

ANNUAL REPORT FOR 2020



Gum Swamp Creek Temporary Impact Site

Scotland County

TIP No. B-4639

COE Action ID: SAW-2009-01695

DWR Project #: 20131277v.1



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SUMMARY

The Gum Swamp Creek Temporary Impact Site is located in Scotland County. This is an annual report for temporary impacts associated with the bridge replacement of Bridge No. 17 over Gum Swamp Creek on US 15/401. The temporary impact site was planted in May 2018.

The temporary impacts encompassed approximately 0.32 acre wetland fill, 43 linear feet of stream channel for the purpose of constructing a temporary onsite detour and additional temporary impacts during construction of 0.14 acre of hand clearing and 0.02 acre fill for erosion control measures within wetlands. The area that was impacted is being monitored for 3 years to ensure that it re-attains wetland jurisdictional status.

After the third year of monitoring, the Gum Swamp Creek Temporary Impact Site shows by visual observation and stem counts that the temporarily impacted area is re-attaining wetland jurisdictional status.

NCDOT proposes to discontinue monitoring at the Gum Swamp Creek Temporary Impact Site.

1.0 INTRODUCTION

1.1 Project Description

The Gum Swamp Creek Temporary Impact Site is located in Scotland County at Bridge No. 17 over Gum Swamp Creek on US 15/401 (Figure 1). The temporary impacts encompass approximately 0.32 acre wetland fill, 43 linear feet of stream channel, 0.14 acre of hand clearing and 0.02 acre fill for erosion control measures within wetlands. The area that was impacted is being monitored for 3 years to ensure that it re-attains wetland jurisdictional status.

1.2 Purpose

In order for a temporary impact site to be considered successful, a site must meet the success criteria. This report details the monitoring in 2020 at the Gum Swamp Creek Temporary Impact Site.

1.3 Project History

May 2018	Wetland Reforestation Completed
August 2018	Vegetation Monitoring – Site Photos (Year 1)
August 2018	USACE/NCDOT Onsite Meeting
October 2018	Vegetation Monitoring – Stem Counts (Year 1)
June 2019	Vegetation Monitoring (Year 2)
June 2020	Vegetation Monitoring (Year 3)

1.4 Debit Ledger

The restoration of the Gum Swamp Creek temporary impact site was used entirely to compensate for temporary impacts on the B-4639 project. There were no wetland mitigation credits generated from the restoration of the impacted area.

2.0 VEGETATION: GUM SWAMP CREEK TEMPORARY IMPACT SITE (YEAR 3 MONITORING)

2.1 Success Criteria

USACE Condition #7

Temporary impact areas will be returned to their preconstruction grade, contours and wetland type (i.e. Riverine Swamp Forest/Bottomland Hardwood Forest). To restore the temporary impact areas to pre-existing wetland conditions, these areas will be seeded with a native seed mix and planted with native live stakes and/or saplings of species commonly found in Riverine Swamp Forests/Bottomland Hardwood Forests/Non-Tidal Freshwater Marshes, such as Sweetgum, Blackgum, Green Ash, Red Maple, Sycamore, Pond or Bald Cypress, and Oak. Restoration of impacted areas shall be deemed successful when:

- a) All affected soils are intact and suitably vegetated with little or no evidence of erosion related to construction activities.
- b) Survival of $\geq 80\%$ of planted mixed forested wetland tree species or >120 trees per acre of similar mixed species.
- c) Hydrology that is evident by the presence of one or more indicators of hydrology, and/or hydric soil indicators as described in the Atlantic Gulf Coastal Plain Supplement.

USACE Condition #8

The restoration area will be visually monitored for meeting the above success criteria for a minimum of 3 years. Reference photos and plant survival shall be reported annually and submitted to the Corps of Engineers, Wilmington Regulatory Field Office. If the site does not exhibit forested wetland (see condition #7 above) and corrective measures such as replanting and soil manipulation are unsuccessful, additional compensatory mitigation may be required for wetland conversion and/or loss.

2.2 Description of Species

The following wetland species were planted in the temporary impact area:

Fraxinus pennsylvanica, Green Ash

Taxodium distichum, Baldcypress

Platanus occidentalis, American Sycamore

2.3 Results of Vegetation Monitoring

Plot #	Green Ash	Baldcypress	Sycamore	Total (Year 3)	Total (at planting)	Density (Trees/Acre)
1	5	15	1	21	34	420
Year 3 Average Density (Trees/Acre)						420
Year 2 Average Density (Trees/Acre)						480
Year 1 Average Density (Trees/Acre)						680

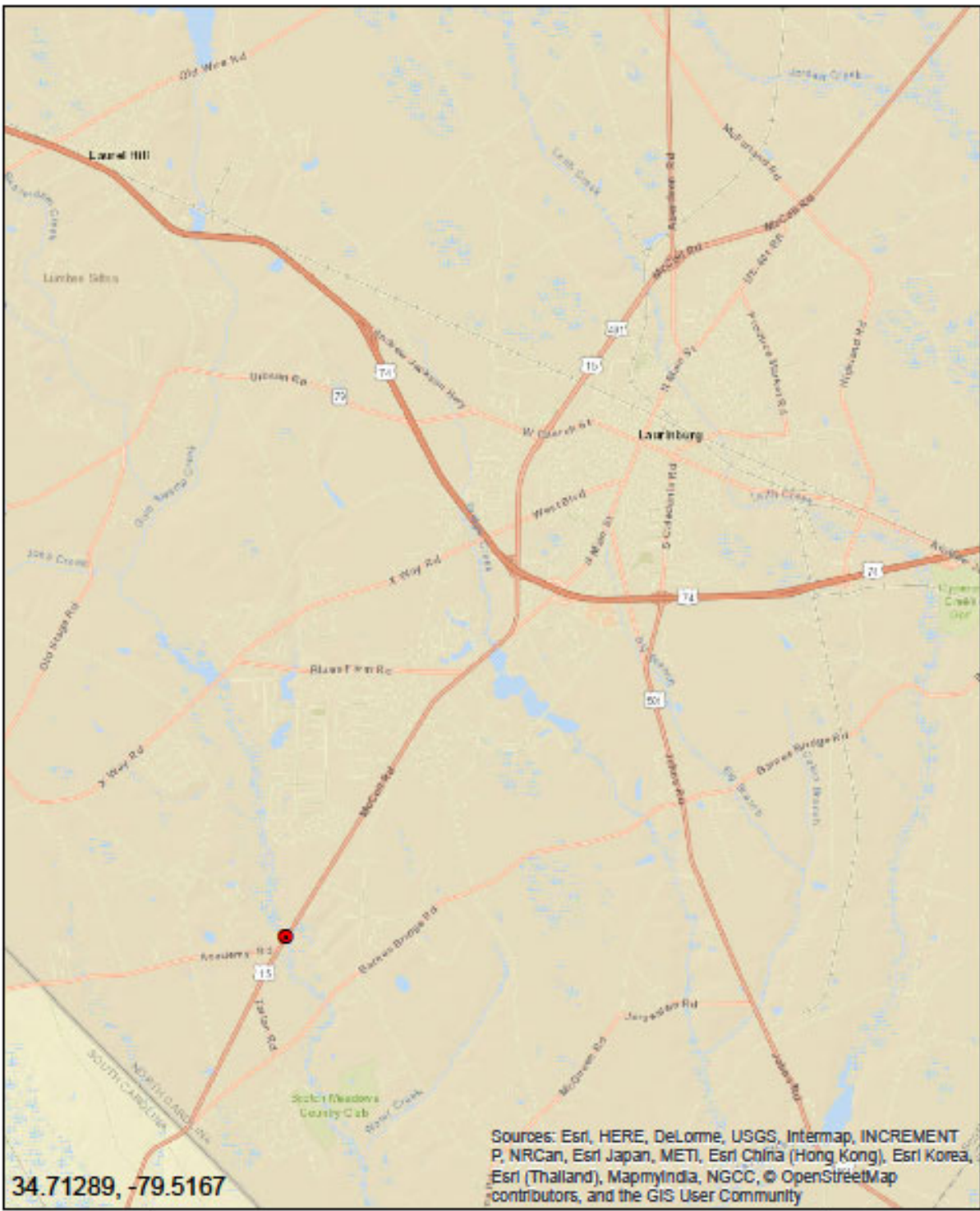
Site Notes: The impacted area where the temporary impacts occurred is re-attaining wetland jurisdictional status and the hardwood trees are surviving. There were no signs of erosion from construction activities with all disturbed soils remaining stabilized. The site was inundated with approximately 2.5 ft. of water at the time of monitoring. Other indicators of the presence of wetland hydrology were water marks on trees, algal deposits, and water stained leaves at the time of monitoring evaluation. Other species noted within the temporary impacted area included black willow, cattail, woolgrass, red maple, and soft rush.

2.4 Conclusions

There is one vegetation monitoring plot established throughout the temporary impact area. The 2020 vegetation monitoring of the site revealed an average tree density of 420 trees per acre. This average is well above the minimum success criteria of 120 trees per acre for Year 3.

3.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS

NCDOT proposes to discontinue monitoring at the Gum Swamp Creek Temporary Impact Site.






	Vicinity Map B-4639 Gum Swamp Creek Temporary Impact Site Scotland County, North Carolina	
		

Figure 1. Vicinity Map

APPENDIX A

SITE PHOTOS & SITE MAPS

Gum Swamp Creek Temporary Impact Site



Photo 1



Photo 2

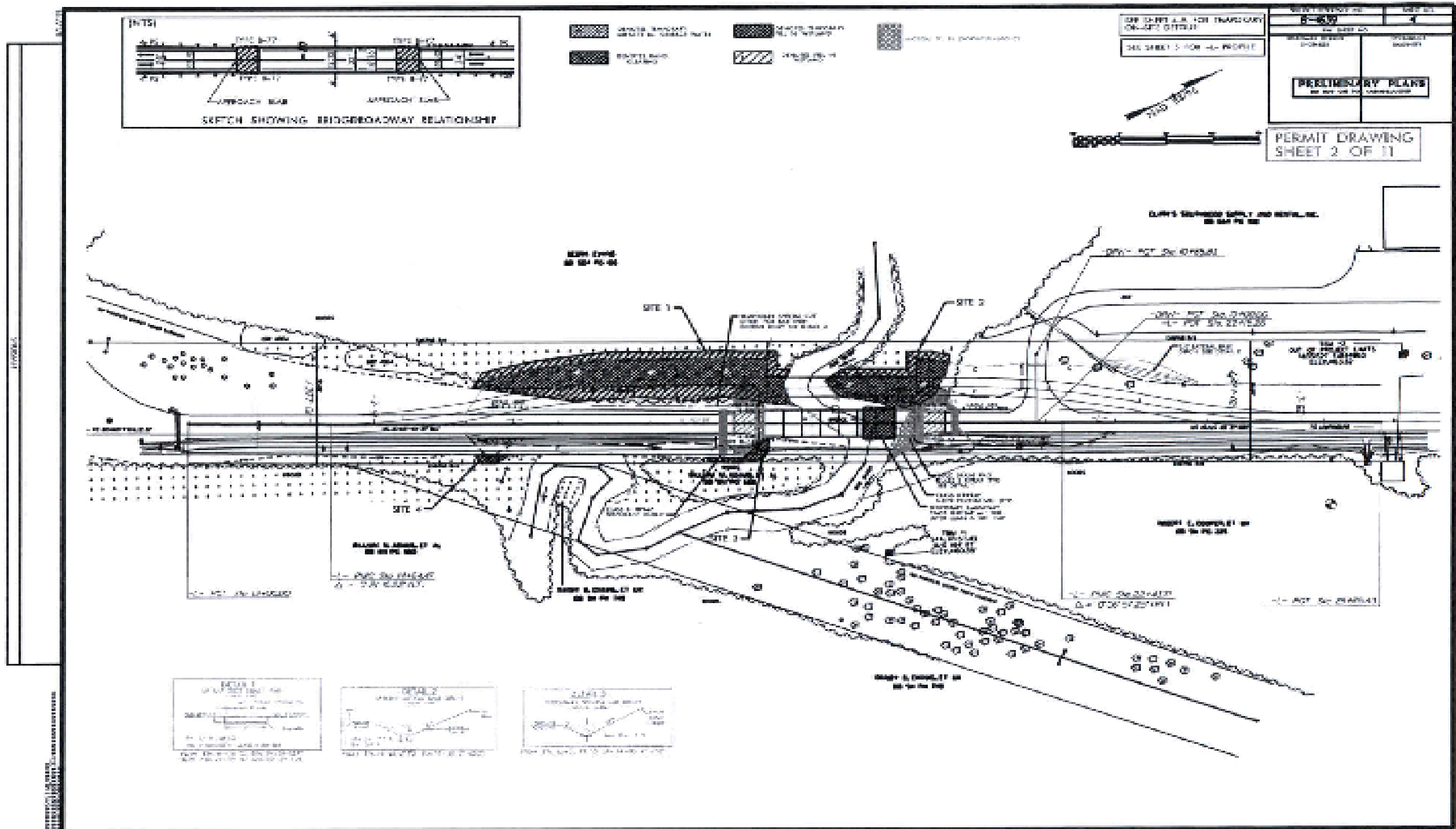


Photo 3

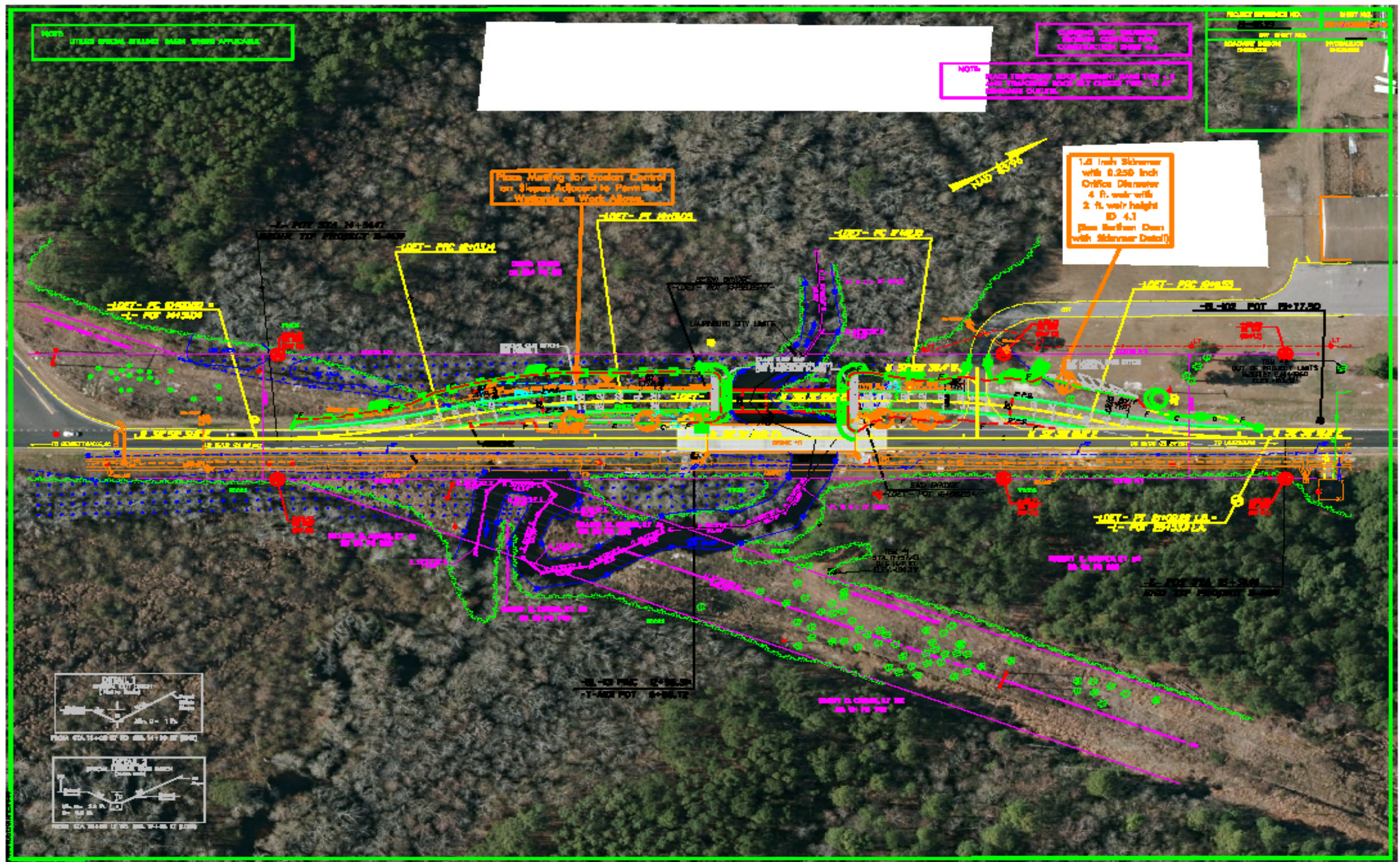


Overview photo looking southwest from US 15

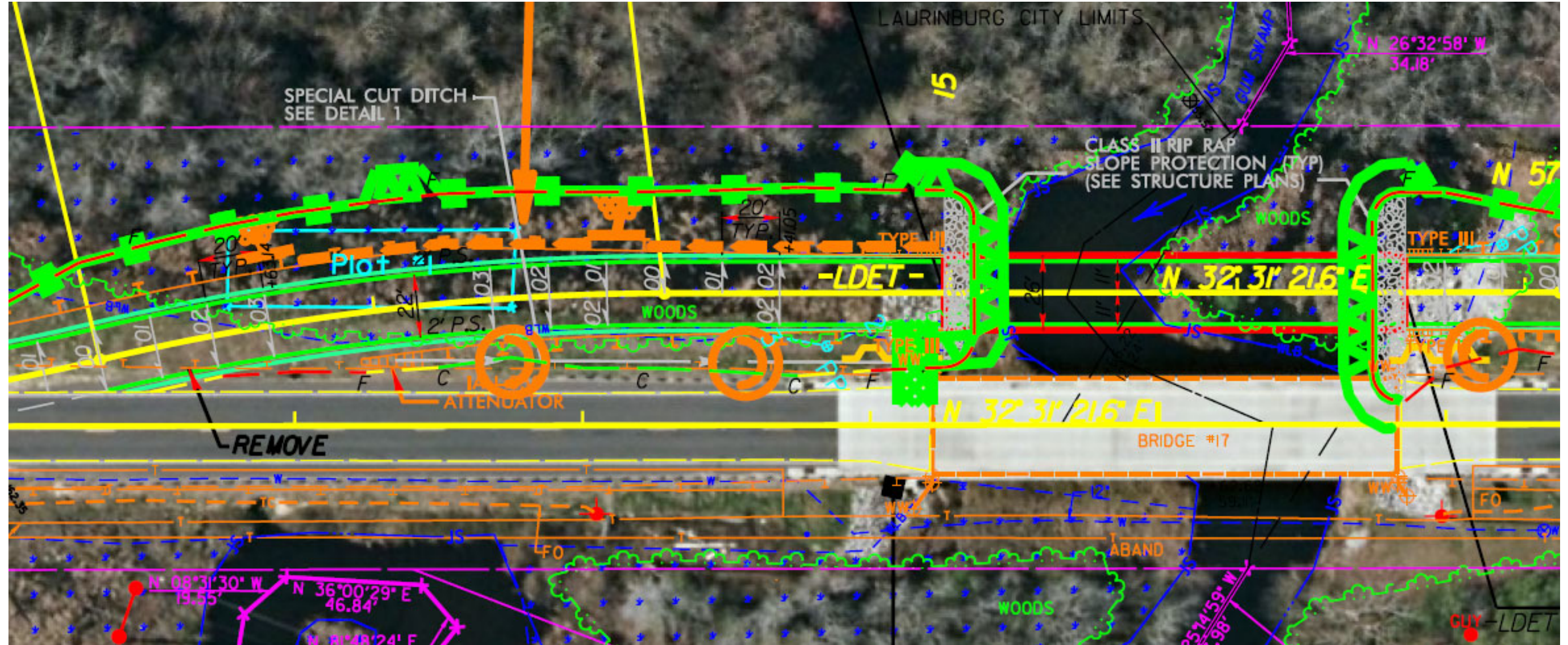
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B-4639 Gum Swamp Creek
Permit Drawing



B-4639 Gum Swamp Creek
 Photo Point and Vegetation Plot Locations



Inset
 B-4639 Gum Swamp Creek
 Photo Point and Vegetation Plot Locations