



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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January 8, 2007

N. C. Dept. of Environment and Natural Resources
Division of Water Quality
2321 Capital Blvd
Raleigh, NC 27604

Attention: Mr. Brian Wrenn
Regulatory Specialist

Subject: **Application for a Individual 401 Water Quality Certification Permit for the Second Bridge to Oak Island**, Brunswick County, WBS Number 34407.1.1, State Project No. 8.1570601, Federal Aid No. STP-1105 (6), TIP R-2245, Division 3

Reference: DWQ Water Quality Certification Application Requirement Letter Dated May 16, 2006

Dear Mr. Wrenn:

The North Carolina Department of Transportation (NCDOT) proposes to construct a roadway on new location in Brunswick County, known as the second bridge to Oak Island. The proposed project starts at SR 1104 (Beach Drive) on Oak Island and will continue to NC 211, west of Southport. The proposed project consists of constructing a four-lane median divided facility on 150 feet (46 meters) of right-of-way with controlled access. The project includes replacement of the existing bridge over Davis Canal on Middleton Avenue and construction of a new bridge over the Atlantic Intracoastal Water Way (AIWW). Project length is approximately 4.5 miles.

The purpose of this letter is to submit this final design for approval and to request approval for an Individual Water Quality Certification Permit and to provide the information requested by DWQ in the letter dated May 16, 2006. Included in this application package are the following: (1) a copy of the MOU between NCDOT, FHWA, USEPA, and NCDENR, (2) a copy of signed Agreements between NCDOT and adjacent landowners regarding acquisition of conservation easements (3) Merger 01 4B and 4C meeting minutes, (4) North Carolina Ecosystem Enhancement Program (EEP) acceptance letter, (5) permit drawings, (6) a set of half size roadway plans, (7) a copy of the USCG permit application, (8) a copy of the USFWS concurrence letter, and (9) a copy of the NMFS concurrence letter.

PROJECT SCHEDULE

For construction purposes, the second bridge to Oak Island will be constructed in one section. The project has a proposed let date of May 15, 2007.

Purpose and Need: The main purposes of the proposed second bridge to Oak Island are to provide traffic relief to the existing bridge to Oak Island on NC 133, decrease accident potential, and provide an additional emergency evacuation route for Oak Island.

Summary of Impacts: The proposed project is in the Lumber River Basin, Hydrologic Unit 03040207. Impacts on jurisdictional areas of the proposed project consist of a total of 21.448 acres of permanent wetland impacts. There will also be 222 linear feet of permanent jurisdictional stream impacts and 132 feet of temporary stream impacts.

Permanent Wetlands Impacts *	Temporary Wetlands Impacts	Permanent SW Impacts	Temporary SW Impacts
21.448 ac	0.046 ac	222 ft (0.015 ac)	132 ft (0.053 ac)

*Includes fill, excavation, mechanized clearing, and wetland drawdown from moving existing ditches

Summary of Mitigation:

The project has been designed to avoid and minimize impacts to jurisdictional areas throughout the NEPA and design processes. However, project impacts will still necessitate compensatory mitigation for the unavoidable impacts. Detailed descriptions of these actions are presented in the mitigation portion of this application. The Ecosystem Enhancement Program (EEP) will provide compensatory mitigation for 21.448 acres of wetland impacts and 15 feet of stream impacts. Mitigation is not proposed for 207 feet of intermittent stream impacts due to lack of aquatic habitat.

NEPA DOCUMENT STATUS

The Final Environmental Impact Statement (FEIS) was approved by the Federal Highway Administration (FHWA) on April 30, 2004 for R-2245. The Record of Decision (ROD) was approved on November 10, 2004. After the documents were approved, they were circulated to the resource agencies.

Net wetland impacts have increased since the FEIS was completed by 5.337 acres. Wetland impacts have changed due to the following reasons: updating of the wetland delineation, raising the road grade, adjustment of the mechanized clearing to the right-of-way and accounting for the potential draw-down of a wetland at one site due to the movement of an existing ditch. The road grade has been raised in order to provide sufficient cover on the cross pipes and equalizer pipes. A site by site breakdown of the change in impacts and rationale for the changes are included in Table 2 below.

Table 2- Difference in Wetland Impacts Between FEIS and Final Design				
Site	FEIS Impact Total (ac)	Final Design Impacts (ac)	Impact Change (ac)	Reason For Impact Change
2	0	0.026	0.026	Increase resulted from Raising Bridge and Road Grade
6	1.281	1.522	0.241	Increase resulted from grade change
8	0	0.066	0.066	Increase resulted from Redelineation/Reverification
9	0	0.106	0.106	Increase resulted from Redelineation/Reverification
10	0	0.137	0.137	Increase resulted from Redelineation/Reverification
11	1.341	1.407	0.066	Increase resulted from grade change
12	1.127	1.172	0.045	Increase resulted from grade change
13	0.055	0.07	0.015	Increase resulted from grade change
14	0.7	0.75	0.050	Increase resulted from grade change
15	0.006	0.01	0.004	Increase resulted from grade change
16	0.249	0.276	0.027	Increase resulted from grade change
17	0.348	0.365	0.017	Increase resulted from grade change
18	0.14	0.147	0.007	Increase resulted from grade change
19	1.099	1.161	0.062	Increase resulted from grade change
20	0.159	0.168	0.009	Increase resulted from grade change
21	2.426	2.773	0.347	Increase resulted from grade change
22	0	1.557	1.557	Increase resulted from Redelineation/Reverification
23	0	0.182	0.182	Increase resulted from Redelineation/Reverification
24	2.94	3.345	0.405	Increase resulted from grade change
25	2.48	2.908	0.428	Increase resulted from grade change
27	0.026	0.025	-0.001	Decrease result of Mechanized Clearing to R/W
29	0.1271	0.805	0.678	Increase as a result of Grade Change And Redelination/Reverification
30	0.761	0.984	0.223	Increase resulted from grade change
31	0	0.088	0.088	Increase resulted from Redelineation/Reverification
32	0.72	0.68	-0.040	Decrease resulted from grade change
32	0	0.671	0.671	Increase as a result of ditch draw down in wetlands
33	0.126	0.047	-0.079	Decrease resulted from grade change
Total	16.1111	21.448	5.337	

Stream impacts have also increased since the completion of the FEIS from 0 feet to 222 feet at two sites. Permanent stream impacts at Site 11 have increased by 207 feet. The stream at Site 11 was added to the impact sites as a result of the jurisdictional re-verification conducted in 2004. Permanent stream impacts at Site 34 have increased by 15 feet. Impacts have increased at this site because NC 211 will be widened at the intersection with the proposed road project to accommodate turn lanes. The existing culvert will be replaced with a 10-foot by 8-foot RCBC.

INDEPENDENT UTILITY

The subject project is in compliance with 23 CFR Part 771.111(f) which lists the Federal Highway Administration (FHWA) characteristics of independent utility of a project:

- (1) The project connects logical termini and is of sufficient length to address environmental matters on a broad scope;

- (2) The project is usable and a reasonable expenditure, even if no additional transportation improvements are made in the area;
- (3) The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

RESOURCE STATUS

Delineations:

Wetland and stream delineations for R-2245 were conducted in 2000 by Stantec Consulting using the field delineation method outlined in the *1987 Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and verified by Mr. Scott McLendon of the USACE Wilmington Regulatory Field Office. Delineation updates were conducted by Stantec Consulting and the verification was updated by Dave Timpy of the USACE on October 26, 2004. During the update of the wetland delineation, 2.8 acres of wetlands were added to the project impacts. These sites (Sites 8, 9, 10, 22, 23, 29, 31) are listed above within Table 2.

Wetlands:

Wetland impacts occur at 27 sites within the Lumber River Basin and within Hydrologic Unit Code (HUC) 030340207. Table 3 is a list of permanent impacts to jurisdictional wetland resources (which include impacts resulting from fill, excavation, mechanized clearing, and drainage effect), wetland type, and the Cowardin description. Erosion control devices located within wetland will be placed with the mechanized clearing areas. Mechanized clearing is considered a permanent impact due to the grubbing activities. Hand clearing is not considered a permanent impact because no grubbing will occur. Riprap at the ends of pipes has been calculated as permanent fill.

Table 3- R-2245 Wetland Impacts and Descriptions				
Site	Impact Type	Permanent Impacts (Acres)	Temporary Impacts	Cowardin et al. Description
1	Tidal CAMA	0*	0	EIEM1
2	Riverine	0.026	0.027	EIEM1
4	Tidal CAMA	0*	0.019	EIEM1
6	Non-Riverine	1.522	0	PF01
7	Non-Riverine	0*	0	PF04
8	Non-Riverine	0.066	0	PF04
9	Non-Riverine	0.106	0	PF04
10	Non-Riverine	0.137	0	PF04
11	Non-Riverine	1.407	0	PF04
12	Non-Riverine	1.172	0	PF04
13	Non-Riverine	0.070	0	PF04
14	Non-Riverine	0.750	0	PF04
15	Non-Riverine	0.010	0	PF04
16	Non-Riverine	0.276	0	PF04
17	Non-Riverine	0.365	0	PF04
18	Non-Riverine	0.147	0	PF04
19	Non-Riverine	1.161	0	PF04
20	Non-Riverine	0.168	0	PF04
21	Non-Riverine	2.773	0	PF04

Site	Impact Type	Impacts (Acres)	Temporary Impacts	Cowardin et al. Description
22	Non-Riverine	1.557	0	PF04
23	Non-Riverine	0.182	0	PF04
24	Non-Riverine	3.345	0	PF04
25	Non-Riverine	2.908	0	PF04
26	Non-Riverine	0*	0	PF04
27	Non-Riverine	0.025	0	PF04
28	Non-Riverine	0*	0	PF04
29	Non-Riverine	0.805	0	PF04
30	Non-Riverine	0.984	0	PF04
31	Non-Riverine	0.088	0	PF04
32	Non-Riverine	1.351	0	PF01
33	Non-Riverine	0.047	0	PF01
35	Non-Riverine	0*	0	PF04
36	Non-Riverine	0*	0	PF04
Total		21.448	0.046	

*Impacts have been avoided

Streams:

Stream impacts occur at 4 sites. Impacts to streams occur within HUC 030340207 of the Lumber River Basin. Table 4 is a list of surface water impacts including stream name, type of structure, amount of impacts, mitigation required, DWQ classification, and DWQ stream index number. Neither the AIWW nor Davis Canal are designated as a North Carolina Natural or Scenic River, or as a national Wild and Scenic River, nor is it listed as a 303(d) stream. No designated Outstanding Resource Waters (ORW), Water Supply I (WS-I), or Water Supply II (WS-II) waters occur within 3.0 miles of the project study area.

Site	Stream Name and Intermittent (I) or Perennial (P)	Structure/ Size Type	Permanent Impacts	Mitigation Required	Temporary Impacts	DWQ Index number	DWQ Class
3 & 4	Davis Canal (P)	Bridge	0.001 ac	No	0.035 ac	15-25	SA HQW
5	AIWW	Bridge	0.068 ac	No	0.012 ac	15-25	SA HQW
11	UT to AIWW (I)	2 @ 60"RCP	207 ft	No	52 ft	15-25	SA HQW
34	UT to River Swamp (P)	Install new 10'x8' RCBC	15 ft	30 ft	80 ft	15-25-1-6	C Sw
Total			0.069ac/222 ft	30 ft	0.047ac/132 ft		

WETLAND and STREAM IMPACT DESCRIPTIONS

A site by site description of wetland and stream impacts is included below.

Sites 1 and 2 (Station 15+40 to 19+80) have 0.026 acre of fill in Section 404 jurisdictional wetlands and 0.027 acre of temporary impacts. Fill in the wetlands occurs as a result of replacing the existing bridge with a wider bridge deck and raising the final roadway grade to accommodate drainage for stormwater treatment.

Sites 3 and 4 (Station 20+70 to 22+35) have 0.019 acre of fill in CAMA jurisdictional coastal marsh wetlands and 0.001 acre of permanent fill and 0.035 acre of temporary fill in Davis Canal, a Public Trust Water. Impacts occur as a result of replacing the current 160' long, 38' wide bridge with a 165' long, 45.5' wide bridge. Traffic will use an offsite detour during construction. The new bridge will have 14.2 feet of navigational clearance at mean high water. The new bridge will be a 3-span cored slab bridge supported on driven piles. The driven piles will result in 0.001 acre of permanent fill. The new bridge will be constructed using top down construction. Permanent impacts to Davis Canal will occur from the placement of two bridge bents below mean high water and the placement of Class II riprap on the fill slopes under the bridge. Placement of Class II riprap on the fill slopes under the bridge will not result in permanent fill in the wetlands. Placement of the Class II riprap will act as shoreline stabilization. Riprap will result in 0.029 acre of temporary fill in Davis Canal at Site 3 and 0.006 acre at Site 4. Riprap will also result in 0.019 acre of temporary fill in wetlands. The existing bridge will be removed without dropping components into the water.

Site 5 (Station 56+40 to 60+70) has 0.068 acre of permanent fill and 0.012 acre of temporary fill within the AIWW. The construction of the bridge over the AIWW will result in the placement of sixteen 6-foot diameter piers constructed using drilled shafts below mean high water level (0.056 acre permanent fill). The placement of piers below mean high water level is required to support two bridge bents. The piers will be located outside of the main channel. The 980-foot long bridge over the AIWW will be a pre-stressed concrete high-rise bridge constructed in 5-spans. The piers used for the bridge bents will be constructed from drilled shafts. Approximately 0.012 acre of temporary fill occurs as a result of the construction of two temporary work bridges and temporary bents that will be used to construct the drilled shaft piers. The work bridges are located outside of the main channel and their location is shown on pages 18, 35 and 55 of the enclosed permit drawings. An existing timber bulkhead on the southern bank of the AIWW will be relocated due to interference of the complex pile group with the bulkhead. Portions of the bulkhead will be shifted towards the AIWW a maximum of 9 feet or away from the AIWW a maximum of 9 feet and will result in approximately 0.012 acre of permanent fill in the AIWW. Drawings of the proposed bulkhead are included on sheets 18 and 55 of the enclosed permit drawings and design plans.

Site 6 (Station 75+40 to 83+00) has 1.348 acres of fill and 0.174 acre of mechanized clearing within a coastal plain bottomland hardwood wetland forest. Impacts occur due to the placement of fill for the roadway and riprap at the pipe outlet. Two 42" reinforced-concrete-pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. Hand clearing will occur in 0.082 acre of wetlands to allow for construction equipment clearance.

Site 7 (Station ACC2 13+65 to 14+05) Impacts at this site have been avoided.

Sites 8, 9 and 10 (Stations 82+10 to 89+75) impacts total 0.253 acre of fill and 0.056 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Hand clearing will occur in 0.049 acre of wetlands to allow for construction equipment clearance.

Site 11 (Station 92+65 to 97+50) has 1.203 acres of fill and 0.204 acre of mechanized clearing within a pocosin wetland forest. Impacts to the intermittent UT to the AIWW include 207 feet of permanent stream impacts and 52 feet of temporary stream impacts. A determination that no mitigation would be required for impacts to this UT was made during the re-verification conducted in October 2004. Impacts occur due to the placement of fill for the roadway and placement of riprap at the pipe outlet. Two 60" reinforced-concrete cross pipes buried one foot will be placed in the UT to the AIWW and one 48" equalizer pipe buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. Hand clearing will occur in 0.151 acre of wetlands to allow for construction equipment clearance.

Site 12 (Station 108+20 to 112+65) impacts total 1.013 acres of fill and 0.159 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. One 42" and one 48" pipe buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. Hand clearing will occur in 0.055 acre of wetlands to allow for construction equipment clearance.

Site 13 (Station 120+85 to 123+05) impacts total 0.029 acre of fill and 0.041 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Hand clearing will occur in 0.015 acre of wetlands to allow construction equipment clearance.

Sites 14 and 15 (Station 122+85 to 127+85) impacts total 0.672 acre of fill and 0.088 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Hand clearing will occur in 0.037 acre of wetlands to allow for construction equipment clearance.

Site 16 (Station 136+35 to 138+30) impacts total 0.231 acre of fill and 0.045 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway.

Site 17 (Station 144+25 to 146+10) impacts total 0.325 acre of fill and 0.040 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. One 48" reinforced-concrete-pipe buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. Hand clearing will occur in 0.030 acre of wetlands to allow for construction equipment clearance.

Site 18 (Station 153+40 to 155+25) impacts total 0.105 acre of fill and 0.042 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Five 60" corrugated aluminum pipes will be backfilled with 1-foot of soil and buried 1-foot under the roadway for small animal passage. Hand clearing will occur in 0.035 acre of wetlands to allow for construction equipment clearance.

Site 19 (Station 159+25 to 163+65) impacts total 1.070 acres of fill and 0.091 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Two 48" pipes will be backfilled with 1-foot of soil and buried 1-foot under the roadway for small animal passage.

Site 20 (Station 164+55 to 165+70) impacts total 0.142 acre of fill and 0.026 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. One 48” pipe will be backfilled with 1-foot of soil and buried 1-foot under the roadway for small animal passage.

Site 21 and 22 (Station 173+70 to 182 +40) impacts total 3.701 acres of fill and 0.629 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Four 48” and one 42” pipes will be backfilled with 1-foot of soil and buried 1-foot under the roadway for small animal passage. Hand clearing will occur in 0.404 acre of wetlands to allow for construction equipment clearance.

Site 23 and 24 (Station 197+05 to 209+30) impacts total 3.05 acres of fill and 0.477 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Four 48” pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. One 48” corrugated aluminum pipe will be backfilled with 1-foot of soil and buried 1-foot under the roadway for small animal passage. Hand clearing will occur in 0.097 acre of wetlands to allow for construction equipment clearance.

Site 25 and 27 (Station 208+60 to 223+65) impacts total 2.501 acres of fill and 0.432 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Three 48” reinforced-concrete-pipe buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. One 48” will be backfilled with 1-foot of soil and buried 1-foot under the roadway for small animal passage. Hand clearing will occur in 0.174 acre of wetlands to allow for construction equipment clearance.

Site 26 and 28 (Station 218+65 to 225+65) have 0.015 acre of hand clearing impacts within a pocosin wetland forest for the construction of 48” control-of-access fence.

Site 29 and 30 (Station 229+50 to 242+45) impacts total 1.369 acres of fill and 0.420 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway. Two 48” reinforced-concrete-pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. Hand clearing will occur in 0.11 acre of wetlands to allow for construction equipment clearance.

Site 31 (Station 236+55 to 237+60) impacts total 0.073 acre of fill and 0.015 acre of mechanized clearing within a pocosin wetland forest. Impacts occur due to the placement of fill for the roadway.

Site 32 and 33 (Station 245+50 to 248+30) impacts total 0.561 acre of fill and 0.166 acre of excavation within a bottomland hardwood wetland forest. The existing roadside ditch parallel to NC 211 will be moved to the south resulting in an estimated 0.671 acre of drawdown of wetland hydrology. Impacts occur due to the placement of fill for the new roadway and widening existing NC 211 to accommodate turn lanes. Hand clearing will occur in 0.050 acre to allow for construction equipment clearance.

Site 34 (Station –Y7- 24+00) impacts total 15 feet of permanent channel impacts and 80 feet of temporary impacts to a perennial UT to River Swamp. Impacts will occur due to the replacement of the existing 6-foot by 4-foot with a 10’ x 8’ RCBC under NC 210 to accommodate widening for additional lanes on NC 210. The culvert will be installed using phased construction.

Site 35 and 36 (-ACC2- Station 15+45 to 21+95) Impacts at these sites have been eliminated

FEDERALLY PROTECTED SPECIES

Plants and animals with Federal classification of Endangered (E) or Threatened (T) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of April 27, 2006 the U.S. Fish and Wildlife Service (FWS) lists 15 federally protected species for Brunswick County (Table 5). No changes in the county species list has occurred since the original surveys were conducted.

Biological Conclusions of No Effect have been rendered for the eastern cougar, piping plover, and the seabeach amaranth. The American alligator is listed due to similarity of appearance and thus not subject to Section 7 consultation. The FWS has concurred with the biological conclusion of “May Effect, Not Likely to Adversely Affect” for the West Indian manatee, wood stork, bald eagle, red-cockaded woodpecker, loggerhead sea turtle, green sea turtle, leatherback sea turtle, Kemp’s ridley sea turtle, Cooley’s meadowrue, and rough leaved loostrife. NCDOT received concurrence from FWS in the attached letter dated November 19, 2003. National Marine Fisheries Service concurred with the biological conclusion of “May Affect, Not Likely to Adversely Affect” for the shortnose sturgeon and the loggerhead sea turtle, green sea turtle, leatherback sea turtle, and the Kemp’s ridley sea turtle in the attached letter dated March 24, 2004. NCDOT has agreed to follow the “Precautionary Guidelines for General Construction in Areas that may be used by the West Indian manatee in North Carolina,” in order to obtain concurrence from the FWS. These biological conclusions remain valid.

Table 5. Federally Protected Species for Brunswick County

Scientific Name	Common Name	Habitat Present	Status	Biological Conclusion
<i>Puma concolor cougar</i>	Eastern cougar	No	E	No Effect
<i>Trichechus manatus</i>	West Indian manatee	Yes	E	MA-NLAA
<i>Mycteria americana</i>	Wood stork	Yes	E	MA-NLAA
<i>Charadrius melodus</i>	Piping plover	No	T	No Effect
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Yes	T	MA-NLAA
<i>Picoides borealis</i>	Red-cockaded woodpecker	Yes	E	MA-NLAA
<i>Alligator mississippiensis</i>	American alligator	NA	T(S/A)	NA
<i>Caratta carretta</i>	Loggerhead sea turtle	Yes	T	MA-NLAA
<i>Chelonia mydas</i>	Green sea turtle	Yes	T	MA-NLAA
<i>Dermochelys coriacea</i>	Leatherback sea turtle	Yes	E	MA-NLAA
<i>Lepidochelys kempii</i>	Kemp’s ridley sea turtle	Yes	E	MA-NLAA
<i>Acipenser brevirostrum</i>	Shortnose sturgeon	Yes	E	MA-NLAA
<i>Thalictrum cooleyi</i>	Cooley’s meadowrue	Yes	E	MA-NLAA
<i>Amaranthus pumilus</i>	Seabeach amaranth	No	T	No Effect
<i>Lysimachia asperulaefolia</i>	Rough leaved loosestrife	Yes	E	MA-NLAA

“E” denotes Endangered.
 “T” denotes Threatened.

“T (S/A)” denotes Threatened due to similarity
 “MA-NLAA” denotes May Effect, Not Likely to Adversely Affect

CULTURAL RESOURCES

Historic Architecture:

Appendix A.1 of the FEIS contains a letter from the State Historic Preservation Office (SHPO), dated February 23, 1995 indicating that there are no structures over 50 years of age within the study area; therefore the project would not impact any historic architectural properties.

Archaeology:

An archaeology survey was conducted for the Preferred Alternative in 2003. No archaeological sites were identified during this survey. The SHPO concurrence letter for the archaeology survey, dated December 5, 2003, is included in Appendix A.1 of the FEIS.

FEMA COMPLIANCE

This project crosses the 100-year floodplain at AIWW and Davis Canal. The AIWW bridge has been designed to span the 100-year floodplain at the AIWW Canal. The Davis Canal Bridge has been designed to ensure there is no increase to the extent and level of the flood hazard risk.

UTILITY IMPACTS

There will be no proposed impacts to Waters of the U.S. due to utility construction.

ICI STUDY

An Indirect and Cumulative Impact (ICI) study for this project was updated in May 2005 and supplemented in June 2006. The ICI study concluded that only small magnitudes of change in land use patterns would occur between the build and the no build scenario. The small changes in land use patterns will only result in small changes to the study parameters. The parameters evaluated in the ICI study include dissolved oxygen, phosphorus, nitrogen, sediment loads, fecal coliform, and stream erosion. Copies have been forwarded to DWQ. Copies of the ICI report will be furnished to the other resource agencies upon request.

ESSENTIAL FISH HABITAT

In accordance with the Magnuson-Stevens Act of 1996 (16 U.S.C 1801 *et seq.*) an Essential Fish Habitat Assessment was prepared as part of the FEIS and can be found on pages 1-7 to 1-10. The Assessment concludes that the project will impact EFH within Davis Canal and AIWW and that impacts can be minimized following NCDOT's Best Management Practices for Protection of Surface Waters.

PROJECT COMMITMENTS

The following environmental commitments were agreed to in the NEPA-404 Merger process during the 4A meeting held on November 19, 2003 and their current status is listed below.

- The vertical clearance at mean high water level will be a minimum of 65 feet and the horizontal clearance will be a minimum of 90 feet. The proposed bridge will be designed and constructed so as to not interfere with the operation and maintenance of the navigation channel in the AIWW. A minimum 140 feet navigation opening, without using a fender system for vessel impact, will be provided 70 feet from the channel centerline on each side. Channel centerline coordinates will be obtained from the USACE prior to design and construction.

-The proposed bridge over the AIWW will have 67.3 feet of vertical clearance and 90 feet of horizontal clearance. A 140 feet navigation opening without using a fender system

will provide 70 feet of clearance between the centerline of the channel and the bridge on both sides. Channel coordinates have been obtained from the USACE and are shown on the U.S. Coast Guard (USCG) application and the enclosed permit drawings. A copy of the USCG permit application is included with this cover letter.

- The project will have two access points between NC 211 and the new bridge over the AIWW. The northern access point will be located approximately 5,700 feet from the southern right-of-way of NC 211. This access point will be a right-in/right-out only intersection on the eastern side with no break in the median. The southern access point will be located as close to the northern terminus of the bridge over the AIWW as allowed by NCDOT design standards. These access points will be located to avoid additional wetland impacts within the NCDOT right-of-way.
 - A full movement median opening access point will be located approximately 5,600 feet to the south of NC 211 on the eastern side of the roadway at Station 192+55(ACC3). Due to conflicts with the USACE dredge and spoil land, the Access Point at Station 73+15 (ACC1) has been eliminated from the project plans. A gate will be constructed at this location to allow the USACE access to the dredge and spoil land. An additional third, right-in/ right-out, access point on the western side of the road has been approved by the merger team located approximately 9,500 feet south of NC 211 and is marked at Station 151+55. The location of these access points is shown on the enclosed half-size design drawings. The access points are also discussed in the following section of the permit application.
- Access control will be extended for a distance of 1,500 feet along the two access roadways. A continuous fence along the roadway will also reflect control of access.
 - The enclosed half-size design drawings show that control of access will be maintained at ACC3 for approximately 1,000 feet.
- The State will construct a “small animal passage” pipe under the road at a point where the roadway passes between the two Carolina bays. The pipe design will be subject to approval by the NC Wildlife Resources Commission. There shall be an easement along the routes to the passageway from each Carolina bay.
 - Ten small animal passage pipes will be placed under the road between Stations 147+00 to 210+00 and are shown on the enclosed roadway plans. The pipes are 48” reinforced concrete pipes or 60” by 46” corrugated aluminum pipes. Revisions to the agreement to provide animal passage corridors were discussed and agreed to in the Merger Meeting held on April 11, 2006. Details on the revisions are discussed in the following section.
- For areas adjacent to High Quality Waters (HQW) or Shellfish Areas (SA), Design Standards in Sensitive Watersheds and HQW erosion control measures will be implemented.
 - Design standards for sensitive watersheds and HQW erosion control measures will be implemented at the Davis Canal, AIWW and the UT to AIWW crossing. This is a standard NCDOT commitment.
- Potential anadromous fish habitat is located within the study area. Therefore, the NCDOT guidance document, Stream Crossing Guidelines for Anadromous Fish Passage, will be adhered to for this project.
 - An in water construction moratorium from February 15 to June 30 will be followed during the construction of the bridge over the AIWW and Davis Canal.
- Coordination with the USACE will continue to minimize the impact to the Yellow Banks confined (diked) disposal area.
 - Impacts to the Yellow Banks have been minimized to the maximum extent practical.

- No borrow or waste areas will be located in wetland areas without a permit from the USACE.
 - This is a standard commitment on NCDOT projects.
- The National Ocean Service, National Geodetic Survey requires a 90-day notification for any activity that may disturb or destroy the geodetic monument located at Middleton Avenue and Oak Island Drive or the monument located near the intersection of NC 211 and SR 1500 (Midway Road). Appropriate measures will be taken to relocate the monuments if necessary.
 - NCDOT Location and surveys will contact the National Geodetic Survey 90 days prior to construction activities.
- The NCDOT will make every effort to obtain or acquire the two Carolina bays on each side of the road plus 200 feet around each bay.
 - A revised agreement between the NCDOT and the Merger team was made at a revised Concurrence Point 4A meeting held April 11, 2006. The revisions are discussed in the following section.
- The NCDOT agrees to replace the Middleton Avenue access point to the AIWW if the current access point cannot be maintained due to design considerations.
 - The NCDOT is in the process of working with the City of Oak Island to enhance two other existing public access points instead of replacing the existing access point.
- Strict adherence to procedures contained in *Best Management Practices for Protection of Surface Waters* and *Stream Crossing Guidelines for Anadromous Fish Passage* as well as the NC Department of Environment and Natural Resources, Division of Land Resources Land Quality Section's *North Carolina Erosion and Sediment Control Planning and Design Manual* will aid in avoiding and minimizing impacts to water resources and aquatic communities.
 - These are standard commitments on NCDOT projects.
- Native vegetation will be planted along roadsides to deter the spread of exotic and invasive species in accordance with the FHWA guidance handbook, *Roadside Use of Native Plants*.
 - In riparian areas and areas adjacent to wetlands, seed mixtures including the native grasses Indian grass, little blue stem and switch grass will be used as establishment on disturbed areas.
- The use of a vacuum machine to clean up and transfer of spoil material generated during the installation of bridge piles will minimize impacts to wetlands, aquatic communities and riparian buffers.
 - Bridge piles will be installed using drilled shafts or driven piles and therefore not require the use of a vacuum machine. Construction of piles using drilled shafts confines the spoil material within the shafts and will not result in a discharge in violation of applicable environmental permits.
- Clearing and grubbing activities will be minimized to reduce impacts to riparian areas.
 - Mechanized clearing within riparian areas will only occur at Site 11. Mechanized clearing has been minimized at this site by 0.151 acre by using hand clearing.
- Implementation of NMFS construction moratoriums and USFWS guidance will minimize direct impacts to essential fish habitat and primary nursery inhabitants.
 - An in-water construction moratorium for sturgeon (February 15-June 30), and primary nursery areas (February 15- September 30) will be observed in the AIWW and Davis Canal. The NCDOT also agrees to follow the "Precautionary Guidelines for General Construction in Areas that may be used by the West Indian Manatee in North Carolina."

REVISED CONCURRENCE POINT 4A

On April 11, 2006 a revised Concurrence Point 4A Merger Meeting was held at the Highway Building. The following revisions to project commitments were agreed upon by the Merger Team.

- Acquire three Carolina Bays.

Carolina Bay West of R-2245 (Williamson Property)

The Carolina Bay west of the proposed R-2245 roadway alignment, including park areas PR6 and PR9 with the exception of a planned Club House Amenity Center (PR7); three additional park and recreation areas PR3, PR11 & PR13; the approximately 300' wide animal corridor leading from the bay to the Carolina Bay east of the roadway alignment; and a section of the bay east of the proposed R-2245 roadway alignment.

Carolina Bays East of R-2245 (St. James Property)

The Carolina Bay east of the proposed R-2245 roadway alignment, with the exception of existing platted lots on upland areas around the bay rim, a 300' wide animal corridor leading north to another new Carolina Bay, to also be acquired. The delineated wetland of the Carolina Bay east and north will be restricted from development through a conservation easement.

- Acquire two animal crossing easements. One approximately 300' wide connecting the two Carolina Bays, in addition to another 300' wide easement leading north from the Carolina Bay east of R-2245 to the new North Bay. The landowner of the Williamson property will provide a minimum of at least four 60" by 46" crossings under the private development roads within the preserved wildlife corridors.
 - After negotiating with the landowner of the St. James Property, the NCDOT will construct the pipe crossings under the development road within the wildlife corridor from the eastern bay to the northern bay.
- Provide full control of access from NC 211 to the Intracoastal Waterway, except at the following street access points: -L- Station 73+15 (Full Movement), -L- Station 191+45 (Right-in/Right-out Only), and approximately -L- Station 151 +55 (Right-in/ Right-out Only). NCDOT has eliminated the western access point at -L- Station 73+15. NCDOT will redesign the western access point from -L- Station 79+50 to allow the landowner to connect to the access without incurring additional stream and wetland impacts. NCDOT will provide rationale for the western access. If this cannot be accomplished, this western access point will be eliminated. During this meeting the NCDOT informed the Merger team that the control of access on ACC 3 will be shortened. The control of access reflected on the final design plans is approximately 1,000 feet long.

The location of ACC3 has shifted since the Revised 4A meeting from 191+45 to 192+55. ACC3 has also been modified from a Right-in/Right-out only access point to a full movement access point. This change was approved by the merger team during a meeting held on November 16, 2006.

Maintain Control of Access by the following:

1. The Control of Access on the NCDOT plans will be designated as "Special Control of Access" with a unique symbol, legend and note.

The road plans have been labeled with the special designation "No Revisions shall be made to the Control of Access without approval of NCDOT, FHWA, USEPA and NCDENR per Agreement and USACE per Permit Condition.

2. A Memorandum of Understanding (MOU) between NCDOT, USEPA, NCDENR, and FHWA will be executed. The memorandum will stipulate that any future break in the control of access would require the agreement of all the signatory parties.

The NCDOT has circulated a copy of the MOU to the signatory parties. On final approval, the signatory parties will sign the MOU.

3. A special condition will be added to any USACE permit that would perpetually prohibit any future break in the control of access without modification of the permit.

Per discussions between the USACE and NCDOT, this commitment is no longer essential.

Following the April 11, 2006 Merger Meeting the NCDOT developed the following course of action related to ACC2, the western access point to MAS properties. The NCDOT will eliminate ACC2 from the roadway plans and the permit drawings. Due to the fact there has been previous coordination, public involvement, and the roadway plans have shown an access point to this property, the MOU provides for a future access point to be reserved at the ACC2 location.

It should be noted that the future access point will be relocated from 73+15 to approximate L-Sta. 72+65 (90'Lt.). The future location of the access point has been relocated to the upland area on MAS Properties, LLC to eliminate wetland impacts.

The process for granting the reserved break in the control of access at ACC2 to MAS will be as follows:

The MAS Properties, LLC property owner will obtain a written agreement from the US Army Corps of Engineers (USACE) that the access point will not create a conflict with or compromise the Yellowbanks Environmental Assessment that was issued in June 2005. After obtaining the USACE agreement, the property owner will request a break in the control of access from the NCDOT. MAS Properties, LLC will have to donate 100 feet of right of way width along the potential access roadway for a length of approximately 500 feet from the western edge of the mainline right of way for the Second Bridge to Oak Island project. This right of way will also consist of control of access limits along both sides of the potential access roadway for a distance of approximately 500 feet. After receipt of the written agreement from the USACE, and the donation of the right of way and control of access limits, the NCDOT will grant approval of the access point. The break in the control of access will not be subject to an enhancement fee.

A meeting between NCDOT and the USACE Navigation Branch was held on September 28, 2006 regarding the project crossing the land that the USACE holds a perpetual easement on for maintenance of the AIWW. During the meeting the USACE informed the NCDOT that construction of the bridge over the AIWW and the mainline roadway through the USACE land is acceptable. However, the USACE informed the NCDOT that construction of ACC1 across USACE land is not acceptable.

A follow up meeting was held with NCDOT and the USACE regarding additional alternatives for ACC1 on October 31, 2006. Two additional alternatives to the design and location of ACC1 were

discussed. The determination was made that these two additional alternatives were not feasible due to the increase of wetland impacts or because impacts to the USACE land were still too large. Therefore, NCDOT and the USACE determined that the elimination of ACC1 was necessary and a gated driveway that allowed USACE access to the land would be required.

MERGER TEAM MEETING HELD NOVEMBER 16, 2006

On November 16, 2006 a meeting was held regarding changes to ACC3 and ACC1 with the merger team. The team was informed due to the conflicts mentioned above with the USACE Navigation Branch, ACC1 will be eliminated. Due to the elimination of this access point the NCDOT requested authorization to modify ACC3 from right-in right-out to a full movement median opening access point, if required to meet project commitments and minimize wetland impacts. The merger team agreed to the changes proposed by NCDOT.

Negotiations were finalized with St. James with leftover only movement. However, this design resulted in higher wetland impacts so full movement was included in the final design. Revised design plans and permit drawings that reflect the above mentioned drawings have been included with this letter.

Acquisition of Carolina Bays

On November 20, 2006 the NCDOT obtained a signed agreement to place approximately 460 acres within the Williamson Tract into a conservation easement. When the conservation easement for the Williamson Tract is signed, the NCDOT will grant the access point at Station 151+55. On December 22, 2006 the NCDOT obtained a signed agreement to place approximately 400 acres within the St. James Tract into a conservation easement.

Copies of the signed agreements are included with this letter. Copies of the easement documents that will be signed when surveys are finalized are also included with this letter.

Memorandum of Understanding

A copy of the final Memorandum of Understanding regarding the control of access between the NCDOT, FHWA, the EPA, and NCDENR is included with this letter.

MITIGATION OPTIONS

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts, and to provide full compensatory mitigation of all remaining, unavoidable jurisdictional impacts. Avoidance measures were taken during the planning and NEPA compliance stages; minimization measures were incorporated as part of the project design.

Avoidance:

Avoidance has been employed to the maximum extent practical. All wetland areas not affected by the project will be protected from unnecessary encroachment by the roadway project construction.

General avoidance measures incorporated into the project design

- No Staging of construction equipment or storage of construction supplies will be allowed in wetlands or near surface waters. The contractor will determine staging areas after the project is let.
- No borrow or waste areas will be located in wetland areas without a permit from the USACE.

Specific avoidance measures

- The roadway has been aligned to avoid and minimize impacts to the two large Carolina Bays in the project study area.

Minimization:

Minimization has been employed in the project area to the maximum extent practical. Reduction of fill-slopes at stream/wetland crossings and the selection of alternatives that will minimize wetland impacts will reduce unnecessary wetland takings.

Project Wide Minimization Measures

- Use of 3:1 side slopes in jurisdictional areas.
- All culverts will be buried a minimum of 12 inches.
- For areas adjacent to HQW or Shellfish Areas (SA), Design Standards in sensitive Watersheds and HQW erosion control measures will be implemented.
- Strict adherence to the procedures contained in Best Management Practices for Protection of Surface Waters and Stream Crossing Guidelines for Anadromous Fish Passage, as well as NC Department of Environment and Natural Resources (NCDENR), Division of Land Resources, Land Quality Section's *North Carolina Erosion and Sediment Control Planning and Design Manual* will aid in avoiding and minimizing impacts to water resources and aquatic communities.
- No Erosion control structures will result in additional fill placed in wetlands.
- Clearing and grubbing activities will be minimized to reduce impacts to riparian buffers.
- NCDOT will adhere to construction moratoriums for the shortnose sturgeon (February 1- June 30) and Primary Nursery Areas (February 15 to September 30)
- NCDOT will adhere to the *Guidelines for Avoiding Impact to the West Indian Manatee*.
- NCDOT will place conservation easements on three bays adjacent to the roadway.
- NCDOT will place conservation easements on two approximately 300-foot wide wildlife corridors between the three bays.
- 10 wildlife passage pipes will be placed under the proposed roadway and wildlife passage will be placed under the private development roads within the wildlife corridors.

Site Specific Minimization Measures

- Station 15+40 to 19+80, The fill slopes at this site have been redesigned to using engineered 1.25:1 side slopes reducing impacts to wetlands from 0.261 acre to 0.026 acre.
- Station 15+40 to 19+80, The mechanized clearing has been changed from using a 10' offset width from the toe of slope to hand clearing using a 5' offset from the toe of slope.
- Station 56+40 to 60+70, A work bridge will be used for the construction of the bridge over the AIWW rather than using work causeways.
- Station 75+40 to 83+00, Two 42" reinforced-concrete-pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. The usage of hand clearing has reduced mechanized clearing impacts by 0.075 acre at this site.

- Station 82+10 to 83+00, Hand clearing in 0.014 acre of wetlands will be used instead of mechanized clearing.
- Station 88+05 to 89+75, Hand clearing in 0.035 acre of wetlands will be used instead of mechanized clearing.
- Station 92+65 to 97+50, Hand clearing in 0.151 acre of wetlands will be used instead of mechanized clearing. A 48” reinforced-concrete-pipe buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway
- Station 108+20 to 112+65, Hand clearing in 0.055 acre of wetlands will be used instead of mechanized clearing. One 48” and one 42” reinforced-concrete-pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway.
- Station 120+85 to 123+05, Hand clearing in 0.015 acre of wetlands will be used instead of mechanized clearing. A 42” reinforced-concrete-pipe buried 1-foot will be placed adjacent to the wetland and will serve as a hydraulic cross pipe.
- Station 122+85 to 127+85, Hand clearing in 0.037 acre of wetlands will be used instead of mechanized clearing.
- Station 144+25 to 146+10, Hand clearing in 0.030 acre of wetlands will be used instead of mechanized clearing.
- Station 153+40 to 155+25, Hand clearing in 0.035 acre of wetlands will be used instead of mechanized clearing. Five 60”*46” corrugated aluminum pipes buried 1-foot will be placed adjacent to the wetland and will serve as small animal passage pipes.
- Station 159+25 to 163+65, Two 48” reinforced-concrete-pipes buried 1-foot will serve as small animal passage pipes.
- Station 164+55 to 165+70, One 48” reinforced-concrete-pipe buried 1-foot will serve as a small animal passage pipe.
- Station 173+70 to 191+85, Hand clearing in 0.404 acre of wetlands will be used instead of mechanized clearing. Four 48” pipes and one 42” pipe buried 1-foot will serve as small animal passage pipes.
- Station 197+05 to 197+70, Hand clearing in 0.008 acre of wetlands will be used instead of mechanized clearing.
- Station 198+55 to 209+30, Hand clearing in 0.089 acre of wetlands will be used instead of mechanized clearing. Four 48” pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. One 48” pipe buried 1-foot will serve as a small animal passage pipe.
- Station 208+60 to 219+90, Hand clearing in 0.167 acre of wetlands will be used instead of mechanized clearing. Three 48” pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway. One 48” pipe buried 1-foot will serve as a small animal passage pipe.
- Station 218+65 to 225+65, Hand clearing in 0.022 acre of wetlands will be used instead of mechanized clearing.
- Station 229+50 to 242+45, Hand clearing in 0.110 acre of wetlands will be used instead of mechanized clearing. Two 48” pipes buried 1-foot will be placed in the wetlands to maintain hydraulic connectivity on both sides of the roadway.
- Station 245+50, Hand clearing in 0.050 acre of wetlands will be used instead of mechanized clearing.

Compensatory Mitigation:

The construction of the R-2245 will result in 21.448 acres of permanent wetland and 15 ft of stream impacts that will require mitigation within the Lumber River Basin.

Based upon the agreements stipulated in the “Memorandum of Agreement Among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U.S. Army Corps of Engineers, Wilmington District” (MOA), it is understood that the North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP), will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for NCDOT projects.

The offsetting mitigation will be derived from an inventory of assets already in existence within the same 8-digit cataloguing unit. The Department has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above. The remaining, unavoidable impacts to 21.448 acres of jurisdictional wetlands and to 15 feet of jurisdictional streams will be offset by compensatory mitigation provided by the EEP program as noted in the enclosed EEP confirmation letter.

REGULATORY APPROVALS

Section 401: Application is hereby made for a Clean Water Act Section 401 Water Quality Certification. NCDOT has already provided for method of payment through the CAMA Major Development Permit application.

CAMA: NCDOT has applied for a CAMA Major Development Permit under separate cover.

Section 404: NCDOT has applied for a Clean Water Act Section 404 Individual Permit under separate cover.

US Coast Guard: In a separate application, NCDOT requested approval from the US Coast Guard for the construction of the bridge over the AIWW.

A copy of this permit application will be posted on the DOT website at: <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>

Thank you for your assistance with this project. If you have any questions or need any additional information about this project, please contact Brett Feulner at (919) 715-1488.

Sincerely,



for

Greg Thorpe, P.E., Branch Manager
Project Development and Environmental Analysis Branch

GT/bmf

cc w/o attachment

Mr. Jim Gregson, NCDCM
Ms. Becky Fox, USEPA – Whittier, NC
Mr. Gary Jordan, USFWS
Mr. Mark Staley, Roadside Environmental
Mr. Allen Pope, P.E., Division 3 Engineer
Mr. Clarence Coleman, P.E., FHWA
Mr. Michael Street, NCDMF
Mr. Dave Timpy, USACE, Wilmington
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Todd Jones, NCDOT-, External Audit Branch

Mr. Travis Wilson, NCWRC
Mr. Ronald Mikulak, USEPA – Atlanta, GA
Dr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mason Herndon, Division 3 DEO
Mr. Ron Sechler, NMFS
Mr. Steve Sollod, NCDCM
Mr. Carl Goode, NCDOT- HEU
Mr. Joseph Qubain, P.E., PDEA
Mr. Scott McLendon, USACE, Wilmington
Ms. Beth Harmon, EEP
Mr. Terry Knowles, USCG



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**SECOND BRIDGE TO OAK ISLAND (TIP NO. R-2245)
NEPA / 404 MERGER TEAM
MEETING FOR REVISED CONCURRENCE POINT 4A**

Meeting Date: April 11, 2006

Place / Time: NCDOT Board Room, Raleigh, 9:00 am

Attendees: Ron Sechler, NOAA Fisheries Service
Pace Wilber, NOAA Fisheries Service
Scott McLendon, US Army Corps of Engineers
Dave Timpy, US Army Corps of Engineers
Kathy Matthews, US Environmental Protection Agency
Chris Militscher, US Environmental Protection Agency
Gary Jordan, US Fish and Wildlife Service
Melba McGee, NC Department of Environment and Natural Resources
Amy Simes, NC Department of Environment and Natural Resources
Steve Sollod, NC Division of Coastal Management
Brian Wrenn, NC Division of Water Quality
John Hennessy, NC Division of Water Quality
Travis Wilson, NC Wildlife Resources Commission
Ron Lucas, Federal Highway Administration
Joe Blair, NCDOT Division 3
Mason Herndon, NCDOT Division 3
David Chang, NCDOT Hydraulics Unit
Ray Lovinggood, NCDOT Hydraulics Unit
Max Price, NCDOT Hydraulics Unit
Stacy Baldwin, NCDOT Project Development & Environmental Analysis Branch
Rob Hanson, NCDOT Project Development & Environmental Analysis Branch
Joseph Qubain, NCDOT Project Development & Environmental Analysis Branch
Greg Thorpe, NCDOT Project Development & Environmental Analysis Branch
Deborah Anderson, NCDOT Natural Environment Unit
Brett Feulner, NCDOT Natural Environment Unit
Phil Harris, NCDOT Natural Environment Unit
Elizabeth Lusk, NCDOT Natural Environment Unit
Colin Mellor, NCDOT Natural Environment Unit
Leilani Paugh, NCDOT Natural Environment Unit
Chris Rivenbark, NCDOT Natural Environment Unit
Debbie Barbour, NCDOT Preconstruction
Victor Barbour, NCDOT Project Services Unit
Doug Allison, NCDOT Right-of-Way Branch
Hugh Thompson, NCDOT Right-of-Way Branch
John Williamson, NCDOT Right-of-Way Branch
Glenn Mumford, NCDOT Roadway Design Unit
Tatia White, NCDOT Roadway Design Unit
Lonnie Brooks, NCDOT Structure Design Unit
Emily Murray, NCDOT Structure Design Unit
Ray McIntyre, NCDOT TIP Development Unit
Tyler Bray, NCDOT Transportation Planning Branch
Robert Memory, NCDOT Utilities Coordination Unit
Don Eggert, Cape Fear Rural Planning Organization
Keith Lewis, Stantec
Paul Koch, Stantec

Reference: Second Bridge to Oak Island Meeting for Revised Concurrence Point 4A

PURPOSE OF MEETING:

To reach agreement on Revised Concurrence Point 4A (Avoidance and Minimization).

ITEMS OF DISCUSSION:

The following paragraphs summarize the discussion and decisions resulting from this meeting. (See attached concurrence form for background information).

The meeting opened with a brief introduction by Dave Timpy who noted the absence of the State Historic Preservation Office (SHPO) representative and stated that the SHPO did not have any concerns about the revisions. Mr. Timpy then turned the meeting over to Joseph Qubain. Mr. Qubain explained the Revised 4A Concurrence form, which was displayed onscreen and distributed to the Merger Team, then opened the discussion for questions.

In response to a question asked by Travis Wilson, Leilani Paugh stated that animal passages under private roads within the conservation easement are included in the project. She added that \$100,000 has been allocated to each of the two landowners to be used for animal passage construction. The concurrence form was revised to reflect this information.

Chris Militscher noted that the USEPA had been added as a party to the Memorandum of Understanding (MOU) and expressed concern about lots within the St. James Carolina Bay that appeared to be within wetlands. As a result of subsequent discussions, the concurrence form was revised to state that the wetlands within the St. James Carolina Bay would be restricted from development.

Mr. Militscher requested that additional parks and recreational areas shown on the Williamson Tract Master Plan be added to the conservation area. Ms. Paugh stated that she would discuss the request with the landowner, but did not anticipate a favorable response.

During the previous discussion, Mr. Timpy recalled the USACE's request for a pre-application meeting between the USACE, NCDOT, and the developers to discuss wetland impacts within the vicinity of the access points. Mr. Qubain responded that that was beyond the scope of the project and that those issues would be resolved through the developer's permitting process with the USACE. Scott McClendon stated that the USACE was concerned that the access points would generate development. Ms. Paugh noted that development is occurring in the area regardless of the project and that acquiring the conservation areas and easements is generating protection for upland areas that would not be protected under Section 404 regulations. She also noted that the Williamson Tract no-access plan has greater wetland impacts than the plan with access.

The remaining portion of the meeting focused on the southwest access (SW) at access point number two (i.e., the southernmost access point on the west side of the proposed roadway). With the addition of a right-in/right-out access on the Williamson Tract, members of the Merger Team requested that the SW access point be eliminated. The discussion of this issue spanned a large portion of the meeting, with the Merger Team breaking into several small group discussions.

The following bullets summarize the main items of discussion.

- The SW access point would provide access for a landlocked parcel owned by MAS. The parcel is currently accessed from the west by Sunset Harbor Road. Travis Wilson and Brian Wrenn [referencing the Yellow Banks Environmental Assessment] noted that MAS and Coastal Communities are the same company and reasoned

Reference: Second Bridge to Oak Island Meeting for Revised Concurrence Point 4A

therefore that access to that parcel from the east was not needed, as it could be accessed from the Coastal Communities property.

- The USACE recommends that the access point be moved to an upland area along the USACE easement for the Yellow Banks Disposal Area. If the access point cannot be relocated, it should be eliminated.
- Greg Thorpe stated that moving the access point further south would not be an option due to proximity to the bridge.
- If the access point is eliminated, Mr. Milischer requested that the design include a U-turn opening in the median at this location.
- Debbie Barbour stated that there is a strong possibility that the SW access point can be eliminated; however, the NCDOT would like to research the history of the access point to determine its origins before making a decision to eliminate it.
- Mr. Timpy stated that the access point as designed does not meet the commitment to avoid additional wetland impacts. He also noted that the project is not removing existing access to the MAS property.
- In response to a question asked by Mr. Wilson, Ms. Paugh stated that the NCDOT would investigate the origins of the SW access point and attempt to redesign the access to avoid potential legal issues resulting from the elimination of the access point. She added that eliminating the access point after following this process would be consistent with the original commitment that the access points should be located such that there are no additional wetland impacts. If this commitment cannot be met due to the presence of wetlands, the elimination of the SW access point would be justified under this commitment.
- Mr. Timpy reiterated that the USACE recommends eliminating the SW access and proposed that the Team sign a Revised 4A form indicating as such. Should the access point be needed, the Team would reconvene to discuss.
- In response to the USACE proposal, NCDOT proposed that the access point be redesigned (shortened or lengthened, and realigned) so that it is in, and can be accessed from, entirely upland areas. NCDOT would perform wetland delineations to identify upland areas.
- In response to a request made by Mr. McClendon, Ms. Paugh stated that the Record of Decision (ROD) and public hearing mapping are documentation of the need for this access point.
- In response to a comment made by Mr. Timpy that the Merger Team not reach concurrence at that meeting, Ms. Paugh stated that a signed concurrence form would aid in negotiations with the landowners as it would demonstrate the Merger Team's willingness to move forward with the project.
- It was resolved that the concurrence form would state that NCDOT will redesign the SW access point to allow connection without incurring additional stream and wetland impacts and that NCDOT would provide rationale for the access. If either of these items cannot be accomplished, the access point would be eliminated.

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The meeting also included discussions of the following items:

The Merger Team briefly discussed access control for the conservation easement, with Gary Jordan stating preference that it be fenced to deter human intrusion.

Reference: Second Bridge to Oak Island Meeting for Revised Concurrence Point 4A

Ms. Paugh informed the Team that the NCDOT proposed to reduce the length of access control on the St. James access point to the intersection with the first development street

In response to a comment by Mr. Timpy regarding the wetland delineations/jurisdictional determinations for the Williamson Tract and St. James, Mr. Qubain stated that the NCDOT would provide copies of wetland information on file.

In response to a question asked by Mr. Militscher, Ron Lucas stated that the NCDOT, Project Development would be preparing a consultation and would not be preparing a revised ROD. Mr. Militscher requested that this information be provided to the Merger Team.

CORRECTIONS & OMISSIONS: This summary is the writer's interpretation of the events, discussions, and transactions that took place during the meeting. If there are any additions and/or corrections please inform the writer in writing within seven (7) days.



Keith D. Lewis, PE
Project Manager
klewis@stantec.com

KDL/acs

Attachment: Revised Concurrence Point 4A Form
Exhibit

cc: Attendees
File

NEPA / 404 MERGER TEAM AGREEMENT

Revised CONCURRENCE POINT NO. 4A

Federal Aid Project Number: STP-1105(6)
State Project Number: 8.2231201
TIP Number: R-2245
TIP Description: Second Bridge to Oak Island
From SR 1104 (Beach Drive) to NC 211, Brunswick County

Background

Agreement on Concurrence Point 3 was reached on June 19, 2002. The description of the Least Environmentally Damaging Practicable Alternative (LEDPA) (Alternative B) was amended to include the acquisition of an easement connecting the two Carolina Bays with an animal crossing. Agreement on Concurrence Point 4A was reached on November 19, 2003. As part of the avoidance and minimization measures for the project, it was agreed that NCDOT would make every effort to acquire the two Carolina Bays on each side of the road plus 200 feet around each Bay and acquire a 10-foot wide conservation easement adjacent to the right-of-way on each side of the road. During the initial implementation stage, NCDOT encountered difficulty meeting these three commitments. The status of these commitments was discussed in meetings with the Merger Team on April 20, 2005, July 21, 2005, and January 19, 2006, during which NCDOT described the legal issues involved with the commitments. NCDOT proposed alternative commitments that would fulfill the intended purpose of the original commitments, but that were within the Department's statutory authority. A package was mailed to the Merger Team on February 6, 2006 that included detailed information on the proposed alternative commitments. Field meetings were held February 7 and 8, 2006 to view the proposed conservation areas. Based on the comments received on the package and negotiations with the landowners, the project commitments are described herewith.

- Acquire three Carolina Bays.

Carolina Bay West of R-2245 (Williamson Property)

The Carolina Bay west of the proposed R-2245 roadway alignment, including park areas PR6 and PR9 with the exception of a planned Club House/Amenity Center (PR7); three additional park and recreation area PR3, PR11 & PR13; the approximately 300' wide animal corridor leading from the bay to the Carolina Bay east of the roadway alignment; and a section of the bay east of the proposed R-2245 roadway alignment.

Carolina Bays East of R-2245 (St. James Property)

The Carolina Bay east of the proposed R-2245 roadway alignment, with the exception of existing platted lots on upland areas around the bay rim, a 300' wide animal corridor leading north to another new Carolina Bay, to also be acquired, with the exception of a small piece of upland. The delineated wetland of the Carolina Bay east will be restricted from development.

- Acquire two animal crossing easements. One approximately 300' wide connecting the two Carolina Bays, in addition to another 300' wide easement leading north from the Carolina Bay east of R-2245 to the new Bay. NCDOT has committed to provide \$100,000 per

landowner to provide crossings under the private development roads within the preserved wildlife corridors.

- Provide full control of access from NC 211 to the Intracoastal Waterway, except at the following street access points: -L- Station 79+50 (Full Movement), -L- Station 191+45 (Right-in Right-out Only), and approximately -L- Station 151+55 (Right-in Right-out Only). NCDOT will redesign the western access point from -L- Station 79+50 to allow the landowner to connect to the access without incurring additional stream and wetland impacts. NCDOT will provide rationale for the western access. If this cannot be accomplished, this western access point will be eliminated.

Maintain Control of Access by the following:

1. The Control of Access on the NCDOT plans will be designated as "Special Control of Access" with a unique symbol, legend and note.
2. A Memorandum of Understanding between NCDOT, USEPA, NCDENR, and FHWA will be executed. The memorandum will stipulate that any future break in the control of access would require the agreement of all the signatory parties.
3. A special condition will be added to any USACE permit that would perpetually prohibit any future break in the control of access without modification of the permit.

Additional avoidance and minimization measures are attached to this concurrence form.

The Merger Team has concurred on this date of April 11, 2006 on the alternative commitments.

US Army Corps of Engineers

US Environmental Protection Agency

US Fish and Wildlife Service

National Marine Fisheries Service

NCDENR, Division of Water Quality

NCDENR, Division of Coastal Management

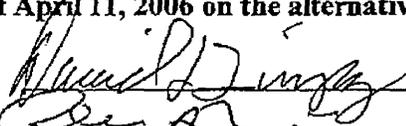
NCDENR, Division of Marine Fisheries

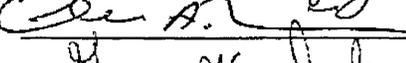
NC Wildlife Resources Commission

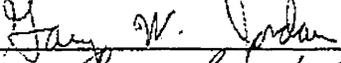
State Historic Preservation Office

Federal Highway Administration

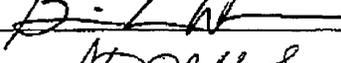
NC Department of Transportation

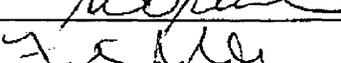


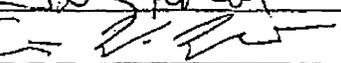


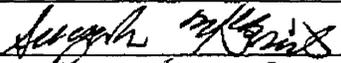
















Avoidance and Minimization Measures

Project-Specific Avoidance and Minimization Measures

Due to the large amount of wetlands within the study area, it is impossible to construct the proposed project without wetland impacts. Measures have been taken, however, to avoid and minimize these impacts to the maximum extent possible, while still effectively meeting the purpose of and need for the proposed project. Project-specific measures include the following items:

- The project right-of-way was set at 150 feet (46 meters) to avoid impacts to wetlands within the larger project corridor; and,
- The proposed alignment and resulting right-of-way was set within the corridor of the Preferred Alternative to avoid and minimize impacts.

The avoidance and minimization of potential ICIs from the proposed project were also considered during this phase of the planning process. These measures are listed below.

- Residential street access is precluded from the right-of-way of the proposed project to the planned development roads for Williamson and St. James properties. Access control would also be reflected by a continuous fence along the roadway. These measures aid in minimizing induced development along the project; and,
- The Phase II National Pollutant Discharge Elimination System (NPDES) stormwater program would be adopted and enforced by local governments for the area bound by NC 211, Sunset Harbor Road, the AIWW, and Beaver Dam Creek. The stormwater program mandates would be applied to new development within the specified area. (Brunswick County currently has a Stormwater Ordinance that it has adopted in anticipation of the Phase II NPDES regulations. This ordinance is included in the Brunswick County Commissioners' correspondence in FEIS Section 3.0.)

Avoidance and Minimization Measures for the Construction Phase

In addition to the measures above, the following avoidance and minimization procedures should be implemented during construction:

- Strict adherence to procedures contained in *Best Management Practices for Protection of Surface Waters* (NCDOT, 1997) and *Stream Crossing Guidelines for Anadromous Fish Passage* (NCDOT, 1999), as well as the NC Department of Environment and Natural Resources (NCDENR), Division of Land Resources, Land Quality Section's *North Carolina Erosion and Sediment Control Planning and Design Manual* (NCDENR, 1993) would aid in avoiding and minimizing impacts to water resources and aquatic communities;
- Native vegetation should be planted along roadsides to deter the spread of exotic and invasive species. The FHWA guidance handbook, *Roadside Use of Native Plants* (FHWA, 2002) provides information on roadside restoration and management;

- Implementing NMFS construction moratoriums and USFWS construction guidance can minimize direct impacts to essential fish habitat and primary nursery inhabitants and manatees. Table 2.7.1 contains these moratoriums;

**TABLE 2.7.1
NMFS CONSTRUCTION MORATORIUMS
USFWS CONSTRUCTION GUIDANCE**

SPECIES/TYPE	DATES	PRIMARY AGENCY
Sturgeon	February 1 – June 30	NMFS
Primary Nursery Areas	February 15 – September 30	NMFS/NCDMF
Manatee (in-water activities)	June – October	USFWS

SOURCE: USACE, August 2002. <http://www.saw.usace.army.mil/wetlands/Policies/MORATORIUMS8-02.pdf>

- The use of a vacuum machine to clean up and transfer of spoil material generated during the installation of bridge piles can minimize impacts to wetlands, aquatic communities, and riparian buffers;
- Clearing and grubbing activities should be minimized to reduce impacts to riparian buffers;
- Judicious management of herbicides and pesticides; and,
- Litter and debris control.



R-2245 Proposed Conservation Easement
Proposed Easement Boundary ————
DRAFT 04/20/2006





STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

Draft Minutes of the Interagency Hydraulic Design Review
"4B" Meeting July 20, 2004

R-2445 (Second Bridge To Oak Island)
State Project 34407.1.1
New Route From SR 1104 (Beach Dr.) To NC 211
Brunswick County

Team Members: David Timpy, USACE (present)
Nikki Thompson, NCDWQ (present)
Gary Jordan-USFWS (not present)
Travis Wilson, NCWRC (present)
Chris Militscher-EPA (present)
Steve Sollod, NCDCM (present)
Bill Arrington, NCDCM (present)
Ron Schler, NMFS (not present)
Elizabeth Lusk, ONE (present)
Stacy Baldwin- PDEA (present)
Glenn Mumford- Roadway Design (present)

Participants: (See attached list)

Plan Sheet 4 & Big Davis Canal Bridge: Max Price explained that the beginning of the project was a typical beach road; i.e., water sheet flows off of the roadway and infiltrates into the sandy soils. Ditches are not typically utilized to convey water to established outfalls. Instead of ditches we propose to use drop inlets and "storm chambers" to provide temporary underground storage and infiltration of stormwater that usually occurs in the beach roadway shoulders and right of way.

This project will require CAMA Major Permit and so will therefore require a State Stormwater Permit. A pre-application consultation with regional DWQ staff will be conducted prior to final Hydraulic design and the 4C Permit Drawing Review meeting.

MAILING ADDRESS:
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HYDRAULICS UNIT
1590 MAIL SERVICE CENTER
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TELEPHONE: 919-250-4100
FAX: 919-250-4108

WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
CENTURY CENTER COMPLEX
BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC

There are sliver fill areas in the coastal marsh wetlands left and right of -L- Sta. 17+00 and 20+00 (+/-) with impacts less than one acre (0.4 acres +/-). These impacts were created when the proposed grade across the Davis Canal was changed in order to drain bridge deck runoff to the north and not to the south as shown on the 25% roadway plans. Placement of infiltration basins (or other BMP devices) to the south would be impractical due to the above mentioned wetlands and would result in greater impacts. At the northern end of the bridge, it is possible to treat the stormwater runoff without wetland impacts.

A proposed location for “storm chambers” for infiltrating the deck stormwater is shown on plan sheet 5. This design will be coordinated with regional DWQ staff and finalized prior to the 4C meeting.

The question was raised if “box beams” could be used for the bridge’s superstructure rather than the proposed 21” cored slabs. Box beams would allow longer spans and a reduction in the number of interior bents from four to two with the subsequent reduction in fewer drilled shaft bents. NCDOT Structure Design staff answered that box beams would necessitate raising the grade in order to preserve the vertical clearance of the existing bridge. Raising the grade would result in additional impacts to the coastal marsh. Due to additional impacts to the coastal marsh, the decision was made to use a cored slab bridge and not box beams.

NCDOT Geotechnical Unit staff stated that based on geology, drilled shaft bents would probably be the required foundation type. It was also stated that the temporary work bridges could be supported by pile bents.

Temporary work bridges will be required for construction of the new bridge. Two work bridges will be required in order to maintain a navigable channel during construction. Temporary piles will support the work bridges. The elevation and location of the work bridges will be determined during final design and presented at the 4C meeting.

Plan Sheet 5: Treatment for bridge deck storm water is envisioned as the “storm chambers” shown on the right side of the road just north of the bridge. This is an urbanized area and use of the underground infiltration storm chambers appear the more appropriate method of treating the storm water rather than an open infiltration basin.

Plan Sheet 6: Upon approval by regional DWQ staff, urbanized areas will utilize the same drop inlet and “storm chamber” infiltration concept discussed on plan sheet 4.

Plan Sheet 7 & Intracoastal Waterway Bridge: Max explained the area on the southern end of the Intracoastal Waterway (ICW) bridge has room for stormwater management. The Public Hearing map shows expected property takes for Right of Way acquisition and these parcels should provide adequate room for some type of stormwater BMP device. The design and treatment method on the northern and southern end of the Intracoastal Bridge will be coordinated with regional DWQ staff and finalized prior to the 4C meeting.

Bill Arrington of the North Carolina Division of Coastal Management requested the design maintain access to the gravel parking area and board walkway shown under the south end of the proposed ICW bridge. According to the current Bridge Survey Report, the design provides approximately 32' of vertical clearance over East Yacht Drive. No one expressed any design concerns with maintaining this access.

Dave Timpy of the US Army Corps of Engineers mentioned there is an on-going "land swap" deal in progress, involving the land developers on the north east end of the bridge and the Corps of Engineers. He couldn't say what the current status of this swap might be or how it could affect the project.

Construction of the bridge was discussed. Max Price stated barges and work bridges would probably be used for the construction. Also discussed was the use of barges that would be allowed to settle on the bottom during low tides. The elevation and location of the work bridges will be determined during final design and presented at the 4C meeting.

Max talked about the overall bridge length as shown in the previous Bridge Survey Report, dated April 3, 1998. In it, there were proposed bridge spans over the dredged spoil area for a length of greater than 250'. There is no hydraulic reason for the additional span lengths since the 100 year flood elevation is well below the elevation of the dredged spoils. Research by the Hydraulics Unit has found no evidence for the need for the additional spans. Keith Lewis of Stantec responded that sometime in the past, "someone in NCDOT wanted the bridge to cross over a portion of the dredged spoils." However, he didn't remember who it was or if there was a given reason. Nobody in the meeting expressed objection to shortening the bridge, however, coordination with the Corps of Engineers is required to determine if the additional bridge length was required for access to the spoil area.

Some members of the 4B meeting questioned if shortening the bridge would allow for shifting the access point towards the south and out of the wetland area. Glenn Mumford, NCDOT Roadway Project Engineer, showed a larger scale plan with additional wetland areas depicted. He explained the bridge probably couldn't be shorted enough to allow shifting the access road without impacting a greater area of wetlands. Complicating the design are the requirements for guardrail and tapers for a turn lane which combine to require significant distance between the end of the bridge and the access road.

John Hennessy asked if there is a moratorium on working in the water. No answer was given and John requested the answer be available for the 4C meeting.

(Subsequent to the 4B meeting and during the compilation of these minutes, reference to moratoriums was found on the "green sheets" of the Final EIS – Ed.)

A question was raised about utilities on the bridge. Max responded it is too early in the design to know.

Plan Sheet 8: Max Price explained the general roadway typical section from the northern end of the ICW bridge to the northern project terminus: Four lanes divided with a mounded grass

median and open shoulders on the outside. In tangent sections, roadway storm water would sheetflow down the grassed fill slopes, but in curves, runoff would be collected by catch basins in the median and piped to the roadway toe of slope.

Currently, the plans show the standard NCDOT rip rap outlet pad at all catch basin outlet pipes. The 2 and 10 year storm outlet velocities will be evaluated to determine the possible need for preformed scour holes. A request was made by DWQ that outlets near wetlands discharge with non-erosive velocities. The final design will address this request.

Plan Sheet 9: Max stated the access point design most likely will require changing the drainage as presently shown near the double 42" pipes.

There was discussion on the "stream" conveyed by the double 42" pipes. It shows as a "blue line" on the USGS quad map, but was not delineated as a jurisdictional stream.

Although the NCDOT standard rip rap is shown at the downstream end of the 42" pipes, rip rap will not be used unless outlet velocity dictates its use.

There was much discussion about the location, and impacts associated with the access point. There may need to be further coordination between the agencies, planning and design prior to the final design and the 4C meeting.

John Hennessy asked that all wetland information for the access points be made available for the 4C meeting.

Plan Sheet 10: The conceptual drainage plans presently show double 48" pipes to convey the "blue line" stream as shown on the USGS quad map. Mason Herndon, NCDOT Division 3 Environmental Officer, stated this is the only stream that was identified as a jurisdictional stream. It was classified as "intermittant."

It was emphasized that all fill slopes within the wetlands should be 3:1.

Plan Sheet 11: The need for rip rap at the pipe outlets will be verified once outlet velocities are checked.

Plan Sheet 12: The plans currently show a 42" pipe laid in the existing dirt logging road, maintaining the present drainage pattern. While this doesn't match the USGS quad, which shows a blue line crossing the dirt road, it is the current drainage pattern. Discussion centered on the possibility of reconnecting the two wetland areas. NCDOT will investigate if it is feasible. One possible problem would be the need to raise the roadway grade to allow placement of an adequately sized pipe. As shown, the pipe is down low in the old logging road, but reconnecting the two wetland areas would require a pipe at a higher elevation. Raising the roadway grade will impact more wetland due to the larger footprint. If the agencies see the need for a field review of this site someone from the Hydraulics Unit would like to attend.

There was discussion among the agencies that there might be a chance for on-site mitigation credits if these wetlands are reconnected. How the credits would be measured or accounted for was not determined at this time.

Plan Sheet 13: Travis Wilson (North Carolina Wildlife Resource Commission), discussed providing a small animal passage through the roadway embankment between the two Carolina Bays. The Hydraulics Unit will coordinate the size and location of the of the passage with NCWRC and USWFS prior to final design and the 4C meeting.

The status of NCDOT purchasing the two Carolina Bays was discussed. Brett Fuelner and Elizabeth Lusk of the Office of Natural Environment (ONE) replied that right of way acquisition won't begin until April or May of 2005. It was commented on that the process of acquiring the Carolina Bays could possibly begin prior to the project Right of Way acquisition. DWQ stated that they may not issue the 401 Certification if the bays are not purchased.

Plan Sheet 14: No Comments

Plan Sheet 15: Nicole Thomson requested the catch basin outlets be routed to discharge in the wetlands rather than on the upland side of the road. She explained the wetlands performed as natural filters for the stormwater running from the catch basins. She did state the outlet velocities would need to be non-erosive. Dave Timpy disagreed and requested the pipes not outlet into the wetlands. After reviewing the quad map, Max mentioned that a wetland or Carolina Bay is on the other side of the road and that consideration will be given to the above in the final design phase.

A suggestion was made to place a note on the plans indicating where the two large Carolina Bays are located and Hydraulics will do this.

Plan Sheet 16: Discussion focused on whether or not the equalizer pipes should be buried. It was decided that they should they be buried since they are in the wetlands. A note will be added to the plans so that it is clear to construction personnel that the pipes will be buried.

Plan Sheet 17: There was much discussion about the location, and impacts associated with the access point. There may need to be further coordination between the agencies, planning and design prior to the final design and the 4C meeting.

Plan Sheet 18: No Comments.

Plan Sheet 19: No Comments.

Plan Sheet 20: Hydraulics will field investigate the stream or ditch currently shown on the plans, between stations 233+00 Lt and 235+50 Lt (+/-) to determine if the drainage design requires changes.

Plan Sheets 21, 22, and 23: Max explained the existing drainage along the south side of NC-211: Ditches currently provide drainage, flowing to the west from approximately station 22+00

and flowing to the east from that same high point in the ditch. Flows to the east go to the box culvert under NC-211 and then flow north into "River Swamp." The proposed drainage design maintains the same design philosophy: lateral ditches alongside NC-211 that are approximately the same width, depth, and slope as the existing ditches. These ditches are limited in depth by the pipes and culverts they must tie to. It was determined that possible impacts to the wetlands as a result of moving the ditches should be evaluated during the final design process.

The presence of underground storage tanks on the Midway Trading Post property, located at the intersection of SR 1500 and NC-211 was discussed. Hydraulics said that while it is not shown on the half-sized plan sheets, channelization curb can be used in this area instead of roadway ditches to avoid excavation on this property outside of the existing right of way.

The existing box culvert shown on plan sheet 23 will be retained and extended.

No other comments were provided and the meeting was terminated.

ACTION ITEMS

- Hydraulics will review the drainage design and stormwater management plan with regional DWQ staff prior to the 4C meeting.
- Hydraulics will check velocities on pipe outlets near wetland areas to see if rip rap can be omitted where practical. Use of preformed scour holes will be evaluated.
- Hydraulics will check the constraints involved in connecting the wetland areas on both sides of the roadway at the existing soil road crossing on sheet 12. Required fill height over the proposed pipe and the resulting additional wetland impacts are a concern.
- Hydraulics, NCWRC, and USFWS will coordinate as to the type/size of an animal passage structure between the Carolina Bays located on sheets 13 through 15.
- Equalizer pipes will be buried in jurisdictional surface waters and wetlands.
- Roadway Design will investigate the use of channelization curb at the Midway Trading Post property.
- Roadway Design will address providing access to the gravel parking area and board walkway under the proposed ICW bridge.
- NCDOT will proceed with attempt to acquire the two large Carolina Bays located between – L- Sta. 120+50 Lt and 190+50 Rt.
- PEDDA will coordinate with USACE to determine the status and affect of the "land swap" deal and southern access point involving land developers and the Corps of Engineers on the northeast end of the ICW bridge.
- Hydraulics will coordinate with USACE in determining if the area below the north end of the ICW bridge is required for spoil disposal equipment to travel from one side of the roadway to the other .
- ONE will coordinate delineation of all wetlands near access points prior to the 4C meeting.

R-2245
**SECOND BRIDGE TO OAK ISLAND
 MERGER PROCESS 4b MEETING
 WEDNESDAY 21 JUL 04**

Sign in Sheet

NAME	ORGANIZATION	PHONE NUMBER
RAY LOVINGGOOD	NC DOT HYDRAULICS	250-4100
MAX PRICE	" "	250-4100
Omar Aziz	" Str Design	250-4066
Brett Feulner	PDEA - ONE	715-1988
Elizabeth Luck	"	715-1444
David Smith	NC DOT Precast	733-9425
David Chang	DOT-Hydraulics	250-4100
Emily Murray	^{DEPT} Str. Design	250-4068
Jamey Batts	Geotechnical Eng. Unit	250-662 -4710
David Teague	Geotechnical Eng. Unit	662-4710
DAVID TIMMY	USACE - WILMINGTON	910-251-4634
CHRIS MILITSCHER	USEPA - Raleigh	919-856-4206
Bill Arrington	NC DCM	252-528-0019
STEVE SOLLID	NC DCM	919-785-2293
BILL ZERMAN	HYDRAULICS	919-250-4100
KEITH LEWIS	STATTEC	919-851-4366
Troy Wilson	NCWILL	919-528-9886
LONNIE L. BROOKS	NC DOT - STRUCTURE DESIGN	919-250-4049
KEN AVERITTE	NC DENR - DWA	910-486-1541
Mason Herndon	NC DOT - Div 3	910-251-5724
Angie Pennack	USACE - Asheville FO	728-271-7980
John Hennessy	NC DOT NCDWA	919-733-5894
NICOLE THOMPSON	NC DWA	919-715-3415
STACY BALDWIN	PDEA	733-7844 x 264
Khaled AL-AKHAR	PDEA	733-7844 x 267
Jon Weatherbee	Roadway Design	250-4016
GLENN MUMFORD	ROADWAY DESIGN	250-4016
Libby Shapiro	Roadway Design	250-4016
Ron Allen	Roadway Design	250-4016
Joc Blair	DIV. 3	910-251-5724



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

Draft Minutes of the Interagency Permit Drawings Review
"4C" Meeting April 20, 2005

R-2245 (Second Bridge To Oak Island)
State Project 34407.1.1
New Route From SR 1104 (Beach Dr.) To NC 211
Brunswick County

Team Members: David Timpy, USACE (present)
Gary Jordan, USFWS (present)
Travis Wilson, NCWRC (present)
Brian Wrenn, NCDWQ (present)
Chris Militscher, EPA (present)
Rob Ayers, FHWA (not present)
Bill Arrington, NCDCM (present)
Steve Sollod, NCDCM (present)
Ron Sechler, NMFS (not present)
Stacy Baldwin, PDEA (present)
Mason Herndon, Divison 3 (present)
Joe Blair, Division 3 (present)
Glenn Mumford- Roadway Design (present)
Lonnie Brooks, Structures (present)
Elizabeth Lusk, ONE (not present)

Participants: (See attached list)

General Comments:

- Dave Timpy requested an explanation for the use of rip rap as energy dissipaters in the wetlands. Max Price explained that for the cross pipes, of which there are four on the project, the outlet velocities for the 10 year storm events will be much greater than non-erosive velocities and the receiving ground structure could not withstand the high velocity. The swales where the cross pipes are located are not well defined. They have no banks, but consist of large, low areas with flat side slopes. The lack of a defined channel means the tail

water depth is relatively low. As water flows through the pipe, it may begin at the upstream face flowing full, then the water level will drop to the "normal depth" within the pipe. As the depth drops, the velocity increases and with the quantity of flow these pipes are anticipated to convey, the velocities are high. The low tail water contributes to the problem. When the water depth in the pipe is higher than the tailwater, the velocity coming out of the pipe will be high; there is no high tailwater to buffer the flow. But with use of a rip rap energy dissipater pad, the Q2 and Q10 velocities will be non-erosive. Travis Wilson asked if the addition of parallel pipes would aid in reducing the outlet velocities to something less than an erosive velocity. Max Price answered that not a reasonable number of additional pipes would sufficiently reduce the outlet velocities to be non-erosive.

- Chris Militscher requested Q2 and Q10 flows and velocities, for pipes discharging to wetlands, be provided with the permit.
- Erosion Control devices in wetland impact areas should be described in the permit documentation. The items they will use can be placed within the mechanized cleared areas that are already delineated on the permit drawings. The impact of the devices are not to be calculated nor tabulated since the areas have already been accounted for by the mechanized clearing.
- Dave Timpy stated there is a difference between the recorded impact to wetlands in the FEIS and the NCDOT Wetland Permit Impact Summary. The current impact as determined by NCDOT is 17.81 acres (Permanent Fill In Wetlands) while the FEIS shows only 16.1 acres. Joseph Qubain of PDEA will obtain information from Stantec and coordinate with the Hydraulics Unit so site by site comparisons can be made.
- Dave Timpy requested a description of the bridge construction be placed in the written documentation portion of the permit package. The construction of the Intracoastal Waterway could effect navigation along the ICWW. He also stated a description of construction for the Davis Canal bridge also be included.
- Dave Timpy requested that the Intracoastal Waterway centerline, as supplied by the Corps of Engineers, appear on the both the plans and permit drawings.
- Dave Timpy requested NCDOT provide the community type for wetland and stream impacts.
- Bill Arrington asked NCDOT to add "Coastal Wetlands" to the Wetland Permit Impact Summary Sheets. Sites 1, 2, and 4 are the only locations of coastal wetlands.
- ONE will include a note in the permit application that rip rap at the ends of pipes in wetlands will be considered as permanent fill in wetlands.
- Max Price asked if there would be any objections to audio tape future 4c meetings. There were no objections.

Site Maps: (The 8.5in x 11in site maps created with the USGS quad maps used as a background): Dave Timpy requested a north arrow be placed on the four sheets.

Applicable Permit Plan Sheets: Dave Timpy requested tributaries crossed by the project be named and if the trib is unnamed, show on the plans the name of the first named tributary downstream.

Plan Sheet 4: Dave Timpy requested the overall length and elevation of the existing bridge over the Davis Canal be provided on either the permit drawings or the narrative.

For Sites 1 and 2, change the impact from mechanized clearing, which used a 10' offset width from the toe of slope, to "Hand Clearing". Decrease the offset from 10' to 5', as measured from the toe of slope.

Max Price requested clarification on the impact of keying in rip rap. The question: How is it measured? Should it be measured as an excavation in wetland *and* a permanent fill in wetland? Or, should the entire area, including the area keyed in, be tabulated as a permanent fill in wetland? The answer: Tabulate the final configuration. In this case, provide an area of fill in the wetland. Include the area keyed in.

Plan Sheet 7: Max Price explained relocating of the existing timber bulkhead on the southern bank of the Intracoastal Waterway will be required, due to the interference of the complex pile group with the bulkhead. The new bulkhead will be shown in the final permit drawings in plan and cross section.

Plan Sheets 8-9: Dave Timpy requested Max Price to check and verify the area of impact for Site 6. Dave calculates the area near to 0.8 acres as opposed to the 1.321 acres shown in the tables.

There was much discussion between several parties about the location of the access roads and whether or not they were to be "right in, right out" designs. It was resolved the design as shown on the plans met the commitments. The southern access point provides a full at-grade intersection with access points on both sides of the project route. The northern access point, located on the east side of the alignment, uses a "right in, right out" design. Two turn-around points are provided for this access point which will allow access for emergency vehicles while maintaining the "right in, right out" design.

Also, Allen Pope stated that DOT will not build a road within the access point areas. If a developer builds a road within the DOT Right of Way, it will be at his expense and by an encroachment permit.

Plan Sheet 12: Max Price discussed the issue of reconnecting the two wetland areas which are now divided by a logging road. Max stated it would be unfeasible to rejoin the two wetlands. The wetland on the eastern side of the road alignment is lower than the one on the western side, but the USGS quad map shows the water should flow from the east to the west. Recreating the

flow pattern would require filling the eastern side, thus burying the wetland. It would also disrupt the existing drainage pattern, which has been well established over a number of years.

Small animal passage pipe installation was discussed and it was agreed to backfill the pipes as they are installed. Backfill with soil to a depth of one foot throughout the entire length of the pipes. Joe Blair requested the plans and permit drawings include a note, in large type, stating this requirement.

Plan Sheet 16: Travis Wilson requested changing the equalizer pipe at Sta 179+00 to a small animal passage pipe.

Plan Sheet 17: Chris Militscher requested an equalizer pipe be placed within the wetland at Site 22.

Plan Sheet 18: Travis Wilson requested the equalizer pipes at stations 206+00 and 209+90 be relabeled as "Small Animal Pipe." As with the other small animal pipes, label it to be backfilled with one foot of soil and buried one foot.

Dave Timpy requested a reference note describing the extents of the wetlands.

Plan Sheet 19: For Sites 26 and 28, change the notation from "Mechanized Clearing" to "Hand Clearing."

Plan Sheet 20: Dave Timpy and Chris Militscher requested an additional equalizer pipe reconnect Sites 29 and 30.

Chris asked if the DI at station 233+00 could be piped to an upland area rather than to the wetland as currently designed. Ray Lovinggood will investigate and make the change, if possible.

Plan Sheet 21: There was much discussion about the drawdown effect to the wetland on the right side of -Y7- and the left side of -L- at Site 32. While it appears the existing ditch along the south (right) side of -Y7- (NC-211) has no drawdown effect, the team members agreed to determine the impact caused by the proposed project according to Dr. Wayne Skagg's methodology and account for the drained wetlands in the permit summary table.

Plan Sheet 23: The culvert shown on the permit drawings and roadway plan sheets is not the final design. After the permit drawings were mailed out, additional work ensued on designing a replacement culvert that can be built with staged construction. The staged construction will permit continuous two-way traffic through the project area. The final design will show a culvert with a longer length than what was shown on the drawings at this meeting. The final permit drawings will reflect the new culvert design and its impacts.

Carolina Bays, 10' conservation easement, and Animal Passage Easements

NCDOT is working on purchasing the two Carolina Bays. It is the opinion of the North Carolina Attorney's General Office that for the bays to be acquired by NCDOT, they must be purchased

and not condemned. In order to purchase, the current owner must be a willing seller and the property must have a "fair market" value. The 200' buffer for the Carolina Bays would be pursued as an "incidental purchase" to the Carolina Bays.

There was much discussion about the ability to condemn or not condemn. According to Fred Lamar of the AG office, condemnation for mitigation has not been done before. NCDOT does not have the authority. NCDOT can not condemn for offsite mitigation and this aspect of the project is similar to offsite mitigation. Nikki Thomson and Dave Timpy stated it was not mitigation but "avoidance and minimization." Representatives from NCDOT countered stating the alignment did avoid the bays and acquiring them would be for mitigation.

A question was asked if NCDOT would be allowed credit for the bays and the answer was yes, at a ratio of 10:1.

Then, Robert Hanson stated if there is a willing seller, a fair market price, and NCDOT is allowed credits, NCDOT will purchase the bays. He asked Nikki Thomson if it would be acceptable to purchase the bays if the 200' buffer around the exterior of the bays could not be bought and the answer was "yes."

Nikki Thomson clearly stated that if the bays are not purchased, there will be no permits issued for the project. Robert Hanson stated the verbiage in the concurrence points and Record of Decision was different and did not state the purchase was mandatory, but that NCDOT "...will make every effort to acquire the two Carolina bays on each side of the road plus 200 feet around each bay..."

Fred Lamar discussed the 10' conservation easement. He stated the legal opinion is that NCDOT cannot purchase this land outside of the roadway right of way then transfer the property to a third party. Options for maintaining an unbroken right of way along the project were presented by Art McMillan. They are:

- Label the roadway plans (and permit drawings) with a special label for the Right of Way line / Controlled Access lines.
- Make a provision of the permit that states any request to break the C/A fence and install a new access road will be denied by NCDOT.
- Link the requirements for refusal of all encroachment agreements with permits.
- Provide a Memorandum of Agreement (MOA) between NCDOT, DENR, USACE, and DCM.

Subsequent from the meeting, the following note has been added to the plans and is in the review process as these minutes are being prepared.

***NO REVISIONS CAN BE MADE TO THE CONTROL
OF ACCESS WITHOUT APPROVAL OF NCDOT,
DENR, AND USACE.***

Chris Militscher and others requested written proposals for the options.

For the animal crossing easements, again, Fred Lamar and Robert Hanson stated NCDOT may not be able to fulfill this comment due to the policy. It wasn't clear if it was a policy or a legal issue. What may be possible is to tie the permit to the need for the animal crossing easement. Fred didn't have an answer if condemnation was available to acquire the land. Travis Wilson will write the permit conditions requiring granting of the permit will be tied to the purchase of the animal access easements. He stated that if the bays can't be purchased, then there would be no need for the animal access easements.

The last item discussed during the meeting was a contingency plan. If the Carolina bays can't be bought, or if the 200' easement around the bays can't be purchased, or the animal access easement can't be bought, what is the contingency plan? It was noted the Record of Decision does not have a contingency plan and Alternative "B", the selected alternative, is the only option available.

1/2

HYDRAULIC DESIGN (4B) / PERMIT DRAWINGS (4C) REVIEW

Location: Location & Survey Conference Room, DOT Century Center

TIP NO: R-2245 DATE: 20 APR 05

COUNTY: BRUNSWICK ROUTE: _____

NAME	AGENCY/ UNIT	PHONE
Stacy Baldwin	PDEA	733-7844 x2604
Earlene Thomas	Preconstruction	715-0797
Lennie I. Brooks	NCDOT - STRUCTURE DIV.	919 250 4049
Joe Blair	DIV 3	910 251 5724
Joseph Dubain	PDEA	733-7844 x209
Jo Todd Kennedy	PDEA/ONE	715-1458
Allen Pope	DN.3 DOT	(910)251-5724
Mike Robinson	CONST UNIT	919 522 4337
Mason Herndon	DIV 3 OEO	910 251-5724
TATIA WHITE	ROADWAY	919 250-4016
Jeff Walston	Roadside Env.	733-7920
Mark Staley	" "	" "
Lisa W. Shapiro	Roadway Design	919-250-4016
GUEEN MUMFORD	ROADWAY DESIGN	(919) 250-4016

Brett Fein V DOT ONE 715-1988

CHRIS MILITZER USEPA - Raleigh 856-4206

Christina Breen NCDNR 733 9004

2/2

(CONTINUED)

TIP NO: R-2245

NAME	AGENCY/ UNIT	PHONE NO
GEORGEY HOLMES	DOT - STRUCTURES	250-4051
Emily Murray	DOT - Structure Design	250-9067
Omar Azizi	" " "	250-4066
ART McMICHAEL	DOT HOIB	250 9001
Leilani Pauah	NCDOT PDEA ONE	715-1457
RAY LOVINGGOOD	NCDOT HYDRAULICS	250.4100
Bill Zeaman	NCDOT HYDRAULICS	250-4100
DAVID CHANG	" "	" "
Scott Conklyn	NCDOT - Agi office	733-3316
Bill Arrington	NC DCM	252-528-0019
STEVE SOLLID	NC DCM	919-733-2293 x230
Gary Jordan	USFWS	919-856-4520 x.32
MAX PRICE		
Rob Hanson	NCDOT PDEA	733-7844 x 226
FRED LAMAR	NCDOT TRANS SECTION	733-3316
Brian Wann	DWA	733-5715

DAVE TIMPA USACE 910-251-4634
 Travis Wilson NCDWA 919-528-9886
 NIKKI THOMPSON NCDWA 919. 715. 3415



October 9, 2006

Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
North Carolina Department of Transportation, PDEA Branch
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: Revised EEP Mitigation Acceptance Letter:

R-2245, Second Bridge to Oak Island, Brunswick County

Reference: EEP Mitigation Acceptance Letters dated February 28, 2006 and March 1, 2006, issued to NCDOT and USACE, respectively

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the required non-riparian wetland and stream mitigation for the subject project. Based on the information supplied by you in letter dated September 14, 2006, the impacts are located in CU 03040207 of the Lumber River Basin of the Southern Outer Coastal Plain Eco-region (SOCP), and are as follows:

Non-Riparian Wetlands:	21.522 acres
Stream:	34 feet

This mitigation acceptance letter replaces the mitigation acceptance letter issued on February 28, 2006. Due to further avoidance and minimization by the NCDOT, the 0.279 acre of impact to coastal marsh wetland is no longer anticipated; however, the non-riparian impact amount increased by 0.086 acre (original accepted impact amount - 21.436 acres). Therefore, EEP will not provide any coastal marsh wetland mitigation for the above referenced project.

Compensatory non-riparian wetland and stream mitigation for this project will be provided in accordance with the Memorandum of Agreement between the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, signed on July 22, 2003 (Tri-Party MOA). EEP commits to implementing sufficient compensatory non-riparian

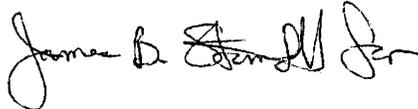
Restoring... Enhancing... Protecting Our State



wetland and stream mitigation to offset the impacts associated with this project by the end of the MOA Year in which this project is permitted, in accordance with Section X of the Tri-Party MOA. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

A handwritten signature in black ink, appearing to read "William D. Gilmore, P.E.", written in a cursive style.

William D. Gilmore, P.E.
EEP Director

cc: Mr. David Timpy, USACE-Wilmington
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: R-2245 Revised



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

March 10, 2006

Commander, Fifth Coast Guard District (obr)
LANTAREA
Bridge Administration
Federal Building
431 Crawford Street
Portsmouth, VA 23704-5004

Attn: Mr. Waverly Gregory
Chief, Bridge Administration

SUBJECT: Brunswick County, Construction of a Second Bridge to Oak Island,
WBS Number 34407.1.1, State Project No. 8.1570601, Federal Aid Nos. STP-
1105 (6), TIP R-2245, Division 3.

Dear Mr. Gregory:

Application is hereby made by the North Carolina Department of Transportation (NCDOT) for approval by the Commandant, U.S. Coast Guard, of the location and plans to construct a new roadway on new location in Brunswick County, known as the second bridge to Oak Island. The proposed project starts at SR 1104 (Beach Drive) on Oak Island and will continue to NC 211, west of Southport. The proposed project consists of constructing a four lane median divided facility on 150 feet (46 meters) of right-of-way with controlled access. The project includes replacement of the existing Bridge No. 206 over Davis Canal (Davis Creek) on Beach Drive and construction of a new bridge over the Atlantic Intracoastal Waterway. The project length is approximately 4.5 miles.

Pursuant to the project commitment included in the Final Environmental Impact Statement (FEIS), the vertical clearance of the new bridge over the Atlantic Intracoastal Waterway at mean high water level will be a minimum of 65 feet and the horizontal clearance will be a minimum of 90 feet. A minimum 140 feet navigation opening, without using a fender system for vessel impact, will be provided 70 feet from the channel centerline on each side. The proposed bridge will be designed and constructed so as to not interfere with the operation and maintenance of the navigation channel in the Atlantic Intracoastal Waterway. Channel centerline coordinates have been obtained from the USACE. The proposed bridge will be designed for vessel impact.

Navigational lighting will be provided. The NCDOT requested Advance Approval for the proposed replacement of Bridge No. 206 over Davis Canal (Creek) in a letter to the U.S. Coast Guard dated August 30, 2005. A copy of this request letter is enclosed with this permit application.

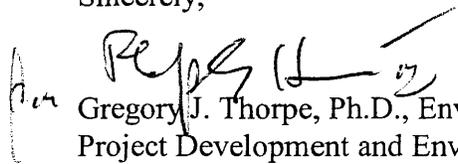
Legal authority for the bridges is found in the General Bridge Act of 1946. Federal funds will be utilized for this project. However, the U.S. Army Corps of Engineers must approve this project under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The N.C. Division of Water Quality must approve this project under Section 401 of the Clean Water Act. The NCDOT is preparing and will submit a Joint Permit Application for both State and Federal Permits.

The NCDOT is also required to obtain a permit from the N.C. Division of Coastal Management (NCDOT) for major development in areas of environmental concern (AECs). It is anticipated that a formal CZM consistency statement is not required from the NCDOT since their position on consistency will be part of the NCDOT's Coastal Area Management Act (CAMA) Major Development Permit. Copies of all appropriate federal and state permits will be forwarded to your office once they are obtained.

The NCDOT analyzed the potential environmental impacts of the project in an FEIS that was signed by the Federal Highway Administration (FHWA) on April 30, 2004 and Record of Decision that was signed on October 20, 2004. The FHWA has determined that this project will not have a significant effect on the human environment. The environmental impacts of the project are listed on pages 2-17 through 2-25 of the FEIS. The names and addresses of the adjacent property owners are included with this application. Also, please find enclosed four originals of the U.S. Coast Guard drawings for the project.

Please initiate review of the proposed project for authorization under an U.S. Coast Guard Permit. It is requested that any correspondence from your office regarding this project include the NCDOT TIP Number (R-2245). Should you have any questions regarding this information, please contact Mr. Brett Feulner at 919-715-1488.

Sincerely,



Gregory J. Thorpe, Ph.D., Environmental Management Director
Project Development and Environmental Analysis Branch

- Encl.: (1) Four copies of a vicinity map and drawings of the bridge.
(2) One copy of the Environmental Impact Statement and Record of Decision.
(3) Addresses of the adjacent property owners.
(4) One copy of the March 26, 2002 letter from the U.S. Coast Guard regarding the proposed vertical clearance of the bridge and responses from NCDOT.
(5) One copy of the request dated August 30, 2005 for Advance Approval for the proposed replacement of Bridge No. 206 over Davis Canal (Creek)

cc list:

w/o attachment

Mr. John Hennessy, NCDWQ

Mr. Travis Wilson, NCWRC

Ms. Becky Fox, USEPA – Whittier, NC

Mr. Ronald Mikulak, USEPA – Atlanta, GA

Mr. Clarence W. Coleman, P.E., FHWA

Mr. Gary Jordan, USFWS

Mr. Ron Sechler, NMFS

Mr. Michael Street, NCDMF

Mr. Steve Sollod, NCDCM

Mr. Bill Arrington, NCDCM

Dr. David Chang, P.E., Hydraulics

Mr. Mark Staley, Roadside Environmental

Mr. Greg Perfetti, P.E., Structure Design

Mr. H. Allen Pope, P.E., Division 3 Engineer

Mr. Mason Herndon, Division 3 Environmental Officer

Mr. Jay Bennett, P.E., Roadway Design

Mr. Majed Alghandour, P. E., Programming and TIP

Mr. Art McMillan, P.E., Highway Design

Mr. Scott McLendon, USACE, Wilmington

Mr. Joseph Qubain, P.E., PDEA

Mr. Carl Goode, PE, Human Environment Unit Head



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

November 19, 2003

Brett Feulner
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Feulner:

This letter is in response to your letter of November 10, 2003 which provided the U.S. Fish and Wildlife Service (Service) with the biological conclusions of the North Carolina Department of Transportation (NCDOT) for 15 federally threatened and endangered species for the proposed second bridge to Oak Island from SR 1104 (Beach Drive) to NC 211, Brunswick County, North Carolina (TIP No. R-2245). The 15 federally protected species are as follows:

Common Name	Scientific Name	Biological Conclusion
Eastern cougar	<i>Puma concolor cougar</i>	No effect
West Indian manatee	<i>Trichechus manatus</i>	MA-NLAA*
Wood stork	<i>Mycteria americana</i>	MA-NLAA
Piping plover	<i>Charadrius melodus</i>	No effect
Bald eagle	<i>Haliaeetus leucocephalus</i>	MA-NLAA
Red-cockaded woodpecker	<i>Picoides borealis</i>	MA-NLAA
American alligator	<i>Alligator mississippiensis</i>	N/A
Loggerhead sea turtle	<i>Caretta caretta</i>	MA-NLAA
Green sea turtle	<i>Chelonia mydas</i>	MA-NLAA
Leatherback sea turtle	<i>Dermochelys coriacea</i>	MA-NLAA
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	MA-NLAA
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	MA-NLAA

Cooley's meadowrue	<i>Thalictrum cooleyi</i>	MA-NLAA
Seabeach amaranth	<i>Amaranthus pumilus</i>	No effect
Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	MA-NLAA

*MA-NLAA - May affect, not likely to adversely affect

These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

Due to the absence of large tracts of habitat, and given the likelihood that the species has been extirpated from the area, the Service concurs that the project will have no effect on the eastern cougar.

Assuming adherence to the **Precautionary Guidelines for General Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina**, the Service concurs that the project may affect, but is not likely to adversely affect the West Indian manatee.

Given the migratory nature and high mobility of the species, the Service concurs that the project may affect, but is not likely to adversely affect the wood stork.

Due to the lack of habitat, the Service concurs that the project will have no effect on the piping plover.

Based on the negative results of surveys and the urbanization of areas adjacent to potential habitat, the Service concurs that the project may affect, but is not likely to adversely affect the bald eagle.

A 1996 survey for red-cockaded woodpeckers (RCW) identified RCW activity near the project corridor. A 2000 survey revealed one active cavity tree near the corridor. A foraging analysis indicated that foraging habitat within a half mile radius of the active tree was insufficient to support an RCW colony. During aerial and ground surveys conducted June 23-25, 2003, no active cavities, abandoned cavities or active start holes were identified. The active tree previously identified in 2000 had been removed due to residential development. Based on the recent negative survey results, the Service concurs that the project may affect, but is not likely to adversely affect the red-cockaded woodpecker.

The American alligator is listed as threatened due to similarity of appearance and thus is not subject to section 7 consultation.

Due to the lack of nesting habitat within the project area, the Service concurs that the project may affect, but is not likely to adversely affect loggerhead, green, leatherback and Kemp's ridley sea turtles. However, please note that this concurrence only applies to the nesting habitat for sea turtles. The Service has jurisdiction for sea turtles only where they occur on land (i.e. nesting beaches). The National Marine Fisheries Service (NMFS) has jurisdiction for sea turtles when

they occur in water. Since potential habitat occurs for sea turtles in the Atlantic Intracoastal Waterway, the NMFS should be consulted.

Since the NMFS has complete jurisdiction for the shortnose sturgeon, the Service will not comment on this species.

Due to the lack of habitat, the Service concurs that the project will have no effect on seabeach amaranth.

Due to the negative results of plant surveys conducted June 16-18, 2003, the Service concurs that the project may affect, but is not likely to adversely affect Cooley's meadowrue and rough-leaved loosestrife.

We believe that the requirements of section 7 (a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,



Garland B. Pardue, Ph.D.
Ecological Services Supervisor

cc: Dave Timpy, USACE, Wilmington, NC
David Franklin, USACE, Wilmington, NC
John Hennessy, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, FL 33702
(727) 570-5312; Fax 570-5517
<http://caldera.sero.nmfs.gov>

MAR 24 2004

F/SER3:SKB

Stacy Baldwin
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Ms. Baldwin:

This is in response to your October 6, 2003, letter regarding the construction of a second bridge to Oak Island in Brunswick County, North Carolina (TIP No. R-2245). We have reviewed the material submitted by the North Carolina Department of Transportation (NCDOT), with respect to possible effects on the species listed and the critical habitat designated under the Endangered Species Act (ESA) under the purview of the National Marine Fisheries Service (NOAA Fisheries). This consultation is being conducted with the NCDOT as designated by the Federal Highways Administration, North Carolina Division (letter dated April 8, 2003) pursuant to 50 CFR 402.08.

Construction of the bridge to Oak Island will consist of inserting concrete piles into the substrate via either driving or jetting. Barges will be utilized in the construction. The bridge will connect S.R. 1104 to N.C. 211 by crossing over the Atlantic Intracoastal Waterway (AIWW). Project location is nearby (ca. 8½ miles) the mouth of the Cape Fear River. The endangered shortnose sturgeon (*Acipenser brevirostrum*) is known to inhabit the Cape Fear River. Four federally-protected species of sea turtles (green, *Chelonia mydas*; leatherback, *Dermochelys coriacea*; loggerhead, *Caretta caretta*; and Kemp's ridley, *Lepidochelys kempii*) are often found in the project location in the AIWW and nearby the project location in the Atlantic Ocean. Therefore, NOAA Fisheries is concerned about potential project impacts on shortnose sturgeon and sea turtles.

The NCDOT proposes and is willing to adopt the following measures to avoid harm to species in the project area:

1. In-water construction shall be conducted only between July 1 and February 14 (which is outside the anadromous fish spawning period of February 15 through June 30), to preclude adverse effects on spawning behavior and sensitive early life stages, and
2. Avoid impacts to water resources and aquatic communities by strictly adhering to guidelines described in three best management procedures (*Best Management Practices for Protection of Surface Waters*, NCDOT 1997; *Stream Crossing Guidelines for Anadromous Fish Passage*, NCDOT 1999; and *North Carolina Erosion and Sediment Control Planning and Design Manual*, NCDENR 1993) that reduce turbidity and minimize runoff.



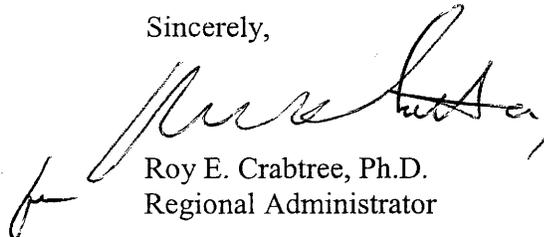
Furthermore, construction methods used for bridges (e.g., pile driving or jetting-in, and construction barge anchoring) have not been shown to adversely affect sea turtles or shortnose sturgeon; both species are highly mobile and will likely avoid the area due to project activity and noise. Normal behavior patterns of listed species are not expected to be significantly disrupted by the proposed action as the project area is not known to serve as a feeding, breeding, migratory, or sheltering area for either sea turtles or shortnose sturgeon. Therefore, NOAA Fisheries concludes that the project, when designed to include the protective measures listed above that reduce project impacts to discountable levels by restricting in-water construction, protecting migratory pathways, and protecting water quality and clarity, is not likely to adversely affect shortnose sturgeon or listed sea turtles.

This concludes the NCDOT's consultation responsibilities with NOAA Fisheries under section 7 of the ESA for the second bridge to Oak Island project. Be advised that a new consultation must be initiated if a take occurs or new information reveals effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. Potential project impacts utilizing methodology not considered in the consultation will require additional ESA section 7 consultation with NOAA Fisheries' Protected Resources Division.

The action agency is also reminded, in addition to its protected species/critical habitat consultation requirements with NOAA Fisheries' Protected Resources Division pursuant to section 7 of the ESA, prior to proceeding with the proposed action the action agency must also consult with NOAA Fisheries' Habitat Conservation Division (HCD) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act's requirements for essential fish habitat (EFH) consultation (16 U.S.C. 1855 (b)(2) and 50 CFR 600.905-600.930, subpart K). Consultation is not complete until EFH and ESA concerns have been addressed. If you have any questions about EFH consultation for this project, please contact Mr. Ron Sechler, HCD, at (252) 728-5090.

We look forward to continued cooperation with the NCDOT in conserving our endangered and threatened resources. If you have any questions, please contact Dr. Stephania Bolden, fishery biologist, at (727) 570-5312, or by e-mail at stephania.bolden@noaa.gov.

Sincerely,



Roy E. Crabtree, Ph.D.
Regional Administrator

cc: F/SER4 (R. Sechler)
Ref: I\SER\2004\01320
File: 1514-22.L (NCDOT)

MEMORANDUM OF UNDERSTANDING

Among the

THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

and

THE FEDERAL HIGHWAY ADMINISTRATION

and

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

and

THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

This Memorandum of Understanding (“MOU”) is made on the last day entered below among the North Carolina Department of Transportation (“NCDOT”), the Federal Highway Administration (“FHWA”), the United States Environmental Protection Agency (“USEPA”), and the North Carolina Department of Environment and Natural Resources (“NCDENR”) (collectively referred to hereinafter as “the Parties”).

GENERAL RECITALS

WHEREAS, the FHWA and NCDOT approved the selected alternative for TIP project R-2245 (hereinafter, “the Project”) as part of the Record of Decision executed by FHWA and NCDOT on October 20, 2004 and November 10, 2004, respectively;

WHEREAS, the approved alternative for the Project is described as widening SR 1105 (Middleton Avenue) between the Atlantic Ocean and the Atlantic Intracoastal Waterway (“AIWW”), constructing a new bridge over Davis Canal and a new high-rise bridge over the AIWW to the mainland, and constructing a roadway on new location from the new high-rise bridge to NC 211 at SR 1500 (Midway Road);

WHEREAS, pursuant to the Merger 01 Process, certain federal and state resource and regulatory agencies participate with NCDOT in the early planning process for select NCDOT projects;

WHEREAS, pursuant to N.C.G.S. §§ 136-18(5), 136-18(29) and 136-93, NCDOT and the Board of Transportation are authorized to issue policies and rules governing the permitting of street and driveway access to State highways;

WHEREAS, pursuant to the Merger 01 process and interagency discussion among the Parties, NCDENR and USEPA have determined that maintaining control of access along portions of the right-of-way of the Project is necessary to minimize indirect effects to wetlands and water quality within the study area, which they believe may result from the Project; and

WHEREAS, NCDOT and the FHWA agree that the control of access limits are important to maintaining the safety, mobility, and operational integrity of the project.

NOW THEREFORE, the Parties agree as follows:

1.0 NCDOT Authority and Procedure. The Parties agree that NCDOT is given the statutory authority to review street and driveway access requests pursuant to N.C.G.S. §§ 136-18(5), 136-18(29) and 136-93, and has an established procedure for determining whether to grant street and driveway access to state highways.

2.0 Project Control of Access Limits and Special Designation.

2.1 Control of Access – Control of access limits subject to the MOU shall begin at the northern terminus of the Atlantic Intracoastal Waterway Bridge (*approximate station –L- 63+00*) and continue to the intersection of the NC 211 southern right of way boundary (*approximate station –L- 248+00*).

2.2 Access Breaks – Three designated access breaks on the mainline will be allowed for access roads. NCDOT may allow the following breaks in access without complying with paragraph 3.0 below:

Access	Centerline of Access Break	East or West of Mainline
Access 2	–L- Station 72+65.00	West
Access 3	–L- Station 192+55.00	East
Access 4	–L- Station 151+55.00	West

The length of control of access along each access road is as shown on the attached Exhibits 2 through 4. It is understood by all parties that the access roads may be longer than what is shown on Exhibits 2 through 4; however, the control of access limits will end at the locations depicted on the Exhibits. The right of way width for each access road identified in the table above shall be 100 feet total, 50 feet on each side of its centerline. The width of the access break will be wider than 100 feet at the mainline, and may be wider than what is shown on the Exhibits, to accommodate sight triangles, or as necessary for safety or traffic engineering reasons. This right of way will have the same special control of access designation as the mainline (see paragraph 2.3 below), and any request for future access breaks will be subject to paragraph 3.0 of this Agreement.

Access 2 is a reserved future access break. All parties agree that NCDOT may allow this break in access, without complying with paragraph 3.0 of this Agreement, subject to conditions established in the permit issued by the United States Army Corps of Engineers for the Project. Access 2 is identified by a note on the NCDOT plans that states: "A future control of access break has been reserved left of -L- Sta. 72+65.00. Any access break at this location shall be in accordance with specific guidelines set forth in the Memorandum of Understanding between NCDOT, FHWA, NCDENR and USEPA and permit conditions prescribed by USACE."

A gate and gravel driveway will be installed east of -L- Station 73+00.00 to allow access by the United States Army Corps of Engineers to property over which the Corps holds an easement.

2.3 Special Designation – NCDOT agrees to provide special designation of the subject Control of Access limits on the NCDOT plans as "Special Control of Access" with a unique symbol and a legend referencing this agreement between the Parties. (See Exhibit 1, Sample Special Control of Access Designation)

NCDOT agrees to include a description of the Control of Access limits in each deed it records for properties that fall within the area described in this paragraph 2.0. NCDOT further agrees that it will contact, in writing, the nine landowners adjacent to the controlled access area from which NCDOT purchased or condemned property for the Project, after their right-of-way claims are finalized, and request that said landowners include deed restrictions on their properties to indicate the Control of Access limits.

3.0 Review of Requests to Break Control of Access. As part of the right-of-way acquired by NCDOT for the Project, NCDOT has also acquired the right to control the access to such right-of-way along portions of the project. Accordingly, it is the intent and desire of NCDOT to maintain the integrity of the roadway facility by retaining the control of access limits described in paragraph 2.0.

3.1 Initial Review and Consideration by NCDOT – If a future request is made to break the existing control of access limits along the Project at any location other than those specified in paragraph 2.2 above, NCDOT agrees to follow the Operating Procedures (hereinafter, "the Procedures") of the NCDOT Right of Way Disposal and Control of Access Committee (hereinafter, "the NCDOT Committee"), except to the extent the Procedures differ from the process described herein. The person applying for the control of access break must first submit a request to the District Engineer, who will gather information about the request and forward it to the Division Engineer. The Division Engineer may deny the request. If the Division Engineer does not deny the request, the request shall be forwarded to the Chairperson of the NCDOT Committee. The NCDOT Committee will review the request. If the NCDOT Committee does not deny the request, the request shall be forwarded to the NCDOT State Highway Administrator, the Division Administrator of the FHWA, the Deputy Regional

Administrator of the USEPA, and the Chief Deputy Secretary for NCDENR (collectively referred to hereinafter as the "Parties' Executives").

3.2 FHWA, USEPA and NCDENR Consideration – Once the request has been transmitted to the Parties' Executives, the NCDOT State Highway Administrator, or his designee, will initiate a meeting among the Parties' Executives, or their designees, to review the request. The Parties' Executives will consult and discuss the control of access break request. Any objection by NCDENR or USEPA to the control of access break request will be based upon their respective agency's expertise and consistent with impact avoidance and minimization purposes, and must be presented in writing to the other Parties' Executives. All Parties agree that in order for a break in the control of access to be approved, all Parties must concur and each Party must document concurrence in written form. NCDOT will notify the requesting party of the approval or denial of the request for a break in the control of access.

4.0 **Notices.** All notices required under this MOU shall be in writing and sent via U.S. Mail, postage pre-paid, by national courier service or hand delivered to the addresses set out below. Notice shall be deemed delivered and given when mailed, if mailed, or when delivered by hand or by courier, upon receipt.

Notice to NCDOT

State Highway Administrator
1536 Mail Service Center
Raleigh, NC 27699-1536

Notices to FHWA

Division Administrator, NC Division
310 New Bern Avenue, Suite 410
Raleigh, NC 27601-1418

Notices to USEPA

Deputy Regional Administrator
USEPA Region 4
61 Forsyth Street
Atlanta, Georgia 30303-8960

Notices to NCDENR

Chief Deputy Secretary
1601 Mail Service Center
Raleigh, NC 27699-1601

5.0 **Amendments.** This Agreement may be amended only by mutual agreement of the Parties. All amendments must be in writing and executed by all Parties.

6.0 **Termination.** This MOU may be terminated upon written agreement of the Parties.

7.0 **Severability and Survival.** If any of the provisions contained in this MOU are held illegal, invalid or unenforceable, the enforceability of the remaining provisions shall not be impaired thereby.

8.0 Funding. Nothing in this Agreement obligates any of the parties to pay any monies to any other party to this Agreement. In the event that a party to this Agreement enters into a contract, grant or Interagency Agreement with another party to this Agreement, the validly executed contract, grant or Interagency Agreement shall control the disbursement of any funding, the applicable scope of work and the resolution of any disputes involving the contract, grant or Interagency Agreement.

9.0 Authorities. No Provision or requirement in this Agreement shall affect or otherwise alter any of the delegated legal authorities of any of the signatory agencies.

This Agreement shall be effective on the date of the last signature below.

IN WITNESS WHEREOF, the Parties have each executed this Agreement, this the _____ day of _____, 2006.



Len Sanderson
NCDOT, State Highway Administrator

12-20-06

Date

John Sullivan, III
FHWA, Division Administrator

Date

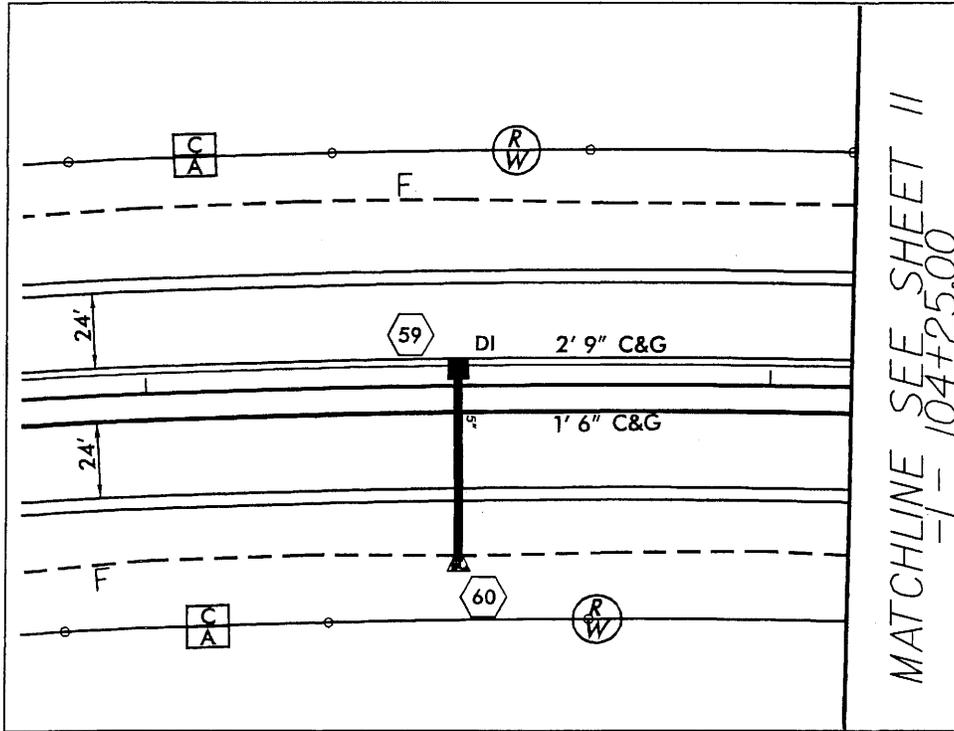
A. Stanley Meiburg
USEPA, Deputy Regional Administrator

Date

Dempsey Benton
NCDENR, Chief Deputy Secretary

Date

EXHIBIT 1



SPECIAL CONTROL OF ACCESS DESIGNATION.

NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA, AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

EXHIBIT 2

FUTURE RESERVED CONTROL OF ACCESS CORRIDOR ACCESS ROAD # 2 (ACC2)

SPECIAL CONTROL OF ACCESS DESIGNATION

NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

NON-JURISDICTIONAL BORROW POND

INTRACOASTAL RIGHT-OF-WAY OF PERPETUAL EASEMENT

NOTES:

1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.

2) A FUTURE CONTROL-OF-ACCESS BREAK HAS BEEN RESERVED LEFT OF STATION 72+65.00. ANY ACCESS BREAK AT THIS LOCATION SHALL BE IN ACCORDANCE WITH SPECIFIC GUIDELINES SET FORTH IN THE MEMORANDUM OF UNDERSTANDING BETWEEN NCDOT, FHWA, NCDENR AND USEPA AND PERMIT CONDITIONS PRESCRIBED BY USAGE.

NOT TO SCALE

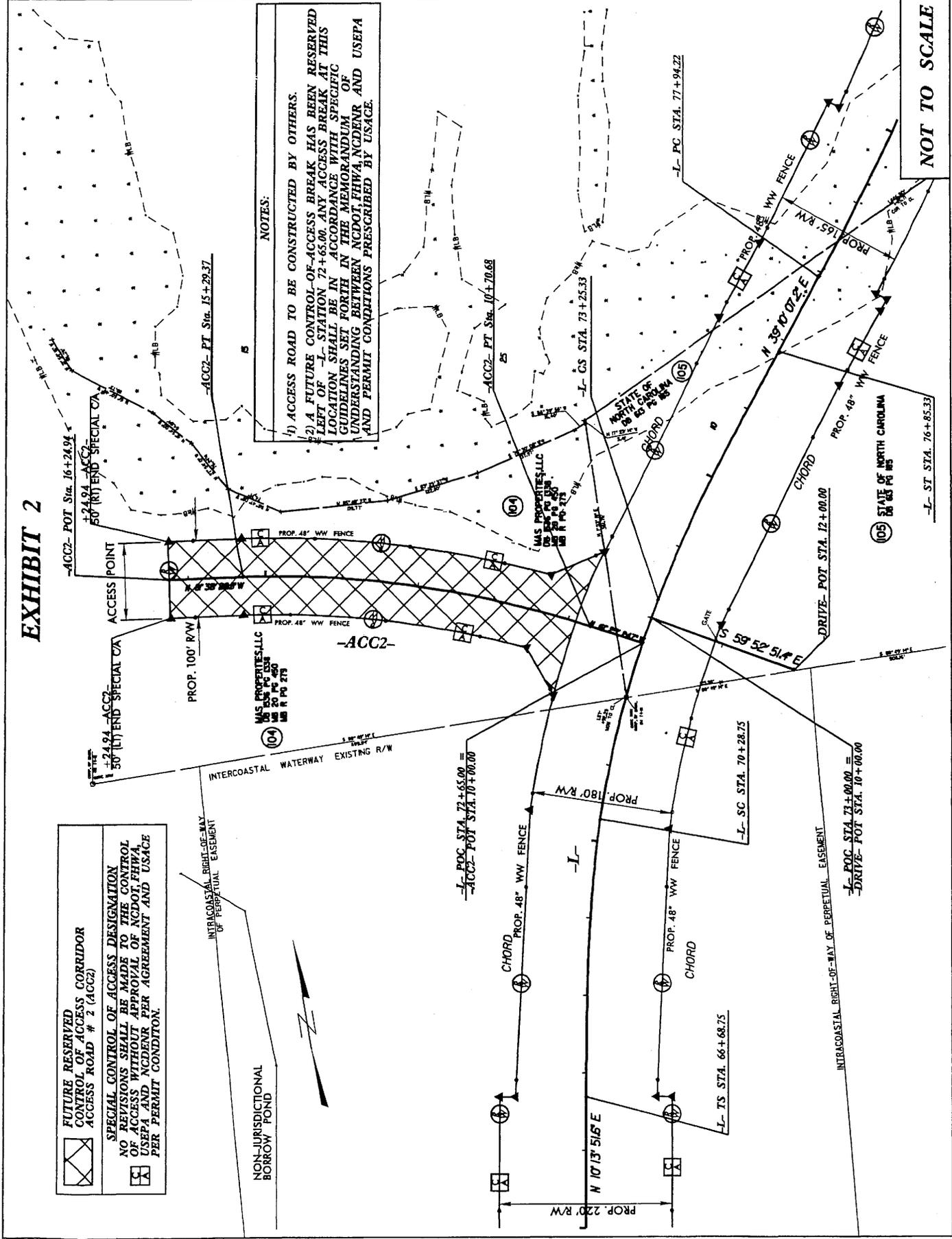
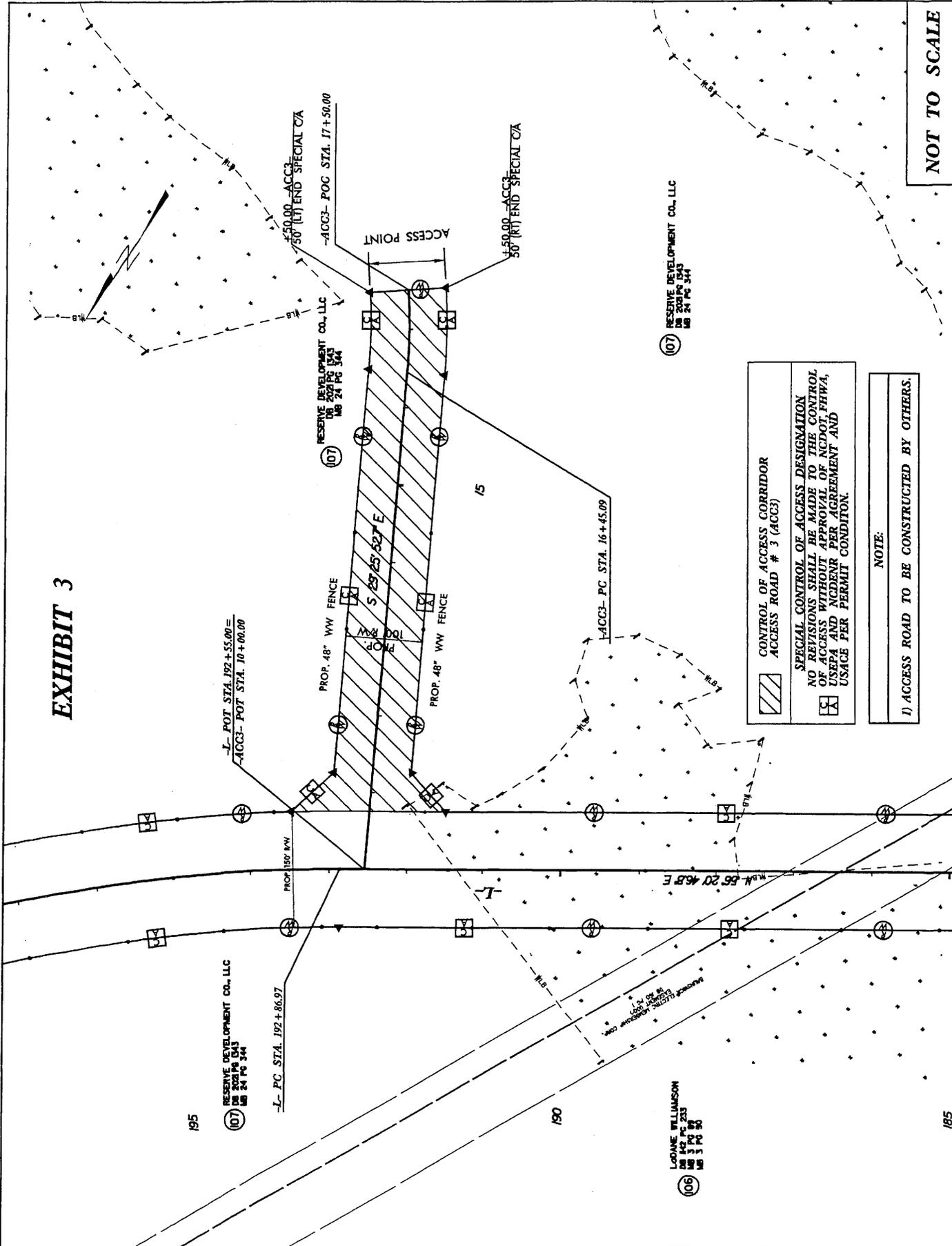


EXHIBIT 3



195

(107) RESERVE DEVELOPMENT CO., LLC
 IN 2024 PG 1543
 MB 24 PG 344

(106) LOGANE WILLIAMSON
 IN 2024 PG 233
 MB 3 PG 57

(107) RESERVE DEVELOPMENT CO., LLC
 IN 2024 PG 1543
 MB 24 PG 344

CONTROL OF ACCESS CORRIDOR
 ACCESS ROAD # 3 (ACC3)

SPECIAL CONTROL OF ACCESS DESIGNATION
 NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND INCIDENT PER AGREEMENT AND USAGE PER PERMIT CONDITION.

NOTE:
 1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.

NOT TO SCALE

EXHIBIT 4

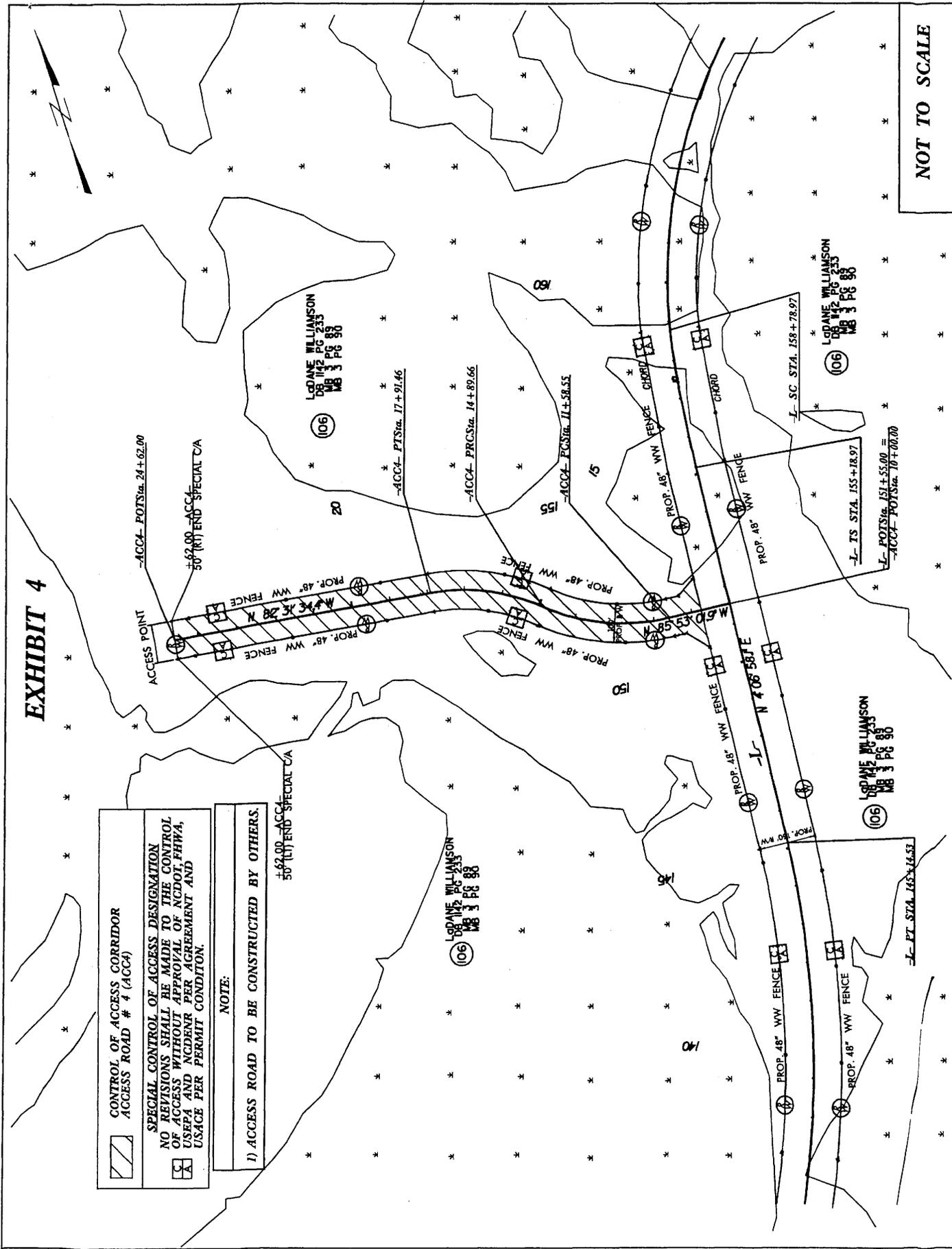
CONTROL OF ACCESS CORRIDOR
ACCESS ROAD # 4 (ACCA)

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,
USEPA AND NCDENR PER AGREEMENT AND
USAGE PER PERMIT CONDITION.

NOTE:

1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.

NOT TO SCALE



STATE OF NORTH CAROLINA

COUNTY OF BRUNSWICK

AGREEMENT

This AGREEMENT (hereinafter, "Agreement") is entered into this 22nd day of December, 2006, by and between RESERVE DEVELOPMENT CO., LLC (hereinafter, "RDC"), and THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (hereinafter, "NCDOT").

WITNESSETH:

WHEREAS, RDC acquired certain real property more particularly described in Deed Book 2021, Page 1343, and Deed Book 2021, Page 1345 of the Brunswick County Register of Deeds Office (such property, excepting portions thereof as have been subsequently conveyed by RDC, is hereinafter referred to as the "Property");

WHEREAS, RDC desires to grant, and NCDOT desires to hold, a conservation easement over approximately 400 acres of the Property, shown as "North Bay," "East Bay," "Wildlife Corridor 1," and "Wildlife Corridor 2" on Exhibit A attached hereto (hereinafter, the "Conservation Easement Area"). The Conservation Easement Area shall be more definitely determined after delineation of wetlands is complete and after a survey of the boundaries is complete, as discussed below in paragraph 1.

WHEREAS, the Conservation Easement Area provides natural wildlife habitat for a wide variety of land, air and aquatic species, and many of these species are of great importance to RDC and the people of North Carolina;

WHEREAS, NCDOT plans to construct a controlled access highway connecting North Carolina State Highway 211 to the Town of Oak Island, Brunswick County, thereby providing a second access point to the Town of Oak Island (hereinafter, the "Proposed Highway");

WHEREAS, the Proposed Highway will be located adjacent or in close proximity to the Conservation Easement Area;

WHEREAS, NCDOT has agreed to allow RDC to access the Proposed Highway via a controlled access corridor in exchange for the grant to NCDOT of a perpetual Conservation Easement over the Conservation Easement Area, thereby restricting and limiting the use of land within the Conservation Easement Area substantially according to the terms and conditions set forth in the conservation easement form attached hereto as Exhibit C; and,

WHEREAS, RDC has agreed to the conditions set forth below regarding access to the Proposed Highway.

NOW, THEREFORE, in consideration of the foregoing recitals, the mutual agreements set forth below and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. **Conservation Easement.** RDC hereby agrees to grant to NCDOT a perpetual Conservation Easement for the areas identified on Exhibit A as "NorthBay," "EastBay," "Wildlife Corridor 1," and "Wildlife Corridor 2," the Conservation Easement Area. The parties agree that said Area shall be more definitively determined after delineation of wetlands is complete and after a survey of the boundaries is complete. The terms and conditions of the Conservation Easement shall be substantially similar to the terms and conditions set forth in the conservation easement form attached hereto as Exhibit C. However, both parties understand and agree that Exhibit C will be provided to the United States Army Corps of Engineers (hereinafter, "USACE") and to the North Carolina Department of Environment and Natural Resources, Division of Water Quality (hereinafter, "DWQ"), in connection with applications for permits required for the Proposed Highway pursuant to the Clean Water Act. If either the USACE or DWQ request changes to the language of the easement in order to grant the permit, both parties agree they will revise the Conservation Easement accordingly, provided that the Conservation Easement shall not be changed or revised in any way that would adversely affect or limit RDC's ability or right to develop its land adjacent to the Conservation Easement Area.

2. **Controlled Access Road.**

(a) In exchange for the grant of the Conservation Easement, NCDOT hereby agrees to allow RDC to access the Proposed Highway via a road, having full control of access rights (hereinafter, "Controlled Access Road"), to be constructed by RDC within the Control of Access Corridor depicted on Exhibit B attached hereto (hereinafter, "Corridor" or "ACC3"). The exact specifications for the Corridor will be shown on the final right of way plans, which are to be certified and recorded in the Office of the Register of Deeds for Brunswick County pursuant to N.C.G.S. § 136-19.4. As part of the construction of the Proposed Highway, NCDOT will construct a full movement median opening on the mainline of the Proposed Highway for access to the Corridor, as shown on Exhibit D attached hereto. However, NCDOT reserves the right to modify or remove the full movement median opening in the future, without any compensation to RDC.

(b) The USACE verified NCDOT's delineation of the wetlands in the Corridor on October 26, 2004. On June 29, 2006, NCDOT applied for a Section 404 permit from the USACE to authorize the discharge of dredged and fill material into waters of the United States in connection with the Proposed Highway Project. Due to changes in the alignment of the ACC3 corridor, NCDOT will be sending a revised permit application to the USACE, requesting authorization to permanently impact (through fill and mechanized clearing) 1.56 acres of wetlands and temporarily impact (through hand clearing) 0.28 acres of wetlands at Site 22, which includes the ACC3 corridor, as shown

on Exhibit D. The permit has not yet been issued. The permit is expected to have an expiration date of three (3) years from the date of issuance.

(c) RDC will be solely responsible for planning, design, and construction of the Controlled Access Road within the ACC3 Corridor, including obtaining any and all permits necessary for the construction of the Controlled Access Road; provided, however, that NCDOT shall construct a wildlife crossing within the Corridor and shall install control of access fencing along the Corridor. As part of building the wildlife crossing, NCDOT will install four (4) sixty inch (60") by forty-six inch (46") corrugated aluminum pipe arches, spread evenly across the width of the wildlife corridor, with a continuous aluminum barrier on both ends. NCDOT will provide temporary erosion and sediment control necessary for said construction and will perform necessary grading operations and place compacted fill over the wildlife crossing pipes with a depth of not less than 12" at the pipe end junctions with the aluminum barrier and not less than 24" over the top of the pipes at the centerline of the corridor where the Controlled Access Road will be built. The elevation of the filled area over the wildlife crossing pipes will tie to the finish grade of the Proposed Highway on the west end and on the east end will tie down to existing grade in a manner that will facilitate construction of the Controlled Access Road in the future.

(d) At the request of RDC, NCDOT will provide coordination through the driveway permit application process referenced below for RDC's planning and design of the Controlled Access Road as it relates to the final design and construction of the Proposed Highway. The application for a driveway access permit shall be made in accordance with the North Carolina Department of Transportation's "Policy On Street and Driveway Access to North Carolina Highways" in effect at the time of such application, subject to the rules, regulations, conditions, specifications, and permit processes of the NCDOT and those of any local governments, including but not limited to the submission to, and approval by, such governmental entities of a proposed site development and traffic plan. NCDOT will not unreasonably delay consideration of the application for the driveway access permit.

(e) RDC must obtain an approved driveway access permit from NCDOT prior to beginning construction of any portion of the Controlled Access Road. Further, construction of the first 300' of the Controlled Access Road, measured from its intersection with the proposed right of way boundary of the mainline of the Proposed Highway, may begin only after the completion and acceptance of the construction of the Proposed Highway; or may begin earlier after the wildlife crossings have been constructed, if the contractor responsible for construction of the Proposed Highway so agrees in writing. RDC may begin construction of the portion of the Controlled Access Road that is greater than 300' from the intersection with the proposed right of way boundary of the mainline of the Proposed Highway prior to completion of the wildlife crossings, so long as such construction does not interfere with NCDOT's construction of the wildlife crossings. The Controlled Access Road may not be opened to traffic until after the Proposed Highway is completed or until NCDOT has given RDC written permission to open the road.

(f) The Controlled Access Road must be built in accordance with the right-of-way and construction standards contained in the North Carolina Department of Transportation's "Subdivision Roads Minimum Construction Standards" manual in effect at the time of the application for the driveway access permit, and must be built in accordance with any conditions of the approved driveway access permit. RDC may be required to construct a deceleration lane on the mainline of the Proposed Highway on the southern approach to the Controlled Access Road. As shown on Exhibit D, NCDOT has requested authorization to permanently impact, through fill and mechanized clearing, wetlands up to ten feet beyond the slope stake line along the southern approach to ACC3 and within the ACC3 corridor itself. NCDOT will coordinate with RDC regarding the design of the deceleration lane and will strongly consider allowing a design exception for the deceleration lane, if necessary, to avoid and minimize any additional wetland impacts that may be incurred by RDC in construction of the deceleration lane. If additional impacts cannot be avoided, NCDOT will provide information and coordination regarding NCDOT's wetland impacts and mitigation to RDC and/or NCDENR and the USACE to facilitate RDC with any required wetland permit application or modification. Upon completion of the Controlled Access Road in accordance with this Agreement, NCDOT will accept the Controlled Access Road onto the State Highway System for maintenance, subject to approval by the Board of Transportation.

3. **Access and Inspection.** The parties acknowledge that NCDOT has already inspected the Conservation Easement Area and determined that it has the requisite qualities, characteristics and natural values to make it appropriate for the purposes of the Conservation Easement. Notwithstanding the above, between the date of this Agreement and the Closing, defined below, NCDOT and NCDOT's agents, employees, contractors, representatives and other designees (collectively, "NCDOT's Designees") shall have the right to enter the Property for the purposes of inspecting the Conservation Easement Area, conducting soil tests, conducting surveys, engineering studies, and conducting any other investigations, examinations, tests and inspections as NCDOT may reasonably require to assess the condition of the Conservation Easement Area.

4. **Escrow; Closing.** At the time this Agreement is signed, RDC will also be signing a deed for the right of way necessary to construct the Proposed Highway and a deed for two tracts isolated by the Proposed Highway, and obtaining a release deed for such right of way and two tracts. The two deeds and the release shall be held in escrow and shall not be released or recorded until NCDOT has paid the purchase prices as specified in the deeds.

The Closing of the transfer of the Conservation Easement shall be held at such time and on such date as may be mutually agreed upon by both parties, but shall not occur until after NCDOT has paid the purchase prices as specified in the deeds referenced above. It is estimated that the Closing will take place on or before June 30, 2007. RDC shall be responsible for RDC's attorneys' fees. NCDOT shall be responsible for all recording and transfer costs, the costs of survey (described below), and NCDOT's

attorneys' fees. This agreement shall expire December 31, 2007, if the Closing is not held before that date.

5. Title & Survey. Not later than Closing, RDC, at its own cost and expense, shall have released or subordinated any deed of trust or mortgage encumbrances affecting the Conservation Easement Area. NCDOT shall arrange for, at its cost, the preparation of a recordable plat of survey prior to Closing, delineating the Conservation Easement Area. RDC shall have the opportunity to review and approve the survey. The survey will be recorded in conjunction with Closing.

6. RDC's Representations and Warranties.

(a) RDC warrants that at the Closing, RDC shall convey to NCDOT the Conservation Easement consistent with Paragraph 20 of Exhibit C.

(b) RDC makes the additional following representations and warranties, to the best of its knowledge without independent investigation, which representations and warranties shall be true as of the day of the Closing and shall survive Closing for a period of six (6) months:

(i) RDC is the record owner of the Conservation Easement Area to be conveyed hereunder.

(ii) RDC is in substantial compliance with the laws, orders and regulations of each governmental department, commission, board, or agency having jurisdiction over the Conservation Easement Area in those cases where noncompliance would have a material adverse effect on the Conservation Easement.

(iii) RDC is not a party to nor subject to or bound by any agreement, contract or lease of any kind relating to the Conservation Easement Area that would unreasonably interfere with the Conservation Easement or defeat its purpose.

(iv) The property comprising the Conservation Easement Area is not in violation of any federal, state or local law, ordinance or regulation relating to environmental conditions on, under or about the Conservation Easement Area, including, but not limited to, soil and groundwater conditions. Neither RDC, nor to the best of its knowledge any third party, has used, generated, manufactured, refined, produced, processed, stored, or disposed of on, or under the Conservation Easement Area or transported to or from the Conservation Easement Area any Hazardous Materials nor does RDC intend to use the Conservation Easement Area prior to the Closing Date for the purpose of generating, manufacturing, refining, producing, storing, handling, transferring, processing or transporting Hazardous Materials. For purposes hereof, "Hazardous Materials" shall mean any flammable explosives, radioactive materials, asbestos, petroleum, organic compounds known as polychlorinated biphenyls, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, hazardous wastes, toxic substances or related materials, including, without limitation, any substances defined as or included in the definition of "hazardous substances", "hazardous materials", or "toxic substances" in the Comprehensive Environmental Response,

Compensation and Liability Act of 1980, as amended, 42 USC Sec. 9601 et seq., the Hazardous Materials Transportation Act, 49 USC Sec. 1801, et seq., the Resource Conservation and Recovery Act, 42 USC Sec. 6901, et seq., or other federal, state or local statute, law, ordinance, code, rule, regulation order, decree or other requirement of governmental authority regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous substance or material, as now in effect, and in the regulations adopted or promulgated pursuant to such laws.

7. Remedies.

(a) If the transfer of the Conservation Easement contemplated hereby is not consummated in accordance with the terms and provisions of this Agreement due to circumstances or conditions which constitute a default by NCDOT under this Agreement, the entire Agreement shall be terminated, all rights and obligations of the parties under this Agreement shall expire, and this Agreement shall become null and void, and RDC shall not be entitled to receive liquidated damages.

(b) If the transfer of the Conservation Easement contemplated hereby is not consummated in accordance with the terms and provisions of this Agreement due to circumstances or conditions which constitute a default by RDC under this Agreement, NCDOT, as its sole and exclusive remedies: (i) shall have the right to terminate this Agreement, in which event all rights and obligations of the parties under this Agreement shall expire, and this Agreement shall become null and void; and (ii) if RDC's default is a refusal by RDC to convey the Conservation Easement to NCDOT as required by this Agreement, then NCDOT shall have the right to sue RDC for specific performance of this Agreement.

8. **Assignment; Successors.** This Agreement may not be assigned by any party, in whole or in part, without the prior written consent of the other party, and any such assignment with the consent of the other party shall be null and void and of no force or effect. Nothing herein shall restrict the ability to assign the Conservation Easement. Subject to the foregoing, this Agreement shall be binding upon and enforceable against, and shall inure to the benefit of, RDC and NCDOT and their respective successors and permitted assigns. No assignment shall relieve RDC of liability for the performance of RDC's duties and obligations under this Agreement.

9. **Entire Agreement; Modification.** This Agreement supersedes all prior discussions and agreements among RDC and NCDOT and constitutes the entire agreement between the parties hereto with respect to the subject matter hereof, and there are no agreements, understandings, warranties or representations between the parties other than those set forth herein. This Agreement may not be amended or modified in any way except by instrument in writing executed by all parties hereto.

10. **Documentation.** If necessary to carry out the intent of this Agreement, each party agrees to execute and provide to the other party any and all other instruments,

documents, conveyances, assignments and agreements which may be necessary to effectuate, carry out and perform the terms, provisions and conditions of this Agreement.

11. **Governing Law.** This Agreement shall be governed by, construed under and interpreted and enforced in accordance with the laws of the State of North Carolina.

12. **Miscellaneous Provisions.**

(a) **Notices.** All notices, demands or requests shall be in writing to the addresses indicated on the signature pages below and shall be deemed given (i) upon the date hand delivered; (ii) those given by mailing as hereinabove provided shall be deemed given two business days after the date of deposit in the United States Mail; (iii) those given by commercial courier as hereinabove provided shall be deemed given one business day after the date of deposit with the commercial courier; or (iv) those given by facsimile shall be deemed given on the date of confirmed facsimile transmittal.

(b) **Facsimile as Writing.** The parties expressly acknowledge and agree that, notwithstanding any statutory or decisional law to the contrary, the printed product of a facsimile transmittal shall be deemed to be "written" and a "writing" for all purposes of this Agreement.

(c) **Headings.** The use of headings, captions and numbers in this Agreement is solely for the convenience of identifying and indexing the various provisions in this Agreement and shall in no event be considered otherwise in construing or interpreting any provision in this Agreement.

(d) **Exhibits.** Each and every exhibit referred to or otherwise mentioned in this Agreement is attached to this Agreement and is and shall be construed to be made a part of this Agreement by such reference.

(e) **Non-Waiver.** Failure by any party to complain of any action, non-action or breach of any other party shall not constitute a waiver of any aggrieved party's rights hereunder. Waiver by any party of any right arising from any breach of any other party shall not constitute a waiver of any other right arising from a subsequent breach of the same obligation or for any other default, past, present or future.

(f) **Rights Cumulative.** All rights, remedies, powers and privileges conferred under this Agreement on the parties shall be cumulative of and in addition to, but restrictive of or in lieu of, those conferred by law.

(g) **Counterparts.** This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.

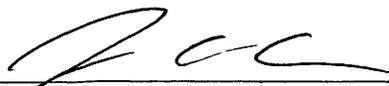
(h) **Authority.** Each party hereto warrants and represents, to the extent authorized by law, that such party has full and complete authority to enter into this Agreement and each person executing this Agreement on behalf of a party warrants and represents that he has been fully authorized to execute this Agreement on behalf of such party and that such party is bound by the signature of such representative.

(i) **No Construction Against Preparer.** No provision of this Agreement shall be construed against or interpreted to the disadvantage of any party by any court or other governmental or judicial authority by reason of such party's having or being deemed to have prepared or imposed such provision.

13. **Agreement; Recording.** This Agreement runs with the land and is enforceable by each party against the other, including its representatives, heirs, successors and assigns, lessees, agents, and licensees. The NCDOT shall record a Memorandum of its right to acquire the Conservation Easement pursuant to this Agreement and any amendment hereto in a timely fashion with the Office of the Register of Deeds for Brunswick County, North Carolina, and may re-record it at any time as may be required to preserve its rights under this Agreement.

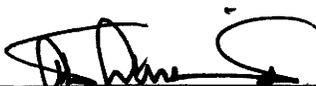
IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and delivered through their duly authorized agents effective as of the date first above written.

RESERVE DEVELOPMENT CO., LLC
By its Manager, Annapolis Management Co., LLC

BY: 

John A. Atkinson, Jr., Manager
P.O. Box 10879
Southport, NC 28461

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION

BY: 

A. D. Allison, II
Assistant Manager, Right of Way Branch
North Carolina Department of Transportation
1546 Mail Service Center
Raleigh, NC 27699-1546

#128785

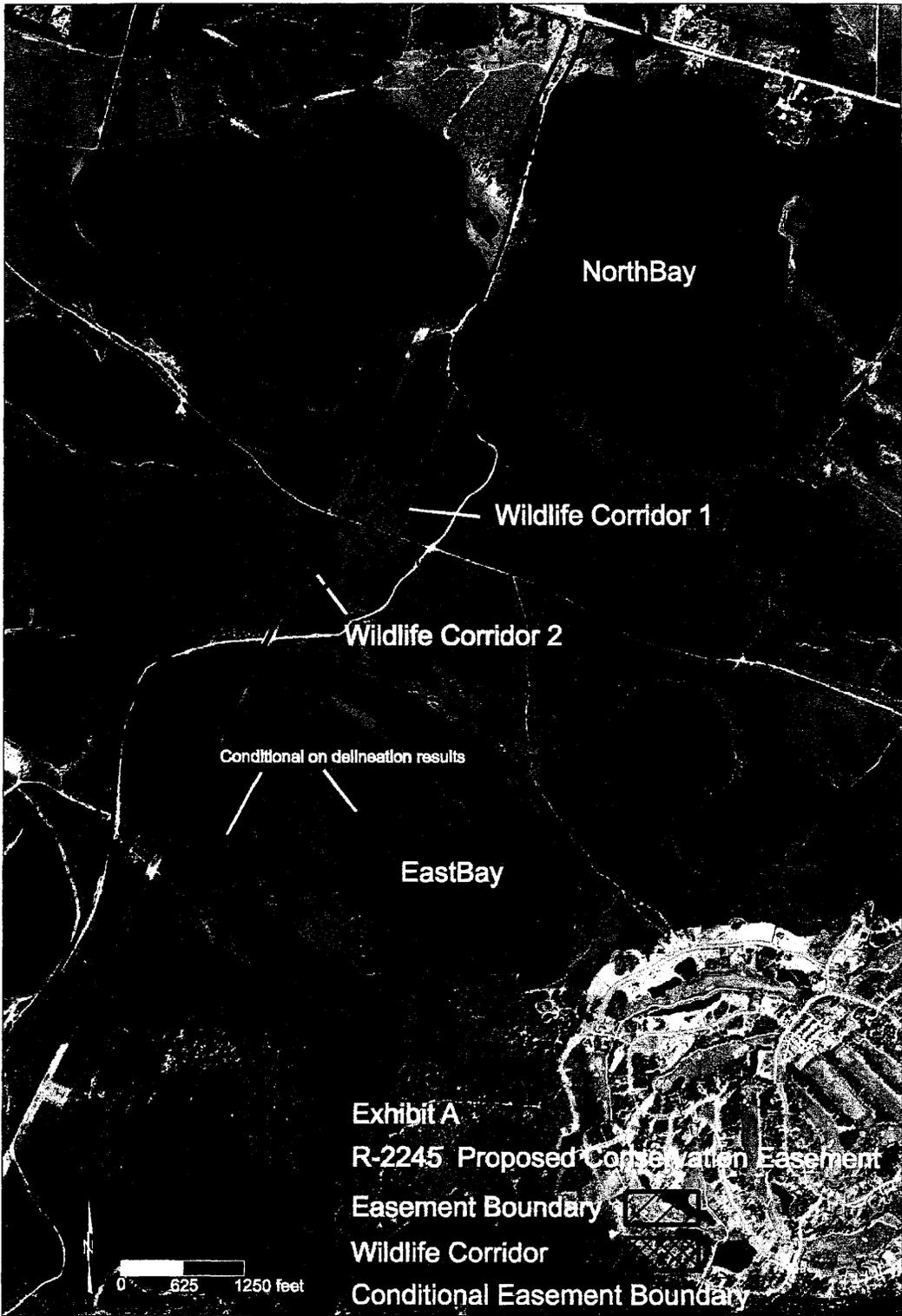
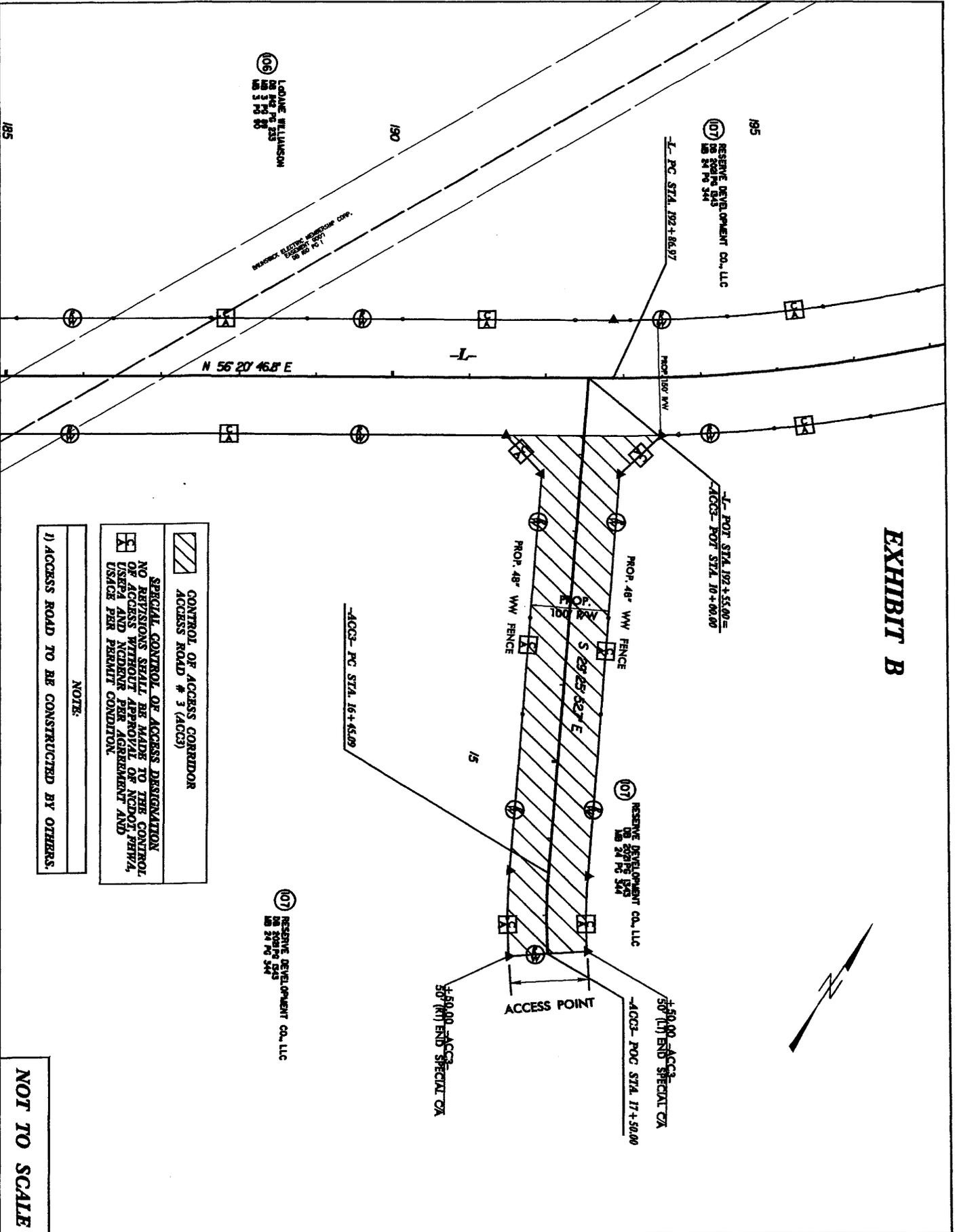


EXHIBIT B



	CONTROL OF ACCESS CORRIDOR ACCESS ROAD # 3 (ACG3)
	SPECIAL CONTROL OF ACCESS DESIGNATION NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USFPA AND NCDNR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

NOTE:
1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.

NOT TO SCALE



EXHIBIT C

STATE OF NORTH CAROLINA

P.I.N. # _____

COUNTY OF BRUNSWICK

PREPARED BY: Lisa Glover
Assistant Attorney General
North Carolina Department of Justice

RETURN TO: North Carolina Department of Transportation
Natural Environment Unit
1598 Mail Service Center
Raleigh, NC 27699-1598

CONSERVATION EASEMENT

This Conservation Easement is granted on this ____ day of _____, 2007, by RESERVE DEVELOPMENT CO., LLC, having an address of P.O. Box 10879, Southport, North Carolina, 28461 (hereinafter, "Grantor"), to THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, having an address of 1598 Mail Service Center, Raleigh, NC 27699-1598 (hereinafter, "NCDOT" or "Grantee").

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors and assigns, and shall include singular, plural, masculine, feminine, or neuter as required by context.

WHEREAS:

The Grantor is the sole owner in fee simple of four (4) tracts or parcels of land located in Lockwood Folly Township, Brunswick County, North Carolina, and more particularly described on Exhibit A attached hereto. Said four (4) tracts are hereinafter referred to as the "Conservation Easement Area."

The Conservation Easement Area provides natural wildlife habitat for a wide variety of land, air and aquatic species, because of the wetland and Carolina Bay habitat that are present within the Conservation Easement Area; many of these species, which rely on the wetland and bay habitat, are of great importance to the Grantor and the people of North Carolina.

The Grantor is willing to grant a perpetual Conservation Easement over the Conservation Easement Area, thereby restricting and limiting the use of land within the Conservation Easement Area to the terms and conditions and for the purposes hereinafter set forth.

The NCDOT is an agency of the State of North Carolina whose purpose includes the construction of transportation projects for public use and who has the authority to acquire land for the purpose of mitigating environmental impacts of these transportation projects.

In connection with construction of Transportation Improvement Program Project R-2245, a controlled access highway connecting North Carolina State Highway 211 to the Town of Oak Island, Brunswick County (hereinafter, the "Proposed Highway"), the NCDOT desires to preserve Carolina Bays located near the Project and preserve wildlife crossings between the Bays, and to hold a conservation easement over said Bays and crossings;

The purposes of the Conservation Easement over the Conservation Easement Area are (1) to preserve and protect the conservation values of the Conservation Easement Area, which include, but are not limited to, natural resources; wildlife habitat for land, air and aquatic species; aquatic resources, including streams, rivers, ponds, bays, and wetlands; and scenic resources of the Conservation Easement Area; (2) to prevent any use of the Conservation Easement Area that will significantly impair or interfere with these purposes; and, (3) to maintain permanently the dominant woodland, scenic and natural character of the Conservation Easement Area.

The Grantor intends that the conservation values of the Conservation Easement Area be preserved and maintained, and further, the Grantor intends to convey to the Grantee the right to preserve and protect the conservation values of the Conservation Easement Area in perpetuity.

The conservation purposes of this Conservation Easement are recognized by the Uniform North Carolina Conservation and Historic Preservation Agreements Act, N.C.G.S. § 121-34 *et seq.*, which provides for the enforceability of restrictions, easements, covenants or conditions “appropriate to retaining land or water areas predominantly in their natural, scenic, or open condition or in agricultural, horticultural, farming or forest use,” N.C.G.S. § 121-35(1); and which provides for tax assessment of lands subject to such agreements “on the basis of the true value of the land and improvement less any reduction in value caused by the agreement,” N.C.G.S. § 121-40.

NOW, THEREFORE, in consideration of the sum of ONE Dollar (\$1.00) and for other valuable considerations to the Grantor, and in consideration of the mutual covenants, terms, conditions and restrictions contained herein, the Grantor hereby grants and conveys unto the Grantee and its successors or assigns forever and in perpetuity a Conservation Easement of the nature and character and to the extent hereinafter set forth, in respect to the Conservation Easement Area as described in Exhibit A.

The terms, conditions and restrictions of the Conservation Easement are as hereinafter set forth:

1. Grant of Conservation Easement

The Grantor hereby voluntarily grants and conveys to the Grantee, and the Grantee hereby voluntarily accepts, a perpetual Conservation Easement, which is an immediately vested interest in real property of the nature and character described herein. The Grantor agrees that it will not perform any act on or affecting the Conservation Easement Area that is inconsistent with the covenants herein. The Grantor authorizes the Grantee to enforce these covenants in the manner described below.

The Grantor hereby voluntarily grants and conveys to the Grantee all development rights for the Conservation Easement Area, except as otherwise reserved and provided by the terms of this Conservation Easement, that are now or hereafter inherent in the Conservation Easement Area. The parties agree that such rights are terminated and extinguished, and may not be used on or transmitted to any other property.

2. Statement of Purpose, Duration

The purposes of the Conservation Easement are, as more particularly described above, to preserve current and future conservation values inherent in the Conservation Easement Area. Except as specifically permitted herein, no activity that shall significantly impair the condition of the Conservation Easement Area shall be permitted.

This Conservation Easement shall be perpetual. It is an easement in gross, runs with the land and is enforceable by the Grantee against the Grantor, its representatives, heirs, successors and assigns, lessees, agents, and licensees.

3. Description of Conservation Easement Area

The Conservation Easement Area is comprised of ____ total acres, as more particularly described in Exhibit A. For purposes of this Conservation Easement, the Conservation Easement Area contains two sub-areas: the Bay Area, consisting of both the North Bay and the East Bay; and the Corridor Area, consisting of both Wildlife Corridor 1 and Wildlife Corridor 2. As noted in Exhibit A, a plat of the Conservation Easement Area is recorded in Map Cabinet ____ at Page ____ of the Brunswick County Registry (hereinafter, "the Plat")

4. Access

Access to the North Bay, Wildlife Corridor 1, and Wildlife Corridor 2 will be by way of the Proposed Highway to be constructed by the NCDOT, as shown on the Plat. Access to the East Bay will be from the west through adjoining property over which NCDOT holds or will hold a Conservation Easement and from the north through an access easement running along an existing Brunswick Electric Membership Corporation utility easement, as shown on the Plat.

The NCDOT and its authorized representatives, including the United States Army Corps of Engineers and the Ecosystem Enhancement Program of the North Carolina Department of Environment and Natural Resources (hereinafter, "EEP"), at all reasonable times and continuing in perpetuity, shall have the right to access the Conservation Easement Area in the manner described above (1) in order to study, inventory, monitor, maintain, enhance, and preserve the Conservation Easement Area; (2) in order to access, study, inventory, monitor, maintain, enhance, and preserve adjoining property in which NCDOT holds or will hold a conservation easement; and (3) for the purpose of inspecting the Conservation Easement Area to determine if the Grantor is complying with the terms, conditions, restrictions, and purposes of this Conservation Easement. The NCDOT will notify the Grantor by phone, email, or other correspondence before entering the Conservation Easement Area for the purpose of determining compliance. However, if the NCDOT in its sole discretion determines that circumstances require immediate entry, such party is not required to notify the Grantor prior to entry but will notify the Grantor within two business days of such entry.

5. Rights and Responsibilities Retained by the Grantor

Subject to the terms and restrictions contained herein, the Grantor reserves to and for itself and its successors all customary rights and privileges of ownership, including without limitation the right to quiet enjoyment of the Conservation Easement Area; the rights to sell, lease, encumber, impose restrictions on and devise the Conservation Easement Area, provided such transaction is subject to the terms of this Conservation Easement and written notice is provided to the Grantee; together with any rights not specifically prohibited by or limited by this Conservation Easement, and not inconsistent with the purposes of this Conservation Easement. Unless otherwise specified below, nothing in this Conservation Easement shall require the Grantor to take any action to restore the condition of the Conservation Easement Area after any Act of God. The Grantor understands that nothing in this Conservation Easement relieves it of any obligation or restriction on the use of the Conservation Easement Area imposed by law.

6. Right to Privacy

The Grantor retains the right to privacy and the right to exclude any member of the public from trespassing on the Conservation Easement Area. This Conservation Easement does not create any rights of the public in, on or to the Conservation Easement Area, although the public has the right to view the Conservation Easement Area from any adjacent publicly accessible areas. The Grantor may allow public access to the Conservation Easement Area; however, any such access must be consistent with the terms and conditions of this Easement, and may not impair or interfere with the conservation values of this Conservation Easement Area.

7. Subdivision and Conveyance

The Conservation Easement Area may not be subdivided, partitioned nor conveyed, except in its current configuration. Provided, however, that the Grantor may convey the North Bay and the East Bay to the St. James Plantation Property Owners Association, Inc., pursuant to the terms of paragraph 13 herein, and may convey Wildlife Corridor 1 and Wildlife Corridor 2 to future adjoining property owners or to a local government or state agency, pursuant to the terms of paragraph 13 herein. Upon conveyance of such tract by the Grantor, the Grantor shall have no further obligation hereunder with respect to such tract.

8. Passive Recreational Use

The Grantor retains the right to engage in passive recreational uses of the Conservation Easement Area (requiring no surface alteration of the land and posing no threat to the conservation values set forth herein), including, without limitation, walking or animal and plant observation as long as such activity is consistent with the purposes of this Conservation Easement and is not prohibited by Paragraph 9 below. Fishing, hunting, or equestrian use of the Conservation Easement Area are prohibited.

9. Permitted and Restricted Activities

Any activity on, or use of, the designated Conservation Easement Area inconsistent with the purposes of this Conservation Easement is prohibited. Unless expressly reserved as a compatible use herein, any activity in, or use of, the Conservation Easement Area by the Grantor is prohibited as inconsistent with the purposes of the Conservation Easement. The Conservation Easement Area shall be maintained in its natural, scenic and open condition and restricted from any development that would significantly impair or interfere with the conservation values of this Conservation Easement Area, and any use or activity that causes or is likely to cause significant soil degradation or erosion or significant pollution of any surface or sub-surface waters is prohibited. Any rights not expressly reserved hereunder by the Grantor have been acquired by the Grantee.

Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited, restricted or reserved as indicated hereunder:

A. *Disturbance of Natural Features*

Any changes, disturbance, alteration or impairment of the natural, scenic and aesthetic features of the Conservation Easement Area or any introduction of non-native plants and/or animal species is prohibited unless the NCDOT gives its prior written consent or unless otherwise expressly permitted herein.

B. *Agricultural, Grazing, and Horticultural Use and Fencing*

Agricultural, grazing and horticultural use, including landscaping, of the Conservation Easement Area is prohibited. No herbicides, insecticides, fungicides, fertilizers or other potentially harmful substances may be used in the Conservation Easement Area without advance written permission from the NCDOT. No agricultural products or by-products may be disposed of in the Conservation Easement Area.

C. *Silvicultural Use and Land Clearing; Trails*

There may be no destruction or cutting of trees or plants in the Conservation Easement Area, except upon written approval of NCDOT. The gathering of firewood in the Conservation Easement Area shall be limited to dead trees, such that the gathering is consistent with the purposes of this Conservation Easement. Removal of large live trees, or thinning of the forest or removal of brush for fire management, may be allowed in some cases provided that any such request is consistent with the purposes of this Conservation Easement and the Grantor obtains prior written approval from the NCDOT.

The Grantee is permitted to construct and maintain walking trails on upland areas within the conservation easement. Designated wetland areas must be bridged or crossed using an elevated boardwalk. The trails may be a maximum width of six (6) feet. No additional clearing may take place outside the six (6) foot width. The trails may be surfaced with compacted soil or gravel (maximum aggregate size of three quarters (3/4) of an inch) if necessary to allow access for the disabled. The trails may be maintained through mowing.

D. *Dumping and Storage*

Dumping or storage of soil, trash, refuse, debris, ashes, garbage, waste, abandoned vehicles or parts, appliances, machinery, or hazardous substances, or toxic or hazardous waste, or any placement of underground or aboveground storage tanks or other materials on the Conservation Easement Area is prohibited. No agricultural products or by-products, or agricultural equipment, may be dumped or stored in the Conservation Easement Area.

E. *Mineral Use, Excavation, and Dredging*

There shall be no filling, excavation, dredging, mining or drilling; no removal of topsoil, sand, gravel, rock, peat, minerals or other materials, and no change in the topography of the land in any manner on the Conservation Easement Area.

F. *Industrial Use*

Industrial activities on the Conservation Easement Area are prohibited.

G. *Residential Use*

Residential use of the Conservation Easement Area is prohibited.

H. *Commercial Use*

Commercial activities in the Conservation Easement Area are prohibited.

I. *Construction, Roads and Road Building, Motorized Vehicles*

There shall be no building, shed, facility, mobile home, or other structure constructed or placed in the Conservation Easement Area. No new roads, either paved or unpaved, may be constructed in the Conservation Easement Area. Motorized vehicles, including off-road vehicles, are prohibited in the Conservation Easement Area. However, the NCDOT expressly reserves the right to install, operate, and maintain unpaved roads, and to use motorized vehicles in any manner necessary, for the purpose of preserving, protecting, and maintaining the conservation values of the Conservation Easement Area.

J. *Signs*

No signs shall be permitted in the Conservation Easement Area except interpretive signs describing activities and the conservation values of the Conservation Easement Area, signs identifying the owner of the Conservation Easement Area and the holder of the Conservation Easement, and signs giving directions or prescribing rules and regulations for the use of the Conservation Easement Area, which shall specifically include "No Trespassing," "No Hunting," and "Posted" signs, if applicable.

K. *Utilities*

The installation of utility systems, including, without limitation, water, sewer, power, fuel, and communication lines and related facilities, is prohibited, except as permitted by existing easements of record. However, existing electric transmission lines and other facilities located within the Conservation Easement Area may be maintained, replaced and/or upgraded, notwithstanding that there may be no easement of record for such facilities.

L. *Water Quality and Drainage Patterns; Wetland Creation*

The Grantor shall conduct no activities in the Conservation Easement Area that would be detrimental to water quality or to any of the plants or habitats within the Conservation Easement Area, or that would alter natural water levels, drainage, sedimentation and/or flow in or over the Conservation Easement Area, or cause soil degradation or erosion. Diking, dredging, alteration, draining, filling or removal of wetlands in the Conservation Easement Area by the Grantor is prohibited. However, land development, excavation, grading, and construction adjacent to the Conservation Easement Area, including installation of ponds, vegetated swales and other stormwater facilities that direct or cause water to flow into the Conservation Easement Area, shall be permitted, provided that such activities are done in compliance with applicable laws, regulations and permit requirements regarding erosion and sedimentation control and stormwater management.

Further, and notwithstanding the foregoing or any other provisions of this Conservation Easement, the Grantor shall be permitted to convert any or all of the uplands located within Wildlife Corridor 1 and Wildlife Corridor 2 into wetlands. Such activities may include, without limitation, removal of existing vegetation and soils from, and excavation and grading of, such upland areas for the purpose of creating wetlands. The Grantor must obtain any required permits from the appropriate regulatory agencies prior to commencement of such activities. The Grantor shall give notice to NCDOT of any such planned activities prior to commencement, but such activities shall not require approval from NCDOT. Subject to approval from the appropriate regulatory agencies, the Grantor may use any mitigation credits resulting from such wetland creation in connection with any permit requirements related to other activities or projects of the Grantor, and the Grantor shall have the right to assign any such mitigation credits to others for similar purposes.

M. *NCDOT's Rights*

The NCDOT, on behalf of itself and its authorized representatives, specifically including the EEP, reserves the right to use the Conservation Easement Area in any way necessary, consistent with the terms herein, to undertake any activities to protect, restore, manage, maintain, or enhance the conservation values of this Conservation Easement. NCDOT specifically reserves the right to use the Bay sub-areas of the Conservation Easement Area in the future for additional conservation activities that further the conservation values of the Conservation Easement Area.

10. Ongoing Responsibilities of the Grantor

Other than as specified herein, this Conservation Easement is not intended to impose any legal or other responsibility on the Grantee, or in any way to affect any existing obligation of the Grantor as owner of the Conservation Easement Area. Among other things, this shall apply to:

A. *Taxes*

The Grantor shall continue to be solely responsible for payment of all taxes and assessments levied against its interest in the Conservation Easement Area.

B. *Upkeep and Maintenance*

Except as otherwise provided herein, the Grantor retains all responsibilities and shall bear all costs and liabilities of any kinds related to the ownership of the Conservation Easement Area. The Grantee shall have no obligation for the upkeep or maintenance of the Conservation Easement Area, except to the extent that the need for upkeep or maintenance results from activities of the Grantee.

C. *Liability and Indemnification*

The Grantor agrees to indemnify and hold the Grantee harmless from any and all costs, claims or liability, including but not limited to reasonable attorneys' fees actually incurred arising from any personal injury, accidents, negligence or damage relating to the Conservation Easement Area, or any claim thereof, except to the extent due to any act of the Grantee or their agents, in which case liability shall be apportioned to the extent allowed by law.

11. Enforcement

The NCDOT shall have the right to prevent violations and remedy violations of the terms of this Conservation Easement through judicial action, which shall include, without limitation, the right to bring proceedings in law or in equity against any party or parties attempting to violate the terms of this Conservation Easement. Except when an ongoing or imminent violation could irreversibly diminish or impair the conservation values of the Conservation Easement Area, the NCDOT shall give the Grantor written notice of the violation and thirty (30) days to cure the violation, before commencing any legal proceedings. If a court with jurisdiction determines that a violation may exist or has occurred, the NCDOT may obtain an injunction to stop the violation, temporarily or permanently. The parties agree that a court may issue an injunction or order requiring the Grantor to restore the Conservation Easement Area to its condition prior to the violation as restoration of the Conservation Easement Area may be the only appropriate remedy. In any case where a court finds that Grantor has violated the terms of this Conservation Easement, the Grantor shall reimburse the NCDOT for all its expenses incurred in stopping and correcting the violation, including but not limited to court costs, reasonable attorneys' fees actually incurred, and any other reasonable costs incurred with onsite remediation. The failure of the NCDOT to discover a violation or to take immediate legal action shall not bar it from doing so at a later time for that violation or any subsequent violations.

12. Transfer of Easements

The Grantee shall have the right to transfer this Conservation Easement to the EEP, or any public agency or to a private nonprofit organization that, at the time of transfer, is a qualified

organization under §170(h) of the U.S. Internal Revenue Code, as amended and under NCGS §121-34 *et seq.*, provided the agency or organization expressly agrees to assume the responsibility imposed on the transferring party or parties by this Conservation Easement. As a condition of such transfer, the Grantee shall require that the conservation purposes intended to be advanced hereunder shall be continued to be carried out.

13. Transfer of Property

The Grantor agrees to incorporate by reference the terms of this Conservation Easement in any deed or other legal instrument by which it transfers or divests itself of any interests, including leasehold interests, in all or a portion of the Conservation Easement Area. Failure of the Grantor to comply with this section shall not impair the validity of this Conservation Easement as to successor owners or limit their enforceability in any way, nor shall the Grantor's failure to comply with this section constitute a default under this Conservation Easement.

14. Amendment of Easements

This Conservation Easement may be amended by a written instrument executed by the Grantee and the Grantor. Any such amendment shall be consistent with the purpose of this Conservation Easement and its terms, and shall comply with Section 170(h) of the Internal Revenue Code or any regulations promulgated in accordance with that section. Any such amendment shall be duly recorded.

15. Procedure in the Event of Changed Conditions

The grant or donation of this Conservation Easement gives rise to a property right immediately vested in the Grantee, with a fair market value equal to the proportionate value that the Conservation Easement bears to the value of the Conservation Easement Area as a whole. That proportionate value of the Grantee's property rights shall remain constant. If a change in conditions occurs, which makes impossible or impractical any continued protection of the Conservation Easement Area for conservation purposes, the restrictions contained herein may only be extinguished by judicial proceeding. Any proceeds recovered in such actions shall be divided in accordance with the proportionate value of the Grantor's and Grantee's interests as specified herein; all expenses including attorneys' fees incurred by the Grantor and Grantee in such action shall be paid out of the recovered proceeds. The Grantee, its successors and assigns, shall be entitled to a portion of the proceeds of such sale, exchange, involuntary conversion of the Conservation Easement Area, or any damage award with respect to any judicial proceeding. Upon such proceedings, such portion shall be equal to the proportionate value that the Grantee's, its successor's and assign's, interest in the Conservation Easement Area bears to the value of the Conservation Easement Area as a whole as of the date of the recording of this Conservation Easement. "Proceeds of Sale" shall mean the cash value of all money and property paid, transferred or contributed in consideration for, or as otherwise required as a condition to the sale, exchange or involuntary conversion of the Conservation Easement Area, or any damages otherwise awarded as a result of judicial proceeding, minus the Grantor's expenses from such transaction or proceeding.

16. Procedure in the Event of Condemnation or Eminent Domain

Whenever all or part of the Conservation Easement Area is taken by exercise of eminent domain by public, corporate or other authority, or by negotiated sale in lieu of condemnation, so as to abrogate the restrictions imposed by this Conservation Easement, the Grantor shall immediately give notice to the Grantee and shall take all appropriate actions at the time of such taking or sale to recover the full value of the taking and all incidental or direct damages resulting from the taking. Any proceeds recovered in such actions shall be divided in accordance with the proportionate value of the Grantor's and Grantee's interests as specified herein; all expenses including attorneys' fees incurred by the Grantor and Grantee in such action shall be paid out of the recovered proceeds to the extent not paid by the condemning authority. The Grantee, its successors and assigns, shall be entitled to a portion of the proceeds of such sale, exchange, involuntary conversion of the Conservation Easement Area, or any damage award with respect to any judicial proceeding. Such portion shall be equal to the proportionate value that the Grantee's, its successor's and assign's interest in the Conservation Easement Area bears to the value of the Conservation Easement Area as a whole as of the date of the recording of this Conservation Easement. "Proceeds of Sale" shall mean the cash value of all money and property paid, transferred or contributed in consideration for, or as otherwise required as a condition to the sale, exchange or involuntary conversion of the Conservation Easement Area, or any damages otherwise awarded as a result of judicial proceeding, minus the Grantor's expenses from such transaction or proceeding.

17. Interpretation

This Conservation Easement shall be interpreted under the laws of the State of North Carolina, resolving any ambiguities and questions of the validity of specific provisions so as to give maximum effect to its conservation purposes.

18. Perpetual Duration; Severability

This Conservation Easement shall be a servitude running with the land in perpetuity. Every provision of this Conservation Easement that applies to the Grantor or the Grantee shall also apply to their respective agents, heirs, executors, administrators, assigns, and all other successors as their interests may appear. Invalidity of any of the covenants, terms or conditions of this Conservation Easement, or any part thereof, by court order or judgment shall in no way affect the validity of any of the other provisions hereof, which shall remain in full force and effect.

19. Notices

Any notices required by this Conservation Easement shall be in writing and shall be personally delivered or sent by first class mail to the parties respectively at the following addresses, unless a party has been notified in writing by the other of a change of address:

To the Grantor:
Reserve Development Co., LLC
P.O. Box 10879
Southport, NC 28461

To NCDOT:
Office of Natural Environment
1598 Mail Service Center
Raleigh, NC 27699-1598

In any provision of this Conservation Easement in which the Grantor is required to provide advance notice to the Grantee of any activity on the Conservation Easement Area, such notice shall be given not less than thirty days prior to the planned commencement of the activity. If the Grantee's approval is required, such approval shall be deemed withheld unless the Grantee provides to the Grantor written notice of approval within 30 days of receipt of said request. If the Grantor has received no response after said 30 days, the Grantor may send a second written notice to the Grantee requesting a statement of the reasons for the disapproval and the Grantee shall respond within 30 days with an explanation for the specific reasons and basis for its decision to disapprove.

20. Grantor's Title Warranty

The Grantor covenants and represents that the Grantor is the sole owner and is seized of the Conservation Easement Area in fee simple and has good right to grant and convey the aforesaid Conservation Easement; and that the Conservation Easement Area is free and clear of any and all encumbrances, except easements and leases of record or in effect by prescriptive rights as of the date hereof (which shall be deemed to include all existing electric transmission lines and other facilities, regardless whether a recorded easement exists for such facilities). The Grantor covenants that the Grantee shall have the use of and enjoy all of the benefits derived from and arising out of the easement conveyed hereby.

21. Subsequent Liens

No provisions of this Conservation Easement should be construed as impairing the ability of the Grantor to use the Conservation Easement Area as collateral for subsequent borrowing. Any such liens shall be subordinated to this Conservation Easement.

22. Subsequent Easements/Restrictions

The grant of any easements or use restrictions that might diminish or impair the conservation values of the Conservation Easement Area is prohibited. Any such easements or restrictions shall be subordinated to this Conservation Easement.

23. Grantor's Environmental Warranty

The Grantor warrants that it has no actual knowledge of a release or threatened release of hazardous substances or wastes on the Conservation Easement Area, as such substances and wastes are defined by applicable federal and state law, and hereby promises to defend and indemnify the Grantee against all litigation, claims, demands, penalties and damages, including reasonable attorneys' fees actually incurred, arising from or connected with any release of hazardous waste caused by the intentional or negligent act of the Grantor or violation of federal, state or local environmental laws caused by the negligent or intentional act of the Grantor. Without limiting the generality of the foregoing, nothing in this Conservation Easement shall be construed as giving rise to any right or ability in the Grantee, nor shall the Grantee have any right or ability, to exercise physical or managerial control over the day-to-day operations of the Conservation Easement Area, or otherwise to become an operator with respect to the Conservation Easement Area within the meaning of The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended.

24. Entire Agreement

This instrument sets forth the entire agreement of the parties with respect to the Conservation Easement and supersedes all prior discussions, negotiations, understandings or agreements relating to the said easement.

25. Recording

The Grantee shall record this instrument and any amendment hereto in timely fashion with the Office of the Register of Deeds of Brunswick County, North Carolina, and may re-record it at any time as may be required to preserve its rights under this Conservation Easement.

26. Merger

The Parties agree that the terms of this Conservation Easement shall survive any merger of the fee and easement interest in the Conservation Easement Area.

TO HAVE AND TO HOLD this Conservation Easement unto the Grantee, its successors and assigns, forever.

IN WITNESS WHEREOF, the Grantor and Grantee, intending to legally bind themselves, have set their hands on the date first written above.

[signatures and acknowledgments on following pages]

GRANTOR:

Reserve Development Co., LLC
By its Manager,
Annapolis Management Co., LLC

By: _____
John A. Atkinson, Jr., Manager

NORTH CAROLINA
BRUNSWICK COUNTY

I hereby certify that the following person personally appeared before me this day, acknowledging to me that he voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated: John A. Atkinson, Jr.

Date: _____, 20__

(Official Seal)

Official Signature of Notary

_____, Notary Public
Printed or typed name

My commission expires: _____

Accepted:

GRANTEE:

**The North Carolina Department
Of Transportation**

By: A.D. Allison, II
Assistant Manager, Right of Way Branch

NORTH CAROLINA
WAKE COUNTY

I hereby certify that the following person personally appeared before me this day, acknowledging to me that he voluntarily signed the foregoing document for the purpose state therein and in the capacity indicated: A.D. Allison, II.

Date: _____, 20__

(Official Seal)

Official Signature of Notary

_____, Notary Public
Printed or typed name

My commission expires: _____

EXHIBIT A

CONSERVATION EASEMENT AREA

Being those four (4) tracts or parcels of land located in Lockwood Folly Township, Brunswick County, North Carolina, designated as "North Bay," consisting of _____ acres; "East Bay," consisting of _____ acres; "Wildlife Corridor 1," consisting of _____ acres; and "Wildlife Corridor 2," consisting of _____ acres; all as shown on that plat of _____ [title] recorded in Map Cabinet _____ at Page _____ in the office of the Register of Deeds for Brunswick County.



STATE OF NORTH CAROLINA
DEPARTMENT OF JUSTICE

ROY COOPER
ATTORNEY GENERAL

REPLY TO:
Lisa C. Glover
Transportation Section

MEMORANDUM

To: Deborah Barbour, P.E., Director, Preconstruction
Doug Allison, Assistant Branch Manager, Right of Way Branch
LeiLani Paugh, Supervisor, Natural Environment ICI/On-Site Mitigation Group, PDEA
Hugh Thompson, Division Agent, Division 3 Right of Way Office

From: Lisa Glover, Assistant Attorney General

Date: January 2, 2007

Re: RDC Oak Island Agreement

Please find enclosed a copy of the executed Agreement between Reserve Development Co., LLC and NCDOT regarding the second bridge to Oak Island project. RDC has one original of the fully-executed Agreement; I am sending another original of the Agreement to Doug Allison via this memo. RDC also signed all the right of way deeds necessary for the project; those deeds will be recorded, and payment made to RDC for the right of way, by the end of January. Hugh Thompson is handling that portion of the transaction. In order to finalize the conservation easement portion of this transaction, NCDOT needs to finalize the survey plats of the conservation easement area and present those to RDC for its approval. RDC and NCDOT will then need to execute the conservation easement, and then record both the plat and easement. However, as we have discussed, I recommend submitting the RDC Agreement, with the draft conservation easement attached as an exhibit, to the United States Army Corps of Engineers and the Division of Water Quality together with the 404/401 permit application; and then waiting to record the conservation easement until after the 404/401 permits have been issued.

Please contact me if you have any questions about this communication.

MAILING ADDRESS:
DEPARTMENT OF TRANSPORTATION
ATTORNEY GENERAL'S OFFICE
1505 MAIL SERVICE CENTER
RALEIGH, NC 27699-1505

TELEPHONE: 919-733-3316
FACSIMILE: 919-733-9329

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

STATE OF NORTH CAROLINA

Drawn by and mail to:
Lisa C. Glover, Esq.
N.C. Dept. of Justice/Transportation Section
1505 Mail Service Center
Raleigh, NC 27699-1505

COUNTY OF BRUNSWICK

AGREEMENT

This AGREEMENT (hereinafter, "Agreement") is entered into this 20th day of November, 2006, by and between LADANE WILLIAMSON and DR. DECAROL WILLIAMSON (hereinafter and collectively, the "WILLIAMSONS"), and THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (hereinafter, "NCDOT").

WITNESSETH:

WHEREAS, the Williamsons are the sole owner in fee simple of certain real property consisting of approximately 3500 acres as is more particularly described in Deed Book 1142, Page 233, of the Brunswick County Register of Deeds Office (hereinafter, the "Property");

WHEREAS, portions of the Property provide natural wildlife habitat for a wide variety of land, air and aquatic species, and many of these species are of great importance to the Williamsons and the people of North Carolina;

WHEREAS, NCDOT plans to construct a controlled access highway connecting North Carolina State Highway 211 to the Town of Oak Island, Brunswick County, thereby providing a second access point to the Town of Oak Island (hereinafter, the "Proposed Highway");

WHEREAS, the Proposed Highway crosses over a portion of the Property;

WHEREAS, NCDOT desires to hold a Conservation Easement over certain portions of the Property (hereinafter, "Conservation Easement Area"), as depicted on Exhibit A and more particularly described below;

WHEREAS, the Williamsons desire to access the Proposed Highway from the Property;

WHEREAS, NCDOT has agreed to allow the Williamsons to access the Proposed Highway via a Controlled Access Road in exchange for the grant to NCDOT of a perpetual Conservation Easement over the Conservation Easement Area, thereby restricting and limiting the use of land within the Conservation Easement Area, together with a permanent access easement of ingress and egress, substantially according to the terms and conditions set forth in the conservation easement form attached hereto as Exhibit C; and,

WHEREAS, NCDOT has agreed to allow the Williamsons to construct a subdivision road through a portion of the Conservation Easement Area so long as the road contains adequate wildlife crossings, as described below; and,

WHEREAS, the Williamsons have agreed to the conditions set forth below regarding access to the Proposed Highway and construction of the subdivision road.

NOW, THEREFORE, in consideration of the foregoing recitals, the mutual agreements set forth below and other good and valuable consideration including payment to the Williamsons of \$100,000.00, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. **Conservation Easement and Easement of Ingress and Egress.** The Williamsons hereby agree to grant to NCDOT a perpetual Conservation Easement for the areas identified on Exhibit A as "PR3," "WestBay," "Wildlife Corridor 1," "Williamson EastBay," "PR11," and "PR13," referred to collectively as the Conservation Easement Area, and to grant to NCDOT Permanent Access Easements of Ingress and Egress as shown on Exhibit A. The parties agree that said Conservation Easement Area and Easement of Ingress and Egress shall be more definitively determined after delineation of wetlands is complete and after a survey of the boundaries is complete. The terms and conditions of the Conservation Easement and Permanent Access Easement of Ingress and Egress shall be substantially similar to the terms and conditions set forth in the conservation easement and permanent access easement of ingress and egress form attached hereto as Exhibit C.

2. **Controlled Access Road.** In exchange for the grant of the Conservation Easement and Permanent Access Easements, NCDOT hereby agrees to allow the Williamsons to access the Proposed Highway via a Controlled Access Road to be constructed by the Williamsons within the Control of Access Corridor depicted on Exhibit B (hereinafter, "Corridor"). The exact specifications for the Corridor will be shown on the final right of way plans, which are to be certified and recorded in the Office of the Register of Deeds for Brunswick County pursuant to N.C.G.S. § 136-19.4. The Williamsons shall grant to the Department, in consideration for this Agreement and without further compensation, the right-of-way with full controlled access rights within the Corridor. Said conveyance of right-of-way and control of access comprising the Corridor shall be made at the same time as the Closing of the Conservation Easement transaction, discussed below in Paragraph 6, and shall be by way of an instrument substantially similar to the instrument attached hereto as Exhibit D. The Williamsons will be solely responsible for planning, design, and construction of the Controlled Access Road within this corridor, including obtaining any and all permits necessary for the construction of the Controlled Access Road. The Williamsons must obtain an approved driveway access permit from NCDOT prior to beginning construction. The application for a driveway access permit shall be made in accordance with the North Carolina Department of Transportation's "Policy On Street and Driveway Access to North Carolina Highways" in effect at the time of such application, subject to the rules, regulations, conditions, specifications, and permit processes of the NCDOT and those of

any local governments, including but not limited to the submission to, and approval by, such governmental entities of a proposed site development and traffic plan. The Controlled Access Road must be built in accordance with the right-of-way and construction standards contained in the North Carolina Department of Transportation's "Subdivision Roads Minimum Construction Standards" manual in effect at the time of the application for the driveway access permit, and must be built in accordance with any conditions of the approved driveway access permit.

3. **Subdivision Road and Wildlife Crossings in the Wildlife Corridor.**

(a) NCDOT agrees to allow the Williamsons to construct a subdivision road through the area labeled Wildlife Corridor 1 on Exhibit A, so long as wildlife crossings are provided as described below. The total width of clearing for the road and any associated pathways, drainage, and utilities may not exceed one hundred (100) feet. The provisions of N.C.G.S. § 136-102.6 and any other applicable statutes, regulations, or policies govern acceptance of the subdivision road and the wildlife crossings (discussed below) onto the State highway system. The Williamsons will be solely responsible for planning, design, and construction of the subdivision road, including obtaining any and all permits necessary for the construction of the subdivision road. The Williamsons must obtain advance written permission from NCDOT before beginning construction of the subdivision road and wildlife crossings.

(b) In order to maintain continuity between Wildlife Corridor 1 and WestBay, the Williamsons will provide a minimum of four (4) sixty inch (60") by forty-six inch (46") corrugated aluminum pipe arches, spread evenly across the width of the wildlife corridor, with a continuous aluminum barrier on both ends, to be used as wildlife crossings. The wildlife crossings must be built in accordance with Exhibit E attached hereto. The bottom of the pipes shall be buried one foot (1') below the ground surface. The pipes will be backfilled along their entire length with one foot (1') of soil. Four pre-cast concrete bridge openings may be used in place of the pipe-arch configuration provided the vertical clearance and total opening area of the four bridges equals or exceeds that for the pipe-arch configuration. The wildlife crossings must be constructed and operational by the time construction of the subdivision road is complete and before the road is open to traffic.

4. **Compensation.** NCDOT will pay a total of \$100,000 to the Williamsons pursuant to this Agreement. An initial payment of \$10,000 will be made upon the signing of this Agreement (the "Earnest Money"), with the remaining \$90,000 to follow upon the signing of the aforementioned Conservation Easement. The Earnest Money is a non-refundable deposit, absent default by the Williamsons hereunder.

5. **Access and Inspection.** The parties acknowledge that NCDOT has already inspected the Conservation Easement Area and determined that it has the requisite qualities, characteristics and natural values to make it appropriate for the purposes of the Conservation Easement. Notwithstanding the above, between the date of this Agreement and the Closing, defined below, NCDOT and NCDOT's agents,

employees, contractors, representatives and other designees (collectively, "NCDOT's Designees") shall have the right to enter the Conservation Easement Area for the purposes of inspecting the Conservation Easement Area, conducting soil tests, conducting surveys, engineering studies, and conducting any other investigations, examinations, tests and inspections as NCDOT may reasonably require to assess the condition of the Conservation Easement Area.

6. **Closing.** The Closing of the transfer of the Conservation Easement, Permanent Access Easement of Ingress and Egress, and the right of way and controlled access rights for the Corridor shall be held at such time and on such date as may be mutually agreed upon by both parties. The Williamsons shall be responsible for their attorneys' fees. NCDOT shall be responsible for all recording and transfer costs, the costs of survey (described below), and NCDOT's attorneys' fees.

7. **Title & Survey.** Not later than Closing, the Williamsons shall have released or subordinated any deed of trust or mortgage encumbrances affecting the Conservation Easement Area. NCDOT shall arrange for, at its cost, the preparation of a recordable plat of survey prior to Closing, delineating the Conservation Easement Area. The Williamsons shall have the opportunity to review and approve the survey. The survey will be recorded in conjunction with closing.

8. **Representations and Warranties; Disclaimer of Further Representations and Warranties.**

(a) The Williamsons warrant that at the Closing, they shall convey to NCDOT good, indefeasible, marketable and insurable title to the Conservation Easement consistent with Paragraph 20 of Exhibit C.

(b) The Williamsons make the additional following representations and warranties, to the best of its knowledge without independent investigation, which representations and warranties shall be true as of the day of the Closing and shall survive Closing for a period of six (6) months:

(i) The Williamsons are the record owner of the Conservation Easement Area to be conveyed hereunder. Following Closing, NCDOT shall have insurable title to the Conservation Easement consistent with Paragraph 20 of Exhibit C.

(ii) The Williamsons are in substantial compliance with the laws, orders and regulations of each governmental department, commission, board, or agency having jurisdiction over the Conservation Easement Area in those cases where noncompliance would have a material adverse effect on the Conservation Easement.

(iii) The Williamsons are not a party to nor subject to or bound by any agreement, contract or lease of any kind relating to the Conservation Easement Area that would unreasonably interfere with the Conservation Easement or defeat its purpose.

(iv) The property comprising the Conservation Easement Area is not in violation of any federal, state or local law, ordinance or regulation relating to

environmental conditions on, under or about the Conservation Easement Area, including, but not limited to, soil and groundwater conditions. Neither the Williamsons, nor to the best of their knowledge any third party, has used, generated, manufactured, refined, produced, processed, stored, or disposed of on, or under the Conservation Easement Area or transported to or from the Conservation Easement Area any Hazardous Materials nor do the Williamsons intend to use the Conservation Easement Area prior to the Closing Date for the purpose of generating, manufacturing, refining, producing, storing, handling, transferring, processing or transporting Hazardous Materials. For purposes hereof, "Hazardous Materials" shall mean any flammable explosives, radioactive materials, asbestos, petroleum, organic compounds known as polychlorinated biphenyls, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, hazardous wastes, toxic substances or related materials, including, without limitation, any substances defined as or included in the definition of "hazardous substances", "hazardous materials", or "toxic substances" in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 USC Sec. 9601 et seq., the Hazardous Materials Transportation Act, 49 USC Sec. 1801, et sec., the Resource Conservation and Recovery Act, 42 USC Sec. 6901, et sec., or other federal, state or local statute, law, ordinance, code, rule, regulation order, decree or other requirement of governmental authority regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous substance or material, as now or at any time hereafter in effect, and in the regulations adopted or promulgated pursuant to such laws.

9. Remedies.

(a) If the transfer of the Conservation Easement contemplated hereby is not consummated in accordance with the terms and provisions of this Agreement due to circumstances or conditions which constitute a default by NCDOT under this Agreement, the entire Agreement shall be terminated, all rights and obligations of the parties under this Agreement shall expire, and this Agreement shall become null and void, and the Earnest Money shall be delivered to and retained by the Williamsons as their liquidated damages for such default. The parties acknowledge that as to the liquidated damages option above, the Williamsons' actual damages in the event of a default by NCDOT will be difficult to ascertain, that such damages represent the parties' best estimate of such damages, and that the Williamsons and NCDOT believe such liquidated damages are a reasonable estimate of such damages.

(b) If the transfer of the Conservation Easement contemplated hereby is not consummated in accordance with the terms and provisions of this Agreement due to circumstances or conditions which constitute a default by the Williamsons under this Agreement, the Earnest Money shall be refunded to NCDOT promptly upon request, and NCDOT, as its sole and exclusive remedies, may exercise the following additional rights and remedies: (i) in the event of any default by the Williamsons, NCDOT shall have the right to terminate this Agreement, in which event all rights and obligations of the parties under this Agreement shall expire, and this Agreement shall become null and void; and

(ii) if the Williamsons' default is a refusal by the Williamsons to convey the Conservation Easement to NCDOT as required by this Agreement, then NCDOT shall have the right to sue the Williamsons for specific performance of this Agreement. The Williamsons shall have no other liability to NCDOT under this Agreement.

(c) If NCDOT has not advertised for bids to construct the Proposed Highway within six (6) years from the execution date of this Agreement and if at that time the Proposed Highway is not included within the State Transportation Improvement Program, then this Agreement shall be deemed null and void; moreover, if the Conservation Easement has already been recorded, then NCDOT shall take all necessary measures to allow the Williamsons to remove the Conservation Easement from the public record and to free the Conservation Easement Area from all effects of that Conservation Easement.

10. **Assignment; Successors.** This Agreement may not be assigned by any party, in whole or in part, without the prior written consent of the other party, and any such assignment without the consent of the other party shall be null and void and of no force or effect. Subject to the foregoing, this Agreement shall be binding upon and enforceable against, and shall inure to the benefit of, the Williamsons and NCDOT and their respective successors and permitted assigns. No assignment shall relieve the Williamsons of liability for the performance of their duties and obligations under this Agreement.

11. **Entire Agreement; Modification.** This Agreement supersedes all prior discussions and agreements among the Williamsons and NCDOT and constitutes the entire agreement between the parties hereto and there are no agreements, understandings, warranties or representations between the parties other than those set forth herein. This Agreement may not be amended or modified in any way except by instrument in writing executed by all parties hereto.

12. **Documentation.** If necessary to carry out the intent of this Agreement, each party agrees to execute and provide to the other party any and all other instruments, documents, conveyances, assignments and agreements which may be necessary to effectuate, carry out and perform the terms, provisions and conditions of this Agreement.

13. **Governing Law.** This Agreement shall be governed by, construed under and interpreted and enforced in accordance with the laws of the State of North Carolina.

14. **Miscellaneous Provisions.**

(a) **Notices.** All notices, demands or requests shall be in writing to the addresses indicated on the signature pages below and shall be deemed given (i) upon the date hand delivered; (ii) those given by mailing as hereinabove provided shall be deemed given two business days after the date of deposit in the United States Mail; (iii) those given by commercial courier as hereinabove provided shall be deemed given one business day after the date of deposit with the commercial courier; or (iv) those given by facsimile shall be deemed given on the date of confirmed facsimile transmittal.

(b) Facsimile as Writing. The parties expressly acknowledge and agree that, notwithstanding any statutory or decisional law to the contrary, the printed product of a facsimile transmittal shall be deemed to be “written” and a “writing” for all purposes of this Agreement.

(c) Headings. The use of headings, captions and numbers in this Agreement is solely for the convenience of identifying and indexing the various provisions in this Agreement and shall in no event be considered otherwise in construing or interpreting any provision in this Agreement.

(d) Exhibits. Each and every exhibit referred to or otherwise mentioned in this Agreement is attached to this Agreement and is and shall be construed to be made a part of this Agreement by such reference.

(e) Non-Waiver. Failure by any party to complain of any action, non-action or breach of any other party shall not constitute a waiver of any aggrieved party’s rights hereunder. Waiver by any party of any right arising from any breach of any other party shall not constitute a waiver of any other right arising from a subsequent breach of the same obligation or for any other default, past, present or future.

(f) Rights Cumulative. All rights, remedies, powers and privileges conferred under this Agreement on the parties shall be cumulative of and in addition to, but restrictive of or in lieu of, those conferred by law.

(g) Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.

(h) Authority. Each party hereto warrants and represents, to the extent authorized by law, that such party has full and complete authority to enter into this Agreement and each person executing this Agreement on behalf of a party warrants and represents that he has been fully authorized to execute this Agreement on behalf of such party and that such party is bound by the signature of such representative.

(i) No Construction Against Preparer. No provision of this Agreement shall be construed against or interpreted to the disadvantage of any party by any court or other governmental or judicial authority by reason of such party’s having or being deemed to have prepared or imposed such provision.

15. **Agreement; Recording**. This Agreement runs with the land and is enforceable by each party against the other, including representatives, heirs, successors and assigns, lessees, agents, and licensees. The NCDOT shall record a Memorandum of this Agreement and any amendment hereto in a timely fashion with the Office of the Register of Deeds for Brunswick County, North Carolina, and may re-record it at any time as may be required to preserve its rights under this Agreement.

[This space left intentionally blank]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and delivered through their duly authorized agents effective as of the date first above written.


LADANE WILLIAMSON

STATE OF NORTH CAROLINA

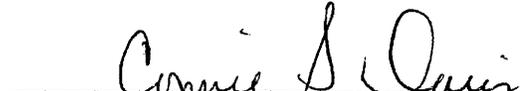
COUNTY OF Brunswick

I, Connie S Davis, Notary Public of the aforesaid County and State, do hereby certify that **LaDane Williamson** personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this 25 day of September 2006.

My commission expires: 3/20/2009

(AFFIX SEAL)


Notary Public


DR. DECAROL WILLIAMSON

STATE OF NORTH CAROLINA

COUNTY OF New Hanover

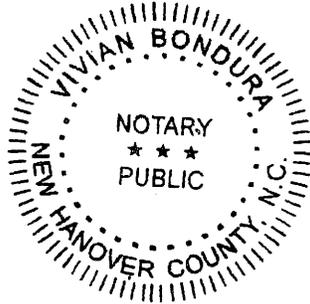
I, Vivian Bondura, Notary Public of the aforesaid County and State, do hereby certify that **Dr. DeCarol Williamson** personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this 25 day of September, 2006.

My commission expires: 10/06/07

Vivian Bondura
Notary Public

(AFFIX SEAL)




JAN WILLIAMSON*

**Jan Williamson executes this Agreement solely to the extent that she has any marital right to the Property*

STATE OF NORTH CAROLINA

COUNTY OF New Hanover

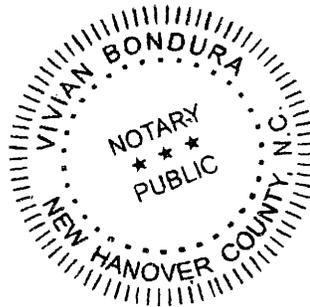
I, Vivian Bondura, Notary Public of the aforesaid County and State, do hereby certify that **Jan Williamson** personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this 25 day of September, 2006.

My commission expires: 10/06/07

Vivian Bondura
Notary Public

(AFFIX SEAL)



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION

BY: _____


A. D. Allison, II
Assistant Manager, Right of Way Branch
North Carolina Department of Transportation
1546 Mail Service Center
Raleigh, NC 27699-1546

ATTEST:

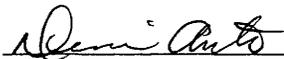

SECRETARY TO THE BOARD OF
TRANSPORTATION AND CUSTODIAN
OF THE SEAL OF THE DEPARTMENT
OF TRANSPORTATION

(Seal)

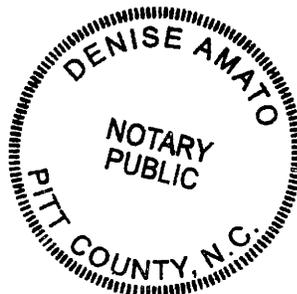
NORTH CAROLINA
WAKE COUNTY

This the 20th day of November, 2006, personally appeared before me, Denise Amato, a Notary Public of Pitt County and State, Tammy B. Denning, who being by me duly sworn, says that she knows the Seal of the Department of Transportation and is acquainted with A. D. Allison, II, who is Assistant Manager of Right of Way of the Division of Highways of said Department, and that she, the said Tammy B. Denning, is the Secretary to the Board of Transportation and Custodian of the Seal of the Department of Transportation, and saw said Assistant Manager of Right of Way sign the foregoing instrument, and that she, the said Secretary to the Board of Transportation and Custodian of the Seal of the Department of Transportation, affixed said seal to said instrument and signed her name in attestation of the execution thereof in the presence of said Assistant Manager of Right of Way.

WITNESS my hand and Notarial Seal, the 20th day of November, 2006.


Notary Public

My Commission Expires: October 29, 2009



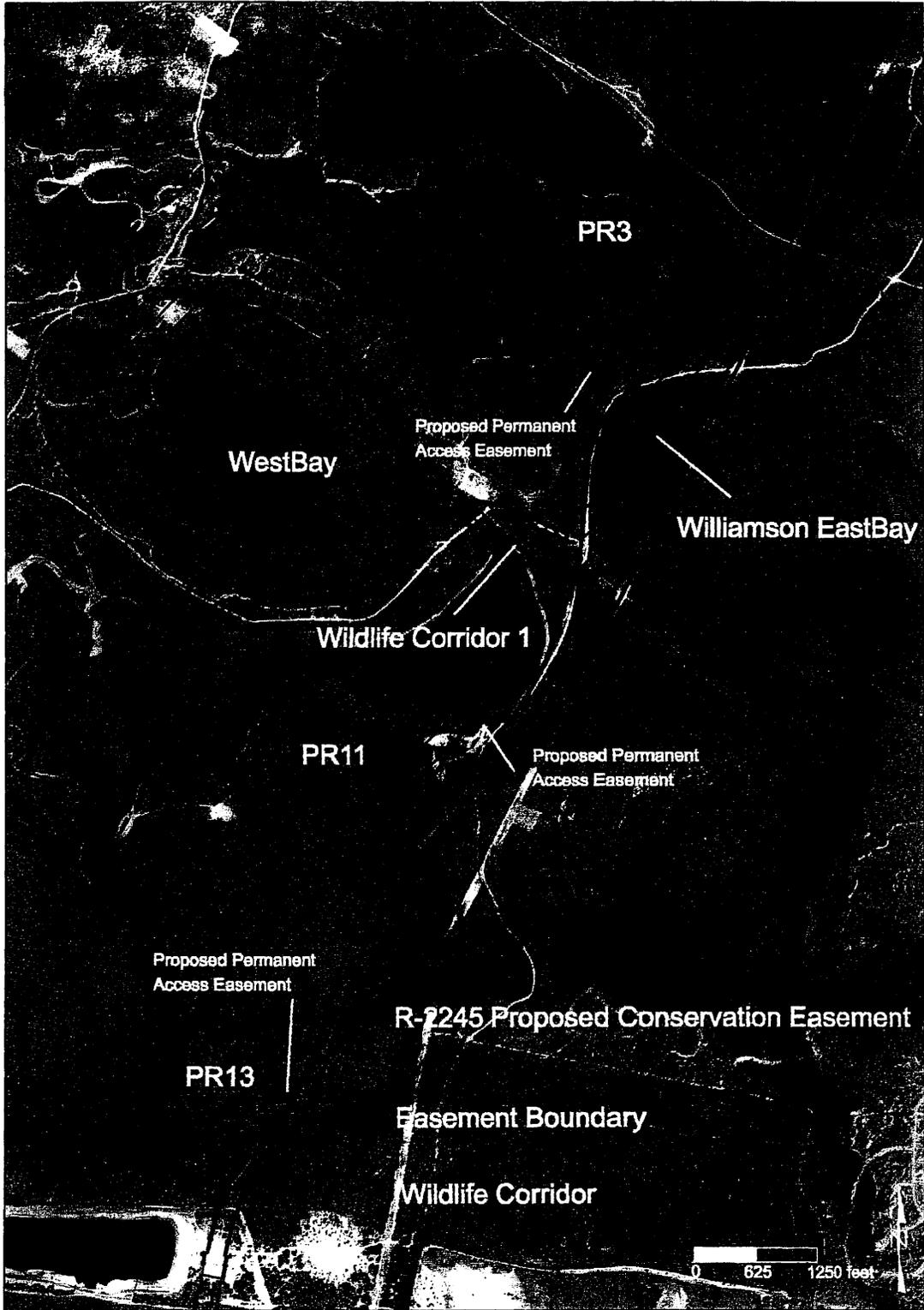


EXHIBIT B

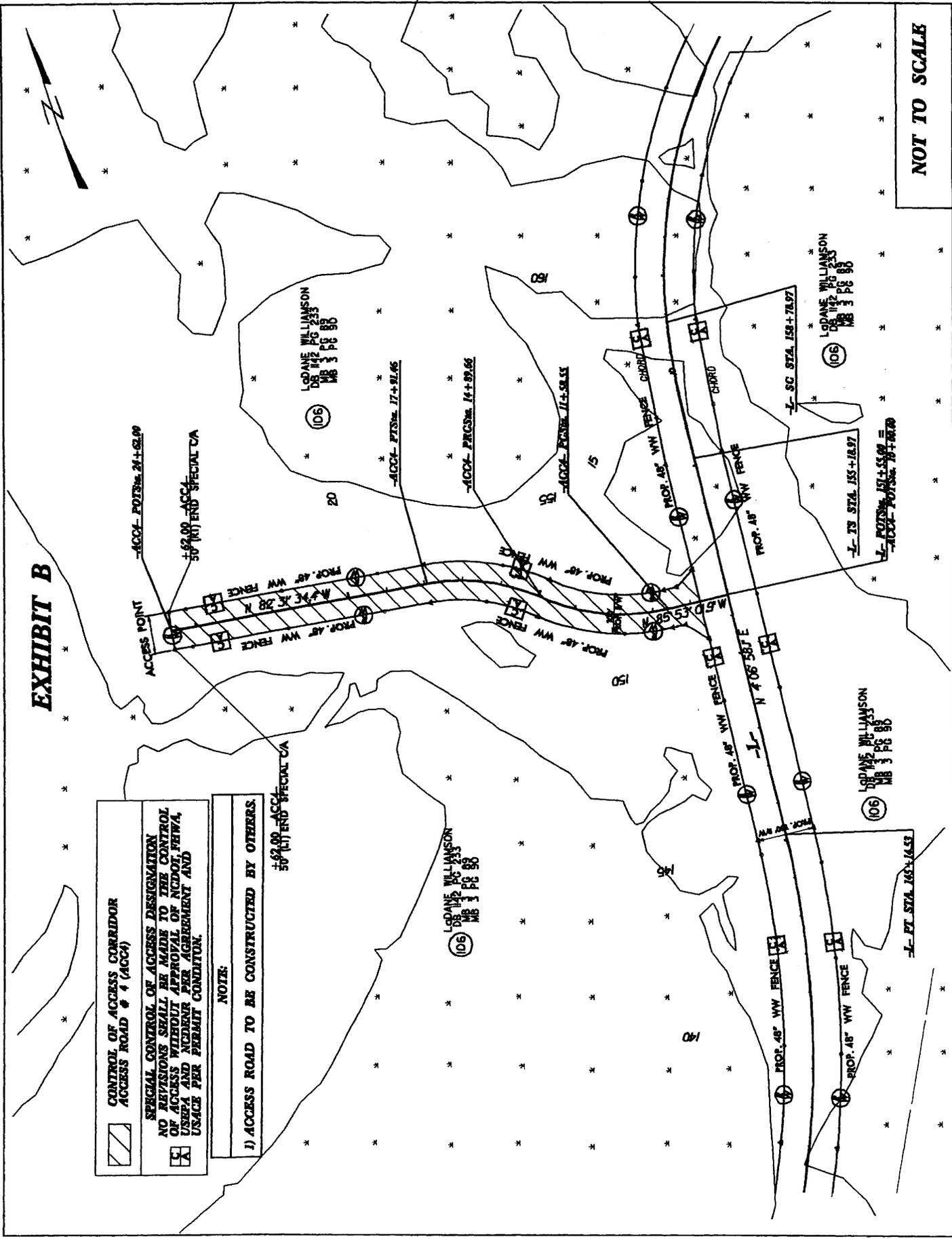
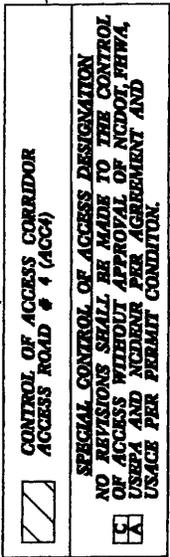
CONTROL OF ACCESS CORRIDOR
ACCESS ROAD # 4 (ACCA)

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA,
USEPA AND ACDENR PER AGREEMENT AND
USAGE PER PERMIT CONDITION.

NOTE:

1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.

±62.00 ACCA
50' (N) END SPECIAL CA



NOT TO SCALE

EXHIBIT C

STATE OF NORTH CAROLINA

P.I.N. # _____

COUNTY OF BRUNSWICK

PREPARED BY: Lisa Glover
Assistant Attorney General
North Carolina Department of Justice

RETURN TO: North Carolina Department of Transportation
Natural Environment Unit
1598 Mail Service Center
Raleigh, NC 27699-1598

CONSERVATION EASEMENT AND EASEMENT OF INGRESS AND EGRESS

This Conservation Easement and Easement of Ingress and Egress is granted on this ____ day of _____, 2006, by LADANE WILLIAMSON and DR. DECAROL WILLIAMSON and wife JAN WILLIAMSON (hereinafter and collectively, the "WILLIAMSONS"), having an address of _____, North Carolina, _____ (hereinafter, "Grantors"), to THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, having an address of 1598 Mail Service Center, Raleigh, NC 27699-1598 (hereinafter, "NCDOT" or "Grantee").

The designation Grantors and Grantee as used herein shall include said parties, their heirs, successors and assigns, and shall include singular, plural, masculine, feminine, or neuter as required by context.

WHEREAS:

The Grantors are the sole owners in fee simple of certain real property more particularly described in Deed Book 1142, Page 233, of the Brunswick County Registry, which consists of approximately 3500 acres, more or less, located in _____ Township, Brunswick County, North Carolina (hereinafter, "the Property").

The Property provides natural wildlife habitat for a wide variety of land, air and aquatic species, because of the wetland and Carolina Bay habitat that are present within the Property; many of these species, which rely on the wetland and bay habitat, are of great importance to the Grantors and the people of North Carolina.

The Grantors are willing to grant a perpetual Conservation Easement over _____ acres of the Property (hereinafter, the "Conservation Easement Area"), thereby restricting and limiting the use of land within the Conservation Easement Area to the terms and conditions and for the purposes hereinafter set forth, and to further grant a Permanent Access Easement of Ingress and Egress (hereinafter, "Permanent Access Easement") to the Conservation Easement Area upon and along the Property as more particularly set forth hereinafter.

The NCDOT is an agency of the State of North Carolina whose purpose includes the construction of transportation projects for public use and who has the authority to acquire land for the purpose of mitigating environmental impacts of these transportation projects.

In connection with Transportation Improvement Program Project R-2245, the NCDOT desires to preserve Carolina Bays located near the Project and preserve wildlife crossings between the Bays, and to hold a conservation easement over said Bays and crossings, referred to as the Conservation Easement Area;

The purposes of the Conservation Easement over the Conservation Easement Area are (1) to preserve and protect the conservation values of the Conservation Easement Area, which include, but are not limited to, natural resources; wildlife habitat for land, air and aquatic species; aquatic resources, including streams, rivers, ponds, bays, and wetlands; and scenic resources of the Property; (2) to prevent any use of the Conservation Easement Area that will significantly impair or interfere with these purposes; and, (3) to maintain permanently the dominant woodland, scenic and natural character of the Conservation Easement Area.

The Grantors intend that the conservation values of the Conservation Easement Area be preserved and maintained, and further, the Grantors intend to convey to the Grantee the right to preserve and protect the conservation values of the Conservation Easement Area in perpetuity.

The conservation purposes of this Conservation Easement are recognized by the Uniform North Carolina Conservation and Historic Preservation Agreements Act, N.C.G.S. § 121-34 *et seq.*, which provides for the enforceability of restrictions, easements, covenants or conditions “appropriate to retaining land or water areas predominantly in their natural, scenic, or open condition or in agricultural, horticultural, farming or forest use,” N.C.G.S. § 121-35(1); and which provides for tax assessment of lands subject to such agreements “on the basis of the true value of the land and improvement less any reduction in value caused by the agreement,” N.C.G.S. § 121-40.

NOW, THEREFORE, in consideration of the sum of ONE Dollar (\$1.00) and for other valuable considerations to the Grantors, and in consideration of the mutual covenants, terms, conditions and restrictions contained herein, the Grantors hereby grant and convey unto the Grantee and its successors or assigns forever and in perpetuity a Conservation Easement of the nature and character and to the extent hereinafter set forth, in respect to the Conservation Easement Area of the Property of the Grantors situated in Brunswick County, North Carolina, as described in Exhibit A; together with a Permanent Access Easement as more particularly described below in Paragraph 4 and in Exhibit B, attached hereto and incorporated by reference. All subsequent references to the Conservation Easement shall include, where appropriate, reference to the Permanent Access Easement.

The terms, conditions and restrictions of the Conservation Easement and Permanent Access Easement are as hereinafter set forth:

1. Grant of Conservation Easement

The Grantors hereby voluntarily grant and convey to the Grantee, and the Grantee hereby voluntarily accepts, a perpetual Conservation Easement, which is an immediately vested interest in real property of the nature and character described herein. The Grantors agree that they will not perform, nor knowingly allow others to perform, any act on or affecting the Conservation Easement Area that is inconsistent with the covenants herein. The Grantors authorize the Grantee to enforce these covenants in the manner described below.

The Grantors hereby voluntarily grant and convey to the Grantee all development rights for the Conservation Easement Area, except as otherwise reserved and provided by the terms of this Conservation Easement, that are now or hereafter inherent in the Conservation Easement Area. The parties agree that such rights are terminated and extinguished, and may not be used on or transmitted to any portion of the Property, as it now or hereafter may be bounded or described, or to any other property.

2. Statement of Purpose, Duration

The purposes of the Conservation Easement are, as more particularly described above, to preserve current and future conservation values inherent in the Property. Except as specifically

permitted herein, no activity that shall significantly impair the condition of the Conservation Easement Area shall be permitted.

This Conservation Easement shall be perpetual. It is an easement in gross, runs with the land and is enforceable by the Grantee against the Grantors, its representatives, heirs, successors and assigns, lessees, agents, and licensees.

3. Description of Conservation Easement Area

The Conservation Easement Area is comprised of ____ total acres, as more particularly described in Exhibit A.

4. Access

The Grantors hereby grant and convey to the Grantee a Permanent Access Easement over the Property to the Conservation Easement Area, continuing in perpetuity. The location of the Permanent Access Easement is described in Exhibit B.

The NCDOT and its authorized representatives, including the USACE and the Ecosystem Enhancement Program of the North Carolina Department of Environment and Natural Resources (hereinafter, "EEP"), at all reasonable times and continuing in perpetuity, shall have the right to access the Conservation Easement Area through the Property over this Permanent Access Easement (1) in order to study, inventory, monitor, maintain, enhance and preserve the Conservation Easement Area; (2) in order to access, study, inventory, monitor, maintain, and preserve adjoining property in which NCDOT holds or will hold a conservation easement; and (3) for the purpose of inspecting the Conservation Easement Area to determine if the Grantors are complying with the terms, conditions, restrictions, and purposes of this Conservation Easement. The NCDOT will notify the Grantors by phone, email, or other correspondence before entering the Property for the purpose of determining compliance. However, if the NCDOT in its sole discretion determines that circumstances require immediate entry, such party is not required to notify the Grantors prior to entry but will notify the Grantors within two business days of such entry.

5. Rights and Responsibilities Retained by the Grantors

Subject to the terms and restrictions contained herein, the Grantors reserve to and for itself and its successors all customary rights and privileges of ownership, including without limitation the right to quiet enjoyment of the Conservation Easement Area; the rights to sell, lease, encumber, impose restrictions on and devise the Conservation Easement Area, provided such transaction is subject to the terms of this Conservation Easement and written notice is provided to the Grantee; together with any rights not specifically prohibited by or limited by this Conservation Easement, and not inconsistent with the purposes of this Conservation Easement. Unless otherwise specified below, nothing in this Conservation Easement shall require the Grantors to take any action to restore the condition of the Conservation Easement Area after any

Act of God. The Grantors understand that nothing in this Conservation Easement relieves it of any obligation or restriction on the use of the Conservation Easement Area imposed by law.

6. Right to Privacy

The Grantors retain the right to privacy and the right to exclude any member of the public from trespassing on the Conservation Easement Area. This Conservation Easement does not create any rights of the public in, on or to the Conservation Easement Area, although the public has the right to view the Conservation Easement Area from any adjacent publicly accessible areas. The Grantors may allow public access to the Conservation Easement Area; however, any such access must be consistent with the terms and conditions of this Easement, and may not impair or interfere with the conservation values of this Conservation Easement Area.

7. Subdivision

The Conservation Easement Area may not be subdivided, partitioned nor conveyed from the Property, except in its current configuration as an entity or block of the Property.

8. Passive Recreational Use

The Grantors retain the right to engage in passive recreational uses of the Conservation Easement Area (requiring no surface alteration of the land and posing no threat to the conservation values set forth herein), including, without limitation, walking or animal and plant observation as long as such activity is consistent with the purposes of this Conservation Easement and is not prohibited by Paragraph 9 below. Fishing, hunting, or equestrian use of the Conservation Easement Area are prohibited.

9. Permitted and Restricted Activities

Any activity on, or use of, the designated Conservation Easement Area inconsistent with the purposes of this Conservation Easement is prohibited. Unless expressly reserved as a compatible use herein, any activity in, or use of, the Conservation Easement Area by the Grantors is prohibited as inconsistent with the purposes of the Conservation Easement. The Conservation Easement Area shall be maintained in its natural, scenic and open condition and restricted from any development that would significantly impair or interfere with the conservation values of this Conservation Easement Area, and any use or activity that causes or is likely to cause significant soil degradation or erosion or significant pollution of any surface or sub-surface waters is prohibited. Any rights not expressly reserved hereunder by the Grantors have been acquired by the Grantee.

Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited, restricted or reserved as indicated hereunder:

A. *Disturbance of Natural Features*

Any changes, disturbance, alteration or impairment of the natural, scenic and aesthetic features of the Conservation Easement Area or any introduction of non-native plants and/or animal species is prohibited unless the NCDOT gives its prior written consent or unless otherwise expressly permitted herein.

B. *Agricultural, Grazing, and Horticultural Use and Fencing*

Agricultural, grazing and horticultural use, including landscaping, of the Conservation Easement Area is prohibited. No herbicides, insecticides, fungicides, fertilizers or other potentially harmful substances may be used in the Conservation Easement Area without advance written permission from the NCDOT. No agricultural products or by-products may be disposed of in the Conservation Easement Area or within 100 feet of the streambank, whichever is greater, or result in or cause discharge or runoff directly into the Conservation Easement Area. Existing fences may be repaired and replaced. Grantee or its representatives, specifically including the EEP, may install fencing around the perimeter of the Conservation Easement Area. Grantors will be responsible for maintenance of all fences.

C. *Silvicultural Use and Land Clearing*

There may be no destruction or cutting of trees or plants in the Conservation Easement Area, except upon written approval of NCDOT. The gathering of firewood in the Conservation Easement Area shall be limited to dead trees, such that the gathering is consistent with the purposes of this Conservation Easement. Removal of large live trees, or thinning of the forest or removal of brush for fire management, may be allowed in some cases provided that any such request is consistent with the purposes of this Conservation Easement and the Grantors obtain prior written approval from the NCDOT.

The Grantee is permitted to construct and maintain walking trails on upland areas within the conservation easement. Designated wetland areas must be bridged or crossed using an elevated boardwalk. The trails may be a maximum width of six (6) feet. No additional clearing may take place outside the six (6) foot width. The trails may be surfaced with compacted soil or gravel (maximum aggregate size of three quarters (3/4) of an inch) if necessary to allow access for the disabled. The trails may be maintained through mowing.

D. *Dumping and Storage*

Dumping or storage of soil, trash, refuse, debris, ashes, garbage, waste, abandoned vehicles or parts, appliances, machinery, or hazardous substances, or toxic or hazardous waste, or any placement of underground or aboveground storage tanks or other materials on the Conservation Easement Area is prohibited. No agricultural products or by-products, or agricultural equipment, may be dumped or stored in the Conservation Easement Area. Grantors shall be responsible for removing any dumped or stored material.

E. *Mineral Use, Excavation, and Dredging*

There shall be no filling, excavation, dredging, mining or drilling; no removal of topsoil, sand, gravel, rock, peat, minerals or other materials, and no change in the topography of the land in any manner on the Conservation Easement Area, or on adjacent property if owned by the Grantors or their successors, which would cause erosion or siltation on the Conservation Easement Area.

F. *Industrial Use*

Industrial activities on the Conservation Easement Area are prohibited.

G. *Residential Use*

Residential use of the Conservation Easement Area is prohibited.

H. *Commercial Use*

Commercial activities in the Conservation Easement Area are prohibited.

I. *Construction, Roads and Road Building, Motorized Vehicles*

There shall be no building, shed, facility, mobile home, or other structure constructed or placed in the Conservation Easement Area. No new roads, either paved or unpaved, may be constructed in the Conservation Easement Area. Motorized vehicles, including off-road vehicles, are prohibited in the Conservation Easement Area. However, the NCDOT expressly reserves the right to install, operate, and maintain structures or unpaved roads, and to use motorized vehicles in any manner necessary, for the purpose of preserving, protecting, and maintaining the conservation values of the Conservation Easement Area.

Provided, however, that Grantors are permitted to construct an access road through the Wildlife Corridor. The total width of clearing for the road and any associated pathways, drainage, and utilities may not exceed one hundred (100) feet. The provisions of N.C.G.S. § 136-102.6 and any other applicable statutes, regulations, or policies govern acceptance of the subdivision road and the wildlife crossings (described below) onto the State highway system. The Williamsons will be solely responsible for planning, design, and construction of the subdivision road, including obtaining any and all permits necessary for the construction of the subdivision road. The Williamsons must obtain advance written permission from NCDOT before beginning construction of the subdivision road and wildlife crossings, with such written permission not to be unreasonably delayed or withheld.

In order to maintain continuity between the Wildlife Corridor 1 and West Bay, the Grantors will provide a minimum of four (4) sixty inch (60”) by forty-six inch (46”) corrugated aluminum pipe arches, spread evenly across the width of the wildlife corridor, with a continuous aluminum headwall on both ends, to be used as wildlife crossings. The bottom of the pipes shall be buried one foot (1’) below the ground surface. The pipes will be backfilled along their entire length with one foot (1’) of soil. The wildlife crossings must be built in accordance with Exhibit

C, attached hereto. Four pre-cast concrete bridge openings may be used in place of the pipe-arch configuration provided the vertical clearance and total opening area of the four bridges equals or exceeds that for the pipe-arch configuration. The wildlife crossings must be constructed and operational by the time construction of the subdivision road is complete and before the road is open to traffic.

J. *Signs*

No signs shall be permitted in the Conservation Easement Area except interpretive signs describing activities and the conservation values of the Conservation Easement Area, signs identifying the owner of the Property and the holder of the Conservation Easement, and signs giving directions or prescribing rules and regulations for the use of the Conservation Easement Area, which shall specifically include "No Trespassing," "No Hunting," and "Posted" signs, if applicable.

K. *Utilities*

The installation of utility systems, including, without limitation, water, sewer, power, fuel, and communication lines and related facilities, is prohibited. If there are existing utility easements located in the Conservation Easement Area or affecting the Conservation Easement Area, the Grantors shall notify the NCDOT if right-of-way clearing or other work in the Conservation Easement Area is scheduled by the utility. Any such clearing should be in keeping with the intent of the Conservation Easement.

L. *Water Quality and Drainage Patterns*

The Grantors shall conduct no activities in the Conservation Easement Area that would be detrimental to water quality or to any of the plants or habitats within the Conservation Easement Area, or that would alter natural water levels, drainage, sedimentation and/or flow in or over the Conservation Easement Area, or cause soil degradation or erosion. Diking, dredging, alteration, draining, filling or removal of wetlands or stream by the Grantors is prohibited. In addition, the Grantors are prohibited from diverting or causing or permitting the diversion of surface or underground water into, within or out of the Conservation Easement Area by any means; polluting or discharging into waters, springs, seeps, or wetlands; or using pesticides or biocides in the Conservation Easement Area unless agreed to in writing by the NCDOT.

M. *NCDOT's Rights*

The NCDOT, on behalf of itself and its authorized representatives, specifically including the EEP, reserves the right to use the Conservation Easement Area in any way necessary, consistent with the terms herein, to undertake any activities to protect, restore, manage, maintain, or enhance the conservation values of this Conservation Easement. NCDOT specifically reserves the right to use the Conservation Easement Area in the future for additional mitigation or conservation activities that further the conservation values of the Conservation Easement Area.

10. Ongoing Responsibilities of the Grantors

Other than as specified herein, this Conservation Easement is not intended to impose any legal or other responsibility on the Grantee, or in any way to affect any existing obligation of the Grantors as owners of the Property. Among other things, this shall apply to:

A. *Taxes*

The Grantors shall continue to be solely responsible for payment of all taxes and assessments levied against the Property. If the Grantee is ever required to pay any taxes or assessments on its interest in the Property, the Grantors will reimburse the Grantee for the same.

B. *Upkeep and Maintenance*

The Grantors retain all responsibilities and shall bear all costs and liabilities of any kinds related to the ownership, operation, upkeep and maintenance of the Property, including the maintenance of adequate comprehensive general liability insurance coverage. The Grantee shall have no obligation for the upkeep or maintenance of the Property.

C. *Liability and Indemnification*

The Grantors agree to indemnify and hold the Grantee harmless from any and all costs, claims or liability, including but not limited to reasonable attorney's fees arising from any personal injury, accidents, negligence or damage relating to the Property, or any claim thereof, unless due to the intentional misconduct or negligence of the Grantee or their agents, in which case liability shall be apportioned to the extent allowed by law.

11. Enforcement

The NCDOT shall have the right to prevent violations and remedy violations of the terms of this Conservation Easement through judicial action, which shall include, without limitation, the right to bring proceedings in law or in equity against any party or parties attempting to violate the terms of this Conservation Easement. Except when an ongoing or imminent violation could irreversibly diminish or impair the conservation values of the Conservation Easement Area, the NCDOT shall give the Grantors written notice of the violation and thirty (30) days to cure the violation, before commencing any legal proceedings. If a court with jurisdiction determines that a violation may exist or has occurred, the NCDOT may obtain an injunction to stop the violation, temporarily or permanently. The parties agree that a court may issue an injunction or order requiring the Grantors to restore the Conservation Easement Area to its condition prior to the violation as restoration of the Conservation Easement Area may be the only appropriate remedy. In any case where a court finds that a violation has occurred, the Grantors shall reimburse the NCDOT for all its expenses incurred in stopping and correcting the violation, including but not limited to court costs, attorneys' fees, and any other costs incurred with onsite remediation. If legal action is brought by the NCDOT and the court finds that no violation has occurred, each party shall bear its own costs. The failure of the NCDOT to discover a violation or to take

immediate legal action shall not bar it from doing so at a later time for that violation or any subsequent violations.

12. Transfer of Easements

The Grantee shall have the right to transfer this Conservation Easement and Permanent Access Easement to the EEP, or any public agency or to a private nonprofit organization that, at the time of transfer, is a qualified organization under §170(h) of the U.S. Internal Revenue Code, as amended and under NCGS §121-34 *et seq.*, provided the agency or organization expressly agrees to assume the responsibility imposed on the transferring party or parties by this Conservation Easement. As a condition of such transfer, the Grantee shall require that the conservation purposes intended to be advanced hereunder shall be continued to be carried out.

13. Transfer of Property

The Grantors agree to incorporate by reference the terms of this Conservation Easement and Permanent Access Easement in any deed or other legal instrument by which it transfers or divests itself of any interests, including leasehold interests, in all or a portion of the Conservation Easement Area. Failure of the Grantors to comply with this section shall not impair the validity of this Conservation Easement and Permanent Access Easement as to successor owners or limit their enforceability in any way, nor shall the Grantors's failure to comply with this section constitute a default under this Conservation Easement.

14. Amendment of Easements

This Conservation Easement and Permanent Access Easement may be amended by a written instrument executed by the Grantee and the Grantors. Any such amendment shall be consistent with the purpose of this Conservation Easement and its terms, and shall comply with Section 170(h) of the Internal Revenue Code or any regulations promulgated in accordance with that section. Any such amendment shall be duly recorded.

15. Procedure in the Event of Changed Conditions

The grant or donation of this Conservation Easement gives rise to a property right immediately vested in the Grantee, with a fair market value equal to the proportionate value that the Conservation Easement bears to the value of the Property as a whole. That proportionate value of the Grantee's property rights shall remain constant. If a change in conditions occurs, which makes impossible or impractical any continued protection of the Conservation Easement Area for conservation purposes, the restrictions contained herein may only be extinguished by judicial proceeding. Any proceeds recovered in such actions shall be divided in accordance with the proportionate value of the Grantors's and Grantee's interests as specified herein; all expenses including attorneys' fees incurred by the Grantors and Grantee in such action shall be paid out of the recovered proceeds. The Grantee, its successors and assigns, shall be entitled to a portion of the proceeds of such sale, exchange, involuntary conversion of the Property, or any damage award with respect to any judicial proceeding. Upon such proceedings, such portion shall be

equal to the proportionate value that the Grantee's, its successor's and assign's, interest in the Conservation Easement Area bears to the value of the Property as a whole as of the date of the recording of this Conservation Easement. "Proceeds of Sale" shall mean the cash value of all money and property paid, transferred or contributed in consideration for, or as otherwise required as a condition to the sale, exchange or involuntary conversion of the Conservation Easement Area, or any damages otherwise awarded as a result of judicial proceeding, minus the Grantors's expenses from such transaction or proceeding.

16. Procedure in the Event of Condemnation or Eminent Domain

Whenever all or part of the Property is taken by exercise of eminent domain by public, corporate or other authority, or by negotiated sale in lieu of condemnation, so as to abrogate the restrictions imposed by this Conservation Easement, the Grantors shall immediately give notice to the Grantee and shall take all appropriate actions at the time of such taking or sale to recover the full value of the taking and all incidental or direct damages resulting from the taking. Any proceeds recovered in such actions shall be divided in accordance with the proportionate value of the Grantors's and Grantee's interests as specified herein; all expenses including attorneys' fees incurred by the Grantors and Grantee in such action shall be paid out of the recovered proceeds to the extent not paid by the condemning authority. The Grantee, its successors and assigns, shall be entitled to a portion of the proceeds of such sale, exchange, involuntary conversion of the Property, or any damage award with respect to any judicial proceeding. Such portion shall be equal to the proportionate value that the Grantee's, its successor's and assign's interest in the Conservation Easement Area bears to the value of the Property as a whole as of the date of the recording of this Conservation Easement. "Proceeds of Sale" shall mean the cash value of all money and property paid, transferred or contributed in consideration for, or as otherwise required as a condition to the sale, exchange or involuntary conversion of the Conservation Easement Area, or any damages otherwise awarded as a result of judicial proceeding, minus the Grantors's expenses from such transaction or proceeding.

17. Interpretation

This Conservation Easement shall be interpreted under the laws of the State of North Carolina, resolving any ambiguities and questions of the validity of specific provisions so as to give maximum effect to its conservation purposes.

18. Perpetual Duration; Severability

This Conservation Easement and Permanent Access Easement shall be servitudes running with the land in perpetuity. Every provision of this Conservation Easement and Permanent Access Easement that applies to the Grantors or the Grantee shall also apply to their respective agents, heirs, executors, administrators, assigns, and all other successors as their interests may appear. Invalidity of any of the covenants, terms or conditions of this Conservation Easement or Permanent Access Easement, or any part thereof, by court order or judgment shall in no way affect the validity of any of the other provisions hereof, which shall remain in full force and effect.

19. Notices

Any notices required by this Conservation Easement shall be in writing and shall be personally delivered or sent by first class mail to the parties respectively at the following addresses, unless a party has been notified in writing by the other of a change of address:

To the Grantors:

To NCDOT:
Office of Natural Environment
1598 Mail Service Center
Raleigh, NC 27699-1598

In any provision of this Conservation Easement in which the Grantors is required to provide advance notice to the Grantee of any activity on the Property, such notice shall be given not less than thirty days prior to the planned commencement of the activity. If the Grantee's approval is required, such approval shall be deemed withheld unless the Grantee provides to the Grantors written notice of approval within 30 days of receipt of said request. If the Grantors have received no response after said 30 days, the Grantors may send a second written notice to the Grantee requesting a statement of the reasons for the disapproval and the Grantee shall respond within 30 days with an explanation for the specific reasons and basis for its decision to disapprove.

20. Grantors's Title Warranty

The Grantors covenant and represent that the Grantors are the sole owners and are seized of the Property in fee simple and has good right to grant and convey the aforesaid Conservation Easement and Permanent Access Easement; that the Conservation Easement Area and Permanent Access Easement are free and clear of any and all encumbrances, except easements and leases of record or in effect by prescriptive rights as of the date hereto; and that there is legal access to the Property; and the Grantors covenant that the Grantee shall have the use of and enjoy all of the benefits derived from and arising out of the aforesaid easements conveyed.

21. Subsequent Liens

No provisions of this Conservation Easement should be construed as impairing the ability of the Grantors to use the Conservation Easement Area as collateral for subsequent borrowing. Any such liens shall be subordinated to this Conservation Easement.

22. Subsequent Easements/Restrictions

The grant of any easements or use restrictions that might diminish or impair the conservation values of the Conservation Easement Area is prohibited. Any such easements or restrictions shall be subordinated to this Conservation Easement and Permanent Access Easement.

23. Grantors's Environmental Warranty

The Grantors warrant that they have no actual knowledge of a release or threatened release of hazardous substances or wastes on the Property, as such substances and wastes are defined by applicable federal and state law, and hereby promise to defend and indemnify the Grantee against all litigation, claims, demands, penalties and damages, including reasonable attorneys' fees, arising from or connected with any release of hazardous waste caused by the intentional or negligent act of the Grantors or violation of federal, state or local environmental laws caused by the negligent or intentional act of the Grantors. Without limiting the generality of the foregoing, nothing in this Conservation Easement shall be construed as giving rise to any right or ability in the Grantee, nor shall the Grantee have any right or ability, to exercise physical or managerial control over the day-to-day operations of the Property, or otherwise to become an operator with respect to the Property within the meaning of The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended.

24. Entire Agreement

This instrument sets forth the entire agreement of the parties with respect to the Conservation Easement and Permanent Access Easement and supersedes all prior discussions, negotiations, understandings or agreements relating to the said easements.

25. Recording

The Grantee shall record this instrument and any amendment hereto in timely fashion with the Office of the Register of Deeds of Brunswick County, North Carolina, and may re-record it at any time as may be required to preserve its rights under this Conservation Easement.

26. Merger

The Parties agree that the terms of this Conservation Easement and Permanent Access Easement shall survive any merger of the fee and easement interest in the Property.

TO HAVE AND TO HOLD this Conservation Easement and Permanent Access Easement unto the Grantee, its successors and assigns, forever.

IN WITNESS WHEREOF, the Grantors and Grantee, intending to legally bind themselves, have set their hands on the date first written above.

GRANTORS:

_____(Seal)
LADANE WILLIAMSON

NORTH CAROLINA
_____ COUNTY

I, _____, a Notary Public of _____ County, North Carolina do hereby certify that LaDane Williamson personally appeared before me this day and executed the foregoing instrument.

Witness my hand and official stamp or seal this the _____ day of _____, 2006.

Notary Public (SEAL)
My commission expires: _____

_____(Seal)
DR. DECAROL WILLIAMSON

NORTH CAROLINA

COUNTY

I, _____, a Notary Public of _____ County, North Carolina do hereby certify that DeCarol Williamson personally appeared before me this day and executed the foregoing instrument.

Witness my hand and official stamp or seal this the _____ day of _____, 2006.

Notary Public (SEAL)
My commission expires: _____

_____(Seal)
JAN WILLIAMSON*

**Jan Williamson executes this Agreement solely to the extent that she has any marital right to the Property*

NORTH CAROLINA

COUNTY

I, _____, a Notary Public of _____ County, North Carolina do hereby certify that Jan Williamson personally appeared before me this day and executed the foregoing instrument.

Witness my hand and official stamp or seal this the ____ day of _____, 2006.

Notary Public (SEAL)
My commission expires: _____

Accepted:

GRANTEE:

THE NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION

By: A.D. Allison, II
Assistant Manager, Right of Way Branch

NORTH CAROLINA
_____ COUNTY

I, _____, a Notary Public of _____ County, North Carolina do hereby certify that A.D. Allison, II personally came before me this day and acknowledged that he is the Assistant Manager of the Right of Way Branch of the North Carolina Department of Transportation, an agency of the State of North Carolina, and that by authority duly given he executed the foregoing instrument.

Witness my hand and official stamp or seal this the _____ day of _____, 2006.

Notary Public (SEAL)
My commission expires: _____

EXHIBIT A

CONSERVATION EASEMENT AREA

All of that property designated as “_____” as shown on a survey for the North Carolina Department of Transportation dated _____, prepared by _____ and recorded in Map Book ___ at Page ____ in the office of the Register of Deeds for Brunswick County.

EXHIBIT B

PERMANENT ACCESS EASEMENT

All of that property designated as “_____” as shown on a survey for the North Carolina Department of Transportation dated _____, prepared by _____ and recorded in Map Book ___ at Page ___ in the office of the Register of Deeds for Brunswick County.

DEED FOR HIGHWAY RIGHT OF WAY

THIS INSTRUMENT DRAWN BY _____ CHECKED BY _____

RETURN TO: Division Right of Way Agent
NCDOT - 3113 N. Kerr Avenue
Wilmington, NC 28405

NORTH CAROLINA
COUNTY OF BRUNSWICK
TAX MAP AND LOT 21900001

T.I.P. No.: R-2245
WBS ELEMENT: 34407.3.1
PARCEL NUMBER: R-2245
ROUTE: Second Bridge to Oak Island

THIS FEE SIMPLE DEED, made and entered into this the ____ day of _____, 2006
by and between Dr. DeCarol Williamson and wife, Jan Williamson, and LaDane Williamson
ADD ADDRESS HERE

hereinafter referred to as GRANTORS, and the Department of Transportation, an agency of the State of North Carolina, hereinafter referred to as the Department;

WITNESSETH

That the GRANTORS, for themselves, their heirs, successors, and assigns, for and in consideration of the sum of \$ _____ agreed to be paid by the DEPARTMENT to the GRANTORS, do hereby give, grant and convey unto the DEPARTMENT, its successors and assigns, in FEE SIMPLE (together with any provisions relating to abutter's rights of access which may be hereinafter stated), that certain property located in Lockwood Folly Township, Brunswick County, North Carolina, which is particularly described as follows:

Control of Access Right of Way for Access Corridor 4 (ACC4) for Transportation Improvement Program Project R-2245 (hereinafter, "ACC4 Right of Way"):

ACC 4: [insert legal description here]

The property hereinabove described is a portion of the property acquired by the GRANTORS by instrument(s) recorded in the Brunswick County Registry in Deed Book _____ Page _____.

IT IS UNDERSTOOD AND AGREED between the parties hereto that this conveyance is made for the purpose of constructing and establishing upon the right of way hereby conveyed a road or highway designated as State Highway Project 34407.3.1, Transportation Improvement Program Project R-2245 (hereinafter, "the Project"), Brunswick County, which road or highway is a controlled access facility as defined by law and the GRANTORS shall have no right of access to said road or highway, except as shown on the final right of way plans (hereinafter, "Plans") and specifically subject to the restrictions upon access for the ACC3 Corridor set forth hereinafter. The Plans for the Project showing the above described right of way are to be certified and recorded in the Office of the Register of Deeds for said County pursuant to N.C.G.S. 136-19.4, reference to which Plans is hereby made for purposes of further description and for greater certainty.

The Grantors by the execution of this instrument, acknowledge that the Plans for the Project as they affect their remaining property have been fully explained to them or their authorized representative, and they do hereby release the Grantee, its successors and assigns from any and all claims for damages resulting from the construction of said Project or from the past, present or future use of said premises herein conveyed

for any purpose for which the said Department is authorized by law to subject the same.

Conveyance of the ACC4 Right of Way is made for the acquisition of Right of Way for a Control of Access Corridor (ACC4); however, it is specifically understood that any road or highway constructed or established thereon shall be constructed by and at the expense of the Grantors, or their successors in title to the adjoining lands, and not by the Department.

Access from the adjoining property of the Grantors to the future road or highway that may be constructed by the Grantors within the said ACC4 corridor will be allowed at a point more particularly described as follows: By means of a specific access point 100 feet in width, which is located along the following described line: Beginning at a point [insert description here].

The Grantors, as owners of the adjoining property, or their successors in title, must obtain from the Department an approved driveway access permit prior to beginning construction of the road or highway within the ACC4 corridor. The application for a driveway access permit shall be made in accordance with the North Carolina Department of Transportation's "Policy On Street and Driveway Access to North Carolina Highways" in effect at the time of such application, subject to the rules, regulations, conditions, specifications, and permit processes of the NCDOT and those of any local governments, including but not limited to the submission to, and approval by, such governmental entities of a proposed site development and traffic plan. The Grantors, or their successors in title, will be solely responsible for the planning, design, and construction of the road or highway within the ACC4 corridor, and for obtaining any and all permits necessary for the construction of the road. Said road must be a control of access facility, and must be built in accordance with the minimum right-of-way and construction standards contained in the North Carolina Department of Transportation's "Subdivision Roads Minimum Construction Standards" manual in effect at the time of the application for the driveway access permit, and in accordance with any conditions of the approved driveway access permit. Said access shall be subject to any restrictions upon any requested revision of control of access as set forth on the Plans for said Project.

TO HAVE AND TO HOLD the aforesaid premises and all privileges and appurtenances thereunto belonging to the DEPARTMENT, its successors and assigns in FEE SIMPLE, for the past, present and future use thereof and for all purposes which the said Department is authorized by law to subject the same.

And the GRANTORS covenant with the DEPARTMENT, that the GRANTORS are seized of the premises in fee simple, have the right to convey the same in fee simple, or by easement as indicated, that the title thereto is marketable and free and clear of all encumbrances, and that the GRANTORS will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. Title to the property hereinabove described is hereby conveyed subject to the following exceptions:
NONE

IN WITNESS WHEREOF, the GRANTORS have hereunto set their hands and seals (or if corporate, has caused the instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors) the day and year first above written.

BY: _____
DeCarol Williamson

BY: _____
Jan Williamson

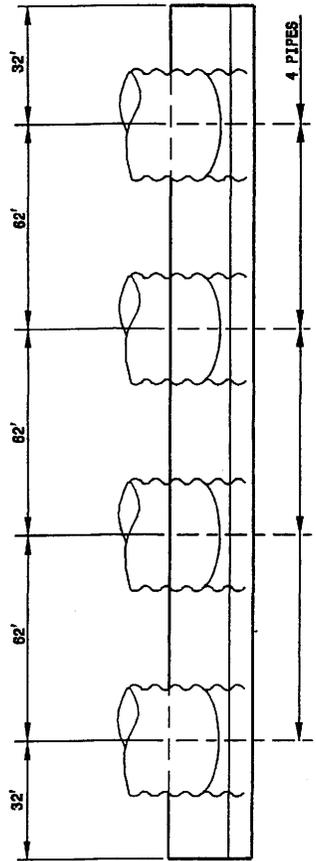
BY: _____
LaDane Williamson

ACCEPTED FOR THE DEPARTMENT OF TRANSPORTATION BY:

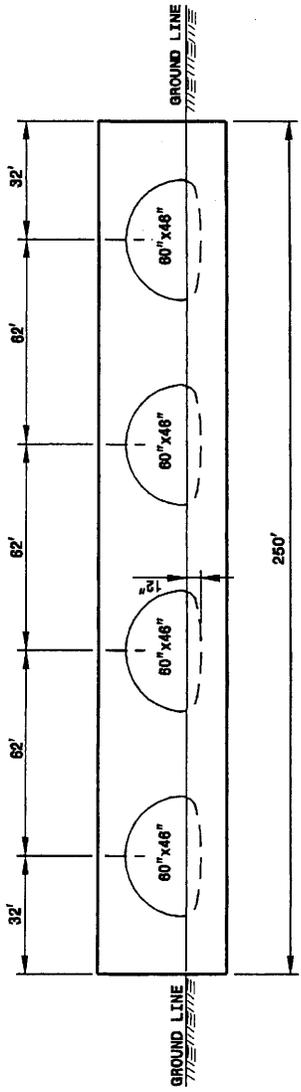
(Stamp/Seal)	STATE OF _____ COUNTY OF _____
	I, _____ a Notary Public for said County and State, certify that _____ personally appeared before me this day and executed the foregoing instrument.
	Witness my hand and official stamp or seal, this the _____ day of _____, 2006 .
	My commission expires _____ <div style="text-align: right;">Notary Public</div>

EXHIBIT E

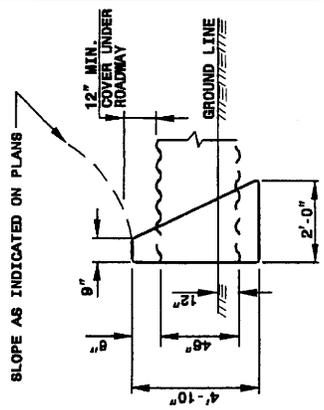
NOTES:
 USE ALUMINUM ENDWALL THAT MEETS
 NCDOT STANDARD SPECIFICATIONS 1082-2.
 CONCRETE MAY BE USED IN LIEU OF ALUMINUM
 FOR ENDWALL CONSTRUCTION IN UPLAND
 (NON-WETLAND) AREAS.
 SUBMIT SHOP DRAWINGS TO NCDOT PROJECT
 SERVICES FOR APPROVAL PRIOR TO INSTALLATION.
 DIMENSIONS AND SHAPE OF ENDWALL MAY VARY
 PER DESIGN OF ENDWALL FABRICATOR.



PLAN

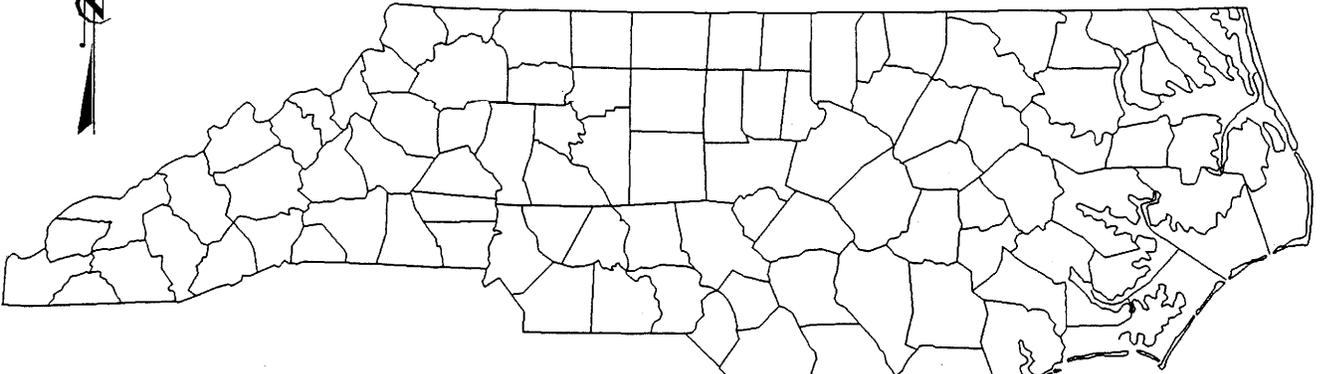


ELEVATION



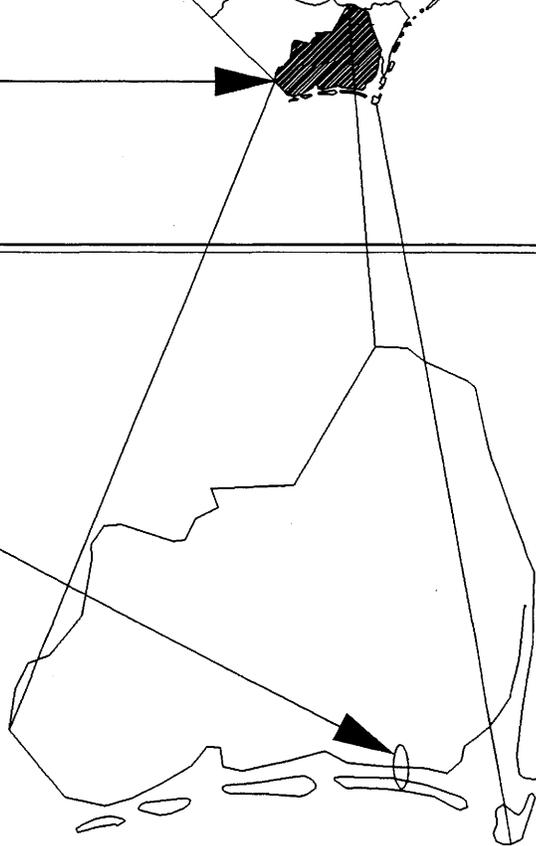
END ELEVATION

NORTH CAROLINA



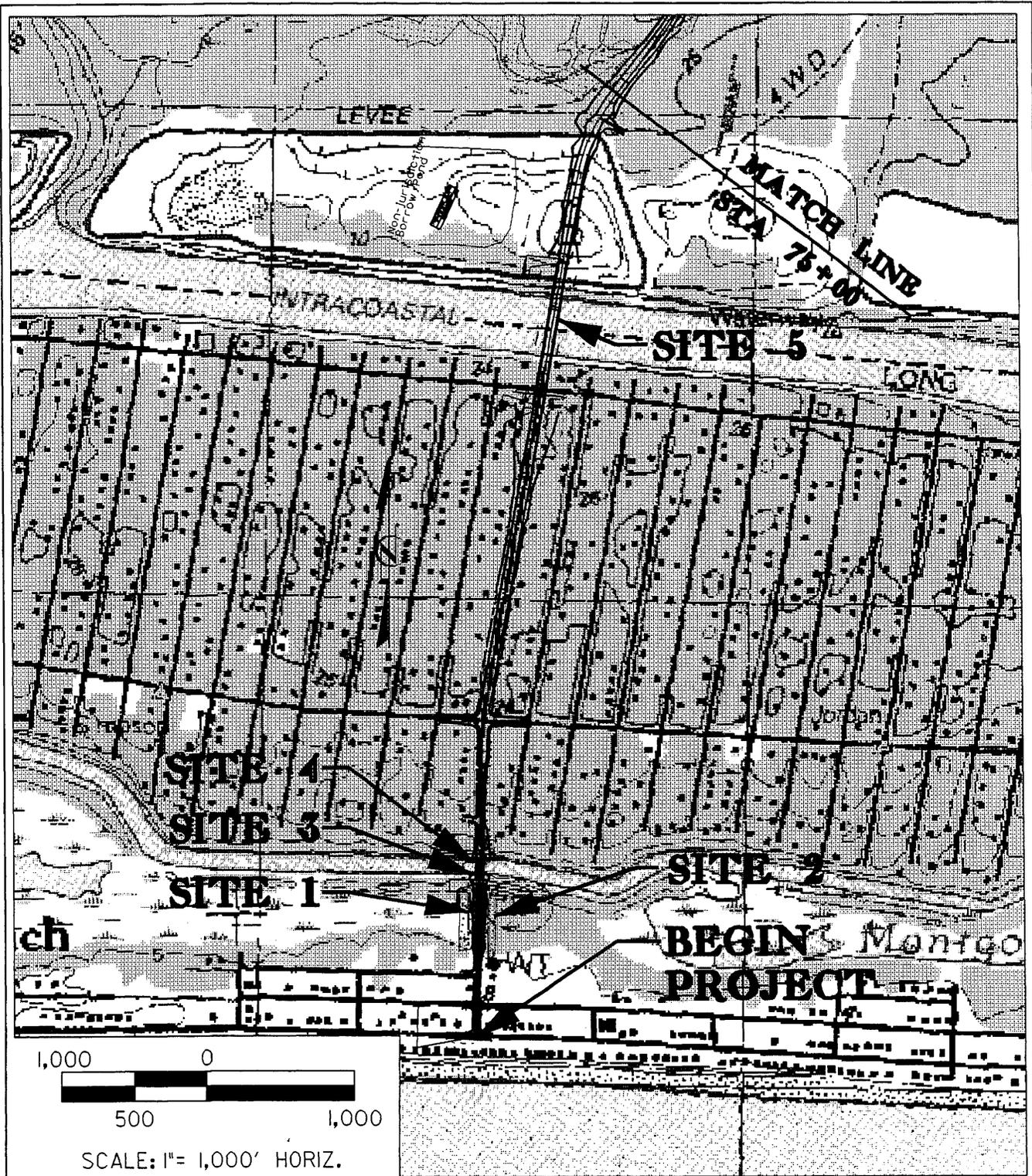
BRUNSWICK
COUNTY

PROJECT
LOCATION



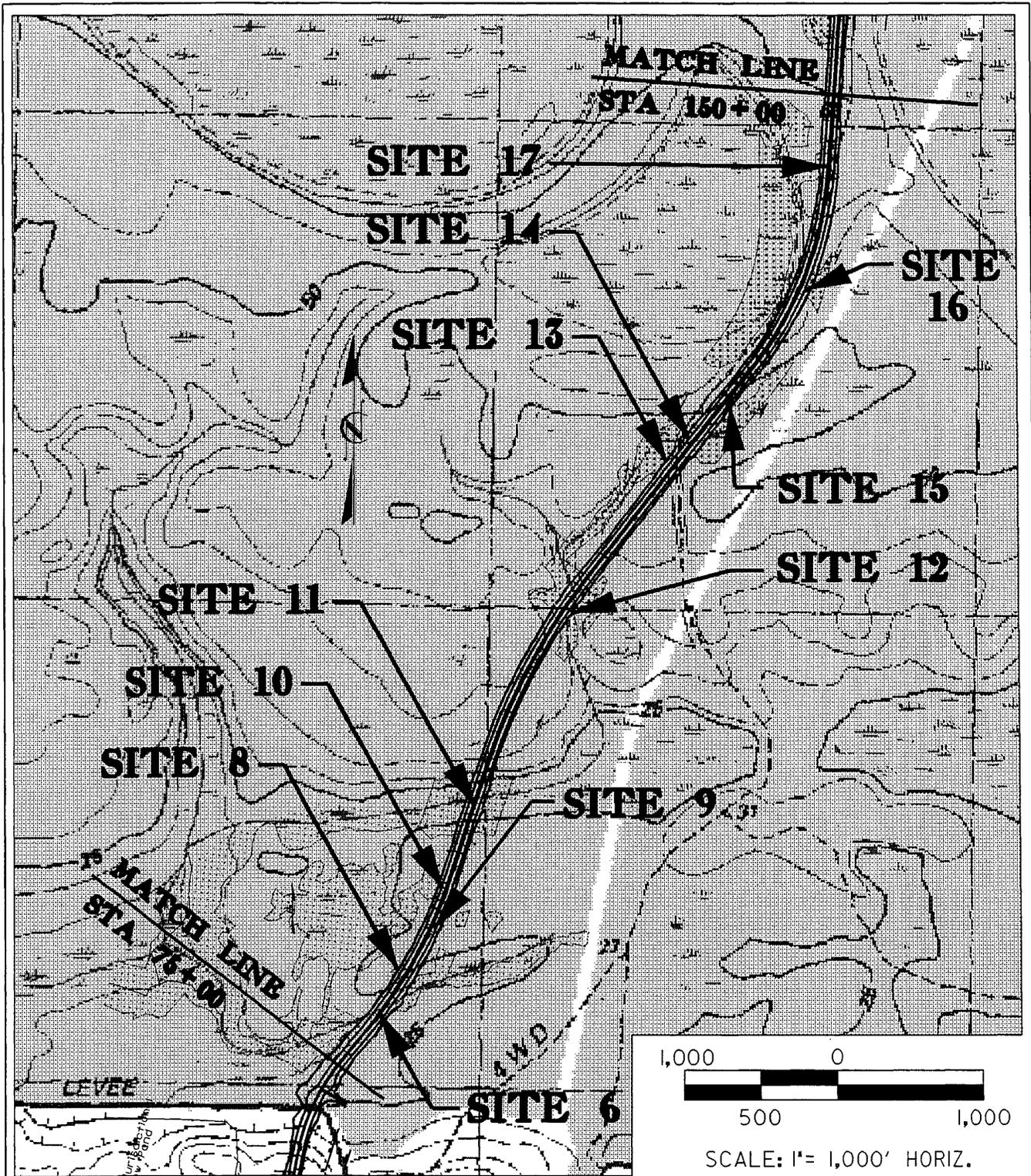
LOCATION
MAP

NCDOT
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT 34407.1.1 (R-2245)
SECOND BRIDGE TO
OAK ISLAND



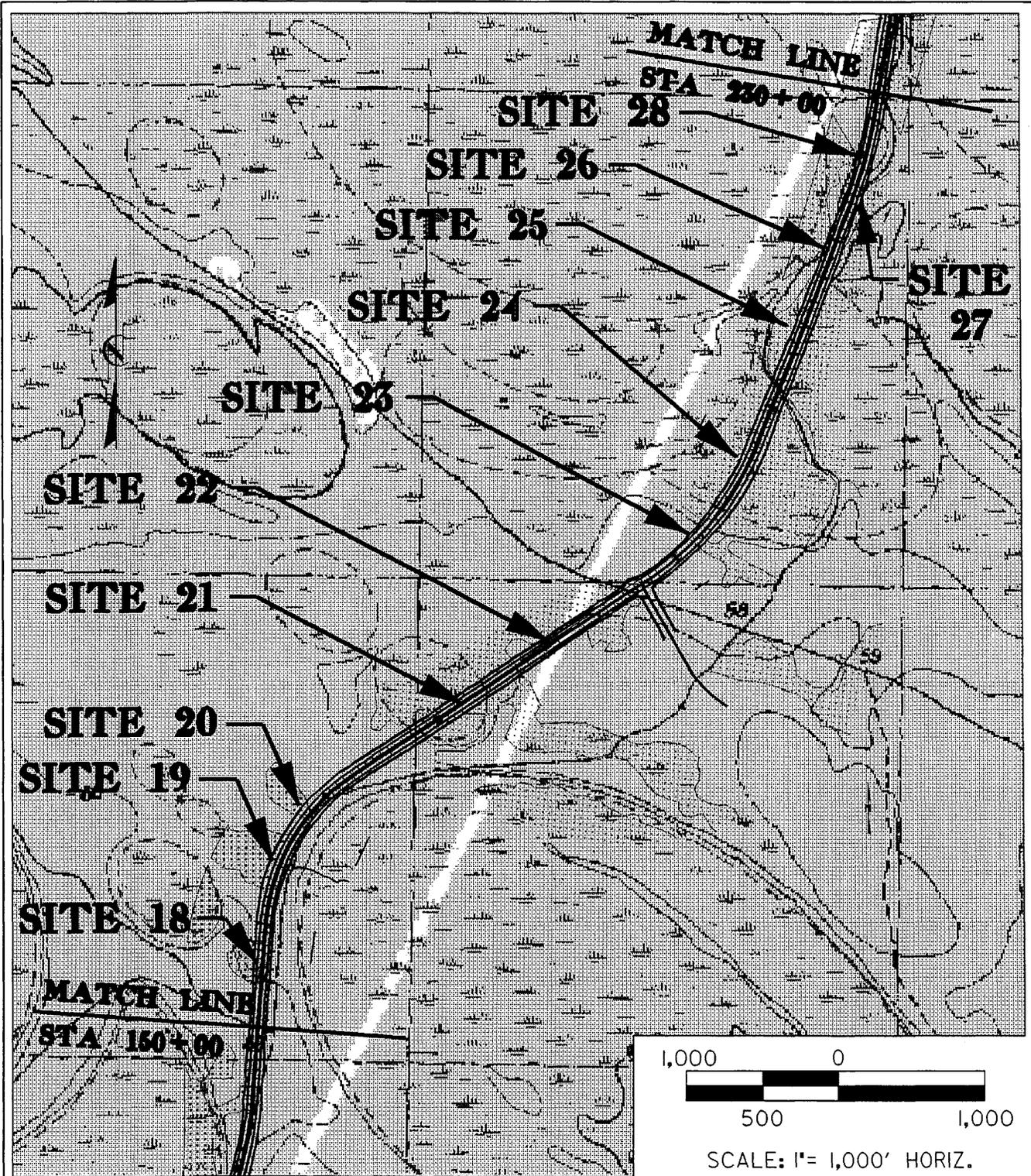
SITE
MAP
1 of 4

NCDOT
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT 34407.1.1 (R-2245)
NEW ROUTE FROM SR 1104
(BEACH DR) TO NC 211
(SECOND BRIDGE TO OAK ISLAND)



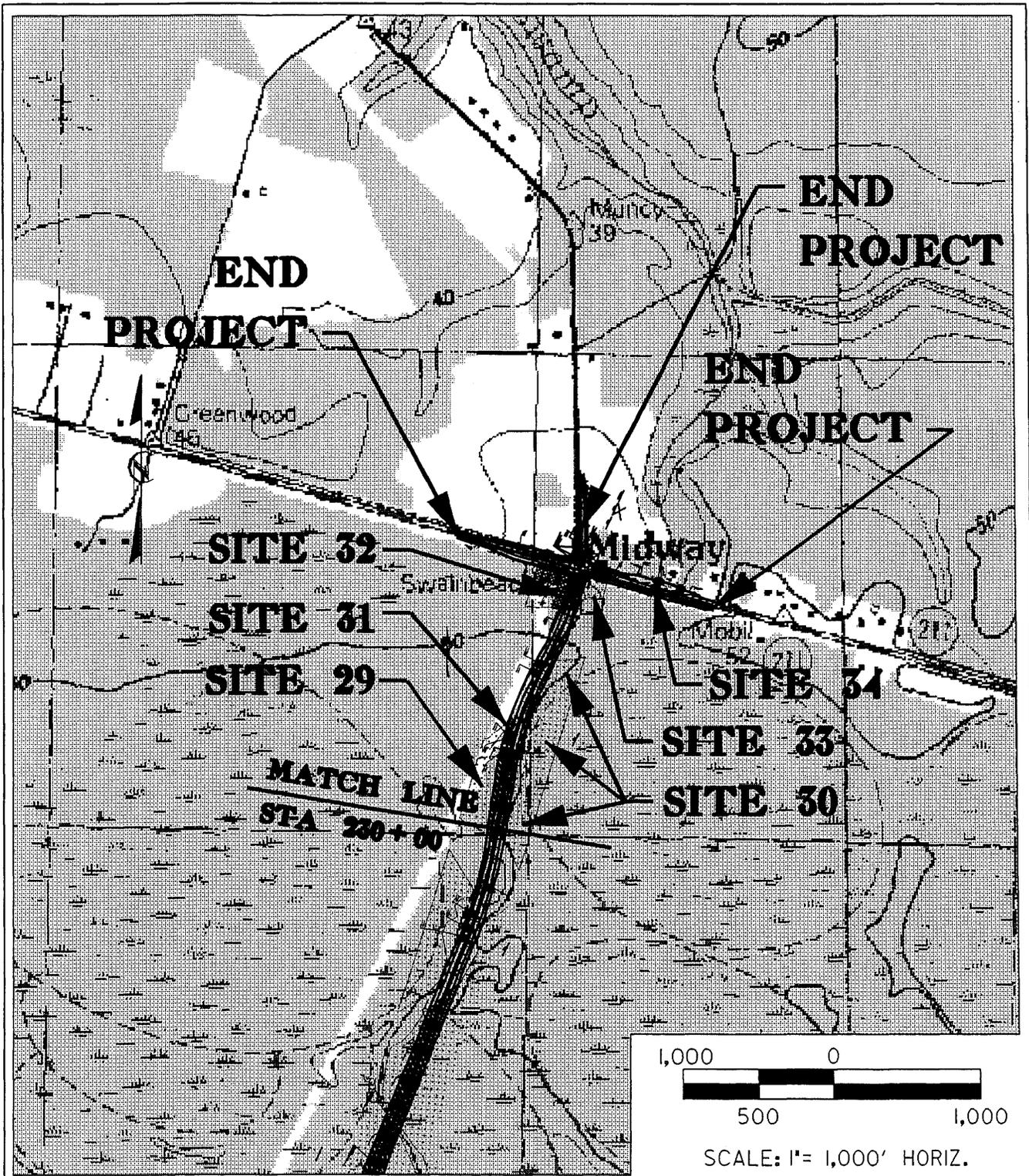
SITE
MAP
2 of 4

NCDOT
 DIVISION OF HIGHWAYS
 BRUNSWICK COUNTY
 PROJECT 34407.1.1 (R-2245)
 NEW ROUTE FROM SR 1104
 (BEACH DR) TO NC 211
 (SECOND BRIDGE TO OAK ISLAND)



SITE
MAP
3 of 4

NCDOT
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT 34407.1.1 (R-2245)
NEW ROUTE FROM SR 1104
(BEACH DR) TO NC 211
(SECOND BRIDGE TO OAK ISLAND)



SITE
MAP
4 of 4

NCDOT

DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT 34407.1.1 (R-2245)
NEW ROUTE FROM SR 1104
(BEACH DR) TO NC 211
(SECOND BRIDGE TO OAK ISLAND)

SHEET 5 OF 60

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
7	OAK ISLAND ELKS LODGE #2769	106 EAST DOLPHIN DRIVE OAK ISLAND, NC 28465
8	GAYLE S. FAUCETTE, etal	418 SUNSET AVE. OXFORD, NC 27565
11	MARION C. DEETER	119 SE 1st STREET OAK ISLAND, NC 28465
71	GEORGE L. FISHER, Etal.	HARRISBURG, NC 28075 10630 PEACH ORCHARD RD
102	MICHAEL DENNIS	CMR 467 BOX 1982 APO AE, 09096
103	JAMES W. WRIGHT	143 MAXWELL ST. FAYETTEVILLE, NC 28301
104	MAS PROPERTIES LLC	131 OCEAN BLVD. WEST HOLDEN BEACH, NC 28462

NCDOT

DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT 34407.1.1 (R-2245)
SECOND BRIDGE TO
OAK ISLAND

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
106	LaDANE WILLIAMSON, etal	2618 NEW VILLAGE WAY WILMINGTON, NC 28405
(not numbered)	BRUNSWICK ELEC MEMBERSHIP	P.O. BOX 826 SHALLOTTE, NC 28459
107	RESERVE DEVELOPMENT CO. LLC	P.O. BOX 10879 SOUTHPORT, NC 28465
109	SOUTH SHORE REAL ESTATE, LLC.	P.O. BOX 411 WINNABOW, NC 28479
113	MIDWAY LANDING, LLC. & GROCERY OF WINNABOW INC.	233 FOREST ROAD WILMINGTON, NC 28403
114	JAMES E. McCRACKEN, et al	3343 SOUTHPORT-SUPPLY RD BOLIVIA, NC 28422

NCDOT

DIVISION OF HIGHWAYS

BRUNSWICK COUNTY

PROJECT 34407.1.1 (R-2245)

SECOND BRIDGE TO

OAK ISLAND

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS				Natural Stream Design (ft)		
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)		Existing Channel Impacts Temp. (ft)	
1	16+00-L- +/- to 19+80 -L- +/- LT	ROADWAY FILL	0.000					0.000					
NO IMPACTS AT SITE 1													
2	15+40 -L- +/- to 19+80 -L- +/- RT	ROADWAY FILL	0.026	0.027									
3	20+70 -L- +/- to 21+20 -L- +/-	CLASS II RIP RAP FILL SLOPE PROTECTION							0.001	0.029			
*4	21+75 -L- +/- to 22+35 -L- +/-	CLASS II RIP RAP FILL SLOPE PROTECTION		0.019					0.000	0.006			
5	56+40 -L- +/- to 60+70 -L- +/-	BRIDGE OVER INTRACOASTAL WATERWAY & BULKHEAD											
6	75+40 -L- +/- to 83+00 -L- +/-	ROADWAY FILL	1.348			0.174		0.082					
TOTALS, This Sheet:			1.374	0.046		0.174		0.082	0.001	0.035			

Total impacts to Coastal Wetlands: 0.019 Acres

- Site 3 Perm. Surface Water Impact Due to Perm. Pile Bents: <0.001 Acres
- Site 4 Perm. Surface Water Impact Due to Perm. Pile Bents: <0.001 Acres
- Site 4 Perm. Surface Water Impact Due to Rowdy Fill: <0.001 Acres
- Site 5 Temp. Surface Water Impact Due to Temp Work Bridge: 0.011 Acres
- Site 5 Temp. Surface Water Impact Due to Temp Bents: <0.001 Acres
- Site 5 Perm. Surface Water Impact Due to Perm. Pile Caps: 0.056 Acres
- Site 5 Perm. Surface Water Impact Due to Bulkhead: 0.012 Acres

SPECIAL EROSION CONTROL FENCE (TEMPORARY FILL) WILL BE PLACED IN SOME AREAS OF MECH. CLEARING.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 34407.1.1 (R-2245)

SHEET 8 OF 50

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS								
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)			
*7	ACCESS ROAD 2 13+65 to 14+05 +/-	ACCESS RD FILL (R/W to R/W)	0.000				0.000								
NO IMPACTS TO SITE 7															
8	82+10 -L- +/- to 83+00 -L- +/- LT	ROADWAY FILL	0.046			0.020	0.014								
9	85+95 -L- +/- to 86+65 -L- +/- RT	ROADWAY FILL	0.099			0.007									
10	88+05 -L- +/- to 89+75 -L- +/- LT	ROADWAY FILL	0.108			0.029	0.035								
11	92+65 -L- +/- to 97+50 -L- +/-	ROADWAY FILL	1.203			0.204	0.151		0.010	0.002	207		52		
12	108+20 -L- +/- to 112+65 -L- +/-	ROADWAY FILL	1.013			0.159	0.055								
13	120+85 -L- +/- to 123+05 -L- +/- LT	ROADWAY FILL	0.029			0.041	0.015								
14	122+85 -L- +/- to 126+55 -L- +/-	ROADWAY FILL	0.669			0.081	0.023								
TOTALS, This Sheet:			3.167			0.541	0.293		0.010	0.002	207		52		

*NOTE: Site 7 has been deleted. It was associated with an access point on the west side of the -L- line.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 34407.1.1 (R-2245)
SHEET **9** OF **66**

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS									
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)				
15	127+23 -L- +/- to 127+85 -L- +/- RT	ROADWAY FILL	0.003			0.007	0.014									
16	136+35 -L- +/- to 138+30 -L- +/- RT	ROADWAY FILL	0.231			0.045										
17	144+25 -L- +/- to 146+10 -L- +/- LT	ROADWAY FILL	0.325			0.040	0.030									
18	153+40 -L- +/- to 155+25 -L- +/- LT	ROADWAY FILL	0.105			0.042	0.035									
19	159+25 -L- +/- to 163+65 -L- +/-	ROADWAY FILL	1.070			0.091										
20	164+55 -L- +/- to 165+70 -L- +/- LT	ROADWAY FILL	0.142			0.026										
21	173+70 -L- +/- to 182+40 -L- +/-	ROADWAY FILL	2.388			0.385	0.125									
TOTALS, This Sheet:			4.264			0.636	0.204									

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 BRUNSWICK COUNTY
 PROJECT: 34407.1.1 (R-2245)

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS							
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)		
22	184+50 -L- +/- to 191+85 -L- +/-	ROADWAY FILL	1.313			0.244	0.279							
23	197+05 -L- +/- to 197+70 -L- +/-	ROADWAY FILL	0.161			0.021	0.008							
24	198+55 -L- +/- to 209+30 -L- +/-	ROADWAY FILL	2.889			0.456	0.089							
25	208+60 -L- +/- to 219+90 -L- +/-	ROADWAY FILL	2.497			0.411	0.167							
26	218+65 -L- +/- to 220+45 -L- +/- LT	ROADWAY FILL					0.013							
27	222+25 -L- +/- to 223+65 -L- +/- RT	ROADWAY FILL	0.004			0.021	0.007							
28	225+20 -L- +/- to 225+65 -L- +/- LT	ROADWAY FILL					0.002							
29	229+50 -L- +/- to 235+30 -L- +/-	ROADWAY FILL	0.682			0.123	0.019							
TOTALS, This Sheet:			7.546			1.276	0.584							

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 BRUNSWICK COUNTY
 PROJECT: 34407.1.1 (R-2245)

SHEET 11 OF 60

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS							
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)			
30	229+15 -L- +/- to 242+45 -L- +/-	ROADWAY FILL	0.687			0.297	0.091								
31	236+55 -L- +/- to 237+60 -L- +/- LT	ROADWAY FILL	0.073			0.015									
*32	SOUTH WEST CORNER OF -L- and NC-211	ROADWAY FILL	0.514		0.166										
		*Drawdown Effect	0.671												
33	SOUTH EAST CORNER OF -L- and NC-211	ROADWAY FILL	0.047				0.050								
34	24+00 -Y7- (NC-211)	10' w x 8' h RCBC								0.004	0.016	15	80		
**35	ACCESS ROAD 2 15+65 +/- to 16+45 +/-	ACCESS RD FILL (RW to RW)	0.000				0.000								
TOTALS, This Sheet:			1.992		0.166	0.312	0.141	0.004	0.016	15	80				

* NOTE: Area of drawdown as a result of moving existing roadway ditch: 0.671 Acres

**NOTE: Site 35 has been deleted. It was associated with an access point on the west side of the -L- line.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BRUNSWICK COUNTY
PROJECT: 34407.1.1 (R-2245)

SHEET 12 OF 66

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2245	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
34407.1.1	STP-1105(6)	P.E.	
34407.3.1	STP-1105(7)	RAW & UTIL.	
34407.2.3	STP-1105(17)	CONST.	

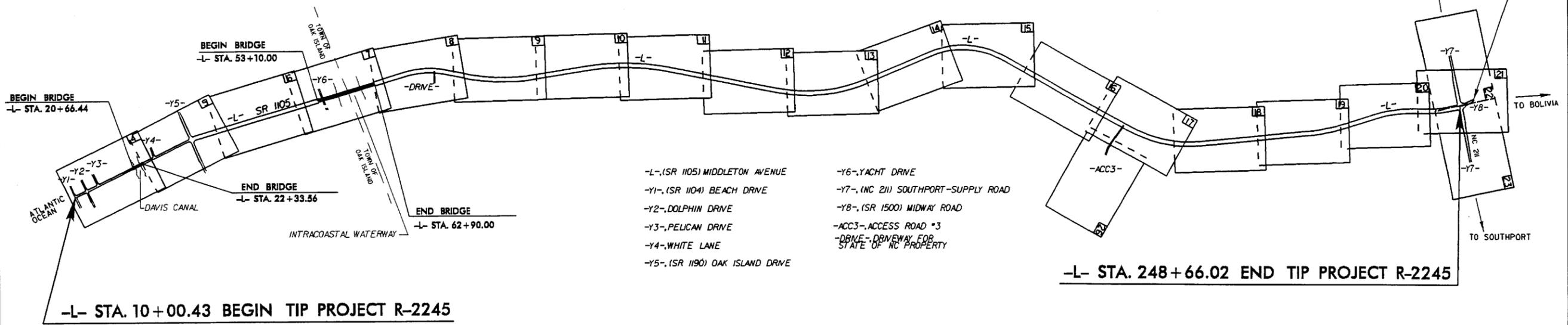
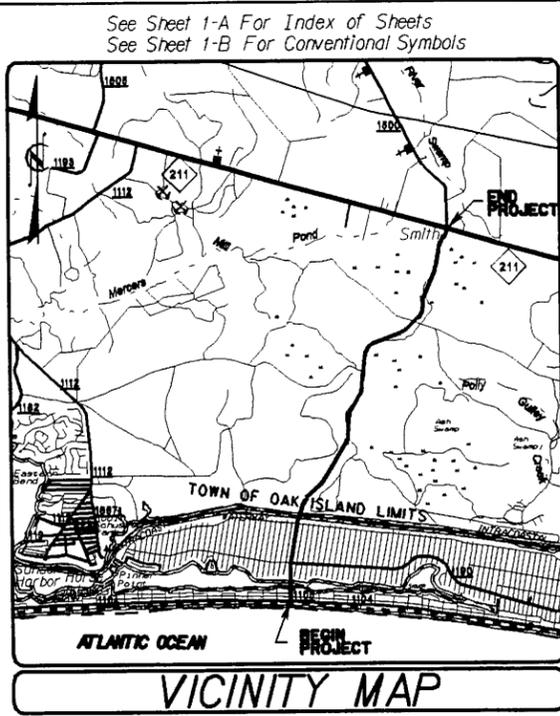
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BRUNSWICK COUNTY

LOCATION: NEW ROUTE FROM SR 1104 (BEACH DRIVE)
TO NC 211 (SECOND BRIDGE TO OAK ISLAND)

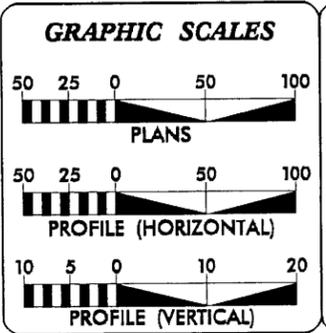
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, STRUCTURES
AND CULVERT

PERMIT DRAWINGS



ACCESS IS NOT CONTROLLED FROM OCEAN BEACH DRIVE TO 735' SOUTH OF YACHT DRIVE.
ACCESS CONTROL IS LIMITED TO POINTS AS SHOWN ON THE PLANS FROM 735' SOUTH OF YACHT DRIVE TO NC 211.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2006 =	13800
ADT 2030 =	31000
DHV =	8 %
D =	55 %
T =	3 % *
V =	40-60 MPH
* (TTST 1% + DUAL 2%)	
FUNC CLASS =	RURAL COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2245 =	4.303 MI
LENGTH STRUCTURES TIP PROJECT R-2245 =	0.217 MI
TOTAL LENGTH OF TIP PROJECT R-2245 =	4.520 MI

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	APRIL 29, 2005
LETTING DATE:	MAY 15, 2006
	GLENN W. MUMFORD, PE PROJECT ENGINEER
	SUSAN C. LANCASTER, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.
DATE

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

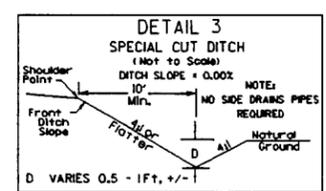
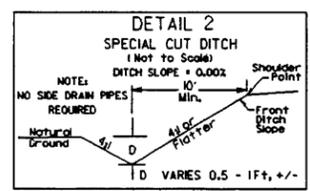
SIGNATURE: _____ P.E.
STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SIGNATURE: _____ P.E.
DIVISION ADMINISTRATOR

20-DEC-2006 09:25
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 03/08/99
 CONTRACT: C201550
 TIP PROJECT: R-2245

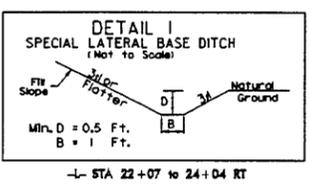
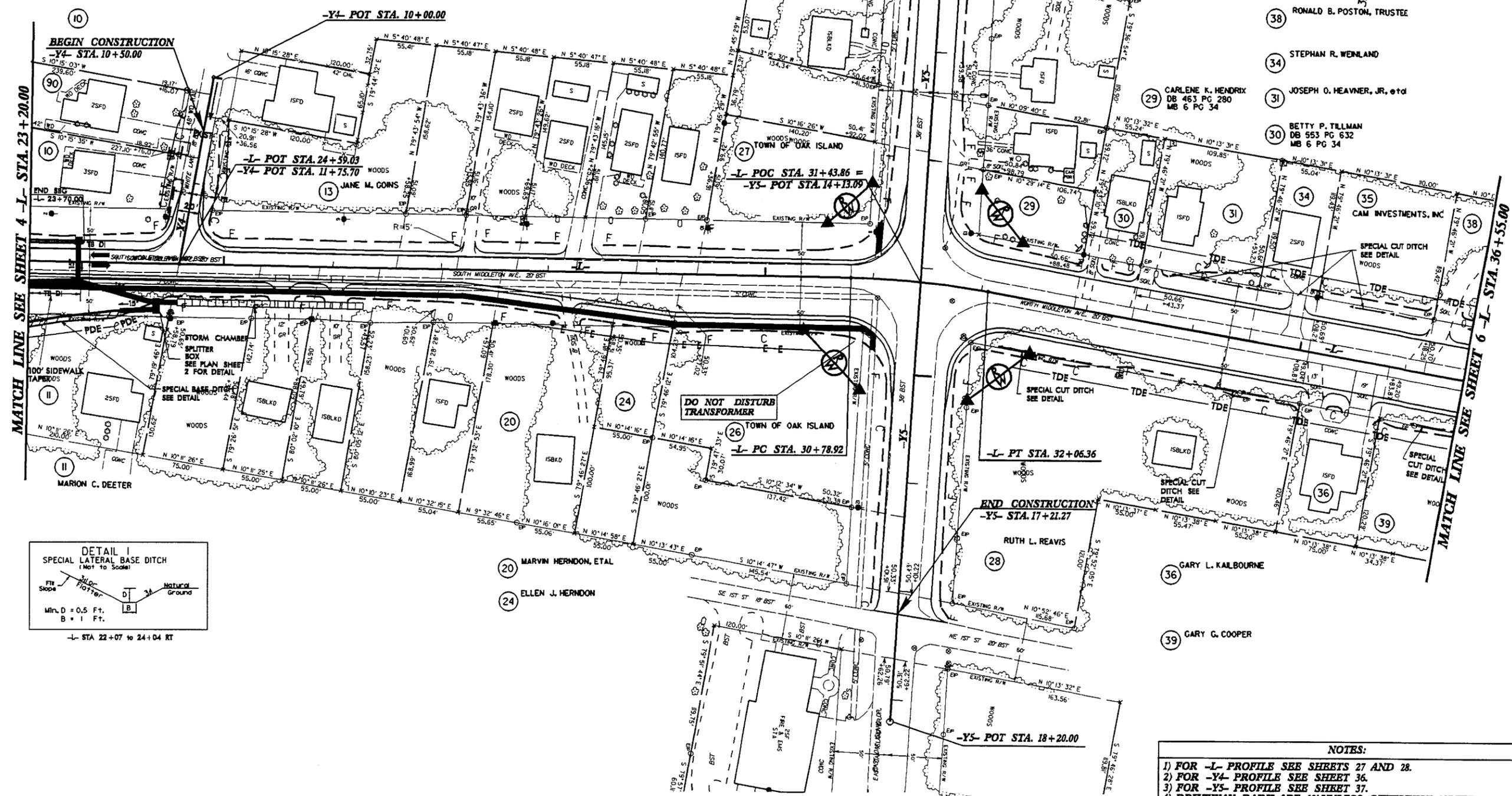
PROJECT REFERENCE NO. R-2245	SHEET NO. 5
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-L- STA 33+72 to 34+75 LT EL=23.40
 -L- STA 35+38 to 36+02 LT EL=23.90
 -L- STA 36+80 to 37+13 LT EL=24.20

-L- STA 32+25 to 33+13 RT EL=22.10
 -L- STA 34+30 to 34+78 RT EL=23.00
 -L- STA 36+14 to 37+10 RT EL=24.20

90 EMMETT C. GUNNERSON
 DB 565 PG 1055
 5 PG 114
 GARY V. PETERSON



-L- STA 22+07 to 24+04 RT

20 MARVIN HERNDON, ETAL
 24 ELLEN J. HERNDON

29 CARLENE K. HENDRIX
 DB 463 PG 280
 MB 6 PG 34
 30 BETTY P. TILMAN
 DB 553 PG 632
 MB 6 PG 34
 31 JOSEPH O. HEAVNER, JR. etd
 32 RONALD B. POSTON, TRUSTEE
 33 STEPHAN R. WEINLAND
 34 GARY L. KALBOURNE
 35 CAM INVESTMENTS, INC
 36 GARY G. COOPER

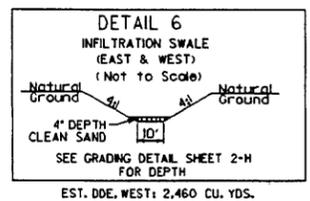
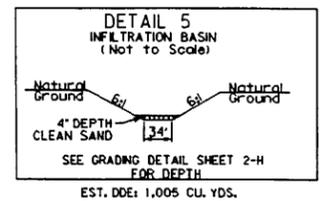
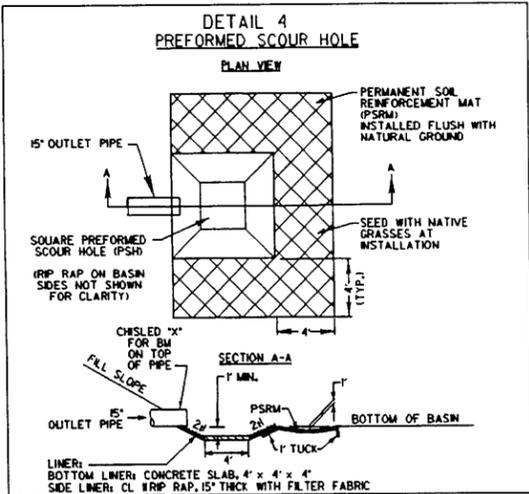
- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 27 AND 28.
 - 2) FOR -Y- PROFILE SEE SHEET 36.
 - 3) FOR -Y- PROFILE SEE SHEET 37.
 - 4) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
 - 5) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
 - 6) -Y- LINE RADII ARE 30' UNLESS OTHERWISE NOTED.

16 67 50

19 DEC 2006 16:26
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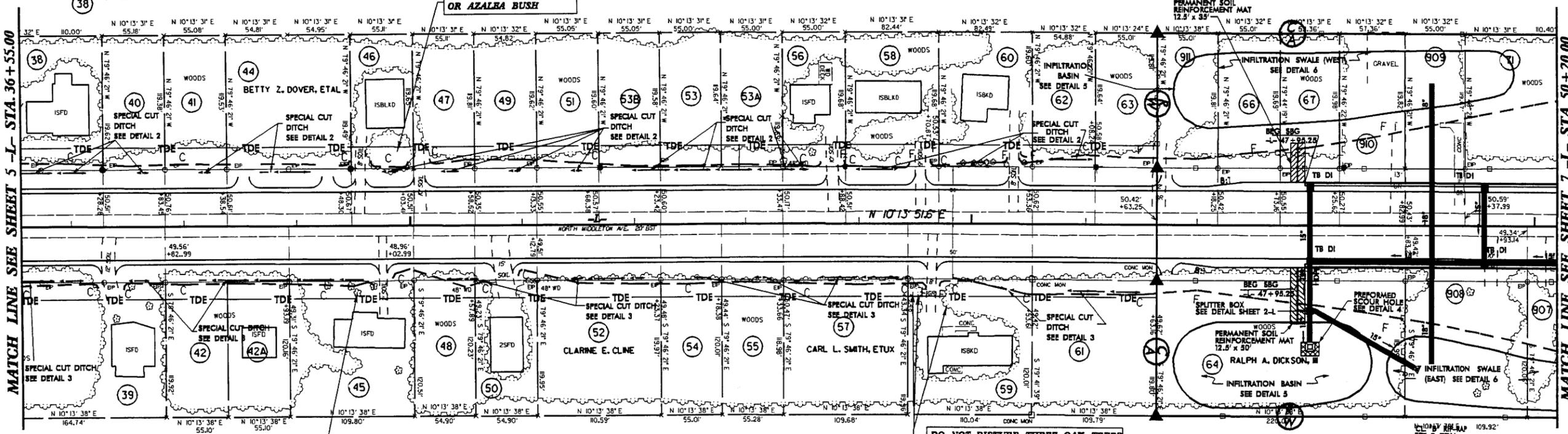
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PROJECT REFERENCE NO. R-2245	SHEET NO. 6
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



- 41 JOHN ROACH JAMES
- 47 ROBERT WALSER, SR.
- 49 MINDI W. SINK, ETAL
- 53A DAWN T. WARRICK
- 40 HARMON H. JAMES, JR.
- 46 JANET H. DENNIS
- 53 WILLIAM B. WARRICK
- 58 DONNA L. BROWN, ETALS
- 38 RONALD B. POSTON, TRUSTEE
- 42 HARMON H. JAMES, JR.
- 51 JOHN L. WALSER
- 56 ANNE E. HAMPTON
- 63 MARVIN C. MARTIN, SR.
DB 1390 PG 266
MB 6 PG 34
- 67 PAUL E. MOORE, JR.
- 71 GEORGE L. FISHER, ETAL
- 60 ROBERT W. CONNER
- 66 FRANK LEE
- 909 (formerly-FREDA M. RICH)
- 62 PAUL M. SAWYER
DB 1789 PG 683
MB 6 PG 34
- 911 (formerly-KEN BLACK)
- 910 (formerly-DOUGLASS JOHNSON)

DO NOT DISTURB WELL OR AZALEA BUSH



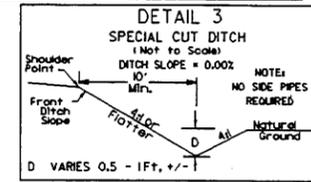
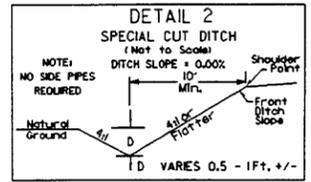
MATCH LINE SEE SHEET 5 -L- STA. 36+55.00

MATCH LINE SEE SHEET 7 -L- STA. 50+20.00

DO NOT DISTURB TREE

DO NOT DISTURB THREE OAK TREES

- 39 GARY G. COOPER
- 45 MARY W. CHURCH
- 42 ARTHUR SKIPPER
- 48 H. EMANUEL GHENT
- 42A KIMBERLY S. ANDERSON
- 50 DENISE M. WEST
- 54 NEIL G. JESTER
- 55 ANNE J. CONNER



-L- STA 36+50 to 37+13 LT EL=24.20 -L- STA 37+58 to 37+68 LT EL=24.50 -L- STA 38+13 to 38+24 LT EL=24.60 -L- STA 38+68 to 39+37 LT EL=24.90 -L- STA 39+73 to 39+89 LT EL=25.00 -L- STA 40+28 to 40+44 LT EL=25.00 -L- STA 40+88 to 40+98 LT EL=25.00 -L- STA 41+43 to 41+83 LT EL=25.40 -L- STA 41+98 to 43+85 LT EL=25.70 -L- STA 43+97 to 44+34 LT EL=25.70 -L- STA 44+73 to 45+18 LT EL=26.20 -L- STA 45+63 to 46+10 LT EL=26.20	-L- STA 36+14 to 37+10 RT EL=24.20 -L- STA 37+50 to 37+68 RT EL=24.50 -L- STA 38+13 to 39+88 RT EL=24.80 -L- STA 40+33 to 40+61 RT EL=25.50 -L- STA 41+43 to 42+08 RT EL=25.60 -L- STA 42+53 to 42+63 RT EL=25.80 -L- STA 43+08 to 43+19 RT EL=26.00 -L- STA 43+64 to 44+45 RT EL=26.20 -L- STA 44+83 to 45+39 RT EL=26.50 -L- STA 45+84 to 46+48 RT EL=26.90
--	--

- 59 MARSHALL R. CARROLL
- 61 J.R. CORBETT
- 909 (formerly-KATHERINE W. HICKS)
- 907 (formerly-DONALD W. BATCHELOR)

NOTES:

- 1) FOR -L- PROFILE SEE SHEET 28.
- 2) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
- 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

17 of 60

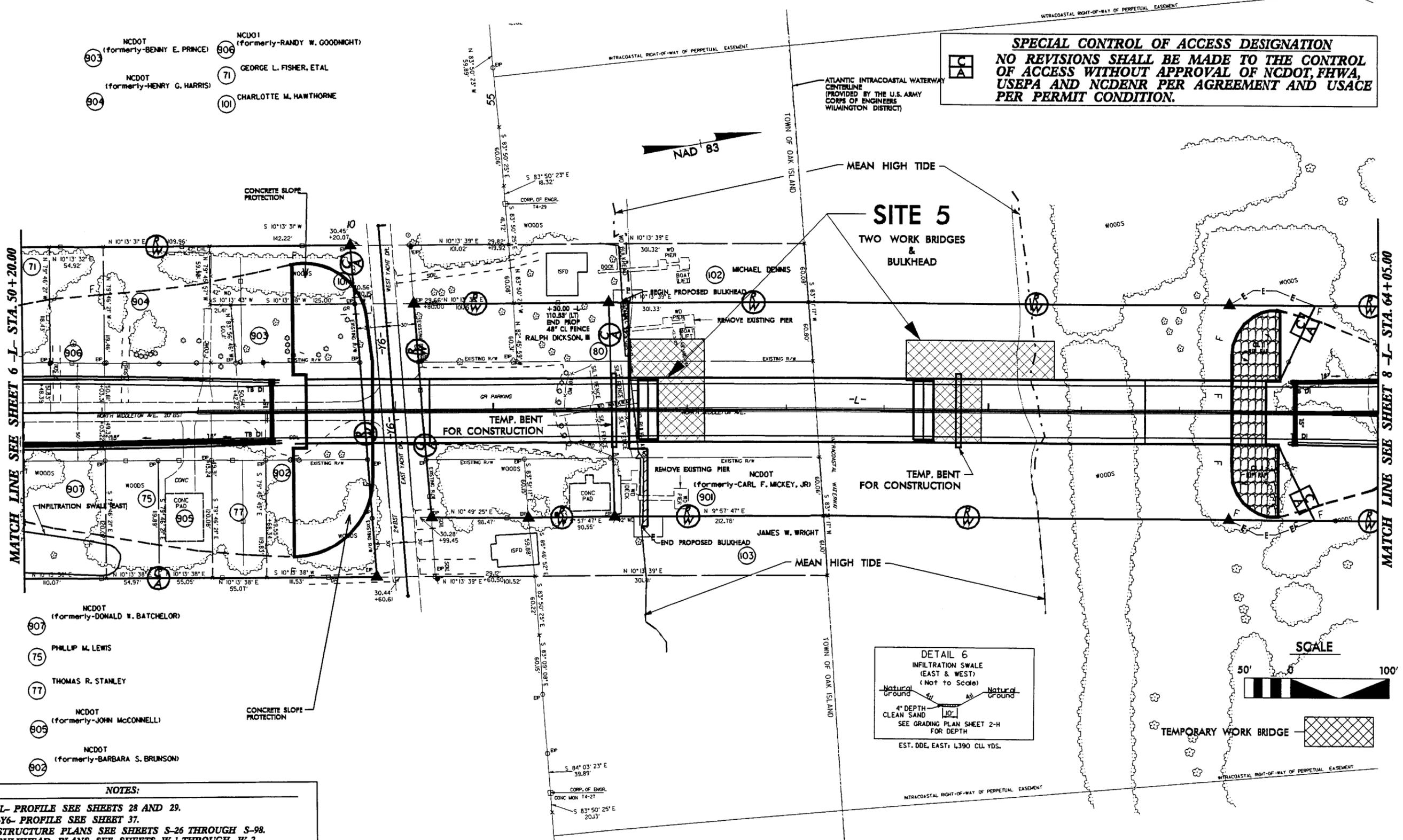
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PROJECT REFERENCE NO. R-2245		SHEET NO. 7	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

ENGLISH

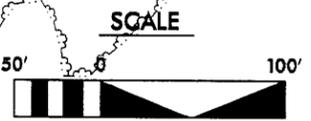
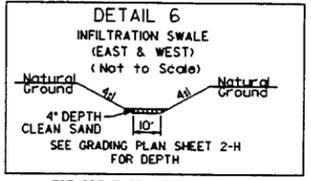


SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.



MATCH LINE SEE SHEET 6 -L- STA. 50+20.00

MATCH LINE SEE SHEET 8 -L- STA. 64+05.00

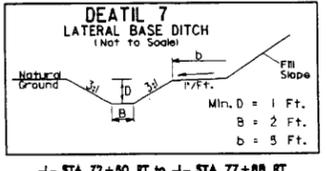


- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 28 AND 29.
 - 2) FOR -Y6- PROFILE SEE SHEET 37.
 - 3) FOR STRUCTURE PLANS SEE SHEETS S-26 THROUGH S-28.
 - 4) FOR BULKHEAD PLANS SEE SHEETS W-1 THROUGH W-2.
 - 5) EXISTING PAVEMENT WITHIN THE AREA OF END BENT FILES SHALL BE REMOVED AND SCARIFIED TO MINIMUM DEPTH OF 2.0'.

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ENGLISH

PROJECT REFERENCE NO. R-2245	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-L- STA 72+80 RT to -L- STA 77+88 RT

SITE 7

SITE 7
REMOVED FROM PROJECT
11 MAY 06
NO IMPACT

SITE 6

SITE 6
FILL IN WETLANDS,
MECHANIZED & HAND CLEARING

SITE 8

SITE 8
FILL IN WETLANDS,
MECHANIZED & HAND CLEARING

SITE 9

SITE 9
FILL IN WETLANDS
&
MECHANIZED CLEARING

SITE 10

SITE 10
FILL IN WETLANDS,
MECHANIZED & HAND CLEARING

MATCH LINE SEE SHEET 8 -L- STA 77+20.00

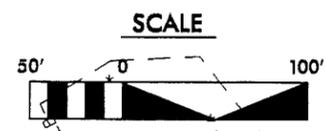
MATCH LINE SEE SHEET 10 -L- STA 90+95.00

(105) STATE OF NORTH CAROLINA

(105) STATE OF NORTH CAROLINA

LEGEND

- WOODS
- FILL IN WETLANDS
- MECHANIZED CLEARING
- HAND CLEARING



SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

NOTES:

- 1) FOR -L- PROFILE SEE SHEET 29.
- 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 89+84.04 RT AND -L- STA. 77+94.22 RT) SEE SHEET 2-J.

20 of 66

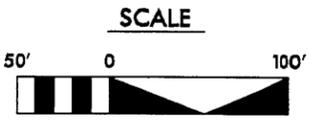
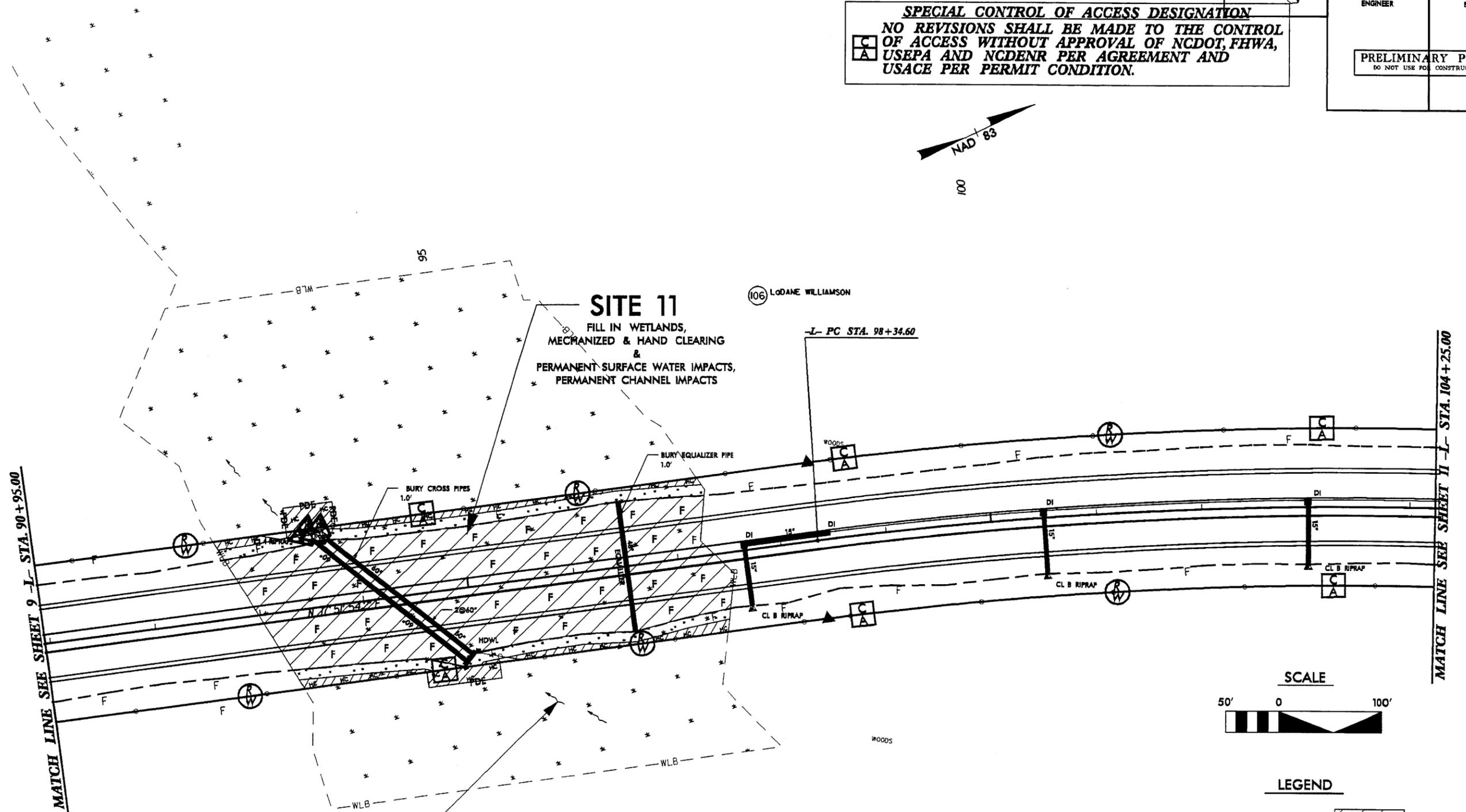
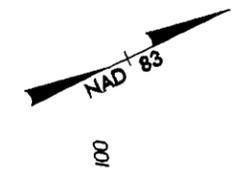
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ENGLISH

PROJECT REFERENCE NO. R-2245	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.



LEGEND

FILL IN WETLANDS	
MECHANIZED CLEARING	
HAND CLEARING	

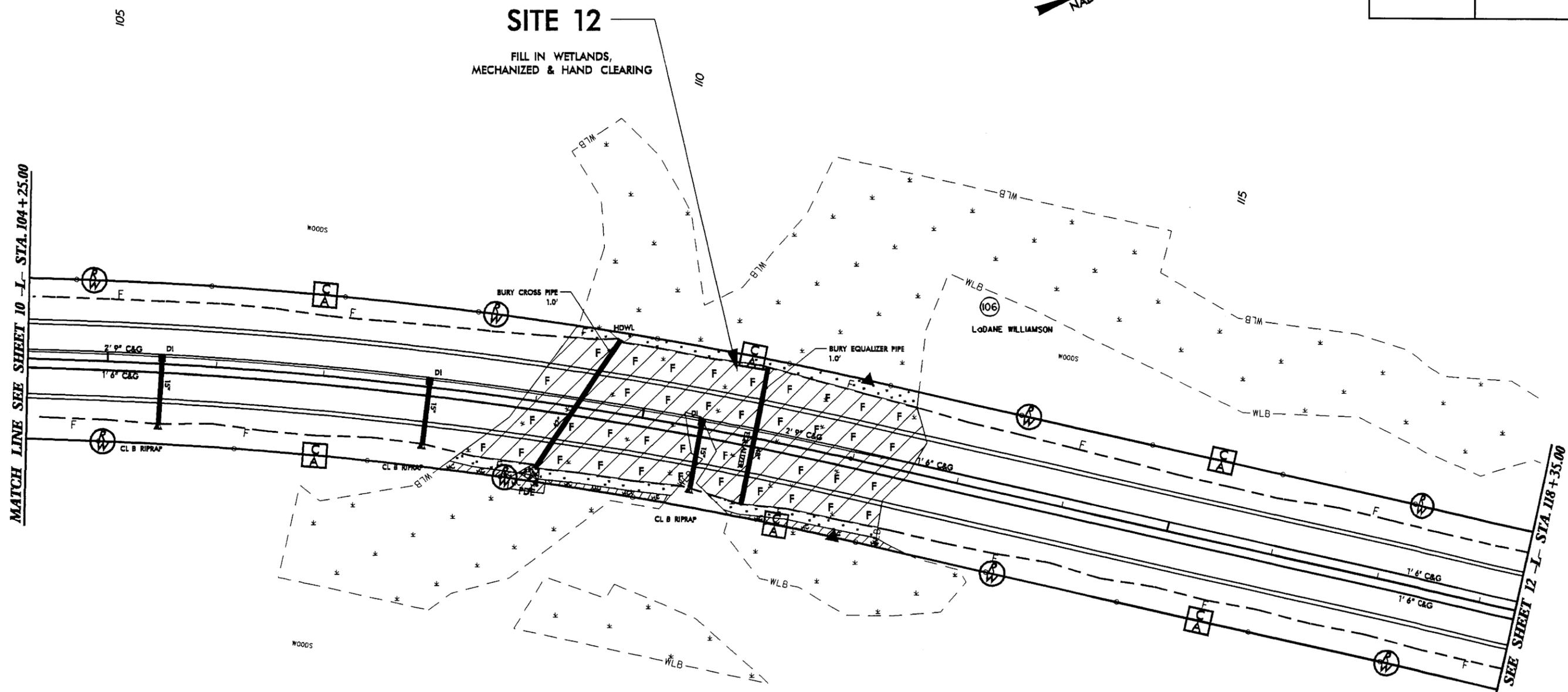
NOTES:
 1) FOR -L- PROFILE SEE SHEETS 29 AND 30.
 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 98 + 34.60 LT) SEE SHEET 2-J.

B/17/99

REVISIONS

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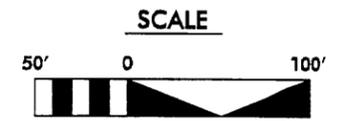
DLAFC



REVISIONS

LEGEND

- (106) LODANE WILLIAMSON
- FILL IN WETLANDS
- MECHANIZED CLEARING
- HAND CLEARING



SPECIAL CONTROL OF ACCESS DESIGNATION
 NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

NOTES:

- FOR -L- PROFILE SEE SHEET 30.
- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 111+97.79 LT) SEE SHEET 2-J.

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ENGLISH

PROJECT REFERENCE NO. R-2245	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



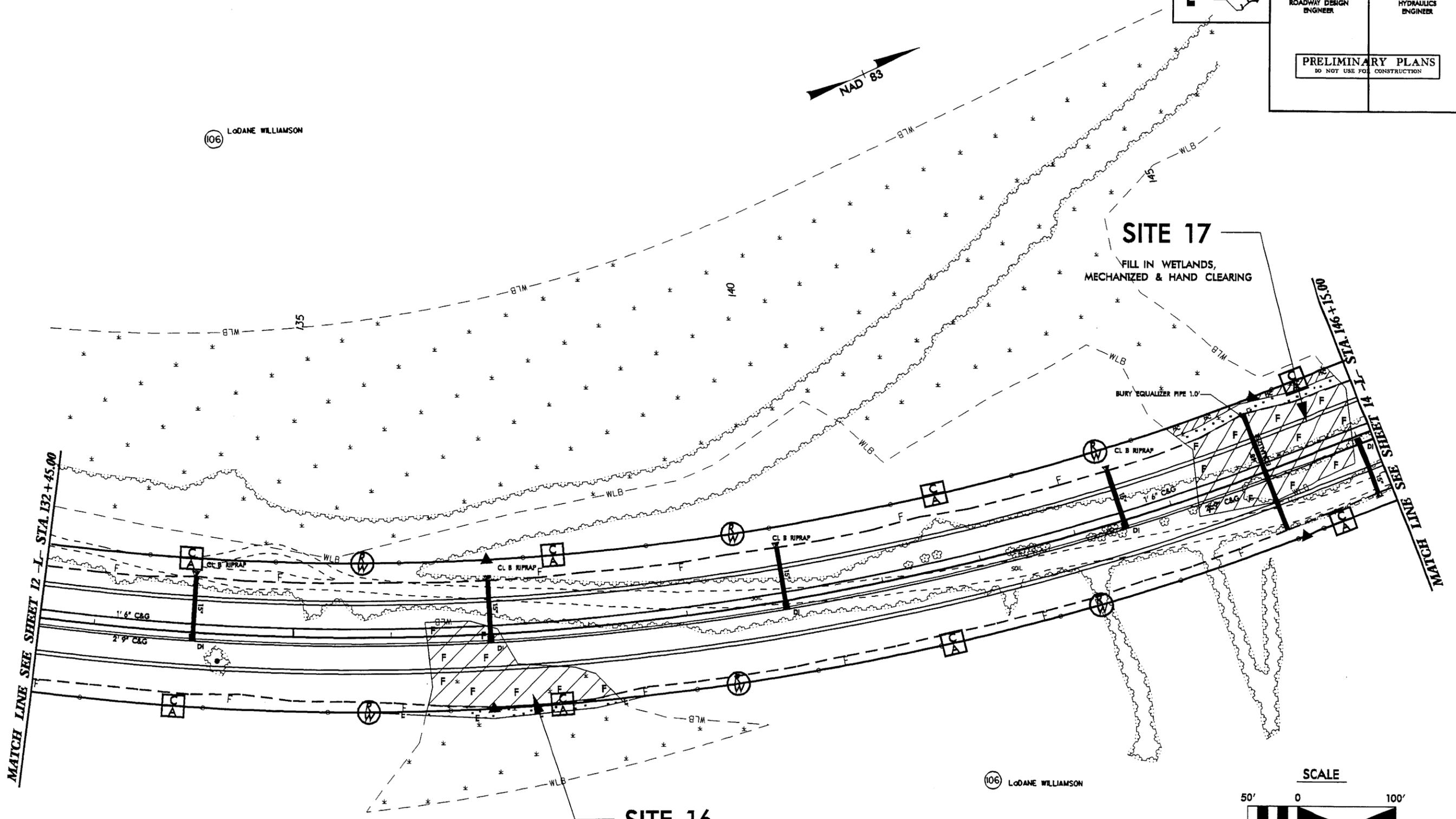
(106) L. O'DANE WILLIAMSON

SITE 17

FILL IN WETLANDS,
MECHANIZED & HAND CLEARING

MATCH LINE SEE SHEET 12 - L - STA. 132 + 45.00

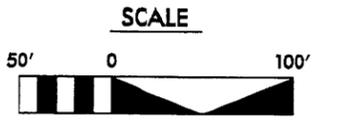
SEE SHEET 14 FOR
LIMITS



SITE 16

FILL IN WETLANDS
&
MECHANIZED CLEARING

(106) L. O'DANE WILLIAMSON



LEGEND

- FILL IN WETLANDS
- MECHANIZED CLEARING
- HAND CLEARING

NOTES:

- 1) FOR -L- PROFILE SEE SHEET 31.
- 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
- 3) SEE SHEET 2- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G.

NO REVISIONS CAN BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND DENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

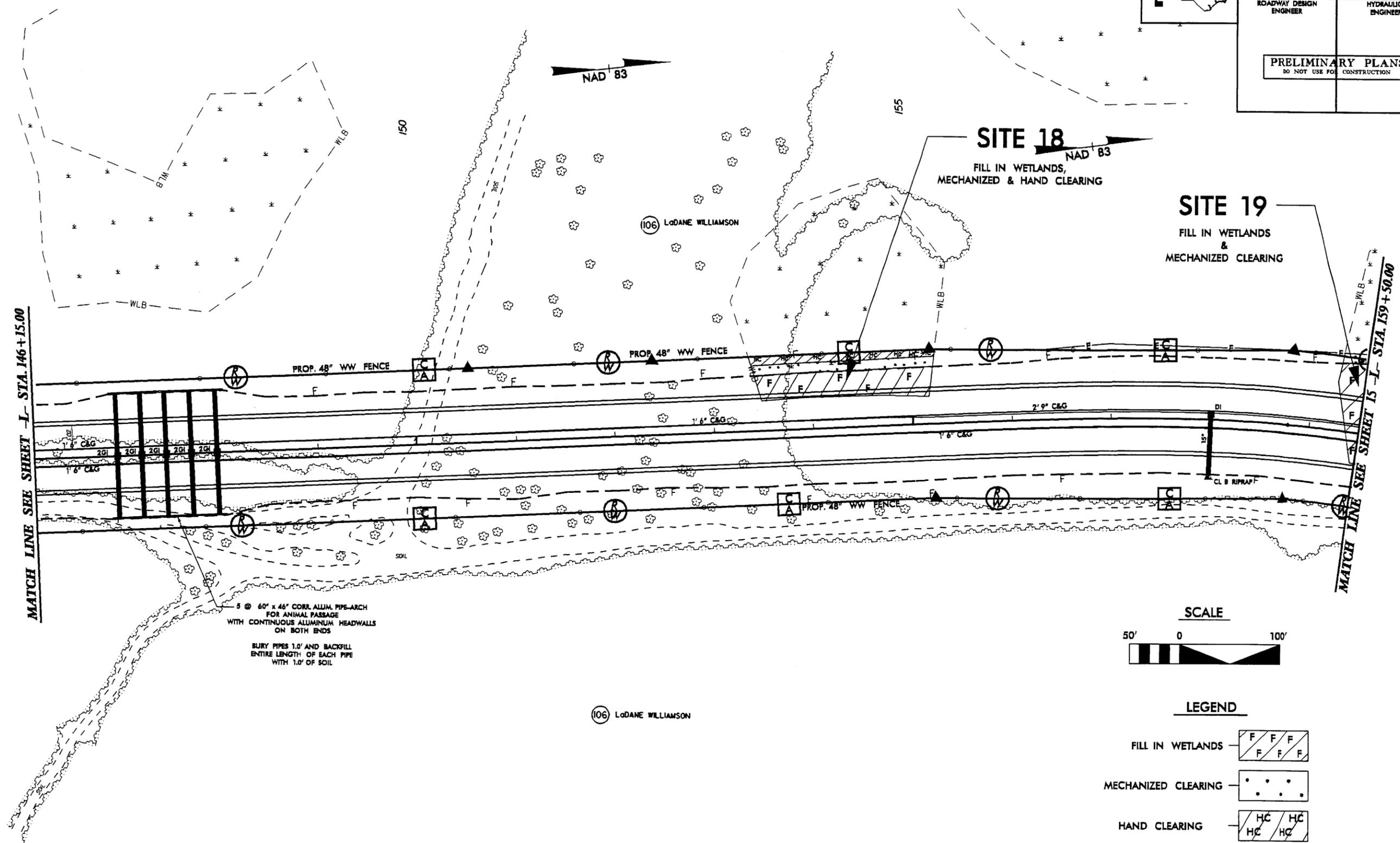
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ENGLISH

PROJECT REFERENCE NO. R-2245	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



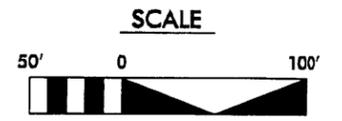
MATCH LINE SEE SHEET L- STA. 146 + 15.00

MATCH LINE SEE SHEET L- STA. 159 + 50.00

NAD 83

SITE 18
FILL IN WETLANDS,
MECHANIZED & HAND CLEARING

SITE 19
FILL IN WETLANDS
&
MECHANIZED CLEARING



LEGEND

FILL IN WETLANDS	
MECHANIZED CLEARING	
HAND CLEARING	

SPECIAL CONTROL OF ACCESS DESIGNATION

C
A NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITON.

NOTES:

- 1) FOR -L- PROFILE SEE SHEETS 31 AND 32.
- 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 155 + 18.97 LT) SEE SHEET 2-J.
- 3) FOR ACCESS BREAK SEE DETAIL SHEET 2-G.

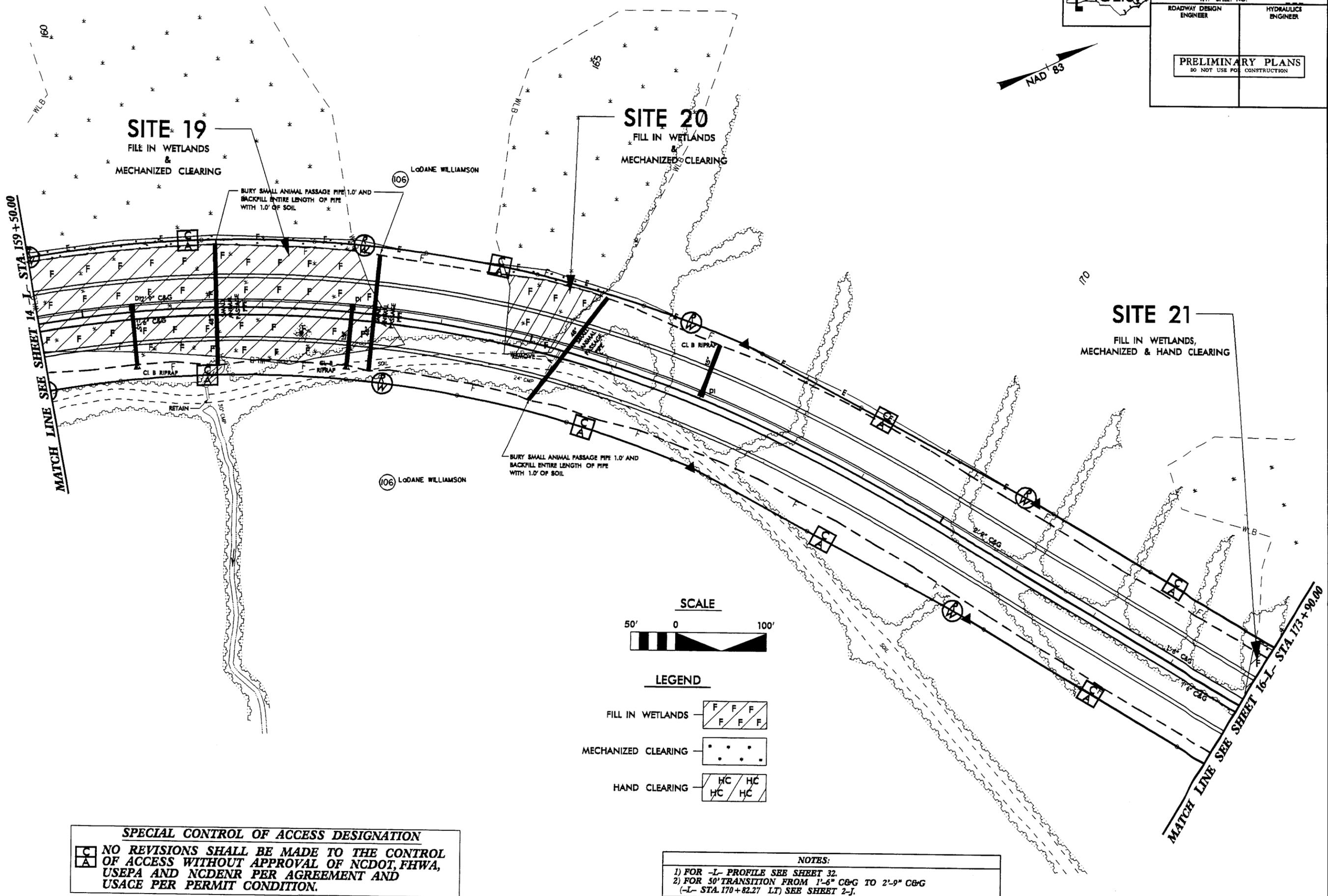
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05 of 60

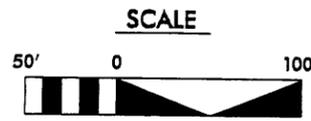


PROJECT REFERENCE NO. R-2245	SHEET NO. 15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



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LEGEND

FILL IN WETLANDS	
MECHANIZED CLEARING	
HAND CLEARING	

SPECIAL CONTROL OF ACCESS DESIGNATION

C NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

A

NOTES:

1) FOR -L- PROFILE SEE SHEET 32.
2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 170+82.27 LT) SEE SHEET 2-J.

26 155

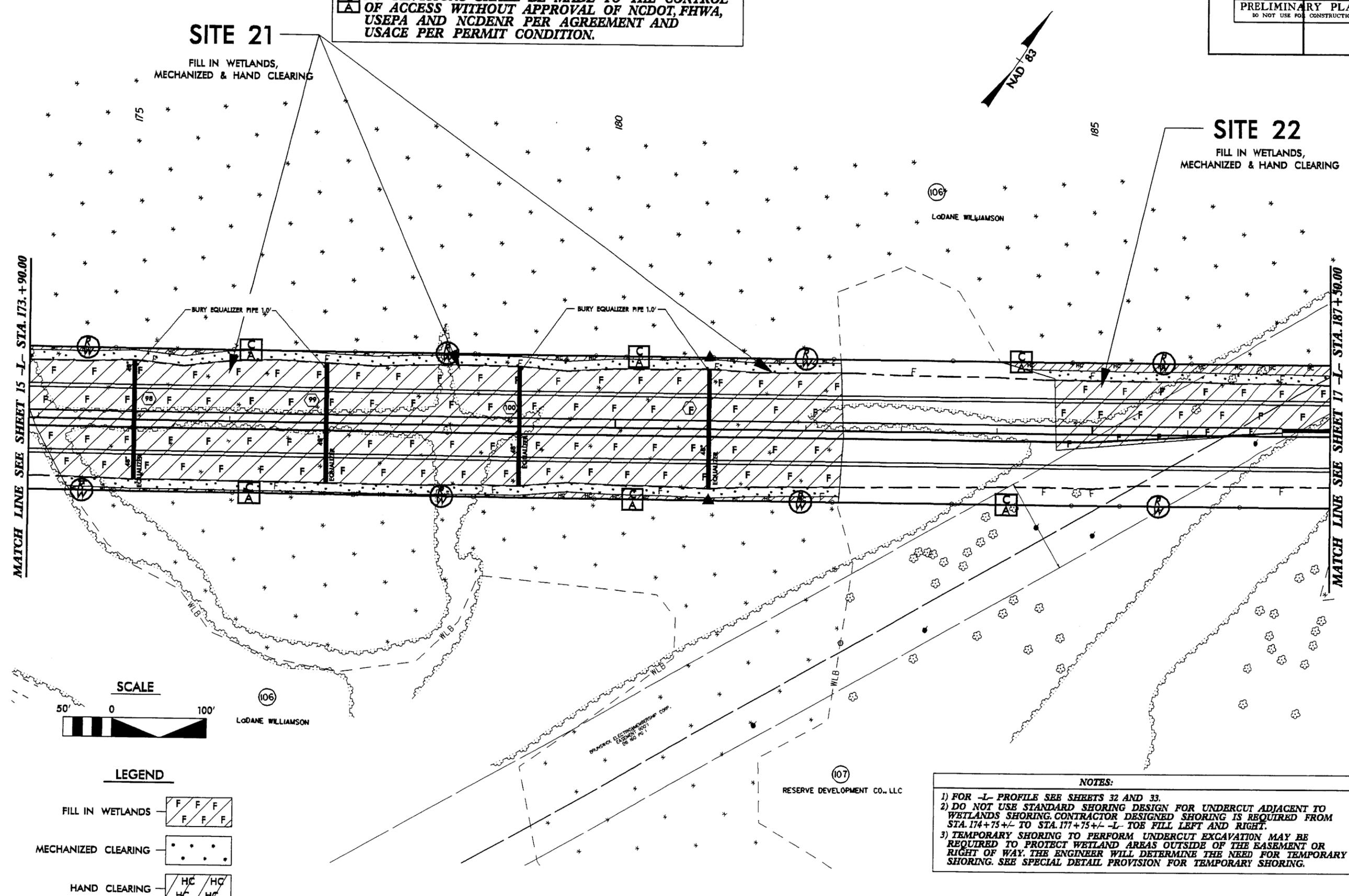
SPECIAL CONTROL OF ACCESS DESIGNATION
C NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.
A

SITE 21

FILL IN WETLANDS,
MECHANIZED & HAND CLEARING

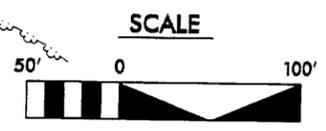
SITE 22

FILL IN WETLANDS,
MECHANIZED & HAND CLEARING



MATCH LINE SEE SHEET 15 -L- STA. 173+90.00

MATCH LINE SEE SHEET 17 -L- STA. 187+50.00



LEGEND

FILL IN WETLANDS	
MECHANIZED CLEARING	
HAND CLEARING	

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 32 AND 33.
 - 2) DO NOT USE STANDARD SHORING DESIGN FOR UNDERCUT ADJACENT TO WETLANDS SHORING. CONTRACTOR DESIGNED SHORING IS REQUIRED FROM STA. 174+75+/- TO STA. 177+75+/- -L- TOE FILL LEFT AND RIGHT.
 - 3) TEMPORARY SHORING TO PERFORM UNDERCUT EXCAVATION MAY BE REQUIRED TO PROTECT WETLAND AREAS OUTSIDE OF THE EASEMENT OR RIGHT OF WAY. THE ENGINEER WILL DETERMINE THE NEED FOR TEMPORARY SHORING. SEE SPECIAL DETAIL PROVISION FOR TEMPORARY SHORING.

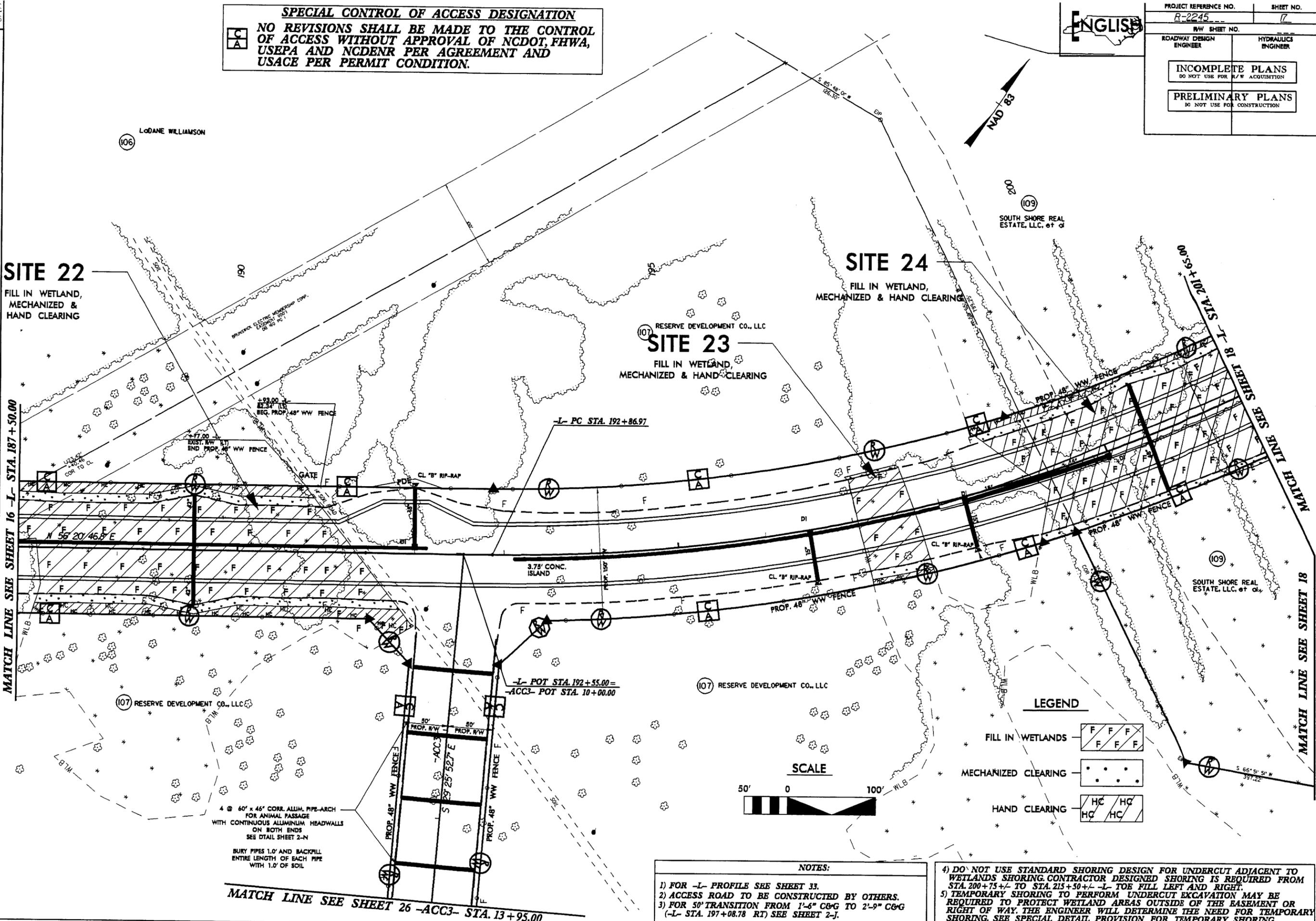
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SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

PROJECT REFERENCE NO. R-2245		SHEET NO. 17	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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 19-DEC-2006 08:14
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 1-Layout
 1-Permit
 1-2245
 1-17
 1-17



28050



RESERVE DEVELOPMENT CO., LLC



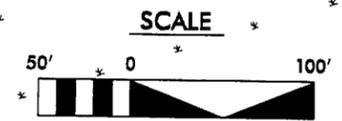
SITE 24
FILL IN WETLAND,
MECHANIZED AND HAND CLEARING

SITE 25
FILL IN WETLAND,
MECHANIZED AND HAND CLEARING

MATCH LINE SEE SHEET 17 -L- STA. 201 + 65.00

MATCH LINE SEE SHEET 19 -L- STA. 214 + 65.00

MATCH LINE SEE SHEET 17



LEGEND

FILL IN WETLANDS	
MECHANIZED CLEARING	
HAND CLEARING	

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

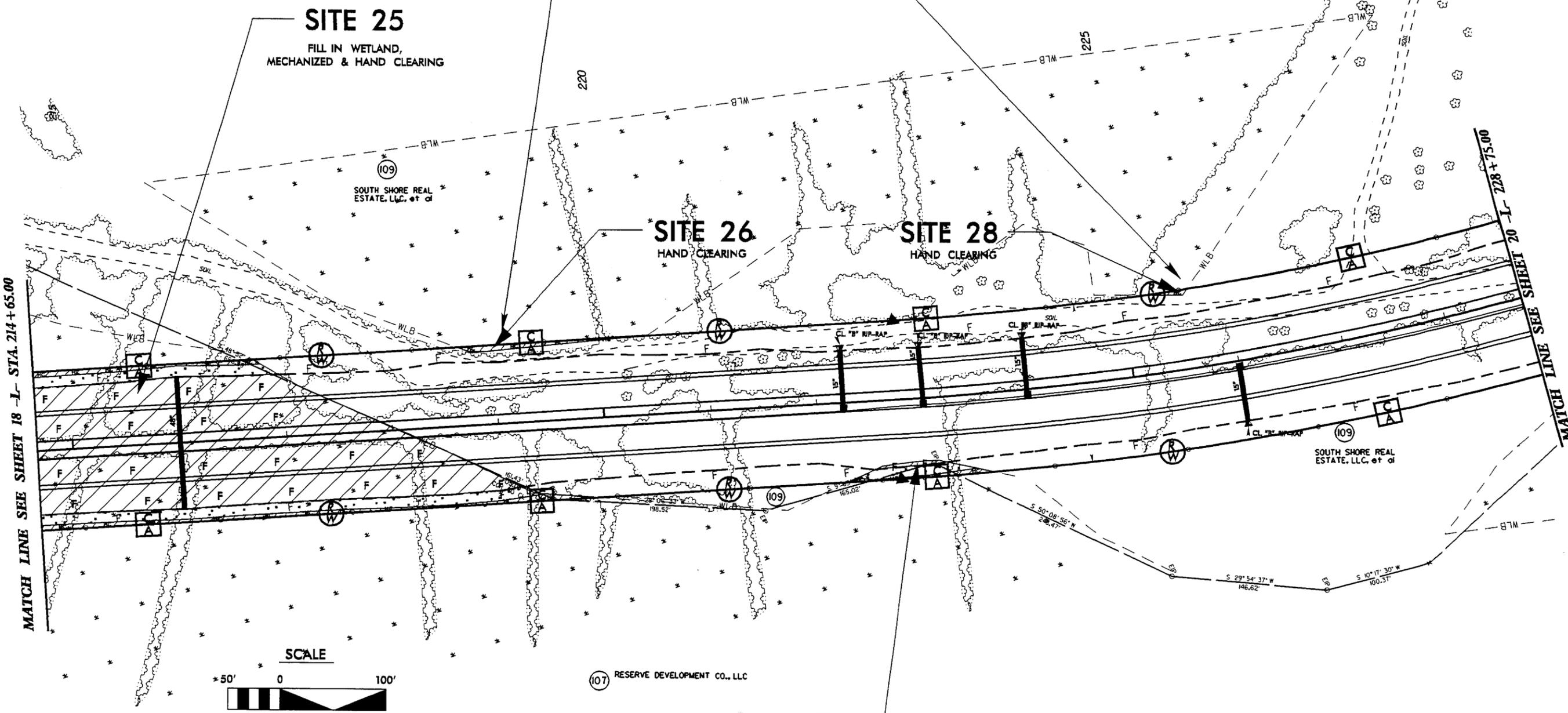
- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 33 AND 34.
 - 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 204+85.97 RT) SEE SHEET 2-J.
 - 3) DO NOT USE STANDARD SHORING DESIGN FOR UNDERCUT ADJACENT TO WETLANDS SHORING. CONTRACTOR DESIGNED SHORING IS REQUIRED FROM STA. 200+75+/- TO STA. 215+50+/- -L- TOE FILL LEFT AND RIGHT.
 - 4) TEMPORARY SHORING TO PERFORM UNDERCUT EXCAVATION MAY BE REQUIRED TO PROTECT WETLAND AREAS OUTSIDE OF THE EASEMENT OR RIGHT OF WAY. THE ENGINEER WILL DETERMINE THE NEED FOR TEMPORARY SHORING. SEE SPECIAL DETAIL PROVISION FOR TEMPORARY SHORING.

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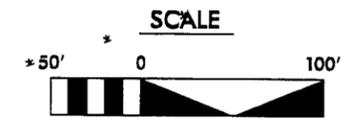
20-18

HAND CLEARING WILL BE REQUIRED IN AREAS DESIGNATED BY THE PERMITS AND AS DIRECTED BY THE ENGINEER.



MATCH LINE SEE SHEET 18 -L- STA. 214 + 65.00

MATCH LINE SEE SHEET 20 -L- 228 + 75.00



LEGEND

FILL IN WETLANDS	
MECHANIZED CLEARING	
HAND CLEARING	

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 34.
 - 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 222+75.67 RT) SEE SHEET 2-J.
 - 3) DO NOT USE STANDARD SHORING DESIGN FOR UNDERCUT ADJACENT TO WETLANDS SHORING. CONTRACTOR DESIGNED SHORING IS REQUIRED FROM STA. 200+75+/- TO STA. 215+50+/- -L- TOE FILL LEFT AND RIGHT.
 - 4) TEMPORARY SHORING TO PERFORM UNDERCUT EXCAVATION MAY BE REQUIRED TO PROTECT WETLAND AREAS OUTSIDE OF THE BASEMENT OR RIGHT OF WAY. THE ENGINEER WILL DETERMINE THE NEED FOR TEMPORARY SHORING. SEE SPECIAL DETAIL PROVISION FOR TEMPORARY SHORING.

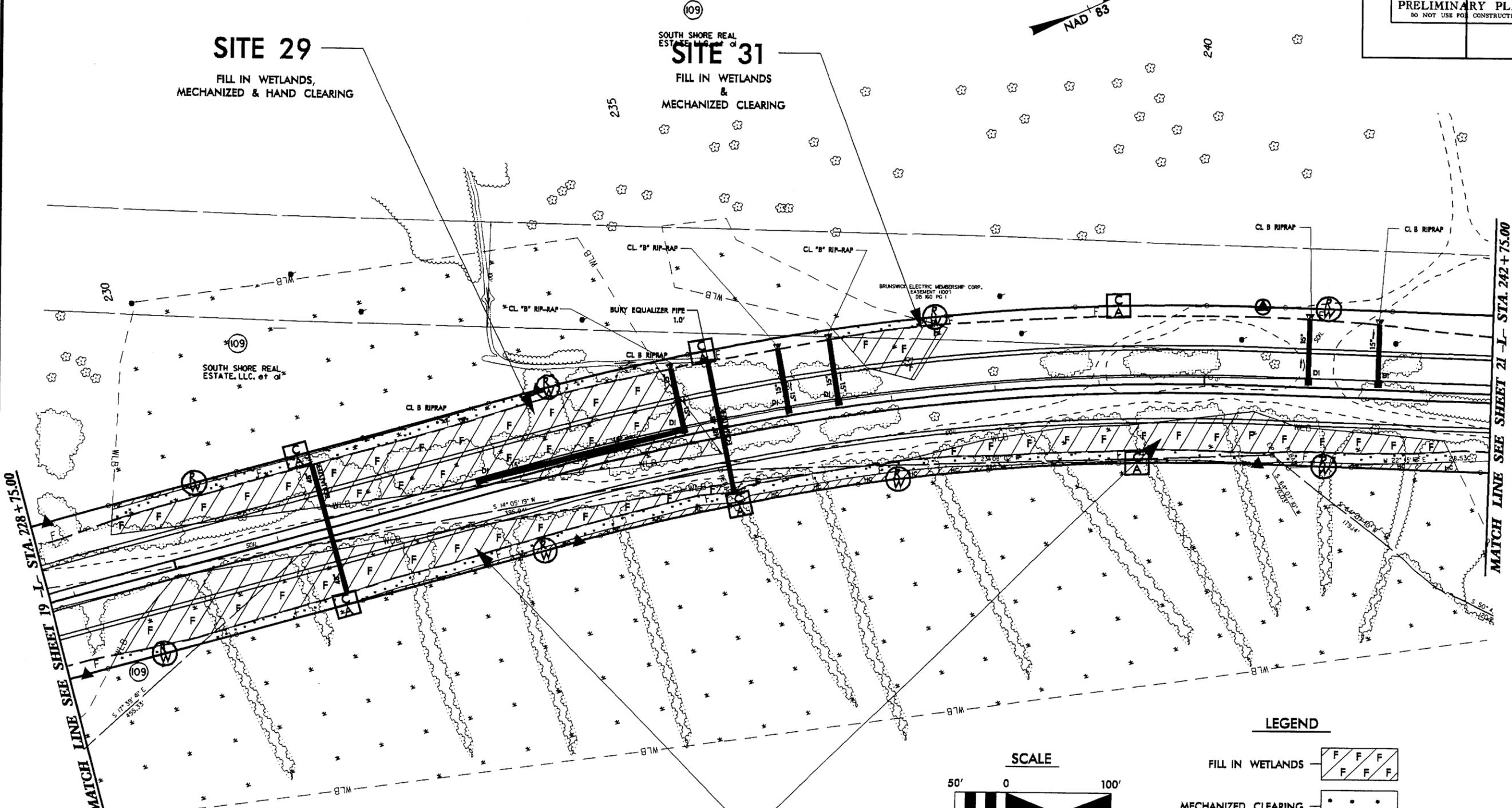
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SITE 29
FILL IN WETLANDS,
MECHANIZED & HAND CLEARING

(109)
SITE 31
FILL IN WETLANDS
&
MECHANIZED CLEARING

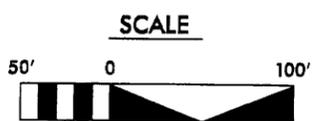
(107) RESERVE DEVELOPMENT CO., LLC
SITE 30
FILL IN WETLANDS,
MECHANIZED & HAND CLEARING



REVISIONS

MATCH LINE SEE SHEET 19 -L- STA. 228 + 75.00

MATCH LINE SEE SHEET 21 -L- STA. 242 + 75.00



LEGEND

FILL IN WETLANDS	
MECHANIZED CLEARING	
HAND CLEARING	

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

NOTES:

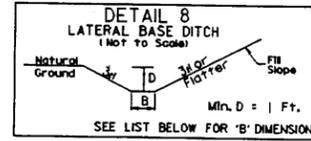
- FOR -L- PROFILE SEE SHEETS 34 AND 35.
- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 228+91.24 RT, -L- STA. 233+76.23 LT) SEE SHEET 2-J.

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SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

ENGLISH

PROJECT REFERENCE NO. R-2245	SHEET NO. 21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



- L- STA 244+00 LT to -L- STA 248+20 LT B=3'
- Y7- STA 13+00 RT to -Y7- STA 17+96 RT B=3'
- Y7- STA 12+75 LT to -Y7- STA 16+00 LT B=3'
- Y7- STA 19+14 LT to -Y7- STA 23+88 LT B=2'
- Y8- STA 12+05 LT to -Y8- STA 12+77 LT B=5'
- Y8REV- STA 10+57 RT to -Y8- STA 16+50 RT B=5'

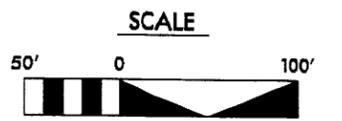
SITE 32
 FILL and EXCAVATION IN WETLANDS
 &
 MECHANICAL CLEARING
 &
 WETLAND IMPACTS FROM
 DITCH DRAWDOWN

MATCH LINE SEE SHEET 22 -Y7- STA. 13+15.00

MATCH LINE SEE SHEET 20 -L- STA. 242+75.00

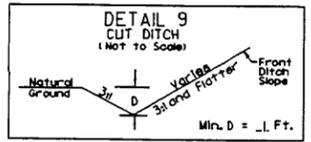
MATCH LINE SEE SHEET 23 -Y7- STA. 22+55.00

END CONSTRUCTION
 -Y8- POT STA. 16+50.00



LEGEND

- FILL IN WETLANDS
- EXCAVATION IN WETLANDS
- MECHANIZED CLEARING
- DITCH DRAWDOWN
- HAND CLEARING

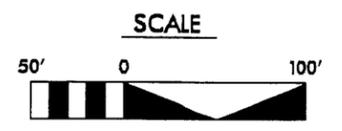
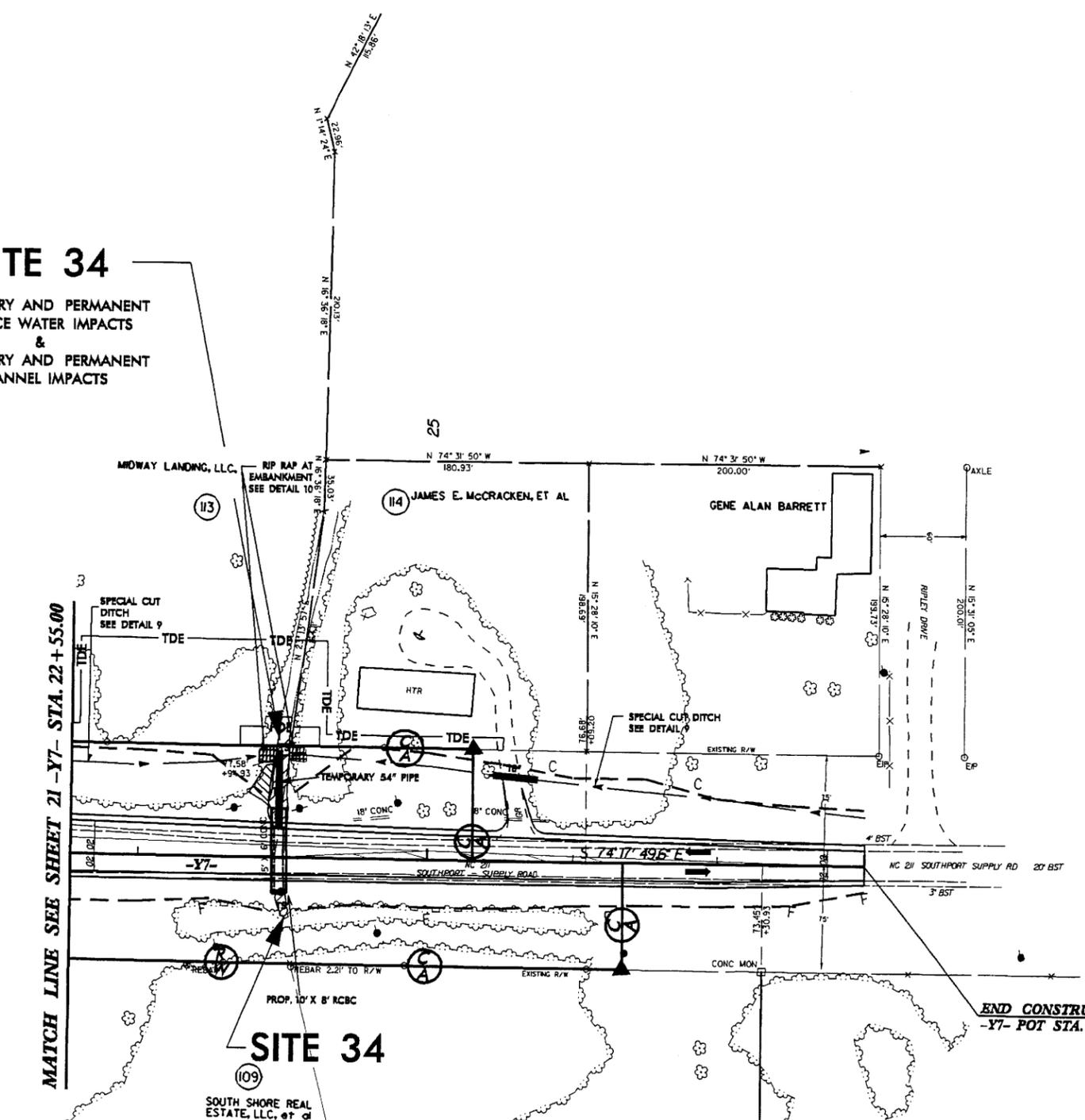


-Y7- STA 21+38 LT to -Y7- STA 23+80 LT

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 35.
 - 2) FOR -Y7- AND -Y8- PROFILES SEE SHEET 38.
 - 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
 - 4) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-F AND TRAFFIC CONTROL PLANS.

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SITE 34
 TEMPORARY AND PERMANENT
 SURFACE WATER IMPACTS
 &
 TEMPORARY AND PERMANENT
 CHANNEL IMPACTS



LEGEND

PERMANENT FILL IN SURFACE WATERS	
TEMPORARY FILL IN SURFACE WATERS	

- NOTES:**
- 1) FOR -Y7- PROFILE SEE SHEET 38.
 - 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
 - 3) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-F AND TRAFFIC CONTROL PLANS.
 - 4) FOR CULVERT PLANS SEE SHEETS C-1 THROUGH C-4.
 - 5) USE ALTERNATIVE SPACING FOR GUARDRAIL INSTALLATION OVER CULVERT

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REVISIONS

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 Checked by:

B/17/9

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE * N/A CFS
DESIGN FREQUENCY * 10 YRS
DESIGN HW ELEVATION * 62 FT
BASE DISCHARGE * N/A CFS
BASE FREQUENCY * 100 YRS
BASE HW ELEVATION * 23 FT
OVERTOPPING DISCHARGE * N/A CFS
OVERTOPPING FREQUENCY * 10 YRS
OVERTOPPING ELEVATION * 73 FT

K, EL = 19.78'
L STATION 21+50.00 -L-
3 SPAN BRIDGE W/ 21" CORED SLABS
TOTAL LENGTH = 165'
SPAN 1 = 55'
SPAN 2 = 55'
SPAN 3 = 55'

BM #200 BOLT IN LEFT FRONT LEG
OF WATER TOWER
6210 RT. OF -L- STA 15+43
ELEV. = 195' N 61°22' E 225'632

PI = 18+70.00
EL = 20.82
VC = 280'
K = 48

PI = 13+10.00
EL = 7.23
VC = 128'
K = 178

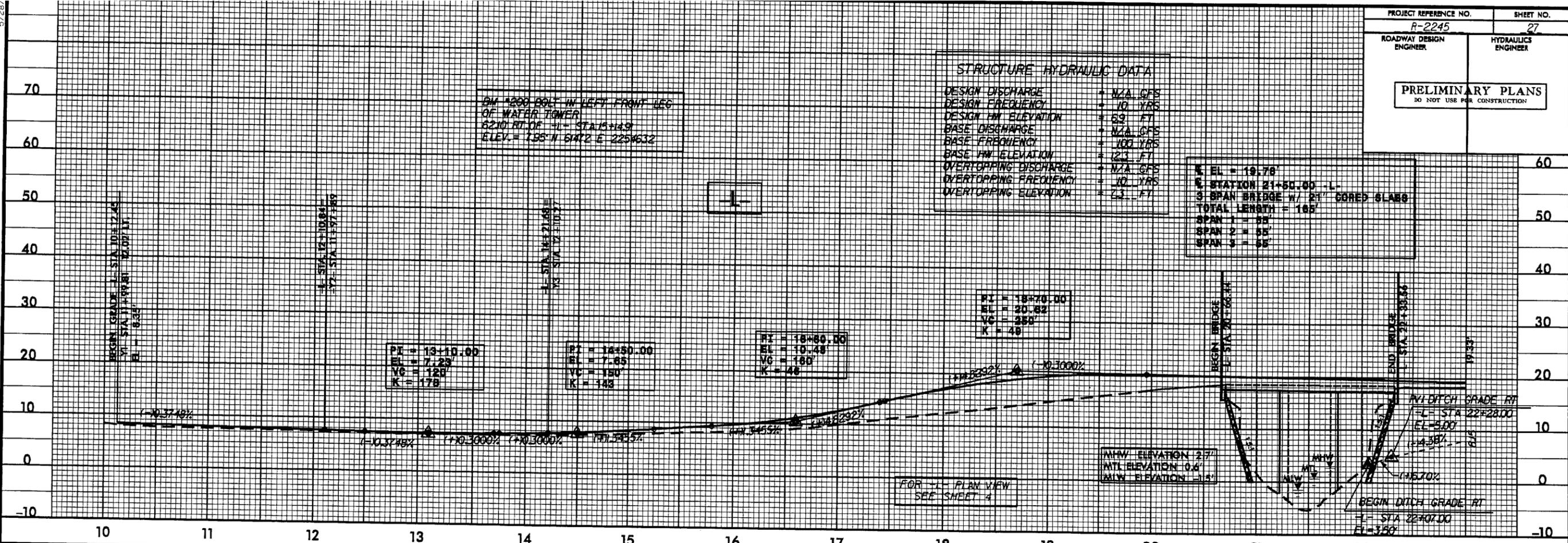
PI = 14+50.00
EL = 7.85
VC = 150'
K = 143

PI = 18+60.00
EL = 10.48
VC = 188'
K = 48

MHW ELEVATION 2.7'
MFL ELEVATION 0.6'
MFW ELEVATION -1.5'

FOR -L- PLAN VIEW
SEE SHEET 4

BEGIN DITCH GRADE RT
-L- STA 22+01.00
EL = 3.50

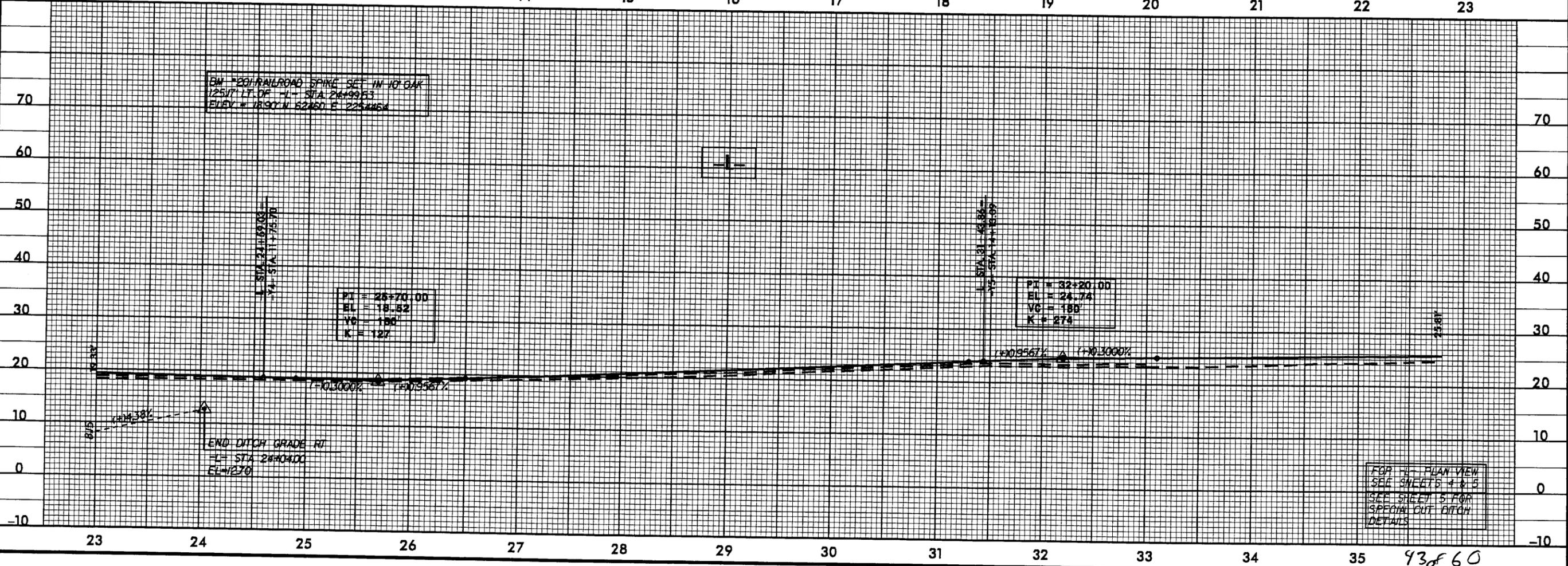


BM #201 RAILROAD SPIKE SET IN JO GAK
125 FT LT. OF -L- STA 24+99.53
ELEV. = 189' N 62°46' E 225'464

PI = 32+20.00
EL = 24.74
VC = 188'
K = 274

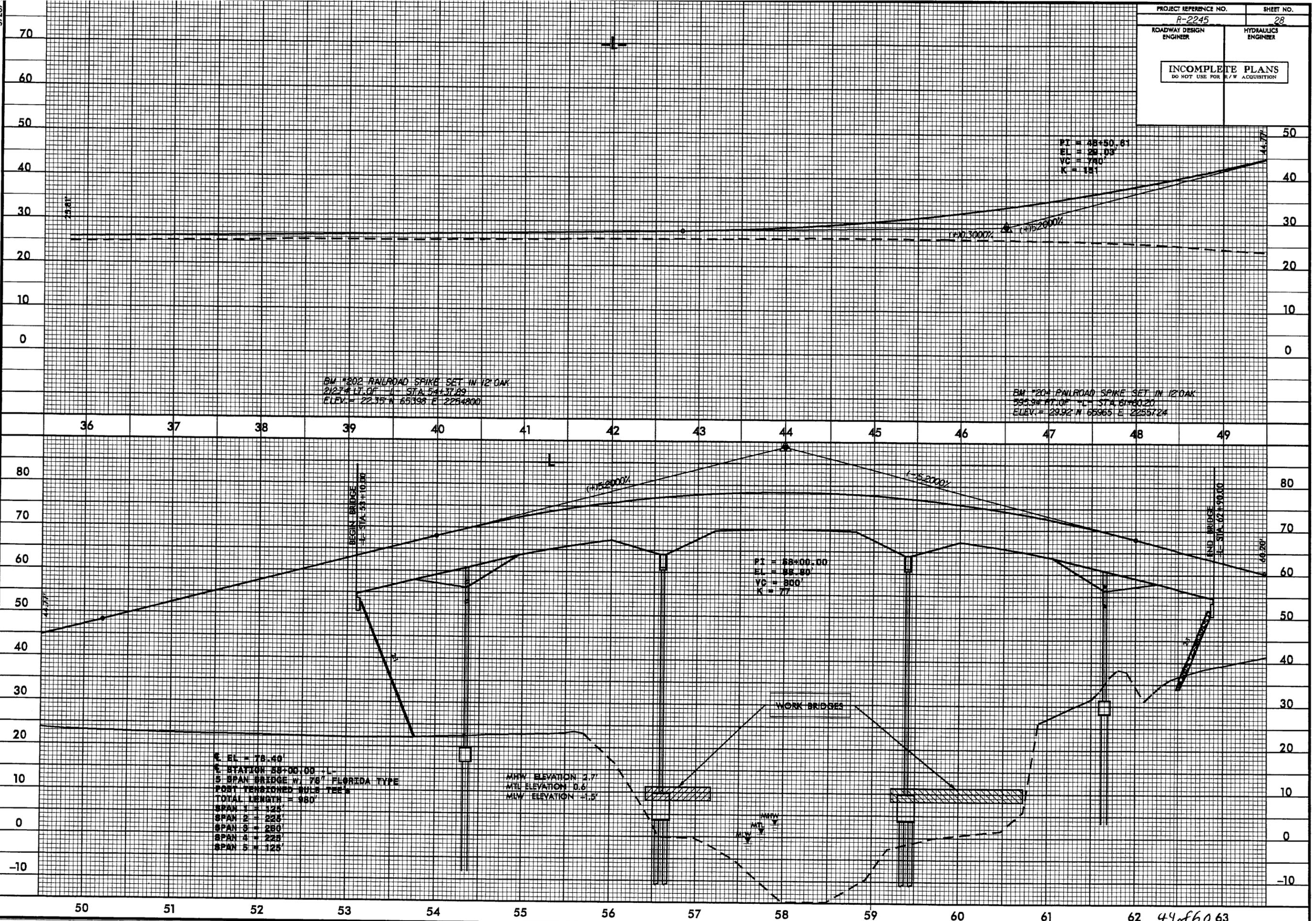
PI = 26+70.00
EL = 18.82
VC = 186'
K = 127

FOR -L- PLAN VIEW
SEE SHEETS 4 & 5
SEE SHEET 5 FOR
SPECIAL CUT BITUM
DETAILS



20-DEC-2006 09:29
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11/22/06

5/28/06



BM #202 RAILROAD SPIKE SET IN 1/2 OAK
21274 LT. OF "A" STA. 39+37.89
ELEV. = 22.35' N 65338 E 2254800

BM #204 RAILROAD SPIKE SET IN 1/2 OAK
59534 RT. OF "A" STA. 48+60.20
ELEV. = 29.92' N 65965 E 2255124

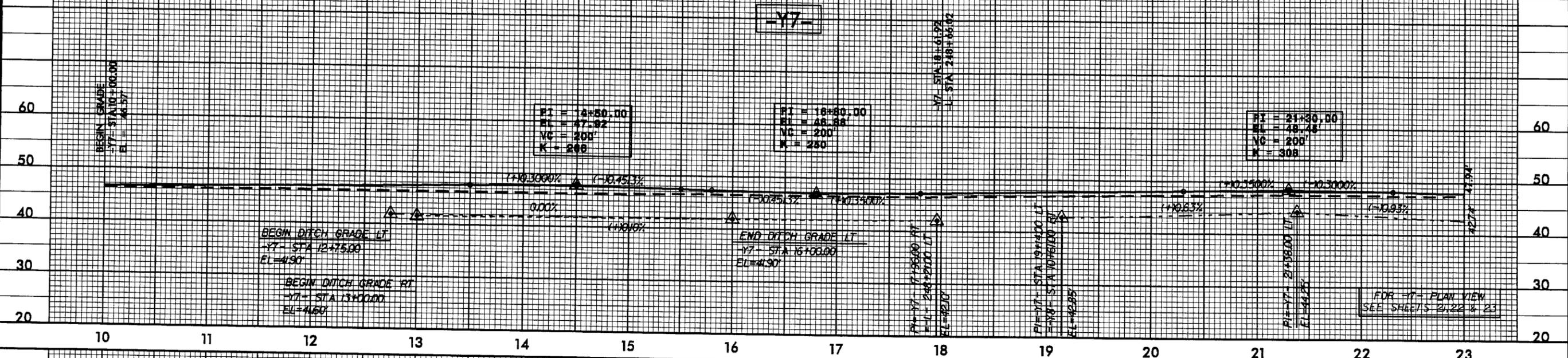
C. EL. = 78.40'
STATION 58+00.00 - L.
5 SPAN BRIDGE W/ 76' FLORIDA TYPE
POST TENSIONED GULB TEE'S
TOTAL LENGTH = 980'
SPAN 1 = 125'
SPAN 2 = 225'
SPAN 3 = 280'
SPAN 4 = 225'
SPAN 5 = 125'

MHW ELEVATION 2.7'
MTL ELEVATION 0.6'
MLW ELEVATION -1.5'

WORK BRIDGES

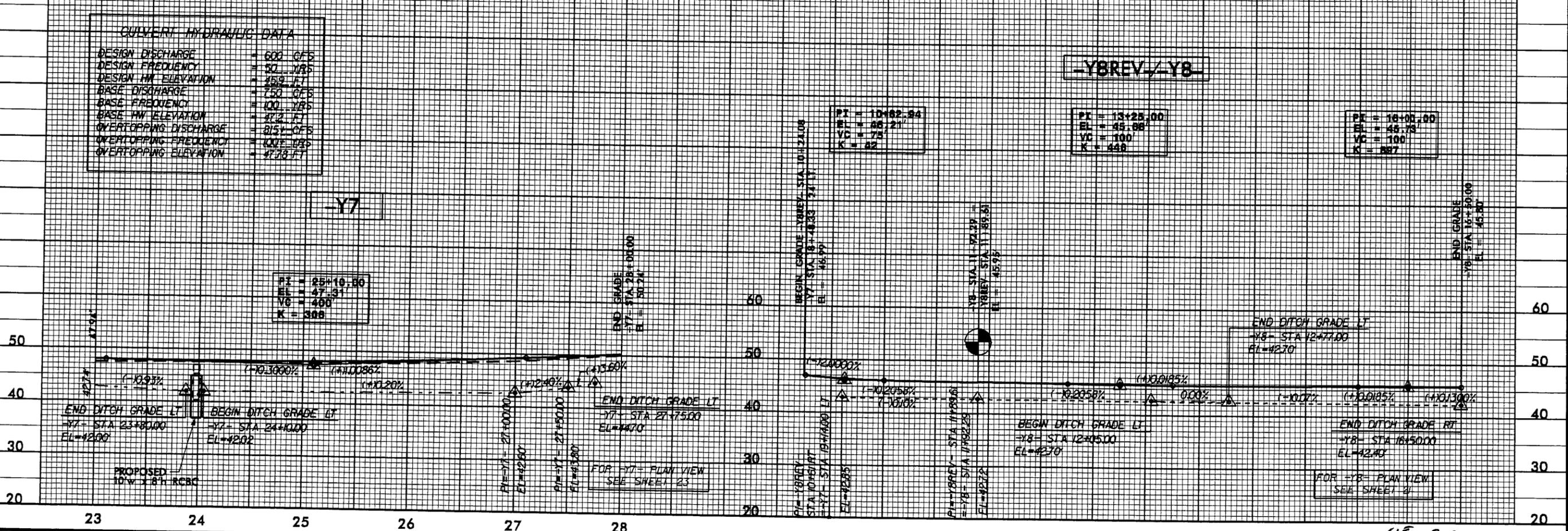
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BM 4213 RAILROAD SPIKE SET IN 12" PINE
9.505 FT OF -Y7- STA 15+24.28
ELEV. = 44.33 N 84.75 E 2263288



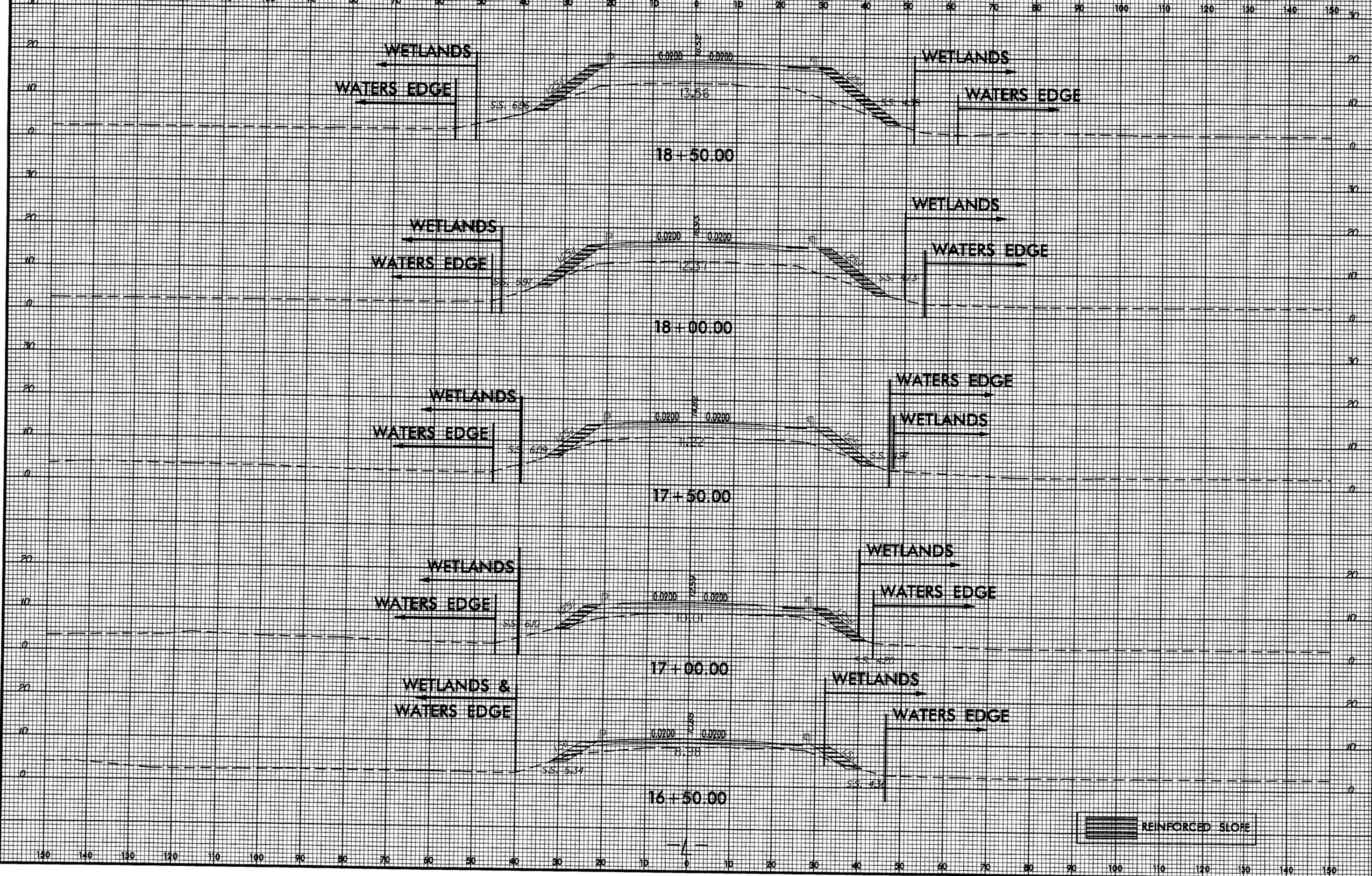
QUIVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 600 CFS
DESIGN FREQUENCY	= 50 - YRS
DESIGN HW ELEVATION	= 45.9 FT
BASE DISCHARGE	= 750 CFS
BASE FREQUENCY	= 100 - YRS
BASE HW ELEVATION	= 47.2 FT
OVERTOPPING DISCHARGE	= 8157 CFS
OVERTOPPING FREQUENCY	= 1000 YRS
OVERTOPPING ELEVATION	= 47.78 FT



20 DEC 2006 09:31
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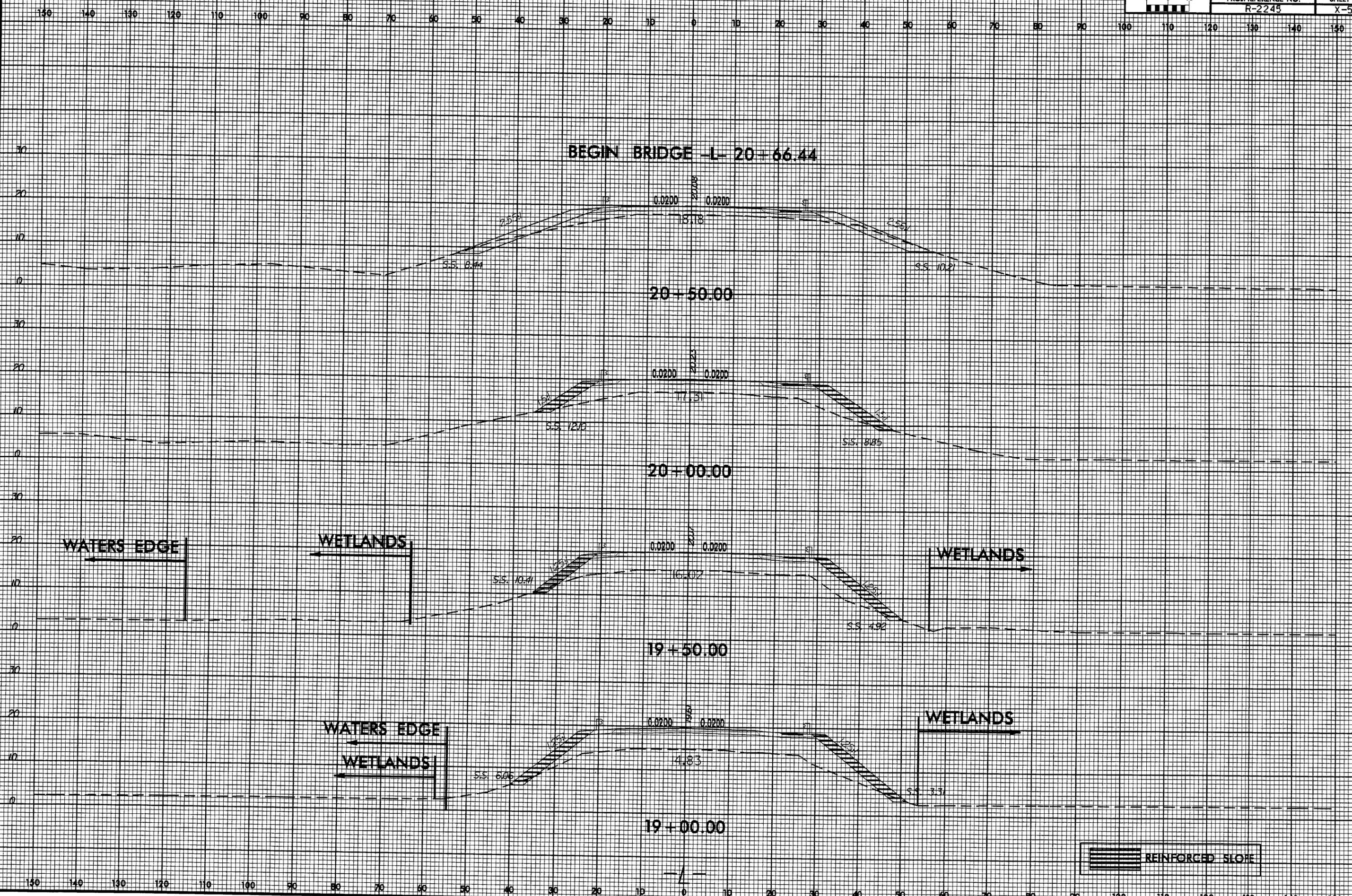
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 AT:11221936

46 of 50

BEGIN BRIDGE - L- 20+ 66.44



REINFORCED SLOPE

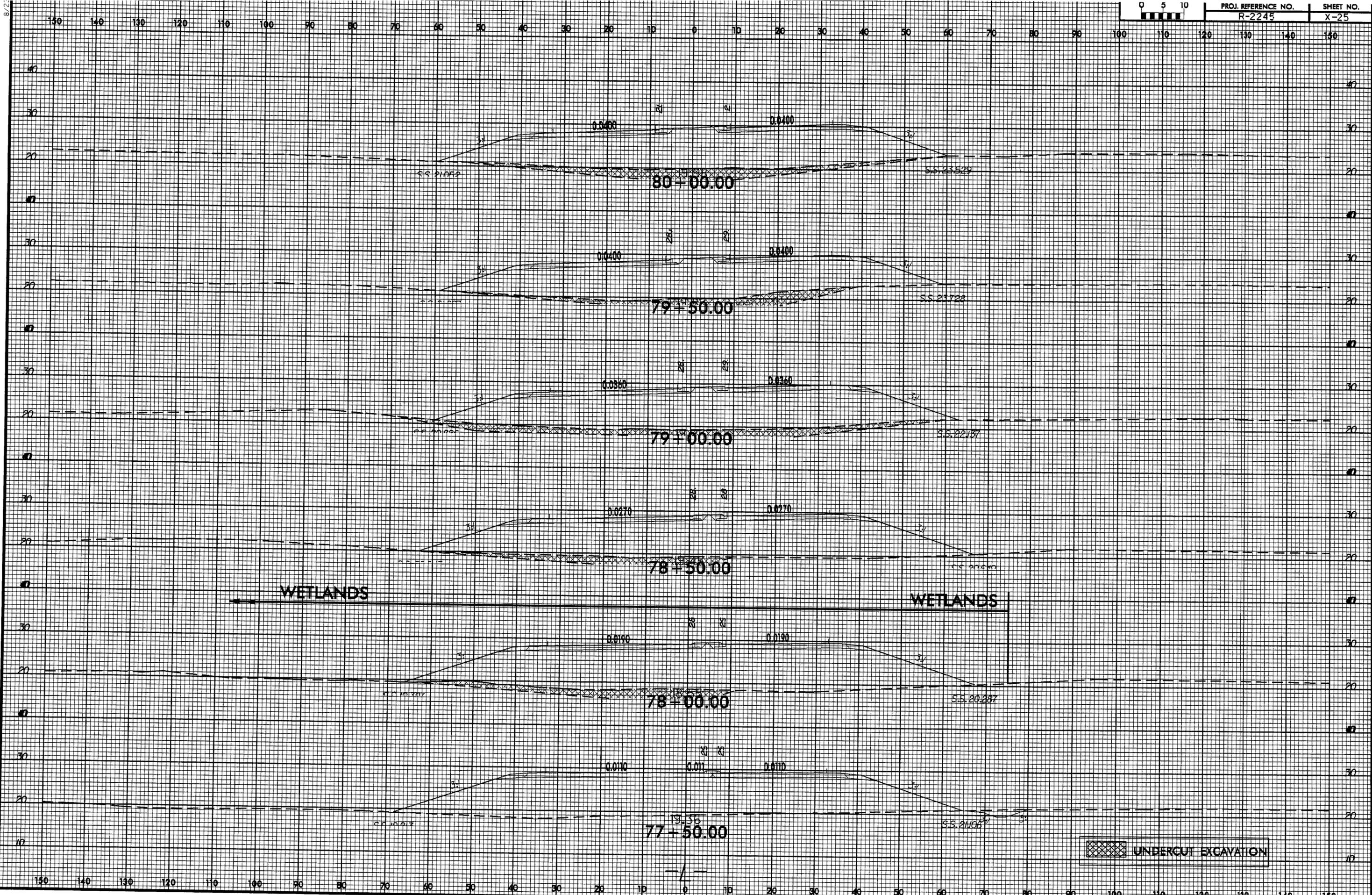
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11/22/06
11/22/06

47 FEB



PROJ. REFERENCE NO.
R-2245

SHEET NO.
X-25

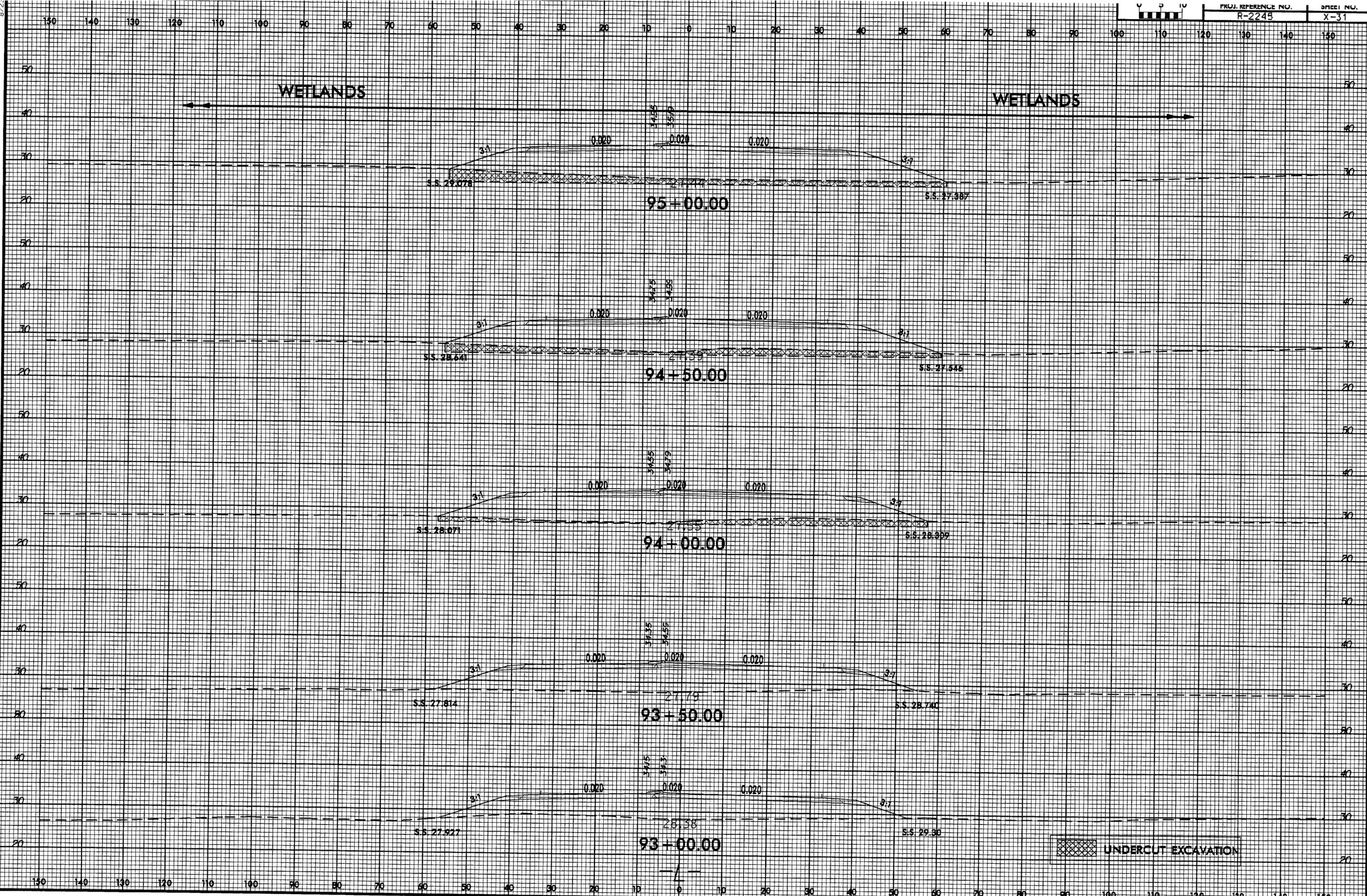


UNDERCUT EXCAVATION

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11/22/06 41

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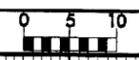
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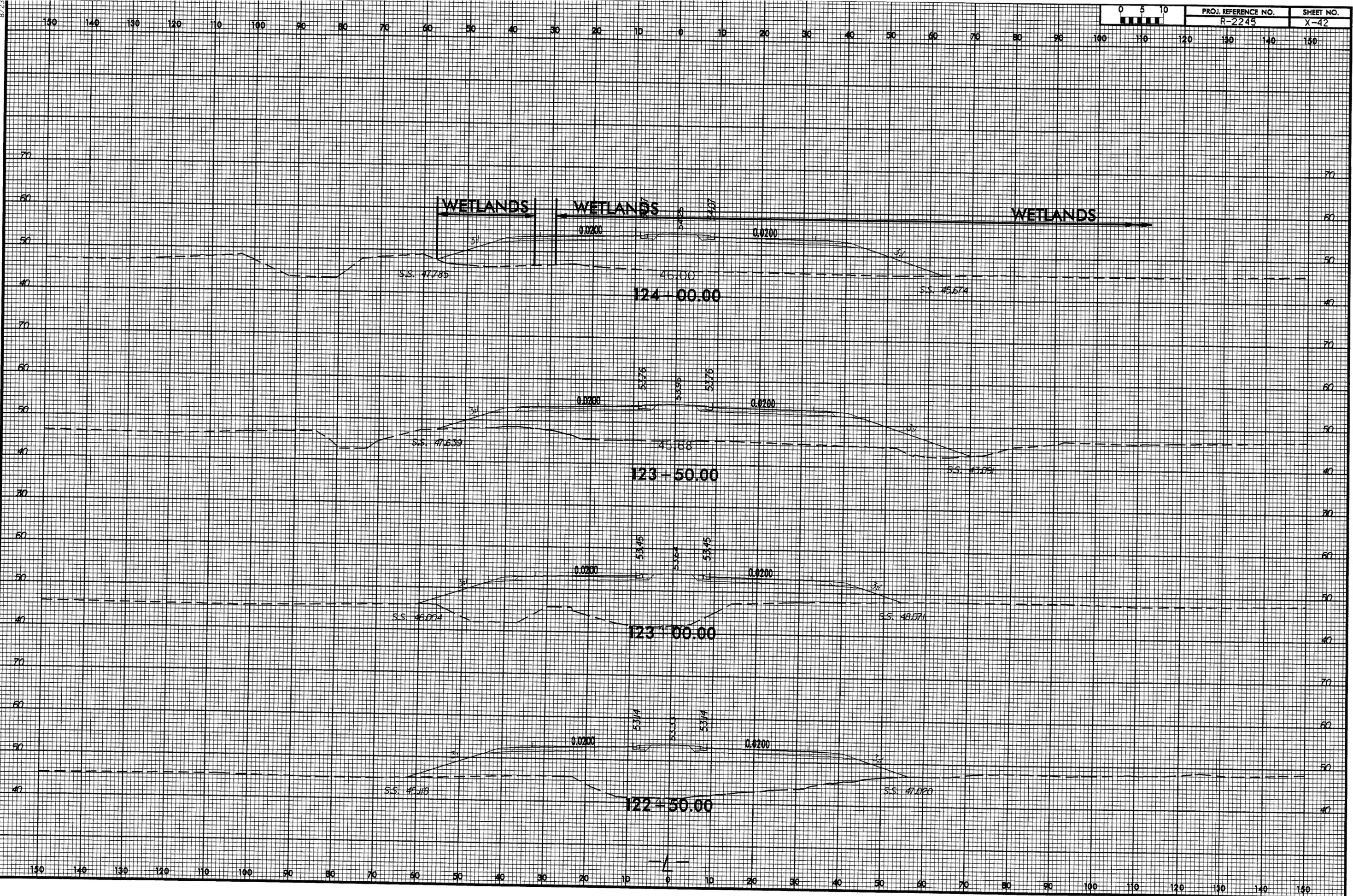
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49 of 60

8/23

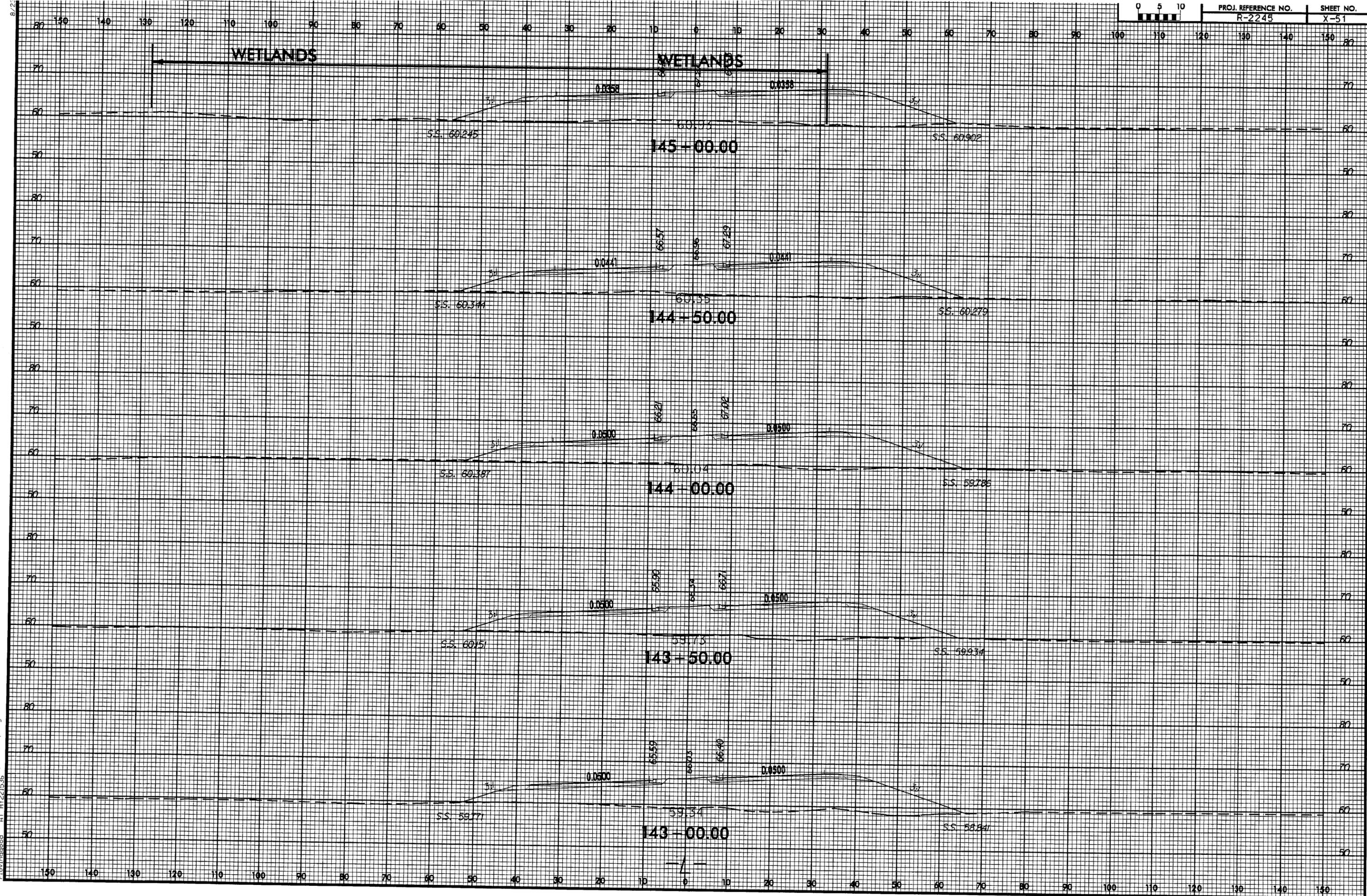


PROJ. REFERENCE NO.	SHEET NO.
R-2245	X-42



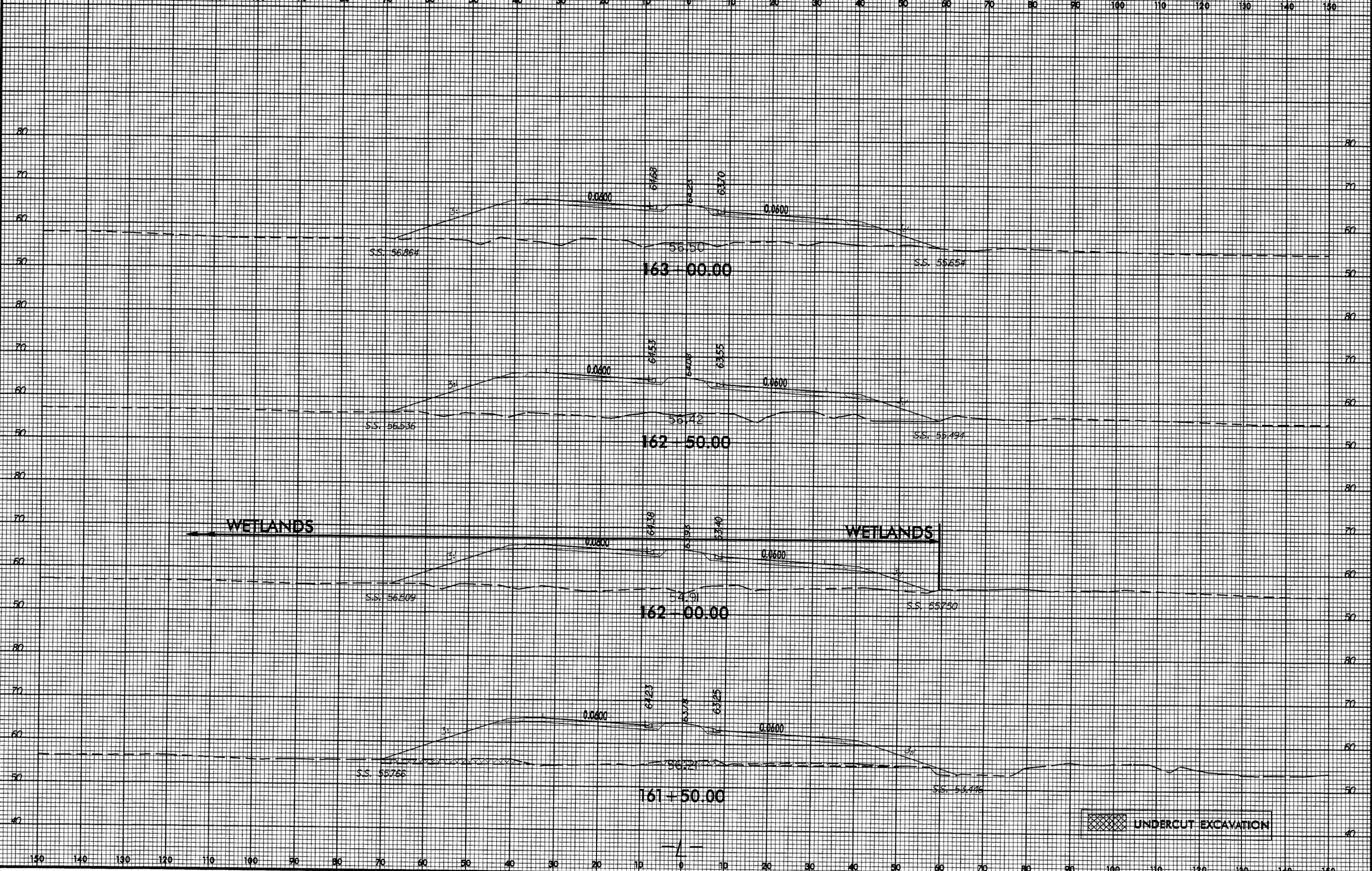
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rlevinagood AT HY224536

FI-FL



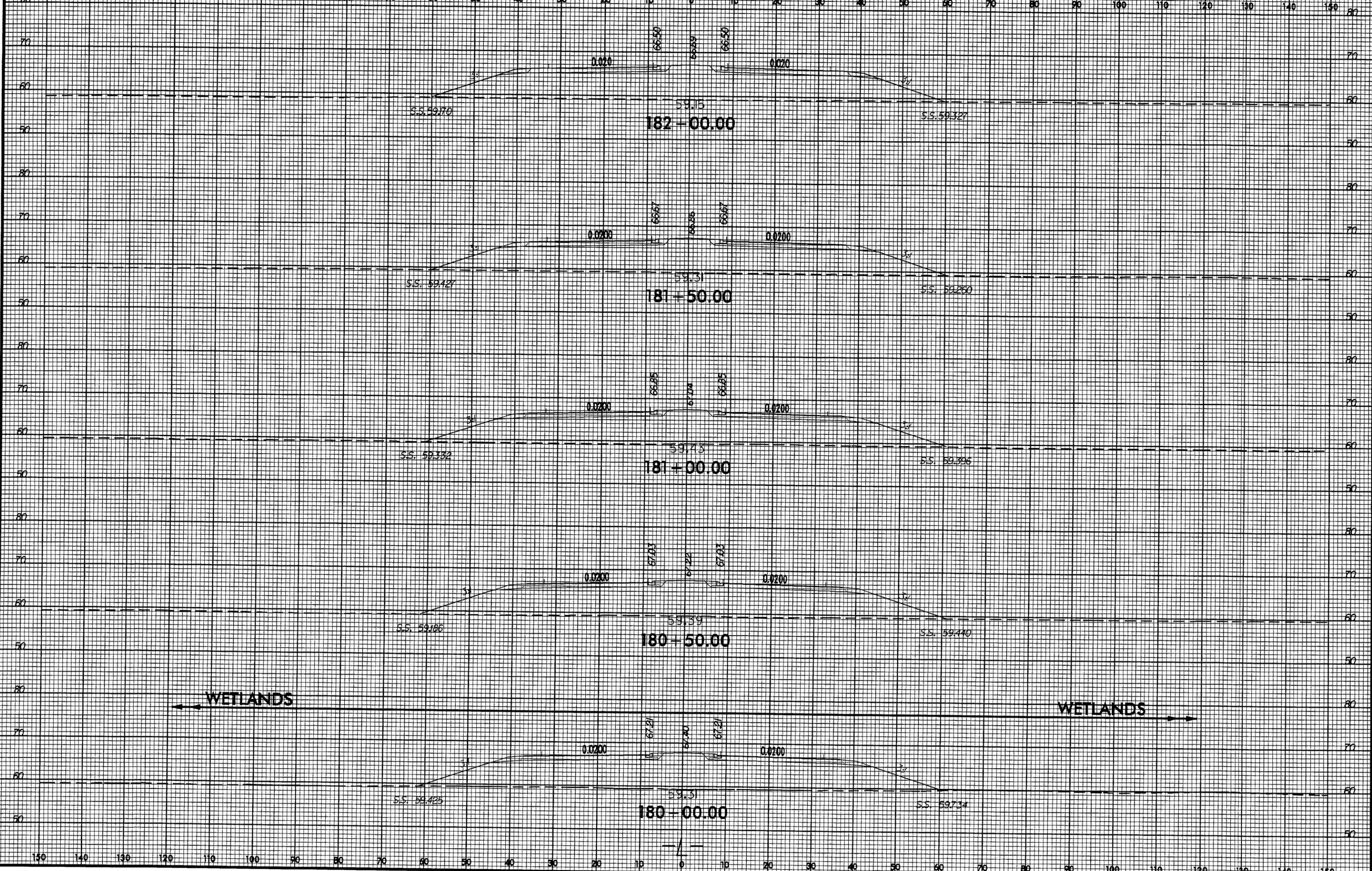
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8.23



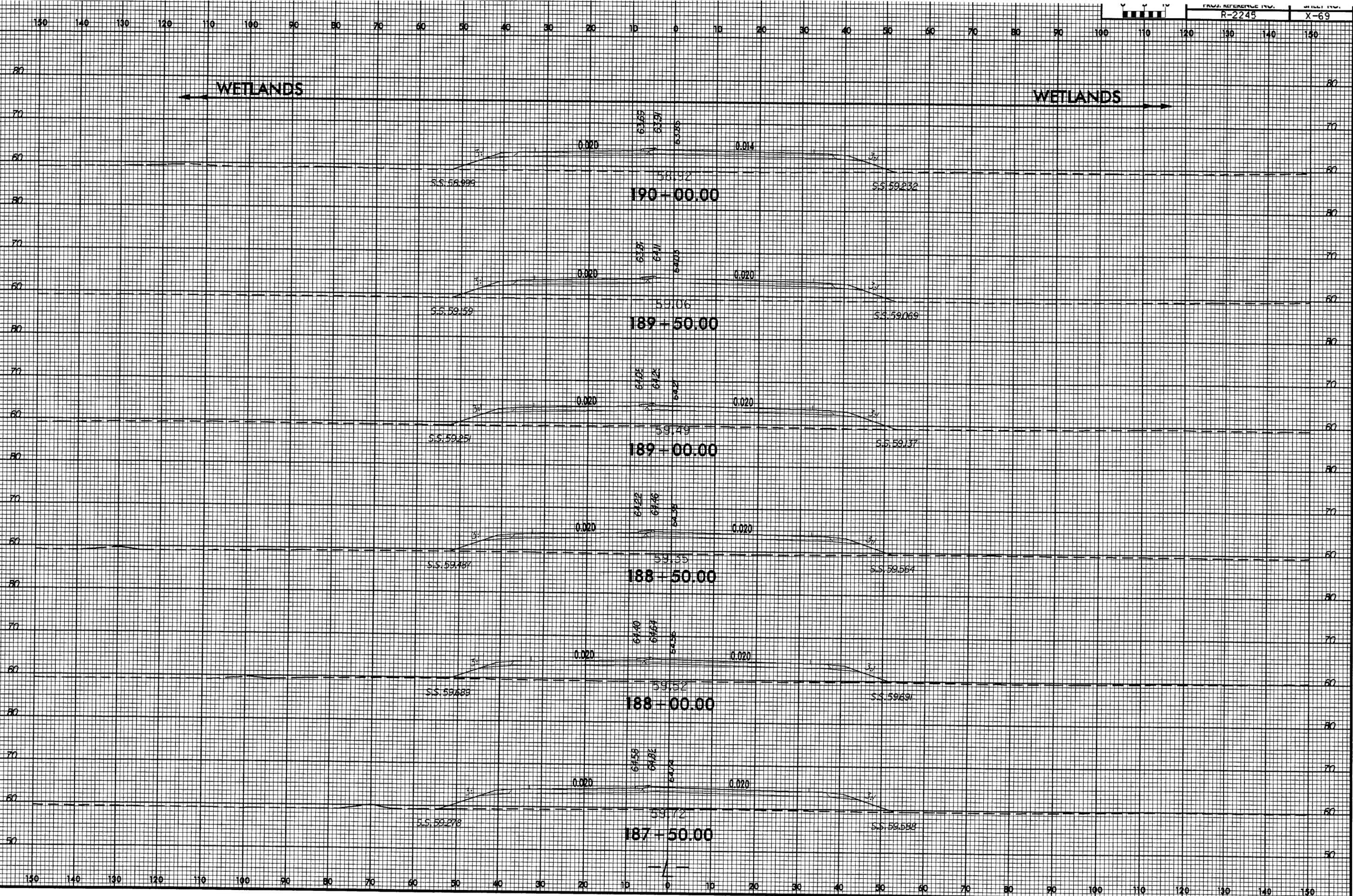
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8/23



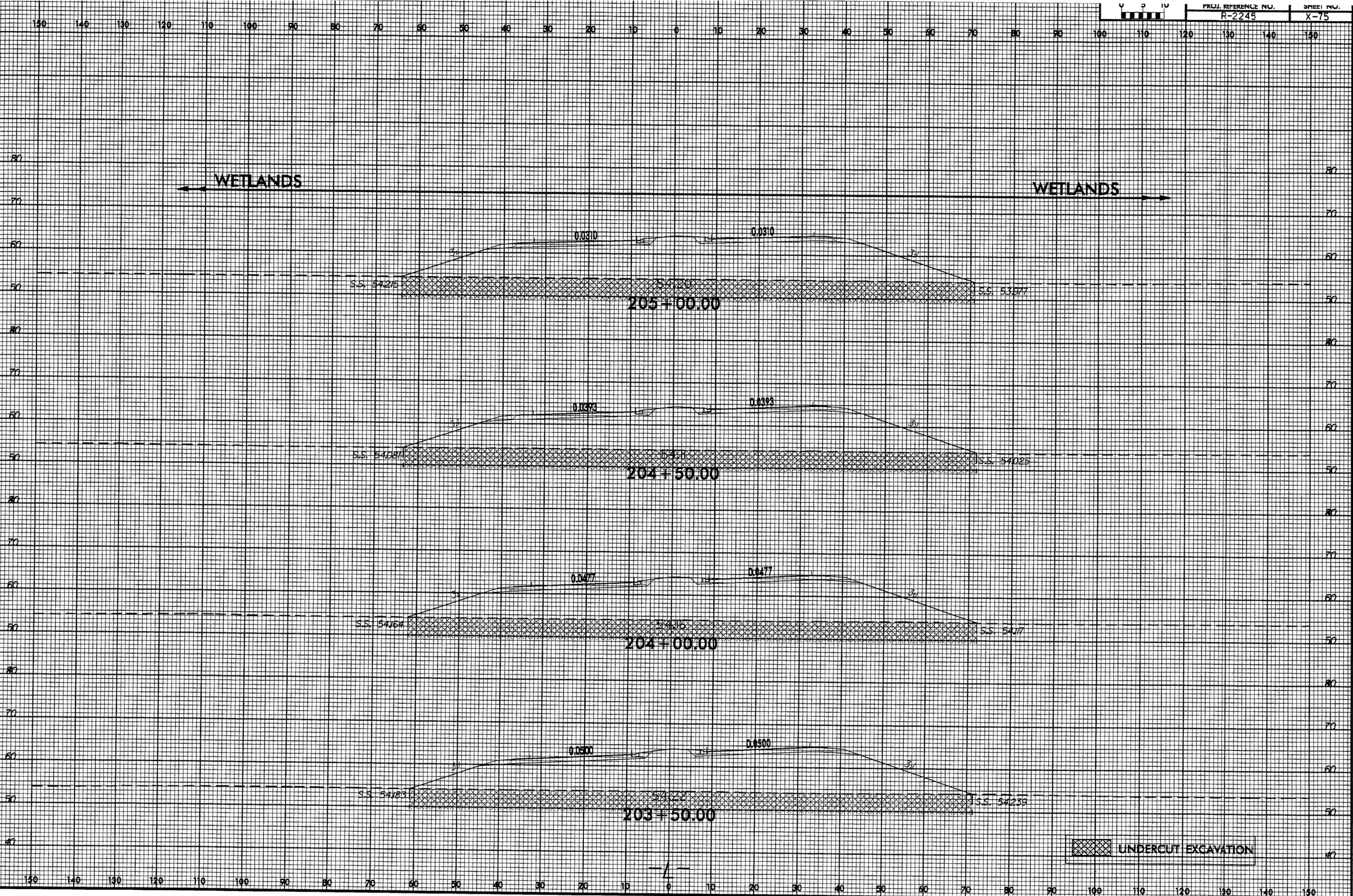
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← WETLANDS →

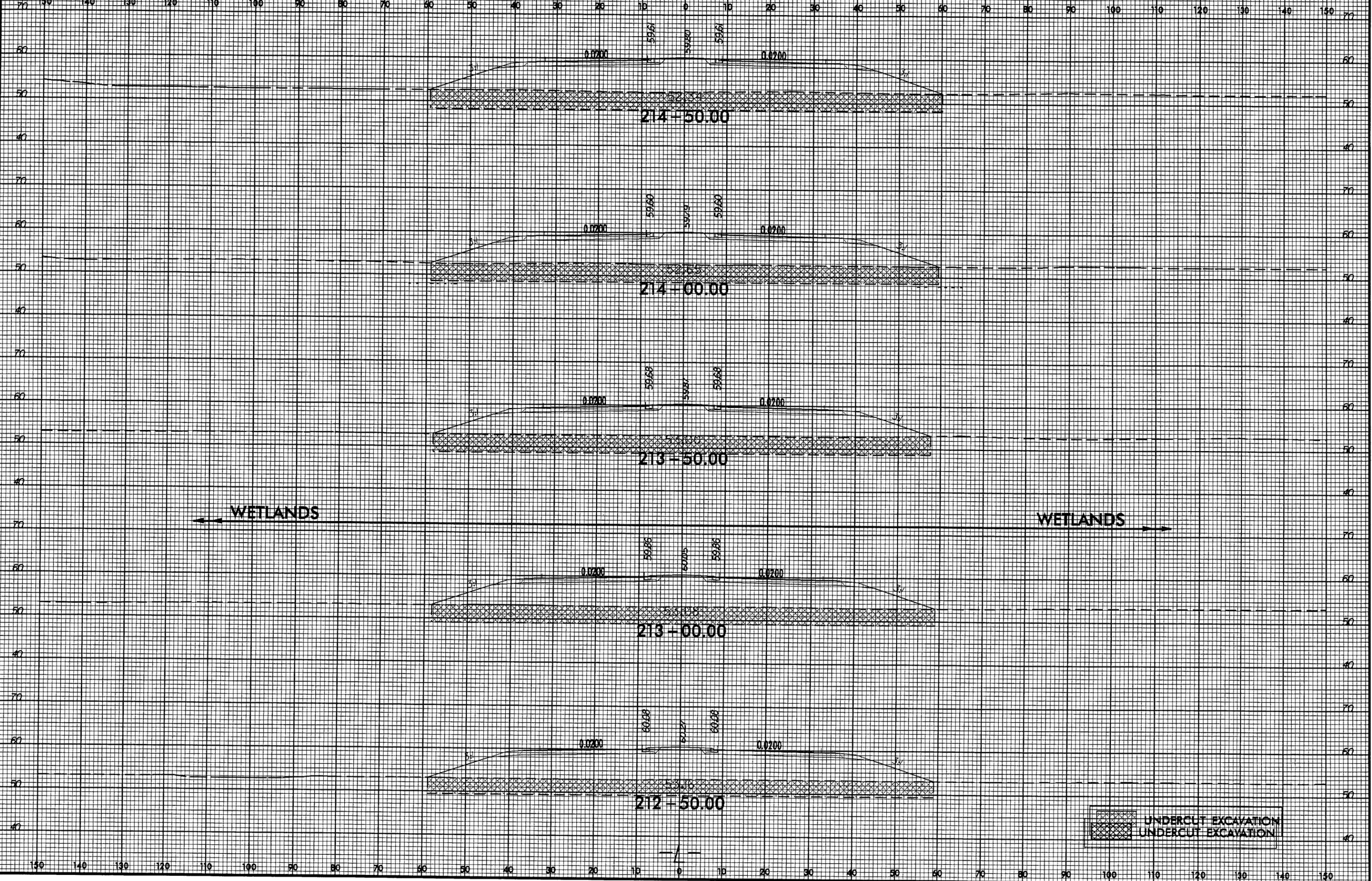


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8/23

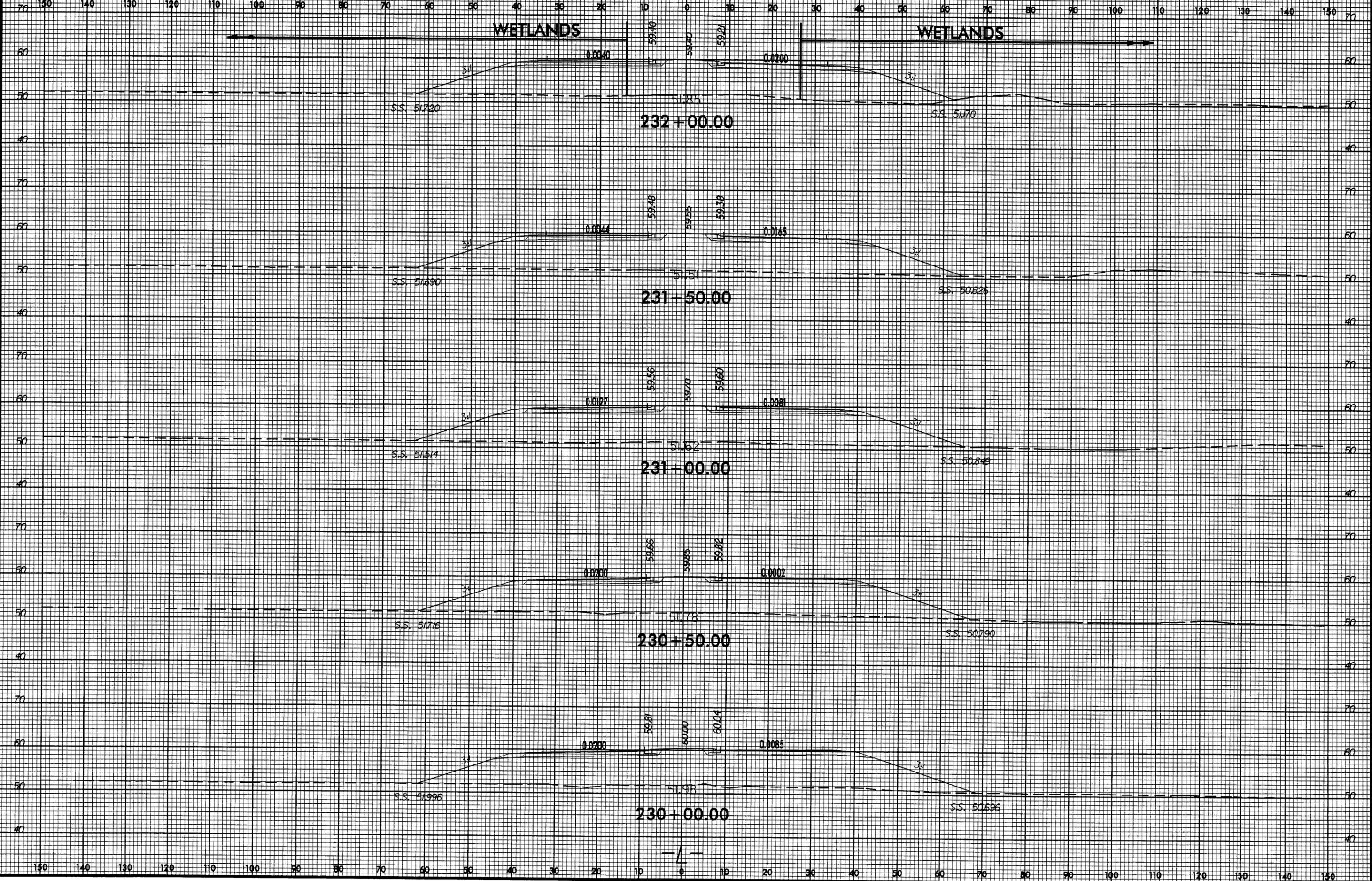


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FlavinGood



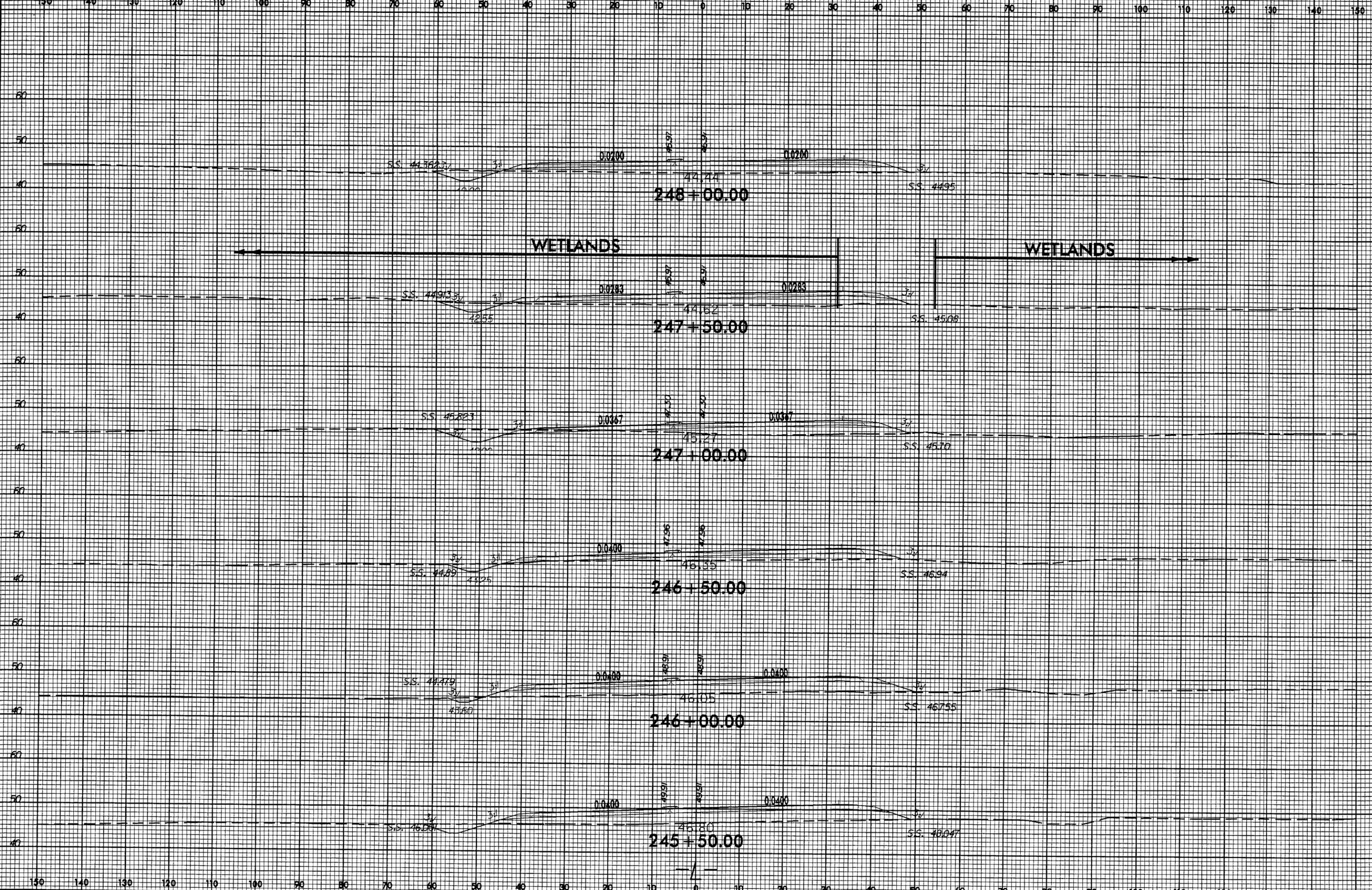
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8/23/07



18-DEC-2006 10:59
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8/23/16



18-DEC-2006 11:00
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03/08/06

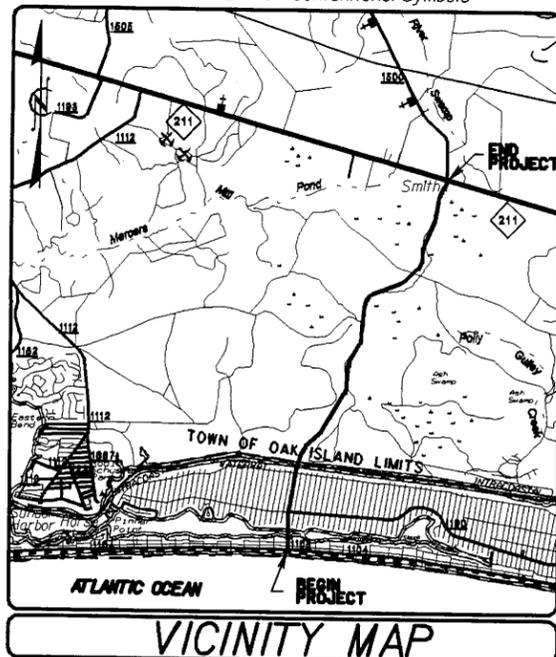
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BRUNSWICK COUNTY

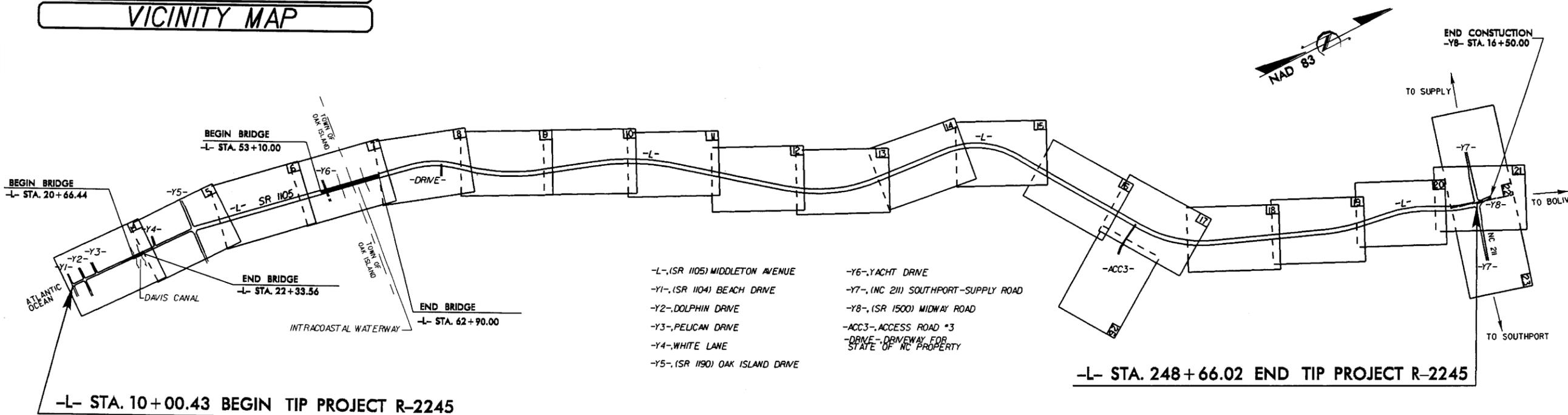
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2245	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34407.1.1	STP-1105(6)	P.E.	
34407.3.1	STP-1105(7)	RW & UTIL.	
34407.2.3	STP-1105(17)	CONST.	

TIP PROJECT: R-2245



**LOCATION: NEW ROUTE FROM SR 1104 (BEACH DRIVE)
TO NC 211 (SECOND BRIDGE TO OAK ISLAND)**

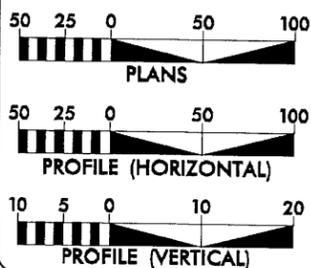
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, STRUCTURES
AND CULVERT**



ACCESS IS NOT CONTROLLED FROM OCEAN BEACH DRIVE TO 735' SOUTH OF YACHT DRIVE.
ACCESS CONTROL IS LIMITED TO POINTS AS SHOWN ON THE PLANS FROM 735' SOUTH OF YACHT DRIVE TO NC 211.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2006 = 13800
ADT 2030 = 31000
DHV = 8 %
D = 55 %
T = 3 % *
V = 40-60 MPH
* (TTST 1% + DUAL 2%)
FUNC CLASS = RURAL COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2245 = 4.303 MI
LENGTH STRUCTURES TIP PROJECT R-2245 = 0.217 MI
TOTAL LENGTH OF TIP PROJECT R-2245 = 4.520 MI

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: APRIL 29, 2005
GLENN W. MUMFORD, PE
PROJECT ENGINEER

LETTING DATE: MAY 15, 2006
SUSAN C. LANCASTER, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____
ROADWAY DESIGN ENGINEER

SIGNATURE: _____
DATE

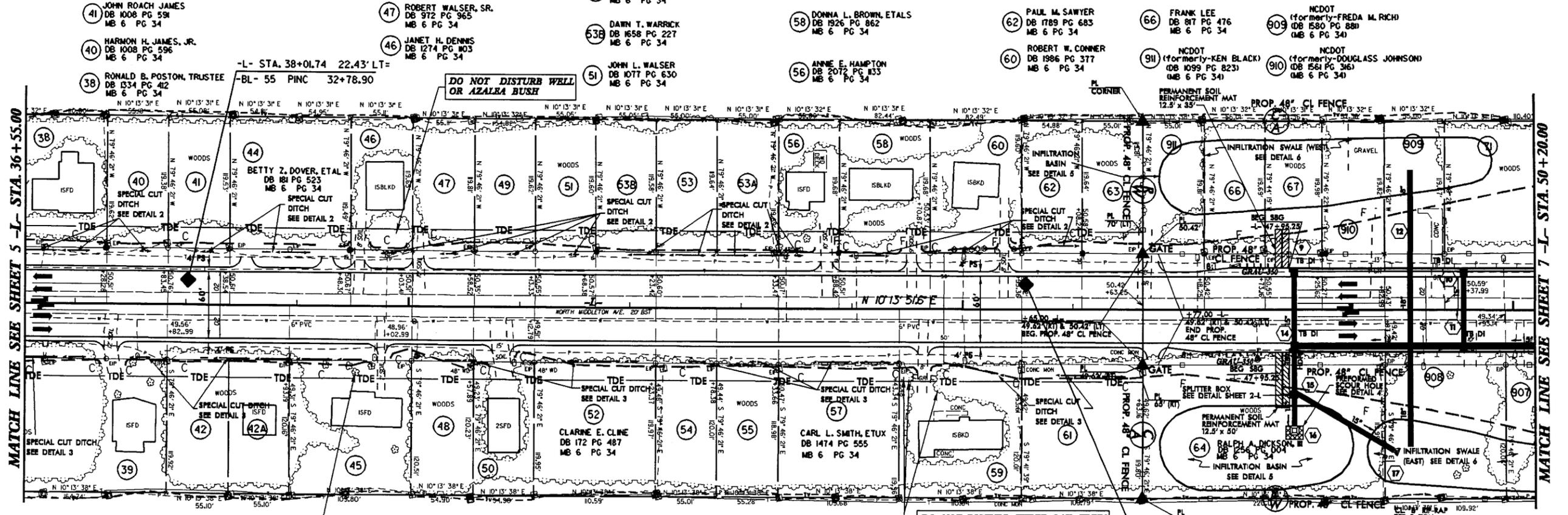
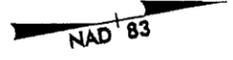
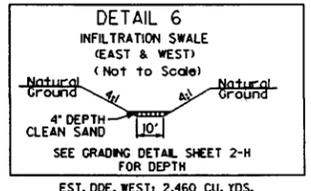
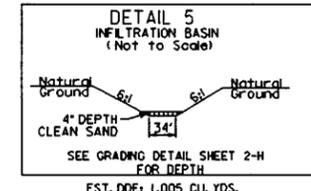
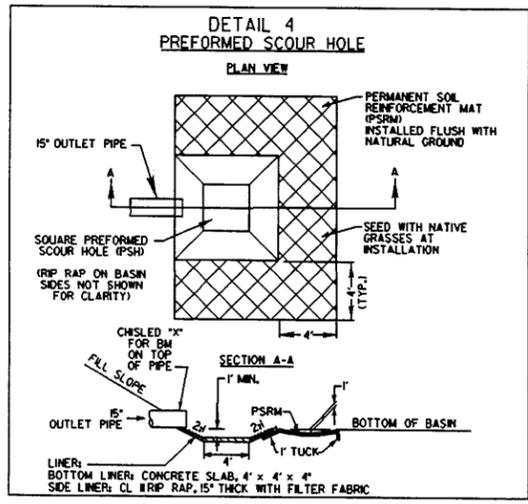
**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE DESIGN ENGINEER
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR

20-DEC-2006 09:40
r:\prowork\proj\2245_rdy_tsh.dgn
USERNAME

CONTRACT: C201550



- 41 JOHN ROACH JAMES
DB 1008 PG 591
MB 6 PG 34
- 40 HARMON H. JAMES, JR.
DB 1008 PG 596
MB 6 PG 34
- 38 RONALD B. POSTON, TRUSTEE
DB 1334 PG 412
MB 6 PG 34

- 49 MINDI W. SINK, ETAL
DB 1484 PG 82
MB 6 PG 34
- 47 ROBERT WALSER, SR.
DB 972 PG 965
MB 6 PG 34
- 46 JANET H. DENNIS
DB 1274 PG 803
MB 6 PG 34

- 53A DAWN T. WARRICK
DB 1658 PG 229
MB 6 PG 34
- 53 WILLIAM B. WARRICK
DB 1658 PG 231
MB 6 PG 34
- 53B DAWN T. WARRICK
DB 1658 PG 227
MB 6 PG 34
- 51 JOHN L. WALSER
DB 1077 PG 630
MB 6 PG 34

- 58 DONNA L. BROWN, ETALS
DB 1926 PG 862
MB 6 PG 34
- 56 ANNE E. HAMPTON
DB 2072 PG 833
MB 6 PG 34

- 63 MARVIN C. MARTIN, SR.
DB 1390 PG 266
MB 6 PG 34
- 62 PAUL M. SAWYER
DB 1789 PG 683
MB 6 PG 34
- 60 ROBERT W. CONNER
DB 1986 PG 377
MB 6 PG 34

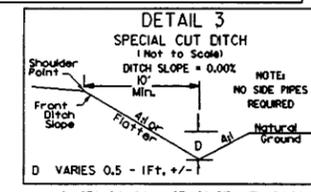
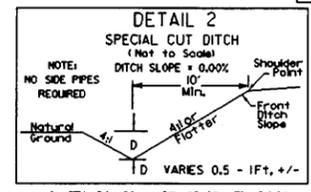
- 67 PAUL E. MOORE, JR.
DB 1223 PG 689
MB 6 PG 34
- 66 FRANK LEE
DB 817 PG 476
MB 6 PG 34
- 61 NCDOT (formerly-KEN BLACK)
DB 1099 PG 823
MB 6 PG 34

- 71 GEORGE L. FISHER, ETAL
DB 1881 PG 593
MB 6 PG 34
- 609 NCDOT (formerly-FREDA M. RICH)
DB 1580 PG 888
MB 6 PG 34
- 910 NCDOT (formerly-DOUGLASS JOHNSON)
DB 1581 PG 316
MB 6 PG 34

- 39 GARY G. COOPER
DB 1908 PG 896
DB 2038 PG 992
MB 6 PG 34
- 42 ARTHUR SKIPPER
DB 1999 PG 778
MB 6 PG 34
- 42A KIMBERLY S. ANDERSON
DB 1999 PG 775
MB 6 PG 34

- 45 MARY W. CHURCH
DB 174 PG 175
DB 145 PG 381
MB 6 PG 34
- 48 H. EMANUEL GHENT
DB 1249 PG 881
MB 6 PG 34
- 50 DENISE M. WEST
DB 1830 PG 945
MB 6 PG 34

- 54 NEIL G. JESTER
DB 2179 PG 693
MB 6 PG 34
- 55 ANNE J. CONNER
DB 1008 PG 606
MB 6 PG 34



STA 36+50 to 37+13 LT	EL=24.20
STA 37+58 to 37+68 LT	EL=24.50
STA 38+13 to 38+24 LT	EL=24.60
STA 38+68 to 39+37 LT	EL=24.90
STA 39+75 to 39+89 LT	EL=25.00
STA 40+28 to 40+44 LT	EL=25.00
STA 40+88 to 40+98 LT	EL=25.00
STA 41+43 to 41+53 LT	EL=25.40
STA 41+98 to 43+65 LT	EL=25.70
STA 43+97 to 44+34 LT	EL=25.70
STA 44+73 to 45+18 LT	EL=26.20
STA 45+65 to 46+10 LT	EL=26.20

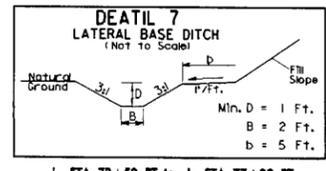
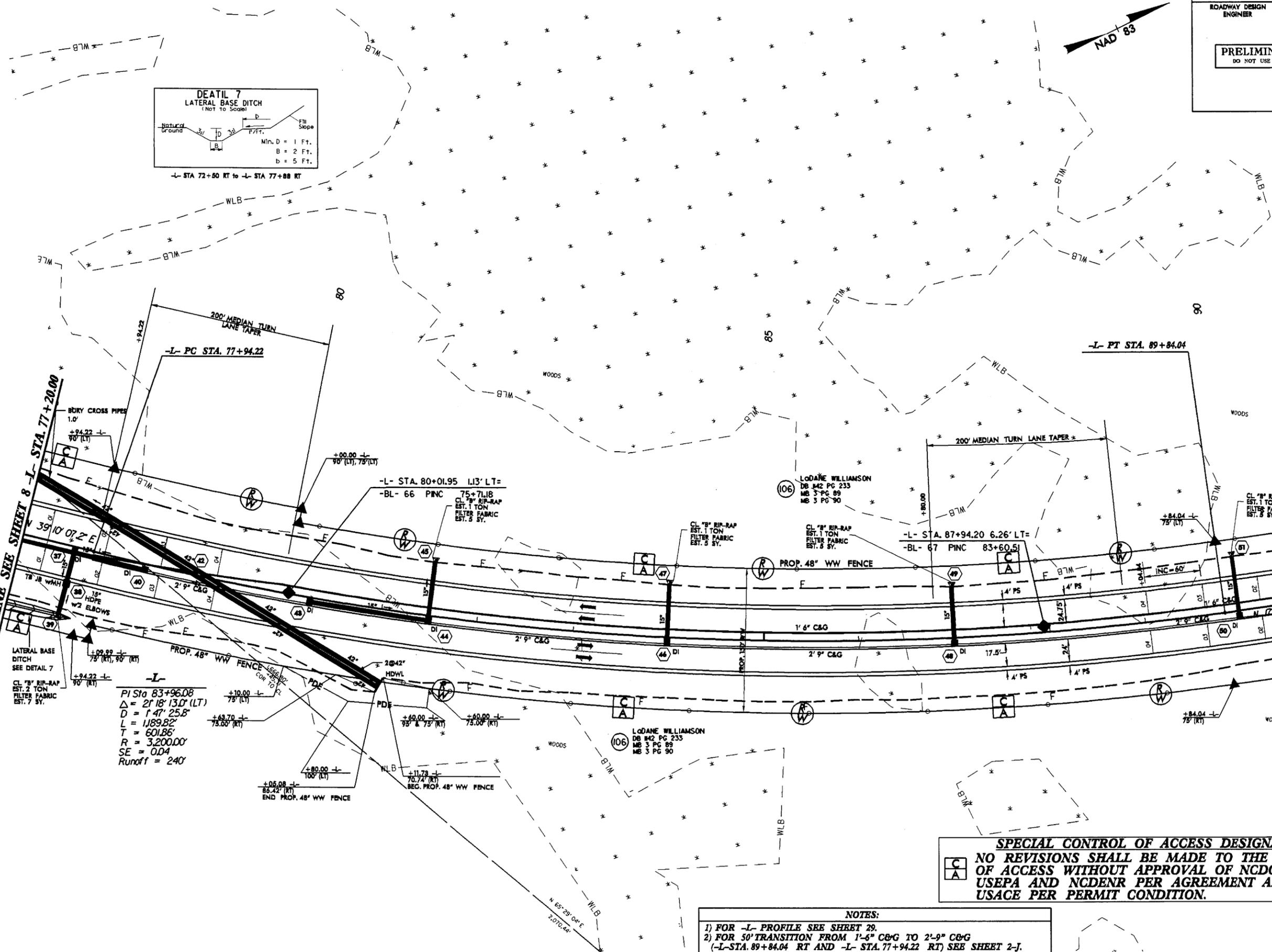
STA 36+14 to 37+10 RT	EL=24.20
STA 37+50 to 37+48 RT	EL=24.50
STA 38+13 to 39+88 RT	EL=24.80
STA 40+33 to 40+41 RT	EL=25.50
STA 41+43 to 42+08 RT	EL=25.60
STA 42+53 to 42+63 RT	EL=25.80
STA 43+08 to 43+19 RT	EL=26.00
STA 43+64 to 44+45 RT	EL=26.20
STA 44+83 to 45+39 RT	EL=26.50
STA 45+84 to 46+48 RT	EL=26.90

- 59 MARSHALL R. CARROLL
DB 1895 PG 828
MB 6 PG 34
- 61 J. R. CORBETT
DB 596 PG 210
DB 596 PG 212
MB 6 PG 34
- 608 NCDOT (formerly-KATHERINE W. HICKS)
DB 169 PG 55
MB 6 PG 34
- 607 NCDOT (formerly-DONALD W. BATCHELOR)
DB 836 PG 759
MB 6 PG 34

NOTES:
 1) FOR -L- PROFILE SEE SHEET 28.
 2) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.
 3) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.

8/17/99
 20-DEC-2006 09:41
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PROJECT REFERENCE NO. R-2245	SHEET NO. 9
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCH LINE SEE SHEET 8 -L- STA 71+20.00

MATCH LINE SEE SHEET 10 -L- STA 90+95.00

-L-
PI Sta 83+96.08
Δ = 21° 18' 13.0" (LT)
D = 147' 25.8"
L = 1189.82'
T = 601.86'
R = 3,200.00'
SE = 0.04
Runoff = 240

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

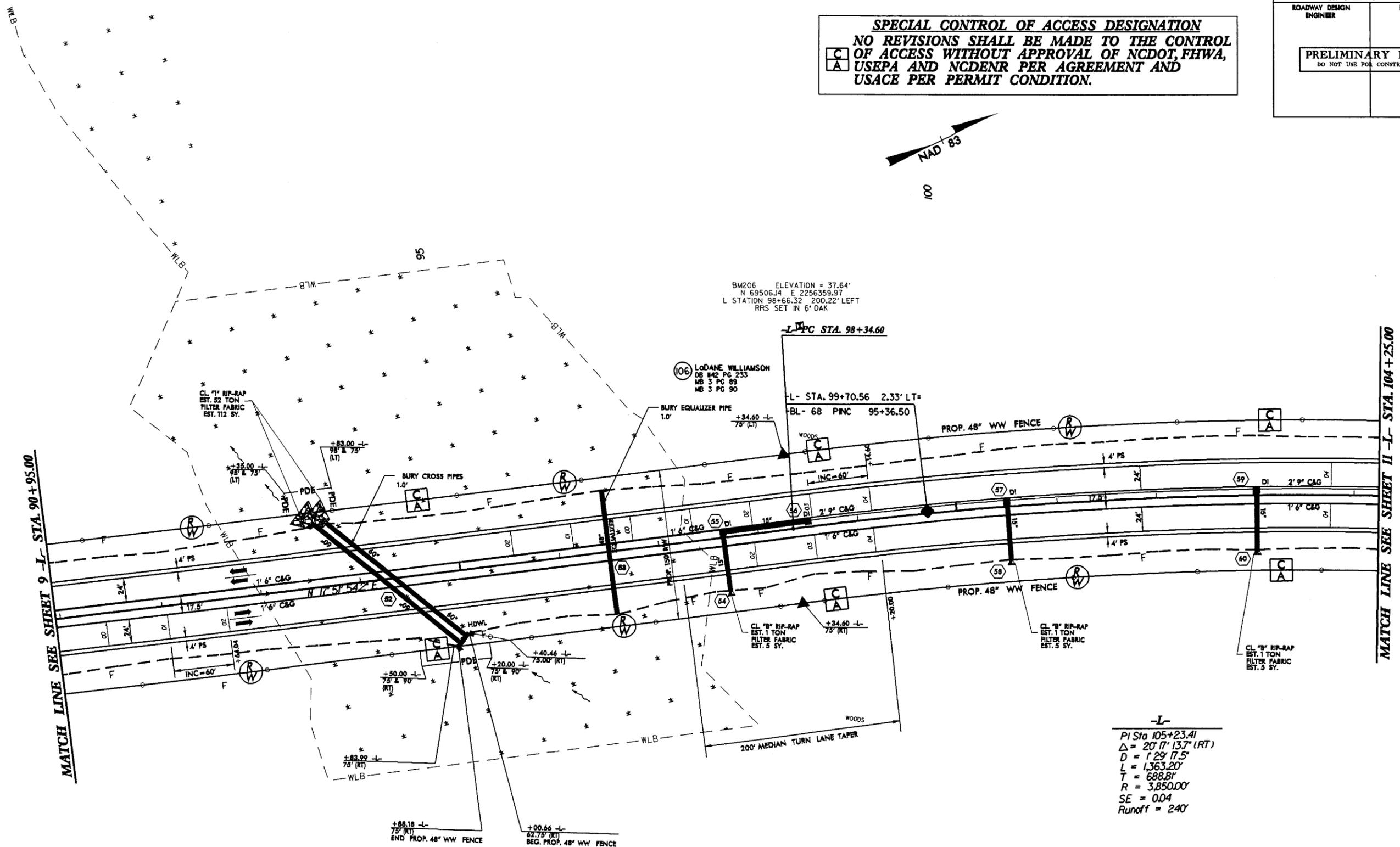
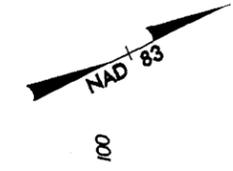
NOTES:
1) FOR -L- PROFILE SEE SHRET 29.
2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 89+84.04 RT AND -L- STA. 77+94.22 RT) SEE SHEET 2-J.

REVISIONS

20-DEC-2006 09:41 22:45 rdy-psh09.dgn

PROJECT REFERENCE NO. R-2245	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.



BM206 ELEVATION = 37.64'
 N 69506.14 E 2256359.97
 L STATION 98+66.32 200.22' LEFT
 RRS SET IN 6\"/>

(106) LODANE WILLIAMSON
 DB 142 PG 233
 MB 3 PG 89
 MB 3 PG 90

-L- PC STA. 98+34.60

-L- STA. 99+70.56 2.33' LT=
 -BL- 68 PINC 95+36.50

-L-
 PI Sta 105+23.41
 $\Delta = 20' 17' 13.7''$ (RT)
 $D = 1' 29' 17.5''$
 $L = 1,363.20'$
 $T = 688.81'$
 $R = 3,850.00'$
 $SE = 0.04$
 $Runoff = 2.40'$

(106) LODANE WILLIAMSON
 DB 142 PG 233
 MB 3 PG 89
 MB 3 PG 90

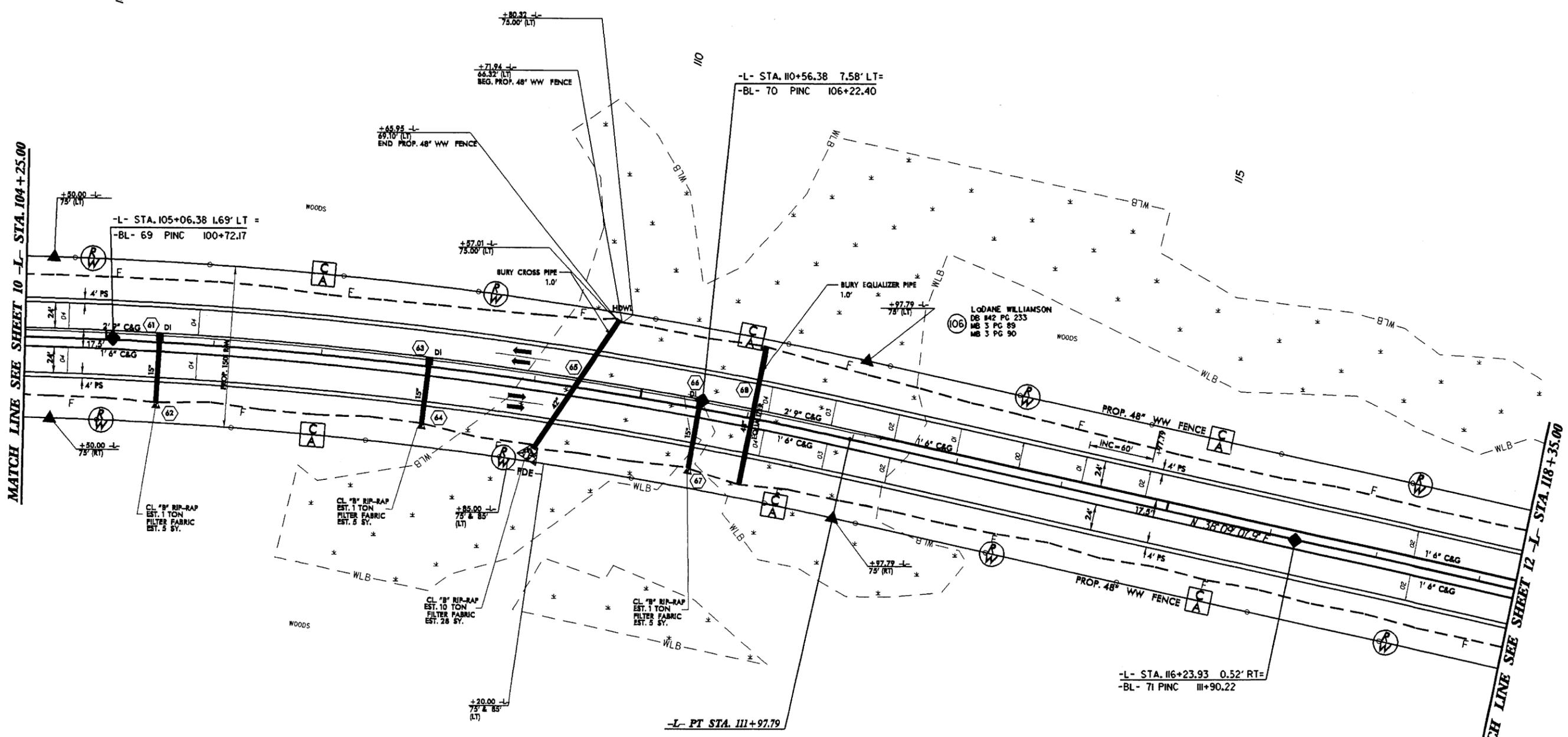
NOTES:
 1) FOR -L- PROFILE SEE SHEETS 29 AND 30.
 2) FOR 50' TRANSITION FROM 1'-6\"/>

REVISIONS

20-DEC-2006 09:41
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 USER:RFR

8/17/95

PROJECT REFERENCE NO. R-2245	SHEET NO. II
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCH LINE SEE SHEET 10 -L- STA. 104 + 25.00

MATCH LINE SEE SHEET 12 -L- STA. 118 + 35.00

-L-
 PI Sta 105+23.41
 $\Delta = 20^\circ 17' 13.7''$ (RT)
 $D = 1' 29' 17.5''$
 $L = 1363.20'$
 $T = 688.81'$
 $R = 3,850.00'$
 $SE = 0.04$
 Runoff = 240'

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

NOTES:

- 1) FOR -L- PROFILE SEE SHEET 30.
- 2) FOR 50' TRANSITION FROM 1'-4" C&G TO 2'-9" C&G (-L- STA. 111+97.79 LT) SEE SHEET 2-J.

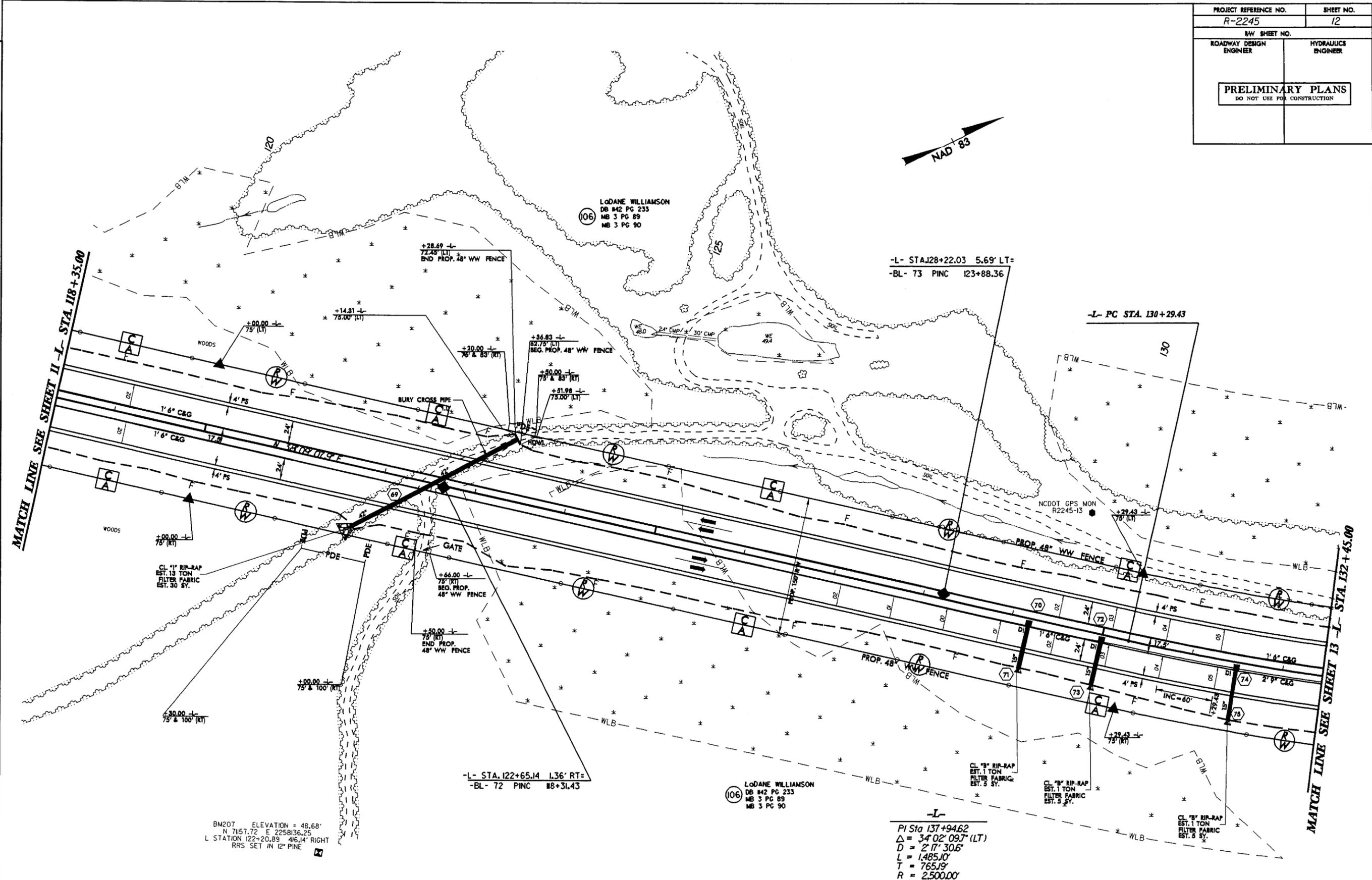
REVISIONS

8/17/99

20-DEC-2006 09:42 22:49 r-dj_psh11.dgn

PROJECT REFERENCE NO. R-2245	SHEET NO. 12
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99
 REVISIONS
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 5:53 PM



SPECIAL CONTROL OF ACCESS DESIGNATION

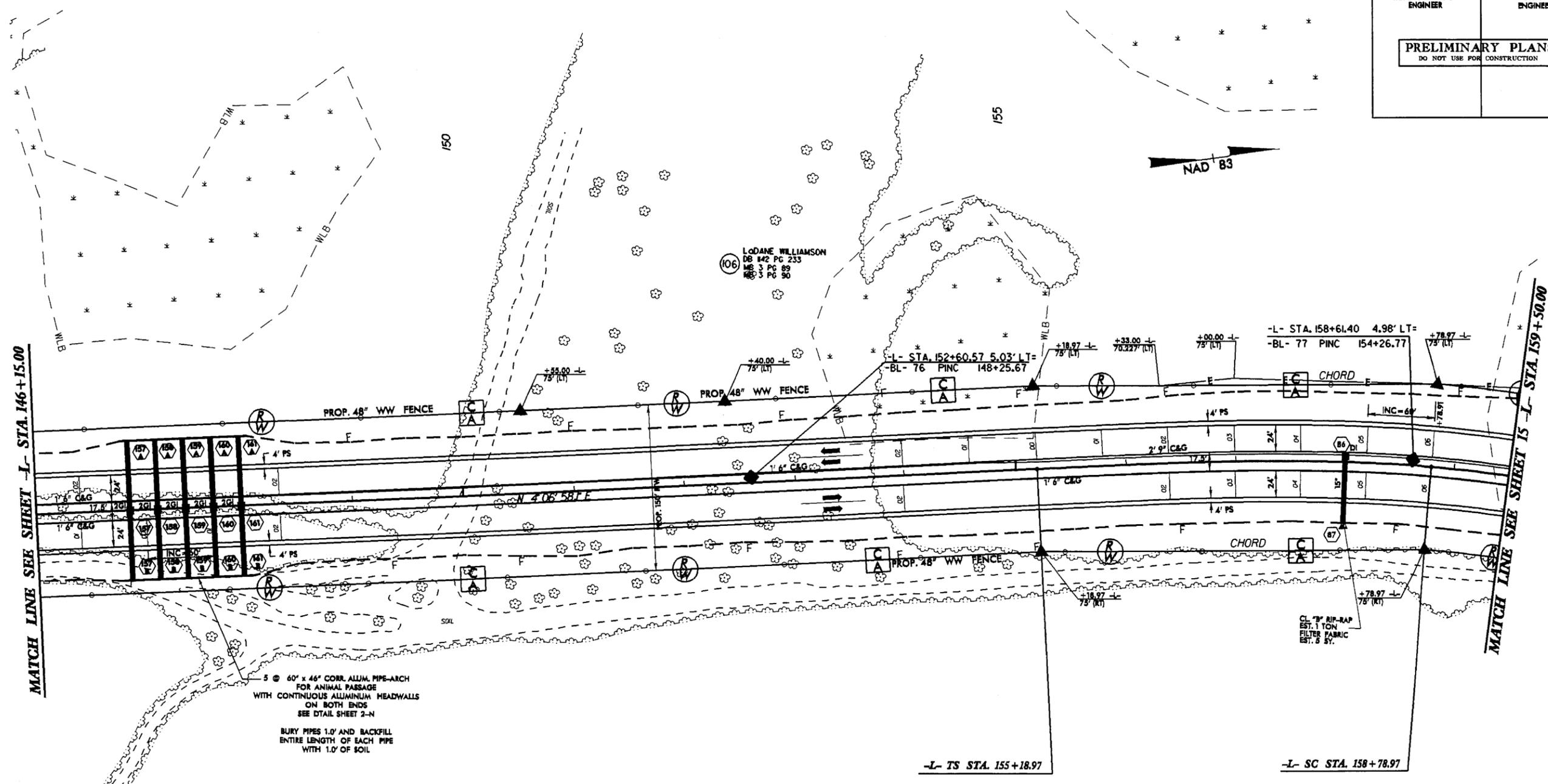
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

-L-
 PI Sta 137+94.62
 $\Delta = 34^{\circ}02'09.7" (LT)$
 $D = 2'17"30.6"$
 $L = 1,485.10'$
 $T = 765.19'$
 $R = 2,500.00'$
 $SE = 0.05$
 Runoff = 300'

NOTES:

- 1) FOR -L- PROFILE SEE SHEETS 30 AND 31.
- 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 130+29.43 RT) SEE SHEET 2-J.

PROJECT REFERENCE NO. R-2245	SHEET NO. 14
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCH LINE SEE SHEET -L- STA. 146+15.00

MATCH LINE SEE SHEET IS -L- STA. 159+50.00

5 @ 60" x 46" CORR. ALUM. PIPE-ARCH
FOR ANIMAL PASSAGE
WITH CONTINUOUS ALUMINUM HEADWALLS
ON BOTH ENDS
SEE DETAIL SHEET 2-N

BURY PIPES 1.0' AND BACKFILL
ENTIRE LENGTH OF EACH PIPE
WITH 1.0' OF SOIL

-L- TS STA. 155+18.97

-L- SC STA. 158+78.97

(106) LoDANE WILLIAMSON
DB 842 PG 233
MB 3 PG 89
NB 3 PG 90

-L-
 PIs Sta 157+59.20 PI Sta 163+15.57
 Os = 7' 48" 47.0" Δ = 36' 36" 14.6" (RT)
 Ls = 360.00' D = 4' 20" 26.1"
 LT = 240.23' L = 843.30'
 ST = 120.21' T = 436.60'
 R = 1,320.00'
 SE = 0.06
 Runoff = 360'

SPECIAL CONTROL OF ACCESS DESIGNATION

C
A NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS
WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER
AGREEMENT AND USACE PER PERMIT CONDITON.

NOTES:

- 1) FOR -L- PROFILE SEE SHEETS 31 AND 32.
- 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 155+18.97 LT) SEE SHEET 2-J.
- 3) FOR ACCESS BREAK SEE DETAIL SHEET 2-G.

REVISIONS

8/17/99

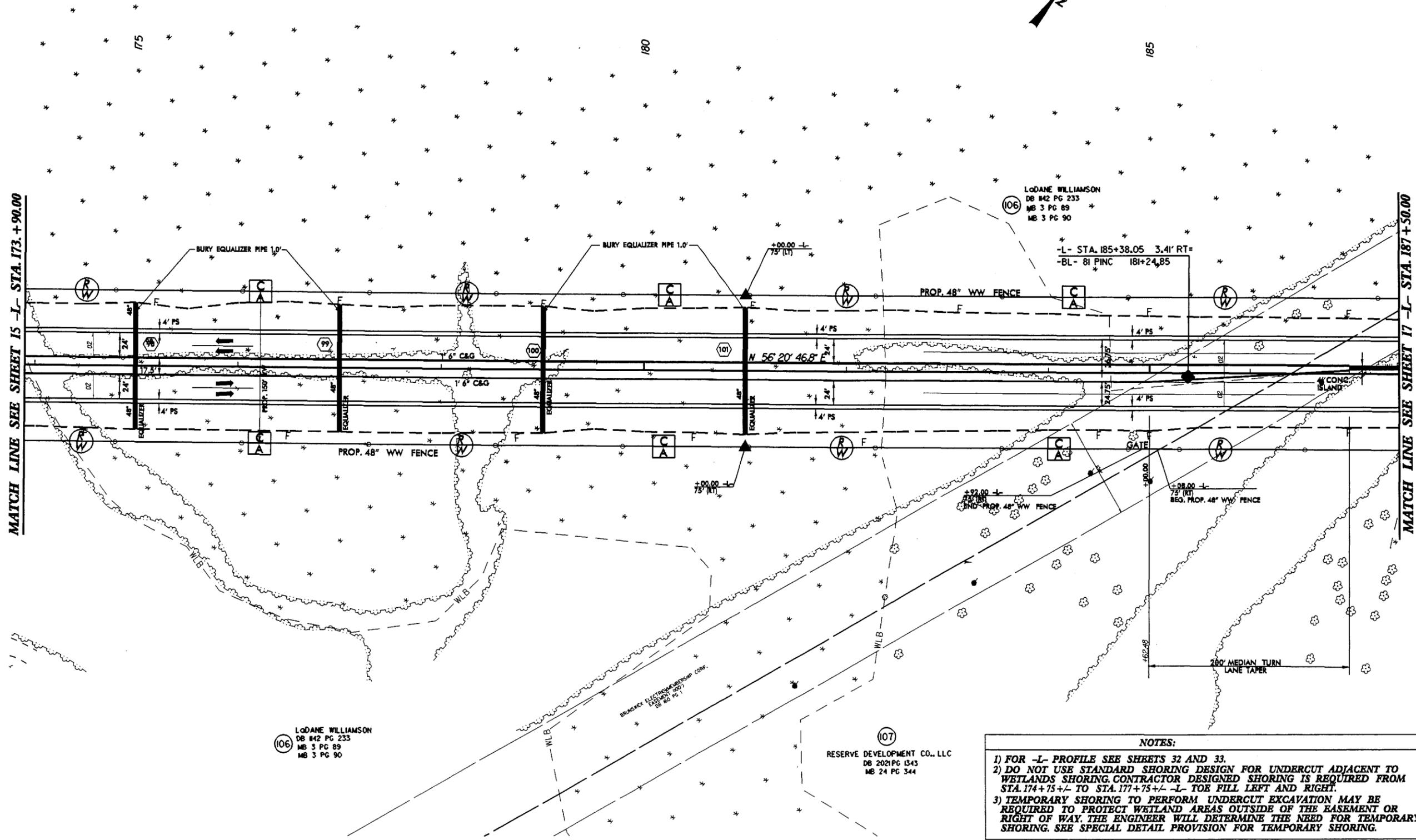
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PROJECT REFERENCE NO. R-2245	SHEET NO. 16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SPECIAL CONTROL OF ACCESS DESIGNATION

C NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

A



MATCH LINE SEE SHEET 15 -L- STA. 173. +90.00

MATCH LINE SEE SHEET 17 -L- STA. 187 +50.00

REVISIONS

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11:58:58 AM

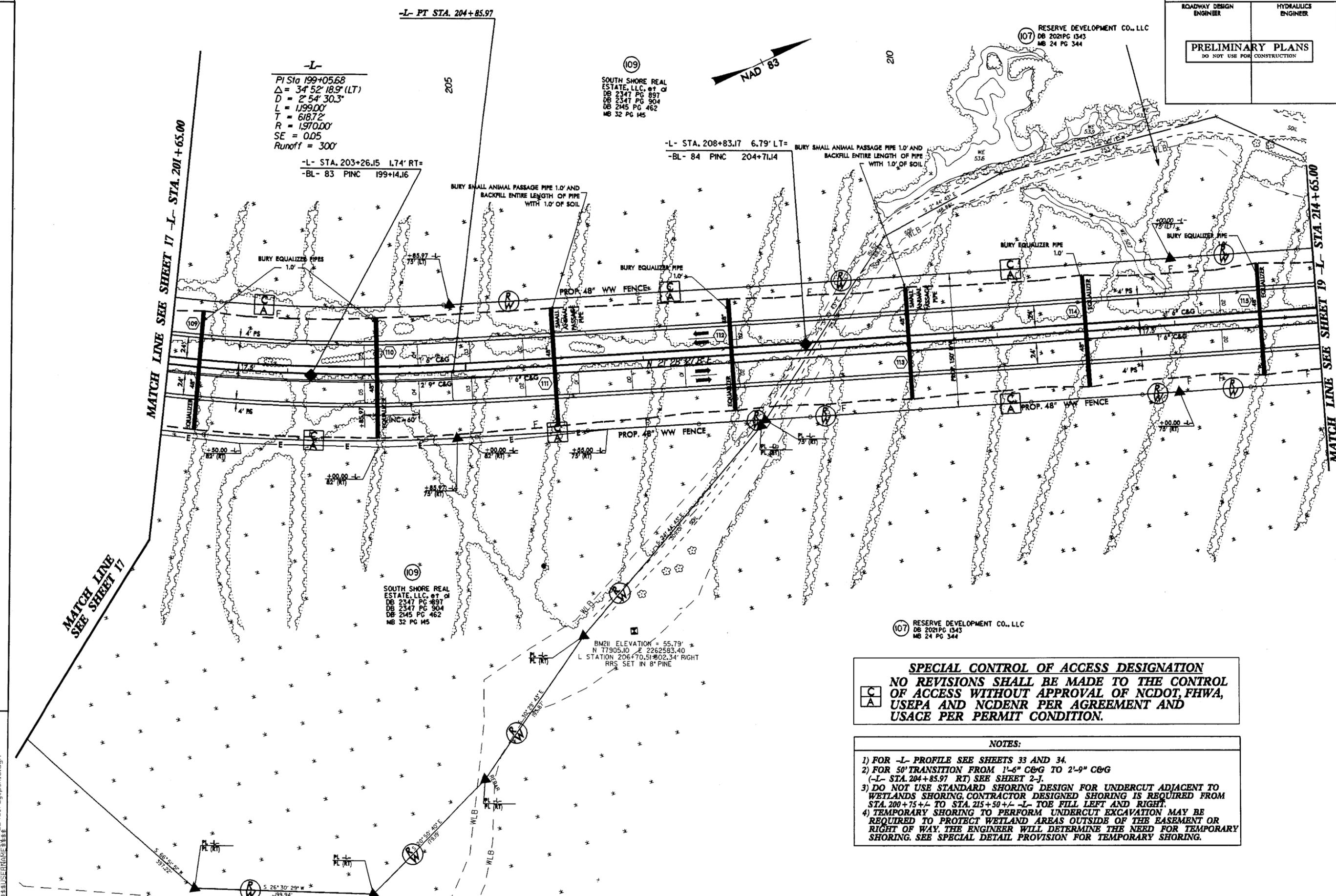
(106)
LODANE WILLIAMSON
DB 842 PG 233
MB 3 PG 89
MB 3 PG 90

(107)
RESERVE DEVELOPMENT CO., LLC
DB 2021 PG 1343
MB 24 PG 344

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 32 AND 33.
 - 2) DO NOT USE STANDARD SHORING DESIGN FOR UNDERCUT ADJACENT TO WETLANDS SHORING. CONTRACTOR DESIGNED SHORING IS REQUIRED FROM STA. 174+75+/- TO STA. 177+75+/- -L- TOE FILL LEFT AND RIGHT.
 - 3) TEMPORARY SHORING TO PERFORM UNDERCUT EXCAVATION MAY BE REQUIRED TO PROTECT WETLAND AREAS OUTSIDE OF THE BASEMENT OR RIGHT OF WAY. THE ENGINEER WILL DETERMINE THE NEED FOR TEMPORARY SHORING. SEE SPECIAL DETAIL PROVISION FOR TEMPORARY SHORING.

PROJECT REFERENCE NO. R-2245	SHEET NO. 18
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

REVISIONS



-L-
 PI Sta 199+05.68
 $\Delta = 34' 52'' 18.9''$ (LT)
 $D = 2' 54'' 30.3''$
 $L = 1,999.00'$
 $T = 618.72'$
 $R = 1,970.00'$
 $SE = 0.05$
 Runoff = 300'

-L- STA. 203+26.15 L74' RT=
 -BL- 83 PINC 199+14.16

-L- STA. 208+83.17 6.79' LT=
 -BL- 84 PINC 204+71.14

(109) SOUTH SHORE REAL ESTATE, LLC, et al
 DB 2347 PG 897
 DB 2347 PG 904
 DB 245 PG 462
 MB 32 PG 145

(107) RESERVE DEVELOPMENT CO., LLC
 DB 2021 PG 1343
 MB 24 PG 344

BM211 ELEVATION = 55.79'
 N 77905.10 E 2262583.40
 L STATION 206+70.51=802.34' RIGHT
 RRS SET IN 8" PINE

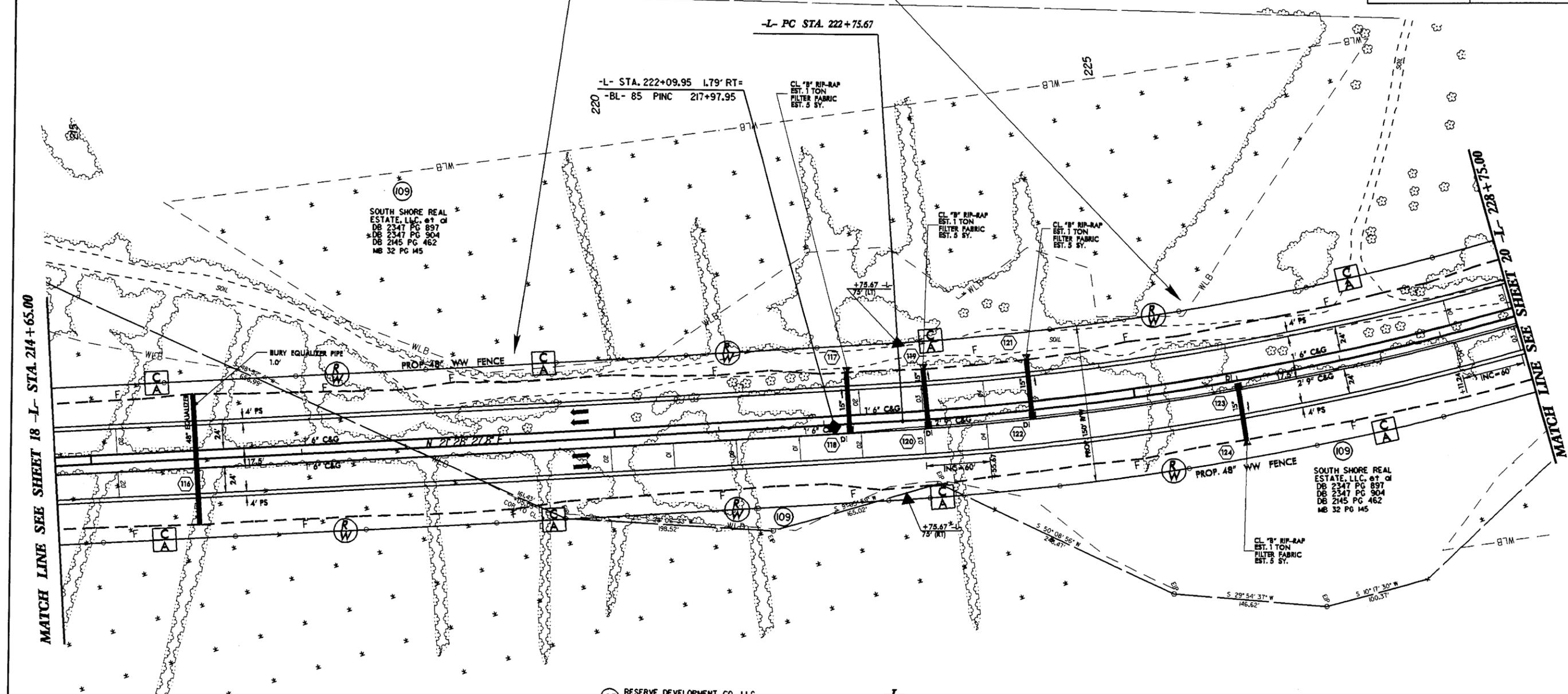
SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEETS 33 AND 34.
 - 2) FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 204+85.97 RT) SEE SHEET 2-J.
 - 3) DO NOT USE STANDARD SHORING DESIGN FOR UNDERCUT ADJACENT TO WETLANDS SHORING. CONTRACTOR DESIGNED SHORING IS REQUIRED FROM STA. 200+75+/- TO STA. 215+50+/- -L- TOE FILL LEFT AND RIGHT.
 - 4) TEMPORARY SHORING TO PERFORM UNDERCUT EXCAVATION MAY BE REQUIRED TO PROTECT WETLAND AREAS OUTSIDE OF THE EASEMENT OR RIGHT OF WAY. THE ENGINEER WILL DETERMINE THE NEED FOR TEMPORARY SHORING. SEE SPECIAL DETAIL PROVISION FOR TEMPORARY SHORING.

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PROJECT REFERENCE NO. R-2245	SHEET NO. 19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

HAND CLEARING WILL BE REQUIRED IN AREAS DESIGNATED BY THE PERMITS AND AS DIRECTED BY THE ENGINEER.



MATCH LINE SEE SHEET 18 -L- STA. 214+65.00

MATCH LINE SEE SHEET 20 -L- STA. 228+75.00

(107) RESERVE DEVELOPMENT CO., LLC
DB 2021PG 1343
MB 24 PG 344

-L-
PI Sta 225+84.62
 $\Delta = 12^{\circ} 09' 43.1''$ (LT)
 $D = 1^{\circ} 58' 32.6''$
 $L = 615.57'$
 $T = 308.95'$
 $R = 2,900.00'$
 $SE = 0.04$
Runoff = 240'

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 34.
 - 2) FOR 50' TRANSITION FROM 1'-4" C&G TO 2'-9" C&G (-L- STA. 222+75.67 RT) SEE SHEET 2-J.
 - 3) DO NOT USE STANDARD SHORING DESIGN FOR UNDERCUT ADJACENT TO WETLANDS SHORING. CONTRACTOR DESIGNED SHORING IS REQUIRED FROM STA. 200+75+/- TO STA. 215+50+/- -L- TOE FILL LEFT AND RIGHT.
 - 4) TEMPORARY SHORING TO PERFORM UNDERCUT EXCAVATION MAY BE REQUIRED TO PROTECT WETLAND AREAS OUTSIDE OF THE EASEMENT OR RIGHT OF WAY. THE ENGINEER WILL DETERMINE THE NEED FOR TEMPORARY SHORING. SEE SPECIAL DETAIL PROVISION FOR TEMPORARY SHORING.

REVISIONS

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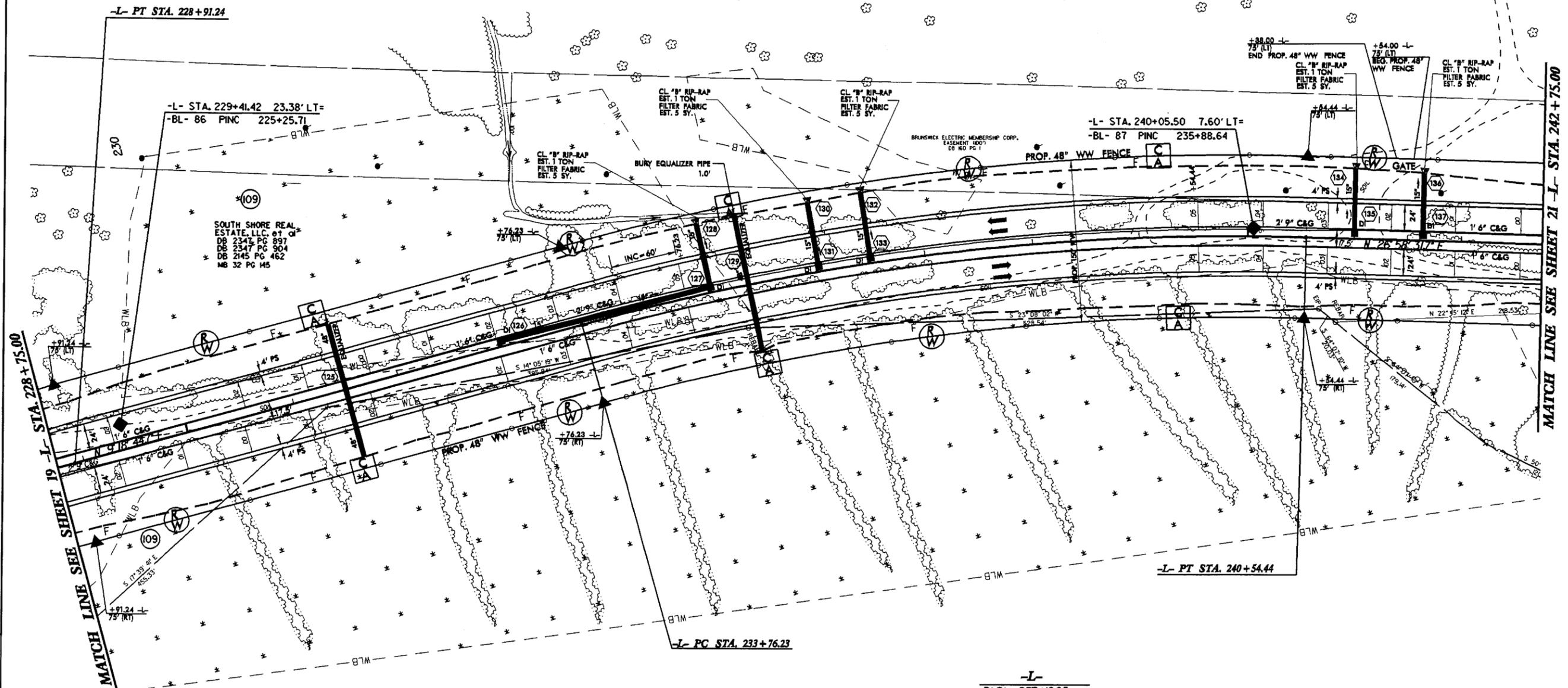
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PROJECT REFERENCE NO. R-2245	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-
 PI Sta 225+84.62
 $\Delta = 12^{\circ}09'43''$ (LT)
 $D = 158'32.6''$
 $L = 615.57'$
 $T = 308.95'$
 $R = 2,900.00'$
 $S.E. = 0.04$

BM212 ELEVATION = 55.52'
 N 80407.77' E 2262706.47'
 L STATION 231+37.05 391.22' LEFT
 RRS SET IN 10' PINE

(109)
 SOUTH SHORE REAL ESTATE, LLC, et al
 DB 2347 PG 897
 DB 2347 PG 904
 DB 2145 PG 462
 MB 32 PG 145



(109)
 SOUTH SHORE REAL ESTATE, LLC, et al
 DB 2347 PG 897
 DB 2347 PG 904
 DB 2145 PG 462
 MB 32 PG 145

(107) RESERVE DEVELOPMENT CO., LLC
 DB 2021 PG 1543
 MB 24 PG 344

-L-
 PI Sta 237+18.05
 $\Delta = 17^{\circ}39'46.9''$ (RT)
 $D = 2'36'15.7''$
 $L = 678.21'$
 $T = 341.82'$
 $R = 2,200.00'$
 $SE = 0.05$
 Runoff = 300'

SPECIAL CONTROL OF ACCESS DESIGNATION

NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USAGE PER PERMIT CONDITION.

NOTES:

- FOR -L- PROFILE SEE SHEETS 34 AND 35.
- FOR 50' TRANSITION FROM 1'-6" C&G TO 2'-9" C&G (-L- STA. 228+91.24 RT, -L- STA. 233+76.23 LT) SEE SHEET 2-J.

REVISIONS

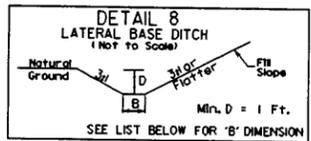
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SPECIAL CONTROL OF ACCESS DESIGNATION

NO REVISIONS SHALL BE MADE TO THE CONTROL OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA, USEPA AND NCDENR PER AGREEMENT AND USACE PER PERMIT CONDITION.

PROJECT REFERENCE NO. R-2245	SHEET NO. 21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

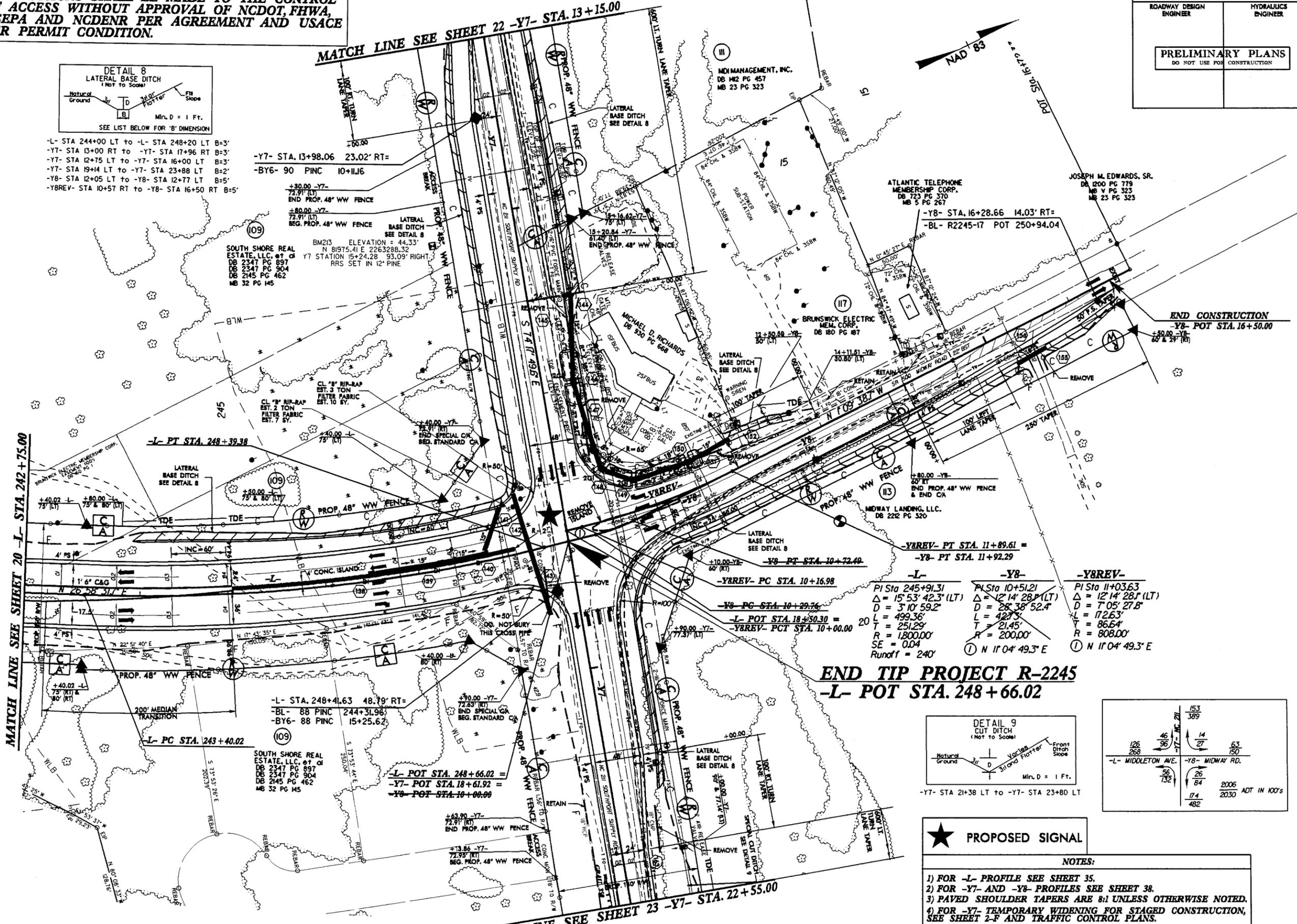


-L- STA 244+00 LT to -L- STA 248+20 LT B=3'
 -Y7- STA 13+00 RT to -Y7- STA 17+96 RT B=3'
 -Y7- STA 12+75 LT to -Y7- STA 16+00 LT B=3'
 -Y7- STA 19+14 LT to -Y7- STA 23+88 LT B=2'
 -Y8- STA 12+05 LT to -Y8- STA 12+77 LT B=5'
 -Y8REV- STA 10+57 RT to -Y8- STA 16+50 RT B=5'

MATCH LINE SEE SHEET 22 -Y7- STA. 13+15.00

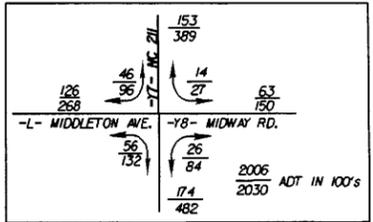
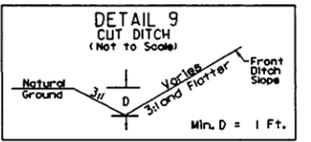
MATCH LINE SEE SHEET 20 -L- STA. 242+75.00

MATCH LINE SEE SHEET 23 -Y7- STA. 22+55.00



END TIP PROJECT R-2245
-L- POT STA. 248+66.02

PI Sta 245+91.31 $\Delta = 15^\circ 53' 42.3''$ (LT) $D = 3' 10' 59.2''$ $L = 499.36'$ $T = 251.29'$ $R = 1,800.00'$ $SE = 0.04$ $Runoff = 240'$	PI Sta 10+51.21 $\Delta = 12^\circ 14' 28.1''$ (LT) $D = 28' 38' 52.4''$ $L = 172.63'$ $T = 21.45'$ $R = 200.00'$ $\textcircled{1} N 11^\circ 04' 49.3'' E$	PI Sta 11+03.63 $\Delta = 12^\circ 14' 28.1''$ (LT) $D = 7' 05' 27.8''$ $L = 172.63'$ $T = 86.64'$ $R = 808.00'$ $\textcircled{1} N 11^\circ 04' 49.3'' E$
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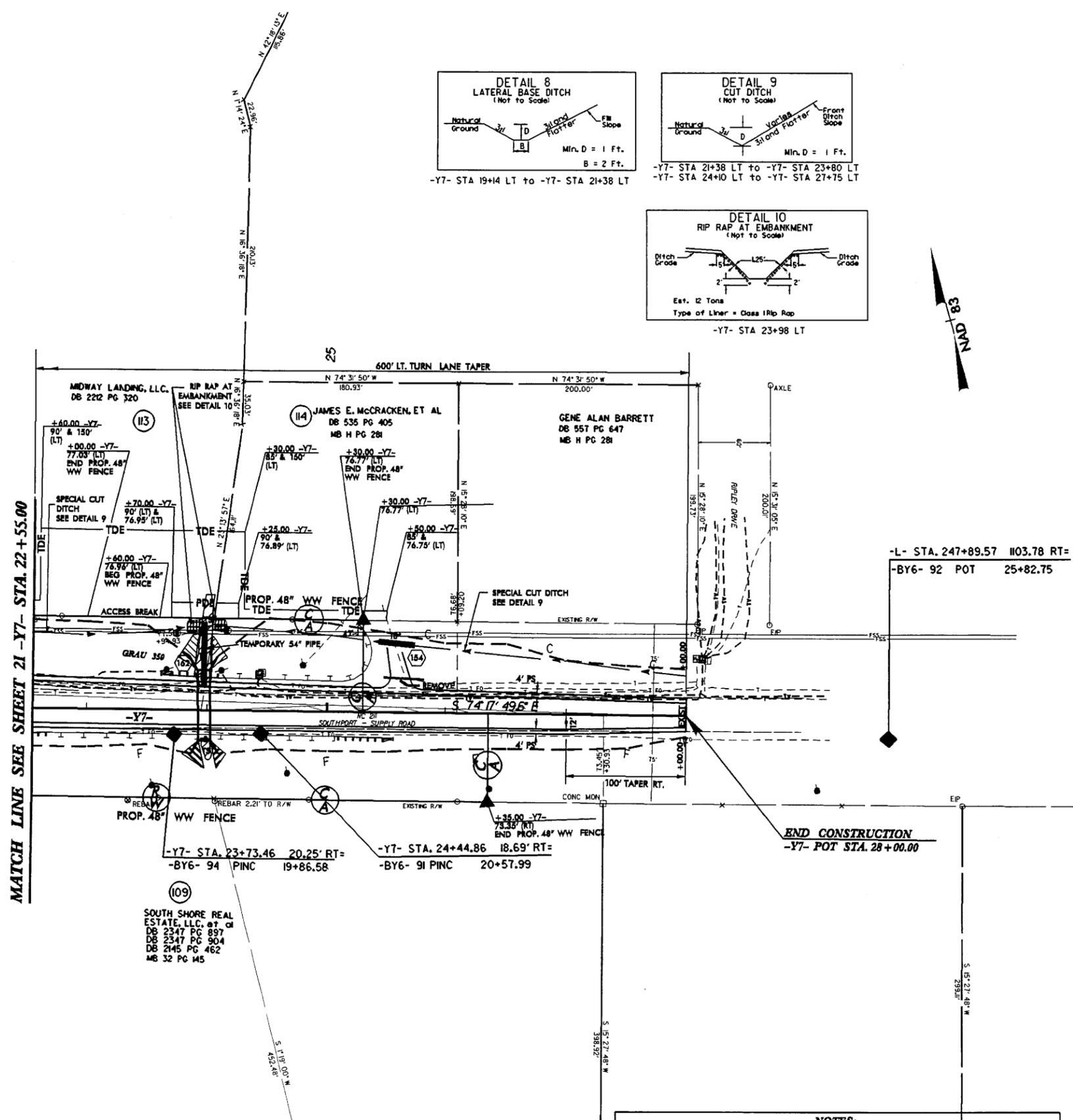
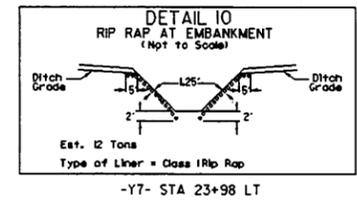
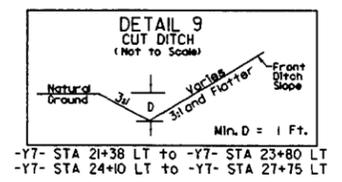
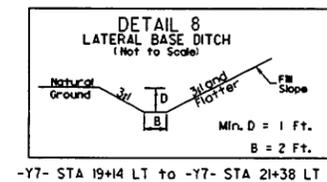
★ PROPOSED SIGNAL

- NOTES:**
- 1) FOR -L- PROFILE SEE SHEET 35.
 - 2) FOR -Y7- AND -Y8- PROFILES SEE SHEET 38.
 - 3) PAVED SHOULDER TAPERES ARE 8:1 UNLESS OTHERWISE NOTED.
 - 4) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-F AND TRAFFIC CONTROL PLANS.

REVISIONS

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PROJECT REFERENCE NO. R-2245	SHEET NO. 23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCH LINE SEE SHEET 21 -Y7- STA. 22+55.00

-L- STA. 247+89.57 1103.78 RT=
-BY6- 92 POT 25+82.75

-Y7- STA. 23+73.46 20.25' RT=
-BY6- 94 PINC 19+86.58

-Y7- STA. 24+44.86 18.69' RT=
-BY6- 91 PINC 20+57.99

END CONSTRUCTION
-Y7- POT STA. 28+00.00

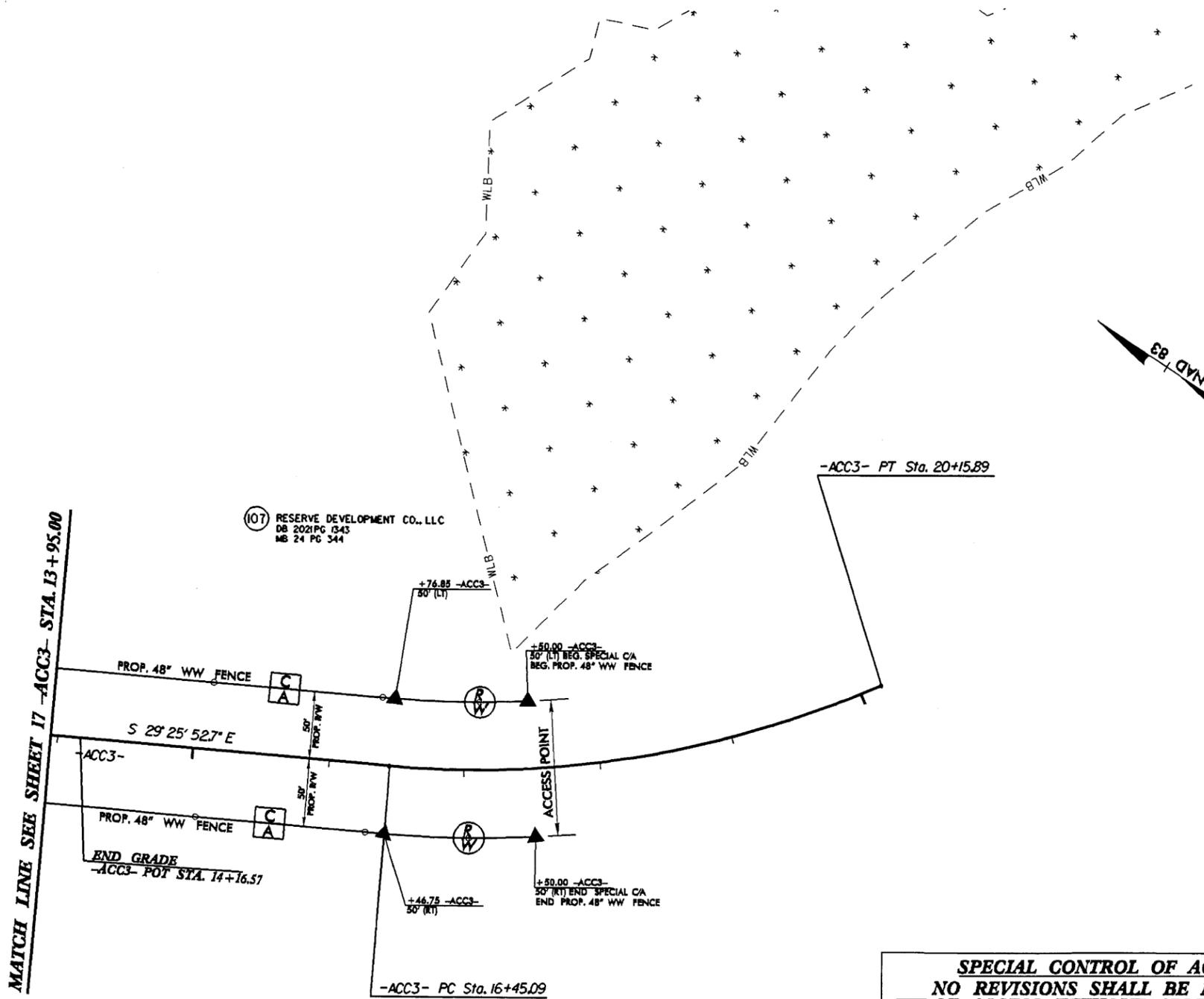
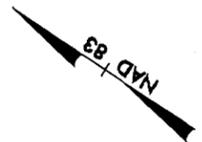
- NOTES:**
- 1) FOR -Y7- PROFILE SEE SHEET 38.
 - 2) PAVED SHOULDER TAPERS ARE 8:1 UNLESS OTHERWISE NOTED.
 - 3) FOR -Y7- TEMPORARY WIDENING FOR STAGED CONSTRUCTION, SEE SHEET 2-F AND TRAFFIC CONTROL PLANS.
 - 4) FOR CULVERT PLANS SEE SHEETS C-1 THROUGH C-4.
 - 5) USE ALTERNATIVE SPACING FOR GUARDRAIL INSTALLATION OVER CULVERT

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PROJECT REFERENCE NO. R-2245	SHEET NO. 26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



(107) RESERVE DEVELOPMENT CO., LLC
 DB 2021 PG 1343
 MB 24 PG 344

-ACC3-
 PI Sta 18+34.36
 $\Delta = 28^\circ 19' 36.4\"$ (LT)
 $D = 7' 38' 22.0\"$
 $L = 370.80'$
 $T = 189.27'$
 $R = 750.00'$

(107) RESERVE DEVELOPMENT CO., LLC
 DB 2021 PG 1343
 MB 24 PG 344

SPECIAL CONTROL OF ACCESS DESIGNATION
NO REVISIONS SHALL BE MADE TO THE CONTROL
OF ACCESS WITHOUT APPROVAL OF NCDOT, FHWA
AND NCDENR PER AGREEMENT AND USACE
PER PERMIT CONDITON.

NOTE:
 1) ACCESS ROAD TO BE CONSTRUCTED BY OTHERS.
 2) FOR -ACC3- PROFILE SEE SHEET 39.

REVISIONS

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