ANNUAL REPORT FOR 2014

Holly and Raft Swamp Mitigation Site
Robeson County
TIP No. B-3693
COE Action ID: SAW-2010-00144
DWQ #: 091354

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TABLE OF CONTENTS

SUMMARY 1

1.0 Introduction 2
.1 Project Description 2
.2 Purpose 2
.3 Project History 2
.4 Debit Ledger.....2

2.0 Vegetation: 4

.1 Success Criteria 4
.2 Description of Species.....4
.3 Results of Vegetation Monitoring 4
.4 Conclusions. 4

3.0 Overall Conclusions and Recommendations 4

FIGURES

Figure 1 – Vicinity Map 3

APPENDICES

Appendix A – Site Photos & Site Map
Appendix B - Wetland Reforestation Figures

SUMMARY

The Holly and Raft Swamp Mitigation Site is located in Robeson County**.** The site was planted in December 2012 and was designed as mitigation for wetland impacts associated with bridge project B-3693.

NCDOT will restore 0.65 acre of riverine wetlands within the Right-of-Way as well as 0.35 acre of riverine wetlands outside of the Right-of-Way. The 0.65 acre wetland restoration area within NCDOT Right-of-Way will mitigate for 1.29 acres of temporary fill in wetlands due to an onsite detour. The 0.21 acre of excavation in wetlands, reported as Site 4 on the Wetland Permit Impact Summary, is part of the restoration area construction and does not require mitigation (see revised impact summary sheet). The remainder of the temporary construction and temporary utility easement will also be replanted. NCDOT shall monitor vegetation success by visual observation and photo documentation and will submit an annual report. NCDOT shall monitor the site for a minimum of three years or until the site is deemed successful.

After the second year of monitoring by visual observation, the Holly and Raft Swamp Mitigation Site shows that the planted species are surviving and the restoration area is re-attaining wetland jurisdictional status.

NCDOT proposes to continue vegetation monitoring at the Holly and Raft Swamp Mitigation Site during 2015.

1.0 INTRODUCTION

1.1 Project Description

The Holly and Raft Swamp Mitigation Site is located in Robeson County on Pine Log Road, SR 1527, approximately 7 miles northwest of Lumberton, NC between NC Hwy 72W and NC Hwy 211W. The restoration activities involved the removal of the temporary detour and existing adjacent roadway fill of the Pine Log Road. This area was graded to match the adjacent reference wetland elevation.

1.2 Purpose

In order for a mitigation site to be considered successful, a site must meet vegetation success criteria. This report details the vegetation monitoring in 2014 at the Holly and Raft Swamp Mitigation Site. Hydrologic monitoring was not required for the site.

1.3 Project History

December 2012	Wetland Reforestation Completed
August 2013	Vegetation Monitoring (Year 1)
June 2014	Vegetation Monitoring (Year 2)

1.4 Debit Ledger

The entire Holly and Raft Swamp mitigation site was used for the B-3693 project to compensate for unavoidable wetland impacts.

Figure 1. Vicinity Map

2.0 VEGETATION: HOLLY AND RAFT SWAMP MITIGATION SITE (YEAR 2 MONITORING)

2.1 Success Criteria

Success Criteria states that NCDOT shall monitor the restoration site by visual observation and photo points for survival and aerial cover of vegetation. NCDOT shall monitor the site for a minimum of three years of until the site is deemed successful. Monitoring will be initiated upon completion of the site planting.

2.2 Description of Species

The following wetland species were planted in the Wetland Restoration Area:

Nyssa sylvatica var. *biflora,* Swamp Tupelo

Taxodium distichum, Baldcypress

Chamaecyparis thyoides, Atlantic White Cedar

Quercus nigra, Water Oak

2.3 Results of Vegetation Monitoring

The restoration area is re-attaining wetland jurisdictional status and the planted species are surviving. Planted species noted surviving included swamp tupelo, bald cypress, atlantic white cedar, and water oak. Other species noted within the planted area included cattail, sweetgum, *Juncus* sp., black willow, wax myrtle, fennel, *Scirpus* sp., lespedeza, and various grasses.

The perimeter of the site has been signed to prevent encroachments.

2.4 Conclusions

By visual observation, the Holly and Raft Swamp Mitigation Site shows that the planted species are surviving and the restoration area is re-attaining wetland jurisdictional status.

3.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS

NCDOT proposes to continue vegetation monitoring at the Holly and Raft Swamp Mitigation Site in 2015.

APPENDIX A

SITE PHOTOS & SITE MAP

Holly and Raft Swamp

Photo 1

Photo 2

Photo 3

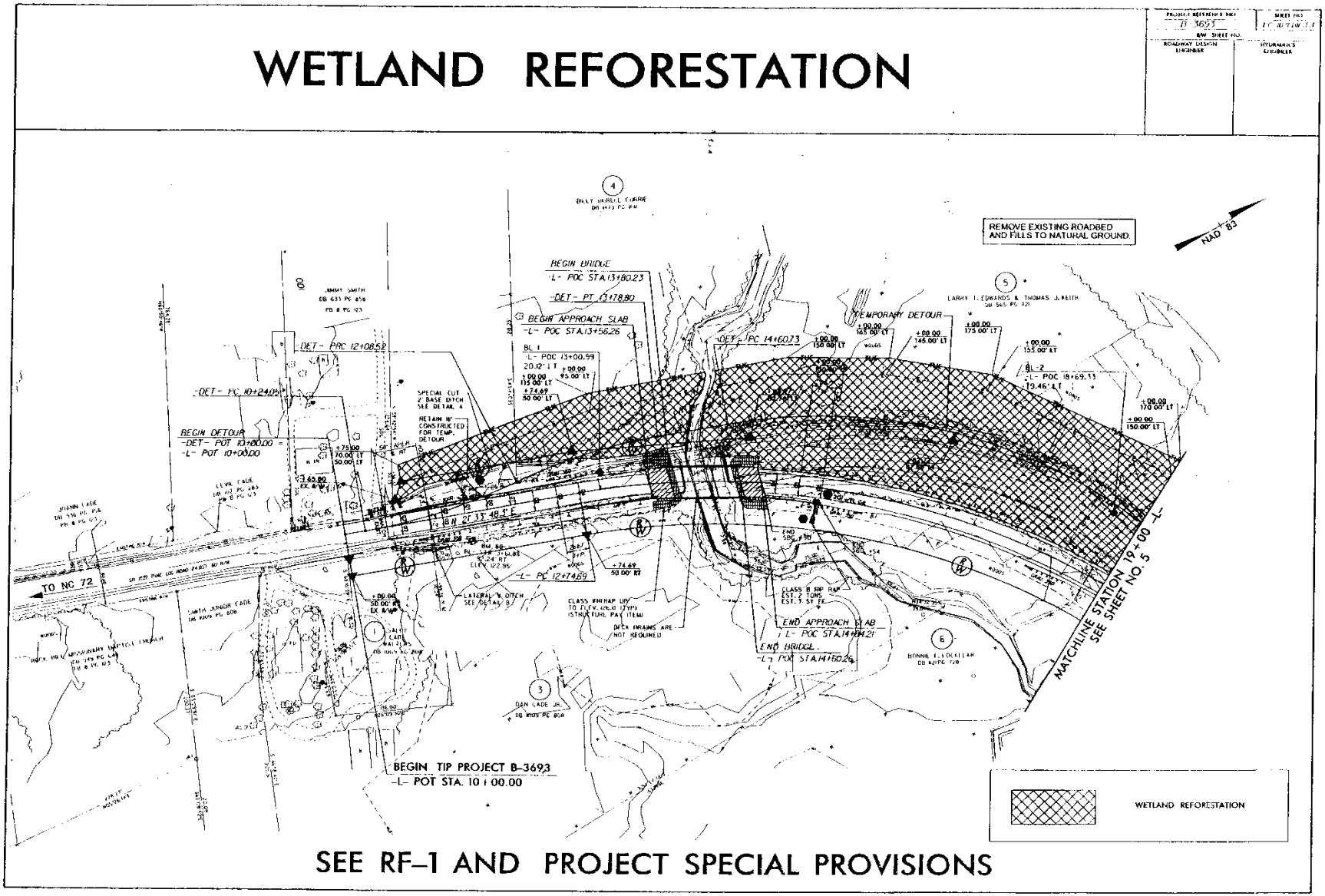
Photo 4

June 2014

Appendix A. Site Map

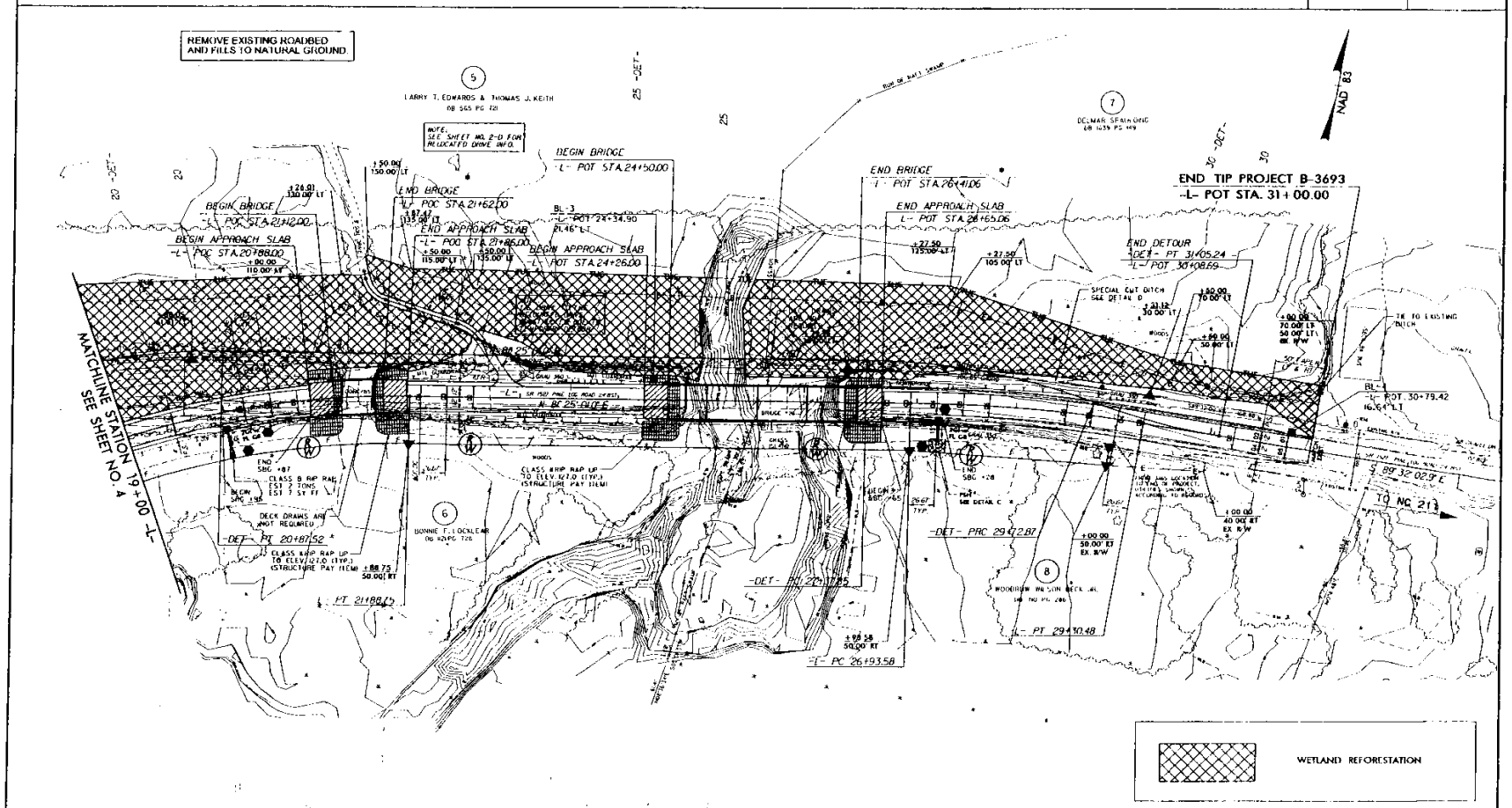
APPENDIX B

WETLAND REFORESTATION FIGURES



Appendix B. Wetland Reforestation Area

WETLAND REFORESTATION



SEE RF–1 AND PROJECT SPECIAL PROVISIONS

Appendix B. Wetland Reforestation Area