT	29, 30	-	-	0.2	-	-	-	-
W-5703H	W5703H-W2	-	30	-	-	-	-	-	-	-
			Total	**0.5**	**0.2**	**0.8**	**0.5**	**0.2**	**0.4**	**0.3**

[1] Feature is a continuation of corresponding wetland verified as part of Project R-5876 (see Table 7).
[2] Calculated impacts to jurisdictional wetlands based on proposed slope stake limits plus 40-foot buffer and rounded to the tenth acre.

Table 10. Additional Jurisdictional Pond Features

NCDOT STIP Project	Map ID	Corresponding R-5876 Pond[1]	Map Sheet	Impacts (ac.)[2]						
				Alt 1	Alt 1A	Alt 2	Alt 4	Alt 4A	Alt 7	Alt 8
R-5857A	R5857A-P1	-	38, 39	0.1	-	0.1	0.1	-	0.1	0.1
R-5857A	R5857A-P2	PDH	38, 39	0.2	-	0.2	0.2	-	0.2	0.2
R-5857A	R5857A-P3	PDB	39	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1
W-5703H	W5703H-P1	PEI	29	-	-	< 0.1	-	-	-	-
W-5703H	W5703H-P2	PEL	30, 31	-	-	0.1	-	-	-	-
			Total	**0.3**	**-**	**0.4**	**0.3**	**-**	**0.3**	**0.3**

[1] Feature is a continuation of corresponding pond verified as part of Project R-5876.
[2] Calculated impacts to jurisdictional ponds based on proposed slope stake limits plus 40-foot buffer and rounded to the tenth acre.